

Emergency Luminaire with LED

Series EXLUX 6409/1

STAHL

www.stahl.de



18327E00

- > Emergency luminaire for wall, ceiling, pendant or pole installation
- > Latest LED technology with a high luminous efficacy and a long service life
- > Central locking system
- > Weekly functional test
- > Annually rated operating time test

E2



The lights of the Series **EXLUX 6409** can be used as emergency lighting

	ATEX / IECEx					
Zone	0	1	2	20	21	22
For use in:			x		x	x

Explosion Protection

Global (IECEx)

Gas and dust

IECEx IBE 16.0047
Ex dc ec IIC T4 Gc
Ex tc IIIC T100°C Dc
Ex tb op is IIIC T100°C Db

Europe (ATEX)

Gas and dust

IBExU 16 ATEX 1233
II 3 G Ex dc ec IIC T4 Gc
II 3 D Ex tc IIIC T100°C Dc
II 2 D Ex tb op is IIIC T100°C Db

Certifications and certificates

Certificates

IECEx, ATEX

WebCode 6409B

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Selection Table

Version	Colour temperature	CRI	Power consumption	Cable entry	Order number	Art. no.	Weight
							kg
Emergency Luminaire with LED Series 6409/1	5,000 K	≥ 80	28 W	3x M25 Plastic	6409/1282-771-7681-131-00	263323	6.500
				3x M20 Metal	6409/1282-771-7681-232-00	263325	6.500
			52 W	3x M25 Plastic	6409/1482-771-7681-131-00	263333	9.400
				3x M20 Metal	6409/1482-771-7681-232-00	263335	9.400
	5,700 K	≥ 70	28 W	3x M25 Plastic	6409/1282-771-7681-131-01	263328	6.500
				3x M20 Metal	6409/1282-771-7681-232-01	263331	6.500
			52 W	3x M25 Plastic	6409/1482-771-7681-131-01	263337	9.400
				3x M20 Metal	6409/1482-771-7681-232-01	263339	9.400

Order Number Supplement

Through wiring	without	6.09/.....0.....	
	with 6 conductors	6.09/.....6.....	
Connection terminal	Screw-type terminal type STAHL 1.5 ... 6 mm ²	6.09/.....2.....	
	Spring clamp terminal type WAGO 0.75 ... 4 mm ²	6.09/.....1.....	
Cable glands	M25 hole	6.09/.....1.....	
	M20 hole	6.09/.....2.....	
	1/2" hole	6.09/.....3.....	
	3/4" hole	6.09/.....4.....	
	Number of holes = 1	6.09/.....1...	
	Number of holes = 2	6.09/.....2...	
	Number of holes = 3	6.09/.....3...	
	Number of holes = 4	6.09/.....4...	
	Insert made of plastic	6.09/.....1...	
	Insert made of stainless steel	6.09/.....2...	
	Insert made of stainless steel (seawater resistant)	6.09/.....5...	
Rated operating time	1.5 hours	6.09/.....77.....	
	3.0 hours	6.09/.....87.....	
	adjustable (1.5 h or 3.0 h)	6.09/.....2.....	
Rated operating time test	with	6.09/.....7.....	
	without	6.09/.....28.....	

Note

The light fittings are delivered without mounting material.
These accessories must be ordered separately!

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Technical Data

Electrical data

Control gear

AC: 110 V ... 240 V $\pm 10\%$; 50 ... 60 Hz

6409/12...-1...-...-...-... 6409/14...-1...-...-...-...

Power consumption [W] 28 52

Voltage [V] 230 110 230 110

Frequency [Hz] 50 60 50 60

Power factor ≥ 0.90 ≥ 0.98 ≥ 0.95 ≥ 0.99

THD [%] ≤ 12.5 ≤ 12.5 ≤ 7 ≤ 8

Typ. rated operational current [A]

LEDs off, battery conservation mode 0.05 0.05 0.05 0.05

LEDs on, battery conservation mode 0.14 0.26 0.24 0.48

LEDs off, battery charging mode 0.06 0.08 0.06 0.08

LEDs on, battery charging mode 0.14 0.28 0.24 0.50

Inrush current

$I_{peak} = 63\text{ A}$; $\Delta t = 115\text{ }\mu\text{s}$

maximum number of luminaires per miniature circuit breaker at 230 V:

