

SIEMENS



Transformers, Power Supply Units and Socket Outlets

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Transformers, Power Supply Units and Socket Outlets



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Characteristic
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FAQ
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Product note
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Technical data

Transformers, Power Supply Units and Socket Outlets

Introduction

Overview

Devices	Page	Application	Standards	Used in		
				Non-residential buildings	Residential buildings	Industry
 4AC3 bell transformers	3	Power supply up to 18 VA as safety extra-low voltage (SELV) in residential buildings for the supply of gongs, buzzers, bells, door openers and remote control switches	EN 61558-1 EN 61558-2-8	✓	✓	--
 4AC3 safety transformers	5	Power supply up to 63 VA as safety extra-low voltage (SELV) for the supply of control circuits, switching relays and Insta contactors	EN 61558-1 EN 61558-2-6	✓	--	✓
 4AC2 power supply units	7	Direct voltage power supply up to 24 V DC and 2 A as safety extra-low voltage (SELV) for the supply of gongs, buzzers, bells, door openers, switching relays and Insta contactors	EN 61558-2-6	✓	✓	✓
 5TE6 REG socket outlets	9	For power supply during maintenance in distribution boards in DIN VDE, CEE 7, CEI 23-50 and UL 489 versions	DIN VDE 0620-1, CEE 7 standard sheet V, CEI 23-50, UL 498	✓	✓	✓

Transformers, Power Supply Units and Socket Outlets

4AC3 bell transformers

Overview

A typical application for these bell transformers is short-time use, as occurs with bells, gongs, door openers or remote control switches in residential buildings.

Siemens bell transformers are protected against short-circuit or moderate overload by a PTC resistor.

After a short circuit, the primary current must be briefly disconnected from the mains before restarting.

Higher output voltages will occur in the event of low-load or no-load operation.

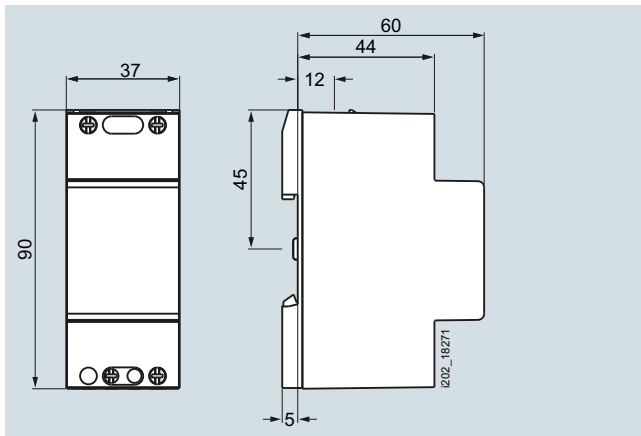
Technical specifications

		4AC3208-0	4AC3208-1	4AC3214-0	4AC3218-0
Standards		EN 61558-1:2005, EN 61558-2-8:2010			
Rated operational power P_s	VA	8	8	14	18
Rated operational voltage U_e	V AC	230			
Operating range at 50 Hz	$\times U_e$	1.04			
Rated frequency	Hz	50			
Rated secondary voltage U_{sec}					
	V AC	--	--	--	4
	V AC	8	8	8	8
	V AC	--	12	12	--
	V AC	--	--	24	--
Rated secondary current I_{sec}					
• At 4 V	A AC	--	--	--	2.0
• At 8 V	A AC	1.0	1.0	2.0	2.0
• At 12 V	A AC	--	0.6	1.3	1.5
• At 24 V	A AC	--	--	0.6	--
Rated power dissipation P_v					
• In no-load operation	W	1.2	1.2	1.3	1.3
• At a rated voltage of 4 V	W	--	--	--	5.5
• At a rated voltage of 8 V	W	5.7	5.7	10.5	8.1
• At a rated voltage of 12 V	W	--	3.8	7.4	8.4
• At a rated voltage of 24 V	W	--	--	4.2	--
Safe separation					
• Creepage distances and clearances	mm	> 6			
Insulation class		E			
Test voltage , 50 Hz, 1 second					
• Primary against secondary winding	kV	4			
Conductor cross-sections					
• Rigid	mm ²	1 x 4 or 2 x 2.5			
• Flexible, with end sleeve	mm ²	1 x 2.5 or 2 x 1.5			
Permissible ambient temperature	°C	40	35	40	40
Permissible humidity	%	91			
Degree of protection	Acc. to EN 60629	IP20			
Safety class	Acc. to EN 61140 (VDE 0140-1)	II			

