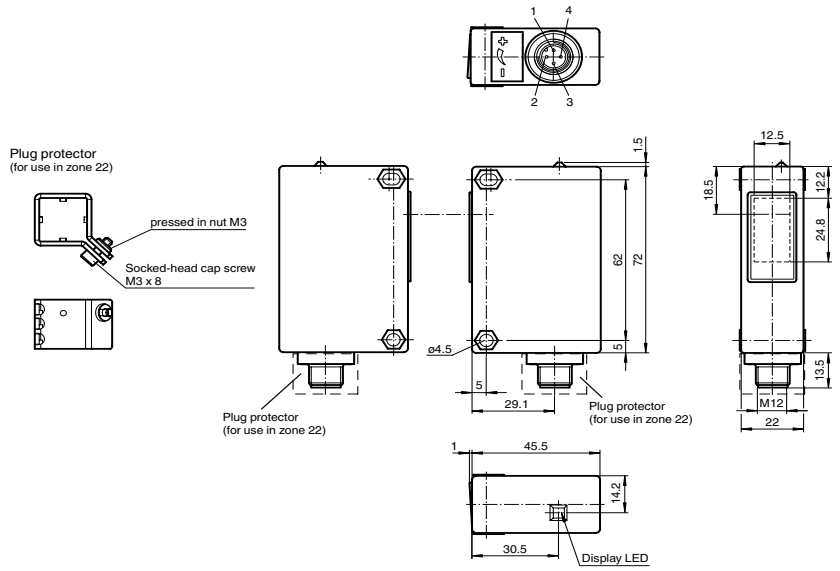
Dimensions



Model Number

L32/LV32-EX2/35/47/73c

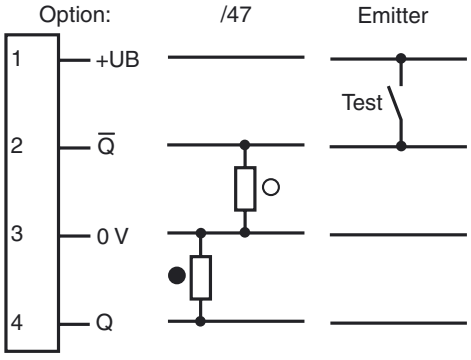
Thru-beam sensor

with 4-pin, M12 x 1 plastic connector

Features

- ATEX-approval for zone 2 and zone 22
- Sleek design, especially for storage and conveyor systems
- Excellent optical performance data
- Scratch-resistant and solvent resistant glass lens

Electrical connection



○ = Light on
● = Dark on

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Technical data

System components		
Emitter		L32-EX2/35/73c
Receiver		LV32-EX2/47/73c
General specifications		
Effective detection range		0 ... 30 m
Threshold detection range		45 m
Light source		LED
Light type		modulated visible red light
Target size		18 mm
Diameter of the light spot		approx. 500 mm at 10 m detection range
Angle of divergence		approx. 3 °
Ambient light limit		60000 Lux
Functional safety related parameters		
$MTTF_d$		255 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		90 %
Indicators/operating means		
Function indicator		LED yellow, lights up when light beam is free, flashes when falling short of the stability control
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC
Ripple		10 %
No-load supply current	I_0	50 mA
Input		
Test input		Emitter deactivation
Output		
Switching type		light/dark on
Signal output		2 PNP, complementary, short-circuit protected, reverse polarity protected
Switching voltage		30 V DC
Switching current		max. 50 mA
Switching frequency	f	150 Hz
Response time		3 ms
Ambient conditions		
Ambient temperature		-20 ... 50 °C (-4 ... 122 °F)
Storage temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP65
Connection		Plastic connector M12 x 1, 4-pin
Material		
Housing		Terluran GV15
Optical face		glass
Mass		60 g (device)
General information		
Use in the hazardous area		see more details for the use in hazardous areas
Category		3G; 3D
Compliance with standards and directives		
Directive conformity		
EMC Directive 2004/108/EC		EN 60947-5-2:2007
Standard conformity		
Product standard		EN 60947-5-2:2007 IEC 60947-5-2:2007