Type	10 A	16 A	20 A	25 A
B	7	12	15	18
C	12	20	25	31
K	25	40	50	62

Luminous characteristics

	6409/12...-1...-...-...-00	6409/14...-1...-...-...-00	6409/12...-1...-...-...-01	6409/14...-1...-...-...-01
Power consumption [W]	28	52	28	52
Colour rendering [CRI]	≥ 80	≥ 80	≥ 70	≥ 70
Colour temperature [K]	5,000	5,000	5,700	5,700
without diffuser				
Luminous flux [lm]	typ. 3,100	typ. 6,200	typ. 3,400	typ. 6,800
Luminaire efficacy [lm/W]	typ. 111	typ. 119	typ. 121	typ. 131
with diffuser				
Luminous flux [lm]	typ. 2,550	typ. 5,100	typ. 2,800	typ. 5,600
Luminaire efficacy [lm/W]	typ. 91	typ. 98	typ. 100	typ. 108

Values apply to $T_a = +25\text{ }^\circ\text{C}$.

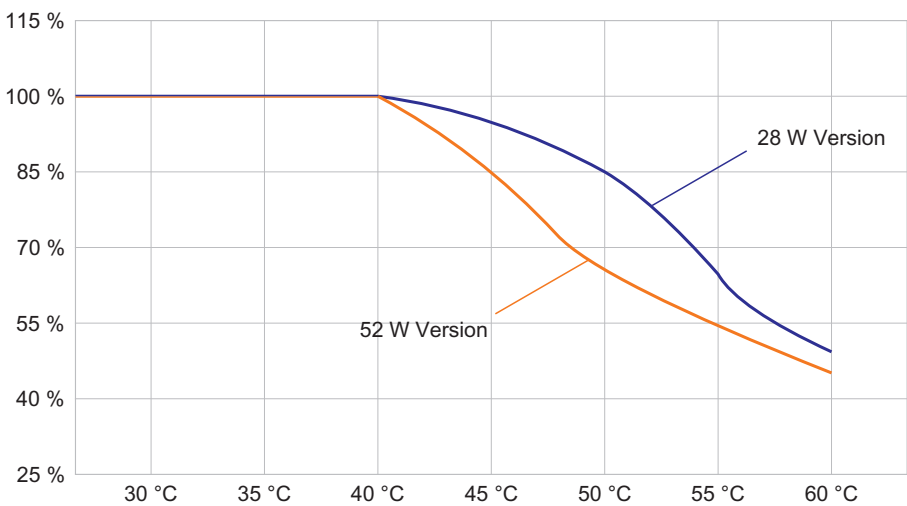
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Technical Data

Luminous characteristics

Luminous flux decline vs. ambient temperature:



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Service life

Service life

	$T_a \leq 25\text{ }^{\circ}\text{C}$	$T_a \leq 45\text{ }^{\circ}\text{C}$	$T_a \leq 60\text{ }^{\circ}\text{C}$
L70B10C10	100,000 h	90,000 h	50,000 h

LxBxCz

At the end of the Service Life:

- Luminous flux decrease to "x" percent
- max. "y" percent of all the light fittings fall below "x"
- max. "z" percent of all the light fittings break down completely

Ambient conditions

Ambient temperature

- 30 ... + 60 °C (1, 2)	without through wiring
- 30 ... + 55 °C (1, 2)	with through wiring; $I_N \leq 10\text{ A}$
- 30 ... + 50 °C (1)	with through wiring; $I_N \leq 16\text{ A}$

(1) Rated operating time during emergency light operation

is guarenteed within an ambient temperature range of -5 °C ... 50 °C. This also applies to charging and discharging of the battery. The rated operating time might be reduced if used outside this temperature range.

(2)Battery service life

is guarenteed within an ambient temperature range of -30 °C ... 50 °C according to IEC/EN 60598-2-22.