Transformers, Power Supply Units and Socket Outlets

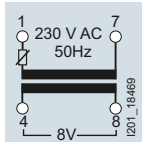
4AC3 bell transformers

Dimensional drawings

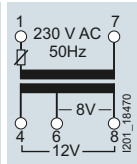


4AC32

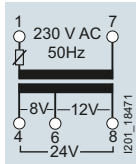
Circuit diagrams



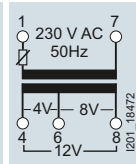
4AC3208-0



4AC3208-1



4AC3214-0



4AC3218-0

Transformers, Power Supply Units and Socket Outlets

4AC3 safety transformers

Overview

These transformers up to 63 VA provide a safety extra-low voltage for supplying control circuits, switching relays or Insta contactors in continuous operation as alternating voltage power supply for 8 V, 12 V, 16 V, 24 V and 32 V AC.

Higher output voltages will occur in the event of low-load or no-load operation. Siemens safety transformers are protected against short circuit or moderate overload by a PTC resistor. After a short circuit, the primary current must be briefly disconnected from the mains before restarting.

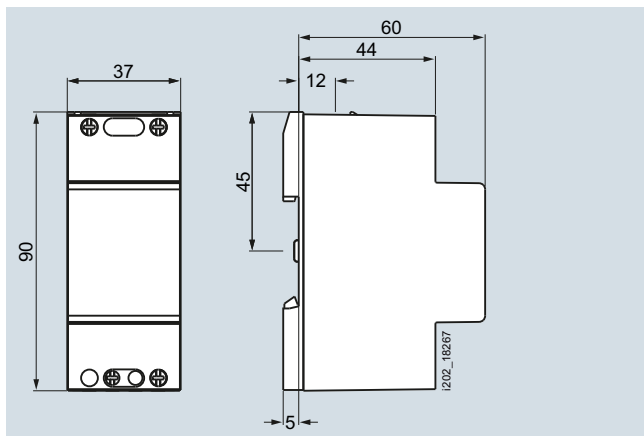
Technical specifications

		4AC3716-0	4AC3724-0	4AC3740-0	4AC3740-1	4AC3763-0
Standards		EN 61558-1:2005, EN 61558-2-6:2009				
Rated operational power P_s	VA	16	24	40	40	63
Rated operational voltage U_e	V AC	230				
Operating range at 50 Hz	$\times U_e$	1.04				
Rated frequency	Hz	50				
Rated secondary voltage U_{sec}						
	V AC	8	8	--	--	--
	V AC	--	--	12	12	2 × 12
	V AC	--	12	--	--	--
	V AC	--	--	--	16	--
	V AC	--	--	24	24	24
	V AC	--	--	--	32	--
Rated secondary current I_{sec}						
• At 8 V	A AC	2.0	2.0	--	--	--
• At 12 V	A AC	--	2.0	3.3	3.3	5.2
• At 16 V	A AC	--	--	--	2.5	--
• At 24 V	A AC	--	--	1.6	1.6	2.6
• At 32 V	A AC	--	--	--	1.2	--
Rated power dissipation P_V						
• In no-load operation	W	1.1	1.1	3.5	3.9	3.9
• At a rated voltage of 8 V	W	6.8	4.6	--	--	--
• At a rated voltage of 12 V	W	--	7.6	7.1	7.5	13.2
• At a rated voltage of 16 V	W	--	--	--	7.7	--
• At a rated voltage of 24 V	W	--	--	7.7	8.1	13.5
• At a rated voltage of 32 V	W	--	--	--	7.6	--
Safe separation						
• Creepage distances and clearances	mm	> 6				
Insulation class		E F				
Test voltage, 50 Hz, 1 second						
• Primary against secondary winding	kV	4				
Conductor cross-sections						
• Rigid	mm ²	1 × 4 or 2 × 2.5				
• Flexible, with end sleeve	mm ²	1 × 2.5 or 2 × 1.5				
Permissible ambient temperature	°C	25				
Permissible humidity	%	91				
Degree of protection	Acc. to EN 60529	IP20				
Safety class	Acc. to EN 61140 (VDE 0140-1)	II				

