

Position and safety switches



	Price groups PG 41K, 41L, 42A, 42D, 250, 572		<u>Shock and vibration test according to railway standard</u>
12/2	Introduction		SIRIUS 3SE5 mechanical position switches
	SIRIUS 3SE5 mechanical position switches	12/78	- 3SE5, plastic enclosures
12/5	General data	12/81	- 3SE5, metal enclosures
12/14	3SE5, plastic enclosures		SIRIUS 3SE5 mechanical safety switches with separate actuator
12/20	- Enclosure width 31 mm according to EN 50047	12/86	- 3SE5, plastic enclosures/metal enclosures
12/20	- Enclosure width 40 mm according to EN 50041		SIRIUS 3SE5 mechanical safety switches with tumbler
12/24	- Enclosure width 50 mm	12/87	- 3SE5, plastic enclosures
	3SE5, metal enclosures		SIRIUS 3SE safety switches and 3SU1 EMERGENCY STOP enclosures for PROFIsafe connection
12/27	- Enclosure width 31 mm according to EN 50047	12/88	Safety cabling in the field with IP67
12/31	- Enclosure width 40 mm according to EN 50041		SIRIUS 3SF1 mechanical safety switches for AS-Interface
12/36	- Enclosure width 56 mm	12/93	General data
12/40	- Enclosure width 56 mm, XL	12/96	3SF1, plastic enclosures
12/43	- Compact design	12/98	3SF1, metal enclosures
12/45	3SE5, open-type design		<u>With separate actuator</u>
	- Enclosure width 30 mm	12/102	General data
12/46	Accessories and spare parts	12/104	3SF1, plastic enclosures
12/48	- Accessories NEW	12/105	3SF1, metal enclosures
	- Optional accessories and spare parts	12/106	Accessories
	SIRIUS 3SE5, 3SE2 mechanical safety switches		<u>With tumbler</u>
	<u>With separate actuator</u>	12/107	General data
12/50	General data	12/109	3SF1, plastic enclosures with locking force greater than 1 200 N
12/53	3SE5, plastic enclosures	12/110	3SF1, metal enclosures with locking force greater than 2 000 N
12/56	3SE5, metal enclosures		<u>Safety hinge switches</u>
12/58	Accessories	12/111	3SF1, plastic enclosures
12/60	3SE2, plastic enclosures	12/112	3SF1, metal enclosures
	<u>With tumbler</u>		SIRIUS 3SE6 non-contact safety switches
12/61	General data	12/113	3SE66, 3SE67 magnetically operated switches
12/65	3SE5, plastic enclosures with locking force greater than 1 200 N	12/119	3SE63 RFID safety switches
12/67	3SE5, metal enclosures with locking force greater than 2 000 N	12/122	3SE64 RFID safety switches with tumbler NEW
12/68	Accessories NEW		SIRIUS 3SE7 cable-operated switches
	SIRIUS 3SE5, 3SE2 mechanical safety hinge switches	13/156	
12/70	General data	13/161	SIRIUS 3SE2, 3SE3 foot switches
12/71	3SE5, plastic enclosures		
12/73	3SE5, metal enclosures		
	3SE2, plastic enclosures		
12/74	- With integrated hinge		
	SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C		
	<u>Shock and vibration test</u>		
	SIRIUS 3SE5 mechanical position switches		
12/75	- 3SE5, plastic enclosures		
	SIRIUS 3SE5 mechanical safety switches with tumbler		
12/76	- 3SE5, plastic enclosures		
	SIRIUS 3SE5 mechanical safety hinge switches		
12/77	- 3SE5, plastic enclosures		

Position and safety switches

Introduction

Overview



3SE523.,
3SE521.,
3SF12.4

3SE524.,
3SF1244

3SE513.,
3SE511.,
3SF1114

3SE512.,
3SF1124

3SE516.

3SE5413,
3SE5423

3SE5250

	Position switches Standard					Compact design	Open-type
Enclosure							
Plastic	✓	--	✓	--	--	✓	✓
Metal	✓	--	✓	--	--	✓	--
Dimensions (W x H x D) in mm	31 x 68 x 33	50 x 53 x 33	40 x 78 x 38	56 x 78 x 38	56 x 100 x 38	30 x 50 x 16 40 x 50 x 16	30 x 48.5 x 20
Degree of protection	IP65, IP66/IP67	IP66/IP67				IP66/IP67	IP10 or IP20
Standards							
IEC 60947-5-1	Mounting and operating points accord- ing to EN 50047	Operating points according to EN 50047	Mounting and operating points accord- ing to EN 50041	Operating points according to EN 50041	--	--	Mounting and operating points accord- ing to EN 50047
Approvals	CE, TÜV, UL, CSA, CCC					CE, UL, CSA, CCC	CE, TÜV, UL, CSA, CCC
Contact blocks							
2 slow-action contacts	1 NO + 1 NC; 2 NC				2 x (1 NO + 1 NC)	--	1 NO + 1 NC
2 snap-action contacts	1 NO + 1 NC				2 x (1 NO + 1 NC)	1 NO + 1 NC	1 NO + 1 NC
• Short stroke	1 NO + 1 NC				--	--	✓
• Contact distance 2 x 2 mm	1 NO + 1 NC				--	--	✓
3 slow-action contacts	1 NO + 2 NC; 2 NO + 1 NC				--	--	1 NO + 2 NC; 2 NO + 1 NC
• With make-before-break	1 NO + 2 NC				2 x (1 NO + 2 NC)	--	1 NO + 2 NC
3 snap-action contacts	1 NO + 2 NC				--	--	1 NO + 2 NC
Special features							
LED status display	✓				--	--	--
Increased corrosion protection	✓				--	--	--
ASIsafe integrated	✓				--	--	--
Electrical specifications							
Insulation voltage U_i	400 V					400 V	400 V
Conventional thermal current I_{th}	6 A/10 A (3-/2-pole)					10 A	6 A
Connections							
Cable entry	1 x (M20 x 1.5)	2 x (M20 x 1.5)	1 x (M20 x 1.5)	3 x (M20 x 1.5)	--	--	--
M12 plug, 4-, 5- or 8-pole	✓				✓	--	--
Plug, 6-pole + PE	--		✓	--	--	--	--
Molded cables	--				✓	--	--
Actuators							
Rounded plungers and roller plungers	✓				--	--	--
Roller levers and angular roller levers	✓				--	--	--
Spring rod	✓				--	--	--
Twist levers and rod levers	✓				--	--	--
Fork lever	--		✓	--	--	--	--
Hinge switches	✓				--	--	--
Plungers, twist levers	✓				✓	✓	✓
Page							
Complete units	12/14, 12/27	12/24	12/20, 12/31	12/36	12/40	12/44	12/45
Modular system	12/18, 12/29	12/25	12/22, 12/34	12/38	12/41	--	--
Ambient temperature -40 °C	12/75, 12/80	12/80	12/80	12/83	12/84	--	--
ASIsafe	12/96, 12/98	12/96	12/100	12/100	--	--	--

✓ Available

-- Not available



3SE5232,
3SE5212,
3SF12.4

3SE5132,
3SE5112,
3SF11.4

3SE5232,
3SE5242,
3SF12.4

3SE5112,
3SE5122,
3SF11.4

3SE5322,
3SE5312,
3SF13.4

	Safety hinge switches		Safety switches with separate actuator		Safety switches with tumbler
Enclosure					
Plastic	✓		✓		✓
Metal	✓		✓		✓
Dimensions (W x H x D) in mm	31 x 68 x 33	40 x 78 x 38	31 x 68 x 33, 50 x 53 x 33	40 x 78 x 38, 56 x 78 x 38	54 x 185 x 44
Degree of protection	IP65, IP66/IP67	IP66/IP67	IP65, IP66/IP67	IP66/IP67	IP66/IP67, IP69
Standards					
IEC 60947-5-1	Mounting and operating points according to EN 50047		Mounting and operating points according to EN 50047		ISO 14119, IEC 62061/IEC 61508, ISO 13849-1
Approvals	CE, TÜV, UL, CSA, CCC		CE, TÜV, UL, CSA, CCC		CE, TÜV, UL, CSA, CCC
Contact blocks/outputs					
2 slow-action contacts	--		1 NO + 1 NC; 1 NO + 2 NC		--
2 snap-action contacts	1 NO + 1 NC		--		--
• Short stroke	--		--		--
• Contact distance 2 x 2 mm	--		--		--
3 slow-action contacts	--		1 NO + 2 NC		2 x (1 NO + 2 NC)
• With make-before-break	--		--		--
3 snap-action contacts	1 NO + 2 NC		--		--
Electronic safety outputs	--		--		--
Special features					
LED status display	✓		✓		✓
Increased corrosion protection	✓		✓		✓
ASIsafe integrated	✓		✓		✓
Electrical specifications					
Insulation voltage U_i	400 V		400 V		400 V
Conventional thermal current I_{th}	6 A/10 A (3-/2-pole)		6 A		6 A
Connections					
Cable entry	1 x (M20 x 1.5)		1 x (M20 x 1.5), 2 x (M20 x 1.5)	1 x (M20 x 1.5), 3 x (M20 x 1.5)	3 x (M20 x 1.5)
M12 plug, 4-, 5- or 8-pole	✓		✓	✓	✓
Molded cables	--		--	--	--
AS-Interface	--		✓	✓	✓
Actuators					
Plungers, twist levers	--		--		--
Separate actuators	--		✓		✓
Hinge switches	✓		--		--
Page					
Complete units	12/71	12/71, 12/73	12/53, 12/56	12/54, 12/57	12/65 ... 12/67
Modular system	--	--	--	--	--
Ambient temperature -40 °C	12/77	--	12/86	--	12/87
ASIsafe	12/111	12/112	12/104	12/105	12/109, 12/110

✓ Available

-- Not available

Position and safety switches

Introduction



	3SE66, 3SE67	3SE66, 3SE67	3SE63	3SE64
	Non-contact safety switches Magnetically operated switches		RFID safety switches¹⁾	
		Supplementary range¹⁾	Standard	With tumbler
Enclosure				
Plastic	✓		✓	
Metal	--		--	
Dimensions (W x H x D) in mm	M30; 25 x 88; 25 x 33	25 x 88; 26 x 36	25 x 91 x 22	87 x 120 x 34
Degree of protection	IP67		IP69	
Standards	IEC 60947-5-3		ISO 14119, IEC 60947-5-3, SIL 3 according to IEC 62061/IEC 61508, PL e according to ISO 13849-1	
Approvals	CE, TÜV, UL, CSA, CCC		CE, TÜV, UL, CSA	
Contact blocks/outputs				
Reed contacts	1 NO + 1 NC 2 NC 1 NO + 1 NC (+ 1 NC signaling contact)	1 NO + 1 NC (+ 1 NC signaling contact) 2 NC 2 NC (+ 1 NC signaling contact)	--	
Special features				
LED status display	--	✓	✓	
Increased corrosion protection	--		✓	
ASIsafe integrated	--		--	
Electrical specifications				
Insulation voltage U_i	100 V AC/DC 24 V DC	75 V DC 50 V AC	--	
Conventional thermal current I_{th}	250 mA 400 mA	250 mA	--	
Connections				
M8 plug, 4-pole	✓		--	
Ø 8 mm, latching connection, plug, 6-pole	--	✓	--	
M12 plug, 4-pole	✓	--	--	
M12 plug, 8-pole	--		✓	
Molded cables	✓		--	
AS-Interface	--		--	
Actuators				
RFID	--		✓	
Switching solenoid	✓		--	
Page	12/113		12/119	12/122

✓ Available

-- Not available

¹⁾ CCC approval not required for voltages < 36 V.Note:Safety characteristics, [see page 16/9](#).

Position and safety switches

SIRIUS 3SE5 mechanical position switches

General data

Overview

More information

Homepage, see www.siemens.com/sirius-position-switches
 Industry Mall, see www.siemens.com/product?3SE
 Configurator, see www.siemens.com/sirius/configurators
 Conversion tool, see www.siemens.com/conversion-tool

Configuration Manual, see <https://support.industry.siemens.com/cs/ww/en/view/43920150>
 For brochure, see <https://support.industry.siemens.com/cs/ww/en/view/109811407>

Our SIRIUS 3SE5 position switches are modern, compact and modular in design and simple to connect. They save time and increase flexibility during installation of a whole range of switch variants. In principle it is possible to combine any enclosure with any operating mechanism, paying due consideration to the EN 50041 and EN 50047 standards where necessary.

Complete units

Popular versions of the position switches in standard enclosures are available as complete units.



3SE5 position switches with plastic and metal enclosures

Modular system

The 3SE5 series is the modular system comprising different sizes of the basic switch and an actuator which must be ordered separately. Thanks to the modular design of the switch the user can select the right solution for his application from numerous versions and install it himself in a very short time.

Simple plug-in mounting enables fast replacement of the actuator heads.



Examples of selection options in the modular system

Service box for SIRIUS 3SE5 position switches



Service box with basic switches, actuator heads and accessories

For the most common applications for quick replacement as part of maintenance or for many first applications, a service box 3SX5110-0BK can be ordered for the SIRIUS 3SE5 position switches in the modular system.

This contains a selection of basic switches, actuator heads and accessories for various possible combinations.

213 tested combinations of 22 individual products are possible. The standard interface enables simple replacement of the actuator heads by plug-in mounting. The actuator heads can be rotated in steps of $16 \times 22.5^\circ$.

For more information, see page 12/46.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

General data

Design

All enclosure variants have an integrated chlorinated rubber diaphragm for high functional safety in cold and aggressive environments.

Enclosure sizes

The 3SE5 switches are available in five different enclosure sizes with 2 or 3 contacts and with the XL enclosure:

- Open-type position switch IP20 or IP10
- Plastic enclosures according to EN 50047, 31 mm wide, IP65, 1 cable entry
- Metal enclosures according to EN 50047, 31 mm wide, IP66/IP67, 1 cable entry
- Plastic and metal enclosures according to EN 50041, 40 mm wide, IP66/IP67, 1 cable entry
- Plastic enclosures, 50 mm wide, IP66/IP67, 2 cable entries
- Metal enclosures, 56 mm wide, IP66/IP67, 3 cable entries
- XL metal enclosures with 4 to 6 contacts, 56 mm wide, IP66/IP67, 3 cable entries

Enclosure versions

Various basic switches can be selected for the enclosures of the 3SE5 series:

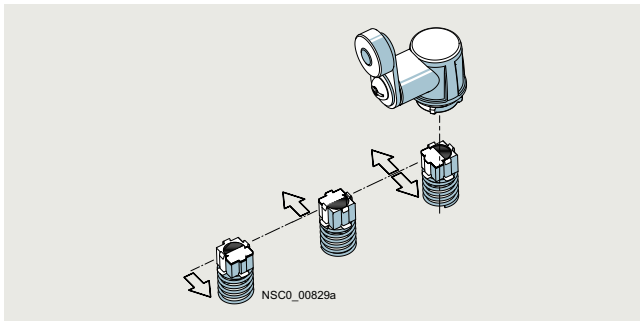
- With contact blocks with two or three contact elements (screw terminals) designed as slow-action or snap-action contacts; the slow-action contacts also with make-before-break
- Optional LED status display
- With assembled M12 device plug, 4- or 5-pole (available as an accessory for self-assembly for the wide enclosure)
- With 6-pole device plug + PE on the metal enclosures
- Versions with increased corrosion protection
- Versions for operating temperatures down to -40 °C
- AS-Interface version with integrated ASIsafe electronics for all enclosure designs (see page 12/93)

Actuator variants

All actuators can be rotated around the axis in increments of 16 x 22.5°. The following actuator variants are available:

- Plain, rounded and roller plungers
- Roller levers and angular roller levers
- Spring rod
- Twist levers and rod levers with twist actuator
- Fork levers with twist actuator

The actuator rollers are available with various materials and diameters.



Twist actuator for twist levers and rod actuators, with setting of switching direction to right, left or right/left (standard for all twist actuators except fork levers)

Cover design

The mechanical position switches have a turquoise cover and the mechanical safety switches have a yellow cover.



Cover colors: position switches turquoise, safety switch yellow

On request the switches can be delivered ex works with a yellow cover. The cover has no effect on the mode of operation. Both versions can be used in safety applications (see also page 12/16).

Diverse contact types

Exchangeable 2-pole and 3-pole contact blocks for all enclosure sizes.



Contact block for position switches, 3 contacts

The 3-pole contact block with snap-action or slow-action contacts is regularly available for all enclosure forms. The same installation space is required as for a 2-pole block. The version with 1 NO + 2 NC offers, for example, more safety through redundant shutdowns (2 NC contacts) with simultaneous signaling (NO contact). The 3-pole blocks are also available with make-before-break and with 2 NO + 1 NC.

Contact reliability

The contact blocks ensure an extremely high contact stability. This applies even when the devices are switching low voltages and currents.

Positive opening ➡

The NC contacts of the switch are forced open mechanically, positively driven and reliably by the plunger. This is referred to as "positive opening".

Optional LED displays

LED displays are available for all enclosure sizes except for XL. The enclosures are supplied with an LED signaling indicator (1 x green + 1 x yellow). This is the first time that optical signaling equipment is also available for small standard enclosures according to EN 50047. The LEDs are implemented in 24 V DC and 230 V AC.

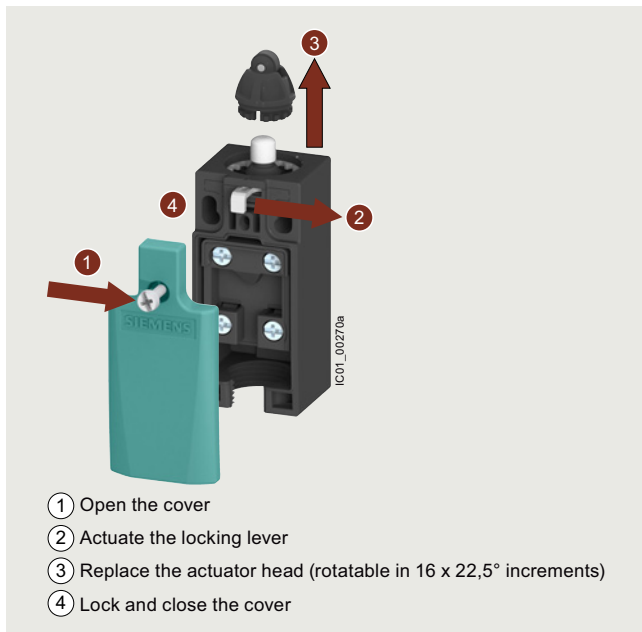
Position and safety switches

SIRIUS 3SE5 mechanical position switches

General data

Mounting

Easy plug-in method for fast replacement of the actuator heads



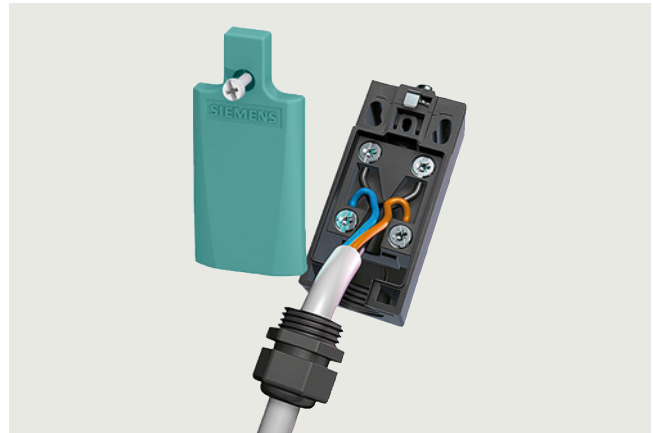
Replacement of the position switch actuator head in only four steps



Video: What makes the SIRIUS position switches so flexible?

Quick-connect technology

For plastic enclosure with a width of 31 mm



Quick-connect technology for plastic enclosures

These position switches can be wired quickly and easily as an added customer benefit. The connecting cable is first connected to the terminals of the contact block and then guided through a slit into the cable gland opening. The time saved through this new connection method is approx. 20 to 25%.

A cable gland with seal must be used with the quick-connect method.



Video: How easy is it to install the 3SE5232 position switch?

Article number scheme

Product versions		Article number									
SIRIUS position and safety switches		3SE					-				
Series		5									
Standard	EN 50041	1									
	EN 50047	2									
	With tumbler	3									
Enclosure material and width	e.g. 1 = metal, narrow										
Connection	Cable entry	2									
	Device plug	4/5									
LEDs	None							0			
	24 V DC							1			
	115 V AC							2			
	230 V AC							3			
Version of contacts	e.g. C = snap-action 1 NO + 1 NC										
Version of operating mechanism	e.g. C02 = rounded plunger										
Example		3SE	5	1	1	2	-	0	C	C	0 2

Note:

The article number scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

General data

Benefits

The 3SE5 position switches differ from the previous series through the following new characteristics:

- The modular design of the product range allows a number of versions with a smaller number of bearing types for enclosures and operating mechanisms.
- All operating mechanisms can be rotated around the axis in increments of 22.5° (see [Mounting, page 12/7](#)).
- Rounded and roller plungers according to EN 50041 with 3 mm overtravel (total travel 9 mm) for greater tolerance when switching.
- All enclosure sizes – now also including the small enclosure 31 mm wide – are optionally available with an LED signaling indicator (see [page 12/6](#)).
- All enclosure variants have an integrated chlorinated rubber diaphragm for high functional safety in cold and aggressive environments.
- All contact blocks are replaceable (see [page 12/48](#)).
- The 3-pole contact blocks are available for all enclosure sizes (see [Diverse contact types, page 12/6](#)).

- Elements with 1 NO + 2 NC slow-action contacts with make-before-break and 2 NO + 1 NC
- The short-stroke contact block 1 NO + 1 NC improves the precision of the switching operation through a reduced actuation path.
- The contact block with 1 NO + 1 NC snap-action contacts with a contact distance of 2 x 2 mm is suitable for simultaneous shutdown and signaling, particularly in the elevator industry.
- XL metal enclosures for accommodating two 2- or 3-pole contact blocks
- Versions with plugs for safe and fast connection, e.g. to fail-safe field modules of the SIMATIC ET 200eco PN or SIMATIC ET 200AL
- The plastic enclosure with width 31 mm has simple and fast wiring equipment which makes it possible to save approx. 20 to 25% of the time when connecting (see [Quick-connect technology, page 12/7](#)).
- The ASIsafe electronics are integrated in the enclosure for the versions with AS-Interface connection (see [page 12/93](#)); an additional adapter is not required.

Application

With the standard position switches, mechanical positions of moving machine parts are converted into electrical signals. Through their modular and uniform design and large number of variants, the devices can comply with practically all requirements in industry.

Devices are available with enclosure versions to suit the particular ambient conditions. Different control tasks can be performed with the contact blocks best suited for the particular purpose. And many different actuator variants are available to match the mechanical configuration of the moving machine parts. Dimensions, fixing points and characteristics are largely in accordance with the EN 50041 or EN 50047 standards.

The devices are suitable for use in any climate.

Standards

The switches comply with IEC 60947-5-1 (electromechanical control circuit devices).

The protective measure of "total insulation" by the plastic enclosure is ensured by the use of plastic screw glands.

Safety position switches

For controls according to IEC 60204-1 the devices can be used as a safety position switch. They comply with ISO 14119. A TÜV Certificate is available. To secure position switches against changes in their position, positively-driven techniques must be employed on installation.

Safety circuits

Standard IEC 60947-5-1 requires positive opening of the NC contacts. In other words, for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to the standard IEC 60947-5-1 with the symbol ☹.

SIL 1 according to IEC 62061/IEC 61508 or PL c according to ISO 13849-1 can be attained with the 3SE5 position switch with ☹ if the corresponding fail-safe evaluation units are selected and correctly installed (e.g. the 3SK safety relays or matching devices from the ASIsafe, SIMATIC or SINUMERIK product ranges).

If a second position switch with ☹ is used, SIL 3/PL e can be attained.

In addition to positive opening, the operating mechanisms (actuators) must also have a positively driven connection to the enclosure. The corresponding operating mechanisms are marked in the catalog with ☹.

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, see www.siemens.com/safety-evaluation.

Contacts for every application

- **Snap-action contacts:** NC and NO contacts switch simultaneously – regardless of the actuating speed ($v_{\min} = 0.01$ m/s) and contact erosion.
- **Slow-action contacts:** Difference in travel between "NC contact opens" and "NO contact closes"; the switching speed is the same as or proportional to the actuating speed ($v_{\min} = 0.4$ m/s).
- **Slow-action contacts with make-before-break:** e.g. suitable for adding a second function to a sequence control.

Operating mechanisms for every application

Plain, rounded and roller plungers

- Operation in direction of the plunger axis or in case of roller plunger with bar at right angles to the plunger axis.
- The roller plunger is recommended for lateral actuation and relatively long overtravel.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

General data

Roller levers and angular roller levers

- For actuators made of finely ground steel in the form of cams, bars (approach angle 30°) or cam disks.

Spring rod

- Can be used for undefined actuations and changing approach conditions
- Approach from any direction is possible

Twist levers and rod levers

- For high approach velocities ($v = 1.5 \text{ m/s}$)
- Variety of approach options
- Insensitive to oil, grinding dust, dirt and coarse-grained material
- Adjustment of the lever in increments of 10°
- Can be adjusted with left or right switching

Fork lever

- Switchable in two directions
- Latching actuator
- For reciprocating movements

Monitoring with safe evaluation units from the 3SK series

Safe evaluation units		Maximum achievable safety level according to type of switch				
		Compact	Standard	Hinge	Separate actuator	Tumbler
3SK						
Use of only one position/safety switch		3SE54	3SE51/3SE52	3SE51/3SE52	3SE51/3SE52	3SE53
Monitoring with 1 contact: 1 x NC contact		SIL 1/PL c				
Monitoring with 2 contacts: 2 x NC contact or 1 x NC contact + 1 x NO contact		SIL 1/PL c	SIL 2/PL d			
Use of a second position/safety switch		SIL 3/PL e				
Standard switch	3SE51/3SE52/3SE54	SIL 3/PL e				
Safety switch/hinge switch	3SE51/3SE52					
Safety switch with separate actuator	3SE51/3SE52					
Safety switch with tumbler	3SE53					

Note:

Taking account of certain fault exclusions (e.g. actuator breakage), use of just one hinge switch or a switch with separate actuator with or without tumbler up to SIL 2/PL d is possible as described in the table.

Since the machine manufacturer must provide proof of fault exclusion, the component manufacturer is unable to carry out a definitive assessment of the measures taken.

For more information, see <https://support.industry.siemens.com/cs/ww/en/view/35443942>.

The maximum achievable SIL or PL level always depends on other assumptions as well. Factors to be taken into account include the DC (declaration), the CCF, and the number of actuations.

For information on the safe evaluation units and an introduction to safety systems, see page 11/1 onwards.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

General data

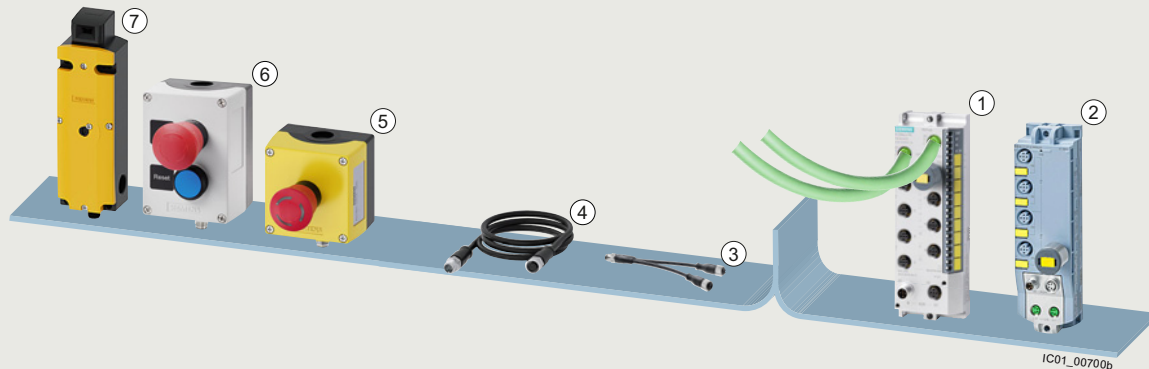
Safety cabling in the field with IP67

More information

Fail-safe I/O device for

- SIMATIC ET 200eco PN, see <https://mall.industry.siemens.com/mall/en/ww/Catalog/Products/10370455?tree=CatalogTree>
- SIMATIC ET 200AL, see <https://mall.industry.siemens.com/mall/en/ww/Catalog/Products/10414335?tree=CatalogTree>

Configurator, see www.siemens.com/SIMATIC-ET200-safety-sensor-configurator



- | | | |
|--|--|--|
| ① SIMATIC ET 200eco PN field module, fail-safe, 6ES7146-6FF00-0BA0 | ④ Connecting cable, 8-pole, 3SX5601-3SV18 | ⑥ SIRIUS ACT enclosure, EMERGENCY STOP and pushbutton, with M12 plug, 8-pole, 3SU1802-0NE00-4SB1 |
| ② SIMATIC ET 200AL field module, fail-safe, 6ES7146-5FF00-0BA0 | ⑤ SIRIUS ACT enclosure, EMERGENCY STOP, illuminated, with M12 plug, 8-pole, 3SU1801-0NV00-4SA2 | ⑦ Safety switch with tumbler, with M12 plug, 8-pole, 3SE5324 |
| ③ Y-cable, 8-pole to 2 x 5-pole, 6ES7194-6KC00-0XA0 | | |

Excerpt from the Safety field system composed of SIRIUS sensors and SIMATIC ET 200 with the M12 connection method

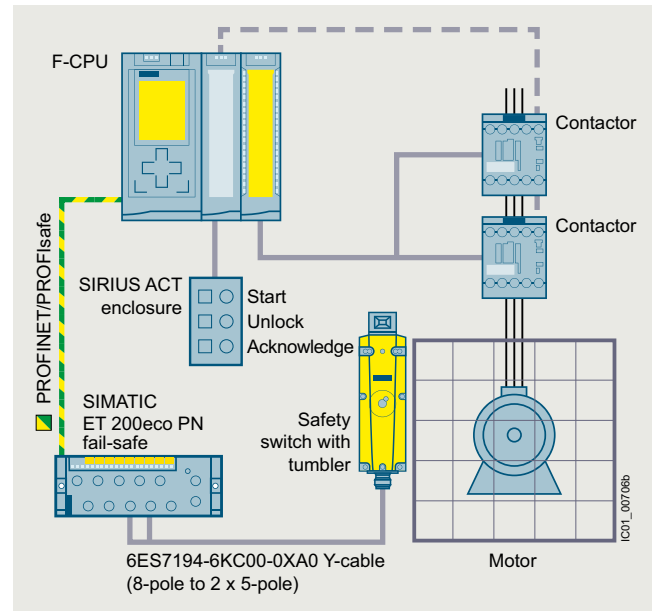
The new system comprising SIRIUS sensors and fail-safe SIMATIC ET 200 provides a safe M12 connection method for industry.

The SIRIUS sensors can be connected in the field via the fail-safe field modules of the SIMATIC ET 200eco PN and SIMATIC ET 200AL.

The signals are forwarded to the higher-level controller via PROFINET/PROFIsafe either by means of a direct connection of the SIMATIC ET 200eco PN or, in the case of SIMATIC ET 200AL, via an interface module.

For more information and examples, see page 12/88 onwards.

Application example



Protective door monitoring with 3SE53 safety switch with tumbler on the fail-safe field module of the SIMATIC ET 200eco PN with inverted Y-cable 6ES7194-6KC00-0XA0 (8-pole to 2 x 5-pole)

For a detailed description of this example of how safety switches with tumblers can achieve different SIL/PL levels, see <https://support.industry.siemens.com/cs/ww/en/view/109778289>.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

General data

Technical specifications

Type		3SE51.. ¹⁾ , 3SE52.. ¹⁾	3SE541.	3SE542.
General data				
Standards		IEC 60947-5-1, ISO 14119		
Rated insulation voltage U_i	V	400 ²⁾	400	
Pollution degree according to IEC 60664-1		Class 3	Class 3	
Rated impulse withstand voltage U_{imp}	kV	6	4	
Rated operational voltage U_e	V	400 AC; over 300 V AC same potential only ³⁾	300 AC	
Conventional thermal current I_{th}	A	10	10	
Rated operational current I_e				
• For alternating current 50/60 Hz		I_e /AC-15	I_e /AC-15	
- At 24 V	A	6	6	
- At 120 V	A	6	6	
- At 240 V	A	6	3	
- At 400 V	A	4	--	
• For direct current		I_e /DC-13	I_e /DC-13	
- At 24 V	A	3	3	
- At 125 V	A	0.55	0.55	
- At 250 V	A	0.27	0.27	
- At 400 V	A	0.12	--	
Short-circuit protection⁴⁾				
• With DIAZED fuse links, operational class gG	A	6	10	
• With miniature circuit breaker, C characteristic (I_{Kc} 400 A)	A	1	3	
Mechanical endurance				
• Basic switch		15 x 10 ⁶ operating cycles	10 x 10 ⁶ operating cycles	10 x 10 ⁶ operating cycles
• With spring rod, 3SE5...-R..		10 x 10 ⁶ operating cycles	--	--
• With fork lever, 3SE51...-T..		1 x 10 ⁶ operating cycles	--	--
Electrical endurance				
• With 3RH21 contactors size S00 and 3RT contactors sizes S00, S0		10 x 10 ⁶ operating cycles	500 000 operating cycles	500 000 operating cycles
• For utilization category AC-15 when switching off I_e /AC-15 at 240 V		100 000 operating cycles	100 000 operating cycles	100 000 operating cycles
• With utilization category DC-12/DC-13		For direct current depending on the loading of the switch		
Frequency of operation				
With contactors 3RH21 size S00 and 3RT contactors sizes S00, S0		6 000 operating cycles/h	1 800 operating cycles/h	
Switching accuracy				
• For repeated switching, measured at the plunger of the contact block	mm	0.05	0.05	
• With twist actuators		1°	1°	
Rated data according to  and 				
• Rated voltage	V	300	300	
• Uninterrupted current	A	6	10	
• Switching capacity		Heavy duty, A 300/B 300/Q 300	A 300/Q 300	

¹⁾ Special versions, see the respective data sheet.

²⁾ For slow-action contacts 1 NO + 2 NC with make-before-break ("M") and 2 NO + 1 NC ("P") the following applies: 250 V.

³⁾ For slow-action contacts 1 NO + 2 NC with make-before-break ("M") and 2 NO + 1 NC ("P") the following applies: over 250 V AC same potential only.

⁴⁾ Without any welds according to IEC 60947-5-1.

Type		3SE523.	3SE513.	3SE524.	3SE521.	3SE511.	3SE512., 3SE516.	3SE54..	3SE525.
Enclosure									
Enclosure • Material • Width	mm	Plastic P66 3140		50	Zinc die-casting 3140		56	Zn/Al 30/40	-- 30
Degree of protection on the front according to IEC 60529		IP65	IP66/IP67; IP65/IP67 for actuator heads with spring rod and rod actuators					IP67	IP20 ¹⁾ , IP10
Ambient temperature • During operation • In operation, switch with LEDs • Storage, transport	°C °C °C	-25 ... +85; -40 ... +85 for 3SE51...-1AJ0 and 3SE52...-1AJ0, -1AY0						-25 ... +85 -- -40 ... +90	
Mounting position		Any							
Connection									
Cable entry		1 x (M20 x 1.5)		2 x (M20 x 1.5)	1 x (M20 x 1.5)		3 x (M20 x 1.5)	--	--
Conductor cross-sections • Solid • Finely stranded with end sleeve • AWG cables, solid or stranded	mm ² mm ² AWG	1 x (0.5 ... 1.5), 2 x (0.5 ... 0.75) 1 x (0.5 ... 1.5), 2 x (0.5 ... 0.75) 1 x (AWG 20 ... 16), 2 x (AWG 20 ... 18)							
Tightening torque , contact block	Nm	0.8 ... 1.0							
Protective conductor connection Inside enclosure					M3.5			--	--

¹⁾ With the conductor connected and the clamping screw tightened.

Position and safety switches

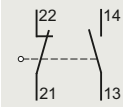
SIRIUS 3SE5 mechanical position switches

General data

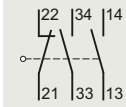
Circuit diagrams

Enclosure widths 31, 40, 50 and 56 mm

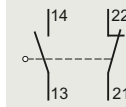
Slow-action contacts
1 NO + 1 NC
3SE5...-B..., -R...



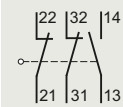
Slow-action contacts
2 NO + 1 NC
3SE5...-P...



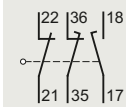
Snap-action contacts
1 NO + 1 NC
3SE5...-C..., -F..., -G..., -H..., -N...



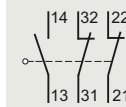
Slow-action contacts
1 NO + 2 NC
3SE5...-K..., -Q...



Slow-action contacts
1 NO + 2 NC with
make-before-break, 3SE5...-M...

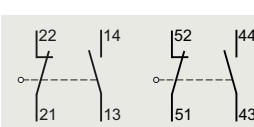


Snap-action contacts
1 NO + 2 NC
3SE5...-L...

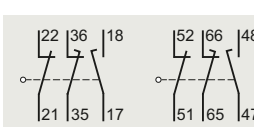


XL enclosures, width 56 mm

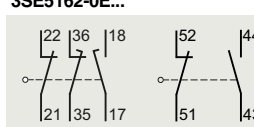
Slow-action contacts
2 x (1 NO + 1 NC)
3SE5162-0B...



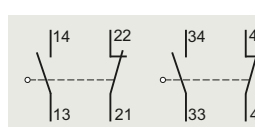
Slow-action contacts
2 x (1 NO + 2 NC) with
make-before-break, 3SE5162-0D...



Slow-action contacts
1 NO + 2 NC with make-before-break,
1 NO + 1 NC
3SE5162-0E...



Snap-action contacts
2 x (1 NO + 1 NC)
3SE5162-0C...

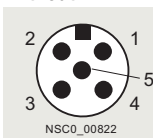


3SE5 pin assignment

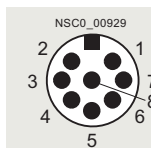
M12 device plugs, 4-pole
3SY3127



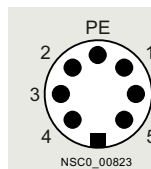
M12 device plugs, 5-pole
3SY3128, 3SX5100-1SS51,
PE on pin 3, 3SX5100-1SS05
without PE



M12 device plugs, 8-pole
3SX5100-1SS08



Device plugs, 6-pole + PE
3SY3131



Type	Device plugs	Contacts	LEDs	Connections								
	Type	Version	Version	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	PE
M12 device plugs, 4-, 5- or 8-pole												
3SE5..4-0....-1AC4, 3SE5..4-0....-1AJ1 ¹⁾	3SY3127	1 NO + 1 NC	--	21	22	13	14	--	--	--	--	--
3SE5..4-0....-1AL0, 3SE5..4-0....-1AJ2 ¹⁾	3SY3128	1 NO + 1 NC	--	21	22	13	14	PE	--	--	--	--
3SE5..4-0....-1AE0	3SY3127	2 NC	--	21	22	31	32	--	--	--	--	--
3SE5..4-0....-1AE1, 3SE5..4-0....-1AJ4 ¹⁾	3SY3128	2 NC	--	21	22	31	32	PE	--	--	--	--
3SE5..4-0....-1AE2	3SX5100-1SS51	2 NC	--	21	31	--	22	32	--	--	--	--
3SE5..4-0....-1AE3	3SX5100-1SS51	2 NC	--	21	31	PE	22	32	--	--	--	--
3SE5..4-1B...-1AF3	3SX5100-1SS05	1 NO + 1 NC slow-action	2 LEDs	21	22	14/ LED gn	13/ LED ye	Ground LED	--	--	--	--
3SE5..4-1C...-1AF3	3SX5100-1SS05	1 NO + 1 NC snap-action	2 LEDs	21	22	13/ LED gn	14/ LED ye	Ground LED	--	--	--	--
3SE5..4-1C...-1AF5	3SX5100-1SS05	1 NO + 1 NC snap-action	2 LEDs	21 21/13 jumper	22	13/ Ground LED	14/ LED ye	PE	--	--	--	--
3SE5..4-1L...-1AD4	--	1 NO + 2 NC snap-action	2 LEDs	21	22	13/ LED gn	14/ LED ye	31	32	Ground LED	PE	--
Device plugs, 6-pole + PE												
3SE5..5-0....-1AD0	3SY3131	1 NO + 1 NC	--	21	22	13	14	--	--	--	--	✓
3SE5..5-0....-1AD1	3SY3131	1 NO + 2 NC	--	21	22	13	14	31	32	--	--	✓

Legend:

gn = green, ye = yellow

✓ Connected

-- Not available

¹⁾ Version for ambient temperatures down to -40 °C.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

General data

Options

On the following pages you will find selection tables for complete units as well as components of the modular system.

☐ Complete units

☒ Modular system

The differences between the units are indicated in the selection and ordering data by the symbols shown on orange backgrounds.

Using the modular system you can assemble switch variants which are not available as complete units. Each complete unit can also be supplied as a module.

A basic switch for the modular system comprises an enclosure with a contact block and a cover. Among the basic switches the following versions, for example, can be selected:

- Basic enclosure with rounded plunger
- Version with increased corrosion protection
- Version with M12 device plug and/or with 2 LEDs
- Version with M12 device plug or 6-pole + PE

Support functions

The 3SE5/3SF1 position and safety switches can also be ordered using an online configurator.

This also enables a complete documentation to be prepared:

- Product data sheets
- Dimensional drawings
- Operating travel diagrams
- CAD data in 2D and 3D model images
- Ordering data
- Product photos

For online configurator, see www.siemens.com/sirius/configurators.

Complete units

Ordering example

Required:

- Position switch according to EN 50047 in a plastic enclosure
- Contact block with slow-action contacts 1 NO + 1 NC
- Angular roller lever, metal lever and plastic roller

To be ordered:

Version	Complete units
	☐
	Article No.

Complete units - Enclosure width 31 mm



Angular roller levers

With metal lever and plastic roller 13 mm

- Slow-action contacts 1 NO + 1 NC

3SE5232-0BF10

Modular system

Ordering example 1

Required:

- Position switch according to EN 50047 in a plastic enclosure
- Contact block with slow-action contacts 1 NO + 1 NC
- Angular roller lever, metal lever and plastic roller

To be ordered separately:

Version	Modular system
	☒
	Article No.

Basic switches - Enclosure width 31 mm



Rounded plungers

- Slow-action contacts 1 NO + 1 NC

3SE5232-0BC05

+

Operating mechanisms



Angular roller levers

- Metal levers

Plastic rollers

3SE5000-0AF10

Ordering example 2

Required:

- Position switch according to EN 50047 in a plastic enclosure
- Contact block with slow-action contacts 1 NO + 1 NC
- Twist levers, high-grade steel lever and plastic roller

To be ordered separately:

Version	Modular system
	☒
	Article No.

