

SLS 96 M...

Through-beam Safety Light Barriers (AOPD type 2)



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In conjunction with a test monitoring unit, such as for instance the TNT 35 or MSI-s/R, this opto-sensor with test input constitutes an active optoelectronic protective device of type 2.

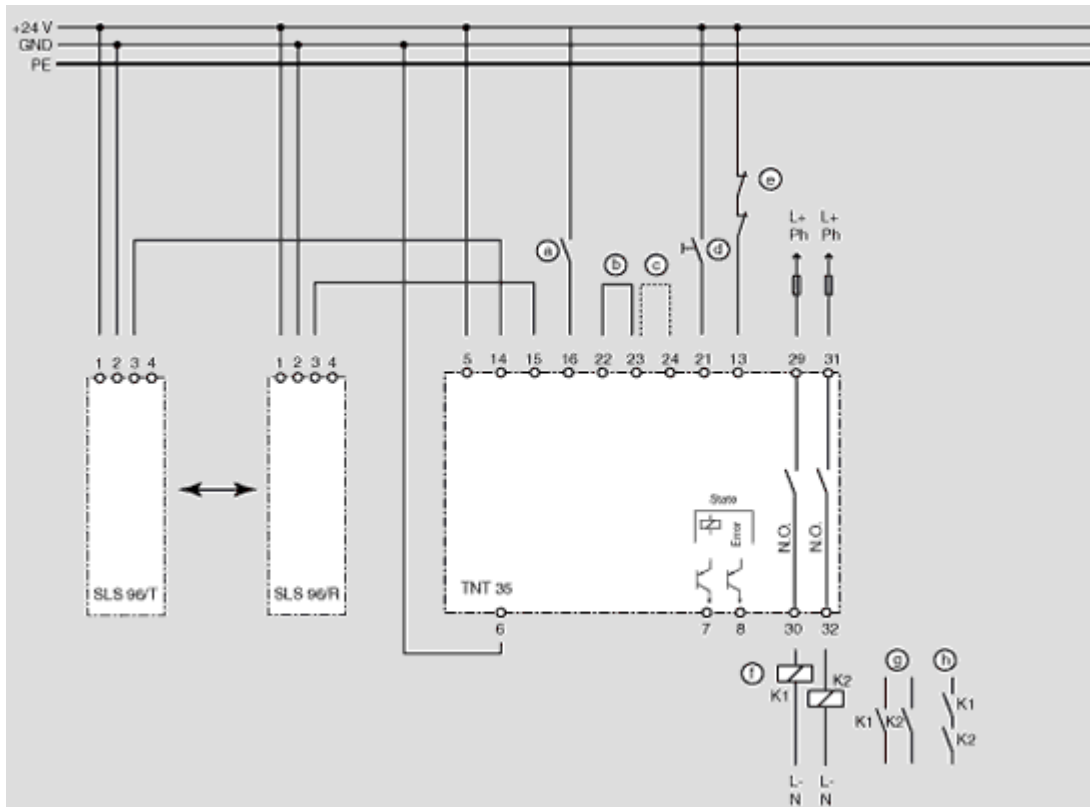
Advantages

- Through-beam safety light barriers category 2 (testing) with high function reserve in visible red light or infra-red light
- Sturdy metal housing with glass covering in or robust plastic housing enclosure rating IP 67 for industrial use
- Far-reach voltage range 10-30 V with pnp output for PLC applications
- Activation input for connection or function test
- 2 displays each on transmitter and receiver for status display during start-up and operation
- Lens heating system combined with the ability to withstand low temperatures
- Connection via M12 circular plug-in connection or comfortable terminal space

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Electrical Connection

Test monitoring unit TNT 35, with SLS 96 Safety Light Barrier, Type 2



- a) Start / Active Reset
- b) Bridge "with" Restart interlock, "with" Relay monitoring
- c) Bridge "ohne" Restart interlock, "ohne" Relay monitoring
- d) Start / Restart-button
- e) Feedback circuit for relay monitoring
- f) Positively guided relay or motor relay, provide suitable spark suppression
- g) Switching off path 2-channel*
- h) Switching off path 1-channel*

* always use both contacts in the switching off path

Pay attention to the operating manual of the components please.



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Technical Data

Safety Light Barrier	SLS 96 M
Safety category	Type 2 according to EN 61496-1,-2 in combination with a test monitoring unit.
Operating range ¹⁾	Infrared light 0 - 50 m, red light 0 - 30 m
Limit range ²⁾	Infrared light 0 - 65 m, red light 0 - 39 m
Sensor response time	1 ms
Stand-by delay	≤ 200 ms
Enclosure rating	IP 67
Shock resistance	Semi sine, 30 gn, 11 ms (VDE 0660 T 208)
Vibration resistance	10 - 55 Hz, max. 7,5 gn (VDE 0660 T 208)
Electronic compatibility	Focus degree 3 (IEC 801.2...4)
Ambient temperature (operation/storage)	-20 °C ... +60 °C / -40 °C .. +70 °C
External light limit	≥ 10 kLux (VDE 0660 T 208)
Protective cabling ³⁾	1, 2, 3
VDE-Protection class ⁴⁾	II, protection isolated
Operation voltage U _B	10... 30 V DC (residual ripple included)
Residual ripple	≤ 15 % von U _B
No-load current	≤ 50 mA
Switching output	pnp transistor output
Output current	max. 100 mA
Function	bright switching
Signal voltage high/low	≥ (U _B - 2 V) / ≤ 2 V
Connection	Terminals or M12 circular plug-in connection
Light source	LED (alternating light)
Wave length	Infrared light 880 nm, red light 660 nm
Switching frequency sensor	500 Hz
LED green	Ready for operation
Receiver LED yellow LED yellow, flashing	Light path unobstructed Light path unobstructed, no function reserve
Transmitter LED yellow	Transmitter activated
Housing	Metal housing: Zinc die casting Plastic housing: polycarbonat
Optical parts	Metal housing: Glass Plastic housing: plastic
Weight	Metal housing: 380 g Plastic housing: 150 g
Transmitter activ/not activ	≥ 8 V / ≤ 2 V
Activation/release delay	≤ 1 ms
Input resistance	10 kΩ ± 10 %
Lens heating system	Prevents steaming up and offers protection in case of changes in temperature
Low temperature	As low as -35 °C

- 1) Operating range: recommended Range with functional reserve
- 2) Limit range: max. possible range without function range
- 3) 1 = transient protection, 2 = pole reversal protection, 3 = short circuit protection for all outputs
- 4) Testing voltage 250 V AC

Note:

The through-beam safety light barrier is an electro-sensitive protective device only in connection with a safety-relevant control system where the cyclical testing of transmitter and receiver is carried out according to EN-/IEC61496-1, -2, category 2 (testing).

Supply unit operating light barrier must intercept changes and interruption of the supply voltage according to prEN 50100-1.