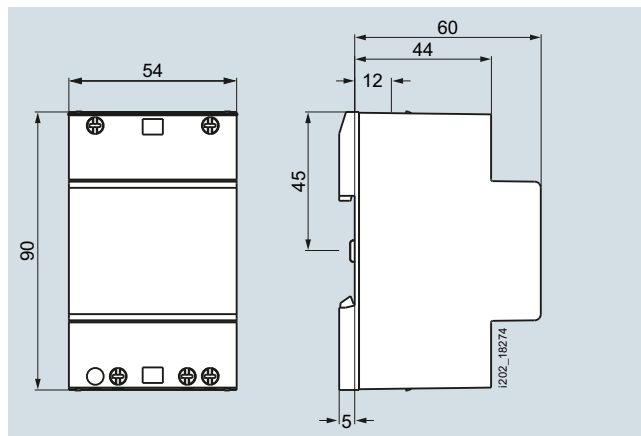
Transformers, Power Supply Units and Socket Outlets

4AC3 safety transformers

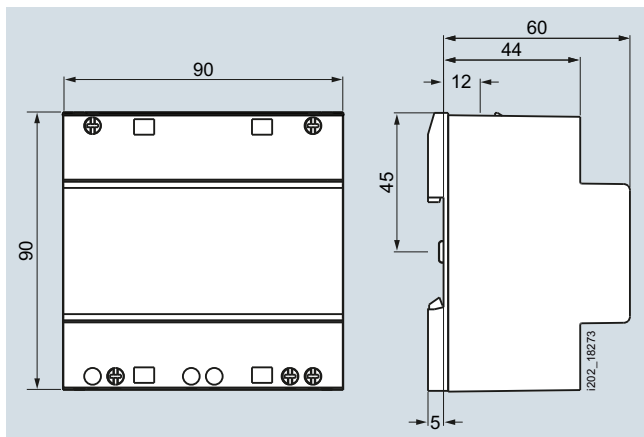
Dimensional drawings



4AC3716-0

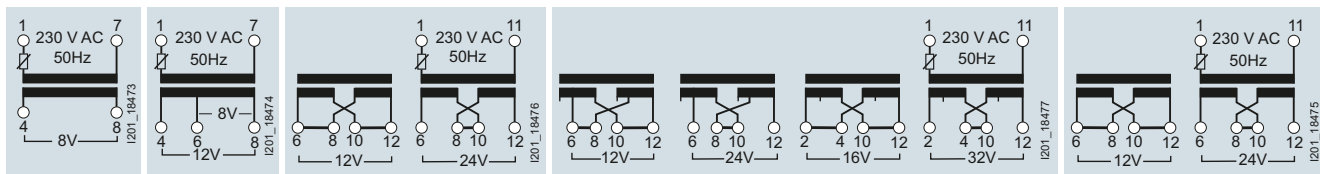


4AC3724-0



4AC3740-1
4AC3740-0
4AC3763-0

Circuit diagrams



4AC3716-0

4AC3724-0

4AC3740-0

4AC3740-1

4AC3763-0

Transformers, Power Supply Units and Socket Outlets

4AC2 power supply units

Overview

The electronic power supply unit provides a 24 V DC supply to systems with an operational voltage of 85 to 265 V AC or 85 to 300 V DC. The device operates in the lower class for minimum power supply with a safety extra-low voltage (SELV).

