Linear light fittings for harsh industrial application

LLK 98 LED ... 8,7 W - 27 W

The lighting solution for harsh and wet industrial applications

The linear luminaires series LLK 98 LED for LED tubes as well as the LLK 980../.. for fluorescent lamps combines the latest lighting technology with the requirements of a harsh environment. These luminaires are available in 3 lamp length sizes (600/1200/1500 mm).

Long-term safety

Wet and harsh environment like industrial outdoor applications need high mechanical strength of the enclosure and protective bowl, an efficient gasket system as well as reliable operation.

The LLK 980../.. fluorescent types are equipped with a highly-efficient electronic ballast for best performance and safe operation. LLK 98 LED are ready for use with energy-efficient LED-tubes.

In addition, these lamps are featured with high impact strength and excellent chemical and UV resistance. A highly efficient lighting technology ensures long service life and high availability.

Simple and cost-effective installation

In conjunction with the generously dimensioned terminal compartment, the standard single- ended through-wiring allows a cost-effective installation. The double-sided locking facility with 10 or 20 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

Highest efficiency with LED technology and cost savings

The type LLK 98 LED are delivered with complete wiring ready for using the latest LED tube technology. Energy savings up to 60 % is not the only advantage. Life time up to 50.000 h and switching cycles up to 200.000 sustainably reduce the maintenance costs. The constant light output even at low ambient temperatures makes this luminaire the ideal light fitting for harsh industrial low-temperature applications.

Features

- Special versions with excellent mechanical properties and high resistance against humidity, dust and harsh environmental
- Cost-effective installation due to single-ended through-wiring
- High efficient with LED tubes
- Double-sided safety lock
- High degree of protection IP66

Ordering details

Type	Content	Terminals	Through-wiring single-ended	Through-wiring twin-ended	Cable gland/thread	Threaded plug	Blanking plug	Order No.
LLK 98 LED 600								
LLK 98 LED 600 (2 x 8.7 W)	1/3-1K	1 x 3	x	–	1 x M25, plastic	1 x M25		**1 3463 218 001**
LLK 98 LED 600 (2 x 8.7 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3463 218 023**
LLK 98 LED 600 (2 x 8.7 W)	1/3-1M [1]	1 x 3	x	–	2 x M20, metal thread	1 x M20		**1 3463 218 031**
LLK 98 LED 600 (2 x 8.7 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3463 218 131**
LLK 98 LED 1200								
LLK 98 LED 1200 (2 x 18.4 W)	1/3-1K	1 x 3	x	–	1 x M25, plastic	1 x M25		**1 3463 236 001**
LLK 98 LED 1200 (2 x 18.4 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3463 236 023**
LLK 98 LED 1200 (2 x 18.4 W)	1/3-1M [1]	1 x 3	x	–	2 x M20 metal thread	1 x M20		**1 3463 236 031**
LLK 98 LED 1200 (2 x 18.4 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3463 236 131**
LLK 98 LED 1500								
LLK 98 LED 1500 (2 x 27 W)	1/3-1K	1 x 3	x	–	1 x M25, plastic	1 x M25		**1 3463 258 001**
LLK 98 LED 1500 (2 x 27 W)	2/6-2K	2 x 6	–	x	2 x M25, plastic	2 x M25	1	**1 3463 258 023**
LLK 98 LED 1500 (2 x 27 W)	1/3-1M [1]	1 x 3	–	x	2 x M20, metal thread	1 x M20		**1 3463 258 031**
LLK 98 LED 1500 (2 x 27 W)	2/6-2M [1]	2 x 6	–	x	4 x M20, metal thread	2 x M20		**1 3463 258 131**

Scope of delivery without lamp and fixing accessories- Metal cable glands see catalogue part 2: 2.3.12 ff
[1] with metal thread, without cable gland
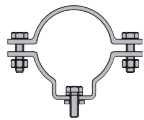
Ordering details

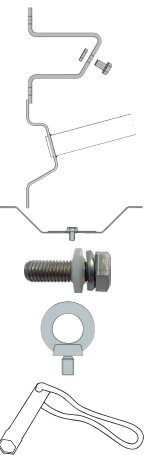LLK 98 LED ... 8,7 W - 27 W.