Basic switches - Enclosure width 31 mm



Rounded plungers

- Slow-action contacts 1 NO + 1 NC

3SE5232-0BC05

+

Twist actuators



Twist actuators

3SE5000-0AK00



Twist levers

- High-grade steel levers

plastic rollers

3SE5000-0AA31

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 31 mm according to EN 50047

Selection and ordering data

Complete units for installation in control cabinets

2 contacts · Degree of protection IP40 · Cable entry by means of a locking plug with Ø 6 mm

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Complete units¹⁾ · Enclosure width 31 mm according to EN 50047

 3SE5232-0HC05-1AB1	Control cabinet type, rounded plungers, type B, according to EN 50047 With flat cover • Snap-action contacts, integrated ²⁾	1 NO + 1 NC --	⊙	3SE5232-0HC05-1AB1	1	1 unit	41K
	With mounting plate and screws for attachment profile • Snap-action contacts, integrated ²⁾	1 NO + 1 NC --	⊙	3SE5232-0HC05-1AB2	1	1 unit	41K
	With standard cover • Snap-action contacts, integrated ²⁾	1 NO + 1 NC --	⊙	3SE5232-0HC05-1AB3	1	1 unit	41K
	With mounting plate and screws for attachment profile • Snap-action contacts, integrated ²⁾	1 NO + 1 NC --	⊙	3SE5232-0HC05-1AB4	1	1 unit	41K

Accessories

 3SX5100-1A	Mounting plate Suitable for 3SE523. and 3SE521. position switches with a width of 31 mm	--	--	3SX5100-1A	1	1 unit	41K
---	---	----	----	-------------------	---	--------	-----

⊙ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ The control cabinet types are not basic switches for the modular system.

²⁾ Subsequent replacement of contact blocks is not possible.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 31 mm according to EN 50047

Complete units2 or 3 contacts · Degree of protection IP65 · Cable entry 1 x (M20 x 1.5)¹⁾

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Complete units²⁾ · Enclosure width 31 mm**Rounded plungers, type B, according to EN 50047**

	3SE5232-0HC05	• Slow-action contacts	1 NO + 1 NC --	→	3SE5232-0BC05	1	1 unit	41K
			1 NO + 2 NC --	→	3SE5232-0KC05	1	1 unit	41K
			2 NO + 1 NC --	→	3SE5232-0PC05	1	1 unit	41K
		- With make-before-break	1 NO + 2 NC --	→	3SE5232-0MC05	1	1 unit	41K
		• Snap-action contacts	1 NO + 1 NC --	→	3SE5232-0CC05	1	1 unit	41K
			1 NO + 2 NC --	→	3SE5232-0LC05	1	1 unit	41K
		- Integrated ³⁾	1 NO + 1 NC --	→	3SE5232-0HC05	1	1 unit	41K
		- Short stroke, integrated ³⁾	1 NO + 1 NC --	→	3SE5232-0FC05	1	1 unit	41K
		- Contact distance 2 x 2 mm	1 NO + 1 NC --	→	3SE5232-0GC05	1	1 unit	41K
		With 2 LEDs, yellow/green						
	3SE5232-1KC05	• Slow-action contacts	1 NO + 2 NC 24 V DC	→	3SE5232-1KC05	1	1 unit	41K
			1 NO + 2 NC 230 V AC	→	3SE5232-3KC05	1	1 unit	41K
		• Snap-action contacts	1 NO + 2 NC 24 V DC	→	3SE5232-1LC05	1	1 unit	41K
			1 NO + 2 NC 230 V AC	→	3SE5232-3LC05	1	1 unit	41K
	3SE5232-0BC05-1CA0	With increased corrosion protection ⁴⁾						
		• Slow-action contacts	1 NO + 1 NC --	→	3SE5232-0BC05-1CA0	1	1 unit	41K
			1 NO + 2 NC --	→	3SE5232-0KC05-1CA0	1	1 unit	41K
			2 NO + 1 NC --	→	3SE5232-0PC05-1CA0	1	1 unit	41K
		- With make-before-break	1 NO + 2 NC --	→	3SE5232-0MC05-1CA0	1	1 unit	41K
		• Snap-action contacts	1 NO + 1 NC --	→	3SE5232-0CC05-1CA0	1	1 unit	41K
			1 NO + 2 NC --	→	3SE5232-0LC05-1CA0	1	1 unit	41K
		With M12 device plug, 4-pole (250 V, 4 A) ⁵⁾						
		• Slow-action contacts	1 NO + 1 NC --	→	3SE5234-0BC05-1AC4	1	1 unit	41K
			2 NC --	→	3SE5234-0KC05-1AE0	1	1 unit	41K
	3SE5234-1BC05-1AF3	• Snap-action contacts	2 NC --	→	3SE5234-0LC05-1AE0	1	1 unit	41K
		- Integrated ³⁾	1 NO + 1 NC --	→	3SE5234-0HC05-1AC4	1	1 unit	41K
		With M12 device plug, 5-pole (125 V, 4 A) ⁵⁾						
		With 2 LEDs, yellow/green						
		• Slow-action contacts	1 NO + 1 NC 24 V DC	→	3SE5234-1BC05-1AF3	1	1 unit	41K
		• Snap-action contacts	1 NO + 1 NC 24 V DC	→	3SE5234-1CC05-1AF3	1	1 unit	41K
	3SE5234-0LC05-1AE2	With pin assignment as for SIMATIC ET 200 ⁶⁾						
		• Snap-action contacts	2 NC --	→	3SE5234-0LC05-1AE2	1	1 unit	41K

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) A cable gland with seal must be used with the quick-connect method.

2) Popular versions.

3) Subsequent replacement of contact blocks is not possible.

4) Use corresponding high-grade steel lever.

5) For pin assignments, see page 12/12.

6) The 3SE5234-.....-1AE2 position switches, prewired with an M12 plug, 5-pole, have the same pin assignment as all fail-safe block I/O modules with a PROFINET connection in the SIMATIC ET 200eco PN and ET 200AL series with degree of protection IP65/IP67 for cabinet-free installation directly at the machine.

For more information, see page 12/88 onwards.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 31 mm according to EN 50047

2 or 3 contacts · Degree of protection IP65 · Cable entry 1 x (M20 x 1.5)¹⁾

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG	
			Article No.	Price per PU			
Complete units ²⁾ · Enclosure width 31 mm							
	Roller plungers, type C, according to EN 50047						
	With plastic roller 10 mm						
	• Slow-action contacts	1 NO + 1 NC --	⊙	3SE5232-0BD03	1	1 unit	41K
		1 NO + 2 NC --	⊙	3SE5232-0KD03	1	1 unit	41K
	• Snap-action contacts	1 NO + 2 NC --	⊙	3SE5232-0LD03	1	1 unit	41K
	- Integrated ³⁾	1 NO + 1 NC --	⊙	3SE5232-0HD03	1	1 unit	41K
	- Short stroke, integrated ³⁾	1 NO + 1 NC --	⊙	3SE5232-0FD03	1	1 unit	41K
	- Actuator head rotated 90°	1 NO + 2 NC --	⊙	3SE5232-0LD03-1AH0	1	1 unit	41K
	- With yellow cover	1 NO + 2 NC --	⊙	3SE5232-0LD03-1AG0	1	1 unit	41K
	With M12 device plug, 4-pole (250 V, 4 A) ⁴⁾						
• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	⊙	3SE5234-0HD03-1AC4	1	1 unit	41K	
With M12 device plug, 5-pole (125 V, 4 A) ⁴⁾							
With pin assignment as for SIMATIC ET 200 ⁵⁾							
• Snap-action contacts	2 NC --	⊙	3SE5234-0LD03-1AE2	1	1 unit	41K	
	Roller plungers with central fixing according to EN 50047						
	With plastic roller 10 mm						
	• Slow-action contacts	1 NO + 2 NC --	⊙	3SE5232-0KD10	1	1 unit	41K
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	⊙	3SE5232-0HD10	1	1 unit	41K
3SE5232-0HD10							
	Roller levers, type E, according to EN 50047						
	With metal lever and plastic roller 13 mm						
	• Slow-action contacts	1 NO + 1 NC --	⊙	3SE5232-0BE10	1	1 unit	41K
		1 NO + 2 NC --	⊙	3SE5232-0KE10	1	1 unit	41K
	• Snap-action contacts	1 NO + 2 NC --	⊙	3SE5232-0LE10	1	1 unit	41K
	- Integrated ³⁾	1 NO + 1 NC --	⊙	3SE5232-0HE10	1	1 unit	41K
	With M12 device plug, 4-pole (250 V, 4 A) ⁴⁾						
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	⊙	3SE5234-0HE10-1AC4	1	1 unit	41K
	With metal lever and high-grade steel roller 13 mm						
	With M12 device plug, 5-pole (125 V, 4 A) ⁴⁾						
With pin assignment as for SIMATIC ET 200 ⁵⁾							
• Snap-action contacts	2 NC --	⊙	3SE5234-0LE11-1AE2	1	1 unit	41K	
With high-grade steel lever and plastic roller 13 mm							
• Snap-action contacts	1 NO + 2 NC --	⊙	3SE5232-0LE12	1	1 unit	41K	
With increased corrosion protection ⁶⁾							
• Snap-action contacts	1 NO + 1 NC --	⊙	3SE5232-0CE12-1CA0	1	1 unit	41K	
	Angular roller levers, according to EN 50047						
	With metal lever and plastic roller 13 mm						
	• Slow-action contacts	1 NO + 1 NC --	⊙	3SE5232-0BF10	1	1 unit	41K
		1 NO + 2 NC --	⊙	3SE5232-0KF10	1	1 unit	41K
	• Snap-action contacts	1 NO + 2 NC --	⊙	3SE5232-0LF10	1	1 unit	41K
	- Integrated ³⁾	1 NO + 1 NC --	⊙	3SE5232-0HF10	1	1 unit	41K
3SE5232-0BF10							

⊙ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) A cable gland with seal must be used with the quick-connect method.

2) Popular versions.

3) Subsequent replacement of contact blocks is not possible.

4) For pin assignments, see page 12/12.

5) The 3SE5234-.....-1AE2 position switches, prewired with an M12 plug, 5-pole, have the same pin assignment as all fail-safe block I/O modules with a PROFINET connection in the SIMATIC ET 200eco PN and ET 200AL series with degree of protection IP65/IP67 for cabinet-free installation directly at the machine.

For more information, see page 12/88 onwards.

6) Use corresponding high-grade steel lever.

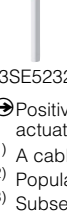
Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 31 mm according to EN 50047

2 or 3 contacts · Degree of protection IP65 · Cable entry 1 x (M20 x 1.5)¹⁾

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		
Complete units²⁾ · Enclosure width 31 mm						
	Spring rods, according to EN 50047					
	Length 142.5 mm, with plastic plunger 50 mm					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5232-0HR01	1	1 unit	41K
	<u>With M12 device plug, 4-pole (250 V, 4 A)⁴⁾</u>					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5234-0HR01-1AC4	1	1 unit	41K
	Twist levers, type A, according to EN 50047					
	With metal lever 21 mm and plastic roller 19 mm					
	• Slow-action contacts	1 NO + 1 NC --	3SE5232-0BK21	1	1 unit	41K
		1 NO + 2 NC --	3SE5232-0KK21	1	1 unit	41K
	• Snap-action contacts	1 NO + 2 NC --	3SE5232-0LK21	1	1 unit	41K
	- Integrated ³⁾	1 NO + 1 NC --	3SE5232-0HK21	1	1 unit	41K
	<u>With M12 device plug, 4-pole (250 V, 4 A)⁴⁾</u>					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5234-0HK21-1AC4	1	1 unit	41K
	With metal lever 35 mm and plastic roller 19 mm					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5232-0HK15	1	1 unit	41K
	Twist levers, adjustable length, according to EN 50047					
	With metal lever 100 mm, with grid holes and plastic roller 19 mm					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5232-0HK60	1	1 unit	41K
	With metal lever 100 mm and plastic roller 19 mm					
	• Slow-action contacts	1 NO + 1 NC --	3SE5232-0BK50	1	1 unit	41K
	• Snap-action contacts	1 NO + 2 NC --	3SE5232-0LK50	1	1 unit	41K
	- Integrated ³⁾	1 NO + 1 NC --	3SE5232-0HK50	1	1 unit	41K
	<u>With M12 device plug, 4-pole (250 V, 4 A)⁴⁾</u>					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5234-0HK50-1AC4	1	1 unit	41K
	Rod levers, according to EN 50047					
	With aluminum rod 200 mm					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5232-0HK80	1	1 unit	41K
	With plastic rod, length 200 mm					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5232-0HK82	1	1 unit	41K
	<u>With M12 device plug, 4-pole (250 V, 4 A)⁴⁾</u>					
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC --	3SE5234-0HK82-1AC4	1	1 unit	41K

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) A cable gland with seal must be used with the quick-connect method.

2) Popular versions.

3) Subsequent replacement of contact blocks is not possible.

4) For pin assignments, see page 12/12.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/18.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 31 mm according to EN 50047

Modular system

2 or 3 contacts · Degree of protection IP65 · Cable entry 1 x (M20 x 1.5)¹⁾

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Basic switches²⁾ · Enclosure width 31 mm

Rounded plungers, type B, according to EN 50047



3SE5232-0BC05

- Slow-action contacts
 - 1 NO + 1 NC -- ➞
 - 1 NO + 2 NC -- ➞
 - 2 NO + 1 NC -- ➞
 - With make-before-break
 - 1 NO + 2 NC -- ➞
- Snap-action contacts
 - 1 NO + 1 NC -- ➞
 - 1 NO + 2 NC -- ➞
 - Integrated³⁾
 - 1 NO + 1 NC -- ➞
 - Short stroke, integrated³⁾
 - 1 NO + 1 NC -- ➞
 - Contact distance 2 x 2 mm
 - 1 NO + 1 NC -- ➞

With increased corrosion protection⁴⁾

- Slow-action contacts
 - 1 NO + 1 NC -- ➞
 - 1 NO + 2 NC -- ➞
 - 2 NO + 1 NC -- ➞
 - With make-before-break
 - 1 NO + 2 NC -- ➞
- Snap-action contacts
 - 1 NO + 1 NC -- ➞
 - 1 NO + 2 NC -- ➞



3SE5232-0BC05-1CA0

With 2 LEDs, yellow/green

- Slow-action contacts
 - 1 NO + 2 NC 24 V DC ➞
 - 1 NO + 2 NC 230 V AC ➞
- Snap-action contacts
 - 1 NO + 2 NC 24 V DC ➞
 - 1 NO + 2 NC 230 V AC ➞



3SE5232-1KC05

With M12 device plug, 4-pole (250 V, 4 A)⁵⁾

- Slow-action contacts
 - 1 NO + 1 NC -- ➞
 - 2 NC -- ➞
- Snap-action contacts
 - 2 NC -- ➞
 - Integrated³⁾
 - 1 NO + 1 NC -- ➞



3SE5234-0HC05-1AC4

With M12 device plug, 5-pole (125 V, 4 A)⁵⁾

With 2 LEDs, yellow/green

- Slow-action contacts
 - 1 NO + 1 NC 24 V DC ➞
- Snap-action contacts
 - 1 NO + 1 NC 24 V DC ➞



3SE5234-1BC05-1AF3

With pin assignment as for SIMATIC ET 200⁶⁾

- Snap-action contacts
 - 2 NC -- ➞

3SE5232-0BC05	1	1 unit	41K
3SE5232-0KC05	1	1 unit	41K
3SE5232-0PC05	1	1 unit	41K
3SE5232-0MC05	1	1 unit	41K
3SE5232-0CC05	1	1 unit	41K
3SE5232-0LC05	1	1 unit	41K
3SE5232-0HC05	1	1 unit	41K
3SE5232-0FC05	1	1 unit	41K
3SE5232-0GC05	1	1 unit	41K
3SE5232-0BC05-1CA0	1	1 unit	41K
3SE5232-0KC05-1CA0	1	1 unit	41K
3SE5232-0PC05-1CA0	1	1 unit	41K
3SE5232-0MC05-1CA0	1	1 unit	41K
3SE5232-0CC05-1CA0	1	1 unit	41K
3SE5232-0LC05-1CA0	1	1 unit	41K
3SE5232-1KC05	1	1 unit	41K
3SE5232-3KC05	1	1 unit	41K
3SE5232-1LC05	1	1 unit	41K
3SE5232-3LC05	1	1 unit	41K

3SE5234-0BC05-1AC4	1	1 unit	41K
3SE5234-0KC05-1AE0	1	1 unit	41K
3SE5234-0LC05-1AE0	1	1 unit	41K
3SE5234-0HC05-1AC4	1	1 unit	41K

3SE5234-1BC05-1AF3	1	1 unit	41K
3SE5234-1CC05-1AF3	1	1 unit	41K

3SE5234-0LC05-1AE2	1	1 unit	41K
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➞ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ A cable gland with seal must be used with the quick-connect method.

²⁾ For enclosures with widths of 31 mm, the basic switch is a complete unit with rounded plungers.

³⁾ Subsequent replacement of contact blocks is not possible.

⁴⁾ Use corresponding high-grade steel lever.

⁵⁾ For pin assignments, see page 12/12.

⁶⁾ The 3SE5234-.....-1AE2 position switches, prewired with an M12 plug, 5-pole, have the same pin assignment as all fail-safe block I/O modules with a PROFINET connection in the SIMATIC ET 200eco PN and ET 200AL series with degree of protection IP65/IP67 for cabinet-free installation directly at the machine.

For more information, see page 12/88 onwards.

Note:

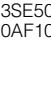
For the selection aid, see page 12/13.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 31 mm according to EN 50047

Version		Diameter	Modular system		PU (UNIT, SET, M)	PS*	PG	
		mm	Article No.	Price per PU				
Operating mechanisms								
	Plain plungers							
• High-grade steel plungers		8.5	➞	3SE5000-0AB01	1	1 unit	41K	
3SE5000-0AB01								
Roller plungers, type C, according to EN 50047								
	• Plastic roller	10	➞	3SE5000-0AD03	1	1 unit	41K	
	• High-grade steel roller	10	➞	3SE5000-0AD04	1	1 unit	41K	
	3SE5000-0AD10							
Roller plungers with central fixing								
	• Plastic roller	10	➞	3SE5000-0AD10	1	1 unit	41K	
	• High-grade steel roller	10	➞	3SE5000-0AD11	1	1 unit	41K	
	3SE5000-0AD10							
Roller levers, type E, according to EN 50047								
	• Metal lever	Plastic roller	13	➞	3SE5000-0AE10	1	1 unit	41K
		High-grade steel roller	13	➞	3SE5000-0AE11	1	1 unit	41K
	• High-grade steel lever	Plastic roller	13	➞	3SE5000-0AE12	1	1 unit	41K
		High-grade steel roller	13	➞	3SE5000-0AE13	1	1 unit	41K
	3SE5000-0AE10							
	3SE5000-0AF10							
Angular roller levers								
	• Metal lever	Plastic roller	13	➞	3SE5000-0AF10	1	1 unit	41K
		High-grade steel roller	13	➞	3SE5000-0AF11	1	1 unit	41K
	• High-grade steel lever	Plastic roller	13	➞	3SE5000-0AF12	1	1 unit	41K
		High-grade steel roller	13	➞	3SE5000-0AF13	1	1 unit	41K
	3SE5000-0AR01							
	3SE5000-0AR03							
Spring rods (for switches with snap-action contacts only)								
• Plunger made of plastic, spring of high-grade steel:		7						
- Length 142.5 mm (spring 50 mm, plunger 50 mm)				3SE5000-0AR01	1	1 unit	41K	
- Length 76 mm (spring 23.5 mm, plunger 10 mm)				3SE5000-0AR03	1	1 unit	41K	
- Length 242.5 mm (spring 150 mm, plunger 50 mm)				3SE5000-0AR04	1	1 unit	41K	
• Plunger and spring made of high-grade steel:		7						
- Length 142.5 mm (spring 50 mm, plunger 50 mm)				3SE5000-0AR02	1	1 unit	41K	
	3SE5000-0AR01							
	3SE5000-0AR03							
Twist actuators								
	Twist actuators, for 31/50 mm, EN 50047							
• For twist levers and rod actuators, switching right and/or left, adjustable		--	➞	3SE5000-0AK00	1	1 unit	41K	
	3SE5000-0AA21							
Levers								
Twist levers 21 mm, straight, type A, according to EN 50047								
	• Metal lever	Plastic roller	19	➞	3SE5000-0AA21	1	1 unit	41K
			30	➞	3SE5000-0AA25	1	1 unit	41K
		High-grade steel roller	19	➞	3SE5000-0AA22	1	1 unit	41K
	- With ball bearing		19	➞	3SE5000-0AA23	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➞	3SE5000-0AA31	1	1 unit	41K
		High-grade steel roller	19	➞	3SE5000-0AA32	1	1 unit	41K
	3SE5000-0AA60							
Twist levers 30 mm, straight¹⁾								
	• Metal lever	Plastic roller	19	➞	3SE5000-0AA24	1	1 unit	41K
			30	➞	3SE5000-0AA26	1	1 unit	41K
	3SE5000-0AA50							
Twist levers 100 mm, adjustable length, with grid hole								
	• Metal lever	Plastic roller	19	➞	3SE5000-0AA60	1	1 unit	41K
			50	➞	3SE5000-0AA67	1	1 unit	41K
		High-grade steel roller	19	➞	3SE5000-0AA61	1	1 unit	41K
		Rubber roller	50	➞	3SE5000-0AA68	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➞	3SE5000-0AA62	1	1 unit	41K
		High-grade steel roller	19	➞	3SE5000-0AA63	1	1 unit	41K
	3SE5000-0AA60							
Twist levers 100 mm, adjustable length								
	• Metal lever	Plastic roller	19		3SE5000-0AA50	1	1 unit	41K
			30		3SE5000-0AA55	1	1 unit	41K
			50		3SE5000-0AA57	1	1 unit	41K
		High-grade steel roller	19		3SE5000-0AA51	1	1 unit	41K
		Rubber roller	50		3SE5000-0AA58	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19		3SE5000-0AA52	1	1 unit	41K
		High-grade steel roller	19		3SE5000-0AA53	1	1 unit	41K
Rod levers 200 mm								
	• Aluminum rod	6		3SE5000-0AA80	1	1 unit	41K	
	• Spring rod	6		3SE5000-0AA81	1	1 unit	41K	
	• Plastic rod	6		3SE5000-0AA82	1	1 unit	41K	
3SE5000-0AA80								

➞ Positively driven actuator, necessary in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

* You can order this quantity or a multiple thereof.
Illustrations are approximate

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 40 mm according to EN 50041

Selection and ordering data

Complete units

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG	
			Article No.	Price per PU			
Complete units ¹⁾ · Enclosure width 40 mm							
 3SE5132-0BB01	Plain plungers, according to EN 50041 With high-grade steel plunger 8.5 mm						
	• Slow-action contacts	1 NO + 1 NC -- 1 NO + 2 NC -- 2 NO + 1 NC --	⤵ ⤵ ⤵	3SE5132-0BB01 3SE5132-0KB01 3SE5132-0PB01	1 1 1	1 unit 1 unit 1 unit	41K 41K 41K
	• Snap-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --	⤵ ⤵	3SE5132-0CB01 3SE5132-0LB01	1 1	1 unit 1 unit	41K 41K
	Rounded plungers, type B, according to EN 50041 With plastic plunger 10 mm						
	• Slow-action contacts	1 NO + 1 NC -- 1 NO + 2 NC -- 2 NO + 1 NC --	⤵ ⤵ ⤵	3SE5132-0BC03 3SE5132-0KC03 3SE5132-0PC03	1 1 1	1 unit 1 unit 1 unit	41K 41K 41K
	• Snap-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --	⤵ ⤵	3SE5132-0CC03 3SE5132-0LC03	1 1	1 unit 1 unit	41K 41K
 3SE5132-0BD05	Roller plungers, type C, according to EN 50041 With plastic roller 13 mm						
	• Slow-action contacts	1 NO + 1 NC -- 1 NO + 2 NC -- 2 NO + 1 NC --	⤵ ⤵ ⤵	3SE5132-0BD05 3SE5132-0KD05 3SE5132-0PD05	1 1 1	1 unit 1 unit 1 unit	41K 41K 41K
	• Snap-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --	⤵ ⤵	3SE5132-0CD05 3SE5132-0LD05	1 1	1 unit 1 unit	41K 41K
	Roller levers, according to EN 50041 With metal lever and plastic roller 22 mm						
	• Slow-action contacts	1 NO + 1 NC -- 1 NO + 2 NC -- 2 NO + 1 NC --	⤵ ⤵ ⤵	3SE5132-0BE05 3SE5132-0KE05 3SE5132-0PE05	1 1 1	1 unit 1 unit 1 unit	41K 41K 41K
	• Snap-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --	⤵ ⤵	3SE5132-0CE05 3SE5132-0LE05	1 1	1 unit 1 unit	41K 41K
 3SE5132-0BF05	Angular roller levers, according to EN 50041 With metal lever and plastic roller 22 mm						
	• Slow-action contacts	1 NO + 1 NC --	⤵	3SE5132-0BF05	1	1 unit	41K
	• Snap-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --	⤵ ⤵	3SE5132-0CF05 3SE5132-0LF05	1 1	1 unit 1 unit	41K 41K
	Spring rods²⁾, according to EN 50041 Length 142.5 mm, with plastic plunger 50 mm						
 3SE5132-0CR01	• Snap-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --		3SE5132-0CR01 3SE5132-0LR01	1 1	1 unit 1 unit	41K 41K

➞ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Popular versions.

²⁾ Degree of protection IP65/IP67.

* You can order this quantity or a multiple thereof.
Illustrations are approximate

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 40 mm according to EN 50041

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		
Complete units¹⁾ · Enclosure width 40 mm						
	Twist levers, type A, according to EN 50041					
	With metal lever 27 mm and plastic roller 19 mm					
	• Slow-action contacts	1 NO + 1 NC --	3SE5132-0BJ01	1	1 unit	41K
		1 NO + 2 NC --	3SE5132-0KJ01	1	1 unit	41K
		2 NO + 1 NC --	3SE5132-0PJ01	1	1 unit	41K
	• Snap-action contacts	1 NO + 1 NC --	3SE5132-0CJ01	1	1 unit	41K
3SE5132-0BJ01		1 NO + 2 NC --	3SE5132-0LJ01	1	1 unit	41K
	Twist levers, adjustable length, according to EN 50041					
	With metal lever 100 mm, with grid holes and plastic roller 19 mm					
	• Snap-action contacts	1 NO + 1 NC --	3SE5132-0CJ60	1	1 unit	41K
3SE5132-0CJ60		1 NO + 2 NC --	3SE5132-0LJ60	1	1 unit	41K
	With metal lever 100 mm and plastic roller 19 mm					
	• Snap-action contacts	1 NO + 1 NC --	3SE5132-0CJ50	1	1 unit	41K
3SE5132-0CJ50		1 NO + 2 NC --	3SE5132-0LJ50	1	1 unit	41K
	Rod levers²⁾, type D, according to EN 50041					
	With aluminum rod 200 mm					
	• Snap-action contacts	1 NO + 1 NC --	3SE5132-0CJ80	1	1 unit	41K
3SE5132-0CJ80						
	With plastic rod 200 mm					
	• Snap-action contacts	1 NO + 1 NC --	3SE5132-0CJ82	1	1 unit	41K

⤵ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) Popular versions.

2) Degree of protection IP65/IP67.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/22.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 40 mm according to EN 50041

Modular system

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Basic switches · Enclosure width 40 mm

Rounded plungers, according to EN 50041



3SE5132-0BA00

- Slow-action contacts
 - 1 NO + 1 NC --
 - 1 NO + 2 NC --
 - 2 NO + 1 NC --
 - With make-before-break
 - 1 NO + 2 NC --
- Snap-action contacts
 - 1 NO + 1 NC --
 - 1 NO + 2 NC --
 - 1 NO + 1 NC --

With increased corrosion protection¹⁾



3SE5132-0BA00-1CA0

- Slow-action contacts
 - 1 NO + 1 NC --
 - 1 NO + 2 NC --
 - 2 NO + 1 NC --
 - With make-before-break
 - 1 NO + 2 NC --
- Snap-action contacts
 - 1 NO + 1 NC --
 - 1 NO + 2 NC --

With 2 LEDs, yellow/green



3SE5132-1KA00

- Slow-action contacts
 - 1 NO + 2 NC 24 V DC
 - 1 NO + 2 NC 230 V AC
- Snap-action contacts
 - 1 NO + 2 NC 24 V DC
 - 1 NO + 2 NC 230 V AC

With M12 device plug, 4-pole (250 V, 4 A)²⁾



3SE5134-0BA00-1AC4

- Slow-action contacts
 - 1 NO + 1 NC --
 - 2 NC --
- Snap-action contacts
 - 1 NO + 1 NC --
 - 2 NC --

3SE5132-0BA00	1	1 unit	41K
3SE5132-0KA00	1	1 unit	41K
3SE5132-0PA00	1	1 unit	41K
3SE5132-0MA00	1	1 unit	41K
3SE5132-0CA00	1	1 unit	41K
3SE5132-0LA00	1	1 unit	41K
3SE5132-0CA00-1AC1	1	1 unit	41K
3SE5132-0BA00-1CA0	1	1 unit	41K
3SE5132-0KA00-1CA0	1	1 unit	41K
3SE5132-0PA00-1CA0	1	1 unit	41K
3SE5132-0MA00-1CA0	1	1 unit	41K
3SE5132-0CA00-1CA0	1	1 unit	41K
3SE5132-0LA00-1CA0	1	1 unit	41K
3SE5132-1KA00	1	1 unit	41K
3SE5132-3KA00	1	1 unit	41K
3SE5132-1LA00	1	1 unit	41K
3SE5132-3LA00	1	1 unit	41K
3SE5134-0BA00-1AC4	1	1 unit	41K
3SE5134-0KA00-1AE0	1	1 unit	41K
3SE5134-0CA00-1AC4	1	1 unit	41K
3SE5134-0LA00-1AE0	1	1 unit	41K

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Use corresponding high-grade steel lever.

²⁾ For pin assignments, see page 12/12.

Note:

For the selection aid, see page 12/13.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 40 mm according to EN 50041

Version		Diameter	Modular system		PU (UNIT, SET, M)	PS*	PG
		mm	Article No.	Price per PU			
Operating mechanisms							
	Plain plungers						
• High-grade steel plunger		8.5	→	3SE5000-0AB01	1	1 unit	41K
3SE5000-0AB01							
	Rounded plungers, type B, according to EN 50041						
• Plastic plungers		10	→	3SE5000-0AC03	1	1 unit	41K
3SE5000-0AC03							
	Roller plungers, type C, according to EN 50041						
• Plastic plungers		13	→	3SE5000-0AD05	1	1 unit	41K
Plastic roller		13	→	3SE5000-0AD06	1	1 unit	41K
High-grade steel roller							
3SE5000-0AD05							
	Roller levers						
• Metal lever		22	→	3SE5000-0AE05	1	1 unit	41K
Plastic roller							
3SE5000-0AE05							
	Angular roller levers						
• Metal lever		22	→	3SE5000-0AF05	1	1 unit	41K
Plastic roller							
3SE5000-0AF05							
	Spring rods (for switches with snap-action contacts only)						
• Plunger made of plastic, spring of high-grade steel: 7							
- Length 142.5 mm (spring 50 mm, plunger 50 mm)				3SE5000-0AR01	1	1 unit	41K
- Length 76 mm (spring 23.5 mm, plunger 10 mm)				3SE5000-0AR03	1	1 unit	41K
- Length 242.5 mm (spring 150 mm, plunger 50 mm)				3SE5000-0AR04	1	1 unit	41K
• Plunger and spring made of high-grade steel: 7							
- Length 142.5 mm (spring 50 mm, plunger 50 mm)				3SE5000-0AR02	1	1 unit	41K
3SE5000-0AR01							
Twist actuators							
	Twist actuators, for 40 mm, according to EN 50041						
• For twist levers and rod actuators, switching right and/or left, adjustable		--	→	3SE5000-0AH00	1	1 unit	41K
3SE5000-0AH00							
	Levers						
Twist levers 27 mm, offset, type A, according to EN 50041							
• Metal lever		19	→	3SE5000-0AA01	1	1 unit	41K
Plastic roller		30	→	3SE5000-0AA05	1	1 unit	41K
		50	→	3SE5000-0AA07	1	1 unit	41K
3SE5000-0AA01							
• 2 plastic rollers		19	→	3SE5000-0AA04	1	1 unit	41K
High-grade steel roller		19	→	3SE5000-0AA02	1	1 unit	41K
- With ball bearing		19	→	3SE5000-0AA03	1	1 unit	41K
Rubber roller		50	→	3SE5000-0AA08	1	1 unit	41K
• High-grade steel lever		19	→	3SE5000-0AA11	1	1 unit	41K
Plastic roller		19	→	3SE5000-0AA12	1	1 unit	41K
High-grade steel roller							
Twist levers 35 mm, offset, type A, according to EN 50041							
• Metal lever		19	→	3SE5000-0AA15	1	1 unit	41K
High-grade steel lever		19	→	3SE5000-0AA16	1	1 unit	41K
Twist levers 30 mm, straight¹⁾, type A, according to EN 50041							
• Metal lever		19	→	3SE5000-0AA24	1	1 unit	41K
Plastic roller		30	→	3SE5000-0AA26	1	1 unit	41K
3SE5000-0AA60							
Twist levers 100 mm, adjustable length, with grid hole							
• Metal lever		19	→	3SE5000-0AA60	1	1 unit	41K
Plastic roller		19	→	3SE5000-0AA61	1	1 unit	41K
High-grade steel roller		50	→	3SE5000-0AA68	1	1 unit	41K
Rubber roller		19	→	3SE5000-0AA62	1	1 unit	41K
• High-grade steel lever		19	→	3SE5000-0AA63	1	1 unit	41K
Plastic roller							
High-grade steel roller							
Twist levers 100 mm, adjustable length							
• Metal lever		19	→	3SE5000-0AA50	1	1 unit	41K
Plastic roller		30	→	3SE5000-0AA55	1	1 unit	41K
High-grade steel roller		19	→	3SE5000-0AA51	1	1 unit	41K
Rubber roller		50	→	3SE5000-0AA58	1	1 unit	41K
• High-grade steel lever		19	→	3SE5000-0AA52	1	1 unit	41K
Plastic roller		19	→	3SE5000-0AA53	1	1 unit	41K
High-grade steel roller							
Rod levers 200 mm, type D, according to EN 50041							
• Aluminum rod		6		3SE5000-0AA80	1	1 unit	41K
Spring rod		6		3SE5000-0AA81	1	1 unit	41K
Plastic rod		6		3SE5000-0AA82	1	1 unit	41K
3SE5000-0AA80							

→ Positively driven actuator, necessary in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 50 mm

Selection and ordering data

Complete units

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 2 x (M20 x 1.5) · Operating points according to EN 50047

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Complete units¹⁾ · Enclosure width 50 mm

Rounded plungers



3SE5242-0BC05

- Slow-action contacts
 - 1 NO + 1 NC --
 - 1 NO + 2 NC --
 - 2 NO + 1 NC --
 - With make-before-break 1 NO + 2 NC --
- Snap-action contacts
 - 1 NO + 1 NC --
 - 1 NO + 2 NC --
 - Integrated²⁾ 1 NO + 1 NC --
 - Short stroke, integrated²⁾ 1 NO + 1 NC --
 - Contact distance 2 x 2 mm 1 NO + 1 NC --

With increased corrosion protection³⁾

- Slow-action contacts
 - 1 NO + 1 NC --
 - 1 NO + 2 NC --
 - 2 NO + 1 NC --
 - With make-before-break 1 NO + 2 NC --
- Snap-action contacts
 - 1 NO + 2 NC --
 - Integrated²⁾ 1 NO + 1 NC --

With 2 LEDs, yellow/green

- Slow-action contacts
 - 1 NO + 2 NC 24 V DC
 - 1 NO + 2 NC 230 V AC
- Snap-action contacts
 - 1 NO + 2 NC 24 V DC
 - 1 NO + 2 NC 230 V AC

3SE5242-0BC05	1	1 unit	41K
3SE5242-0KC05	1	1 unit	41K
3SE5242-0PC05	1	1 unit	41K
3SE5242-0MC05	1	1 unit	41K
3SE5242-0CC05	1	1 unit	41K
3SE5242-0LC05	1	1 unit	41K
3SE5242-0HC05	1	1 unit	41K
3SE5242-0FC05	1	1 unit	41K
3SE5242-0GC05	1	1 unit	41K
3SE5242-0BC05-1CA0	1	1 unit	41K
3SE5242-0KC05-1CA0	1	1 unit	41K
3SE5242-0PC05-1CA0	1	1 unit	41K
3SE5242-0MC05-1CA0	1	1 unit	41K
3SE5242-0LC05-1CA0	1	1 unit	41K
3SE5242-0HC05-1CA0	1	1 unit	41K
3SE5242-1KC05	1	1 unit	41K
3SE5242-3KC05	1	1 unit	41K
3SE5242-1LC05	1	1 unit	41K
3SE5242-3LC05	1	1 unit	41K

Roller plungers

With plastic roller 10 mm

- Slow-action contacts 1 NO + 1 NC --
- Snap-action contacts 1 NO + 2 NC --
- Integrated²⁾ 1 NO + 1 NC --

3SE5242-0BD03	1	1 unit	41K
3SE5242-0LD03	1	1 unit	41K
3SE5242-0HD03	1	1 unit	41K

Roller levers

With metal lever and plastic roller 13 mm

- Slow-action contacts 1 NO + 1 NC --
- Snap-action contacts 1 NO + 2 NC --
- Integrated²⁾ 1 NO + 1 NC --

3SE5242-0BE10	1	1 unit	41K
3SE5242-0LE10	1	1 unit	41K
3SE5242-0HE10	1	1 unit	41K

With M12 device plug, 4-pole right (250 V, 4 A)⁴⁾

- Snap-action contacts 2 NC --

3SE5244-0LE10-1AE0	1	1 unit	41K
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Twist levers

With metal lever 21 mm and plastic roller 19 mm

- Slow-action contacts 1 NO + 1 NC --
- Snap-action contacts 1 NO + 2 NC --
- Integrated²⁾ 1 NO + 1 NC --

3SE5242-0BK21	1	1 unit	41K
3SE5242-0LK21	1	1 unit	41K
3SE5242-0HK21	1	1 unit	41K

Twist levers, adjustable length

With metal lever 100 mm and plastic roller 19 mm

- Snap-action contacts, integrated²⁾ 1 NO + 1 NC --

3SE5242-0HK50	1	1 unit	41K
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3SE5242-0BK21



3SE5242-0HK50

➔ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) Popular versions.

2) Subsequent replacement of contact blocks is not possible.

3) Use corresponding high-grade steel lever.

4) For pin assignments, see page 12/12.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/25.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 50 mm

Modular system

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 2 x (M20 x 1.5) · Operating points according to EN 50047

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
						
			Article No.	Price per PU		

Basic switches · Enclosure width 50 mm

 3SE5242-0BC05	Rounded plungers¹⁾					
	• Slow-action contacts	1 NO + 1 NC --	→	3SE5242-0BC05	1	1 unit 41K
		1 NO + 2 NC --	→	3SE5242-0KC05	1	1 unit 41K
		2 NO + 1 NC --	→	3SE5242-0PC05	1	1 unit 41K
	- With make-before-break	1 NO + 2 NC --	→	3SE5242-0MC05	1	1 unit 41K
	• Snap-action contacts	1 NO + 1 NC --	→	3SE5242-0CC05	1	1 unit 41K
		1 NO + 2 NC --	→	3SE5242-0LC05	1	1 unit 41K
	- Integrated ²⁾	1 NO + 1 NC --	→	3SE5242-0HC05	1	1 unit 41K
	- Short stroke, integrated ²⁾	1 NO + 1 NC --	→	3SE5242-0FC05	1	1 unit 41K
	- Contact distance 2 x 2 mm	1 NO + 1 NC --	→	3SE5242-0GC05	1	1 unit 41K
 3SE5242-0BC05-1CA0	With increased corrosion protection ³⁾					
	• Slow-action contacts	1 NO + 1 NC --	→	3SE5242-0BC05-1CA0	1	1 unit 41K
		1 NO + 2 NC --	→	3SE5242-0KC05-1CA0	1	1 unit 41K
		2 NO + 1 NC --	→	3SE5242-0PC05-1CA0	1	1 unit 41K
	- With make-before-break	1 NO + 2 NC --	→	3SE5242-0MC05-1CA0	1	1 unit 41K
	• Snap-action contacts	1 NO + 2 NC --	→	3SE5242-0LC05-1CA0	1	1 unit 41K
	- Integrated ²⁾	1 NO + 1 NC --	→	3SE5242-0HC05-1CA0	1	1 unit 41K
 3SE5242-1KC05	With 2 LEDs, yellow/green					
	• Slow-action contacts	1 NO + 2 NC 24 V DC	→	3SE5242-1KC05	1	1 unit 41K
		1 NO + 2 NC 230 V AC	→	3SE5242-3KC05	1	1 unit 41K
	• Snap-action contacts	1 NO + 2 NC 24 V DC	→	3SE5242-1LC05	1	1 unit 41K
		1 NO + 2 NC 230 V AC	→	3SE5242-3LC05	1	1 unit 41K

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ For enclosures with widths of 50 mm, the basic switch is a complete unit with rounded plungers.

²⁾ Subsequent replacement of contact blocks is not possible.

³⁾ Use corresponding high-grade steel lever.

Note:

For the selection aid, [see page 12/13](#).