The electronic power supply unit is suitable for supplying the 5TT71 GSM alarm modules within a supply voltage range of 150 to 230 V AC.

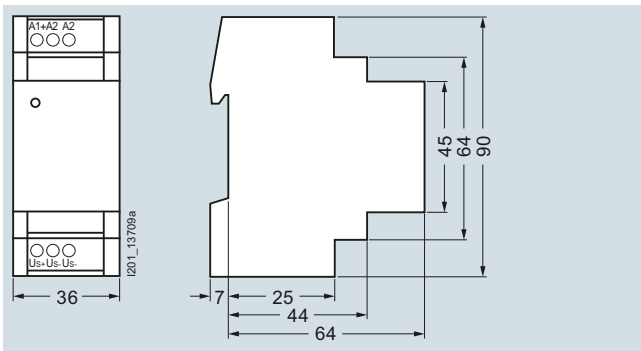
Technical specifications

4AC2402			
Standards		EN 60068-2, EN 61558-1, EN 61000-4	
Approvals		--	
Rated operational power P_s	W	8.4	
Rated operational voltage U_e	V AC	85 ... 265	
	V DC	85 ... 300	
Permissible operational voltage For the 5TT71 GSM alarm modules		V AC/DC	150 ... 265
Primary operating range	At 50/60 Hz	$\times U_e$	--
Rated frequency		Hz	50/60
Operating frequency range		Hz	--
Rated secondary voltage U_{sec}		V DC	$24 \pm 5\%$
Rated secondary current I_{sec}		A DC	0.35
Current limitation		Electronic overload protection	
Residual ripple		mV	< 100
Rated power dissipation P_v	In no-load operation	W	--
	At rated load	W	--
Hum-free	Core molded		--
Safe separation	Creepage distances and clearances	mm	> 5.5
Insulation class		--	
Test voltage Primary against secondary winding		50 Hz, 1 min	kV
Insulation resistance			kV
Rated impulse withstand voltage/degree of pollution		Acc. to IEC 60664-1	6 kV/2
Static discharge	Acc. to IEC/EN 61000-4-2	kV	8
RF irradiation	Acc. to IEC/EN 61000-4-3	V/m	10
Transient overvoltage (burst)	Acc. to IEC/EN 61000-4-4	kV	4
Transient overvoltage (surge) • Supply lines A1, A2 • A1/A2 and ground	Acc. to IEC/EN 61000-4-5	kV	1
		kV	2
RF, conducted disturbance	Acc. to IEC/EN 61000-4-6	V	10
Interference suppression to lower limit class	Acc. to EN 61000-6-3	Complied with	
Terminals • Screw (slotted-head) • $\pm$ screw (Pozidriv)		M2.5 --	
Conductor cross-sections • Rigid • Flexible, with end sleeve, min.		mm ² mm ²	0.5 ... 2.5 0.5 ... 1.5
Permissible ambient temperature		°C	-20 ... +60
Permissible humidity		%	
Resistance to climate	Acc. to IEC/EN 60068-1	20/045/04	
Resistance to vibrations Frequency 10 ... 55 Hz	Acc. to IEC/EN 60068-2-6	mm	0.35 amplitude
Degree of protection	Acc. to EN 60529	IP20, with connected conductors	
Safety class	Acc. to EN 61140	II	

Transformers, Power Supply Units and Socket Outlets

4AC2 power supply units

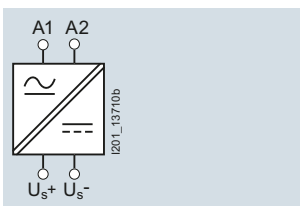
Dimensional drawings



4AC2402

Circuit diagrams

Graphical symbols



4AC2402

Transformers, Power Supply Units and Socket Outlets

5TE6 REG socket outlets

Overview

The socket outlets for mounting in distribution boards to DIN 43880 and on standard mounting rails to DIN 60715 have since become standard in modern switchgear assemblies/distribution boards. The socket outlet range complies with a number of different standards and is available according to the standards of the following countries: VDE for Germany, CEE7 for Belgium/France, CEI for Italy and UL for USA.