Accessories

Type	Length	Power	Luminous flux	Order No.
OSRAM SubstiTUBE advanced ST8A-EM 8.7 W/840 [1]	600 mm	8.7 W	1100 lm	**3 2475 901 012**
OSRAM SubstiTUBE advanced ST8A-EM 18.4 W/840 [1]	1200 mm	18.4 W	2300 lm	**3 2475 901 015**
OSRAM SubstiTUBE advanced ST8A-EM 27 W/840 [1]	1500 mm	27 W	3400 lm	**3 2475 901 018**

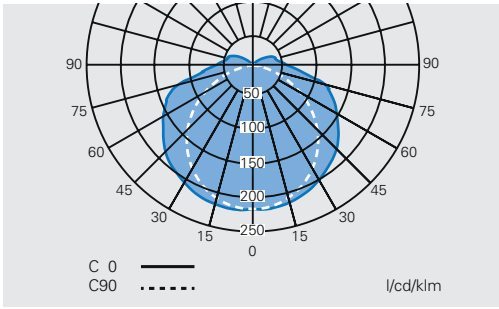1) Lamp data may modified by the manufacturer without notification.

Mounting accessories

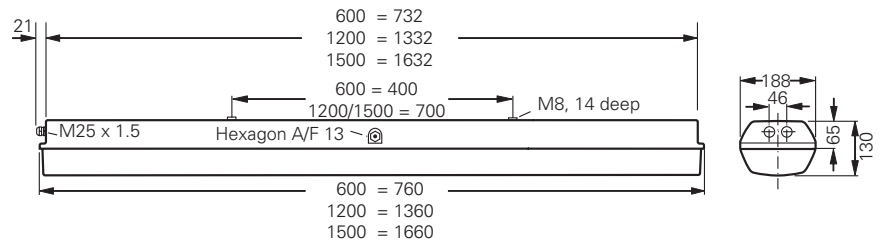| Type	OU	Order No.
Pipe clamps		
2 pcs. pipe clamps R12 (1 1/4"), Ø 38 - 42 mm with screws and polyamide washer, hot-dip galvanized	1	**2 2480 462 000**
2 pcs. pipe clamps R14 (1 1/4"), Ø 38 - 42 mm with screws and polyamide washer, stainless steel	1	**2 2480 464 000**
2 pcs. pipe clamps R22 (1 1/2"), Ø 47 - 51 mm with screws and polyamide washer, hot-dip galvanized	1	**2 2480 472 000**
2 pcs. pipe clamps R24 (1 1/2"), Ø 47 - 51 mm with screws and polyamide washer, stainless steel	1	**2 2480 474 000**
2 pcs. pipe clamps R32 (2"), Ø 56 - 60 mm with screws and polyamide washer, hot-dip galvanized	1	**2 2480 482 000**
2 pcs. pipe clamps R34 (2"), Ø 56 - 60 mm with screws and polyamide washer, stainless steel	1	**2 2480 484 000**
2 pcs. pipe clamp, two-part, for pipe mounting LB 48 - FT with screws and polyamide washer, hot-dip galvanized	1	**2 2480 550 010**
Fixing accessories		
2 pcs. luminaire mounting bracket with 30° angle, wall mounting LH 30- FT, hot-dip galvanized	1	**2 2480 550 013**
2 pcs. luminaire mounting bracket with 45° angle, wall mounting LH 45- FT, hot-dip galvanized	1	**2 2480 550 014**
1 pcs. wall bracket W 27, 15°, for pole-mounting fitting Ø 42 mm, hot-dip galvanized	1	**2 2483 027 000**
2 pcs. ceiling mounting bracket D 92 with screws and polyamide washer, stainless steel	1	**2 2480 092 000**
2 pcs. C-bracket for luminaire mounting LAB-C50- ER, stainless steel	1	**2 2480 550 011**
2 pcs. hexagon screw M8 x 20 for luminaire mounting, with polyamide washer	1	**2 2480 054 000**
2 pcs. eye bolt M8 for luminaire mounting, hot-dip galvanized	1	**2 2480 002 000**
2 pcs. eye bolt M8 for luminaire mounting, stainless steel	1	**2 2480 004 000**
Hexagon box spanner SW 13 for opening/closing fluorescent light fittings eLLK/M and nLLK/M	1	**3 2485 000 005**

Polar curve LLK 98 LED ...