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, plastic enclosures

Enclosure width 50 mm

Version		Dia-me-ter	Modular system			PU (UNIT, SET, M)	PS*	PG
		mm	Article No.		Price per PU			
Operating mechanisms								
 3SE5000-0AB01	Plain plungers • High-grade steel plungers		8.5	➡	3SE5000-0AB01	1	1 unit	41K
 3SE5000-0AD03	Roller plungers, type C, according to EN 50047 • Plastic rollers • High-grade steel rollers		10 10	➡ ➡	3SE5000-0AD03 3SE5000-0AD04	1 1	1 unit 1 unit	41K 41K
 3SE5000-0AD10	Roller plungers with central fixing • Plastic rollers • High-grade steel rollers		10 10	➡ ➡	3SE5000-0AD10 3SE5000-0AD11	1 1	1 unit 1 unit	41K 41K
 3SE5000-0AE10	Roller levers, type E, according to EN 50047 • Metal lever • High-grade steel lever		13 13 13 13	➡ ➡ ➡ ➡	3SE5000-0AE10 3SE5000-0AE11 3SE5000-0AE12 3SE5000-0AE13	1 1 1 1	1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K
 3SE5000-0AF10	Angular roller levers • Metal lever • High-grade steel lever		13 13 13 13	➡ ➡ ➡ ➡	3SE5000-0AF10 3SE5000-0AF11 3SE5000-0AF12 3SE5000-0AF13	1 1 1 1	1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K
 3SE5000-0AR01	Spring rods (for switches with snap-action contacts only) • Plunger made of plastic, spring of high-grade steel: - Length 142.5 mm (spring 50 mm, plunger 50 mm) - Length 76 mm (spring 23.5 mm, plunger 10 mm) - Length 242.5 mm (spring 150 mm, plunger 50 mm) • Plunger and spring made of high-grade steel: - Length 142.5 mm (spring 50 mm, plunger 50 mm)		7 7		3SE5000-0AR01 3SE5000-0AR03 3SE5000-0AR04 3SE5000-0AR02	1 1 1 1	1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K
Twist actuators								
 3SE5000-0AK00	Twist actuators, for 31/50 mm, according to EN 50047 • For twist levers and rod actuators, switching right and/or left, adjustable		--	➡	3SE5000-0AK00	1	1 unit	41K
 3SE5000-0AA21	Levers Twist levers 21 mm, straight, type A, according to EN 50047 • Metal lever • High-grade steel lever		19 30 19 19 19 19	➡ ➡ ➡ ➡ ➡ ➡	3SE5000-0AA21 3SE5000-0AA25 3SE5000-0AA22 3SE5000-0AA23 3SE5000-0AA31 3SE5000-0AA32	1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K 41K 41K
 3SE5000-0AA60	Twist levers 30 mm, straight¹⁾ • Metal lever		19 30	➡ ➡	3SE5000-0AA24 3SE5000-0AA26	1 1	1 unit 1 unit	41K 41K
 3SE5000-0AA50	Twist levers 100 mm, adjustable length, with grid hole • Metal lever		19 50 19 50 19 19	➡ ➡ ➡ ➡ ➡ ➡	3SE5000-0AA60 3SE5000-0AA67 3SE5000-0AA61 3SE5000-0AA68 3SE5000-0AA62 3SE5000-0AA63	1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K 41K 41K
 3SE5000-0AA80	Twist levers 100 mm, adjustable length • Metal lever		19 30 50 19 50 19 19	➡ ➡ ➡ ➡ ➡ ➡ ➡	3SE5000-0AA50 3SE5000-0AA55 3SE5000-0AA57 3SE5000-0AA51 3SE5000-0AA58 3SE5000-0AA52 3SE5000-0AA53	1 1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K 41K 41K 41K
 3SE5000-0AA80	Rod levers 200 mm • Aluminum rod • Spring rod • Plastic rod		6 6 6		3SE5000-0AA80 3SE5000-0AA81 3SE5000-0AA82	1 1 1	1 unit 1 unit 1 unit	41K 41K 41K

➡ Positively driven actuator, necessary in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 31 mm according to EN 50047

Selection and ordering data

Complete units

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Complete units¹⁾ · Enclosure width 31 mm

Rounded plungers, type B, according to EN 50047							
	• Slow-action contacts	1 NO + 1 NC --	➔	3SE5212-0BC05	1	1 unit 41K	
		1 NO + 2 NC --	➔	3SE5212-0KC05	1	1 unit 41K	
		2 NO + 1 NC --	➔	3SE5212-0PC05	1	1 unit 41K	
		- With make-before-break	1 NO + 2 NC --	➔	3SE5212-0MC05	1	1 unit 41K
		• Snap-action contacts	1 NO + 1 NC --	➔	3SE5212-0CC05	1	1 unit 41K
1 NO + 2 NC --	➔		3SE5212-0LC05	1	1 unit 41K		
3SE5212-0BC05	With increased corrosion protection ²⁾						
	• Slow-action contacts	1 NO + 1 NC --	➔	3SE5212-0BC05-1CA0	1	1 unit 41K	
		1 NO + 2 NC --	➔	3SE5212-0KC05-1CA0	1	1 unit 41K	
		2 NO + 1 NC --	➔	3SE5212-0PC05-1CA0	1	1 unit 41K	
	- With make-before-break	1 NO + 2 NC --	➔	3SE5212-0MC05-1CA0	1	1 unit 41K	
	• Snap-action contacts	1 NO + 1 NC --	➔	3SE5212-0CC05-1CA0	1	1 unit 41K	
1 NO + 2 NC --		➔	3SE5212-0LC05-1CA0	1	1 unit 41K		
3SE5212-0BC05-1CA0	With 2 LEDs, yellow/green						
	• Slow-action contacts	1 NO + 2 NC 24 V DC	➔	3SE5212-1KC05	1	1 unit 41K	
		1 NO + 2 NC 230 V AC	➔	3SE5212-3KC05	1	1 unit 41K	
	• Snap-action contacts	1 NO + 2 NC 24 V DC	➔	3SE5212-1LC05	1	1 unit 41K	
		1 NO + 2 NC 230 V AC	➔	3SE5212-3LC05	1	1 unit 41K	
		With M12 device plug, 5-pole (125 V, 4 A) ³⁾					
3SE5212-1KC05	• Slow-action contacts	1 NO + 1 NC --	➔	3SE5214-0BC05-1AC5	1	1 unit 41K	
		2 NC --	➔	3SE5214-0KC05-1AE1	1	1 unit 41K	
	• Snap-action contacts	1 NO + 1 NC --	➔	3SE5214-0CC05-1AC5	1	1 unit 41K	
		2 NC --	➔	3SE5214-0LC05-1AE1	1	1 unit 41K	
With 2 LEDs, yellow/green							
	• Slow-action contacts	1 NO + 1 NC 24 V DC	➔	3SE5214-1BC05-1AF3	1	1 unit 41K	
	• Snap-action contacts	1 NO + 1 NC 24 V DC	➔	3SE5214-1CC05-1AF3	1	1 unit 41K	
Plain plungers, according to EN 50047							
With high-grade steel plunger 8.5 mm							
	• Slow-action contacts	1 NO + 1 NC --	➔	3SE5212-0BB01	1	1 unit 41K	
		1 NO + 2 NC --	➔	3SE5212-0KB01	1	1 unit 41K	
	• Snap-action contacts	1 NO + 1 NC --	➔	3SE5212-0CB01	1	1 unit 41K	
		1 NO + 2 NC --	➔	3SE5212-0LB01	1	1 unit 41K	
3SE5212-0BB01							
Roller plungers, type C, according to EN 50047							
With plastic roller 10 mm							
	• Slow-action contacts	1 NO + 1 NC --	➔	3SE5212-0BD03	1	1 unit 41K	
		1 NO + 2 NC --	➔	3SE5212-0KD03	1	1 unit 41K	
	• Snap-action contacts	1 NO + 1 NC --	➔	3SE5212-0CD03	1	1 unit 41K	
		1 NO + 2 NC --	➔	3SE5212-0LD03	1	1 unit 41K	
3SE5212-0BD03							

➔ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) Popular versions.

2) Use corresponding high-grade steel lever.

3) For pin assignments, see page 12/12.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 31 mm according to EN 50047

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version		Contacts	LEDs	Complete units		PU (UNIT, SET, M)	PS*	PG
Article No.		Price per PU						
Complete units ¹⁾ · Enclosure width 31 mm								
	Roller plungers with central fixing, according to EN 50047							
	With plastic roller 10 mm							
	• Slow-action contacts	1 NO + 2 NC --	→	3SE5212-0KD10	1	1 unit	41K	
3SE5212-0KD10								
	Roller levers, type E, according to EN 50047							
	With metal lever and plastic roller 13 mm							
	• Slow-action contacts	1 NO + 1 NC --	→	3SE5212-0BE10	1	1 unit	41K	
		1 NO + 2 NC --	→	3SE5212-0KE10	1	1 unit	41K	
	• Snap-action contacts	1 NO + 1 NC --	→	3SE5212-0CE10	1	1 unit	41K	
		1 NO + 2 NC --	→	3SE5212-0LE10	1	1 unit	41K	
3SE5212-0BE10								
	Angular roller levers, according to EN 50047							
	With metal lever and plastic roller 13 mm							
	• Slow-action contacts	1 NO + 1 NC --	→	3SE5212-0BF10	1	1 unit	41K	
		1 NO + 2 NC --	→	3SE5212-0KF10	1	1 unit	41K	
	• Snap-action contacts	1 NO + 1 NC --	→	3SE5212-0CF10	1	1 unit	41K	
		1 NO + 2 NC --	→	3SE5212-0LF10	1	1 unit	41K	
3SE5212-0BF10								
	Twist levers, type A, according to EN 50047							
	With metal lever 21 mm and plastic roller 19 mm							
	• Slow-action contacts	1 NO + 1 NC --	→	3SE5212-0BK21	1	1 unit	41K	
		1 NO + 2 NC --	→	3SE5212-0KK21	1	1 unit	41K	
	• Snap-action contacts	1 NO + 1 NC --	→	3SE5212-0CK21	1	1 unit	41K	
		1 NO + 2 NC --	→	3SE5212-0LK21	1	1 unit	41K	
3SE5212-0BK21								
	Twist levers, adjustable length, according to EN 50047							
	With metal lever 100 mm, with grid holes and plastic roller 19 mm							
	• Slow-action contacts	1 NO + 2 NC --	→	3SE5212-0KK60	1	1 unit	41K	
	• Snap-action contacts	1 NO + 1 NC --	→	3SE5212-0CK60	1	1 unit	41K	
		1 NO + 2 NC --	→	3SE5212-0LK60	1	1 unit	41K	
	With metal lever 100 mm and plastic roller 19 mm							
	• Slow-action contacts	1 NO + 1 NC --		3SE5212-0BK50	1	1 unit	41K	
	• Snap-action contacts	1 NO + 1 NC --		3SE5212-0CK50	1	1 unit	41K	
		1 NO + 2 NC --		3SE5212-0LK50	1	1 unit	41K	
3SE5212-0CK60								

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Popular versions.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/29.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 31 mm according to EN 50047

Modular system

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
						
Article No.	Price per PU					

Basic switches · Enclosure width 31 mm**Rounded plungers¹⁾, type B, according to EN 50047**

3SE5212-0BC05

- Slow-action contacts
 - 1 NO + 1 NC -- 
 - 1 NO + 2 NC -- 
 - 2 NO + 1 NC -- 
- With make-before-break
 - 1 NO + 2 NC -- 
- Snap-action contacts
 - 1 NO + 1 NC -- 
 - 1 NO + 2 NC -- 

3SE5212-0BC05	1	1 unit	41K
3SE5212-0KC05	1	1 unit	41K
3SE5212-0PC05	1	1 unit	41K
3SE5212-0MC05	1	1 unit	41K
3SE5212-0CC05	1	1 unit	41K
3SE5212-0LC05	1	1 unit	41K



3SE5212-0BC05-1CA0

With increased corrosion protection²⁾

- Slow-action contacts
 - 1 NO + 1 NC -- 
 - 1 NO + 2 NC -- 
 - 2 NO + 1 NC -- 
- With make-before-break
 - 1 NO + 2 NC -- 
- Snap-action contacts
 - 1 NO + 1 NC -- 
 - 1 NO + 2 NC -- 

3SE5212-0BC05-1CA0	1	1 unit	41K
3SE5212-0KC05-1CA0	1	1 unit	41K
3SE5212-0PC05-1CA0	1	1 unit	41K
3SE5212-0MC05-1CA0	1	1 unit	41K
3SE5212-0CC05-1CA0	1	1 unit	41K
3SE5212-0LC05-1CA0	1	1 unit	41K



3SE5212-1KC05

With 2 LEDs, yellow/green

- Slow-action contacts
 - 1 NO + 2 NC 24 V DC 
 - 1 NO + 2 NC 230 V AC 
- Snap-action contacts
 - 1 NO + 2 NC 24 V DC 
 - 1 NO + 2 NC 230 V AC 

3SE5212-1KC05	1	1 unit	41K
3SE5212-3KC05	1	1 unit	41K
3SE5212-1LC05	1	1 unit	41K
3SE5212-3LC05	1	1 unit	41K



3SE5214-0BC05-1AC5

With M12 device plug, 5-pole (125 V, 4 A)³⁾

- Slow-action contacts
 - 1 NO + 1 NC -- 
 - 2 NC -- 
- Snap-action contacts
 - 1 NO + 1 NC -- 
 - 2 NC -- 

3SE5214-0BC05-1AC5	1	1 unit	41K
3SE5214-0KC05-1AE1	1	1 unit	41K
3SE5214-0CC05-1AC5	1	1 unit	41K
3SE5214-0LC05-1AE1	1	1 unit	41K



3SE5214-1BC05-1AF3

With 2 LEDs, yellow/green

- Slow-action contacts
 - 1 NO + 1 NC 24 V DC 
- Snap-action contacts
 - 1 NO + 1 NC 24 V DC 

3SE5214-1BC05-1AF3	1	1 unit	41K
3SE5214-1CC05-1AF3	1	1 unit	41K

 Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ For enclosures with widths of 31 mm, the basic switch is a complete unit with rounded plungers.

²⁾ Use corresponding high-grade steel lever.

³⁾ For pin assignments, see page 12/12.

Note:

For the selection aid, see page 12/13.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 31 mm according to EN 50047

Version				Diame- ter	Modular system		PU (UNIT, SET, M)	PS*	PG	
				mm	Article No.	Price per PU				
Operating mechanisms										
		Plain plungers		8.5	➞	3SE5000-0AB01	1	1 unit	41K	
		• High-grade steel plunger								
		Roller plungers, type C, according to EN 50047		10	➞	3SE5000-0AD03	1	1 unit	41K	
		• Plastic rollers								
		• High-grade steel rollers		10	➞	3SE5000-0AD04	1	1 unit	41K	
		Roller plungers with central fixing		10	➞	3SE5000-0AD10	1	1 unit	41K	
		• Plastic rollers								
		• High-grade steel rollers		10	➞	3SE5000-0AD11	1	1 unit	41K	
		Roller levers, type E, according to EN 50047		13	➞	3SE5000-0AE10	1	1 unit	41K	
		• Metal lever	Plastic roller			3SE5000-0AE11	1	1 unit	41K	
			High-grade steel roller	13	➞	3SE5000-0AE12	1	1 unit	41K	
		• High-grade steel lever	Plastic roller	13	➞	3SE5000-0AE13	1	1 unit	41K	
			High-grade steel roller	13	➞					
		Angular roller levers		13	➞	3SE5000-0AF10	1	1 unit	41K	
		• Metal lever	Plastic roller			3SE5000-0AF11	1	1 unit	41K	
			High-grade steel roller	13	➞	3SE5000-0AF12	1	1 unit	41K	
		• High-grade steel lever	Plastic roller	13	➞	3SE5000-0AF13	1	1 unit	41K	
			High-grade steel roller	13	➞					
		Spring rods (for switches with snap-action contacts only)								
		• Plunger made of plastic, spring of high-grade steel: 7			3SE5000-0AR01	1	1 unit	41K		
			- Length 142.5 mm (spring 50 mm, plunger 50 mm)			3SE5000-0AR03	1	1 unit	41K	
			- Length 76 mm (spring 23.5 mm, plunger 10 mm)			3SE5000-0AR04	1	1 unit	41K	
		• Plunger and spring made of high-grade steel: 7								
- Length 242.5 mm (spring 150 mm, plunger 50 mm)				3SE5000-0AR02	1	1 unit	41K			
Twist actuators										
		Twist actuators, for 31/50 mm, according to EN 50047		--	➞	3SE5000-0AA00	1	1 unit	41K	
		• For twist levers and rod actuators, switching right and/or left, adjustable								
		Levers								
		Twist levers 21 mm, straight, type A, according to EN 50047								
		• Metal lever	Plastic roller	19	➞	3SE5000-0AA21	1	1 unit	41K	
					30	➞	3SE5000-0AA25	1	1 unit	41K
				High-grade steel roller	19	➞	3SE5000-0AA22	1	1 unit	41K
		• High-grade steel lever	- With ball bearing	19	➞	3SE5000-0AA23	1	1 unit	41K	
			Plastic roller	19	➞	3SE5000-0AA31	1	1 unit	41K	
			High-grade steel roller	19	➞	3SE5000-0AA32	1	1 unit	41K	
		Twist levers 30 mm, straight¹⁾								
		• Metal lever	Plastic roller	19	➞	3SE5000-0AA24	1	1 unit	41K	
					30	➞	3SE5000-0AA26	1	1 unit	41K
		Twist levers 100 mm, adjustable length, with grid hole								
• Metal lever	Plastic roller	19	➞	3SE5000-0AA60	1	1 unit	41K			
			50	➞	3SE5000-0AA67	1	1 unit	41K		
		High-grade steel roller	19	➞	3SE5000-0AA61	1	1 unit	41K		
		Rubber roller	50	➞	3SE5000-0AA68	1	1 unit	41K		
	• High-grade steel lever	Plastic roller	19	➞	3SE5000-0AA62	1	1 unit	41K		
		High-grade steel roller	19	➞	3SE5000-0AA63	1	1 unit	41K		
Twist levers 100 mm, adjustable length										
• Metal lever	Plastic roller	19		3SE5000-0AA50	1	1 unit	41K			
			30		3SE5000-0AA55	1	1 unit	41K		
			50		3SE5000-0AA57	1	1 unit	41K		
• High-grade steel lever	High-grade steel roller	19		3SE5000-0AA51	1	1 unit	41K			
			50		3SE5000-0AA58	1	1 unit	41K		
	Plastic roller	19		3SE5000-0AA52	1	1 unit	41K			
			19		3SE5000-0AA53	1	1 unit	41K		
	Rod levers									
	• Aluminum rod	Length 200 mm	6		3SE5000-0AA80	1	1 unit	41K		
• Spring rod	Length 200 mm	6		3SE5000-0AA81	1	1 unit	41K			
• Plastic rod	Length 200 mm	6		3SE5000-0AA82	1	1 unit	41K			
• Plastic rod	Length 330 mm	6		3SE5000-0AA83	1	1 unit	41K			

➞ Positively driven actuator, necessary in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 40 mm according to EN 50041

Selection and ordering data

Complete units

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		
Complete units¹⁾ · Enclosure width 40 mm						
	Plain plungers, according to EN 50041					
	With high-grade steel plunger 8.5 mm					
	• Slow-action contacts	1 NO + 1 NC --	3SE5112-0BB01	1	1 unit	41K
		1 NO + 2 NC --	3SE5112-0KB01	1	1 unit	41K
	• Snap-action contacts	1 NO + 1 NC --	3SE5112-0CB01	1	1 unit	41K
		1 NO + 2 NC --	3SE5112-0LB01	1	1 unit	41K
3SE5112-0BB01	With M12 device plug, 5-pole (125 V, 4 A) ²⁾					
	With pin assignment as for SIMATIC ET 200 ³⁾					
	• Snap-action contacts	2 NC --	3SE5114-0LB01-1AE3	1	1 unit	41K
	Rounded plungers, type B, according to EN 50041					
	With high-grade steel plunger 10 mm, with 3 mm overtravel					
	• Slow-action contacts	1 NO + 1 NC --	3SE5112-0BC02	1	1 unit	41K
		1 NO + 2 NC --	3SE5112-0KC02	1	1 unit	41K
	• Snap-action contacts	1 NO + 1 NC --	3SE5112-0CC02	1	1 unit	41K
3SE5112-0BC02		1 NO + 2 NC --	3SE5112-0LC02	1	1 unit	41K
	- Increased operation/restoring force ⁴⁾	1 NO + 1 NC --	3SE5112-0CC02-1AA7	1	1 unit	41K
	With M12 device plug, 4-pole (125 V, 4 A) ²⁾					
	• Snap-action contacts	1 NO + 1 NC --	3SE5114-0CC02-1AC4	1	1 unit	41K
	Roller plungers, type C, according to EN 50041					
	With high-grade steel roller 13 mm, with 3 mm overtravel					
	• Slow-action contacts	1 NO + 1 NC --	3SE5112-0BD02	1	1 unit	41K
		1 NO + 2 NC --	3SE5112-0KD02	1	1 unit	41K
	- Increased operation/restoring force ⁴⁾	2 NO + 1 NC --	3SE5112-0PD02-1AA7	1	1 unit	41K
3SE5112-0BD02	• Snap-action contacts	1 NO + 1 NC --	3SE5112-0CD02	1	1 unit	41K
		1 NO + 2 NC --	3SE5112-0LD02	1	1 unit	41K
	- Increased operation/restoring force ⁴⁾	1 NO + 1 NC --	3SE5112-0CD02-1AA7	1	1 unit	41K
		1 NO + 2 NC --	3SE5112-0LD02-1AA7	1	1 unit	41K
	With M12 device plug, 5-pole (125 V, 4 A) ²⁾					
	• Snap-action contacts	1 NO + 1 NC --	3SE5114-0CD02-1AC5	1	1 unit	41K
	- Increased operation/restoring force ⁴⁾	1 NO + 1 NC --	3SE5114-0CD02-1AL0	1	1 unit	41K
	With 2 LEDs, yellow/green					
	• Snap-action contacts	1 NO + 1 NC 24 V DC	3SE5114-1CD02-1AF3	1	1 unit	41K
		1 NO + 1 NC 24 V DC	3SE5114-1CD02-1AF5	1	1 unit	41K
	With pin assignment as for SIMATIC ET 200 ³⁾					
	• Snap-action contacts	2 NC --	3SE5114-0LD02-1AE3	1	1 unit	41K

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Popular versions.

²⁾ For pin assignments, see page 12/12.

³⁾ The 3SE5114-.....-1AE3 position switches, prewired with an M12 plug, 5-pole, have the same pin assignment as all fail-safe block I/O modules with a PROFINET connection in the SIMATIC ET 200eco PN and ET 200AL series with degree of protection IP65/IP67 for cabinet-free installation directly at the machine. For more information, see page 12/88 onwards.

⁴⁾ Increased operation or restoring force 30 N; only available as complete unit, no modular design

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 40 mm according to EN 50041

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs	Complete units		PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU			
Complete units ¹⁾ · Enclosure width 40 mm							
	Roller levers, according to EN 50041						
	With metal lever and plastic roller 22 mm						
	• Slow-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --	→ →	3SE5112-0BE01 3SE5112-0KE01	1 1	1 unit 1 unit	41K 41K
	• Snap-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --	→ →	3SE5112-0CE01 3SE5112-0LE01	1 1	1 unit 1 unit	41K 41K
	3SE5112-0BE01						
	Angular roller levers, according to EN 50041						
	With metal lever and plastic roller 22 mm						
	• Slow-action contacts	1 NO + 1 NC --	→	3SE5112-0BF01	1	1 unit	41K
	• Snap-action contacts	1 NO + 1 NC -- 1 NO + 2 NC --	→ →	3SE5112-0CF01 3SE5112-0LF01	1 1	1 unit 1 unit	41K 41K
	3SE5112-0BF01						
	Spring rods²⁾, according to EN 50041						
	Length 142.5 mm, with plastic plunger 50 mm						
	• Snap-action contacts	1 NO + 1 NC --		3SE5112-0CR01	1	1 unit	41K
	3SE5112-0CR01						
		Twist levers, type A, according to EN 50041					
With metal lever 27 mm and plastic roller 19 mm							
• Slow-action contacts		1 NO + 1 NC -- 1 NO + 2 NC --	→ →	3SE5112-0BH01 3SE5112-0KH01	1 1	1 unit 1 unit	41K 41K
• Snap-action contacts		1 NO + 1 NC -- 1 NO + 2 NC --	→ →	3SE5112-0CH01 3SE5112-0LH01	1 1	1 unit 1 unit	41K 41K
3SE5112-0BH01							
	<u>With M12 device plug, 5-pole (125 V, 4 A)³⁾</u>						
	• Snap-action contacts	1 NO + 1 NC --	→	3SE5114-0CH01-1AC5	1	1 unit	41K
	<u>With 2 LEDs, yellow/green</u>						
	• Snap-action contacts	1 NO + 1 NC 24 V DC	→	3SE5114-1CH01-1AF3	1	1 unit	41K
	<u>With pin assignment as for SIMATIC ET 200⁴⁾</u>						
• Snap-action contacts	2 NC --	→	3SE5114-0LH01-1AE3	1	1 unit	41K	
With metal lever 27 mm and high-grade steel roller 19 mm							
• Slow-action contacts	1 NO + 1 NC --	→	3SE5112-0BH02	1	1 unit	41K	
• Snap-action contacts	1 NO + 1 NC --	→	3SE5112-0CH02	1	1 unit	41K	
<u>With M12 device plug, 5-pole (125 V, 4 A)³⁾</u>							
• Snap-action contacts	1 NO + 1 NC 24 V DC	→	3SE5114-1CH02-1AF3	1	1 unit	41K	
With metal lever 30 mm and plastic roller 19 mm							
• Snap-action contacts	1 NO + 1 NC --	→	3SE5112-0CH24	1	1 unit	41K	

⊙ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) Popular versions.

2) Degree of protection IP65/IP67.

3) For pin assignments, see page 12/12.

4) The 3SE5114-.....-1AE3 position switches, prewired with an M12 plug, 5-pole, have the same pin assignment as all fail-safe block I/O modules with a PROFINET connection in the SIMATIC ET 200eco PN and ET 200AL series with degree of protection IP65/IP67 for cabinet-free installation directly at the machine. For more information, see page 12/88 onwards.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 40 mm according to EN 50041

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs		Complete units		PU (UNIT, SET, M)	PS*	PG	
				Article No.	Price per PU				
Complete units ¹⁾ · Enclosure width 40 mm									
	Twist levers, adjustable length, according to EN 50041								
	With metal lever 100 mm, with grid holes and plastic roller 19 mm								
	• Slow-action contacts	1 NO + 1 NC --	⊙	3SE5112-0BH60	1	1 unit	41K		
	• Snap-action contacts	1 NO + 1 NC --	⊙	3SE5112-0CH60	1	1 unit	41K		
		1 NO + 2 NC --	⊙	3SE5112-0LH60	1	1 unit	41K		
<u>With M12 device plug, 5-pole (125 V, 4 A)²⁾</u>									
With 2 LEDs, yellow/green									
	• Snap-action contacts	1 NO + 1 NC 24 V DC	⊙	3SE5114-1CH60-1AF3	1	1 unit	41K		
3SE5112-0BH60	With metal lever 100 mm, with grid hole and high-grade steel roller 19 mm								
<u>With M12 device plug, 5-pole (125 V, 4 A)²⁾</u>									
	• Snap-action contacts	1 NO + 1 NC --	⊙	3SE5114-0CH61-1AC5	1	1 unit	41K		
	With metal lever 100 mm and plastic roller 19 mm								
	• Slow-action contacts	1 NO + 1 NC --		3SE5112-0BH50	1	1 unit	41K		
	• Snap-action contacts	1 NO + 1 NC --		3SE5112-0CH50	1	1 unit	41K		
		1 NO + 2 NC --		3SE5112-0LH50	1	1 unit	41K		
	<u>With M12 device plug, 8-pole (30 V, 2 A)²⁾</u>								
With 2 LEDs, yellow/green									
	• Snap-action contacts	1 NO + 2 NC 24 V DC		3SE5114-1LH50-1AD4	1	1 unit	41K		
	With metal lever 100 mm and high-grade steel roller 19 mm								
	• Snap-action contacts	1 NO + 1 NC --		3SE5112-0CH51	1	1 unit	41K		
3SE5112-0BH50									
	Fork levers, latching, according to EN 50041								
	With metal lever and 2 plastic rollers 19 mm								
	• Snap-action contacts	1 NO + 1 NC --	⊙	3SE5112-0CT11	1	1 unit	41K		
3SE5112-0CT11									
	Rod levers³⁾, type D according to EN 50041								
	With aluminum rod 200 mm								
	• Snap-action contacts	1 NO + 1 NC --		3SE5112-0CH80	1	1 unit	41K		
	<u>Nagara switch with M12 device plug, 5-pole (125 V, 4 A)²⁾⁴⁾</u>								
	• Snap-action contacts, short-stroke	1 NO + 1 NC --		3SE5114-0NH82-1AM2	1	1 unit	41K		
	With plastic rod, length 200 mm								
	• Snap-action contacts	1 NO + 1 NC --		3SE5112-0CH82	1	1 unit	41K		
3SE5112-0CH80									

⊙ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) Popular versions.

2) For pin assignments, see page 12/12.

3) Degree of protection IP65/IP67.

4) Start switch triggerable via one-hand operation (during operation).

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/34.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 40 mm according to EN 50041

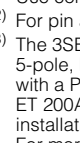
Modular system

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Basic switches - Enclosure width 40 mm

Rounded plungers, according to EN 50041

	3SE5112-0BA00	• Slow-action contacts	1 NO + 1 NC --	→	3SE5112-0BA00	1	1 unit	41K
			1 NO + 2 NC --	→	3SE5112-0KA00	1	1 unit	41K
			2 NO + 1 NC --	→	3SE5112-0PA00	1	1 unit	41K
		- With make-before-break	1 NO + 2 NC --	→	3SE5112-0MA00	1	1 unit	41K
		• Snap-action contacts	1 NO + 1 NC --	→	3SE5112-0CA00	1	1 unit	41K
	3SE5112-0BA00-1CA0		1 NO + 2 NC --	→	3SE5112-0LA00	1	1 unit	41K
		- Gold-plated contacts		→	3SE5112-0CA00-1AC1	1	1 unit	41K
		With increased corrosion protection ¹⁾						
		• Slow-action contacts	1 NO + 1 NC --	→	3SE5112-0BA00-1CA0	1	1 unit	41K
			1 NO + 2 NC --	→	3SE5112-0KA00-1CA0	1	1 unit	41K
	3SE5112-1KA00		2 NO + 1 NC --	→	3SE5112-0PA00-1CA0	1	1 unit	41K
		- With make-before-break	1 NO + 2 NC --	→	3SE5112-0MA00-1CA0	1	1 unit	41K
		• Snap-action contacts	1 NO + 1 NC --	→	3SE5112-0CA00-1CA0	1	1 unit	41K
			1 NO + 2 NC --	→	3SE5112-0LA00-1CA0	1	1 unit	41K
		With 2 LEDs, yellow/green						
	3SE5114-0BA00-1AC5	• Slow-action contacts	1 NO + 2 NC 24 V DC	→	3SE5112-1KA00	1	1 unit	41K
			1 NO + 2 NC 230 V AC	→	3SE5112-3KA00	1	1 unit	41K
		• Snap-action contacts	1 NO + 2 NC 24 V DC	→	3SE5112-1LA00	1	1 unit	41K
			1 NO + 2 NC 230 V AC	→	3SE5112-3LA00	1	1 unit	41K
		With M12 device plug, 5-pole (125 V, 4 A) ²⁾						
	3SE5114-0BA00-1AE1	• Slow-action contacts	1 NO + 1 NC --	→	3SE5114-0BA00-1AC5	1	1 unit	41K
			2 NC --	→	3SE5114-0KA00-1AE1	1	1 unit	41K
		• Snap-action contacts	1 NO + 1 NC --	→	3SE5114-0CA00-1AC5	1	1 unit	41K
			2 NC --	→	3SE5114-0LA00-1AE1	1	1 unit	41K
		With 2 LEDs, yellow/green						
	3SE5115-0KA00-1AD1	• Slow-action contacts	1 NO + 1 NC 24 V DC	→	3SE5114-1BA00-1AF3	1	1 unit	41K
		• Snap-action contacts	1 NO + 1 NC 24 V DC	→	3SE5114-1CA00-1AF3	1	1 unit	41K
		With pin assignment as for SIMATIC ET 200 ³⁾						
		• Snap-action contacts	1 NO + 2 NC --	→	3SE5114-0LA00-1AE3	1	1 unit	41K
		With device plug, 6-pole + PE (250 V, 10 A) ²⁾						
	3SE5115-0KA00-1AD1	• Slow-action contacts	1 NO + 2 NC --	→	3SE5115-0KA00-1AD1	1	1 unit	41K
		• Snap-action contacts	1 NO + 2 NC --	→	3SE5115-0LA00-1AD1	1	1 unit	41K
		With quick-release device						
		• Snap-action contacts	1 NO + 1 NC --	→	3SE5115-0CA00-1AD0	1	1 unit	41K
		With M12 device plug, 8-pole (30 V, 2 A) ²⁾						
	3SE5114-1LA00-1AD4	With 2 LEDs, yellow/green						
		• Snap-action contacts	1 NO + 2 NC 24 V DC	→	3SE5114-1LA00-1AD4	1	1 unit	41K

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Use corresponding high-grade steel lever.

²⁾ For pin assignments, see page 12/12.

³⁾ The 3SE5114-.....-1AE3 position switches, prewired with an M12 plug, 5-pole, have the same pin assignment as all fail-safe block I/O modules with a PROFINET connection in the SIMATIC ET 200eco PN and ET 200AL series with degree of protection IP65/IP67 for cabinet-free installation directly at the machine.

For more information, see page 12/88 onwards.

Note:

For the selection aid, see page 12/13.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 40 mm according to EN 50041

Version		Diame- ter	Modular system		PU (UNIT, SET, M)	PS*	PG	
		mm	Article No.	Price per PU				
Operating mechanisms								
 3SE5000-0AC02	Plain plungers							
	• High-grade steel plunger	8,5	➡	3SE5000-0AB01	1	1 unit	41K	
 3SE5000-0AD02	Rounded plungers, type B, according to EN 50041							
	• High-grade steel plunger, with 3 mm overtravel	10	➡	3SE5000-0AC02	1	1 unit	41K	
 3SE5000-0AE01	Roller plungers, type C, according to EN 50041							
	• High-grade steel roller, with 3 mm overtravel	13	➡	3SE5000-0AD02	1	1 unit	41K	
 3SE5000-0AF01	Roller levers							
	• Metal lever	Plastic roller	22	➡	3SE5000-0AE01	1	1 unit	41K
		High-grade steel roller	22	➡	3SE5000-0AE02	1	1 unit	41K
	• High-grade steel lever	Plastic roller	22	➡	3SE5000-0AE03	1	1 unit	41K
		High-grade steel roller	22	➡	3SE5000-0AE04	1	1 unit	41K
	Angular roller levers							
	• Metal lever	Plastic roller	22	➡	3SE5000-0AF01	1	1 unit	41K
		High-grade steel roller	22	➡	3SE5000-0AF02	1	1 unit	41K
	• High-grade steel lever	Plastic roller	22	➡	3SE5000-0AF03	1	1 unit	41K
		High-grade steel roller	22	➡	3SE5000-0AF04	1	1 unit	41K
 3SE5000-0AR01	Spring rods (for switches with snap-action contacts only)							
	• Plunger made of plastic, spring of high-grade steel:	7						
	- Length 142.5 mm (spring 50 mm, plunger 50 mm)			3SE5000-0AR01	1	1 unit	41K	
	- Length 76 mm (spring 23.5 mm, plunger 10 mm)			3SE5000-0AR03	1	1 unit	41K	
	- Length 242.5 mm (spring 150 mm, plunger 50 mm)			3SE5000-0AR04	1	1 unit	41K	
	• Plunger and spring made of high-grade steel:	7						
	- Length 142.5 mm (spring 50 mm, plunger 50 mm)			3SE5000-0AR02	1	1 unit	41K	
Twist actuators								
 3SE5000-0AH00	Twist actuators, for 40/56/56 mm, XL, according to EN 50041							
	• For twist levers and rod actuators, switching right and/or left, adjustable	--	➡	3SE5000-0AH00	1	1 unit	41K	
 3SE5000-0AA01	• For fork levers, latching	--	➡	3SE5000-0AT10	1	1 unit	41K	
	Levers							
	Twist levers 27 mm, offset, type A, according to EN 50041							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA01	1	1 unit	41K
			30	➡	3SE5000-0AA05	1	1 unit	41K
			50	➡	3SE5000-0AA07	1	1 unit	41K
		2 plastic rollers	19	➡	3SE5000-0AA04	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA02	1	1 unit	41K
		- With ball bearing	19	➡	3SE5000-0AA03	1	1 unit	41K
		Rubber roller	50	➡	3SE5000-0AA08	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA11	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA12	1	1 unit	41K
 3SE5000-0AA60	Twist levers 35 mm, offset, type A, according to EN 50041							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA15	1	1 unit	41K
 3SE5000-0AA50	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA16	1	1 unit	41K
	Twist levers 30 mm, straight¹⁾, type A, according to EN 50041							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA24	1	1 unit	41K
			30	➡	3SE5000-0AA26	1	1 unit	41K
 3SE5000-0AT01	Twist levers 100 mm, adjustable length, with grid hole							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA60	1	1 unit	41K
			50	➡	3SE5000-0AA67	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA61	1	1 unit	41K
		Rubber roller	50	➡	3SE5000-0AA68	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA62	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA63	1	1 unit	41K
	Twist levers 100 mm, adjustable length							
	• Metal lever	Plastic roller	19		3SE5000-0AA50	1	1 unit	41K
			30		3SE5000-0AA55	1	1 unit	41K
		High-grade steel roller	19		3SE5000-0AA51	1	1 unit	41K
		Rubber roller	50		3SE5000-0AA58	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19		3SE5000-0AA52	1	1 unit	41K
		High-grade steel roller	19		3SE5000-0AA53	1	1 unit	41K
	Fork levers (for switches with snap-action contacts only)							
	• 2 metal levers	2 plastic rollers	19	➡	3SE5000-0AT01	1	1 unit	41K
		2 high-grade steel rollers	19	➡	3SE5000-0AT02	1	1 unit	41K
	• 2 high-grade steel levers	2 plastic rollers	19	➡	3SE5000-0AT03	1	1 unit	41K
 3SE5000-0AA80	Rod levers 200 mm, type D, according to EN 50041							
	• Aluminum rod		6		3SE5000-0AA80	1	1 unit	41K
	• Spring rod		6		3SE5000-0AA81	1	1 unit	41K
	• Plastic rod		6		3SE5000-0AA82	1	1 unit	41K

➡ Positively driven actuator, necessary in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

* You can order this quantity or a multiple thereof.
Illustrations are approximate

Position and safety switches

SIRIUS 3SE5 mechanical position switches

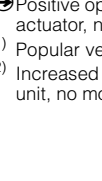
3SE5, metal enclosures

Enclosure width 56 mm

Selection and ordering data

Complete units

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5) · Operating points according to EN 50041

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		
Complete units¹⁾ · Enclosure width 56 mm						
 3SE5122-0BB01	Plain plungers					
	With high-grade steel plunger 8.5 mm					
	• Slow-action contacts	1 NO + 1 NC --	⊕	3SE5122-0BB01	1	1 unit 41K
		1 NO + 2 NC --	⊕	3SE5122-0KB01	1	1 unit 41K
		2 NO + 1 NC --	⊕	3SE5122-0PB01	1	1 unit 41K
 3SE5122-0BC02	• Snap-action contacts	1 NO + 1 NC --	⊕	3SE5122-0CB01	1	1 unit 41K
		1 NO + 2 NC --	⊕	3SE5122-0LB01	1	1 unit 41K
	Rounded plungers					
	With high-grade steel plunger 10 mm, with 3 mm overtravel					
	• Slow-action contacts	1 NO + 1 NC --	⊕	3SE5122-0BC02	1	1 unit 41K
 3SE5122-0BD02		1 NO + 2 NC --	⊕	3SE5122-0KC02	1	1 unit 41K
		2 NO + 1 NC --	⊕	3SE5122-0PC02	1	1 unit 41K
	• Snap-action contacts	1 NO + 1 NC --	⊕	3SE5122-0CC02	1	1 unit 41K
		1 NO + 2 NC --	⊕	3SE5122-0LC02	1	1 unit 41K
	- Increased operation/restoring force ²⁾	1 NO + 1 NC --	⊕	3SE5122-0CC02-1AA7	1	1 unit 41K
 3SE5122-0BE01	Roller plungers					
	With high-grade steel roller 13 mm, with 3 mm overtravel					
	• Slow-action contacts	1 NO + 1 NC --	⊕	3SE5122-0BD02	1	1 unit 41K
		1 NO + 2 NC --	⊕	3SE5122-0KD02	1	1 unit 41K
	• Snap-action contacts	1 NO + 1 NC --	⊕	3SE5122-0CD02	1	1 unit 41K
 3SE5122-0BF01		1 NO + 2 NC --	⊕	3SE5122-0LD02	1	1 unit 41K
	- Increased operation/restoring force ²⁾	1 NO + 1 NC --	⊕	3SE5122-0CD02-1AA7	1	1 unit 41K
	Roller levers					
	With metal lever and plastic roller 22 mm					
	• Slow-action contacts	1 NO + 1 NC --	⊕	3SE5122-0BE01	1	1 unit 41K
 3SE5122-0CE01		1 NO + 2 NC --	⊕	3SE5122-0KE01	1	1 unit 41K
		2 NO + 1 NC --	⊕	3SE5122-0PE01	1	1 unit 41K
	• Snap-action contacts	1 NO + 1 NC --	⊕	3SE5122-0CE01	1	1 unit 41K
		1 NO + 2 NC --	⊕	3SE5122-0LE01	1	1 unit 41K
	With metal lever and high-grade steel roller 22 mm					
 3SE5122-0CF01	• Snap-action contacts	1 NO + 1 NC --	⊕	3SE5122-0CE02	1	1 unit 41K
	Angular roller levers					
	With metal lever and plastic roller 22 mm					
	• Slow-action contacts	1 NO + 1 NC --	⊕	3SE5122-0BF01	1	1 unit 41K
		2 NO + 1 NC --	⊕	3SE5122-0PF01	1	1 unit 41K
	• Snap-action contacts	1 NO + 1 NC --	⊕	3SE5122-0CF01	1	1 unit 41K

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Popular versions.

²⁾ Increased operation or restoring force 30 N; only available as complete unit, no modular design.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 56 mm

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5) · Operating points according to EN 50041

Version	Contacts	LEDs		Complete units	☐	PU (UNIT, SET, M)	PS*	PG
Article No.				Price per PU				
Complete units ¹⁾ · Enclosure width 56 mm								
	Spring rods²⁾							
	Length 142.5 mm, with plastic plunger 50 mm							
3SE5122-0CR01	• Snap-action contacts	1 NO + 1 NC --		3SE5122-0CR01	1	1 unit	41K	
	Twist levers							
	With metal lever 27 mm and plastic roller 19 mm							
3SE5122-0BH01	• Slow-action contacts	1 NO + 1 NC --	⌚	3SE5122-0BH01	1	1 unit	41K	
		1 NO + 2 NC --	⌚	3SE5122-0KH01	1	1 unit	41K	
		2 NO + 1 NC --	⌚	3SE5122-0PH01	1	1 unit	41K	
	• Snap-action contacts	1 NO + 1 NC --	⌚	3SE5122-0CH01	1	1 unit	41K	
		1 NO + 2 NC --	⌚	3SE5122-0LH01	1	1 unit	41K	
	With metal lever 27 mm and high-grade steel roller 19 mm							
	• Snap-action contacts	1 NO + 1 NC --	⌚	3SE5122-0CH02	1	1 unit	41K	
		1 NO + 2 NC --	⌚	3SE5122-0LH02	1	1 unit	41K	
	Twist levers, adjustable length							
	With metal lever 100 mm, with grid holes and plastic roller 19 mm							
3SE5122-0BH60	• Slow-action contacts	1 NO + 1 NC --	⌚	3SE5122-0BH60	1	1 unit	41K	
	• Snap-action contacts	1 NO + 1 NC --	⌚	3SE5122-0CH60	1	1 unit	41K	
		1 NO + 2 NC --	⌚	3SE5122-0LH60	1	1 unit	41K	
	With metal lever 100 mm and plastic roller 19 mm							
	• Slow-action contacts	1 NO + 1 NC --		3SE5122-0BH50	1	1 unit	41K	
	• Snap-action contacts	1 NO + 1 NC --		3SE5122-0CH50	1	1 unit	41K	
		1 NO + 2 NC --		3SE5122-0LH50	1	1 unit	41K	
	Fork levers, latching							
	With metal lever and 2 plastic rollers 19 mm							
3SE5122-0CT11	• Snap-action contacts	1 NO + 1 NC --	⌚	3SE5122-0CT11	1	1 unit	41K	
	Rod levers²⁾							
	With aluminum rod 200 mm							
3SE5122-0CH80	• Snap-action contacts	1 NO + 1 NC --		3SE5122-0CH80	1	1 unit	41K	
	With plastic rod 200 mm							
	• Snap-action contacts	1 NO + 1 NC --		3SE5122-0CH82	1	1 unit	41K	

➞ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) Popular versions.

2) Degree of protection IP65/IP67.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/38.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 56 mm

Modular system

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5) · Operating points according to EN 50041

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Basic switches · Enclosure width 56 mm

Rounded plungers



3SE5122-0BA00

- Slow-action contacts

1 NO + 1 NC --	⊙
1 NO + 2 NC --	⊙
2 NO + 1 NC --	⊙
1 NO + 2 NC --	⊙

- With make-before-break

- Snap-action contacts

1 NO + 1 NC --	⊙
1 NO + 2 NC --	⊙

3SE5122-0BA00	1	1 unit	41K
3SE5122-0KA00	1	1 unit	41K
3SE5122-0PA00	1	1 unit	41K
3SE5122-0MA00	1	1 unit	41K
3SE5122-0CA00	1	1 unit	41K
3SE5122-0LA00	1	1 unit	41K

With increased corrosion protection¹⁾

- Slow-action contacts

1 NO + 1 NC --	⊙
1 NO + 2 NC --	⊙
2 NO + 1 NC --	⊙
1 NO + 2 NC --	⊙

- With make-before-break

- Snap-action contacts

1 NO + 1 NC --	⊙
1 NO + 2 NC --	⊙

3SE5122-0BA00-1CA0	1	1 unit	41K
3SE5122-0KA00-1CA0	1	1 unit	41K
3SE5122-0PA00-1CA0	1	1 unit	41K
3SE5122-0MA00-1CA0	1	1 unit	41K
3SE5122-0CA00-1CA0	1	1 unit	41K
3SE5122-0LA00-1CA0	1	1 unit	41K



3SE5122-0BA00-1CA0

With 2 LEDs, yellow/green

- Slow-action contacts

1 NO + 2 NC 24 V DC	⊙
1 NO + 2 NC 230 V AC	⊙

- Snap-action contacts

1 NO + 2 NC 24 V DC	⊙
1 NO + 2 NC 230 V AC	⊙

3SE5122-1KA00	1	1 unit	41K
3SE5122-3KA00	1	1 unit	41K
3SE5122-1LA00	1	1 unit	41K
3SE5122-3LA00	1	1 unit	41K



3SE5122-1KA00

⊙ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Use corresponding high-grade steel lever.