In distribution boards with 55 mm mounting depth the socket outlet can only be used without the hinged lid. The lids can be retrofitted on all devices. In system components where equipment is still live even after the main switch has been disconnected, this must be indicated according to DIN EN 50110-1 (VDE 0105-1) and IEC/EN 60204-1/VDE 0113-1. Yellow socket outlets are used for these applications.

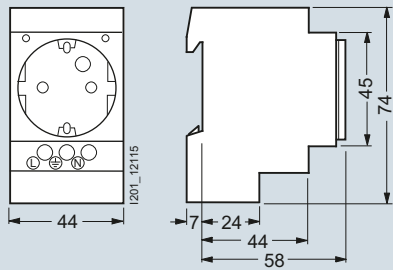
Technical specifications

		5TE6800	5TE6801	5TE6810	5TE6802	5TE6803	5TE6804
Standards		VDE 0620-1	VDE 0620-1	VDE 0620-1	CEI 23-50	CEE 7 standard sheet V	UL 498
Approvals		VDE 0620-1			--		UL File No. E258598/CSA C22.2 No. 182.3M
Rated operational voltage U_e	V AC	230					125
Rated operational current I_e	A AC	16					15
Terminals $\pm$screw (Pozidriv)							
Terminal tightening torque, max.	N	1.2					
Stripped length	mm	10					
Conductor cross-sections							
• Rigid	mm ²	1.5 ... 6					
• Flexible, with end sleeve	mm ²	0.5 ... 4					
• Rigid	AWG	10 ... 14					
• Flexible	AWG	14					
Permissible ambient temperature	°C	-10 ... +55					
Degree of protection							
Acc. to EN 60529		IP20, with connected conductors					
Mounting position		Without cover: any, with cover: vertical or horizontal					

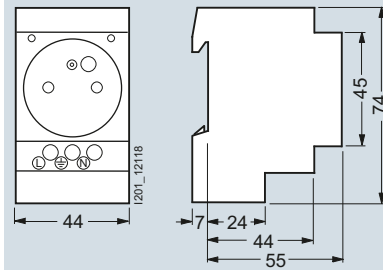
Transformers, Power Supply Units and Socket Outlets