Approvals and certificates	
CCC approval	CCC approval / marking not required for products rated ≤36 V
ATEX 3G (nA)	
Instruction	**Manual electrical apparatus for hazardous areas**
Device category 3G (nA)	for use in hazardous areas with gas, vapour and mist
ATEX marking	Ex II 3 G Ex nAc op is IIC T4
Directive conformity	94/9/EG
Standards	EN 60079-0:2009 , EN 60079-15:2010 , EN 60079-28:2007
Installation, Comissioning	Laws and/or regulations and standards governing the use or intended usage goal must be observed. Attach the connector fuse provided so that the connector cannot be unplugged without using tools. Only connections that are disconnected from the power supply may be unplugged.
Maintenance	No modifications must be undertaken on apparatus, which is operated in hazardous areas. Repairs to such apparatus are not permissible.
Specific conditions	
Maximum permissible ambient temperature T_{Umax}	50 °C (122 °F)
Protection from mechanical danger	The apparatus must be protected from mechanical damage.
Protection of overvoltage	Precautions must be taken to prevent the rated voltage being exceeded by more than 40 % due to transient disturbances.
Protect from direct sunlight	Set up the apparatus so that optical components cannot come into contact with direct sunlight.

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Protection from UV light	The sensor must be protected against harmful UV radiation. This can be achieved by using the sensor indoors.
Other conditions	The optical light from the emitter must not be focused. The plug connector must not be disconnected under voltage.When the plug connector is disconnected the ingress of dirt into the inner areas (i.e. the areas, which are not accessible in the plugged-in condition) must be prevented. The plug connection can only be separated using a tool. This is achieved by using the unlocking protection "Plug protector" (Mounting accessory from Pepperl + Fuchs).

ATEX 3D

Instruction	**Manual electrical apparatus for hazardous areas**
Details for use in hazardous areas	Electrical apparatus for potentially explosive atmospheres
ATEX marking	Ex II 3 D Ex tc IIIC T75 °C
Directive conformity	94/9/EG
Standards	EN 60079-31:2009
Installation, Comissioning	Laws and/or regulations and standards governing the use or intended usage goal must be observed. Attach the connector fuse provided so that the connector cannot be unplugged without using tools. Only connections that are disconnected from the power supply may be unplugged.
Maintenance	No modifications must be undertaken on apparatus, which is operated in hazardous areas. Repairs to such apparatus are not permissible.

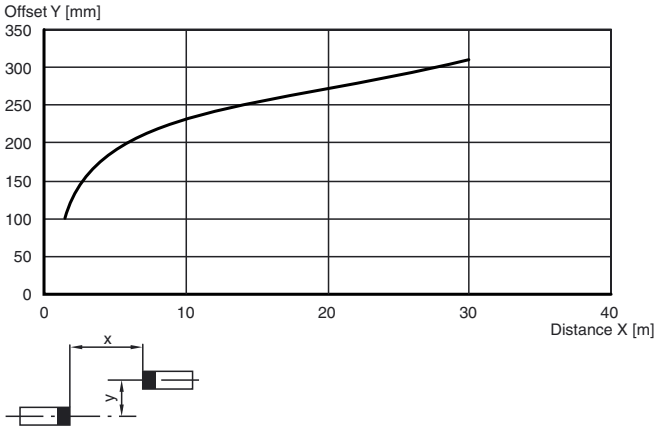
Specific conditions

Protection from mechanical danger	The apparatus must be protected from mechanical damage.
Protection of overvoltage	Precautions must be taken to prevent the rated voltage being exceeded by more than 40 % due to transient disturbances.
Protection from UV light	The sensor must be protected against harmful UV radiation. This can be achieved by using the sensor indoors.
Other conditions	Set up the apparatus so that optical components cannot come into contact with direct sunlight.

Curves/Diagrams

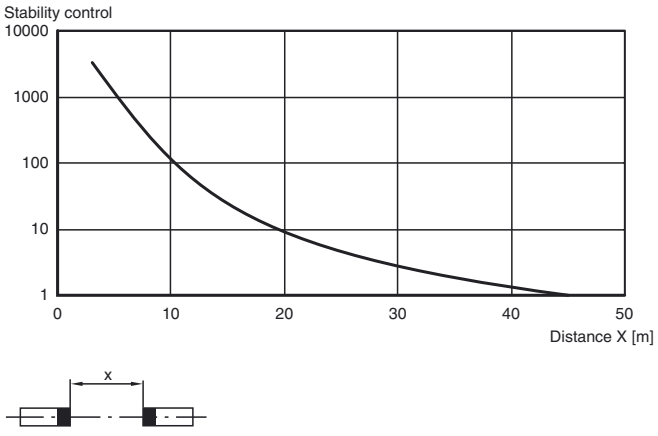
Characteristic response curve

L32LV32/35



Relative received light strength

L32LV32/35



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