Note:

For the selection aid, see page 12/13.

Version	Diame-ter	Modular system	PU (UNIT, SET, M)	PS*	PG
	mm	Article No.	Price per PU		

Operating mechanisms

Plain plungers

- High-grade steel plungers

8.5	⊙
-----	---

3SE5000-0AB01

1 1 unit 41K



3SE5000-0AB01

Rounded plungers, type B, according to EN 50041

- High-grade steel plunger, with 3 mm overtravel

10	⊙
----	---

3SE5000-0AC02

1 1 unit 41K



3SE5000-0AC02



3SE5000-0AD02

Roller plungers, type C, according to EN 50041

- High-grade steel roller, with 3 mm overtravel

13	⊙
----	---

3SE5000-0AD02

1 1 unit 41K

Roller levers

- Metal lever

Plastic roller 22

⊙

3SE5000-0AE01

1 1 unit 41K

High-grade steel roller 22

⊙

3SE5000-0AE02

1 1 unit 41K

- High-grade steel lever

Plastic roller 22

⊙

3SE5000-0AE03

1 1 unit 41K

High-grade steel roller 22

⊙

3SE5000-0AE04

1 1 unit 41K



3SE5000-0AE01

Angular roller levers

- Metal lever

Plastic roller 22

⊙

3SE5000-0AF01

1 1 unit 41K

High-grade steel roller 22

⊙

3SE5000-0AF02

1 1 unit 41K

- High-grade steel lever

Plastic roller 22

⊙

3SE5000-0AF03

1 1 unit 41K

High-grade steel roller 22

⊙

3SE5000-0AF04

1 1 unit 41K



3SE5000-0AF01

Spring rods

(for switches with snap-action contacts only)

- Plunger made of plastic, spring of high-grade steel: 7
 - Length 142.5 mm (spring 50 mm, plunger 50 mm)
 - Length 76 mm (spring 23.5 mm, plunger 10 mm)
 - Length 242.5 mm (spring 150 mm, plunger 50 mm)
- Plunger and spring made of high-grade steel: 7
 - Length 142.5 mm (spring 50 mm, plunger 50 mm)

3SE5000-0AR01	1	1 unit	41K
3SE5000-0AR03	1	1 unit	41K
3SE5000-0AR04	1	1 unit	41K
3SE5000-0AR02	1	1 unit	41K



3SE5000-0AR01

⊙ Positively driven actuator, necessary in safety circuits.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 56 mm

Version			Diame- ter	Modular system		PU (UNIT, SET, M)	PS*	PG
mm				Article No.	Price per PU			
Twist actuators								
	Twist actuators, for 40/56/56 mm, XL, according to EN 50041							
	• For twist levers and rod actuators, switching right and/or left, adjustable	--	➡	3SE5000-0AH00		1	1 unit	41K
3SE5000-0AH00	• For fork levers, latching	--	➡	3SE5000-0AT10		1	1 unit	41K
	Levers							
	Twist levers 27 mm, offset, type A, according to EN 50041							
3SE5000-0AA01	• Metal lever	Plastic roller	19	➡	3SE5000-0AA01	1	1 unit	41K
			30	➡	3SE5000-0AA05	1	1 unit	41K
			50	➡	3SE5000-0AA07	1	1 unit	41K
		2 plastic rollers	19	➡	3SE5000-0AA04	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA02	1	1 unit	41K
		- With ball bearing	19	➡	3SE5000-0AA03	1	1 unit	41K
		Rubber roller	50	➡	3SE5000-0AA08	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA11	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA12	1	1 unit	41K
	Twist levers 35 mm, offset, type A, according to EN 50041							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA15	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA16	1	1 unit	41K
	Twist levers 30 mm, straight¹⁾, type A, according to EN 50041							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA24	1	1 unit	41K
3SE5000-0AA24			30	➡	3SE5000-0AA26	1	1 unit	41K
	Twist levers 100 mm, adjustable length, with grid hole							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA60	1	1 unit	41K
3SE5000-0AA60			50	➡	3SE5000-0AA67	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA61	1	1 unit	41K
		Rubber roller	50	➡	3SE5000-0AA68	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA62	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA63	1	1 unit	41K
	Twist levers 100 mm, adjustable length							
	• Metal lever	Plastic roller	19		3SE5000-0AA50	1	1 unit	41K
		High-grade steel roller	19		3SE5000-0AA51	1	1 unit	41K
		Plastic roller	30		3SE5000-0AA55	1	1 unit	41K
			50		3SE5000-0AA57	1	1 unit	41K
		Rubber roller	50		3SE5000-0AA58	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19		3SE5000-0AA52	1	1 unit	41K
	High-grade steel roller	19		3SE5000-0AA53	1	1 unit	41K	
3SE5000-0AA50	Fork levers							
	(for switches with snap-action contacts only)							
	• 2 metal levers	2 plastic rollers	19	➡	3SE5000-0AT01	1	1 unit	41K
3SE5000-0AT01		2 high-grade steel rollers	19	➡	3SE5000-0AT02	1	1 unit	41K
	• 2 high-grade steel levers	2 plastic rollers	19	➡	3SE5000-0AT03	1	1 unit	41K
		2 high-grade steel rollers	19	➡	3SE5000-0AT04	1	1 unit	41K
	Rod levers 200 mm							
	• Aluminum rod		6		3SE5000-0AA80	1	1 unit	41K
	• Spring rod		6		3SE5000-0AA81	1	1 unit	41K
	• Plastic rod		6		3SE5000-0AA82	1	1 unit	41K
3SE5000-0AA80								

➡ Positively driven actuator, necessary in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

* You can order this quantity or a multiple thereof.
Illustrations are approximate

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 56 mm, XL

Selection and ordering data

Complete units

4 or 5 contacts · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5) · Operating points according to EN 50041

Version	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Complete units¹⁾ · Enclosure width 56 mm, XL



3SE5162-0CB01

Plain plungers

With high-grade steel plunger 8.5 mm

- Snap-action contacts

2 x (1 NO + 1 NC) --



3SE5162-0CB01

1 1 unit

41K



3SE5162-0EC02

Rounded plungers

With high-grade steel plunger 10 mm, with 3 mm overtravel

- Slow-action contacts and Slow-action contacts with make-before-break, 2 mm travel difference

1 NO + 1 NC --



1 NO + 2 NC

3SE5162-0EC02

1 1 unit

41K



3SE5162-0BD02

Roller plungers

With high-grade steel roller 13 mm, with 3 mm overtravel

- Slow-action contacts
- Snap-action contacts

2 x (1 NO + 1 NC) --



2 x (1 NO + 1 NC) --



3SE5162-0BD02

1 1 unit

41K

3SE5162-0CD02

1 1 unit

41K



3SE5162-0BE01

Roller levers

With metal lever and plastic roller 22 mm

- Slow-action contacts
- Snap-action contacts

2 x (1 NO + 1 NC) --



2 x (1 NO + 1 NC) --



3SE5162-0BE01

1 1 unit

41K

3SE5162-0CE01

1 1 unit

41K

With metal lever and high-grade steel roller 22 mm

- Snap-action contacts

2 x (1 NO + 1 NC) --



3SE5162-0CE02

1 1 unit

41K



3SE5162-0CF01

Angular roller levers

With metal lever and plastic roller 22 mm

- Snap-action contacts

2 x (1 NO + 1 NC) --



3SE5162-0CF01

1 1 unit

41K



3SE5162-0CH01

Twist levers

With metal lever 27 mm and plastic roller 19 mm

- Snap-action contacts

2 x (1 NO + 1 NC) --



3SE5162-0CH01

1 1 unit

41K

With high-grade steel lever 27 mm and high-grade steel roller 19 mm

With increased corrosion protection²⁾

- Snap-action contacts (gold contacts)

2 x (1 NO + 1 NC) --



3SE5162-0CH12-1CC1

1 1 unit

41K

Twist levers, adjustable length

With high-grade steel lever 100 mm, with grid hole and high-grade steel roller 19 mm

With increased corrosion protection²⁾, 3SX5100-3B adapter included

- Snap-action contacts (gold contacts)

2 x (1 NO + 1 NC) --



3SE5162-0CH63-1AN4

1 1 unit

41K

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Popular versions.

²⁾ Use corresponding high-grade steel lever.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/41.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 56 mm, XL

Modular system

4 or 6 contacts · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5) · Operating points according to EN 50041

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			☒			
Article No.			Price per PU			

Basic switches · Enclosure width 56 mm, XL

3SE5162-0BA00

Rounded plungers

• Slow-action contacts	2 x (1 NO + 1 NC) --	→	3SE5162-0BA00	1	1 unit	41K
- With make-before-break	2 x (1 NO + 2 NC) --	→	3SE5162-0DA00	1	1 unit	41K
• Snap-action contacts	2 x (1 NO + 1 NC) --	→	3SE5162-0CA00	1	1 unit	41K
With increased corrosion protection ¹⁾						
• Slow-action contacts	2 x (1 NO + 1 NC) --	→	3SE5162-0BA00-1CA0	1	1 unit	41K
- With make-before-break	2 x (1 NO + 2 NC) --	→	3SE5162-0DA00-1CA0	1	1 unit	41K
• Snap-action contacts	2 x (1 NO + 1 NC) --	→	3SE5162-0CA00-1CA0	1	1 unit	41K

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Use corresponding high-grade steel lever.

Note:

For the selection aid, see page 12/13.

Version	Diameter	Modular system	PU (UNIT, SET, M)	PS*	PG
		☒			
Article No.		Price per PU			
mm					

Operating mechanisms

3SE5000-0AB01

Plain plungers

• High-grade steel plunger	8.5	→	3SE5000-0AB01	1	1 unit	41K
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3SE5000-0AC02

Rounded plungers, type B, according to EN 50041

• High-grade steel plunger, with 3 mm overtravel	10	→	3SE5000-0AC02	1	1 unit	41K
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3SE5000-0AD02

Roller plungers, type C, according to EN 50041

• High-grade steel roller, with 3 mm overtravel	13	→	3SE5000-0AD02	1	1 unit	41K
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3SE5000-0AE01

Roller levers

• Metal lever	Plastic roller	22	→	3SE5000-0AE01	1	1 unit	41K
	High-grade steel roller	22	→	3SE5000-0AE02	1	1 unit	41K
• High-grade steel lever	Plastic roller	22	→	3SE5000-0AE03	1	1 unit	41K
	High-grade steel roller	22	→	3SE5000-0AE04	1	1 unit	41K



3SE5000-0AF01

Angular roller levers

• Metal lever	Plastic roller	22	→	3SE5000-0AF01	1	1 unit	41K
	High-grade steel roller	22	→	3SE5000-0AF02	1	1 unit	41K
• High-grade steel lever	Plastic roller	22	→	3SE5000-0AF03	1	1 unit	41K
	High-grade steel roller	22	→	3SE5000-0AF04	1	1 unit	41K



3SE5000-0AR01

Spring rods

(for switches with snap-action contacts only)

• Plunger made of plastic, spring of high-grade steel:	7		3SE5000-0AR01	1	1 unit	41K
- Length 142.5 mm (spring 50 mm, plunger 50 mm)			3SE5000-0AR03	1	1 unit	41K
- Length 76 mm (spring 23.5 mm, plunger 10 mm)			3SE5000-0AR04	1	1 unit	41K
- Length 242.5 mm (spring 150 mm, plunger 50 mm)						
• Plunger and spring made of high-grade steel:	7		3SE5000-0AR02	1	1 unit	41K
- Length 142.5 mm (spring 50 mm, plunger 50 mm)						

→ Positively driven actuator, necessary in safety circuits.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Enclosure width 56 mm, XL

Version		Diame- ter	Modular system		PU (UNIT, SET, M)	PS*	PG	
		mm	Article No.	Price per PU				
Twist actuators								
	Twist actuators, for 40/56/56 mm, XL, according to EN 50041							
	• For twist levers and rod actuators, switching right and/or left, adjustable	--	➡	3SE5000-0AH00	1	1 unit	41K	
3SE5000-0AH00	• For fork levers, latching	--	➡	3SE5000-0AT10	1	1 unit	41K	
Levers								
	Twist levers 27 mm, offset, type A, according to EN 50041							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA01	1	1 unit	41K
3SE5000-0AA01			30	➡	3SE5000-0AA05	1	1 unit	41K
			50	➡	3SE5000-0AA07	1	1 unit	41K
		2 plastic rollers	19	➡	3SE5000-0AA04	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA02	1	1 unit	41K
		- With ball bearing	19	➡	3SE5000-0AA03	1	1 unit	41K
		Rubber roller	50	➡	3SE5000-0AA08	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA11	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA12	1	1 unit	41K
	Twist levers 35 mm, offset, type A, according to EN 50041							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA15	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA16	1	1 unit	41K
		Twist levers 30 mm, straight ¹⁾ , type A, according to EN 50041						
• Metal lever		Plastic roller	19	➡	3SE5000-0AA24	1	1 unit	41K
3SE5000-0AA24			30	➡	3SE5000-0AA26	1	1 unit	41K
	Twist levers 100 mm, adjustable length, with grid hole							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA60	1	1 unit	41K
3SE5000-0AA60			50	➡	3SE5000-0AA67	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA61	1	1 unit	41K
		Rubber roller	50	➡	3SE5000-0AA68	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA62	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA63	1	1 unit	41K
	Twist levers 100 mm, adjustable length							
	• Metal lever	Plastic roller	19		3SE5000-0AA50	1	1 unit	41K
		High-grade steel roller	19		3SE5000-0AA51	1	1 unit	41K
		Plastic roller	30		3SE5000-0AA55	1	1 unit	41K
			50		3SE5000-0AA57	1	1 unit	41K
		Rubber roller	50		3SE5000-0AA58	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19		3SE5000-0AA52	1	1 unit	41K
	High-grade steel roller	19		3SE5000-0AA53	1	1 unit	41K	
3SE5000-0AA50	Fork levers							
	(for switches with snap-action contacts only)							
	• 2 metal levers	2 plastic rollers	19	➡	3SE5000-0AT01	1	1 unit	41K
3SE5000-0AT01		2 high-grade steel rollers	19	➡	3SE5000-0AT02	1	1 unit	41K
	• 2 high-grade steel levers	2 plastic rollers	19	➡	3SE5000-0AT03	1	1 unit	41K
		2 high-grade steel rollers	19	➡	3SE5000-0AT04	1	1 unit	41K
	Rod levers, type D, according to EN 50041							
	• Aluminum rod	Length 200 mm	6		3SE5000-0AA80	1	1 unit	41K
3SE5000-0AA80	• Spring rod	Length 200 mm	6		3SE5000-0AA81	1	1 unit	41K
	• Plastic rod	Length 200 mm	6		3SE5000-0AA82	1	1 unit	41K
	• Plastic rod	Length 330 mm	6		3SE5000-0AA83	1	1 unit	41K

➡ Positively driven actuator, necessary in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).* You can order this quantity or a multiple thereof.
Illustrations are approximate

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Compact design

Overview



Compact design in width 30 mm

Particularly in harsh environments or on equipment with limited space, the small 3SE54 position switches in compact design with a depth of 16 mm and a weight of only 80 g (without cable) are ideal. Above all the versions with molded cable can be mounted in the most confined spaces.

3SE54 compact position switches are available in two different widths as complete units:

- The 3SE5413 series complies with the EU standard and features a 30 mm wide enclosure with drilled holes at a spacing of 20 mm.
- The 3SE5423 series meets the requirements of the US market and features a 40 mm wide enclosure with drilled holes at a spacing of 25 mm.

Both the enclosure and the actuator head are made of metal and comply with the high degree of protection IP67.

The following actuators are available:

- Rounded plungers
- Rounded plungers with central fixing
- Rounded plungers with external seal
- Roller plungers
- Roller plungers with central fixing
- Twist levers
- Twist lever with a smaller mounting depth and lower height
- Twist levers, adjustable length

The contact block is designed with snap-action contacts 1 NO + 1 NC. The NC contact complies with the requirements for positive opening according to IEC 60947-5-1.

Connection:

- With molded cable, length 2 m or 5 m
- With M12 device plug and connecting cable, M12 socket, 5-pole, with open end, length 5 m

Safety circuits

Standard IEC 60947-5-1 requires positive opening of the NC contacts. In other words, for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to the standard IEC 60947-5-1 with the symbol .

SIL 1 according to IEC 62061/IEC 61508 or PL c according to ISO 13849-1 can be attained with the 3SE5 position switch with  if the corresponding fail-safe evaluation units are selected and correctly installed (e.g. the 3SK safety relays or matching devices from the ASIsafe, SIMATIC or SINUMERIK product ranges).

If a second 3SE5 position switch with  is used, SIL 3/PL e can be attained.

Benefits

- Very compact yet with the same rating as the 3SE51 standard switches, for notable space savings in confined installation conditions
- Various actuator versions available
- Roller plungers can be rotated 90°
- Twist levers can be rotated 180°; twist levers can be adjusted in 15° increments
- Time is saved when mounting the fully assembled unit
- With metal enclosure of degree of protection IP67, ideal for use in rough industrial environments
- Insensitive to electromagnetic interference

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, metal enclosures

Compact design

Selection and ordering data

2 snap-action contacts 1 NO + 1 NC · Degree of protection IP67 · With connecting cable or M12 device plug

Operating mechanism		Enclosure width		Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
		mm						
Complete units · Enclosure width 30 or 40 mm								
	Rounded plungers							
	Standard mounting							
	• With connecting cable, 2 m	30	→	3SE5413-0CC20-1EA2		1	1 unit	41K
		40	→	3SE5423-0CC20-1EA2		1	1 unit	41K
	• With connecting cable, 5 m	30	→	3SE5413-0CC20-1EA5		1	1 unit	41K
	• With M12 device plug, 5-pole	30	→	3SE5413-0CC20-1EB1		1	1 unit	41K
3SE5413-0CC20-1EA2		40	→	3SE5423-0CC20-1EB1		1	1 unit	41K
	With central fixing M12 x 1							
	• With connecting cable, 2 m	30	→	3SE5413-0CC21-1EA2		1	1 unit	41K
		40	→	3SE5423-0CC21-1EA2		1	1 unit	41K
3SE5413-0CC21-1EA2								
	With external seal							
	• With connecting cable, 2 m	30	→	3SE5413-0CC22-1EA2		1	1 unit	41K
		40	→	3SE5423-0CC22-1EA2		1	1 unit	41K
3SE5413-0CC22-1EA2								
	Roller plungers							
	Standard mounting							
	• With connecting cable, 2 m	30	→	3SE5413-0CD20-1EA2		1	1 unit	41K
		40	→	3SE5423-0CD20-1EA2		1	1 unit	41K
	- Actuator head rotated 90°	30	→	3SE5413-0CD23-1EA2		1	1 unit	41K
	• With connecting cable, 5 m	30	→	3SE5413-0CD20-1EA5		1	1 unit	41K
	• With M12 device plug, 5-pole	30	→	3SE5413-0CD20-1EB1		1	1 unit	41K
		40	→	3SE5423-0CD20-1EB1		1	1 unit	41K
	With central fixing M12 x 1							
	• With connecting cable, 2 m	30	→	3SE5413-0CD21-1EA2		1	1 unit	41K
3SE5413-0CD23-1EA2		40	→	3SE5423-0CD21-1EA2		1	1 unit	41K
	Twist levers							
	Standard mounting							
	• With connecting cable, 2 m	30	→	3SE5413-0CN20-1EA2		1	1 unit	41K
		40	→	3SE5423-0CN20-1EA2		1	1 unit	41K
	• With connecting cable, 5 m	30	→	3SE5413-0CN20-1EA5		1	1 unit	41K
	• With M12 device plug, 5-pole	30	→	3SE5413-0CN20-1EB1		1	1 unit	41K
		40	→	3SE5423-0CN20-1EB1		1	1 unit	41K
	Twist lever with a smaller mounting depth and lower height							
	• With connecting cable, 2 m	30	→	3SE5413-0CP20-1EA2		1	1 unit	41K
	3SE5413-0CN20-1EA2	Twist levers, adjustable length						
	30	→	3SE5413-0CQ20-1EA2		1	1 unit	41K	
Connecting cable								
	Connecting cable							
	With M12 socket, 5-pole, open end, length 5 m			3SX5601-3SB55		1	1 unit	41K
3SX5601-3SB55								

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

3SE5, open-type design

Enclosure width 30 mm

Overview



Open-type design

Their compact design makes these switches particularly suitable for use in confined conditions. The mountings and operating points comply with EN 50047.

The switches are equipped with two or three contacts in snap-action, slow-action or slow-action with make-before-break versions. The stroke is 6 mm.

The empty enclosure can be equipped with all contact block versions (see page 12/48).

Improved version

The switches have a robust metal plunger with increased abrasion resistance (instead of the rounded plunger). This enables the switch to be approached from a 30° angle.

Selection and ordering data

2 or 3 contacts · Degree of protection IP20¹⁾ (2 contacts), IP10 (3 contacts) · Mounting and operating points according to EN 50047

Version	Contacts	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Plastic enclosures · Enclosure width 30 mm						
 3SE5250-0BC05	With metal plunger					
	• Slow-action contacts	1 NO + 1 NC ➡	3SE5250-0BC05	1	1 unit	41K
		1 NO + 2 NC ➡	3SE5250-0KC05	1	1 unit	41K
		2 NO + 1 NC ➡	3SE5250-0PC05	1	1 unit	41K
 3SE5250-0KC05	- With make-before-break	1 NO + 2 NC ➡	3SE5250-0MC05	1	1 unit	41K
	• Snap-action contacts	1 NO + 1 NC ➡	3SE5250-0CC05	1	1 unit	41K
		1 NO + 2 NC ➡	3SE5250-0LC05	1	1 unit	41K
	• Empty enclosures without contact block	-- ➡	3SE5250-0AC05	1	1 unit	41K
 3SE5250-0AC05						
 3SE5050-0BA00	Contact blocks with 2 contacts For open-type design ²⁾					
	• Slow-action contacts	1 NO + 1 NC ➡	3SE5050-0BA00	1	1 unit	41K
	• Snap-action contacts	1 NO + 1 NC ➡	3SE5050-0CA00	1	1 unit	41K
	- Standard	➡	3SE5050-0GA00	1	1 unit	41K
	- Contact distance 2 x 2 mm	➡	3SE5050-0NA00	1	1 unit	41K
	- Short stroke	➡				

➡ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ With the conductor connected and the clamping screw tightened.

²⁾ Contact blocks with 3 contacts, see page 12/48.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

Accessories and spare parts

Accessories

Selection and ordering data

The quick-release devices and plug-in connections are used for fast installation and replacement of position switches.

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Service box for position switches					
 3SX5110-0BK	Contents: - Three basic switches with rounded plunger in plastic version in enclosure widths 31, 40, 50 mm - Various actuator heads: - Plain plunger - Roller plunger - Roller lever - Angular roller lever - Spring rod - Twist actuator with various lever versions - Accessories: M12 device plug, cover yellow, protective cap, two contact blocks - SIRIUS 3SE brochure in German and English For more information, see flyer .	3SX5110-0BK	1	1 unit	41K
Quick-release devices for enclosure width 40 mm					
 3SY3110	Adapter plates with screws	3SY3110	1	1 unit	41K
 3SY3027	Base plate with locking lever	3SY3027	1	1 unit	41K
Plug-in connections for M20 x 1.5 connection threads					
 3SY3131 3SX5100-1SS05	Device plugs (6-pole + PE), for M20 x 1.5 For max. 250 V, 10 A, With connecting cable 0.75 mm ² , plastic, degree of protection IP65, ambient temperature -40 to +90 °C	3SY3131	1	1 unit	41K
 3SX5100-1SS51 3SX5100-1SS08	M12 device plugs, plastic, for M20 x 1.5 4-pole, for max. 250 V, 4 A, $U_{imp} = 2\,500\text{ V}$ 5-pole, for max. 125 V, 4 A, $U_{imp} = 1\,500\text{ V}$ - Yellow/green cable for PE on pin 5 - Gray cable on pin 5, without PE 5-pole¹⁾, for max. 60 V, 1.5 A, $U_{imp} = 800\text{ V}$ 8-pole, for max. 30 V, 1.5 A, $U_{imp} = 800\text{ V}$	3SY3127 3SY3128 3SX5100-1SS05 3SX5100-1SS51 3SX5100-1SS08	1	1 unit	41K
 3SX5601-2GA03	Connecting cables - With M12 socket, 8-pole, straight, open end, rated voltage 30 V, rated current 2 A - Length 3 m - Length 5 m - Length 10 m - Length 15 m - With M12 socket, open end, length 5 m - 4-pole - 5-pole	3SX5601-2GA03 3SX5601-2GA05 3SX5601-2GA10 3SX5601-2GA15 3SX5601-3SB54 3SX5601-3SB55	1	1 unit	41K
 3SX5601-3SB54			1	1 unit	41K
 3SX5601-3SV15	Connecting cable With M12 socket, 5-pole and M12 plug, 5-pole, length 1 m	3SX5601-3SV15	1	1 unit	41K
 6ES7194-6KB00-0XA0	ET 200 Y-cable¹⁾ for connecting 2 x 1-channel sensors With M12 plug, 5-pole on 2 x M12 sockets, 5-pole, length 200 mm	6ES7194-6KB00-0XA0	1	1 unit	250

¹⁾ Suitable for wiring sensors that are connected to all fail-safe block I/O modules in the SIMATIC ET 200eco PN and ET 200AL series. For more information, [see page 12/88 onwards](#).

Position and safety switches

SIRIUS 3SE5 mechanical position switches

Accessories and spare parts

Accessories

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Plug-in connections for M20 x 1.5 connection threads					
 3RK1902-4CA00-4AA0	Cable box M12 Angled, 4-pole, max. 4 A with cable connection space, max. 0.75 mm ²	3RK1902-4CA00-4AA0	1	1 unit	42D
 3RK1902-4BA00-5AA0	M12 plugs, 5-pole • Straight, separate item • Angled, separate item	3RK1902-4BA00-5AA0 3RK1902-4DA00-5AA0	1 1	1 unit 1 unit	42D 42D
Adapters and cable glands for M20 x 1.5 connection threads					
 3SX9917	Adapters according to ☹, ☹ and ☹ For cable entry from M20 x 1.5 to NPT 1/2 • Metal	3SX9917	1	1 unit	41K
 3SX9918	• Plastic	3SX9918	1	1 unit	41K
 3SX9926	Cable glands M20 x 1.5 Plastic • Degree of protection IP67	3SX9926	1	1 unit	41K
 3SX5601-1A	• High degree of protection IP69, IEC 60529	3SX5601-1A	1	1 unit	41K

Position and safety switches

SIRIUS 3SE5 mechanical position switches

Accessories and spare parts

Optional accessories and spare parts

Selection and ordering data

Version	Color/ contacts	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Optional accessories for 3SE51, 3SE52						
 3SE5000-0AC30	Protective caps For rounded plungers according to EN 50047, 3SE5...C05	Black 3SE5000-0AC30		1	1 unit	41K
 3SX5100-3B	Adapters with screws¹⁾ For an increase in the mounting depth on the 3SE5000-0AH00 twist actuator, in combination with twist lever with adjustable length or rod lever	-- 3SX5100-3B		1	1 unit	41K
 3SX5100-1A	Mounting plate Suitable for 3SE523, and 3SE521, position switches with a width of 31 mm (in particular for control cabinet types)	-- 3SX5100-1A		1	1 unit	41K
Spare parts for 3SE51, 3SE52						
 3SE5232-0AC05	Empty enclosures, plastic • Enclosure width 31 mm - With increased corrosion protection ²⁾ • Enclosure width 40 mm • Enclosure width 50 mm - With increased corrosion protection ²⁾	Turquoise 3SE5232-0AC05 3SE5232-0AC05-1CA0 3SE5132-0AA00 3SE5242-0AC05 3SE5242-0AC05-1CA0		1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K 41K
 3SE5212-0AC05	Empty enclosures, metal • Enclosure width 31 mm - With increased corrosion protection ²⁾ • Enclosure width 40 mm - With increased corrosion protection ²⁾ • Enclosure width 56 mm - With increased corrosion protection ²⁾ • Enclosure width 56 mm, XL ³⁾	Turquoise 3SE5212-0AC05 3SE5212-0AC05-1CA0 3SE5112-0AA00 3SE5112-0AA00-1CA0 3SE5122-0AA00 3SE5122-0AA00-1CA0 3SE5162-0AA00		1 1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K 41K 41K 41K
 3SE5000-0BA00	Contact blocks with 2 contacts⁴⁾ • Slow-action contacts • Snap-action contacts - Standard - Gold-plated contacts - Contact distance 2 x 2 mm - Short stroke	1 NO + 1 NC → 1 NO + 1 NC → → → → →	3SE5000-0BA00 3SE5000-0CA00 3SE5000-0CA00-1AC1 3SE5000-0GA00 3SE5000-0NA00	1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K 41K
 3SE5000-0KA00	Contact blocks with 3 contacts • Slow-action contacts - With make-before-break • Snap-action contacts	1 NO + 2 NC → 2 NO + 1 NC → 1 NO + 2 NC → 1 NO + 2 NC →	3SE5000-0KA00 3SE5000-0PA00 3SE5000-0MA00 3SE5000-0LA00	1 1 1 1	1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K
 3SE5060-0BA00	Contact blocks for XL enclosure³⁾ • Slow-action contacts - With make-before-break • Snap-action contacts	1 NO + 1 NC → 1 NO + 2 NC → 1 NO + 1 NC →	3SE5060-0BA00 3SE5060-0MA00 3SE5060-0CA00	1 1 1	1 unit 1 unit 1 unit	41K 41K 41K

→ Positive opening according to IEC 60947-5-1, Annex K.

¹⁾ Possibly required for the conversion from 3SE21 to 3SE51.

²⁾ Use corresponding high-grade steel lever.

³⁾ XL enclosures may only be equipped with combinations of contact elements, see pages 12/12, 12/40 and 12/41.

⁴⁾ Unsuitable for open-type position switches, see page 12/45.

Position and safety switches

SIRIUS 3SE5 mechanical position switches

Accessories and spare parts

Optional accessories and spare parts

Version	Rated voltage LEDs	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
V						
Spare parts for 3SE51, 3SE52						
	Covers for plastic enclosures, width 31 mm					
	• Turquoise with LED	24 DC	3SE5230-1AA00	1	1 unit	41K
		230 AC	3SE5230-3AA00	1	1 unit	41K
	• Yellow	--	3SE5230-0AA00-1AG0	1	1 unit	41K
	- With LED	24 DC	3SE5230-1AA00-1AG0	1	1 unit	41K
		230 AC	3SE5230-3AA00-1AG0	1	1 unit	41K
3SE5230-1AA00						
	Covers for plastic enclosures, width 40 mm					
	• Turquoise with LED	24 DC	3SE5130-1AA00	1	1 unit	41K
		230 AC	3SE5130-3AA00	1	1 unit	41K
	• Yellow	--	3SE5130-0AA00-1AG0	1	1 unit	41K
	- With LED	24 DC	3SE5130-1AA00-1AG0	1	1 unit	41K
		230 AC	3SE5130-3AA00-1AG0	1	1 unit	41K
3SE5130-1AA00-1AG0						
	Covers for plastic enclosures, width 50 mm					
	• Turquoise with LED	24 DC	3SE5240-1AA00	1	1 unit	41K
		230 AC	3SE5240-3AA00	1	1 unit	41K
	• Yellow	--	3SE5240-0AA00-1AG0	1	1 unit	41K
	- With LED	24 DC	3SE5240-1AA00-1AG0	1	1 unit	41K
		230 AC	3SE5240-3AA00-1AG0	1	1 unit	41K
3SE5240-1AA00						
	Covers for metal enclosures, width 31 mm					
	• Turquoise with LED	24 DC	3SE5210-1AA00	1	1 unit	41K
		230 AC	3SE5210-3AA00	1	1 unit	41K
	• Yellow	--	3SE5210-0AA00-1AG0	1	1 unit	41K
	- With LED	24 DC	3SE5210-1AA00-1AG0	1	1 unit	41K
		230 AC	3SE5210-3AA00-1AG0	1	1 unit	41K
3SE5210-1AA00						
	Covers for metal enclosures, width 40 mm					
	• Turquoise with LED	24 DC	3SE5110-1AA00	1	1 unit	41K
		230 AC	3SE5110-3AA00	1	1 unit	41K
	• Yellow	--	3SE5110-0AA00-1AG0	1	1 unit	41K
	- With LED	24 DC	3SE5110-1AA00-1AG0	1	1 unit	41K
		230 AC	3SE5110-3AA00-1AG0	1	1 unit	41K
3SE5110-1AA00						
	Covers for metal enclosures, width 56 mm					
	• Turquoise with LED	24 DC	3SE5120-1AA00	1	1 unit	41K
		230 AC	3SE5120-3AA00	1	1 unit	41K
	• Yellow	--	3SE5120-0AA00-1AG0	1	1 unit	41K
	- With LED	24 DC	3SE5120-1AA00-1AG0	1	1 unit	41K
		230 AC	3SE5120-3AA00-1AG0	1	1 unit	41K
3SE5120-0AA00-1AG0						
	Covers for XL metal enclosures, width 56 mm					
	• Yellow	--	3SE5160-0AA00-1AG0	1	1 unit	41K
3SE5160-0AA00-1AG0						

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

General data

Overview

More information

Homepage, see www.siemens.com/sirius-position-switches
 Industry Mall, see www.siemens.com/product?3SE
 Configurator, see www.siemens.com/sirius/configurators

Configuration Manual, see <https://support.industry.siemens.com/cs/ww/en/view/43920150>

Safety switches with separate actuator are used where the position of doors, covers or protective grilles must be monitored for safety reasons.

3SE5 safety switches with separate actuator have the same enclosures as the 3SE5 position switches (modular system).



3SE5 safety switches with head for separate actuator

Design

Enclosure sizes

The 3SE5 safety switches are available in four different enclosure sizes:

- Plastic enclosures according to EN 50047, 31 mm wide, IP65, 1 cable entry
- Metal enclosures according to EN 50047, 31 mm wide, IP66/IP67, 1 cable entry
- Plastic and metal enclosures according to EN 50041, 40 mm wide, IP66/IP67, 1 cable entry
- Plastic enclosures, 50 mm wide, IP66/IP67, 2 cable entries
- Metal enclosures, 56 mm wide, IP66/IP67, 3 cable entries

Also available are safety switches in the 3SE2 series which have been developed in this form according to general market requirements:

- Molded-plastic enclosures outside of the standards, enclosure width 52 mm, IP67

Enclosure versions

Various basic versions can be selected for the enclosures of the 3SE5 series:

- Available with 2- or 3-pole contact blocks designed as slow-action contacts
- Optional LED status display
- With mounted 4- or 5-pole M12 device plug, also for connection to field modules, such as SIMATIC ET 200 (available for the wide enclosures as an accessory for self-assembly)
- With 6-pole device plug + PE on the metal enclosures
- Similarly with a combination of plug and LED displays
- AS-Interface version with integrated ASIsafe electronics for all enclosure designs (see [page 12/102](#))

For a description of the basic switches, see [page 12/5](#).

Operation

The actuator head is included in the scope of supply. For actuation from four directions it can be adjusted through $4 \times 90^\circ$. The switches can also be approached from above.

The actuator heads of the 3SE2243 and 3SE2257 switches with special enclosures cannot be changed. The switches can be approached from the two broad sides and from above.

The actuator is not included in the scope of supply of the safety switches and must be ordered separately from a choice of different versions to suit the application (see [page 12/58](#)).

The actuator is encoded. Simple overruling by hand or auxiliary devices is impossible.

Radius actuators

The safety switches with radius actuators are particularly suitable for rotary protective devices. The movable actuation key allows even small radii to be approached. Damage to the switch and the actuator due to inaccurate approach is prevented.

Locking devices

A high-grade steel blocking insert for attaching up to eight padlocks is available for even more security (see [page 12/69](#)).



Blocking inserts with padlock

Dust protection

For use in dusty environments, a protective cap made of rubber is offered that protects the actuator entries of the actuator head from contamination (see [page 12/69](#)).

Contact reliability

The contact blocks ensure an extremely high contact stability. This applies even when the devices are switching low voltages and currents.

Positive opening ☞

The NC contacts of the switch are forced open mechanically, positively driven and reliably by the plunger. This is referred to as "positive opening".

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

General data

Benefits

The 3SE5 safety switches with separate actuator differ from the previous series through the following new properties:

- All enclosure sizes with increased corrosion protection are optionally available with an LED signaling indicator.
- The 3-pole contact block 1 NO + 2 NC is available for all enclosure sizes.
- The plastic enclosure has simple and fast wiring equipment which makes it possible to save approx. 20 to 25% of the time when connecting.
- The ASIsafe electronics are integrated in the enclosure for the versions with AS-Interface connection ([see page 12/102](#)); an additional adapter is not required.

Application

Safety switches with separate actuator are used where the position of doors, covers or protective grilles must be monitored for safety reasons. For more information about protective door monitoring applications, [see Flyer](#).

The safety switch can only be operated with the matching coded actuator. Simple overruling by hand or auxiliary devices is impossible.

Devices are available with enclosure versions to suit the particular ambient conditions. The high-grade steel actuator is suitable for extreme ambient conditions down to -40 °C. Different control tasks can be performed with the contact blocks best suited for the particular purpose. Dimensions and fixing points of the enclosure are according to EN 50041 or EN 50047 standards. The devices are suitable for use in any climate.

Standards

The switches comply with IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The protective measure of "total insulation" by the plastic enclosure is ensured by the use of plastic screw glands.

Safety position switches

For controls according to IEC 60204-1 the devices can be used as a safety position switch. They comply with ISO 14119. A TÜV Certificate is available. To secure position switches against changes in their position, positively-driven techniques must be employed on installation.

Safety circuits

Standard IEC 60947-5-1 requires positive opening of the NC contacts. In other words, for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to the standard IEC 60947-5-1 with the symbol .

SIL 2 according to IEC 62061/IEC 61508 or PL d according to ISO 13849-1 can be attained with a safety switch with a separate actuator with  if the corresponding fail-safe evaluation units are selected and correctly installed (e.g. the 3SK safety relays or matching devices from the ASIsafe, SIMATIC or SINUMERIK product ranges).

If a second 3SE5 safety switch with  is used, SIL 3/PL e can be attained.

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, [see www.siemens.com/safety-evaluation](#).

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

General data

Technical specifications

Type		3SE51...-..V., 3SE52...-..V..	3SE2257-..XX..	3SE2243-..XX..
General data				
Standards		IEC 60947-5-1, ISO 14119		
Rated insulation voltage U_i	V	400	500	
Pollution degree according to IEC 60664-1		Class 3	Class 3	
Rated impulse withstand voltage U_{imp}	kV	6		
Rated operational voltage U_e	V	400 AC; over 300 V AC same potential only	500 AC; over 380 V AC same potential only	
Conventional thermal current I_{th}	A	6	10	
Rated operational current I_e			1-pole	3-pole
• With alternating current 50/60 Hz		$I_e/AC-15$	$I_e/AC-12$	$I_e/AC-15$
- At 24 V	A	6	10	10
- At 120 V	A	6	10	10
- At 240 V	A	4	10	10
- At 400 V	A	4	10	10
- At 500 V	A	--	10	10
• For direct current		$I_e/DC-13$	$I_e/DC-12$	$I_e/DC-13$
- At 24 V	A	3	10	10
- At 125 V	A	0.55	--	--
- At 250 V	A	0.27	--	--
- At 110 V	A	--	4	4
- At 220 V	A	--	1	1
- At 400 V	A	0.12	--	--
- At 440 V	A	--	0.5	0.5
Short-circuit protection				
• With DIAZED fuse links, operational class gG	A	6	6	
• With fuse links, quick	A	--	10	
• With miniature circuit breaker, C characteristic ($I_{K<400A}$)	A	1	--	
Mechanical endurance		1 x 10 ⁶ operating cycles		
Electrical endurance				
• With 3RH21 contactors size S00 and 3RT contactors sizes S00, S0		1 x 10 ⁶ operating cycles	> 1 x 10 ⁶ operating cycles	
• For utilization category AC-15 when switching off $I_e/AC-15$ at 240 V		100 000 operating cycles	500 000 operating cycles	
Frequency of operation with contactors 3RH21 size S00 and 3RT contactors sizes S00, S0		6 000 operating cycles/h		
Minimum pull-out force for positive opening	N	20	10	30

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

3SE5, plastic enclosures > Enclosure width 31 mm according to EN 50047

Selection and ordering data

2 or 3 contacts · 5 directions of approach · Degree of protection IP65 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version ¹⁾		Contacts	LEDs		Complete units		PU (UNIT, SET, M)	PS*	PG
					Article No.	Price per PU			
Enclosure width 31 mm according to EN 50047									
	• Slow-action contacts	1 NO +	--	↻	3SE5232-0RV40		1	1 unit	41K
		1 NC							
		1 NO +	--	↻	3SE5232-0QV40		1	1 unit	41K
		2 NC							
3SE5232-0RV40									
	With 2 LEDs, yellow/green	1 NO +	24 V DC	↻	3SE5232-1RV40		1	1 unit	41K
		1 NC							
	• Slow-action contacts	1 NO +	230 V AC	↻	3SE5232-3RV40		1	1 unit	41K
		1 NC							
	With increased minimum pull-out force 30 N								
		• Slow-action contacts	1 NO +	--	↻	3SE5232-0QV40-1AA1		1	1 unit
		2 NC							
3SE5232-1RV40									
	With M12 device plug, 4-pole (250 V, 4 A) ²⁾	1 NO +	--	↻	3SE5234-0RV40-1AC4		1	1 unit	41K
		1 NC							
	• Slow-action contacts	2 NC	--	↻	3SE5234-0QV40-1AE0		1	1 unit	41K
	With M12 device plug, 5-pole (125 V, 4 A) ²⁾								
		With pin assignment as for SIMATIC ET 200 ³⁾							
	• Slow-action contacts	2 NC	--	↻	3SE5234-0QV40-1AE2		1	1 unit	41K
	With 2 LEDs, yellow/green								
		• Slow-action contacts	1 NO +	24 V DC	↻	3SE5234-1RV40-1AF3		1	1 unit
		1 NC							
3SE5234-0RV40-1AC4									

↻ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately (see page 12/58).

²⁾ For pin assignments, see page 12/12.

³⁾ The 3SE5234-.....-1AE2 position switches, prewired with an M12 plug, 5-pole, have the same pin assignment as all fail-safe block I/O modules with a PROFINET connection in the SIMATIC ET 200eco PN and ET 200AL series with degree of protection IP65/IP67 for cabinet-free installation directly at the machine.
For more information, see page 12/88 onwards.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

3SE5, plastic enclosures > Enclosure width 40 mm according to EN 50041

Selection and ordering data

2 or 3 contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version ¹⁾	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		
Enclosure width 40 mm according to EN 50041						
	• Slow-action contacts	1 NO + 2 NC	--	➡	3SE5132-0QV20	1 1 unit 41K
	With 2 LEDs, yellow/green					
	• Slow-action contacts	1 NO + 2 NC	24 V DC	➡	3SE5132-1QV20	1 1 unit 41K
		1 NO + 2 NC	230 V AC	➡	3SE5132-3QV20	1 1 unit 41K
3SE5132-1QV20						

➡ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately ([see page 12/58](#)).