Mechanical data

Degree of protection	IP66 / IP67 (IEC 60598)
Protection class	I (with internal PE connection)
Impact strength (IK code)	IK10 (IEC 62262)
Material	
Enclosure	
Enclosure	Polyester resin, glass fibre-reinforced
Colour	colour grey, similar to RAL 7035
Translucent cover	Polycarbonate
Seal	Silicone foam gasket in the lamp cover
Luminaire locking	Central locking which can be opened/closed using a socket key M8 / wrench size 13, hinged lamp cover

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Technical Data

Mounting / Installation

Cable glands

Standard luminaire

Plastic: 2 x M25 x 1.5 cable entries 8161 and
2 x M25 x 1.5 stopping plugs 8290 (enclosed)

Metal: 2 x metal plates M20 x 1.5 connected by means of PE for metal cable entries
Attention: cable entries must be ordered separately

Special: max. 4 drilled holes for M20, M25, NPSM 1/2"
max. 2 drilled holes for NPT 3/4"

Metal cable glands: M20 x 1.5, M25 x 1.5; earthing of the metal cable entries by means of metal plates

Connection

Standard: Spring clamp terminals
6-pole: L1, L2, L3, L', N, PE
Clamping range: 1 x 0.75 ... 4 mm² (solid / finely stranded)
(2 free clamping units per pole available)

Special: Terminal block with covering
6-pole: L1, L2, L3, L', N, PE
Clamping range: 2 x 1.5 ... 6 mm² (solid); 2 x 1.5 ... 4 mm² (finely and extra finely stranded)

Through wiring

Through wiring **Standard luminaire** Luminaires are equipped with internal through wiring.
Ingoing and outgoing leads can be connected to the opposite sides.
Terminals: see techn. data
Wiring cross section: 2.5 mm² for max. 16 A.

without **Optional**
On the connection side, there are 2 cable entries M25 x 1.5 for ingoing and outgoing wiring of the connection line (ingoing and outgoing leads on one side).

Assembly

Standard luminaire

Standard: 2 x M8 insert nuts in the enclosure

Special: Mounting grooves in the enclosure for use of fastening and ceiling rails for variable luminaire mounting (variable mounting distances for luminaires L = 700 mm: 320 ... 480 mm; L = 1310 mm; 670 ... 930 mm)

Control gear

Emergency light mode

Rated operating time

In case of power failure the LEDs are supplied by the battery
at optimal ambient temperature of the battery:

Battery capacity	Rated operating time	Emergency light output	
		28 W	52 W
7 Ah	1.5 h	58 %	31 %
	3.0 h	30 %	21 %

Switchover voltage

from mains to battery operation for $U < 0.83 \times U_N$
from battery to mains operation for $U > 0.88 \times U_N$