LLK 98...

C 0
C90

l/cd/klm

21

600 = 732
1200 = 1332
1500 = 1632

600 = 400
1200/1500 = 700

M8, 14 deep

M25 x 1.5   Hexagon A/F 13

600 = 760
1200 = 1360
1500 = 1660

188
46
65
130

Dimensions in mm

Technical data

LLK 98 LED 600 (2 x 8.7 W) / LLK 98 LED 1200 (2 x 18.4 W)
)

Technical data

		LLK 98 LED 600 (2 x 8.7 W - LED tubes)	LLK 98 LED 1200 (2 x 18.4 W - LED tubes)
Permissible ambient temperature		-20 °C up to +40 °C	-20 °C up to +40 °C
IK-class according to EN 50102		IK 10 ≙ 20 J	IK 10 ≙ 20 J
Rated voltage	LLK 98 LED	220 V AC	220 V AC
Rated current	LLK 98 LED	0.1 A [1]	0.19 A [1]
Frequency		50 - 60 Hz	50 - 60 Hz
Power factor cos φ		≥ 0.9	≥ 0.9
Circuit	LLK 98 LED	direct	direct
Protection class		I	I
Lamp / Illuminant	LLK 98 LED	LED tubes e.g. Type Osram SubstiTUBE Advanced 8.7 W	LED tubes e.g. Type Osram SubstiTUBE Advanced 18.4 W
Rated luminous flux	LLK 98 LED	2200 lm [1]	4600 lm [1]
Lamp cap		G13 accd. to IEC 60061-1	G13 accd. to IEC 60061-1
Light efficiency in operation	LLK 98 LED	86 %	86 %
Dimensions (L x W x H)		760 x 188 x 130 mm	1360 x 188 x 130 mm
Connecting terminals		L1, N, PE max. 2 x 2.5 mm² (1/3), or screw terminal max. 2 x 6 mm² single wire (L1, L2, L3, L, N, PE) (1/6 - 2/6)	L1, N, PE max. 2 x 2.5 mm² (1/3), or screw terminal max. 2 x 6 mm² single wire (L1, L2, L3, L, N, PE) (1/6 - 2/6)
Enclosure colour		RAL 7035 light grey	RAL 7035 light grey
Enclosure material		glass-fibre reinforced polyester	glass-fibre reinforced polyester
Weight	LLK 98 LED	5.0 kg	7.0 kg
Cable glands / gland plates / enclosure drilling		Cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm, option: M20 x 1.5 metal thread [2]	Cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm, option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529		IP66	IP66
Protective cover / protective bowl		Polycarbonate	Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed

Technical data

LLK 98 LED 1500 (2 x 27 W - LED tubes)

Permissible ambient temperature		-20 °C up to +40 °C
IK-class according to EN 50102		IK 10 ≙ 20 J
Rated voltage	LLLK 98 LED	220 V AC
Rated current	LLK 98 LED	0,25 A [1]
Frequency		50 - 60 Hz
Power factor cos φ		≥ 0.9
Circuit	LLK 98 LED	direct
Protection class		I
Lamp / Illuminant	LLK 98 LED	LED tubes e.g. Type Osram SubstiTUBE Advanced 27 W
Rated luminous flux	LLK 98 LED	6800 lm [1]
Lamp cap		G13 accd. to IEC 60061-1
Light efficiency in operation	LLK 98 LED	86 %
Dimensions (L x W x H)		1660 x 188 x 130 mm
Connecting terminals		L1, N, PE max. 2 x 2.5 mm² (1/3), or screw terminal max. 2 x 6 mm² single wire (L1, L2, L3, L, N, PE) (2/6)
Enclosure colour		RAL 7035 light grey
Enclosure material		glass-fibre reinforced polyester
Weight	LLK 98 LED	8.0 kg
Cable glands / gland plates / enclosure drilling		Cable glands M25 x 1.5 (plastic) for cables from Ø 8 - 17 mm, option: M20 x 1.5 metal thread [2]
Degree of protection accd. to EN 60529		IP66
Protective cover / protective bowl		Polycarbonate

[1] depends on used lamps
[2] with dustcover if entry/thread is not closed