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

3SE5, plastic enclosures > Enclosure width 50 mm

Selection and ordering data

2 or 3 contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 2 × (M20 × 1.5) · With increased corrosion protection

Version ¹⁾	Contacts	LEDs	Complete units	☐	PU (UNIT, SET, M)	PS*	PG	
			Article No.	Price per PU				
Enclosure width 50 mm								
	• Slow-action contacts	1 NO + 2 NC	--	➡	3SE5242-0QV40	1	1 unit	41K
	With increased minimum pull-out force 30 N							
	• Slow-action contacts	1 NO + 1 NC	--	➡	3SE5242-0RV40-1AA1	1	1 unit	41K
	With 2 LEDs, yellow/green							
	• Slow-action contacts	1 NO + 2 NC	24 V DC	➡		3SE5242-1QV40	1	1 unit
		1 NO + 2 NC	230 V AC	➡	3SE5242-3QV40	1	1 unit	41K

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately (see page 12/58).

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

3SE5, metal enclosures > Enclosure width 31 mm according to EN 50047

Selection and ordering data

2 or 3 contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version ¹⁾	Contacts	LEDs	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		
Enclosure width 31 mm according to EN 50047						
 3SE5212-1RV40	• Slow-action contacts	1 NO + 1 NC	↻	3SE5212-0RV40	1	1 unit 41K
		1 NO + 2 NC	↻	3SE5212-0QV40	1	1 unit 41K
	With 2 LEDs, yellow/green					
	• Slow-action contacts	1 NO + 1 NC	↻	3SE5212-1RV40	1	1 unit 41K
		1 NO + 1 NC	↻	3SE5212-3RV40	1	1 unit 41K

↻ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately ([see page 12/58](#)).

Position and safety switches

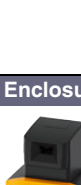
SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

3SE5, metal enclosures > Enclosure width 40 mm according to EN 50041/56 mm

Selection and ordering data

2 or 3 contacts · 5 directions of approach · Degree of protection IP66/IP67 · With increased corrosion protection

Version ¹⁾		Contacts	LEDs		Complete units	☐	PU (UNIT, SET, M)	PS*	PG
					Article No.	Price per PU			
Enclosure width 40 mm according to EN 50041 · Cable entry 1 x (M20 x 1.5)									
	• Slow-action contacts	1 NO + 2 NC	--	➡	3SE5112-0QV10		1	1 unit	41K
	With increased minimum pull-out force 30 N								
	• Slow-action contacts	1 NO + 2 NC	--	➡	3SE5112-0QV10-1AA7		1	1 unit	41K
	With 2 LEDs, yellow/green								
	• Slow-action contacts	1 NO + 2 NC	24 V DC	➡	3SE5112-1QV10		1	1 unit	41K
		1 NO + 2 NC	230 V AC	➡	3SE5112-3QV10		1	1 unit	41K
With M12 device plug, 5-pole (125 V, 4 A) ²⁾									
	• Slow-action contacts	1 NO + 1 NC	--	➡	3SE5114-0RV10-1AC5		1	1 unit	41K
		2 NC	--	➡	3SE5114-0QV10-1AE1		1	1 unit	41K
	With 2 LEDs, yellow/green								
	• Slow-action contacts	1 NO + 1 NC	24 V DC	➡	3SE5114-1RV10-1AF3		1	1 unit	41K
3SE5114-0RV10-1AC5	With pin assignment as for SIMATIC ET 200 ³⁾								
	• Slow-action contacts	2 NC	--	➡	3SE5114-0QV10-1AE3		1	1 unit	41K
With device plug, 6-pole + PE (250 V, 10 A) ²⁾									
	• Slow-action contacts	1 NO + 2 NC	--	➡	3SE5115-0QV10-1AD1		1	1 unit	41K
Enclosure width 56 mm · Cable entry 3 x (M20 x 1.5)									
	• Slow-action contacts	1 NO + 2 NC	--	➡	3SE5122-0QV10		1	1 unit	41K
	With increased minimum pull-out force 30 N								
	• Slow-action contacts	1 NO + 2 NC	--	➡	3SE5122-0QV10-1AA7		1	1 unit	41K
	With 2 LEDs, yellow/green								
	• Slow-action contacts	1 NO + 2 NC	24 V DC	➡	3SE5122-1QV10		1	1 unit	41K
3SE5122-1QV10		1 NO + 2 NC	230 V AC	➡	3SE5122-3QV10		1	1 unit	41K

↻ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately (see page 12/58).

²⁾ For pin assignments, see page 12/12.

³⁾ The 3SE5114-.....-1AE3 position switches, prewired with an M12 plug, 5-pole, have the same pin assignment as all fail-safe block I/O modules with a PROFINET connection in the SIMATIC ET 200eco PN and ET 200AL series with degree of protection IP65/IP67 for cabinet-free installation directly at the machine. For more information, see page 12/88 onwards.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

Accessories

Selection and ordering data

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Actuators with degree of protection IP66/IP67 for 3SE5					
Standard actuators					
 3SE5000-0AV01	Length 75.6 mm	3SE5000-0AV01	1	1 unit	41K
 3SE5000-0AV02	With vertical fixing, length 53 mm	3SE5000-0AV02	1	1 unit	41K
 3SE5000-0AV03	- With transverse fixing - Length 47 mm	3SE5000-0AV03	1	1 unit	41K
 3SE5000-0AW11	- Length 40 mm, plastic¹⁾	3SE5000-0AW11	1	1 unit	41K
High-grade steel actuators²⁾					
 3SE5000-0AW51	Length 75.6 mm	3SE5000-0AW51	1	1 unit	41K
 3SE5000-0AW52	With vertical fixing, length 53 mm	3SE5000-0AW52	1	1 unit	41K
 3SE5000-0AW53	With transverse fixing, length 47 mm	3SE5000-0AW53	1	1 unit	41K
Radius actuators					
 3SE5000-0AV06	- Length 51 mm - Direction of approach from the left - Direction of approach from the right	3SE5000-0AV04	1	1 unit	41K
		3SE5000-0AV06	1	1 unit	41K
Universal radius actuators					
 3SE5000-0AV05-1AA6	- Length 77 mm - Tab rotated 90°	3SE5000-0AV05	1	1 unit	41K
		3SE5000-0AV05-1AA6	1	1 unit	41K
Universal radius actuators, heavy duty					
 3SE5000-0AV07-1AK2	Length 67 mm	3SE5000-0AV07-1AK2	1	1 unit	41K
 3SE5000-0AV07	Length 77 mm	3SE5000-0AV07	1	1 unit	41K
 3SE5000-0AW57	- High-grade steel actuators²⁾	3SE5000-0AW57	1	1 unit	41K

¹⁾ Not suitable for safety switches with tumbler.

²⁾ Suitable for extreme environmental conditions such as -40 °C.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

Accessories

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Optional accessories for 3SE5					
 3SE5000-0AV08-1AA2  3SE5000-0AV08-1AA3	Protective caps Made of black rubber, for actuator head, to protect the actuator openings from contamination (Only for enclosure width 40 mm or 56 mm)	3SE5000-0AV08-1AA2	1	1 unit	41K
	Blocking inserts Made of high-grade steel, for actuator head for up to eight padlocks	3SE5000-0AV08-1AA3	1	1 unit	41K
Connections for 3SE5, 3SE2					
 3SY3127  3SX9926	Device plugs, M12, fixed, for M20 x 1.5 With connecting cable 0.25 mm ² , plastic, degree of protection IP67 • 4-pole, for max. 250 V, 4 A • 5-pole, for max. 125 V, 4 A • 5-pole¹⁾, for max. 60 V, 4 A	3SY3127 3SY3128 3SX5100-1SS51	1	1 unit	41K
	Connecting cable With M12 socket, 5-pole and M12 plug, 5-pole	3SX5601-3SV15	1	1 unit	41K
	Cable glands M20 x 1.5 Plastic	3SX9926	1	1 unit	41K

¹⁾ Suitable for wiring sensors that are connected to all fail-safe block I/O modules in the SIMATIC ET 200eco PN and ET 200AL series. For more information, [see page 12/88 onwards](#).

For more accessories, [see page 12/69](#).

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With separate actuator

3SE2, plastic enclosures > Special width 52 mm

Selection and ordering data

1 or 3 contacts · 3 directions of approach · Degree of protection IP67

Version	Operation	Complete units	PU (UNIT, SET, M)	PS*	PG
Article No.	Price per PU				
Plastic enclosures in special width of 52 mm					
 3SE2243	Lateral and front-end actuation¹⁾	6 mm stroke			
	• Cable entry 3 x (M20 x 1.5)				
	- Slow-action contacts 1 NO + 2 NC	Holding force 5 N ➡	3SE2243-0XX40	1	1 unit 41K
		Holding force 30 N ➡	3SE2243-0XX	1	1 unit 41K
		With automatic ejection ➡	3SE2243-0XX30	1	1 unit 41K
	- Slow-action contacts 1 NC	Holding force 5 N ➡	3SE2257-6XX40	1	1 unit 41K
		Holding force 30 N ➡	3SE2257-6XX	1	1 unit 41K
	• Cable entry 3 x (M16 x 1.5)				
	- Slow-action contacts 1 NO + 2 NC	Holding force 30 N ➡	3SE2243-0XX18	1	1 unit 41K
Accessories					
 3SX3218  3SX3228  3SX3256  3SX3217  3SX3234  3SX3233	Actuators				
	• Standard actuators ($r_{\min} = 150$ mm), length 28 mm		3SX3218	1	1 unit 41K
	• Universal radius actuator ($r_{\min} = 45$ mm), length 34 mm		3SX3228	1	1 unit 41K
	• Radius actuator, adjustable radius, length 34 mm		3SX3256	1	1 unit 41K
	• Ball locating, force adjustable up to max. 100 N by two adjustable screws, length 28 mm		3SX3217	1	1 unit 41K
	• Actuator, length 34 mm, with dust protection and slit cover		3SX3234	1	1 unit 41K
	Slit cover (spare part) (1 set = 3 units) for sealing unused operating slots for 3SE22 devices		3SX3233	1	3 units 41K

➡ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

General data

Overview

The safety switches with tumbler are exceptional safety-related devices which prevent an unforeseen or intentional opening of protective doors, protective grilles or other covers as long as a dangerous situation is present (i.e. follow-on motion of the switched-off machine).



3SE5 safety switch with tumbler

The safety switches with tumbler are comprised of a switch part with electromechanical tumbler and a mechanical actuator which has to be ordered separately.

They are rugged protective devices that enable the greatest possible safety for man and machine.

The safety switches with tumbler are offered in plastic or metal enclosures.

Dimensions (W x H x D) 54 mm x 185 mm x 43.5 mm

Operation

The actuator head is included in the scope of supply. For actuation from four directions it can be adjusted through $4 \times 90^\circ$. The switches can also be approached from above.

The actuator is not included in the scope of supply of the safety switches and must be ordered separately from a choice of different versions to suit the application (see page 12/68).

Actuation data:

- Maximum actuating speed $v_{\max} = 1.5 \text{ m/s}$
- Minimum actuating speed $v_{\min} = 0.4 \text{ mm/s}$
- Minimum force in the direction of actuation $F_{\min} = 30 \text{ N}$

The actuator is encoded. Simple overruling by hand or auxiliary devices is impossible.

Radius actuators

The safety switches with radius actuators are particularly suitable for rotary protective devices. The movable actuation key allows even small radii to be approached. Damage to the switch and the actuator due to inaccurate approach is prevented.

Locking devices

A high-grade steel blocking insert for attaching up to eight padlocks is available for even more security (see page 12/69).

Dust protection

For use in dusty environments, a protective cap made of rubber is offered that protects the actuator entries of the actuator head from contamination (see page 12/69).

Tumbler

There are two versions for interlocking the actuator:

- Spring-actuated lock (closed-circuit principle) with various release mechanisms
- Solenoid-locked (open-circuit principle)

The spring-actuated lock switch is equipped with an auxiliary release for emergency situations or setup mode. Available as options:

- Escape release or
- Emergency release

Contact blocks

The safety switches with tumbler have one switching block each for:

- Monitoring the actuator or the position of the protective door
- Monitoring the position of the solenoid

The mechanical design of the switch corresponds to the requirements of the fail-safe principle according to ISO 14119.

Optical signaling equipment

The safety switches with tumbler are available with an optional optical signaling device.

The signaling device indicates the switch position of the interlock and the protective device optically by means of two LEDs on the front.

Protective device	Tumbler	Display	Meaning
Closed	Released		Actuator able to be pulled
Closed	Locked		Actuator locked
Open	Released		Actuator pulled

Internal wiring:

- The yellow LED is pre-wired to the solenoid monitoring NO contact.
- The green LED is pre-wired to the actuator monitoring NC contact.
- LED ground is pre-wired to the ground of the solenoid.

Notes:

- The operational voltage must be connected to the corresponding contacts by the customer.
- This voltage for the LEDs must match the operational voltage of the solenoid (same potential).

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

General data

Benefits

The 3SE53 safety switches provide:

- More safety through higher locking forces:
 - 1 300 N with plastic enclosure
 - 2 600 N with metal enclosure
- Various release mechanisms: lock release, escape release and emergency release
- Two contact blocks each with three contacts as standard equipment, hence fewer versions needed

- Same dimensions for all enclosure versions: plastic, metal or with integrated ASIsafe
- An extensive range of actuators
- An optional LED status display 24 V DC, 115 V or 230 V AC for all switch versions
- Devices with ASIsafe electronics integrated in the enclosure/ wired to 8-pole M12 device plug (see page 12/107)
- 3SE5322-1S.21-1AG4 series with high degree of protection IP69 according to IEC 60529, cover with foamed seal

Application

The safety switches with tumbler are exceptional safety-related devices which prevent an unforeseen or intentional opening of protective doors, protective grilles or other covers as long as a dangerous situation is present (i.e. follow-on motion of the switched-off machine).

The safety switches with tumbler have the following functions:

- Enabling the machine or process with closed and locked protective device
- Locking the machine or process with opened protective device
- Position monitoring of the protective device and tumbler

Standards

The switches comply with IEC 60947-1 (Low-Voltage Switchgear and Controlgear, General) and IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The mechanical design of the switch corresponds to the requirements of the fail-safe principle according to ISO 14119.

Approvals

The switches are approved for use with locking devices according to ISO 14119 and EN 292, Parts 1 and 2.

These switches are approved according to UL 508, UL 50 and UL 746-C.

Safety circuits

Standard IEC 60947-5-1 requires positive opening of the NC contacts. In other words, for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to the standard IEC 60947-5-1 with the symbol ☞.

SIL 2 according to IEC 62061/IEC 61508 or PL d according to ISO 13849-1 can be attained with a safety switch with a tumbler with ☞ if the corresponding fail-safe evaluation units are selected and correctly installed (e.g. the 3SK safety relays or matching devices from the ASIsafe, SIMATIC or SINUMERIK product ranges).

If a second 3SE5 safety switch with ☞ is used, SIL 3/PL e can be attained.

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, see www.siemens.com/safety-evaluation.

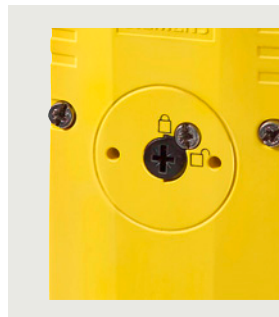
Tumbler

The separate actuator works like a key using coding and protects against manipulation. It transmits the locking force to the protective device and helps to monitor its position.

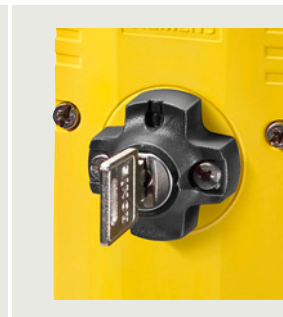
There are two versions of locking:

Spring-actuated lock (closed-circuit principle)

- In the standard version, the safety switch locks by means of spring force and releases by means of electromagnetic force. In the case of power failure, it reliably prevents the protective device from opening when machine parts are still moving.
- The switch is equipped with an auxiliary release for emergency situations or setup mode.
- An auxiliary release which can be secured with a lock to prevent misuse is available as a version.



Auxiliary release



Auxiliary release with lock

Position and safety switches

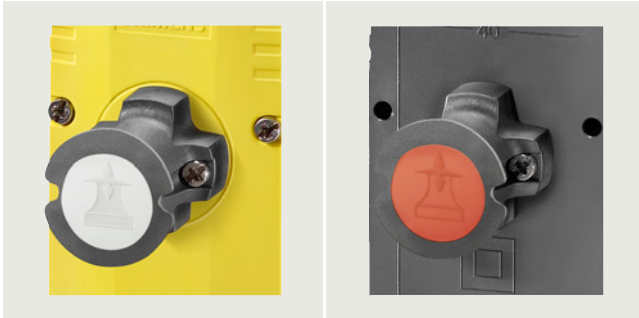
SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

General data

The 3SE53 safety switches are also available with an escape release or emergency release.

- Personnel working inside the hazard zone can use the escape release feature to manually release the tumbler without tools from the escape side (hazardous area side) so that they can exit the hazard area. An intentional act (in this case pulling the gray actuator) is required to release the locking mechanism and restore the normal operating state.
- The emergency release enables someone in an emergency situation to manually release the tumbler without tools from the access side (outside the hazardous area). Releasing the lock and restoring the normal operating state must require effort which is comparable to repair activity: in this case disassembly of the red actuator and resetting of the mechanical lock.



Escape release from the front

Emergency release from the back

Solenoid-locked (open-circuit principle)

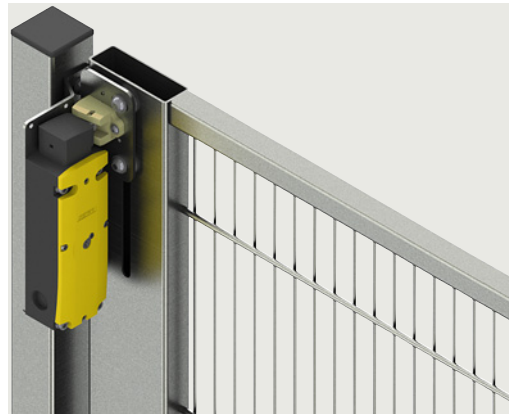
- The second version offers locking by means of electro-magnetic force and release by means of spring force. This version has an advantage when it is necessary to quickly access the machine after a power failure occurs, or in the case of very short coasting times.

Examples of door interlocking



X-Lock door interlocking from Axellent

For the addresses of the door interlock manufacturers, see [page 16/18](#).



Door interlocking from Brühl

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

General data

Technical specifications

Type		3SE5322	3SE5312
General data			
Standards		IEC 60947-5-1, ISO 14119, IEC 62061/IEC 61508	
Rated insulation voltage U_i	V	250	
Pollution degree according to IEC 60664-1		Class 3	
Rated impulse withstand voltage U_{imp}	kV	4	
Rated operational voltage U_e			
• DC	V	24	
• 50/60 Hz AC	V	230	
Conventional thermal current I_{th}	A	6	
Rated operational current I_e			
• With alternating current 50/60 Hz		$I_e/AC-15$ or B300	
- At 24 V	A	6	
- At 120 V	A	6	
- At 240 V	A	3	
• For direct current		$I_e/DC-13$ or Q300	
- At 24 V	A	3	
- At 125 V	A	0.55	
- At 250 V	A	0.27	
Solenoid			
• Locking force, max.	N	1 300	2 600
• Locking force according to ISO 14119	N	1 000	2 000
• Power consumption at U_c	W	3.5	
Short-circuit protection¹⁾			
• With DIAZED fuse links, operational class gG	A	6	
• With miniature circuit breaker, characteristic C	A	0.5	
Mechanical endurance	Operating cycles	1×10^6	
Electrical endurance			
• With 3RH21 contactors size S00 and 3RT contactors sizes S00, S0	Operating cycles	1×10^6	
• For utilization category AC-15 when switching off $I_e/AC-15$ at 230 V	Operating cycles	100 000	
• With utilization category DC-12/DC-13		For direct current depending on the loading of the switch	
Frequency of operation with contactors 3RH21 size S00 and 3RT contactors sizes S00, S0	Operating cycles/h	6 000	
Shock resistance according to IEC 60068-2-27	g/ms	30/11	

¹⁾ Without any welds according to IEC 60947-5-1.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

3SE5, plastic enclosures with locking force greater than 1 200 N
Selection and ordering data

6 slow-action contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5) · ISO 14119

Tumbler ¹⁾	LEDs	Solenoid, rated operational voltage		Complete units Position monitoring: Actuators: 1 NO + 2 NC Solenoid: 1 NO + 2 NC	PU (UNIT, SET, M)	PS*	PG
		V		Article No.	Price per PU		
1 300 N locking force · Enclosure width 54 mm							
	Spring-actuated locks						
	• With auxiliary release	--	24 DC	↻	3SE5322-OSD21	1	1 unit 41K
		--	115 AC	↻	3SE5322-OSD22	1	1 unit 41K
		--	230 AC	↻	3SE5322-OSD23	1	1 unit 41K
		Yellow/green	24 DC	↻	3SE5322-1SD21	1	1 unit 41K
		Yellow/green	115 AC	↻	3SE5322-2SD22	1	1 unit 41K
		Yellow/green	230 AC	↻	3SE5322-3SD23	1	1 unit 41K
	- With M12 plug, 8-pole ²⁾ , monitoring: 1 x door, 1 x interlocking 2 x door	--	24 DC	↻	3SE5324-OSD21-1AE4	1	1 unit 41K
		--	24 DC	↻	3SE5324-OSD21-1AE5	1	1 unit 41K
	• With auxiliary release with lock	--	24 DC	↻	3SE5322-0SE21	1	1 unit 41K
		--	115 AC	↻	3SE5322-0SE22	1	1 unit 41K
		--	230 AC	↻	3SE5322-0SE23	1	1 unit 41K
		Yellow/green	24 DC	↻	3SE5322-1SE21	1	1 unit 41K
		Yellow/green	115 AC	↻	3SE5322-2SE22	1	1 unit 41K
		Yellow/green	230 AC	↻	3SE5322-3SE23	1	1 unit 41K
	• With escape release from the front	--	24 DC	↻	3SE5322-0SF21	1	1 unit 41K
		--	115 AC	↻	3SE5322-0SF22	1	1 unit 41K
		--	230 AC	↻	3SE5322-0SF23	1	1 unit 41K
		Yellow/green	24 DC	↻	3SE5322-1SF21	1	1 unit 41K
		Yellow/green	115 AC	↻	3SE5322-2SF22	1	1 unit 41K
		Yellow/green	230 AC	↻	3SE5322-3SF23	1	1 unit 41K
	• With escape release from the front and emergency release from the back	--	24 DC	↻	3SE5322-0SL21	1	1 unit 41K
	• With escape release from the back and auxiliary release from the front	--	24 DC	↻	3SE5322-0SG21	1	1 unit 41K
		--	115 AC	↻	3SE5322-0SG22	1	1 unit 41K
		--	230 AC	↻	3SE5322-0SG23	1	1 unit 41K
		Yellow/green	24 DC	↻	3SE5322-1SG21	1	1 unit 41K
		Yellow/green	115 AC	↻	3SE5322-2SG22	1	1 unit 41K
		Yellow/green	230 AC	↻	3SE5322-3SG23	1	1 unit 41K
	• With escape release from the back and auxiliary release with lock from the front	--	24 DC	↻	3SE5322-0SH21	1	1 unit 41K
	- With M12 plug, 8-pole ²⁾ , monitoring: 1 x door, 1 x interlocking	--	24 DC	↻	3SE5324-0SH21-1AE4	1	1 unit 41K
	• With emergency release from the back and auxiliary release from the front	--	24 DC	↻	3SE5322-0SJ21	1	1 unit 41K
		--	115 AC	↻	3SE5322-0SJ22	1	1 unit 41K
		--	230 AC	↻	3SE5322-0SJ23	1	1 unit 41K
		Yellow/green	24 DC	↻	3SE5322-1SJ21	1	1 unit 41K
		Yellow/green	115 AC	↻	3SE5322-2SJ22	1	1 unit 41K
		Yellow/green	230 AC	↻	3SE5322-3SJ23	1	1 unit 41K
	Solenoid-locked						
		--	24 DC	↻	3SE5322-0SB21	1	1 unit 41K
		--	115 AC	↻	3SE5322-0SB22	1	1 unit 41K
		--	230 AC	↻	3SE5322-0SB23	1	1 unit 41K
		Yellow/green	24 DC	↻	3SE5322-1SB21	1	1 unit 41K
		Yellow/green	115 AC	↻	3SE5322-2SB22	1	1 unit 41K
		Yellow/green	230 AC	↻	3SE5322-3SB23	1	1 unit 41K
	• With M12 plug, 8-pole	--	24 DC	↻	3SE5324-0SB21-1AC8	1	1 unit 41K
	- Head rotated clockwise by 90°	--	24 DC	↻	3SE5324-0SB21-1AP0	1	1 unit 41K

↻ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately (see page 12/68).

²⁾ Suitable for connection, e.g. to fail-safe field modules of the SIMATIC ET 200eco PN and the SIMATIC ET 200AL with connection accessories 3SX5601-3SV18 and Y-cable 6ES7194-6KC00-0XA0, see page 12/69. For more information, see page 12/88 onwards.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

3SE5, plastic enclosures with locking force greater than 1 200 N

6 slow-action contacts · 5 directions of approach · Degree of protection IP69 · Cable entry 3 x (M20 x 1.5) · With foamed seal and special cover

Tumbler ¹⁾	LEDs	Solenoid, rated operational voltage	Complete units Position monitoring: Actuators: 1 NO + 2 NC Solenoid: 1 NO + 2 NC	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

V

1 300 N locking force · Enclosure width 54 mm · Degree of protection IP69

Spring-actuated locks

- With auxiliary release

Yellow/green 24 DC



3SE5322-1SD21-1AG4

1

1 unit

41K



3SE5322-1SD21-1AG4

- With auxiliary release with lock

Yellow/green 24 DC



3SE5322-1SE21-1AG4

1

1 unit

41K



3SE5322-1SE21-1AG4

- With escape release from the front

Yellow/green 24 DC



3SE5322-1SF21-1AG4

1

1 unit

41K



3SE5322-1SF21-1AG4

- With escape release from the back and auxiliary release from the front

Yellow/green 24 DC



3SE5322-1SG21-1AG4

1

1 unit

41K



3SE5322-1SG21-1AG4

➡ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately (see page 12/68).

For cable gland for degree of protection IP69 and more accessories, see page 12/69.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

3SE5, metal enclosures with locking force greater than 2 000 N

Selection and ordering data

6 slow-action contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5) · ISO 14119

Tumbler ¹⁾	LEDs	Solenoid, rated operational voltage		Complete units Position monitoring: Actuators: 1 NO + 2 NC Solenoid: 1 NO + 2 NC	☐	PU (UNIT, SET, M)	PS*	PG
V				Article No.	Price per PU			
2 600 N locking force · Enclosure width 54 mm								
Spring-actuated locks								
	• With auxiliary release	--	24 DC	⊕	3SE5312-0SD11	1	1 unit	41K
		--	115 AC	⊕	3SE5312-0SD12	1	1 unit	41K
		--	230 AC	⊕	3SE5312-0SD13	1	1 unit	41K
		Yellow/green	24 DC	⊕	3SE5312-1SD11	1	1 unit	41K
		Yellow/green	115 AC	⊕	3SE5312-2SD12	1	1 unit	41K
		Yellow/green	230 AC	⊕	3SE5312-3SD13	1	1 unit	41K
3SE5312-0SD11								
	• With auxiliary release with lock	--	24 DC	⊕	3SE5312-0SE11	1	1 unit	41K
		--	115 AC	⊕	3SE5312-0SE12	1	1 unit	41K
		--	230 AC	⊕	3SE5312-0SE13	1	1 unit	41K
		Yellow/green	24 DC	⊕	3SE5312-1SE11	1	1 unit	41K
		Yellow/green	115 AC	⊕	3SE5312-2SE12	1	1 unit	41K
		Yellow/green	230 AC	⊕	3SE5312-3SE13	1	1 unit	41K
3SE5312-0SE11								
	• With escape release from the front	--	24 DC	⊕	3SE5312-0SF11	1	1 unit	41K
		--	115 AC	⊕	3SE5312-0SF12	1	1 unit	41K
		--	230 AC	⊕	3SE5312-0SF13	1	1 unit	41K
		Yellow/green	24 DC	⊕	3SE5312-1SF11	1	1 unit	41K
		Yellow/green	115 AC	⊕	3SE5312-2SF12	1	1 unit	41K
		Yellow/green	230 AC	⊕	3SE5312-3SF13	1	1 unit	41K
3SE5312-0SF11								
	• With escape release from the back and auxiliary release from the front	--	24 DC	⊕	3SE5312-0SG11	1	1 unit	41K
		--	115 AC	⊕	3SE5312-0SG12	1	1 unit	41K
		--	230 AC	⊕	3SE5312-0SG13	1	1 unit	41K
		Yellow/green	24 DC	⊕	3SE5312-1SG11	1	1 unit	41K
		Yellow/green	115 AC	⊕	3SE5312-2SG12	1	1 unit	41K
		Yellow/green	230 AC	⊕	3SE5312-3SG13	1	1 unit	41K
3SE5312-0SG11								
	• With escape release from the back and auxiliary release with lock from the front	--	24 DC	⊕	3SE5312-0SH11	1	1 unit	41K
	• With emergency release from the back and auxiliary release from the front	--	24 DC	⊕	3SE5312-0SJ11	1	1 unit	41K
		--	115 AC	⊕	3SE5312-0SJ12	1	1 unit	41K
		--	230 AC	⊕	3SE5312-0SJ13	1	1 unit	41K
		Yellow/green	24 DC	⊕	3SE5312-1SJ11	1	1 unit	41K
		Yellow/green	115 AC	⊕	3SE5312-2SJ12	1	1 unit	41K
	Yellow/green	230 AC	⊕	3SE5312-3SJ13	1	1 unit	41K	
3SE5312-0SJ11								
Solenoid-locked								
		--	24 DC	⊕	3SE5312-0SB11	1	1 unit	41K
		--	115 AC	⊕	3SE5312-0SB12	1	1 unit	41K
		--	230 AC	⊕	3SE5312-0SB13	1	1 unit	41K
		Yellow/green	24 DC	⊕	3SE5312-1SB11	1	1 unit	41K
		Yellow/green	115 AC	⊕	3SE5312-2SB12	1	1 unit	41K
		Yellow/green	230 AC	⊕	3SE5312-3SB13	1	1 unit	41K
3SE5312-0SB11								

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately (see page 12/68).

²⁾ Suitable for connection, e.g. to fail-safe field modules of the SIMATIC ET 200eco PN and the SIMATIC ET 200AL with connection accessories 3SX5601-3SV18 and Y-cable 6ES7194-6KC00-0XA0, see page 12/69. For more information, see page 12/88 onwards.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

Accessories

Selection and ordering data

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Actuators with degree of protection IP66/IP67 for 3SE5					
Standard actuators					
 3SE5000-0AV01	Length 75.6 mm	3SE5000-0AV01	1	1 unit	41K
 3SE5000-0AV02	With vertical fixing, length 53 mm	3SE5000-0AV02	1	1 unit	41K
 3SE5000-0AV03	With transverse fixing, length 47 mm	3SE5000-0AV03	1	1 unit	41K
High-grade steel actuators					
 3SE5000-0AW51	Length 75.6 mm	3SE5000-0AW51	1	1 unit	41K
 3SE5000-0AW52	With vertical fixing, length 53 mm	3SE5000-0AW52	1	1 unit	41K
 3SE5000-0AW53	With transverse fixing, length 47 mm	3SE5000-0AW53	1	1 unit	41K
Radius actuators					
 3SE5000-0AV06	- Length 51 mm - Direction of approach from the left - Direction of approach from the right	3SE5000-0AV04 3SE5000-0AV06	1 1	1 unit 1 unit	41K 41K
Universal radius actuators					
 3SE5000-0AV05-1AA6	- Length 77 mm - Tab rotated 90°	3SE5000-0AV05 3SE5000-0AV05-1AA6	1 1	1 unit 1 unit	41K 41K
Universal radius actuators, heavy duty					
 3SE5000-0AV07-1AK2	Length 67 mm	3SE5000-0AV07-1AK2	1	1 unit	41K
 3SE5000-0AV07	Length 77 mm	3SE5000-0AV07	1	1 unit	41K
 3SE5000-0AW57	- High-grade steel actuators¹⁾	3SE5000-0AW57	1	1 unit	41K

¹⁾ Suitable for extreme environmental conditions such as -40 °C.

For further plug versions, see page 12/46.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety switches

With tumbler

Accessories

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Optional accessories for 3SE5					
 3SE5000-0AV08-1AA2 Protective caps Made of black rubber, for actuator head, to protect the actuator openings from contamination	3SE5000-0AV08-1AA2		1	1 unit	41K
 3SE5000-0AV08-1AA3 Blocking inserts Made of high-grade steel, for actuator head for up to eight padlocks	3SE5000-0AV08-1AA3		1	1 unit	41K
Spare parts for 3SE5					
Spare keys for key type RONIS SH115	3SX5100-1F		1	1 unit	41K
Connection accessories for 3SE5					
 3SX5100-1SS51	M12 device plugs, plastic, for M20 x 1.5				
	• 4-pole, for max. 250 V, 4 A, $U_{imp} = 2\,500\text{ V}$	3SY3127	1	1 unit	41K
	• 5-pole, for max. 125 V, 4 A, $U_{imp} = 1\,500\text{ V}$	3SY3128	1	1 unit	41K
	• 5-pole ¹⁾ , for max. 60 V, 4 A, $U_{imp} = 800\text{ V}$	3SX5100-1SS51	1	1 unit	41K
	• 8-pole ¹⁾ , for max. 30 V, 1.5 A, $U_{imp} = 800\text{ V}$	3SX5100-1SS08	1	1 unit	41K
 3SX9926	Cable glands M20 x 1.5 Plastic				
	• Degree of protection IP67	3SX9926	1	1 unit	41K
 3SX5601-1A	• High degree of protection IP69, IEC 60529	3SX5601-1A	1	1 unit	41K
 3SX5601-3SB55	Connecting cables With M12 socket, open end, length 5 m				
	• 4-pole	3SX5601-3SB54	1	1 unit	41K
	• 5-pole	3SX5601-3SB55	1	1 unit	41K
 3SX5601-3SV18	Connecting cable With M12 socket, 8-pole and M12 plug, 8-pole, length 1 m	3SX5601-3SV18	1	1 unit	41K
 3SX5601-2GA03	Connecting cables With M12 socket, 8-pole, straight, open end rated voltage 30 V, rated current 2 A				
	• Length 3 m	3SX5601-2GA03	1	1 unit	41K
	• Length 5 m	3SX5601-2GA05	1	1 unit	41K
	• Length 10 m	3SX5601-2GA10	1	1 unit	41K
	• Length 15 m	3SX5601-2GA15	1	1 unit	41K
 6GT2090-0BE00	M12 plug Straight, 8-pole	6GT2090-0BE00	1	5 units	572
 6ES7194-6KC00-0XA0	ET 200 Y-cable¹⁾ For connecting 1 x 2-channel sensor With M12 socket, 8-pole on 2 x M12 plugs, 5-pole, length 200 mm	6ES7194-6KC00-0XA0	1	1 unit	250

¹⁾ Suitable for wiring sensors that are connected to all fail-safe block I/O modules in the SIMATIC ET 200eco PN and ET 200AL series. For more information, see page 12/88 onwards.

For further plug versions, see page 12/46.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety hinge switches

General data

Overview

3SE5 hinge switches have the same enclosures as the 3SE5 position switches (modular system).



Hinge switches

Design

Enclosure sizes

The 3SE5 switches are available as complete units in two enclosure sizes:

- Plastic enclosures according to EN 50047, 31 mm wide, IP65, 1 cable entry
- Metal enclosures according to EN 50047, 31 mm wide, IP66/IP67, 1 cable entry
- Plastic and metal enclosures according to EN 50041, 40 mm wide, IP66/IP67, 1 cable entry

Enclosure versions

Various basic versions can be selected for the enclosures:

- With 2- or 3-pole contact blocks, designed as snap-action contacts
- AS-Interface version with integrated ASIsafe electronics for all enclosure designs (see page 12/111)

For a description of the basic switches, see page 12/5.

Operating mechanism

The hinge switches are provided for mounting on hinges. The actuator head is included in the scope of supply. There are two versions:

- Operating mechanism with hollow shaft, inner diameter 8 mm, outer 12 mm
- Operating mechanism with solid shaft, diameter 10 mm

3SE2283 hinge switches

The 3SE2283 hinge switches with integrated hinge are available in a special design. They are particularly suitable for use in machine doors and flaps.

Benefits

The 3SE5 hinge switches differ from the previous series through the following new characteristics:

- All actuators can be rotated around the axis in increments of 22.5° (see figure, page 12/6).
- The new 3-pole contact block 1 NO + 2 NC is available for all enclosure sizes (see figure, page 12/6).
- The plastic enclosure with a width of 31 mm has simple and fast wiring equipment which makes it possible to save approx. 20 to 25% of the time when connecting (see figure, page 12/6).
- The ASIsafe electronics are integrated in the enclosure for the versions with AS-Interface connection (see page 12/93); an additional adapter is not required.

Application

The hinge switches are used in those areas where the position of swiveling protective devices such as doors or flaps must be monitored. With these switches, the position of the doors and flaps is converted into electric signals. The switches allow shutdown and signaling without delay in the event of a small opening angle through the snap-action contacts with an actuating angle of 10°.

Devices are available with enclosure versions to suit the particular ambient conditions. Different control tasks can be performed with the contact blocks best suited for the particular purpose. Dimensions and fixing points of the enclosures are in accordance with EN 50041 or EN 50047 standards.

The devices are suitable for use in any climate.

Standards

The switches comply with IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The protective measure of "total insulation" by the plastic enclosure is ensured by the use of plastic screw glands.

Safety position switches

For controls according to IEC 60204-1 the devices can be used as a safety position switch. To secure position switches against changes in their position, positively-driven techniques must be employed on installation.

Safety circuits

Standard IEC 60947-5-1 requires positive opening of the NC contacts. In other words, for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to IEC 60947-5-1 with the symbol .

SIL 2 according to IEC 62061/IEC 61508 or PL d according to ISO 13849-1 can be attained with a 3SE5 safety hinge switch with  if the corresponding fail-safe evaluation units are selected and correctly installed (e.g. the 3SK safety relays or matching devices from the ASIsafe, SIMATIC or SINUMERIK product ranges).

If a second 3SE5 position switch with  is used, SIL 3/PL e can be attained.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety hinge switches

3SE5, plastic enclosures > Enclosure width 31 mm according to EN 50047/40 mm according to EN 50041

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, see www.siemens.com/safety-evaluation.

Technical specifications

The technical specifications are the same as for the standard switches (see page 12/11).

Selection and ordering data

Complete units

2 or 3 contacts · Degree of protection IP65 (31 mm) or IP66/IP67 (40 mm) · Cable entry 1 x (M20 x 1.5)

Version	Snap-action contacts	Complete units	PU (UNIT, SET, M)	PS*	PG
Article No.	Price per PU				
Enclosure width 31 mm according to EN 50047					
 3SE5232-0HU21	With hollow shaft				
	• Actuating angle 10°	1 NO + 1 NC ¹⁾ → 1 NO + 2 NC →	3SE5232-0HU21 3SE5232-0LU21	1 1	1 unit 1 unit 41K 41K
 3SE5232-0HU22	With solid shaft				
	• Actuating angle 10°	1 NO + 1 NC ¹⁾ → 1 NO + 2 NC →	3SE5232-0HU22 3SE5232-0LU22	1 1	1 unit 1 unit 41K 41K
Enclosure width 40 mm according to EN 50041					
 3SE5132-0LU21	With hollow shaft				
	• Actuating angle 10°	1 NO + 2 NC →	3SE5132-0LU21	1	1 unit 41K
 3SE5132-0LU22	With solid shaft				
	• Actuating angle 10°	1 NO + 2 NC →	3SE5132-0LU22	1	1 unit 41K

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Contact blocks permanently integrated, replacement not available.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety hinge switches

3SE5, plastic enclosures > Enclosure width 31 mm according to EN 50047/40 mm according to EN 50041

Spare parts

Version		Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Actuator heads						
 3SE5000-0AU21	With hollow shaft • Actuating angle 10°	3SE5000-0AU21		1	1 unit	41K
	With solid shaft • Actuating angle 10°	3SE5000-0AU22		1	1 unit	41K
 3SE5000-0AU22						

Note:

The respective actuators are included in the scope of supply for the complete units.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety hinge switches

3SE5, metal enclosures > Enclosure width 31 mm according to EN 50047/40 mm according to EN 50041

Selection and ordering data

Complete units

3 contacts · Degree of protection IP66/IP67 · Cable entry 1 x (M20 x 1.5)

Version	Snap-action contacts	Complete units	PU (UNIT, SET, M)	PS*	PG
Article No.	Price per PU				
Enclosure width 31 mm according to EN 50047					
 3SE5212-0LU21	With hollow shaft • Actuating angle 10°	1 NO + 2 NC →	3SE5212-0LU21	1	1 unit 41K
	With solid shaft • Actuating angle 10°	1 NO + 2 NC →	3SE5212-0LU22	1	1 unit 41K
Enclosure width 40 mm according to EN 50041					
 3SE5112-0LU21	With hollow shaft • Actuating angle 10°	1 NO + 2 NC →	3SE5112-0LU21	1	1 unit 41K
	With solid shaft • Actuating angle 10°	1 NO + 2 NC →	3SE5112-0LU22	1	1 unit 41K

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

Spare parts

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Actuator heads					
 3SE5000-0AU21	With hollow shaft • Actuating angle 10°	3SE5000-0AU21	1	1 unit 41K	
 3SE5000-0AU22	With solid shaft • Actuating angle 10°	3SE5000-0AU22	1	1 unit 41K	

Note:

The respective actuators are included in the scope of supply for the complete units.

Position and safety switches

SIRIUS 3SE5, 3SE2 mechanical safety hinge switches

3SE2, plastic enclosures > With integrated hinge

Overview

The 3SE2283 hinge switches with integrated hinge are particularly suitable for use in doors and flaps of machines that must be closed to ensure the safety of operating personnel. Their thin profile and the compact design allow them to be directly mounted on a hinged protective cover and the stable frame.