Battery set

Version

Gas-tight NiCd battery

Operating voltage

6 V

Capacity

7 Ah

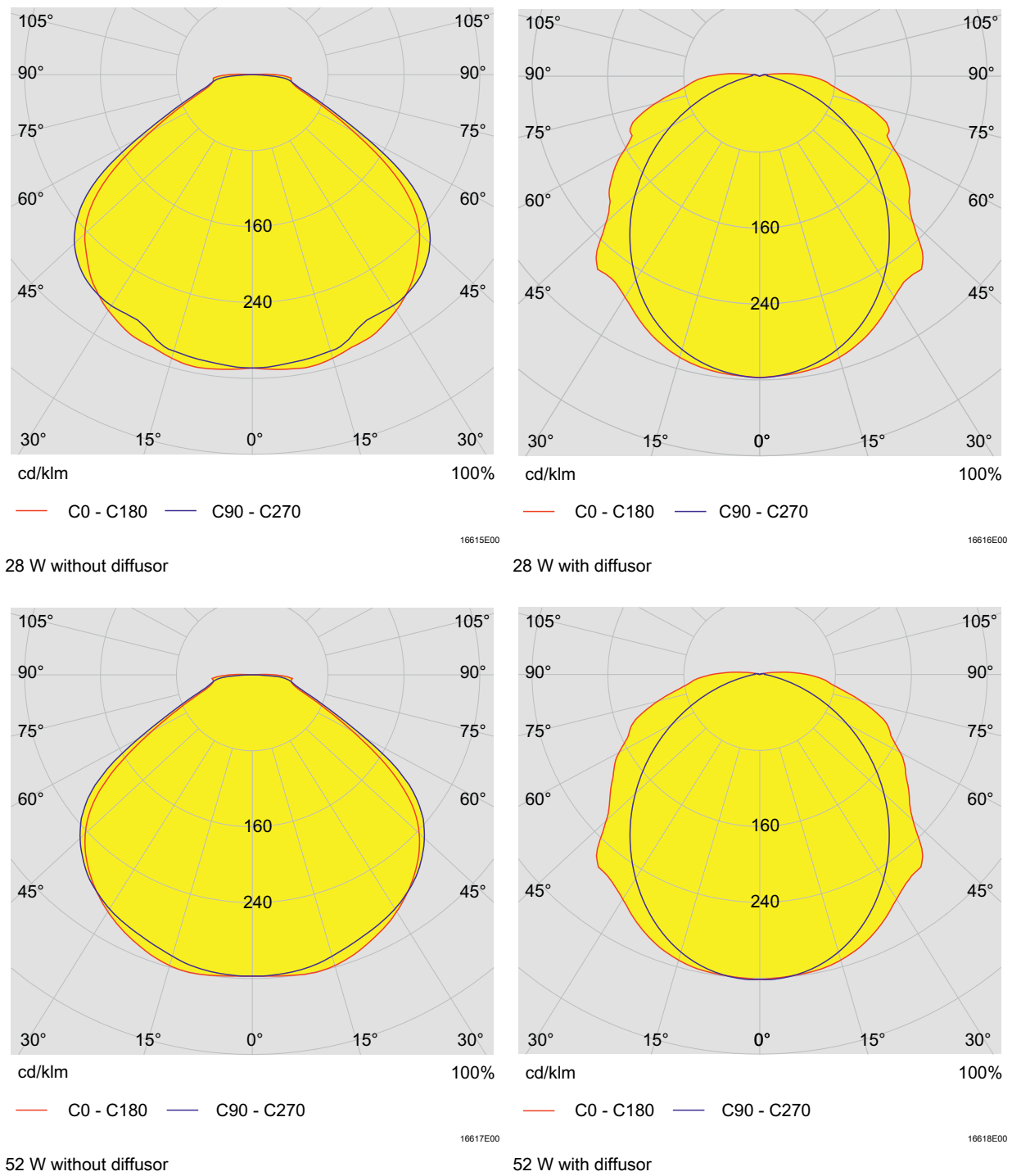
Replacing the battery set

When opening the battery enclosure, the connection between the battery and the control gear is disconnected by means of a switch.
The battery set can be replaced after disconnecting the plug-in contacts.

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Light distribution curves



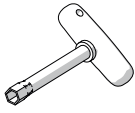
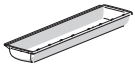
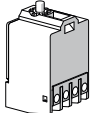


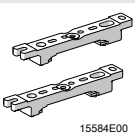
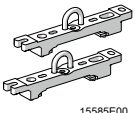
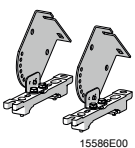
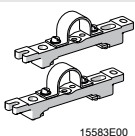

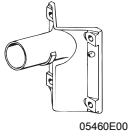
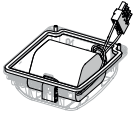
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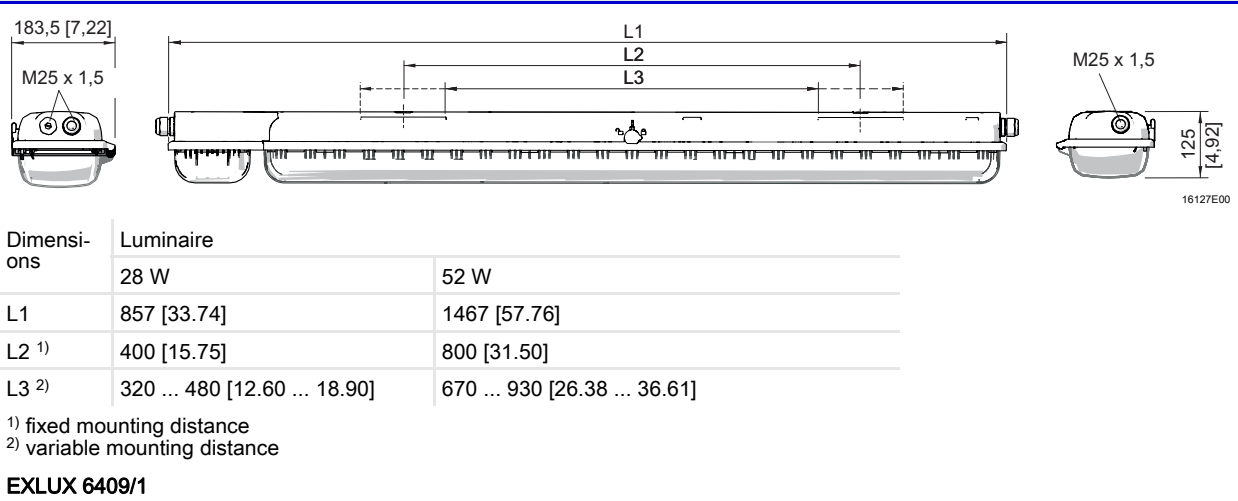
Accessories and Spare Parts

