LS 92 — Protective throughbeam photoelectric sensors



16 m

10 - 30 V DC

BWS Typ 2

TÜV HANNOVER SACHSEN-ANHALT

- Activation input for testing and interlinking
- Compact construction with robust diecast zinc housing and glass optics for protection against environmental influences
- Light or dark switching by reversing the polarity of the operating voltage
- Electrical connection with M12 connector or 6-pin standard plug

CE ISO 9001 IP 67

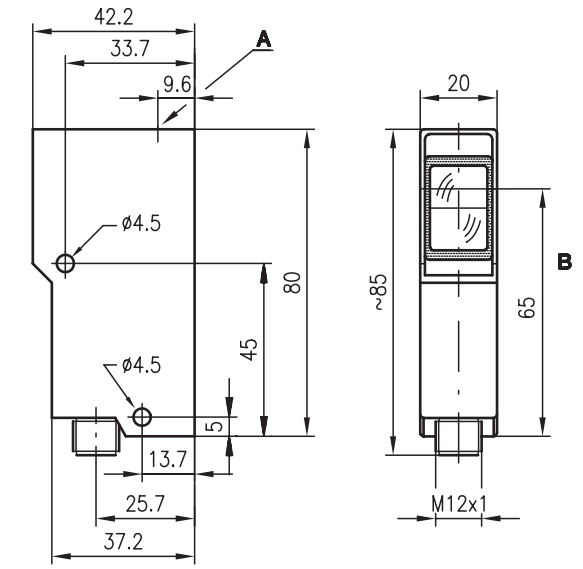
IEC 60947... IEC 60947...

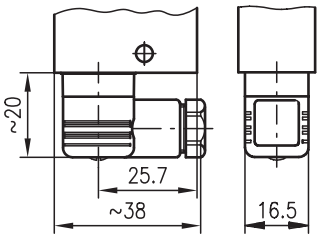
Accessories:

(available separately)

- Mounting systems (BT 92, UMS 1)
- M12 connectors (KD …)
- Ready-made cables (KB …)
- Test-monitoring units:
  - TNT 32 (Part No. 500 20476)
  - TNT 33 (Part No. 500 28158)
  - TNT 34 (Part No. 500 81023)
  - TNT 35 (Part No. 500 33058)
  - TMC 66 (Part No. 500 82121)

Dimensioned drawing

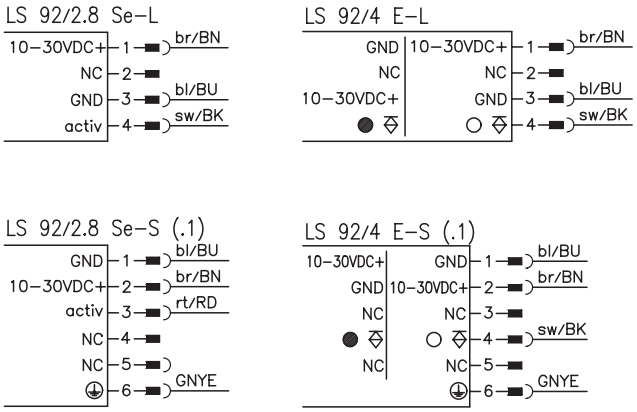




LS 92/2.8 Se-S
LS 92/4 E-S
LS 92/4 E-S.1
LS 92/2.8 Se-S.1

A Indicator diode
B Optical axis

Electrical connection



We reserve the right to make changes • 92_a03e.fm

Specifications

Optical data

Typ. operating range limit [1]	0 … 16m
Operating range [2]	0 … 12m
Light source	LED (modulated light)
Wavelength	880nm

Timing

Switching frequency	200Hz
Response time	2.5ms
Delay before start-up	≤ 100ms

Electrical data

Operating voltage U_B	10 … 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Bias current	≤ 35mA
Switching output	PNP transistor output
Function characteristics	light or dark switching (by reversing the polarity of U_B)
Signal voltage high/low	≥ (U_B-2V)/≤ 2V
Output current	max. 100mA

Indicators

Receiver	
LED yellow	light path free
LED yellow flashing	light path free, no performance reserve
Transmitter	
LED yellow	transmitter ON

Mechanical data

Housing	diecast zinc
Optics	glass
Weight	140g
Connection type	M12 connector or 6-pin standard plug

Environmental data

Ambient temp. (operation/storage)	-20°C … +60°C/-30°C …+70°C
VDE safety class	I for S types
VDE safety class [3]	II for L types (M12 connector)
Protective circuit [4]	2, 3
Protection class	IP 67, IP 65 for all S types
Standards applied	IEC 60947-5-2

Options

Activation input activ	
Transmitter active/not active	≥ 8V/≤ 2V or not connected
Activation/disable delay	≤ 1ms
Input resistance	4.7K<Ω ± 10%

1) Typ. operating range limit: max. attainable range without performance reserve
2) Operating range: recommended range with performance reserve
3) Rating voltage 250VAC
4) 2=polarity reversal protection, 3=short-circuit protection for all outputs

Order guide

	Designation	Part No.
with 6-pin standard plug		
Transmitter and receiver	LS 92/4.8-S	
Transmitter	LS 92/2.8 Se-S	500 11218
Receiver	LS 92/4 E-S	500 11217
with M12 connector		
Transmitter and receiver	LS 92/4.8-L	
Transmitter	LS 92/2.8 Se-L	500 22703
Receiver	LS 92/4 E-L	500 22704
with 6-pin standard plug without cable connector		
Transmitter and receiver	LS 92/4.8-S.1	
Transmitter	LS 92/2.8 Se-S.1	500 20360
Receiver	LS 92/4 E-S.1	500 20573

Tables

Diagrams

Remarks

The protective throughbeam photoelectric sensor is a contactless active protective device only in connection with a safety-relevant control system, in which the cyclical testing of transmitter and receiver is carried out according to EN 61496-1, category 2 (testing).

The power supply unit used to operate the photoelectric sensor has to be able to compensate for changes and interruptions of the supply voltage acc. to EN 61496-1. Minimum blackening object: Ø13mm.