Benefits

- Easy mounting through use of versions with integrated hinge
- Versions with small actuating angle of 4° or 8°
- Protection against personal injury provided by positively driven NC contacts according to IEC 60947-5-1
- Simultaneous shutdown and signaling by 1 NO + 2 NC contacts

Technical specifications

Type	3SE2283	
Rated insulation voltage U_i	V	250
Conventional thermal current I_{th}	A	2.5
Rated operational current I_e		
• At AC-15, 120 V	A	4.2
• At AC-15, 250 V	A	2
• At DC-13, 24 V	A	1
Min. make-break capacity	> 5 V/1 mA	
Short-circuit protection		
• Operational class gG	A	2
Mechanical endurance	> 1 x 10 ⁶ operating cycles	
Frequency of operation	1 200 operating cycles/h	
Positive opening	2 mm after opening point	
Enclosure material	Plastic	
Degree of protection	IP65	
Ambient temperature	°C	-25 ... +65
Shock resistance	30 g/8 ms	
Resistance to vibrations	20 g/0 ... 200 Hz	
Cable entry	2 x (M20 x 1.5)	
Screw terminals	0.5 ... 1.5 mm ² /AWG 15	

Selection and ordering data

3 contacts · Degree of protection IP65 · Cable entry 2 x (M20 x 1.5)

Version	Slow-action contacts	Complete units	PU (UNIT, SET, M)	PS*	PG
		Article No.	Price per PU		

With integrated hinge



3SE2283

Scope of supply includes additional hinge and fixing accessories

• Aluminum hinge

- 4° actuating angle	1 NO + 2 NC	➡
	3 NC	➡
- 8° actuating angle	1 NO + 2 NC	➡
	3 NC	➡

• High-grade steel hinge

- 4° actuating angle	1 NO + 2 NC	➡
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3SE2283-0GA43	1	1 unit	41K
3SE2283-6GA43	1	1 unit	41K
3SE2283-0GA53	1	1 unit	41K
3SE2283-6GA53	1	1 unit	41K
3SE2283-0GA44	1	1 unit	41K

➡ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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Accessories



3SX3225

Additional hinge

(Scope of supply includes fixing accessories)

- Made of aluminum

3SX3225	1	1 unit	41K
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Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test

SIRIUS 3SE5 mechanical position switches > 3SE5, plastic enclosures**Selection and ordering data****Enclosure width 31 mm according to EN 50047**Complete units

2 or 3 contacts · Degree of protection IP65 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version	Contacts	Complete units	PU (UNIT, SET, M)	PS*	PG
		Article No.	Price per PU		

Complete units¹⁾ · Enclosure width 31 mm

3SE5232-0LK21-1AY0

**Twist levers, 21 mm long, type A,
according to EN 50047**

With plastic roller 19 mm

- Snap-action contacts

1 NO +
2 NC**3SE5232-0LK21-1AY0**

1

1 unit

41K



3SE5232-0LE10-1AY0

Roller levers, type E, according to EN 50047

With plastic roller 13 mm

- Snap-action contacts

1 NO +
2 NC**3SE5232-0LE10-1AY0**

1

1 unit

41K



3SE5232-0HK82-1AY0

Rod actuators, according to EN 50047

With plastic rod, length 200 mm

- Snap-action contacts

1 NO +
1 NC**3SE5232-0HK82-1AY0**

1

1 unit

41K



3SE5232-0HR01-1AY0

Spring rods²⁾, according to EN 50047

Length 142.5 mm, with plastic plunger 50 mm

- Snap-action contacts

1 NO +
1 NC**3SE5232-0HR01-1AY0**

1

1 unit

41K

➡ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Popular versions.

²⁾ Degree of protection IP65/IP67.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test

SIRIUS 3SE5 mechanical safety switches with tumbler > 3SE5, plastic enclosures

Selection and ordering data

Enclosure width 54 mm

6 slow-action contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5) · ISO 14119

Tumbler ¹⁾	Solenoid, rated operational voltage	Complete units Position monitoring: Actuators: 1 NO + 2 NC Solenoid: 1 NO + 2 NC	☐	PU (UNIT, SET, M)	PS*	PG
	V	Article No.	Price per PU			

1 300 N locking force · Enclosure width 54 mm

Spring-actuated locks

- With front auxiliary release

24 DC



3SE5322-0SD21-1AY0

1

1 unit

41K



3SE5322-0SD21-1AY0

⊞ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately.

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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Accessories



3SE5000-0AV01

Standard actuators

- Length 75.6 mm

3SE5000-0AV01

1

1 unit

41K



3SE5000-0AW51

High-grade steel actuators, standard¹⁾

- Length 75.6 mm

3SE5000-0AW51

1

1 unit

41K



3SE5000-0AW52

- With vertical fixing, length 53 mm

3SE5000-0AW52

1

1 unit

41K



3SE5000-0AW53

- With transverse fixing, length 47 mm

3SE5000-0AW53

1

1 unit

41K



3SE5000-0AW57

Universal radius actuators, heavy duty

- High-grade steel actuators¹⁾, length 77 mm

3SE5000-0AW57

1

1 unit

41K

¹⁾ Suitable for extreme environmental conditions such as -40 °C.

Selection and ordering data

Enclosure width 31 mm according to EN 50047

2 contacts · Degree of protection IP65 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version	Contacts	Complete units	☐	PU (UNIT, SET, M)	PS*	PG
		Article No.	Price per PU			

Complete units · Enclosure width 31 mm

		Hinge switches, according to EN 50047 With hollow shaft D = 8 mm, actuating angle 10° Snap-action contacts		1 NO + 1 NC	➡	3SE5232-0HU21-1AY0	1	1 unit	41K
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3SE5232-0HU21-1AY0

➡ Positive opening according to IEC 60947-5-1, Annex K.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical position switches > 3SE5, plastic enclosures

Selection and ordering data

Enclosure width 31 mm according to EN 50047/50 mm

Complete units

2 or 3 contacts · Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm) · With increased corrosion protection

Version		Contacts	Complete units	PU (UNIT, SET, M)	PS*	PG				
Article No.		Price per PU								
Complete units ¹⁾ · Enclosure width 31 mm · Cable entry 1 x (M20 x 1.5)										
	Roller plungers, type C, according to EN 50047 With plastic roller 10 mm <u>With M12 device plug, 4-pole (250 V, 4 A)²⁾</u>		3SE5234-0CD03-1AJ1	1	1 unit	41K				
	• Snap-action contacts	1 NO + 1 NC ➡								
3SE5234-0CD03-1AJ1										
	Roller plungers with central fixing, according to EN 50047		3SE5232-0CD10-1AJ0	1	1 unit	41K				
	• Snap-action contacts	1 NO + 1 NC ➡								
3SE5232-0CD10-1AJ0										
	Twist levers, type A, according to EN 50047 With high-grade steel lever 21 mm and plastic roller 19 mm		3SE5232-0CK31-1AJ0	1	1 unit	41K				
	• Snap-action contacts	1 NO + 1 NC ➡								
3SE5232-0CK31-1AJ0										
	Twist levers, adjustable length, according to EN 50047 With high-grade steel lever 100 mm, with grid hole and plastic roller 19 mm		3SE5232-0CK62-1AJ0	1	1 unit	41K				
	• Snap-action contacts	1 NO + 1 NC ➡								
		1 NO + 2 NC ➡					3SE5232-0LK62-1AJ0	1	1 unit	41K
		3SE5232-0CK62-1AJ0								
Complete units ¹⁾ · Enclosure width 50 mm · Cable entry 2 x (M20 x 1.5) · Operating points according to EN 50047										
	Twist levers With metal lever 21 mm and plastic roller 19 mm		3SE5242-0HK21-1AJ0	1	1 unit	41K				
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC ➡								
3SE5242-0HK21-1AJ0										
	Twist levers, adjustable length With high-grade steel lever 100 mm, with grid hole and plastic roller 19 mm		3SE5242-0HK62-1AJ0	1	1 unit	41K				
	• Snap-action contacts, integrated ³⁾	1 NO + 1 NC ➡								
3SE5242-0HK62-1AJ0										

➡ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) Popular versions.

2) For pin assignments, see page 12/12.

3) Subsequent replacement of contact blocks is not possible.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/79.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical position switches > 3SE5, plastic enclosures

Modular system

2 or 3 contacts · Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm) · With increased corrosion protection

Version	Contacts	Modular system	PU (UNIT, SET, M)	PS*	PG
		Article No.	Price per PU		
Basic switches · Enclosure width 31 mm · Cable entry 1 x (M20 x 1.5)					
	Rounded plungers¹⁾, type B, according to EN 50047				
	• Slow-action contacts	1 NO + 2 NC	➡	3SE5232-0KC05-1AJ0	1 1 unit 41K
	• Snap-action contacts	1 NO + 1 NC	➡	3SE5232-0CC05-1AJ0	1 1 unit 41K
		1 NO + 2 NC	➡	3SE5232-0LC05-1AJ0	1 1 unit 41K
Basic switches · Enclosure width 50 mm · Cable entry 2 x (M20 x 1.5)					
	Rounded plungers¹⁾, according to EN 50047				
	• Slow-action contacts	1 NO + 1 NC	➡	3SE5242-0BC05-1AJ0	1 1 unit 41K
	• Snap-action contacts, integrated ²⁾	1 NO + 1 NC	➡	3SE5242-0HC05-1AJ0	1 1 unit 41K

➡ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

1) For enclosures with widths of 31 and 50 mm, the basic switch is a complete unit with rounded plungers.

2) Subsequent replacement of contact blocks is not possible.

Note:

For the selection aid, see page 12/13.

Version		Diameter	Modular system		PU (UNIT, SET, M)	PS*	PG	
		mm	Article No.	Price per PU				
Operating mechanisms								
	Roller plungers, type C, according to EN 50047							
	• Plastic roller	10	➡	3SE5000-0AD03-1AJ0	1	1 unit	41K	
	Roller levers, type E, according to EN 50047							
	• Metal lever	Plastic roller	13	➡	3SE5000-0AE10-1AJ0	1	1 unit	41K
	• High-grade steel lever	Plastic roller	13	➡	3SE5000-0AE12-1AJ0	1	1 unit	41K
		High-grade steel roller	13	➡	3SE5000-0AE13-1AJ0	1	1 unit	41K
	Angular roller levers							
	• Metal lever	Plastic roller	13	➡	3SE5000-0AF10-1AJ0	1	1 unit	41K
	• High-grade steel lever	Plastic roller	13	➡	3SE5000-0AF12-1AJ0	1	1 unit	41K
Twist actuators								
	Twist actuators, for 31/50 mm, according to EN 50047							
	• Switching right and/or left, adjustable	--	➡	3SE5000-0AK00-1AJ0	1	1 unit	41K	
Levers								
	Twist levers 21 mm, straight, type A, according to EN 50047							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA21-1AJ0	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA31-1AJ0	1	1 unit	41K
		High-grade steel roller	19	➡	3SE5000-0AA32-1AJ0	1	1 unit	41K
	Twist levers 100 mm, adjustable length, with grid hole							
	• Metal lever	Plastic roller	19	➡	3SE5000-0AA60-1AJ0	1	1 unit	41K
	• High-grade steel lever	Plastic roller	19	➡	3SE5000-0AA62-1AJ0	1	1 unit	41K

➡ Positively driven actuator, necessary in safety circuits.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical position switches > 3SE5, plastic enclosures

Enclosure width 40 mm according to EN 50041

Modular system

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version	Contacts	Modular system	PU (UNIT, SET, M)	PS*	PG
		☒			
		Article No.	Price per PU		

Basic switches · Enclosure width 40 mm



Rounded plungers, according to EN 50041

- Slow-action contacts

1 NO +
2 NC

3SE5132-0KA00-1AJ0

1 1 unit 41K

- Snap-action contacts

1 NO +
1 NC

3SE5132-0CA00-1AJ0

1 1 unit 41K

1 NO +
2 NC

3SE5132-0LA00-1AJ0

1 1 unit 41K

3SE5132-0CA00-1AJ0

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

Note:

For the selection aid, see page 12/13.

Version	Diame- ter	Modular system	PU (UNIT, SET, M)	PS*	PG
		☒			
	mm	Article No.	Price per PU		

Operating mechanisms



Rounded plungers, type B, according to EN 50041

- Plastic plunger, with 3 mm overtravel

10

3SE5000-0AC03-1AJ0

1 1 unit 41K

3SE5000-0AC03-1AJ0



Roller plungers, type C, according to EN 50041

- Plastic plungers Plastic roller

13

3SE5000-0AD05-1AJ0

1 1 unit 41K

3SE5000-0AD05-1AJ0



Roller levers

- Metal levers with plastic base Plastic roller

22

3SE5000-0AE05-1AJ0

1 1 unit 41K

3SE5000-0AE05-1AJ0

Twist actuators



Twist actuators, for 40/56/56 mm, XL, according to EN 50041

- Switching right and/or left, adjustable

--

3SE5000-0AH00-1AJ0

1 1 unit 41K

3SE5000-0AH00-1AJ0



Levers

Twist levers 27 mm, offset, type A, according to EN 50041

- Metal lever Plastic roller

19

3SE5000-0AA01-1AJ0

1 1 unit 41K

- High-grade steel lever Plastic roller

19

3SE5000-0AA11-1AJ0

1 1 unit 41K

3SE5000-0AA01-1AJ0



Twist levers 100 mm, adjustable length, with grid hole

- Metal lever Plastic roller

19

3SE5000-0AA60-1AJ0

1 1 unit 41K

- High-grade steel lever Plastic roller

19

3SE5000-0AA62-1AJ0

1 1 unit 41K

3SE5000-0AA60-1AJ0

3SE5000-0AA60-1AJ0

⊕ Positively driven actuator, necessary in safety circuits.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical position switches > 3SE5, metal enclosures**Selection and ordering data****Enclosure width 31 mm according to EN 50047**Complete units

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version	Contacts	Modular system	PU (UNIT, SET, M)	PS*	PG
		☒			
		Article No.	Price per PU		

Complete units · Enclosure width 31 mm**Rounded plungers, type B, according to EN 50047**

- Slow-action contacts

1 NO + 2 NC ➞

3SE5212-0KC05-1AJ0

1

1 unit

41K

- Snap-action contacts

1 NO + 1 NC ➞

3SE5212-0CC05-1AJ0

1

1 unit

41K

1 NO + 2 NC ➞

3SE5212-0LC05-1AJ0

1

1 unit

41K

With M12 device plug, 5-pole (250 V, 4 A)¹⁾

- Snap-action contacts

1 NO + 1 NC ➞

3SE5214-0CC05-1AJ2

1

1 unit

41K



3SE5212-0CC05-1AJ0



3SE5214-0CC05-1AJ2



3SE5212-0CH22-1AJ0

Twist levers, type A, according to EN 50047

With metal lever 21 mm and high-grade steel roller 19 mm,
with twist lever operating mechanism with enclosure width 40 mm

- Snap-action contacts

1 NO + 1 NC ➞

3SE5212-0CH22-1AJ0

1

1 unit

41K

➞ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ For pin assignments, see page 12/12.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/82.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical position switches > 3SE5, metal enclosures

Modular system

2 or 3 contacts · Degree of protection IP66/IP67 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version	Contacts	Modular system	PU (UNIT, SET, M)	PS*	PG
					
		Article No.	Price per PU		

Basic switches · Enclosure width 31 mm



Rounded plungers¹⁾, according to EN 50047

• Slow-action contacts	1 NO + 2 NC		3SE5212-0KC05-1AJ0	1	1 unit	41K
• Snap-action contacts	1 NO + 1 NC		3SE5212-0CC05-1AJ0	1	1 unit	41K
	1 NO + 2 NC		3SE5212-0LC05-1AJ0	1	1 unit	41K

 Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

Note:

For the selection aid, see page 12/13.

¹⁾ For enclosures with widths of 31 mm, the basic switch is a complete unit with rounded plungers.

Version	Diameter	Modular system	PU (UNIT, SET, M)	PS*	PG
					
	mm	Article No.	Price per PU		

Operating mechanisms



Roller plungers, type C, according to EN 50047

• Plastic roller	10		3SE5000-0AD03-1AJ0	1	1 unit	41K
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3SE5000-0AD03-1AJ0



Roller levers, type E, according to EN 50047

• Metal lever	Plastic roller	13		3SE5000-0AE10-1AJ0	1	1 unit	41K
• High-grade steel lever	Plastic roller	13		3SE5000-0AE12-1AJ0	1	1 unit	41K
	High-grade steel roller	13		3SE5000-0AE13-1AJ0	1	1 unit	41K

3SE5000-0AE10-1AJ0



Angular roller levers

• Metal lever	Plastic roller	13		3SE5000-0AF10-1AJ0	1	1 unit	41K
• High-grade steel lever	Plastic roller	13		3SE5000-0AF12-1AJ0	1	1 unit	41K

3SE5000-0AF10-1AJ0

Twist actuators



Twist actuators, for 31/50 mm, according to EN 50047

• Switching right and/or left, adjustable	--		3SE5000-0AK00-1AJ0	1	1 unit	41K
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3SE5000-0AK00-1AJ0



Levers

Twist levers 21 mm, straight, type A, according to EN 50047

• Metal lever	Plastic roller	19		3SE5000-0AA21-1AJ0	1	1 unit	41K
• High-grade steel lever	Plastic roller	19		3SE5000-0AA31-1AJ0	1	1 unit	41K

3SE5000-0AA21-1AJ0



Twist levers 100 mm, adjustable length, with grid hole

• Metal lever	Plastic roller	19		3SE5000-0AA60-1AJ0	1	1 unit	41K
• High-grade steel lever	Plastic roller	19		3SE5000-0AA62-1AJ0	1	1 unit	41K

3SE5000-0AA60-1AJ0

 Positively driven actuator, necessary in safety circuits.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical position switches > 3SE5, metal enclosures

Enclosure width 40 mm according to EN 50041/56 mm, XL

Complete units

2, 3 or 4 contacts · Degree of protection IP66/IP67 · With increased corrosion protection

Version	Contacts	Complete units	PU (UNIT, SET, M)	PS*	PG
		Article No.	Price per PU		
Complete units · Enclosure width 40 mm · Cable entry 1 x (M20 x 1.5)					
	Rounded plungers, type B, according to EN 50041 With high-grade steel plunger 10 mm, with 3 mm overtravel • Snap-action contacts	1 NO + 1 NC ➞	3SE5112-0CC02-1AJ0	1	1 unit 41K
3SE5112-0CC02-1AJ0					
	Roller plungers, type C, according to EN 50041 With high-grade steel plunger 13 mm, with 3 mm overtravel • Snap-action contacts	1 NO + 2 NC ➞	3SE5112-0LD02-1AJ0	1	1 unit 41K
3SE5112-0LD02-1AJ0					
	Twist levers, type A, according to EN 50041 With high-grade steel lever 27 mm and plastic roller 19 mm • Snap-action contacts	1 NO + 2 NC ➞	3SE5112-0LH11-1AJ0	1	1 unit 41K
3SE5112-0LH11-1AJ0					
	Twist levers, adjustable length, according to EN 50041 With high-grade steel lever 100 mm, with grid hole and plastic roller 19 mm • Snap-action contacts	1 NO + 1 NC ➞	3SE5112-0CH62-1AJ0	1	1 unit 41K
3SE5112-0CH62-1AJ0					
Complete units · Enclosure width 56 mm, XL · Cable entry 3 x (M20 x 1.5) · Operating points according to EN 50041					
	Twist levers With high-grade steel lever 27 mm and high-grade steel roller 19 mm • Snap-action contacts	2 x (1 NO + 1 NC) ➞	3SE5162-0CH12-1AN5	1	1 unit 41K
3SE5162-0CH12-1AN5					
	Twist levers, adjustable length With metal lever 100 mm, with grid holes and plastic roller 19 mm • Snap-action contacts	2 x (1 NO + 1 NC) ➞	3SE5162-0CH60-1AJ0	1	1 unit 41K
3SE5162-0CH60-1AJ0					
	With high-grade steel lever 100 mm and high-grade steel roller 19 mm • Snap-action contacts	2 x (1 NO + 1 NC) ➞	3SE5162-0CH63-1AN6	1	1 unit 41K

➞ Positive opening according to IEC 60947-5-1, Annex K or positively driven actuator, necessary in safety circuits.

Note:

If the device you require is not available as a complete unit, see "Modular system", page 12/84.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical position switches > 3SE5, metal enclosures

Enclosure width 40 mm according to EN 50041/56 mm/56 mm, XL

Modular system

2, 3 or 4 contacts · Degree of protection IP66/IP67 · With increased corrosion protection

Version	Contacts	Modular system	PU (UNIT, SET, M)	PS*	PG
		Article No.	Price per PU		
Basic switches · Enclosure width 40 mm · Cable entry 1 x (M20 x 1.5)					
	Rounded plungers, according to EN 50041				
	• Slow-action contacts	1 NO + 2 NC	➡	3SE5112-0KA00-1AJ0	1 1 unit 41K
	• Snap-action contacts	1 NO + 1 NC	➡	3SE5112-0CA00-1AJ0	1 1 unit 41K
		1 NO + 2 NC	➡	3SE5112-0LA00-1AJ0	1 1 unit 41K
3SE5112-0CA00-1AJ0					
Basic switches · Enclosure width 56 mm · Cable entry 3 x (M20 x 1.5)					
	Rounded plungers, operating points according to EN 50041				
	• Slow-action contacts	1 NO + 2 NC	➡	3SE5122-0KA00-1AJ0	1 1 unit 41K
	• Snap-action contacts	1 NO + 1 NC	➡	3SE5122-0CA00-1AJ0	1 1 unit 41K
		1 NO + 2 NC	➡	3SE5122-0LA00-1AJ0	1 1 unit 41K
3SE5122-0CA00-1AJ0					
Basic switches · Enclosure width 56 mm, XL · Cable entry 3 x (M20 x 1.5)					
	Rounded plungers, operating points according to EN 50041				
	• Slow-action contacts	2 x (1 NO + 1 NC)	➡	3SE5162-0BA00-1AJ0	1 1 unit 41K
	• Snap-action contacts	2 x (1 NO + 1 NC)	➡	3SE5162-0CA00-1AJ0	1 1 unit 41K
3SE5162-0BA00-1AJ0					

➡ Positive opening according to IEC 60947-5-1, Annex K or positively driven actuator, necessary in safety circuits.

Note:

For the selection aid, see page 12/13.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical position switches > 3SE5, metal enclosures

Version				Diame- ter	Modular system		PU (UNIT, SET, M)	PS*	PG	
				mm	Article No.	Price per PU				
Operating mechanisms										
	Rounded plungers, type B, according to EN 50041				10		3SE5000-0AC02-1AJ0	1	1 unit	41K
	• High-grade steel plunger, with 3 mm overtravel									
3SE5000-0AC02-1AJ0										
	Roller plungers, type C, according to EN 50041				10		3SE5000-0AD02-1AJ0	1	1 unit	41K
	• High-grade steel roller, with 3 mm overtravel									
3SE5000-0AD02-1AJ0										
	Roller levers				13		3SE5000-0AE01-1AJ0	1	1 unit	41K
	• Metal lever Plastic roller									
3SE5000-0AE01-1AJ0	• High-grade steel lever Plastic roller				13		3SE5000-0AE03-1AJ0	1	1 unit	41K
	Angular roller levers				13		3SE5000-0AF01-1AJ0	1	1 unit	41K
	• Metal lever Plastic roller									
3SE5000-0AF01-1AJ0	• High-grade steel lever Plastic roller				13		3SE5000-0AF03-1AJ0	1	1 unit	41K
Twist actuators										
	Twist actuators, for 40/56/56 mm, XL, according to EN 50041				--		3SE5000-0AH00-1AJ0	1	1 unit	41K
	• Switching right and/or left, adjustable									
3SE5000-0AH00-1AJ0										
	Levers									
	Twist levers 27 mm, offset, type A, according to EN 50041									
3SE5000-0AA01-1AJ0	• Metal lever Plastic roller				19		3SE5000-0AA01-1AJ0	1	1 unit	41K
	• High-grade steel lever Plastic roller				19		3SE5000-0AA11-1AJ0	1	1 unit	41K
	Twist levers 100 mm, adjustable length, with grid hole				19		3SE5000-0AA60-1AJ0	1	1 unit	41K
	• Metal lever Plastic roller									
3SE5000-0AA60-1AJ0	• High-grade steel lever Plastic roller				19		3SE5000-0AA62-1AJ0	1	1 unit	41K

➡ Positively driven actuator, necessary in safety circuits.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical safety switches with separate actuator > 3SE5, plastic enclosures/metal enclosures

Selection and ordering data

Enclosure width 31 mm according to EN 50047

Complete units

2 contacts · 5 directions of approach · Degree of protection IP65 · Cable entry 1 × (M20 × 1.5) · With increased corrosion protection

Version	Contacts	Complete units	PU (UNIT, SET, M)	PS*	PG
		Article No.	Price per PU		

Plastic enclosures · Enclosure width 31 mm according to EN 50047



3SE5232-0RV40-1AJ0

- Slow-action contacts

1 NO +
1 NC

3SE5232-0RV40-1AJ0

1 1 unit 41K

Metal enclosures · Enclosure width 40 mm according to EN 50041



3SE5114-0QV40-1AJ4

With M12 device plug, 5-pole (125 V, 4 A)¹⁾

- Slow-action contacts

2 NC

3SE5114-0QV40-1AJ4

1 1 unit 41K

⊕ Positive opening according to IEC 60947-5-1, Annex K.

¹⁾ For pin assignments, see page 12/12.

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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Accessories



3SE5000-0AW11

Standard actuators

- With transverse fixing, plastic, length 40 mm

3SE5000-0AW11

1 1 unit 41K



3SE5000-0AW51

High-grade steel actuators¹⁾

- Length 75.6 mm

3SE5000-0AW51

1 1 unit 41K



3SE5000-0AW52

- With vertical fixing, length 53 mm

3SE5000-0AW52

1 1 unit 41K



3SE5000-0AW53

- With transverse fixing, length 47 mm

3SE5000-0AW53

1 1 unit 41K



3SE5000-0AW57

Universal radius actuators, heavy duty

- High-grade steel actuators¹⁾, length 77 mm

3SE5000-0AW57

1 1 unit 41K

¹⁾ Suitable for extreme environmental conditions such as -40 °C.

Position and safety switches

SIRIUS 3SE5 mechanical position switches for ambient temperatures down to -40 °C

Shock and vibration test according to railway standard

SIRIUS 3SE5 mechanical safety switches with tumbler > 3SE5, plastic enclosures**Selection and ordering data****Enclosure width 54 mm**

6 slow-action contacts · 5 directions of approach · Degree of protection IP66/IP67 · Cable entry 3 x (M20 x 1.5)

Tumbler ¹⁾	Solenoid, rated operational voltage	Complete units Position monitoring: Actuators: 1 NO + 2 NC Solenoid: 1 NO + 2 NC	☐	PU (UNIT, SET, M)	PS*	PG
V		Article No.	Price per PU			

1 300 N locking force · Enclosure width 54 mm according to ISO 14119

3SE5322-0SL21-1AJ0

Spring-actuated locks

- With escape release from the front and emergency release from the back
- With auxiliary release
- With escape release from the back and auxiliary release from the front, head rotated 180°

24 DC

**3SE5322-0SL21-1AJ0**

1

1 unit

41K

3SE5322-0SD21-1AJ0

1

1 unit

41K

3SE5322-0SG21-1AM5

1

1 unit

41K

☞ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately.

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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Accessories

3SE5000-0AV01

Standard actuators

- Length 75.6 mm

3SE5000-0AV01

1

1 unit

41K



3SE5000-0AW51

High-grade steel actuators¹⁾

- Length 75.6 mm

3SE5000-0AW51

1

1 unit

41K



3SE5000-0AW52

- With vertical fixing, length 53 mm

3SE5000-0AW52

1

1 unit

41K



3SE5000-0AW53

- With transverse fixing, length 47 mm

3SE5000-0AW53

1

1 unit

41K



3SE5000-0AW57

Universal radius actuators, heavy duty

- High-grade steel actuators¹⁾, length 77 mm

3SE5000-0AW57

1

1 unit

41K

¹⁾ Suitable for extreme environmental conditions such as -40 °C.

Position and safety switches

SIRIUS 3SE safety switches and 3SU1 EMERGENCY STOP enclosures for PROFI-safe connection

Safety cabling in the field with IP67

Overview

SIRIUS sensors and SIMATIC ET 200

The new system comprising SIRIUS sensors and fail-safe SIMATIC ET 200 provides a safe M12 connection method for industry.

The SIRIUS sensors can be connected in the field via the fail-safe field modules of the SIMATIC ET 200eco PN and SIMATIC ET 200AL.

The signals are forwarded to the higher-level controller via PROFINET/PROFI-safe either by means of a direct connection of the SIMATIC ET 200eco PN or, in the case of SIMATIC ET 200AL, via an interface module.

Configurator, see www.siemens.com/SIMATIC-ET200-safety-sensor-configurator.

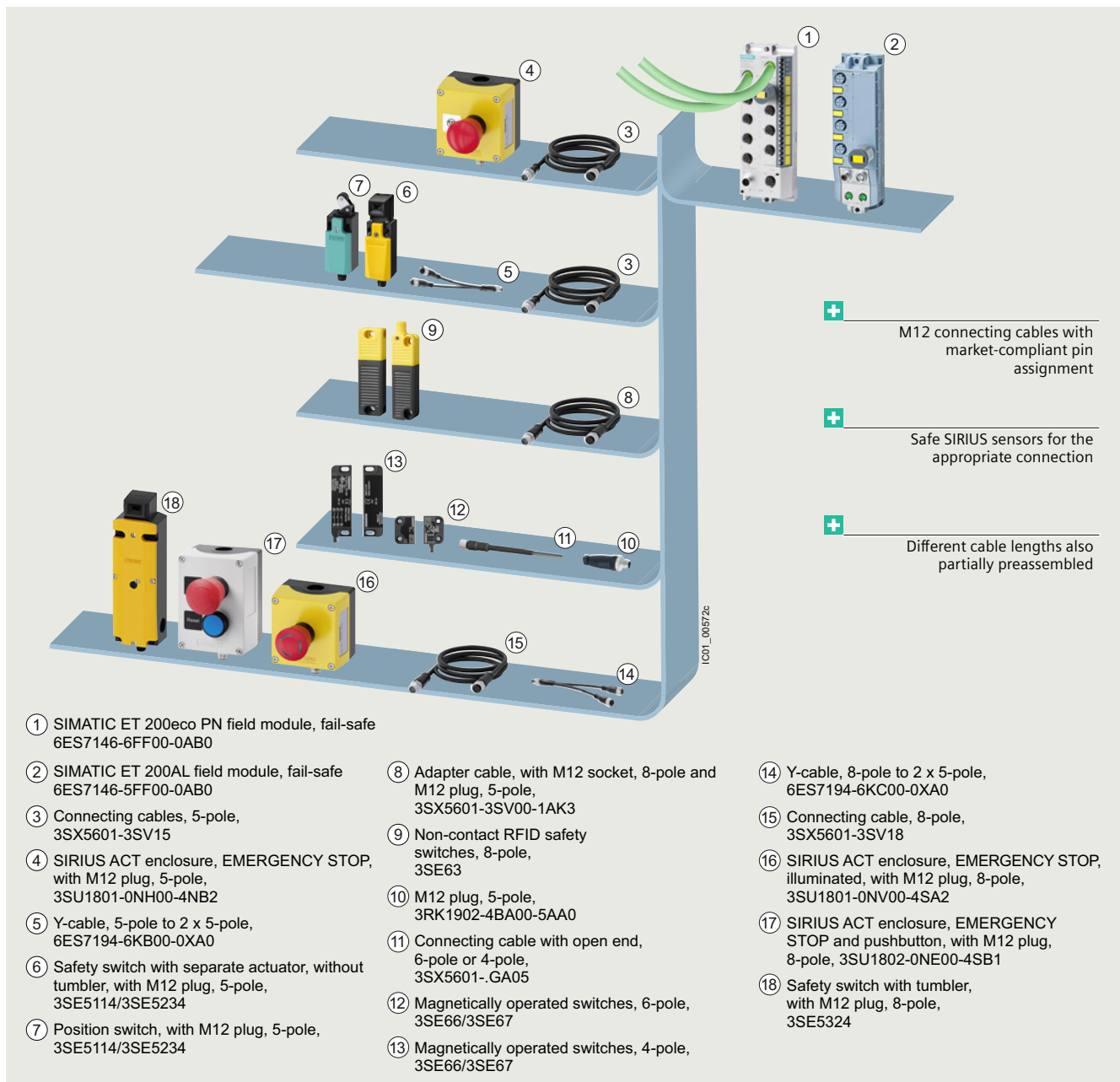
For more information, see also page 12/10.

Examples

- SIRIUS ACT enclosure, EMERGENCY STOP, with M12 plug, 5-pole and 8-pole
- Position switch, with M12 plug, 5-pole
- RFID safety switch, with M12 plug, 8-pole, and magnetically operated switch, 4-pole or 6-pole
- Safety switch with tumbler, with M12 plug, 8-pole

Advantages

- Identical pin assignment on the modules, connecting cables and sensors enables simple and fast connection and prevents connection errors and their consequences.
- Safe system technology in the field from the sensor to the field module



Safety field system composed of SIRIUS sensors and SIMATIC ET 200 with the M12 connection method

Position and safety switches

SIRIUS 3SE safety switches and 3SU1 EMERGENCY STOP enclosures for PROFIsafe connection

Safety cabling in the field with IP67

Sensors with M12 plugs	Type	SIL	Connection accessories M12 method, A-coded	Type	Cable length	
SIRIUS ACT enclosure, EMERGENCY STOP						
	Enclosure plastic, yellow, with 1 command point, A = EMERGENCY STOP mushroom pushbutton, red, M12 plug (5-pole)	3SU1801-0NH00-4NB2 (see page 13/105)	3	 Connecting cable with M12 socket, 5-pole and M12 plug, 5-pole	3SX5601-3SV15 (see page 12/46)	1 m
				or		
				 Connecting cable with M12 socket, 5-pole, open end	3SX5601-3SB55 (see page 12/46)	5 m
				and		
			 M12 plug 5-pole, straight, separate item	3RK1902-4BA00-5AA0 (see page 12/47)	--	
Mechanical safety switches						
Plastic 31 mm						
	Basic switch with rounded plunger for modular design with M12 plug, 5-pole + actuator head (order separately), e.g. roller lever 3SE5000-0AE10	3SE5234-0LC05-1AE2 (basic switches, see page 12/18, actuator heads, see page 12/19)	1			
	Position switch, roller plunger with M12 plug, 5-pole	3SE5234-0LD03-1AE2 (see page 12/16)	1			
	Position switch, roller lever with M12 plug, 5-pole	3SE5234-0LE11-1AE2 (see page 12/16)	2			
	Safety switch with separate actuator without tumbler with M12 plug, 5-pole + actuator (order separately), e.g. standard 3SE5000-0AV01	3SE5234-0QV40-1AE2 (see page 12/53) Actuator (see page 12/58)	2	 Connecting cable with M12 socket, 5-pole and M12 plug, 5-pole	3SX5601-3SV15 (see page 12/46)	1 m
				or		
				 Connecting cable with M12 socket, 5-pole, open end	3SX5601-3SB55 (see page 12/46)	5 m
				and		
				 M12 plug 5-pole, straight, separate item	3RK1902-4BA00-5AA0 (see page 12/47)	--
Metal, 40 mm						
	Basic switch for modular design with M12 plug, 5-pole + actuator head (order separately), e.g. roller plunger 3SE5000-0AD02	3SE5114-0LA00-1AE3 (basic switches, see page 12/34, actuator heads, see page 12/35)	1			
	Position switch, roller plunger with M12 plug, 5-pole	3SE5114-0LD02-1AE3 (see page 12/31)	1			
	Position switch, twist lever with M12 plug, 5-pole	3SE5114-0LH01-1AE3 (see page 12/32)	1			
	Position switch, plain plunger with M12 plug, 5-pole	3SE5114-0LB01-1AE3 (see page 12/31)	1			
	Safety switch with separate actuator without tumbler with M12 plug, 5-pole + actuator (order separately), e.g. standard 3SE5000-0AV01	3SE5114-0QV10-1AE3 (see page 12/57) Actuator (see page 12/58)	2			
Combinations (examples)						
	Position switch + safety switch with separate actuator, without tumbler Actuator (order separately), e.g. standard 3SE5000-0AV01	3SE5114-0LH01-1AE3 (see page 12/32)+ 3SE5234-0QV40-1AE2 (see page 12/53) Actuator (see page 12/58)	3	 ET 200 Y-cable for connecting 2 x 1-channel sensors with M12 plug, 5-pole on 2 x M12 sockets, 5-pole	6ES7194-6KB00-0XA0 (see page 12/46)	0.2 m
				Extend if necessary with		
	2 x safety switches with separate actuator, without tumbler Actuator (order separately), e.g. standard 3SE5000-0AV01	3SE5234-0QV40-1AE2, 3SE5234-0QV40-1AE2 (see page 12/53) Actuator (see page 12/58)	3	 Connecting cable with M12 socket, 5-pole and M12 plug, 5-pole	3SX5601-3SV15 (see page 12/46)	1 m
				or		
	2 x position switches	3SE5114-0LH01-1AE3 (see page 12/32) 3SE5234-0LE11-1AE2 (see page 12/16)	3	 Connecting cable with M12 socket, 5-pole, open end	3SX5601-3SB55 (see page 12/46)	5 m
				and		
				 M12 plug 5-pole, straight, separate item	3RK1902-4BA00-5AA0 (see page 12/47)	--

Position and safety switches

SIRIUS 3SE safety switches and 3SU1 EMERGENCY STOP enclosures for PROFIsafe connection

Safety cabling in the field with IP67

Sensors with M12 plugs	Type	SIL	Connection accessories M12 method, A-coded	Type	Cable length
Non-contact safety switches (examples)					
	RFID safety switch family-coded + actuator	3SE6315-0BB01 (see page 12/121) 3SE6310-0BC01 (see page 12/121)	3		
	RFID safety switch , individually coded, programmable several times + actuator	3SE6315-0BB02 (see page 12/121) 3SE6310-0BC01 (see page 12/121)	3	 Adapter cable with M12 socket, 8-pole on M12 plug, 5-pole Extend if necessary with	0.5 m (see page 12/121)
	RFID safety switch , individually coded, programmable once + actuator	3SE6315-0BB03 (see page 12/121) 3SE6310-0BC01 (see page 12/121)	3	 Connecting cable with M12 socket, 5-pole and M12 plug, 5-pole	1 m (see page 12/46)
	Magnetically operated switch (cable 3 m)	3SE6605-2BA (see page 12/116)	3	 M12 plug 5-pole, straight, separate item	3RK1902-4BA00-5AA0 (see page 12/47) --
	+ switching solenoid (25 x 88 mm), coded	3SE6704-2BA (see page 12/116)		or	
				 M12 plug 5-pole, angled, separate item	3RK1902-4DA00-5AA0 (see page 12/47) --
	Magnetically operated switch (25 x 88 mm), M8 plug, 4-pole + LED, door hinge left , 2 NC	3SE6614-4CA01 (see page 12/116)	3	 Connecting cable with M8 socket, 4-pole, open end	3SX5601-3GA05 (see page 12/46) 5 m
	+ switching solenoid (25 x 88 mm), coded	3SE6714-2CA (see page 12/116)		and	
				 M12 plug 5-pole, straight, separate item	3RK1902-4BA00-5AA0 (see page 12/47) --
				or	
	Magnetically operated switch (25 x 88 mm), M8 plug, 4-pole + LED, door hinge right , 2 NC	3SE6624-4CA01 (see page 12/117)	3	 M12 plug 5-pole, angled, separate item	3RK1902-4DA00-5AA0 (see page 12/47) --
	Magnetically operated switch (25 x 88 mm), 8 mm Ø latching connection, plug, 6-pole, door hinge left , 2 NC + 1 NC signaling contact	3SE6617-2CA01 (see page 12/116)	3		
	+ switching solenoid (25 x 88 mm), coded	3SE6714-2CA (see page 12/116)			
	Magnetically operated switch (25 x 88 mm), 8 mm Ø latching connection, plug, 6-pole, door hinge right , 2 NC + 1 NC signaling contact	3SE6627-2CA01 (see page 12/117)	3	 Connecting cable with socket 8 mm, latching connection, 6-pole, open end	3SX5601-4GA05 (see page 12/46) 5 m
	+ switching solenoid (25 x 88 mm), coded	3SE6714-2CA (see page 12/116)		and	
				 M12 plug 5-pole, straight, separate item	3RK1902-4BA00-5AA0 (see page 12/47) --
	Magnetically operated switch (26 x 36 mm), 8 mm Ø latching connection, plug, 6-pole, door hinge left , 2 NC + 1 NC signaling contact	3SE6617-3CA01 (see page 12/116)	3	or	
	+ switching solenoid (26 x 36 mm), coded	3SE6714-3CA (see page 12/116)			
	Magnetically operated switch (26 x 36 mm), 8 mm Ø latching connection, plug, 6-pole, door hinge right , 2 NC + 1 NC signaling contact	3SE6627-3CA01 (see page 12/117)	3	 M12 plug 5-pole, angled, separate item	3RK1902-4DA00-5AA0 (see page 12/47) --
	+ switching solenoid (26 x 36 mm), coded	3SE6714-3CA (see page 12/116)			

Position and safety switches

SIRIUS 3SE safety switches and 3SU1 EMERGENCY STOP enclosures for PROFIsafe connection

Safety cabling in the field with IP67

Sensors with M12 plugs	Type	SIL	Connection accessories M12 method, A-coded	Type	Cable length	
Mechanical safety switches with tumbler						
 	Safety switch with tumbler, with solenoid monitoring, with auxiliary release M12 plug, 8-pole, monitoring 1 x door + 1 x interlocking, connection to an F-DI input and an F-DQ output via a Y-cable + actuator (order separately), e.g. standard 3SE5000-0AV01, high-grade steel 3SE5000-0AW51	3SE5324-0SD21-1AE4 (see page 12/65)	2	 Connecting cable with M12 socket, 8-pole and M12 plug, 8-pole	3SX5601-3SV18 (see page 12/69)	1 m
				 ET 200 Y-cable for connecting 1 x 2-channel sensor with M12 socket, 8-pole on 2 x M12 plugs, 5-pole	6ES7194-6KC00-0XA0 (see page 12/69)	0.2 m
				 Connecting cables with M12 socket, 8-pole, straight, open end	3SX5601-2GA03 (see page 12/69) 3SX5601-2GA05 (see page 12/69) 3SX5601-2GA10 (see page 12/69) 3SX5601-2GA15 (see page 12/69)	3 m 5 m 10 m 15 m
				 M12 plug 8-pole, straight	6GT2090-0BE00 (see page 12/69)	--
 	Safety switch with tumbler, with solenoid monitoring, with escape release from the back and auxiliary release with lock from the front M12 plug, 8-pole, monitoring 1 x door + 1 x interlocking, connection to an F-DI input and an F-DQ output via a Y-cable + actuator (order separately), e.g. standard 3SE5000-0AV01, high-grade steel 3SE5000-0AW51	3SE5324-0SH21-1AE4 (see page 12/65)	2	 ET 200 Y-cable for connecting 1 x 2-channel sensor with M12 socket, 8-pole on 2 x M12 plugs, 5-pole	6ES7194-6KC00-0XA0 (see page 12/69)	0.2 m
				 Connecting cables with M12 socket, 8-pole, straight, open end	3SX5601-2GA03 (see page 12/69) 3SX5601-2GA05 (see page 12/69) 3SX5601-2GA10 (see page 12/69) 3SX5601-2GA15 (see page 12/69)	3 m 5 m 10 m 15 m
				 2 x M12 plugs 5-pole, straight, separate item	3RK1902-4BA00-5AA0 (see page 12/47)	--
				 2 x M12 plugs 5-pole, angled, separate item	3RK1902-4DA00-5AA0 (see page 12/47)	--

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

General data

Overview

More information

Homepage, see www.siemens.com/sirius-position-switches
 Industry Mall, see www.siemens.com/product?3SF
 Configurator, see www.siemens.com/sirius/configurators
 Configuration Manual, see <https://support.industry.siemens.com/cs/ww/en/view/43920150>

The 3SF1 position switches with safety-related communication can be directly connected using the AS-Interface bus system. The safety functions no longer have to be wired up conventionally.

With the 3SF1 position switches the ASIsafe electronics are integrated in the switch enclosure.



Examples of selection options in the modular system

Modular system

The position switches of the 3SF11.4 and 3SF12.4 series are designed as a modular system comprising different versions of the basic switch and an actuator which must be ordered separately. Thanks to the modular design of the switch the end users can select the right solution for their application from numerous versions and install it themselves in a very short time.