5TE6 REG socket outlets

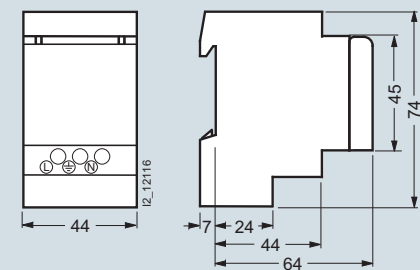
Dimensional drawings



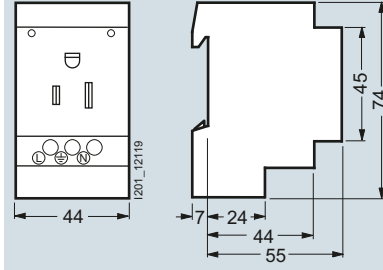
5TE6800
5TE6810



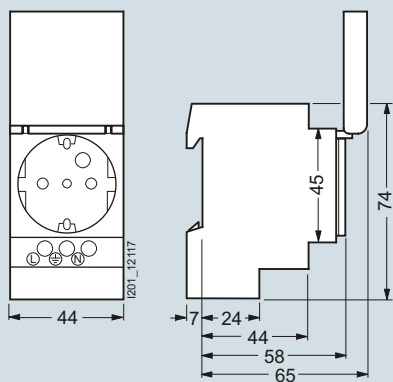
5TE6803



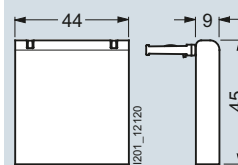
5TE6801



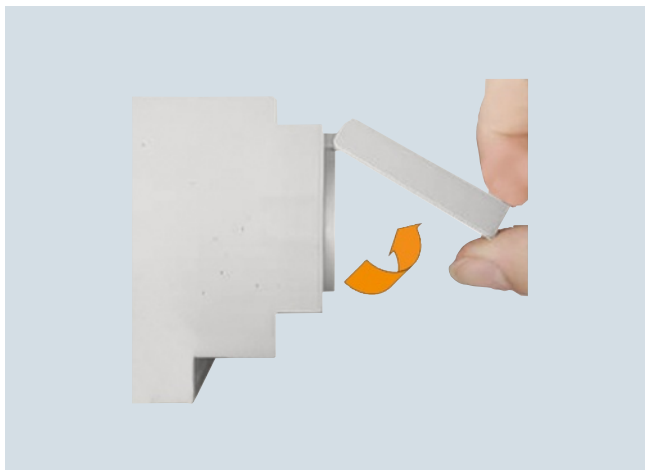
5TE6804



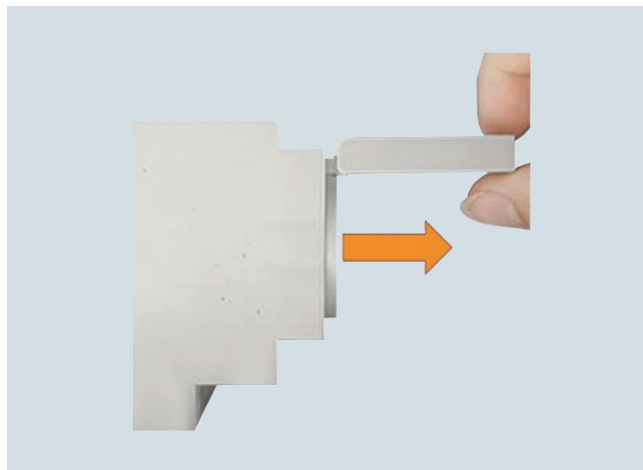
5TE6802



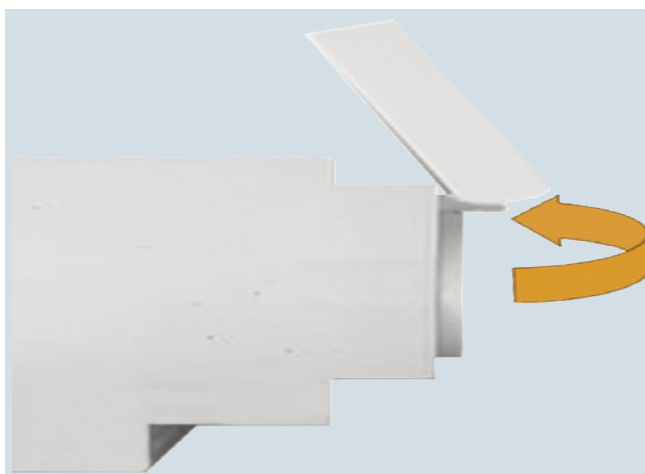
5TE9120

More information***Hinged lid for simple application***

The hinged lid can be opened at an angle greater than 180 degrees.



By pulling on the hinges, the covers stay open, which facilitates plugging in. The hinged lids can be retrofitted on all versions.



In order to make sure that it is possible to work on the distribution board in the event of a power failure, we recommend that the infeed socket outlet is fed using a short-circuit current proof cable installation and a separate fuse. The yellow socket outlet must be used for this purpose.

Transformers, Power Supply Units and Socket Outlets

Notes

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