Designation	Figure	Description	Art. no.	Weight kg
Socket key	 15507E00	M8 / wrench size 13; to open/close the central locking	222430	0.210
Lamp cover		for luminaire L=700	222427	0.639
		for luminaire L=1310	222428	1.149
		for luminaire L=700 (resistant to aromatic substances)	256534	0.639
		for luminaire L=1310 (resistant to aromatic substances)	256535	1.149
Switch	 10809E00	Switching element 8080/1-3-L, 2 normally closed contacts	132527	0.026
Breathing gland	 05703E00	M25 x 1.5 in order to avoid condensate formation for 6009/1	115738	0.017
Ring bolt	 05378E00	M8, direct mounting in insert nuts, 1 pair	115736	0.112
Mounting rail	 15584E00	for a variable mounting distance 1 pair	222826	0.300
Mounting bracket	 15585E00	mounting clamp mounted on a mounting rail for a variable mounting distance 1 pair	222456	0.400
Ceiling and wall-mounting bracket	 15586E00	1 pair mounted on a mounting rail for a variable mounting distance; Material: stainless steel Lamp can be swiveled in steps of 15°	222827	1.200
Pipe clamp	 15583E00	R 1 1/2"	222459	1.200
		R 1 1/4"	222458	0.900
		R 2"	222460	0.750
		with mounting rail for a variable mounting distance; Material: stainless steel 1 pair		
Pole mounting sleeve	 16985E00	for the subsequent mounting on lights 18 W and 36 W, completely with assembly parts	227512	3.200
Bracket for wall mounting with tube	 05460E00	for side entry lamp; with tube, length 400 mm, Ø 42 mm	108947	2.480
Battery set	 16332E00	Battery cover with built-in battery. Gas-tight NiCd battery; 7 Ah / 6 V	223532	1.195