Design

The 3SF1 switches are available in four different enclosure sizes:

- Plastic and metal enclosures according to EN 50047, 31 mm wide, with M12 device plug
- Metal enclosures according to EN 50041, 40 mm wide, with M12 device plug
- Plastic enclosures, 50 mm wide, with M12 device plug and M12 socket
- Metal enclosures, 56 mm wide, with M12 device plug and M12 socket

Display

The switches have a status display with three LEDs:

- LED 1 (yellow): F-IN1
- LED 2 (yellow): F-IN2
- LED 3 (green/red): AS-i/FAULT

Connection

Connection to the AS-Interface is by means of a 4-pole M12 device plug (plastic version) connected to the yellow AS-Interface bus cable.

The wide enclosures (50 or 56 mm) also have an M12 socket for connecting a second position switch. In this way, SIL 3 according to IEC 62061/IEC 61508 or PL e according to ISO 13849-1 is reached.

Benefits

The 3SF1 safety switches provide:

- ASIsafe electronics integrated in the enclosure, with low power consumption < 60 mA
- An extensive range of actuators
- Status display with three LEDs
- Can be integrated easily via TIA Portal

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

General data

Application

With the standard position switches, mechanical positions of moving machine parts are converted into electrical signals. Through their modular and uniform design and large number of variants, the devices can comply with practically all requirements in industry.

Devices are available with enclosure versions to suit the particular ambient conditions. Different control tasks can be performed with the contact blocks best suited for the particular purpose. And many different actuator variants are available to match the mechanical configuration of the moving machine parts. Dimensions, fixing points and characteristics are largely in accordance with the EN 50041 or EN 50047 standards.

The devices are suitable for use in any climate.

Standards

The switches comply with IEC 60947-1 (Low-Voltage Switchgear and Controlgear, General) and IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The mechanical design of the switches corresponds to the requirements of the fail-safe principle according to ISO 14119.

Approvals

AS-Interface according to IEC 62026-2

The 3SF1 position switches are approved according to UL 508, UL 50 and UL 746-C.

Safety circuits

Standard IEC 60947-5-1 requires positive opening of the NC contacts. In other words, for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to the standard IEC 60947-5-1 with the symbol .

With a 3SF1 safety switch with , SIL 2 according to IEC 62061/IEC 61508 or PL c according to ISO 13849-1 can be attained if the corresponding fail-safe evaluation units are selected from the ASIsafe program and correctly installed.

If a second 3SF1 safety switch with  is used, SIL 3/PL e can be attained.

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, see www.siemens.com/safety-evaluation.

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

General data

Technical specifications

Type	3SF11..., 3SF12..	
General data		
Standards	IEC 60947-5-1, ISO 14119	
According to AS-Interface specification		
- I/O configuration/ID configuration - ID1 code/ID2 code (hex) - Power consumption, overall	mA	0/B F/F ≤ 60
Inputs		
- Low signal range - High signal range	Contact open Contact closed, I_{in} dynamic ($I_{peak} \geq 5\text{ mA}$)	
Status display	Green/red dual LED	
Rated impulse withstand voltage U_{imp}	kV	0.6
EMC strength		
- IEC 61000-1-2 - IEC 61000-4-3 - IEC 61000-4-4 (A/B)	kV V/m kV	4 10 1/2
Mechanical endurance		
- Basic switch - With separate actuator, 3SF1...-.V..	15 x 10 ⁶ operating cycles 1 x 10 ⁶ operating cycles	
PFH value		
Probability of failure upon request of the safety function, with 1 actuation per hour and B10 = 5 x 10 ⁶		
- Basic switch - With separate actuator, 3SF1...-.V.. - Hinge switch, 3SF1...-.U..	1/h 1/h 1/h	4 x 10 ⁻⁹ 2 x 10 ⁻⁹ 2 x 10 ⁻⁹
Shock resistance according to IEC 60068-2-27	30 g/11 ms	

Type		3SF1234	3SF1134	3SF1244	3SF1214	3SF1114	3SF1124
Enclosure							
Enclosure							
• Material		Ultramid A3X2G7			Zinc die-casting GD-ZnAl4Cu1		
• Width	mm	31	40	50	31	40	56
• Dimensions according to EN		EN 50047	EN 50041	--	EN 50047	EN 50041	--
Degree of protection according to IEC 60529		IP65	IP66/IP67				
Ambient temperature							
• During operation	°C	-25 ... +60					
• Storage, transport	°C	-40 ... +80					
Mounting position		Any					

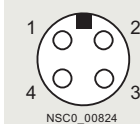
Pin assignments

M12 device plug, 4-pole



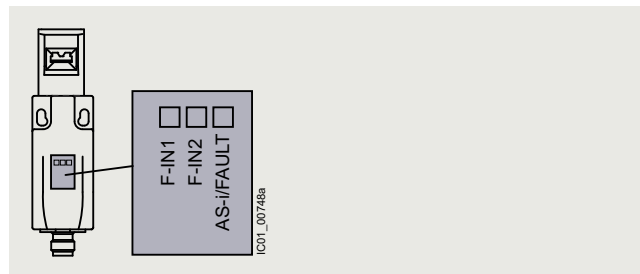
- 1 ASi +
- 2 Not assigned
- 3 ASi -
- 4 Not assigned

M12 socket, 4-pole



- 1 Channel 2
- 2 Channel 2
- 3 Not assigned
- 4 Not assigned

LED displays



3SF1 safety switches with AS-i and LED status displays

Status display (operating state)

LED	No voltage on AS-Interface chip	Communication OK	Communication failed	Slave has address "0"
AS-i/Fault (GN/RD/YE)				

Safe inputs

LED	Not actuated	Actuated		
F-IN1 (YE)			--	--
F-IN2 (YE)			--	--

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

3SF1, plastic enclosure > Enclosure width 31 mm according to EN 50047/50 mm

Selection and ordering data

Modular system

For the ASIsafe version of the position switch, the basic switch and actuator must be ordered separately.

1 or 2 contacts · 3 LEDs · Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm) · M12 device plug

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Basic switches · Enclosure width 31 mm according to EN 50047 · Degree of protection IP65



Rounded plungers¹⁾

With M12 device plug, 4-pole

Channel 1 on NC contact,
channel 2 on NC contact

- Slow-action contacts
- Snap-action contacts

2 NC 24 V DC →
2 NC 24 V DC →

3SF1234-1KC05-1BA1
3SF1234-1LC05-1BA1

1 1 unit 42A
1 1 unit 42A

3SF1234-1KC05-1BA1

Basic switches · Enclosure width 50 mm · Degree of protection IP66/IP67 · Operating points according to EN 50047



Rounded plungers¹⁾

With M12 device plug, 4-pole

Channel 1 on NC contact,
channel 2 on M12 socket, right

- Slow-action contacts
- Snap-action contacts

1 NC 24 V DC →
1 NC 24 V DC →

3SF1244-1KC05-1BA2
3SF1244-1LC05-1BA2

1 1 unit 42A
1 1 unit 42A

3SF1244-1KC05-1BA2

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, for use in safety circuits.

Note:

¹⁾ For enclosures with widths of 31 mm and 50 mm, the basic switch is a complete unit with rounded plungers.

For the selection aid, see page 12/13.

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

3SF1, plastic enclosure > Enclosure width 31 mm according to EN 50047/50 mm

Version		Roller diameter	Modular system		PU (UNIT, SET, M)	PS*	PG
		mm	Article No.	Price per PU			
Operating mechanisms							
	Plain plungers						
	• High-grade steel plungers	8.5	➡	3SE5000-0AB01	1	1 unit	41K
	Roller plungers, type C, according to EN 50047						
	• Plastic roller	10	➡	3SE5000-0AD03	1	1 unit	41K
	• High-grade steel roller	10	➡	3SE5000-0AD04	1	1 unit	41K
	Roller plungers with central fixing						
	• Plastic roller	10	➡	3SE5000-0AD10	1	1 unit	41K
	• High-grade steel roller	10	➡	3SE5000-0AD11	1	1 unit	41K
	Roller levers, type E, according to EN 50047						
	• Metal lever	13	➡	3SE5000-0AE10	1	1 unit	41K
	• High-grade steel lever	13	➡	3SE5000-0AE11	1	1 unit	41K
	• Plastic roller	13	➡	3SE5000-0AE12	1	1 unit	41K
	• High-grade steel roller	13	➡	3SE5000-0AE13	1	1 unit	41K
	Angular roller levers						
	• Metal lever	13	➡	3SE5000-0AF10	1	1 unit	41K
	• High-grade steel lever	13	➡	3SE5000-0AF11	1	1 unit	41K
	• Plastic roller	13	➡	3SE5000-0AF12	1	1 unit	41K
	• High-grade steel roller	13	➡	3SE5000-0AF13	1	1 unit	41K
Twist actuators							
	Twist actuators, for 31/50 mm, according to EN 50047						
	• Switching right or left, adjustable	--	➡	3SE5000-0AK00	1	1 unit	41K
	Levers						
	Twist levers, type A, according to EN 50047						
	• Metal lever	19	➡	3SE5000-0AA21	1	1 unit	41K
	• Plastic roller	30	➡	3SE5000-0AA25	1	1 unit	41K
	• High-grade steel roller	19	➡	3SE5000-0AA22	1	1 unit	41K
	- With ball bearing	19	➡	3SE5000-0AA23	1	1 unit	41K
	• High-grade steel lever	19	➡	3SE5000-0AA31	1	1 unit	41K
	• Plastic roller	19	➡	3SE5000-0AA32	1	1 unit	41K
	Twist levers 30 mm, straight¹⁾						
	• Metal lever	19	➡	3SE5000-0AA24	1	1 unit	41K
	• Plastic roller	30	➡	3SE5000-0AA26	1	1 unit	41K
	Twist levers 100 mm, adjustable length, with grid hole						
	• Metal lever	19	➡	3SE5000-0AA60	1	1 unit	41K
	• Plastic roller	50	➡	3SE5000-0AA67	1	1 unit	41K
	• High-grade steel roller	19	➡	3SE5000-0AA61	1	1 unit	41K
	• Rubber roller	50	➡	3SE5000-0AA68	1	1 unit	41K
	• High-grade steel lever	19	➡	3SE5000-0AA62	1	1 unit	41K
	• High-grade steel roller	19	➡	3SE5000-0AA63	1	1 unit	41K
	• Rubber roller	50	➡	3SE5000-0AA68	1	1 unit	41K

➡ Positively driven actuator, for use in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

3SF1, metal enclosures > Enclosure width 31 mm according to EN 50047

Selection and ordering data

Modular system

For the ASIsafe version of the position switch, the basic switch and actuator must be ordered separately.

2 contacts · 3 LEDs · Degree of protection IP66/IP67 · M12 device plug

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
						
Article No.			Price per PU			

Basic switches · Enclosure width 31 mm according to EN 50047



Rounded plungers¹⁾

With M12 device plug, 4-pole

Channel 1 on NC contact,
channel 2 on NC contact

- | | | | |
|------------------------|------|---------|---|
| • Slow-action contacts | 2 NC | 24 V DC |  |
| • Snap-action contacts | 2 NC | 24 V DC |  |

3SF1214-1KC05-1BA1

1 1 unit 42A

3SF1214-1LC05-1BA1

1 1 unit 42A

3SF1214-1KC05-1BA1

 Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, for use in safety circuits.

¹⁾ For enclosures with widths of 31 mm, the basic switch is a complete unit with rounded plungers.

Note:

For the selection aid, see page 12/13.

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

3SF1, metal enclosures > Enclosure width 31 mm according to EN 50047

Version		Roller diameter	Modular system			PU (UNIT, SET, M)	PS*	PG	
		mm	Article No.		Price per PU				
Operating mechanisms									
 3SE5000-0AB01	Plain plungers • High-grade steel plunger	8.5		3SE5000-0AB01		1	1 unit	41K	
 3SE5000-0AD03	Roller plungers, type C, according to EN 50047 • Plastic roller • High-grade steel roller	10 10	 	3SE5000-0AD03 3SE5000-0AD04		1 1	1 unit 1 unit	41K 41K	
 3SE5000-0AD10	Roller plungers with central fixing • Plastic roller • High-grade steel roller	10 10	 	3SE5000-0AD10 3SE5000-0AD11		1 1	1 unit 1 unit	41K 41K	
 3SE5000-0AE10	Roller levers, type E, according to EN 50047 • Metal lever • High-grade steel lever	Plastic roller High-grade steel roller Plastic roller High-grade steel roller	13 13 13 13	   	3SE5000-0AE10 3SE5000-0AE11 3SE5000-0AE12 3SE5000-0AE13		1 1 1 1	1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K
 3SE5000-0AF10	Angular roller levers • Metal lever • High-grade steel lever	Plastic roller High-grade steel roller Plastic roller High-grade steel roller	13 13 13 13	   	3SE5000-0AF10 3SE5000-0AF11 3SE5000-0AF12 3SE5000-0AF13		1 1 1 1	1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K
Twist actuators									
 3SE5000-0AK00	Twist actuators, for 31/50 mm, according to EN 50047 Switching right or left, adjustable	--		3SE5000-0AK00		1	1 unit	41K	
 3SE5000-0AA21	Levers Twist levers, type A, according to EN 50047 • Metal lever • High-grade steel lever	Plastic roller Plastic roller High-grade steel roller - With ball bearing Plastic roller High-grade steel roller	19 30 19 19 19 19	     	3SE5000-0AA21 3SE5000-0AA25 3SE5000-0AA22 3SE5000-0AA23 3SE5000-0AA31 3SE5000-0AA32		1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K 41K 41K
	Twist levers 30 mm, straight¹⁾ • Metal lever	Plastic roller	19 30	 	3SE5000-0AA24 3SE5000-0AA26		1 1	1 unit 1 unit	41K 41K
 3SE5000-0AA60	Twist levers 100 mm, adjustable length, with grid hole • Metal lever • High-grade steel lever	Plastic roller Plastic roller High-grade steel roller Rubber roller Plastic roller High-grade steel roller	19 50 19 50 19 19	     	3SE5000-0AA60 3SE5000-0AA67 3SE5000-0AA61 3SE5000-0AA68 3SE5000-0AA62 3SE5000-0AA63		1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	41K 41K 41K 41K 41K 41K

→ Positively driven actuator, for use in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

3SF1, metal enclosures > Enclosure width 40 mm according to EN 50041/56 mm

Selection and ordering data

Modular system

For the ASIsafe version of the position switch, the basic switch and actuator must be ordered separately.

1 or 2 contacts · 3 LEDs · Degree of protection IP66/IP67 · M12 device plug

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Basic switches · Enclosure width 40 mm according to EN 50041



Rounded plungers

With M12 device plug, 4-pole

Channel 1 on NC contact,
channel 2 on NC contact

- Slow-action contacts
- Snap-action contacts

2 NC 24 V DC →
2 NC 24 V DC →

3SF1114-1KA00-1BA1
3SF1114-1LA00-1BA1

1 1 unit 42A
1 1 unit 42A

3SF1114-1KA00-1BA1

Basic switches · Enclosure width 56 mm · Operating points according to EN 50041



Rounded plungers

With M12 device plug, 4-pole

Channel 1 on NC contact,
channel 2 on M12 socket, right

- Slow-action contacts
- Snap-action contacts

1 NC 24 V DC →
1 NC 24 V DC →

3SF1124-1KA00-1BA2
3SF1124-1LA00-1BA2

1 1 unit 42A
1 1 unit 42A

3SF1124-1KA00-1BA2

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, for use in safety circuits.

Note:

For the selection aid, [see page 12/13](#).

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

3SF1, metal enclosures > Enclosure width 40 mm according to EN 50041/56 mm

Version				Diame- ter	Modular system			PU (UNIT, SET, M)	PS*	PG													
				mm	Article No.		Price per PU																
Operating mechanisms																							
	Plain plungers			8.5		3SE5000-0AB01		1	1 unit	41K													
	• High-grade steel plunger																						
3SE5000-0AB01																							
	Rounded plungers, type B, according to EN 50041			10		3SE5000-0AC02		1	1 unit	41K													
	• High-grade steel plunger, with 3 mm overtravel																						
3SE5000-0AC02																							
	Roller plungers, type C, according to EN 50041			13		3SE5000-0AD02		1	1 unit	41K													
	• High-grade steel roller, with 3 mm overtravel																						
3SE5000-0AD02																							
	Roller levers			22		3SE5000-0AE01		1	1 unit	41K													
	• Metal lever	Plastic roller																					
		High-grade steel roller																					
		Plastic roller																					
		High-grade steel roller																					
3SE5000-0AE01	• High-grade steel lever	Plastic roller	22		3SE5000-0AE02		1	1 unit	41K														
		Plastic roller	22		3SE5000-0AE03		1	1 unit	41K														
		High-grade steel roller	22		3SE5000-0AE04		1	1 unit	41K														
		High-grade steel roller	22		3SE5000-0AE04		1	1 unit	41K														
	Angular roller levers			22		3SE5000-0AF01		1	1 unit	41K													
	• Metal lever	Plastic roller																					
		High-grade steel roller																					
		Plastic roller																					
		3SE5000-0AF01	• High-grade steel lever								Plastic roller	22		3SE5000-0AF02		1	1 unit	41K					
High-grade steel roller	22				3SE5000-0AF03		1	1 unit	41K														
High-grade steel roller	22				3SE5000-0AF04		1	1 unit	41K														
High-grade steel roller	22				3SE5000-0AF04		1	1 unit	41K														
Twist actuators																							
	Twist actuators, for 40/56/56 mm, XL, according to EN 50041			--		3SE5000-0AH00		1	1 unit	41K													
	• For twist levers, switching right and/or left, adjustable, only for enclosure widths 40 and 56 mm																						
3SE5000-0AH00																							
	Levers			--		3SE5000-0AT10		1	1 unit	41K													
	• For fork levers, latching																						
3SE5000-0AT10																							
	Twist levers 27 mm, offset, type A, according to EN 50041			19		3SE5000-0AA01		1	1 unit	41K													
	• Metal lever	Plastic roller	30									3SE5000-0AA05		1	1 unit	41K							
			50									3SE5000-0AA07		1	1 unit	41K							
			2 plastic rollers								19		3SE5000-0AA04		1	1 unit	41K						
			High-grade steel roller								19		3SE5000-0AA02		1	1 unit	41K						
			- With ball bearing								19		3SE5000-0AA03		1	1 unit	41K						
			Rubber roller								50		3SE5000-0AA08		1	1 unit	41K						
		• High-grade steel lever	Plastic roller								19		3SE5000-0AA11		1	1 unit	41K						
			High-grade steel roller								19		3SE5000-0AA12		1	1 unit	41K						
			Twist levers 35 mm, offset, type A, according to EN 50041								19		3SE5000-0AA15		1	1 unit	41K						
			• Metal lever															Plastic roller					
			• High-grade steel lever								Plastic roller	19		3SE5000-0AA16		1	1 unit	41K					
											Twist levers 30 mm, straight ¹⁾ , type A, according to EN 50041			19		3SE5000-0AA24		1	1 unit	41K			
	• Metal lever	Plastic roller	30									3SE5000-0AA26									1	1 unit	41K
		Twist levers 100 mm, adjustable length, with grid hole									19		3SE5000-0AA60		1	1 unit	41K						
	• Metal lever	Plastic roller	50																3SE5000-0AA67		1	1 unit	41K
			High-grade steel roller															19		3SE5000-0AA61		1	1 unit
		Rubber roller	50		3SE5000-0AA68		1	1 unit	41K														
• High-grade steel lever		Plastic roller	19		3SE5000-0AA62		1	1 unit	41K														
		High-grade steel roller	19		3SE5000-0AA63		1	1 unit	41K														
		Fork levers (for switches with snap-action contacts only)			19		3SE5000-0AT01		1	1 unit								41K					
		• 2 metal levers	2 plastic rollers																				
2 high-grade steel rollers																							
2 high-grade steel levers			2 plastic rollers	19																3SE5000-0AT03		1	1 unit
	2 high-grade steel rollers	19		3SE5000-0AT04		1	1 unit	41K															

➡ Positively driven actuator, for use in safety circuits.

¹⁾ Can be clinch mounted (rotated 180°, rear of lever).

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With separate actuator

General data

Overview

The 3SF1 safety switches with safety-related communication can be directly connected using the AS-Interface bus system. The safety functions no longer have to be wired up conventionally.

With the 3SF1 safety switches the ASIsafe electronics are integrated in the switch enclosure.



3SF1 safety switches with head for separate actuator and with integrated ASIsafe electronics

3SF1 safety switches with separate actuator have the same enclosures as the 3SF1 position switches.

Operation

The actuator head is included in the scope of supply. For actuation from four directions it can be adjusted through $4 \times 90^\circ$. The switches can also be approached from above.

The actuator is not included in the scope of supply of the safety switches and must be ordered separately from a choice of different versions to suit the application ([see page 12/106](#)).

The actuator is encoded. Simple overruling by hand or auxiliary devices is impossible.

Locking devices

A high-grade steel blocking insert for attaching up to eight padlocks is available for even more security ([see page 12/106](#)).

Dust protection

For use in dusty environments, a protective cap made of rubber is offered that protects the actuator entries of the actuator head from contamination ([see page 12/106](#)).

Display

The switches have a status display with three LEDs:

- LED 1 (yellow): F-IN1
- LED 2 (yellow): F-IN2
- LED 3 (green/red): AS-i/FAULT

Connection

Connection to the AS-Interface is by means of a 4-pole M12 device plug (plastic version) connected to the yellow AS-Interface bus cable.

The wide enclosures (50 or 56 mm) also have an M12 socket for connecting a second safety switch. In this way, SIL 3 according to IEC 62061/IEC 61508 or PL e according to ISO 13849-1 is reached.

Benefits

The 3SF1 safety switches with separate actuator provide:

- ASIsafe electronics integrated in the enclosure, with low power consumption < 60 mA
- An extensive range of actuators
- Status display with three LEDs

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With separate actuator

General data

Application

Safety switches with separate actuator are used where the position of doors, covers or protective grilles must be monitored for safety reasons.

The safety switch can only be operated with the matching coded actuator. Simple overruling by hand or auxiliary devices is impossible.

Devices are available with enclosure versions to suit the particular ambient conditions. Different control tasks can be performed with the contact blocks best suited for the particular purpose. Dimensions and fixing points of the enclosure are in accordance with EN 50041 or EN 50047 standards.

The devices are suitable for use in any climate.

Standards

The switches comply with IEC 60947-1 (Low-Voltage Switchgear and Controlgear, General) and IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The mechanical design of the switches corresponds to the requirements of the fail-safe principle according to ISO 14119.

Approvals

AS-Interface according to IEC 62026-2

The 3SF1 safety switches are approved according to UL 508, UL 50 and UL 746-C.

Safety circuits

Standard IEC 60947-5-1 requires positive opening of the NC contacts. In other words, for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to the standard IEC 60947-5-1 with the symbol .

With a 3SF1 safety switch with , SIL 2 according to IEC 62061/IEC 61508 or PL d according to ISO 13849-1 can be attained if the corresponding fail-safe evaluation units are selected from the ASIsafe program and correctly installed.

If a second 3SF1 safety switch with  is used, SIL 3/PL e can be attained.

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, see www.siemens.com/safety-evaluation.

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With separate actuator

3SF1, plastic enclosure > Enclosure width 31 mm according to EN 50047/50 mm

Overview

- Contacts: 1 or 2 slow-action contacts
- Status indicator with three LEDs 24 V DC:
 - LED 1: F-IN1
 - LED 2: F-IN2
 - LED 3: AS-i/FAULT
- Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm)
- 5 directions of approach
- M12 device plugs

Selection and ordering data

Version ¹⁾		Contacts	Complete units	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		
Enclosure width 31 mm according to EN 50047						
	With M12 device plug, 4-pole Channel 1 on NC contact, channel 2 on NC contact • Slow-action contacts	2 NC →	3SF1234-1QV40-1BA1	1	1 unit	42A
Enclosure width 50 mm						
	With M12 device plug, 4-pole Channel 1 on NC contact, channel 2 on M12 socket, right • Slow-action contacts	1 NC →	3SF1244-1QV40-1BA2	1	1 unit	42A

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately (see page 12/106).

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With separate actuator

3SF1, metal enclosures > Enclosure width 31 mm according to EN 50047/40 mm according to EN 50041/56 mm

Overview

- Contacts: 1 or 2 slow-action contacts
- Status indicator with three LEDs 24 V DC:
 - LED 1: F-IN1
 - LED 2: F-IN2
 - LED 3: AS-i/FAULT
- Degree of protection IP66/IP67
- 5 directions of approach
- M12 device plugs

Selection and ordering data

Version ¹⁾		Contacts	Complete units	☐ PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		
Enclosure width 31 mm according to EN 50047						
	With M12 device plug, 4-pole Channel 1 on NC contact, channel 2 on NC contact • Slow-action contacts	2 NC ⤴	3SF1214-1QV40-1BA1	1	1 unit	42A
3SF1214-1QV40-1BA1						
Enclosure width 40 mm according to EN 50041						
	With M12 device plug, 4-pole Channel 1 on NC contact, channel 2 on NC contact • Slow-action contacts	2 NC ⤴	3SF1114-1QV10-1BA1	1	1 unit	42A
3SF1114-1QV10-1BA1						
Enclosure width 56 mm						
	With M12 device plug, 4-pole Channel 1 on NC contact, channel 2 on M12 socket, right • Slow-action contacts	1 NC ⤴	3SF1124-1QV10-1BA2	1	1 unit	42A
3SF1124-1QV10-1BA2						

➞ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately (see page 12/106).

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With separate actuator

Accessories

Selection and ordering data

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Actuators					
Standard actuators					
 3SE5000-0AV01	Length 75.6 mm	3SE5000-0AV01	1	1 unit	41K
 3SE5000-0AV02	With vertical fixing, length 53 mm	3SE5000-0AV02	1	1 unit	41K
 3SE5000-0AV03	- With transverse fixing - Length 47 mm	3SE5000-0AV03	1	1 unit	41K
 3SE5000-0AW11	- Length 40 mm, plastic¹⁾	3SE5000-0AW11	1	1 unit	41K
Radius actuators					
 3SE5000-0AV04	- Length 51 mm - Direction of approach from the left	3SE5000-0AV04	1	1 unit	41K
 3SE5000-0AV06	- Direction of approach from the right	3SE5000-0AV06	1	1 unit	41K
Universal radius actuators					
 3SE5000-0AV05-1AA6	- Length 77 mm - Tab rotated 90°	3SE5000-0AV05	1	1 unit	41K
		3SE5000-0AV05-1AA6	1	1 unit	41K
Universal radius actuators, heavy duty					
 3SE5000-0AV07-1AK2	Length 67 mm	3SE5000-0AV07-1AK2	1	1 unit	41K
 3SE5000-0AV07	Length 77 mm	3SE5000-0AV07	1	1 unit	41K
Optional accessories					
 3SE5000-0AV08-1AA2	Protective caps Made of black rubber, for actuator head, to protect the actuator openings from contamination (only for enclosure width 40 or 56 mm)	3SE5000-0AV08-1AA2	1	1 unit	41K
 3SE5000-0AV08-1AA3	Blocking inserts Made of high-grade steel, for actuator head for up to eight padlocks	3SE5000-0AV08-1AA3	1	1 unit	41K

¹⁾ Not suitable for safety switches with tumbler.

Further versions for high-grade steel, [see page 12/73](#).

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With tumbler

General data

Overview

The 3SF1 safety switches with safety-related communication can be directly connected using the AS-Interface bus system. The safety functions no longer have to be wired up conventionally.

With the 3SF1 safety switches the ASIsafe electronics are integrated in the switch enclosure.



3SF1 safety switch with tumbler and with integrated ASIsafe electronics

Operation

The actuator head is included in the scope of supply. For actuation from four directions it can be adjusted through $4 \times 90^\circ$. The switches can also be approached from above.

The actuator is not included in the scope of supply of the safety switches and must be ordered separately from a choice of different versions to suit the application (see page 12/106).

The actuator is encoded. Simple overruling by hand or auxiliary devices is impossible.

Locking devices

A high-grade steel blocking insert for attaching up to eight padlocks is available for even more security (see page 12/106).

Dust protection

For use in dusty environments, a protective cap made of rubber is offered that protects the actuator entries of the actuator head from contamination (see page 12/106).

Tumbler

There are two versions for interlocking the actuator:

- Spring-actuated lock (closed-circuit principle) with various release mechanisms
- Solenoid-locked (open-circuit principle)

For more explanations, see page 12/62.

Display

The switches have a status display with four LEDs:

- LED 1 (green): AS-i
- LED 2 (red): FAULT
- LED 3 (yellow): F-IN1
- LED 4 (yellow): F-IN2

Connection

Connection to the AS-Interface is by means of a 4-pole M12 device plug (plastic version) connected to the yellow AS-Interface bus cable (no additional supply of auxiliary power is required thanks to the low current consumption of the solenoid of max. 170 mA).

Benefits

The 3SF13 safety switches with tumbler provide:

- More safety through higher locking forces:
 - 1 300 N for the plastic version
 - 2 600 N for the metal version
- Various release mechanisms: lock release, escape release and emergency release
- ASIsafe electronics integrated in the enclosure; connected through 4-pole M12 device plug
- Current consumption of the solenoid no more than 170 mA
- Two contact blocks as standard equipment, hence fewer versions needed
- Same dimensions for all enclosure versions: plastic, metal
- An extensive range of actuators
- Status display with four LEDs
- 3SF1324-1S.21-1BK4 series with high degree of protection IP69 according to IEC 60529, cover with foamed seal

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With tumbler

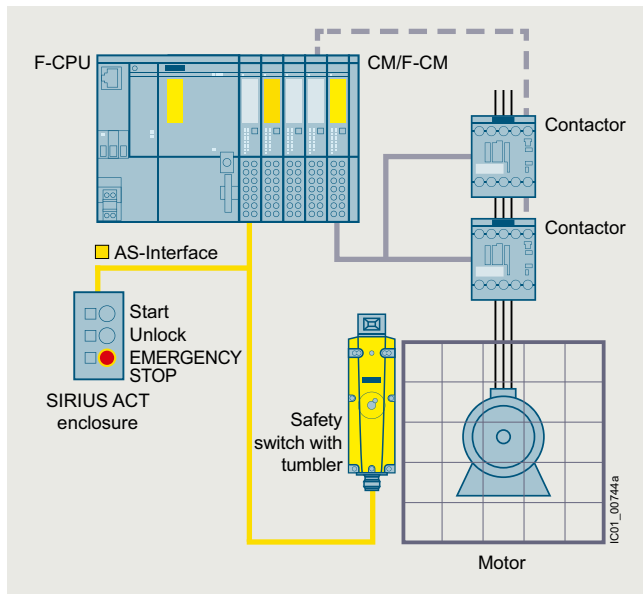
General data

Application

The safety switches with tumbler are exceptional safety-related devices which prevent an unforeseen or intentional opening of protective doors, protective grilles or other covers as long as a dangerous situation is present (e.g. follow-on motion of the switched-off machine).

The safety switches with tumbler have the following functions:

- Enabling the machine or process with closed and locked protective device
- Locking the machine or process with opened protective device
- Position monitoring of the protective device and tumbler



Connection to fail-safe control equipment via CM AS-i Safety ST and F-CM AS-i Safety ST

Standards

The switches comply with IEC 60947-1 (Low-Voltage Switchgear and Controlgear, General) and IEC 60947-5-1 (Electromechanical Control Circuit Devices).

The mechanical design of the switches corresponds to the requirements of the fail-safe principle according to ISO 14119.

Approvals

AS-Interface according to IEC 62026-2

The switches are approved for use with locking devices according to ISO 14119 and ISO 12100.

3SF13 safety switches with tumbler have a VDE test mark.

The 3SF1 safety switches are approved according to UL 508, UL 50 and UL 746-C.

Safety circuits

Standard IEC 60947-5-1 requires positive opening of the NC contacts. In other words, for the purposes of personal safety, the assured opening of NC contacts is expressly stipulated for the electrical equipment of machines in all safety circuits and marked according to the standard IEC 60947-5-1 with the symbol .

With a 3SF13 safety switch with , SIL 2 according to IEC 62061/IEC 61508 or PL d according to ISO 13849-1 can be attained if the corresponding fail-safe evaluation units are selected from the ASIsafe program and correctly installed.

If a second 3SF1 safety switch with  is used, SIL 3/PL e can be attained.

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, see www.siemens.com/safety-evaluation.

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With tumbler

3SF1, plastic enclosures with locking force greater than 1 200 N

Overview

Versions

- 1BA1: ASIsafe channel 1 on 1 NC contact from the actuator and channel 2 on 1 NC contact from the solenoid
- 1BA3: ASIsafe channel 1 on the first NC contact from the actuator and channel 2 on the second NC contact from the actuator
- 1BA4: ASIsafe channel 1 on 2 NC contact (2-channel) from the actuator, and channel 2 on 1 NC contact from the solenoid. The position switch transfers the information of actuators to a transfer channel because the discrepancy of the two actuator contacts is already evaluated in the switch.

The 3SF1324-1S.21-1BA4 safety switches are also recommended where there are several protective door tumblers and reliable diagnostics and quick restart capability of equipment is required.

- A response is received from the solenoid.
- No opening of the doors required after the solenoid is unlocked.

In connection with an ET 200SP module F-CM AS-i Safety ST, it is possible to achieve SIL 2 according to IEC 62061/IEC 61508 or PL d according to ISO 13849-1. They comply with the standard EN ISO 14119. A TÜV certificate is available.

Features

- Slow-action contacts
- 5 directions of approach
- Solenoid: Rated operational voltage 24 V DC
- 1 300 N locking force
- Degree of protection IP66/IP67, IP69
- Status display with four LEDs 24 V DC:
 - LED 1: AS-i
 - LED 2: FAULT
 - LED 3: F-IN1
 - LED 4: F-IN2
- M12 device plugs

Comparison of versions

Safety switches	Contacts	Achievable safety level	Diagnostics	Reclosing condition after unlocking the solenoid (depending on the type of evaluation)
Type	Actuator/solenoid		Feedback from the solenoid	
3SF1324-1S.21-1BA1	1 NC/1 NC 1 NC/1 NC	SIL 1/PL c SIL 2/PL d	✓ ✓	Door does <u>not</u> have to be opened Door must be opened
3SF1324-1S.21-1BA3	2 NC/--	SIL 2/PL d	--	Door does <u>not</u> have to be opened
3SF1324-1S.21-1BA4	2 NC/1 NC	SIL 2/PL d	✓	Door does <u>not</u> have to be opened
3SF1324-1S.21-1BK4 (IP69)	2 NC/1 NC	SIL 2/PL d	✓	Door does <u>not</u> have to be opened

✓ Available -- Not available

Selection and ordering data

Tumbler ¹⁾	Contacts Actuator/solenoid	Complete units	PU (UNIT, SET, M)	PS*	PG
Article No.		Price per PU			
1 300 N locking force - Enclosure width 54 mm according to ISO 14119					
Spring-actuated locks					
With M12 device plug, 4-pole					
	• With auxiliary release	1 NC/1 NC 2 NC/-- 2 NC/1 NC	⊕ ⊕ ⊕	3SF1324-1SD21-1BA1 3SF1324-1SD21-1BA3 3SF1324-1SD21-1BA4	1 1 unit 42A 1 1 unit 42A 1 1 unit 42A
	- Degree of protection IP69 according to IEC 60529 (IP69 according to DIN 40050)	2 NC/1 NC	⊕	3SF1324-1SD21-1BK4	1 1 unit 42A
	• With auxiliary release with lock	1 NC/1 NC	⊕	3SF1324-1SE21-1BA1	1 1 unit 42A
	3SF1324-1SD21-1BA1				
	• With escape release from the front	1 NC/1 NC 2 NC/1 NC 2 NC/1 NC	⊕ ⊕ ⊕	3SF1324-1SF21-1BA1 3SF1324-1SF21-1BA4 3SF1324-1SF21-1BK4	1 1 unit 42A 1 1 unit 42A 1 1 unit 42A
	- Degree of protection IP69 according to IEC 60529 (IP69 according to DIN 40050)	2 NC/1 NC	⊕		
	• With escape release from the back and auxiliary release from the front	1 NC/1 NC 2 NC/1 NC	⊕ ⊕	3SF1324-1SG21-1BA1 3SF1324-1SG21-1BA4	1 1 unit 42A 1 1 unit 42A
	- Degree of protection IP69 according to IEC 60529 (IP69 according to DIN 40050)	2 NC/1 NC	⊕	3SF1324-1SG21-1BK4	1 1 unit 42A
	• With emergency release from the back and auxiliary release from the front	1 NC/1 NC	⊕	3SF1324-1SJ21-1BA1	1 1 unit 42A
	3SF1324-1SF21-1BA1				
Solenoid-locked					
With M12 device plug, 4-pole					
	1 NC/1 NC	⊕	3SF1324-1SB21-1BA1	1 1 unit 42A	
	2 NC/--	⊕	3SF1324-1SB21-1BA3	1 1 unit 42A	
3SF1324-1SB21-1BA1					

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately. For actuators and optional accessories, see page 12/68.

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

With tumbler

3SF1, metal enclosures with locking force greater than 2 000 N

Overview

Version

1BA1: ASIsafe channel 1 on 1 NC contact from the actuator and channel 2 on 1 NC contact from the solenoid

Features

- Slow-action contacts
- Solenoid: Rated operational voltage 24 V DC
- 2 600 N locking force
- Degree of protection IP66/IP67
- Status display with four LEDs 24 V DC:
 - LED 1: AS-i
 - LED 2: FAULT
 - LED 3: F-IN1
 - LED 4: F-IN2
- M12 device plugs

Comparison of versions

Safety switches	Contacts	Achievable safety level	Diagnostics	Reclosing condition after unlocking the solenoid (depending on the type of evaluation)
Type	Actuator/solenoid		Feedback from the solenoid	
3SF1314-1S.11-1BA1	1 NC/1 NC	SIL 1/PL c	✓	Door does <u>not</u> have to be opened
	1 NC/1 NC	SIL 2/PL d	✓	Door must be opened

✓ Available

Selection and ordering data

Tumbler ¹⁾	Contacts Actuator/solenoid	Complete units	PU (UNIT, SET, M)	PS*	PG
		Article No.	Price per PU		

2 600 N locking force · Enclosure width 54 mm according to ISO 14119



3SF1314-1SD11-1BA1

Spring-actuated locks

With M12 device plug, 4-pole

- With auxiliary release 1 NC/1 NC
- With auxiliary release with lock 1 NC/1 NC



3SF1314-1SD11-1BA1
3SF1314-1SE11-1BA1

1 1 unit 42A
1 1 unit 42A



3SF1314-1SF11-1BA1

- With escape release from the front 1 NC/1 NC
- With escape release from the back and auxiliary release from the front 1 NC/1 NC
- With escape release from the back and auxiliary release with lock from the front 1 NC/1 NC
- With emergency release from the back and auxiliary release from the front 1 NC/1 NC



3SF1314-1SF11-1BA1
3SF1314-1SG11-1BA1
3SF1314-1SH11-1BA1
3SF1314-1SJ11-1BA1

1 1 unit 42A
1 1 unit 42A
1 1 unit 42A
1 1 unit 42A



3SF1314-1SB11-1BA1

Solenoid-locked

With M12 device plug, 4-pole

1 NC/1 NC



3SF1314-1SB11-1BA1

1 1 unit 42A

⊕ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

¹⁾ Supplied without actuator. Please order separately.

For actuators and optional accessories, see page 12/68.

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

Safety hinge switches

3SF1, plastic enclosure > Enclosure width 31 mm according to EN 50047/50 mm

Overview

The 3SF1 safety hinge switches with safety-related communication can be directly connected using the AS-Interface bus system. The safety functions no longer have to be wired up conventionally.

With the 3SF1 hinge switches the ASIsafe electronics are integrated in the switch enclosure.

The hinge switches are provided for mounting on hinges. There are two actuator variants here:

- Hollow shaft, inner diameter 8 mm, outer 12 mm
- Solid shaft, diameter 10 mm

For the ASIsafe version of the hinge switch, the basic switch and actuator head must be ordered separately. The basic switches correspond to the 3SF1 position switches (use only versions with snap-action contacts).

The provisions and approvals are the same as for the 3SF1 standard switches ([see page 12/93](#)).

Selection and ordering data

Modular system

1 or 2 contacts · 3 LEDs · Degree of protection IP65 (31 mm) or IP66/IP67 (50 mm) · M12 device plug

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Basic switches · Enclosure width 31 mm according to EN 50047



Rounded plungers

With M12 device plug, 4-pole

Channel 1 on NC contact, channel 2 on NC contact

- Snap-action contacts

2 NC 24 V DC →

3SF1234-1LC05-1BA1

1 1 unit 42A

3SF1234-1LC05-1BA1

Basic switches · Enclosure width 50 mm · Operating points according to EN 50047



Rounded plungers

With M12 device plug, 4-pole

Channel 1 on NC contact, channel 2 on M12 socket, right

- Snap-action contacts

1 NC 24 V DC →

3SF1244-1LC05-1BA2

1 1 unit 42A

3SF1244-1LC05-1BA2

Actuator heads



With hollow shaft

- Actuating angle 10°

-- --

3SE5000-0AU21

1 1 unit 41K

3SE5000-0AU21



With solid shaft

- Actuating angle 10°

-- --

3SE5000-0AU22

1 1 unit 41K

3SE5000-0AU22

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

Accessories, [see page 12/49](#).

Position and safety switches

SIRIUS 3SF1 mechanical safety switches for AS-Interface

Safety hinge switches

3SF1, metal enclosures > Enclosure width 31 mm according to EN 50047/40 mm according to EN 50041/56 mm

Overview

The 3SF1 safety hinge switches with safety-related communication can be directly connected using the AS-Interface bus system. The safety functions no longer have to be wired up conventionally.

With the 3SF1 hinge switches the ASIsafe electronics are integrated in the switch enclosure.

The hinge switches are provided for mounting on hinges.

There are two actuator variants here:

- Hollow shaft, inner diameter 8 mm, outer 12 mm
- Solid shaft, diameter 10 mm

For the ASIsafe version of the hinge switch, the basic switch and actuator head must be ordered separately. The basic switches correspond to the 3SF1 position switches (use only versions with snap-action contacts).

The provisions and approvals are the same as for the 3SF1 standard switches (see page 12/93).

Selection and ordering data

Modular system

1 or 2 contacts · 3 LEDs · Degree of protection IP66/IP67 · M12 device plug

Version	Contacts	LEDs	Modular system	PU (UNIT, SET, M)	PS*	PG
			Article No.	Price per PU		

Basic switches · Enclosure width 31 mm according to EN 50047



Rounded plungers

With M12 device plug, 4-pole

Channel 1 on NC contact,
channel 2 on NC contact

- Snap-action contacts

2 NC 24 V DC →

3SF1214-1LC05-1BA1

1 1 unit 42A

3SF1214-1LC05-1BA1

Basic switches · Enclosure width 40 mm according to EN 50041



Rounded plungers

With M12 device plug, 4-pole

Channel 1 on NC contact,
channel 2 on NC contact

- Snap-action contacts

2 NC 24 V DC →

3SF1114-1LA00-1BA1

1 1 unit 42A

3SF1114-1LA00-1BA1

Basic switches · Enclosure width 56 mm



Rounded plungers

With M12 device plug, 4-pole

Channel 1 on NC contact,
channel 2 on M12 socket, right

- Snap-action contacts

1 NC 24 V DC →

3SF1124-1LA00-1BA2

1 1 unit 42A

3SF1124-1LA00-1BA2

Actuator heads



Hollow shaft

- Actuating angle 10°

-- --

3SE5000-0AU21

1 1 unit 41K

3SE5000-0AU21



Solid shaft

- Actuating angle 10°

-- --

3SE5000-0AU22

1 1 unit 41K

3SE5000-0AU22

→ Positive opening according to IEC 60947-5-1, Annex K, or positively driven actuator, necessary in safety circuits.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE66, 3SE67 magnetically operated switches

Overview

More information

Homepage, see www.siemens.com/sirius-position-switches
 Industry Mall, see www.siemens.com/product?3SE

Configuration Manual, see
<https://support.industry.siemens.com/cs/ww/en/view/43920150>



3SE66 contact blocks and 3SE67 switching solenoids

A magnetically operated switch comprises a coded switching solenoid and a contact block (sensor unit). The switch must be connected to a safety relay, e.g. SIRIUS 3SK1, or a bus system, e.g. SIMATIC ET 200SP, for evaluation. The switches use reed contacts as mechanical contacts. The status of the contacts is monitored using an evaluation unit.



3SE66 contact blocks and 3SE67 switching solenoids, supplementary range in new design

Safety relays

3SK safety relays can be used worldwide since they possess all the required certification. Since they satisfy the highest safety requirements, they are suitable for all kinds of safety applications.

The following can be selected:

- 3SK1 Standard basic units:
Simple and compact to satisfy all the essential requirements of safety sensor monitoring systems
- 3SK1 Advanced basic units:
Multifunctional series with relay enabling circuits, semiconductor outputs or time-delayed outputs
- 3SK2 basic units:
Multifunctional series whose functionality is parameterized using software. The basic units have semiconductor outputs. Relay outputs from the 3SK1 portfolio can also be connected via device connectors.
- Expansion units for inputs and outputs

The 3SE6806 safety relay is also available with two floating enabling circuits (safe circuits) as NO contact circuits and one floating signaling circuit as an NC contact circuit.

Benefits

Standard range

- Non-contact round, rectangular, small (25 mm x 33 mm) and larger (25 mm x 88 mm) versions
- Small, compact, safe
- Simple mounting with alignment of sensor and actuator, and concealed installation also easy
- Suitable for restricted spaces

Supplementary range

- Modern design for rectangular shape
- More functionality
- Greater operating distances and a larger horizontal or vertical displacement
- Various mounting positions possible (e.g. at 90° offset)
- SIL 3 and PL e diagnostics possible because there are two safety contacts and one signaling contact
- LED variant
- Fast connection possible using plug-in variants

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE66, 3SE67 magnetically operated switches

Application

SIRIUS 3SE6 magnetically operated switches are designed for mounting on movable protective guards (e.g. hoods, hinged flaps, doors, etc.). Evaluation can be performed by means of a safety relay or through connection to a bus system. For more information about the protective door monitoring application, [see flyer](#).

The 3SE66 non-contact, magnetically operated safety switches stand out due to their enclosed design with high degree of protection IP67. Since they are coded, they do not have to be concealed when installed. They are particularly suitable therefore for areas exposed to contamination, cleaning or disinfecting.

A solenoid monitoring system comprises one or more magnetically operated switches and an evaluation unit, e.g. a safety relay.

When contact blocks 1 NO + 1 NC (+ 1 NC signaling contact) or 2 NC (+ 1 NC signaling contact) are used, the 3SK safety relay, for example, provides a high degree of protection against manipulation and can be installed in safety circuits up to SIL 3 according to IEC 62061/IEC 61508 and PL e according to ISO 13849-1.

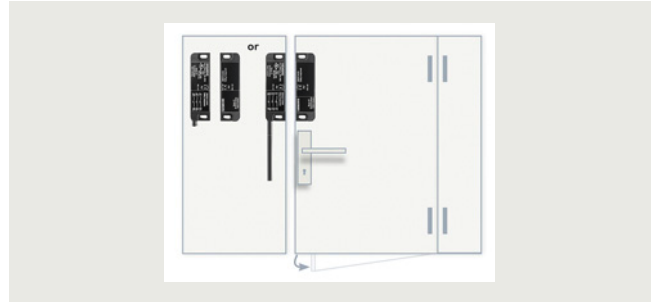
Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

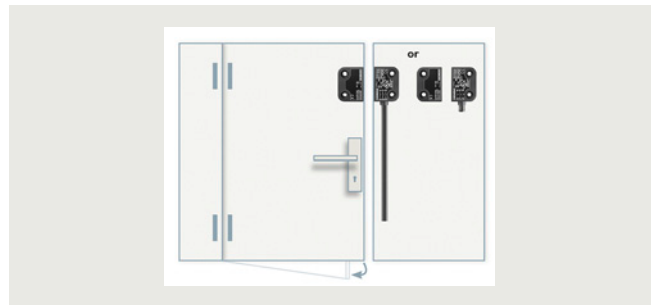
The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, [see www.siemens.com/safety-evaluation](http://www.siemens.com/safety-evaluation).



Non-contact safety magnetically operated switches (with plug or cable) for right-hinged door



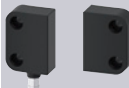
Non-contact safety magnetically operated switches (with plug or cable) for left-hinged door

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE66, 3SE67 magnetically operated switches

Combination of monitoring units and magnetically operated switches

Monitoring units		Magnetically operated switches (contact block + switching solenoid)			Achievable Safety Integrity Level (IEC 62061/ IEC 61508) Performance Level (ISO 13849-1)
		1 NO + 1 NC 3SE6605-..BA..  3SE6704-..BA	2 NC 3SE6604-2BA.. 1 NO + 2 NC 3SE6606-2BA04  3SE6704-2BA	--	
		1 NO + 1 NC (+ 1 NC signaling contact) 3SE6616-3CA01 3SE6626-3CA01  3SE6714-3CA 3SE6724-3CA	2 NC; 2 NC (+ 1 NC signaling contact) 3SE6614-4CA01 3SE6624-4CA01 3SE6617-2CA01 3SE6627-2CA01 3SE6617-2CA04 3SE6627-2CA04  3SE6714-2CA 3SE6724-2CA	2 NC (+ 1 NC signaling contact) 3SE6617-3CA01 3SE6627-3CA01 3SE6617-3CA04 3SE6627-3CA04  3SE6714-3CA 3SE6724-3CA	
		Relay output			
		SIRIUS safety relays	3SK1121 	✓	
Semiconductor outputs					
SIRIUS safety relays	3SK1112, 3SK1122 	--/✓	✓	✓	SIL 3/PL e
	3SK2112, 3SK2122 	✓	✓	✓	SIL 3/PL e
ASIsafe compact safety modules	3RK1205, 3RK1405 	--	✓	✓	SIL 3/PL e
SIMATIC S7-1200					
• F-DI 16 x 24 V DC	6ES7226-6BA32-0XB0, 6AG1226-6BA32-5XB0 (SIPLUS)	✓	✓	✓	SIL 3/PL e
SIMATIC S7-1500/ET 200MP					
• F-DI 16 x 24 V DC	6ES7526-1BH00-0AB0, 6AG1526-1BH00-2AB0 (SIPLUS)	✓	✓	✓	SIL 3/PL e
SIMATIC ET 200SP					
• F-DI 8 x 24 V DC	6ES7136-6BA00-0CA0, 6AG1136-6BA00-2CA0 (SIPLUS)	✓	✓	✓	SIL 3/PL e
• F-PM-E 24 V DC/8 A PPM	6ES7136-6PA00-0BC0, 6AG1136-6PA00-2BC0 (SIPLUS)	✓	✓	✓	SIL 3/PL e
SIMATIC ET 200pro					
• 8/16 F-DI 24 V DC	6ES7148-4FA00-0AB0	✓	✓	✓	SIL 3/PL e
• 4/8 F-DI 24 V DC + 4 F-DO 24 V DC/2 A	6ES7148-4FC00-0AB0	✓	✓	✓	SIL 3/PL e
• F-SWITCH	6ES7148-4FS00-0AB0	✓	✓	✓	SIL 3/PL e
SIMATIC ET 200eco PN					
• F-DI 8 x 24 V DC + F-DQ 3 x 24 V DC/2 A	6ES7146-6FF00-0AB0	✓	✓	✓	SIL 3/PL e
SIMATIC ET 200AL					
• F-DI 4 x 24 V DC + F-DQ 2 x 24 V DC/2 A	6ES7146-5FF00-0BA0	✓	✓	✓	SIL 3/PL e

✓ Suitable magnetically operated switch

-- Not available

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE66, 3SE67 magnetically operated switches

Selection and ordering data

Version		Size	Contacts	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
		mm						
Standard range – Round sensor units								
	Switching solenoids (coded)	M30	--	3SE6704-1BA		1	1 unit	41K
3SE6704-1BA								
	Contact blocks							
	• With cable 3 m	M30	1 NO + 1 NC	3SE6605-1BA		1	1 unit	41K
	• With M12 plug, 4-pole	M30	1 NO + 1 NC	3SE6605-1BA02		1	1 unit	41K
3SE6605-1BA								
Standard range – Rectangular sensor units								
	Switching solenoids (coded)							
	• Operating distance 5 mm	25 x 88	--	3SE6704-2BA		1	1 unit	41K
	• Operating distance 8 mm	25 x 88	--	3SE6701-2BA		1	1 unit	41K
3SE6704-2BA								
	Contact blocks							
	• With cable 3 m	25 x 88	1 NO + 1 NC 2 NC	3SE6605-2BA		1	1 unit	41K
			1 NO + 2 NC	3SE6604-2BA		1	1 unit	41K
				3SE6606-2BA04		1	1 unit	41K
	• With cable 10 m	25 x 88	1 NO + 1 NC 2 NC	3SE6605-2BA10		1	1 unit	41K
				3SE6604-2BA10		1	1 unit	41K
	• With M8 plug, 4-pole	25 x 88	1 NO + 1 NC 2 NC	3SE6605-2BA01		1	1 unit	41K
				3SE6604-2BA01		1	1 unit	41K
3SE660.-2BA								
	Switching solenoids (coded)	25 x 33	--	3SE6704-3BA		1	1 unit	41K
3SE6704-3BA								
	Contact blocks							
	• With cable 3 m	25 x 33	1 NO + 1 NC	3SE6605-3BA		1	1 unit	41K
	• With cable 5 m	25 x 33	1 NO + 1 NC	3SE6605-3BA05		1	1 unit	41K
	• With cable 10 m	25 x 33	1 NO + 1 NC	3SE6605-3BA10		1	1 unit	41K
3SE6605-3BA								
Supplementary range – Rectangular sensor units for left-hinged door								
	Switching solenoids (coded)							
	• Same level	25 x 88	--	3SE6714-2CA		1	1 unit	41K
	• 90° offset	25 x 88	--	3SE6724-2CA		1	1 unit	41K
3SE6714-2CA								
	Contact blocks							
	• With M8 plug, 4-pole, with LED	25 x 88	2 NC	3SE6614-4CA01		1	1 unit	41K
	• Ø 8 mm, latching connection, plug, 6-pole	25 x 88	2 NC + 1 NC ¹⁾	3SE6617-2CA01		1	1 unit	41K
	• With cable 3 m	25 x 88	2 NC + 1 NC ¹⁾	3SE6617-2CA04		1	1 unit	41K
3SE6614-4CA01								
	Switching solenoids (coded)							
	• Same level	26 x 36	--	3SE6714-3CA		1	1 unit	41K
	• 90° offset	26 x 36	--	3SE6724-3CA		1	1 unit	41K
3SE6714-3CA								
	Contact blocks							
	• Ø 8 mm, latching connection, plug, 6-pole	26 x 36	1 NO + 1 NC + 1 NC ¹⁾	3SE6616-3CA01		1	1 unit	41K
		26 x 36	2 NC + 1 NC ¹⁾	3SE6617-3CA01		1	1 unit	41K
	• With cable 3 m	26 x 36	2 NC + 1 NC ¹⁾	3SE6617-3CA04		1	1 unit	41K
3SE6616-3CA01								

¹⁾ The NC is a signaling contact, not a safety contact.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE66, 3SE67 magnetically operated switches

Version	Size	Contacts	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	mm						
Supplementary range – Rectangular sensor units for right-hinged door							
	Switching solenoids (coded)						
	• Same level	25 x 88	--	3SE6714-2CA	1	1 unit	41K
	• 90° offset	25 x 88	--	3SE6724-2CA	1	1 unit	41K
	Contact blocks						
	• With M8 plug, 4-pole, with LED	25 x 88	2 NC	3SE6624-4CA01	1	1 unit	41K
	• Ø 8 mm, latching connection, plug, 6-pole	25 x 88	2 NC + 1 NC ¹⁾	3SE6627-2CA01	1	1 unit	41K
	• With cable 3 m	25 x 88	2 NC + 1 NC ¹⁾	3SE6627-2CA04	1	1 unit	41K
	Switching solenoids (coded)						
	• Same level	26 x 36	--	3SE6714-3CA	1	1 unit	41K
	• 90° offset	26 x 36	--	3SE6724-3CA	1	1 unit	41K
	Contact blocks						
	• Ø 8 mm, latching connection, plug, 6-pole	26 x 36	1 NO + 1 NC + 1 NC ¹⁾	3SE6626-3CA01	1	1 unit	41K
			2 NC + 1 NC ¹⁾	3SE6627-3CA01	1	1 unit	41K
	• With cable 3 m	26 x 36	2 NC + 1 NC ¹⁾	3SE6627-3CA04	1	1 unit	41K
Accessories for standard range							
	Spacer						
		25 x 88	--	3SX3260	1	1 unit	41K
		25 x 33	--	3SX3261	1	1 unit	41K
Accessories for supplementary range							
	Spacer						
		25 x 88	--	3SX5600-2GA01	1	1 unit	41K
		26 x 36	--	3SX5600-2GA02	1	1 unit	41K
	Connecting cables						
	Length 5 m						
	• With M8 socket, 4-pole	--	--	3SX5601-3GA05	1	1 unit	41K
	• With Ø 8 mm socket, 8 mm latching connection, 6-pole	--	--	3SX5601-4GA05	1	1 unit	41K
	M12 plugs, 5-pole						
	• Straight, separate item	--	--	3RK1902-4BA00-5AA0	1	1 unit	42D
	• Angled, separate item	--	--	3RK1902-4DA00-5AA0	1	1 unit	42D

¹⁾ The second NC is a signaling contact, not a safety contact.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE66, 3SE67 magnetically operated switches

Version	Rated control voltage	Number of sensors	Enabling/signaling circuits	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
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Monitoring units



3SK1121-1AB40

3SK1 safety relays

Standard or Advanced basic units

- With relay output 24 V DC 6¹⁾ 3 NO/1 NC
- With semiconductor output 24 V DC 1 2 x F-DQ/1 QM

3SK1121-1AB40

1

1 unit

41L

3SK1121-1BB40

1

1 unit

41L



3SK2112-1AA10

3SK2 safety relays

Basic units

- With semiconductor output 24 V DC 5 2 x F-DQ/1 QM
- 10 4 x F-DQ/2 QM

3SK2112-1AA10

1

1 unit

41L

3SK2122-1AA10

1

1 unit

41L

¹⁾ Only when up to five 3SK1220 input expansion units are used, see page 11/28.

For further monitoring units, see pages 8/1, 9/1 and 11/1.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE63 RFID safety switches

Overview

More information

Homepage, see www.siemens.com/sirius-position-switches
 Industry Mall, see www.siemens.com/product?3SE
 Equipment Manual, see <https://support.industry.siemens.com/cs/ww/en/view/52233535>



RFID non-contact safety switch with maximum tamper resistance

3SE63 RFID non-contact safety switches comply with the highest safety requirements, SIL 3, for monitoring the positions of movable protective devices.

An RFID safety switch consists of a coded RFID switch with an 8-pole M12 connection plug and an identical RFID actuator.

The switch is available in several versions:

- Family-coded with M12 plug or with additional 18 N magnetic catch as an option
- Individually coded, programmable once, with M12 plug or with additional 18 N magnetic catch as an option
- Individually coded, programmable more than once (an unlimited number of times), with M12 plug or version with additional 18 N magnetic catch

The actuator is therefore available in two versions:

- Standard
- With 18 N magnetic catch

The magnetic catch keeps doors and flaps closed with permanent magnets.

Mounting and maintenance

Various options for mounting save on enclosure variants:

- Mounting of the switch on the right or left side
- The actuator can be mounted on all sides

Quick and easy mounting thanks to universal mounting holes:

- Standard gauge/holes for 3SE6 magnetically operated switches
- Fine adjustment thanks to slotted holes

Little adjustment or maintenance required:

- Threshold indication by LED display on the switch for quick and easy adjustment during mounting and maintenance
- Molded switch allows it to be used as an end stop for small and medium-sized doors

Notes:

- Keep metal parts and cuttings away from the vicinity of the switch
- Minimum distance between two switches 100 mm

Optional accessories (mounting)

- Covers for sealing mounting holes, also suitable for tamper-proofing screw fixings
- Spacers (approx. 3 mm high) to facilitate cleaning under the installation surface when using high-pressure cleaners, for example

Coding

Family-coded

These safety switches are delivered ready to use, i.e. no programming is necessary.

Individually coded, programmable once

The assignment of safety switch and actuator thus created is irreversible.

The actuator is programmed simply by routine during startup, thus permanently preventing any form of tampering by means of a replacement actuator.

Individually coded, programmable several times

Programming procedure:

1. Apply operational voltage to safety sensor
2. Move actuator into detection range:
red LED lights up, yellow LED flashes (1 Hz)
3. After 10 s it changes to a shorter flashing frequency (3 Hz).
In this state switch off operational voltage.
4. After the next time the operational voltage is switched on, the actuator is detected again to activate the programmed actuator code. The activated code is thus stored permanently.

The procedure for programming a new actuator can be repeated an unlimited number of times. When a new actuator is programmed the previous code becomes invalid. A protected coding process allows new actuators to be programmed for service purposes.

After this, a ten-minute lockout provides enhanced tamper protection. The green LED flashes until the lockout time has ended and the new actuator has been detected. If the operational voltage is interrupted during this time, the ten-minute guard time is restarted.

Diagnostics

The RFID safety switch indicates its operating state including faults by means of the LED display in the switch and the short-circuit-proof diagnostics output. The signals can then be used for central displays or non-safety-related control tasks.

There are the following diagnostics functions:

- Cross-circuit monitoring
- Open-circuit monitoring
- External voltage monitoring
- Ambient temperature too high
- Wrong or defective actuator
- Operating distance threshold identification with LED display

The signal combination "diagnostics output switched off" and "safety outputs still switched on" can be used to move the machine into a controlled stop position.

Any cross-circuit or a fault that is not currently compromising the safe function of a safety switch results in the disconnection of the safety channels after a 30-minute delay. However, the diagnostics output switches off instantaneously.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE63 RFID safety switches

Mode of operation of the diagnostics LEDs

The safety switch indicates not only its operating state, but also faults by means of LEDs in three colors at the ends of the RFID switch.

- The green LED indicates readiness for operation when the control supply voltage is connected.
- The yellow LED indicates that there is an actuator in detection range. If the actuator is in the operating distance threshold, this is indicated by flashing. This flashing can be used to identify a change in the distance between sensor and actuator at an early stage (e.g. as a result of the sagging of a protective door). The installation should be tested before the distance increases further, the safety outputs switch off and the machine stops.
- The red LED indicates the individual causes of the fault by means of defined flashing frequencies.

Benefits

- Maximum tamper resistance by means of individual coding of switches and actuators at the highest safety level
- Plastic enclosure with integrated plug
- Two solid-state short-circuit-proof safety outputs, each 250 mA
- Integrated cross-circuit, open-circuit and external voltage monitoring, with series circuit as far as the control cabinet
- Safety and diagnostics signals can be connected in series
- Series connection of safety circuits according to SIL 3/PL e
- LED status indication including operating distance threshold indication for quick and easy adjustment during installation and maintenance
- Short-circuit-proof conventional diagnostics output
- Optional version with magnetic catch for interlocking hinge flaps or small doors even when de-energized
- Highly rugged thanks to the use of tested enclosure materials, resistant to aggressive cleaning products, with a degree of protection of up to IP69.
IP69 does not automatically mean that it can be used outdoors.
The devices must be installed with corresponding protection for this purpose. UV radiation additionally affects the enclosure.
- Fine adjustment thanks to slotted holes
- Little adjustment or maintenance required
- Molded switch allows it to be used as an end stop for small and medium-sized doors

Application

RFID non-contact safety switches are designed for use in safety circuits, and are used to monitor the positions of movable protective devices. They monitor the positions of rotating, laterally sliding or removable protective devices using the coded electronic actuator.

For more information about the protective door monitoring application, [see flyer](#).

Their high degree of protection IP69 and the use of cleaning-product-resistant materials means that these switches are optimized for use under extreme environmental conditions.

Their electronic operating principle makes these switches ideal for metalworking machinery.

The switches have a larger operating distance and switching displacement than mechanical switches, improve the mounting tolerance of the protective door, and offer a wide range of diagnostics options.

The RFID switches can be connected to all standard evaluation units suitable for solid-state inputs and in which the built-in cross-circuit monitoring function can be deactivated, e.g.:

Monitoring units	Type
Relay output	
SIRIUS safety relays	3SK1111-..AB30, 3SK1121
Solid-state outputs	
SIRIUS safety relays	3SK1112, 3SK1122, 3SK2112, 3SK2122
SIMATIC S7-1200	
• F-DI 16 x 24 V DC	6ES7226-6BA32-0XB0, 6AG1226-6BA32-5XB0 (SIPLUS)
SIMATIC S7-1500/ET 200MP	
• F-DI 16 x 24 V DC	6ES7526-1BH00-0AB0, 6AG1526-1BH00-2AB0 (SIPLUS)
SIMATIC ET 200SP	
• F-DI 8 x 24 V DC	6ES7136-6BA00-0CA0, 6AG1136-6BA00-2CA0 (SIPLUS)
• F-PM-E 24 V DC/8 A PPM	6ES7136-6PA00-0BC0, 6AG1136-6PA00-2BC0 (SIPLUS)
SIMATIC ET 200pro	
• 8/16 F-DI 24 V DC	6ES7148-4FA00-0AB0
• 4/8 F-DI 24 V DC + 4 F-DO 24 V DC/2 A	6ES7148-4FC00-0AB0
• F-SWITCH	6ES7148-4FS00-0AB0
SIMATIC ET 200eco PN	
• F-DI 8 x 24 V DC + F-DQ 3 x 24 V DC/2 A	6ES7146-6FF00-0AB0
SIMATIC ET 200AL	
• F-DI 4 x 24 V DC + F-DQ 2 x 24 V DC/2 A	6ES7146-5FF00-0BA0

These safety categories can be achieved in safety circuits:

- SIL 3 according to IEC 62061/IEC 61508
- PL e according to ISO 13849-1

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, [see](#)
www.siemens.com/safety-evaluation.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE63 RFID safety switches

Selection and ordering data

With M12 connection plug, 8-pole

Version		Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
switches 3SE63 ¹⁾						
RFID safety switch						
Actuator 3SE6310 must be ordered separately.						
• Family-coded	Without catch	3SE6315-0BB01		1	1 unit	41K
	With 18 N magnetic catch	3SE6315-1BB01		1	1 unit	41K
• Individually coded,	Without catch	3SE6315-0BB02		1	1 unit	41K
programmable several times	With 18 N magnetic catch	3SE6315-1BB02		1	1 unit	41K
• Individually coded,	Without catch	3SE6315-0BB03		1	1 unit	41K
programmable once	With 18 N magnetic catch	3SE6315-1BB03		1	1 unit	41K
RFID actuator						
• Standard	Without catch	3SE6310-0BC01		1	1 unit	41K
	With 18 N magnetic catch	3SE6310-1BC01		1	1 unit	41K

¹⁾ Not connectable via AS-i modules.

For monitoring unit, see pages 8/1, 9/1 and 11/1.

Accessories

Version	Length	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Optional accessories						
 3SX5600-1G	--	3SX5600-1G		1	1 unit	41K
	One pack (1 unit) contains 8 covers and 4 spacers					
 3SX5601-2GA03	3 m	3SX5601-2GA03		1	1 unit	41K
	5 m	3SX5601-2GA05		1	1 unit	41K
	10 m	3SX5601-2GA10		1	1 unit	41K
	15 m NEW	3SX5601-2GA15		1	1 unit	41K
 6GT2090-0BE00	--	6GT2090-0BE00		1	5 units	572
	Straight, 8-pole					
 3SX5601-3SV00-1AK3	0.5 m	3SX5601-3SV00-1AK3		1	1 unit	41K
	Adapter cable¹⁾ With M12 socket, 8-pole on M12 plug 5-pole, for connection, e.g., to fail-safe field modules of SIMATIC ET 200eco PN and SIMATIC ET 200AL					

¹⁾ Extend if necessary with connecting cable 3SX5601-3SV15, length 1 m, see page 12/46.

²⁾ Suitable for wiring sensors that are connected to all fail-safe block I/O modules in the SIMATIC ET 200eco PN and ET 200AL series. For more information, see page 12/88 onwards.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE64 RFID safety switches with tumbler **NEW**

Overview

More information

Homepage, see www.siemens.com/sirius-position-switches
 Industry Mall, see www.siemens.com/product?3SE
 Equipment Manual, see <https://support.industry.siemens.com/cs/ww/en/view/109808156>
 Operating Instructions, see <https://support.industry.siemens.com/cs/ww/en/view/109811041>



3SE64 RFID non-contact safety switch with actuator (right-hand button with escape release)

3SE64 RFID non-contact safety switches comply with the highest safety requirements and tamper protection according to ISO 14119 for monitoring the positions of movable protective devices.

The operating principle using a rotating shaft and star handle is unique. This allows the protective door to be pulled into its end position with almost zero backlash and simultaneous guard locking, even acting as a door stop. No additional door stop is therefore required.

Integrated latching, adjustable from 25 to 50 N with the aid of a star handle, ensures that the protective door remains closed after the tumbler has been released.

The 3SE64 safety switch consists of a coded RFID switch with an 8-pole M12 connection plug and an RFID actuator. They can be ordered family-coded or individually coded (programmable several times).

The two variants differ in the principle by which the guard locking function is activated:

Version 1	Version 2
The 3SE6415-1.B0. version operates according to the <u>closed-circuit principle</u> and is <u>spring-locked</u>. • PL e applies to the interlocking function, corresponding to SIL 3. • PL d applies to the guard locking function, corresponding to SIL 2. • In this version, the tumbler is monitored and consequently the DC required to achieve SIL 2/PL d is reached. • Used to protect personnel	The 3SE6415-1.AB0. version operates according to the <u>open-circuit principle</u> and is <u>solenoid-locked</u>. • PL e applies to the interlocking function, corresponding to SIL 3. • In this case, the guard locking function does not have a SIL level or PL level. • Used to protect the process

One actuator is available for all versions.

A blocking insert protects operating personnel against inadvertently being closed in during maintenance and repair work.

An escape release allows the hazard zone to be exited from the inside if the protective door has accidentally been closed.

Mounting and maintenance



3SE64 RFID non-contact safety switch with actuators from three directions

- Various options for mounting save on enclosure variants:
 - Mounting of the switch on the right or left side of rotating or sliding doors, simple installation on profile systems
 - Mounting of the actuator from three sides (narrow, front and rear side of the switch), see figure above
- Quick and easy mounting thanks to universal mounting holes
- Little adjustment or maintenance required:
 - Threshold indication by LED display on the switch for quick and easy adjustment during mounting and maintenance
 - Dampers in the actuator allow it to be used as an end stop for small and medium-sized doors

Notes:

- Keep metal parts and cuttings away from the vicinity of the switch
- Minimum distance between two switches 250 mm (depending on the mounting position)

Optional accessories (mounting)

- Mounting plate for doors so that they are flush with the door frame
- Blocking insert for padlocks to prevent the door from being closed
- Triangular key to unlock the escape release
- Protection plate (masking plate) for the RFID actuator when used on glass and plastic doors
- Connecting cables in various lengths

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

NEW 3SE64 RFID safety switches with tumbler

Coding

Family-coded

These safety switches are delivered ready to use, i.e. no programming is necessary.

Individually coded, programmable several times

Programming procedure:

1. Apply operational voltage to safety sensor
2. Move actuator into detection range:
red LED lights up, yellow LED flashes (1 Hz)
3. After 10 s it changes to a shorter flashing frequency (3 Hz).
In this state switch off operational voltage.
4. After the next time the operational voltage is switched on, the actuator is detected again to activate the programmed actuator code. The activated code is thus stored permanently.

The procedure for programming a new actuator can be repeated an unlimited number of times. When a new actuator is programmed the previous code becomes invalid. A protected coding process allows new actuators to be programmed for service purposes.

After this, a ten-minute lockout provides enhanced tamper protection. The green LED flashes until the lockout time has ended and the new actuator has been detected. If the operational voltage is interrupted during this time, the ten-minute guard time is restarted.

Diagnostics

The RFID safety switch indicates its operating state including faults by means of the LED display in the switch and the short-circuit-proof diagnostics output. The signals can then be used for central displays or non-safety-related control tasks.

There are the following diagnostics functions:

- Cross-circuit monitoring
- Open-circuit monitoring
- External voltage monitoring
- Ambient temperature too high
- Wrong or defective actuator
- Operating distance threshold identification with LED display

The signal combination "diagnostics output switched off" and "safety outputs still switched on" can be used to move the machine into a controlled stop position.

Any cross-circuit or a fault that is not currently compromising the safe function of a safety switch results in the disconnection of the safety channels after a 30-minute delay. However, the diagnostics output switches off instantaneously.

LED display



3SE64 RFID safety switch with LED display, auxiliary release and 8-pole M12 plug

Simple diagnostics with three colored LEDs:

- Green = Power
- Yellow = Status
- Red = Fault

Mode of operation of the diagnostics LEDs

The safety switch indicates not only its operating state, but also faults by means of LEDs in three colors located in the yellow cover of the RFID switch.

- The green LED indicates readiness for operation when the control supply voltage is connected.
- The yellow LED indicates that there is an actuator in detection range. If the actuator is in the operating distance threshold, this is indicated by flashing. This flashing can be used to identify a change in the distance between sensor and actuator at an early stage (e.g. as a result of the sagging of a protective door). The installation should be tested before the distance increases further, the safety outputs switch off and the machine stops.
- The red LED indicates the individual causes of the fault by means of defined flashing frequencies.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE64 RFID safety switches with tumbler **NEW**

Benefits

- Maximum or requirements-oriented protection against tampering thanks to RFID technology
- Hygiene-compliant design ideal for food & beverage industries, degree of protection IP69
- Variable options for mounting on rotating or sliding doors, simple installation on profile systems
- Guard locking possible from three sides (three directions of actuation) by means of a star handle
- High actuator tolerances, [see Fig. 1](#):
 - Longitudinal direction ± 3.5 mm
 - Transverse direction ± 2 mm
- Simple adjustment of latching force: By rotating the star handle through 180° , the latching force can be increased from 25 N (position I) to 50 N (position II), [see Fig. 2](#).
- LED display, simple diagnostics with 3-colored LEDs
- Auxiliary release, M12 plug, 8-pole, A-coded, [see LED display on page 12/123](#)
- Actuator can be used for a door stop using the integrated damper
- Controlled shutdown process in the event of a cross-circuit: The controller first receives the fault signal, and is only disconnected after 30 minutes.

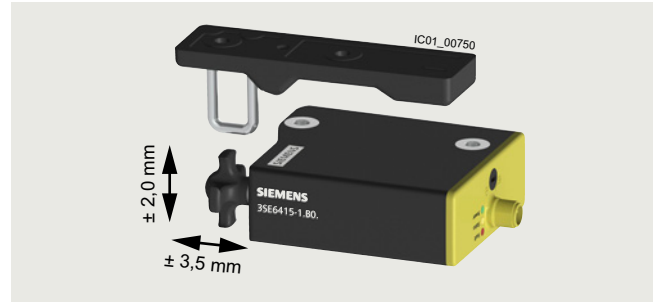


Fig. 1: Actuator tolerance



Fig. 2: Star handle for adjustment of latching force

Application

Whether for grids, covers or doors, rotating, laterally sliding or removable protective devices – safety tumblers ensure that moving guards cannot be opened until dangerous states such as over-travel movements of rollers, chains, shafts, etc. have ended. They are suitable for protecting both the personnel and the process.

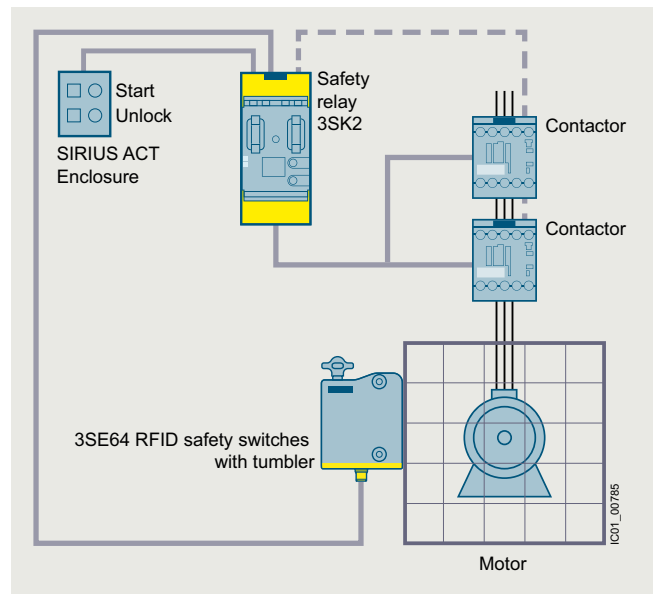
When the protective door is closed and the tumbler locked, the safety outputs are activated.

The actuator design for 3SE64 RFID safety switches with tumbler differs from the 3SE53 mechanical safety switches with tumbler in that it is based on an operating principle involving a rotating shaft and a star handle. The advantage is that, during closing, the protective door is pulled into its end position and kept closed with almost zero backlash. The tumbler can be approached from three sides, making the switch universally deployable.

Thanks to the high degree of protection IP69 and hygienic design, the 3SE64 RFID safety switch is preferred for hygiene-sensitive areas – for example in food production or the packaging and pharmaceutical industry.

The switches have a larger operating distance and switching displacement than mechanical switches, improve the mounting tolerance of the protective door, and offer a wide range of diagnostics options.

Application example



Protective door monitoring with tumbler using 3SE64 RFID safety switch up to SIL 3 or PL e using a 3SK2 safety relay

For a detailed description of this example of how 3SE64 RFID safety switches with tumblers can achieve different SIL/PL levels, [see https://support.industry.siemens.com/cs/ww/en/view/109811081](https://support.industry.siemens.com/cs/ww/en/view/109811081).

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

NEW 3SE64 RFID safety switches with tumbler

The RFID switches can be connected to all standard evaluation units suitable for solid-state inputs and in which the built-in cross-circuit monitoring function can be deactivated, e.g.:

Monitoring units	Type Version	SIPLUS version	Safety assessment of the Interlocking function		Guard locking function
Solid-state outputs					
SIRIUS safety relays					
• 3SK2	3SK2112, 3SK2122	--	SIL 3/PL e	SIL 2/PL d	
• 3SK1	3SK1111-.AB30, 3SK1112, 3SK112., 3SK1220	--	SIL 3/PL e	--	
SIMATIC S7-1200					
• F-DI 16 x 24 V DC	6ES7226-6BA32-0XB0	6AG1226-6BA32-5XB0	SIL 3/PL e	--	
SIMATIC S7-1500/ET 200MP					
• F-DI 16 x 24 V DC	6ES7526-1BH00-0AB0	6AG1526-1BH00-2AB0	SIL 3/PL e	--	
• F-DQ 8 x 24 V DC/2A PPM	6ES7526-2BF00-0AB0	6AG1526-2BF00-2AB0	--	SIL 2/PL d	
SIMATIC ET 200SP					
• F-DI 8 x 24 V DC	6ES7136-6BA00-0CA0	6AG1136-6BA00-2CA0	SIL 3/PL e	--	
• F-DQ 8 x 24 V DC/0.5A PP	6ES7136-6DC00-0CA0	6AG1136-6DC00-2CA0	--	SIL 2/PL d	
• F-PM-E 24 V DC/8A	6ES7136-6PA00-0BC0	6AG1136-6PA00-2BC0	SIL 3/PL e	--	
SIMATIC ET 200pro					
• F-DI 8/16 24 V DC	6ES7148-4FA00-0AB0	--	SIL 3/PL e	--	
• F-DI 4/8 24 V DC + 4 F-DQ 24 V DC/2A PM	6ES7148-4FC00-0AB0	--	SIL 3/PL e	--	
SIMATIC ET 200eco PN					
• F-DI 8 x 24 V DC + F-DQ 3 x 24 V DC/2A PM	6ES7146-6FF00-0AB0	--	SIL 3/PL e	--	
SIMATIC ET 200AL					
• F-DI 4 x 24 V DC + F-DQ 2 x 24 V DC/2A PM	6ES7146-5FF00-0BA0	--	SIL 3/PL e	--	

These safety categories can be achieved in safety circuits:

- SIL 3 according to IEC 62061/IEC 61508
- PL e according to ISO 13849-1

Note:

In order to achieve the maximum achievable safety level (SIL 2 or PL d) of the guard locking function of the 3SE64 RFID safety switch, fail-safe PP-switching outputs of the safety relay or fail-safe controller must be used. When the tumbler of the 3SE64 is connected to standard SIMATIC output modules (DQ) and to fail-safe SIMATIC output modules with the PM switching principle (F-DQ PM-switching), no safety level (SIL or PL) can be reached. In this case, the guard locking function of the 3SE64 can only be used to protect the process.

Evaluation of safety functions

Safety Evaluation in the TIA Selection Tool

The safety evaluation for the standards IEC 62061 and ISO 13849-1 is performed quickly and easily, directly in the TIA Selection Tool. In addition to the fast and safe calculation of machine safety functions – from the definition of the system structure to the selection of components – this enables shared data management during all project phases. Take the next step in the digital design of machinery and equipment with Safety Evaluation in the TIA Selection Tool.

In addition, the functionalities of the proven Safety Evaluation Tool are still available. It determines the achieved safety integrity (SIL/PL) step-by-step. You receive the results as a standards-compliant report that can be integrated in the documentation as proof of safety.

For more information, see www.siemens.com/safety-evaluation.

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

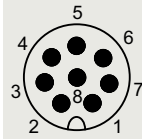
3SE64 RFID safety switches with tumbler **NEW**

Technical specifications

Type		3SE6415	
General data			
Standards		IEC 60947-5-3, IEC 62061/IEC 61508, ISO 14119, ISO 13849-1	
Enclosure material		Plastic, glass-fiber reinforced thermoplastic, self-extinguishing	
Ambient temperature			
• During operation	°C	0 ... +60	
• During storage, transport	°C	-10 ... +90	
Shock resistance		30 g/11 ms	
Vibration resistance		10 ... 150 Hz/ amplitude 0.35 mm	
Operating principle		RFID	
Coding level according to ISO 14119			
• Individually coded, programmable several times		High	
• Family-coded		Low	
Series connection		Number of devices unlimited, ensure external line protection	
Length of sensor chain		Max. 200 m (cable length and cable cross-section change the voltage drop in relation to the output current)	
Mechanical data			
Locking force F _{Zh}		N	1 150
Latching force		N	25 or 50
Mechanical endurance		Operat- ing cycles	≥ 1 000 000
Connection type		Integrated socket M12, 8-pole, A-coded	
Degree of protection		IP66, IP67, IP69 according to IEC 60529	
Safety assessment of the interlocking function			
Standards		ISO 13489-1, IEC 62061/IEC 61508	
PL		Up to e	
Category		Up to 4	
PFHD at high demand rate		5.2 x 10 ⁻¹⁰ /h	
PFD _{avg} at low demand rate		4.5 x 10 ⁻⁵	
SIL		Suitable for applications in SIL 3	
Mission time		Years	20
Safety assessment of the guard locking function			
Standards		ISO 13489-1, IEC 62061/IEC 61508	
PL		Up to d	
Category		Up to 2	
PFHD at high demand rate		2.0 x 10 ⁻⁹ /h	
PFD _{avg} at low demand rate		4.5 x 10 ⁻⁴	
SIL		Suitable for applications in SIL 2	
Mission time		Years	20

Pin assignment

M12 device plugs, 8-pole



1	WH = White	→	A1
2	BN = Brown	→	X1
3	GN = Green	→	A2
4	YE = Yellow	→	OSSD1
5	GY = Grey	→	OUT
6	PK = Pink	→	X2
7	BU = Blue	→	OSSD2
8	RD = Red	→	IN

IC03_31010

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

NEW 3SE64 RFID safety switches with tumbler

Selection and ordering data

Plastic enclosures · With M12 connection plug, 8-pole · Locking force 1 150 N

Version	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
3SE64 RFID safety systems switches with tumbler ¹⁾					
 3SE6415-1.B0.	Three LEDs for displaying the operating states (24 V DC), three directions of actuation, latching force adjustable with star handle: 25 N or 50 N, actuator 3SE6410 must be ordered separately.				
	- Closed-circuit principle with auxiliary release (tumbler monitored) - Family-coded - Individually coded, programmable several times	3SE6415-1BB01 3SE6415-1BB02	1 1	1 unit 1 unit	41K 41K
	- Open-circuit principle with auxiliary release (actuator monitored) - Family-coded - Individually coded, programmable several times	3SE6415-1AB01 3SE6415-1AB02	1 1	1 unit 1 unit	41K 41K
	- Closed-circuit principle with escape release (tumbler monitored), lever handle included as separate item, can be mounted on either side - Family-coded	3SE6415-1CB01	1	1 unit	41K
RFID actuator					
 3SE6410-1AC01	With stainless steel bracket, can be used as door stop	3SE6410-1AC01	1	1 unit	41K

¹⁾ Not connectable via AS-i modules.

 Monitoring units, [see from pages 8/1, 9/1 and 11/1 onwards](#).

Position and safety switches

SIRIUS 3SE6 non-contact safety switches

3SE64 RFID safety switches with tumbler **NEW**

Accessories

	Version	Length	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
		m					
Optional accessories							
 3SX5600-1F	Mounting plate	--	3SX5600-1F		1	1 unit	41K
	For doors so that they are flush with the door frame To compensate for the height between the safety switch and the RFID actuator						
	Blocking inserts	--	3SX5600-2F		1	1 unit	41K
	This is inserted into the actuator bracket to prevent the door from closing. For 1 to 6 padlocks (not included in the scope of supply), shackle diameter max. 6 mm						
 3SX5600-2F	Triangular keys	--	3SX5600-3F		1	1 unit	41K
	For safety switches 3SE6415-1CB01 To unlock the escape release when the red lever is missing.						
 3SX5600-3F	Protection plate (masking plate)	--	3SX5600-4F		1	1 unit	41K
	For the RFID actuator 3SE6410-1AC01 For use on glass and plastic doors on machinery, Material: Aluminum, Aluminum thread heads with M6-Thread including rubber washers						
 3SX5600-4F	Connecting cables	3	3SX5601-2GA03		1	1 unit	41K
	With M12 socket, 8-pole, straight, open end, rated voltage 30 V, rated current 2 A	5	3SX5601-2GA05		1	1 unit	41K
		10	3SX5601-2GA10		1	1 unit	41K
		15	3SX5601-2GA15		1	1 unit	41K
 3SX5601-2GA03	M12 plugs, 5-pole	--	3RK1902-4BA00-5AA0		1	1 unit	42D
	• Straight, separate item	--	3RK1902-4DA00-5AA0		1	1 unit	42D
 3RK1902-4BA00-5AA0	M12 plug, 8-pole	--	6GT2090-0BE00		1	5 units	572
	Straight						
 6GT2090-0BE00	Connecting cable	1	3SX5601-3SV18		1	1 unit	41K
	With M12 socket, 8-pole and M12 plug, 8-pole						
 3SX5601-3SV18							