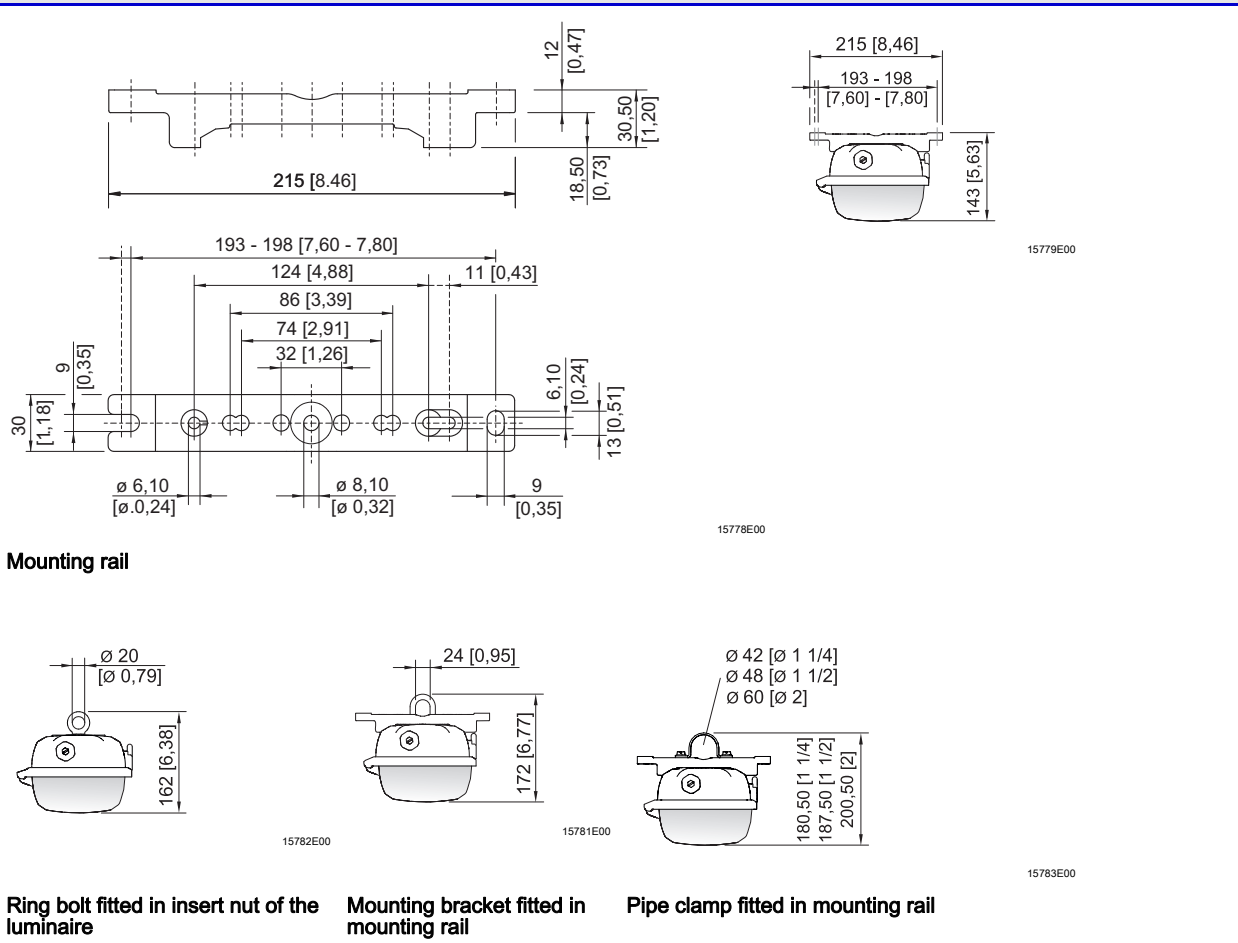
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Dimensional Drawings (All dimensions in mm [inches]) - Subject to alterations



Dimensional drawings for assembly parts and accessories (all dimensions in mm [inches]) – Subject to alterations

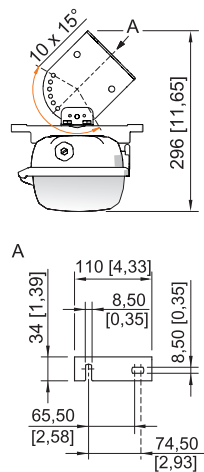


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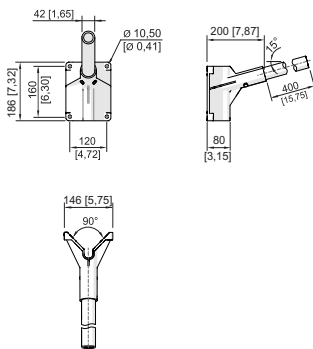
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Dimensional drawings for assembly parts and accessories (all dimensions in mm [inches]) – Subject to alterations



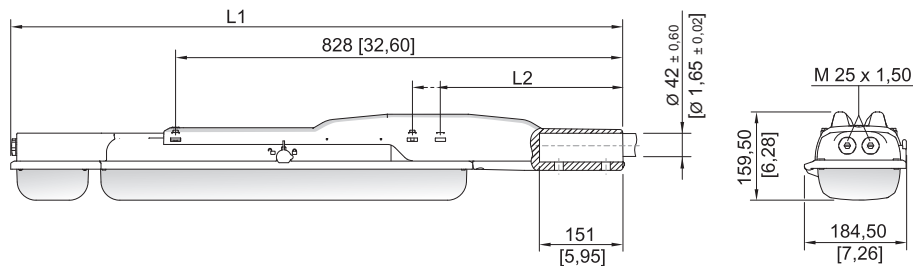
15780E00



03257E00

Wall mounting bracket fitted in mounting rail

Bracket for wall mounting with pipe section



17756E00

Dimensions	Luminaire	
	28 W	52 W
L1	1135 [44.69]	1744 [68.66]
L2	390 [15.35]	338 [13.31]

Linear luminaire EXLUX with pole mounting sleeve

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.