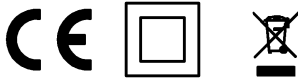


1) Display and control panel, 2) Optical axis



### Basic features

Approval/Conformity	cETLus
	CE
	WEEE
Principle of operation	Luminescence sensor
Series	31M
Style	Square
	Connection 45°

### Display/Operation

Adjuster	Key (2x)
Display	Output function - LED red
	Teach-in - LED yellow/green, flashing
	Set receiver - LED yellow/green
	Adjustment menu - SD
	Error - LED red, flashing
	Switch point - SD
	Transmitting power - SD
	Signal strength - SD
	Button disable active: SD
	Key disable on/off
Setting	Light-on/dark-on
	Sensitivity (switch point)
	Delay time
	Hysteresis (10 levels)
	Transmitting power (3 levels)
	Performance reserve 1/10
	Sensitivity (zero point)

### Electrical connection

Connection	Connector, M12x1-Male
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

### Electrical data

Input function	Key disable on/off
No-load current $I_o$ max. at $U_e$	60 mA
Operating voltage $U_b$	10...24 VDC
Protection class	II
Rated operating current $I_e$	100 mA
Rated operating voltage $U_e$ DC	24 V
Switching frequency	6000 Hz
Turn-off delay $t_{off}$ max.	0.08 ms
Turn-on delay $t_{on}$ max.	0.08 ms
Utilization category	DC -13
Voltage drop $U_d$ max. at $I_e$	2 V

### Environmental conditions

Ambient temperature	-20...55 °C
EN 60068-2-27, Shock	Half-sinus, 30 gn, 11 ms, 3x6
EN 60068-2-6, Vibration	10...55 Hz, amplitude 1.5 mm, 3x2 h
Protection degree	IP67

Photoelectric Sensors  
**BLT 31M-001-U-S92**  
Order Code: BLT000A

**BALLUFF**

### Material

Housing material	Zinc, Die casting, Painted
Material sensing surface	Glass
Surface protection	Painted

### Mechanical data

Dimension	24.1 x 58.4 x 71.1 mm
Mounting	Screw N8-32 UNC Screw M4

### Optical features

Beam characteristic	Focused
Light spot size	Ø 5 mm at 100 mm
Light type	Ultraviolet light
Principle of optical operation	Diffuse sensor, focused
Switching function, optical	Light/dark switching
Wave length	370 nm

### Remarks

For additional information, refer to user's guide.  
Order accessories separately.  
The sensor is functional again after the overload has been eliminated.  
Do not press key using a pointed tool.

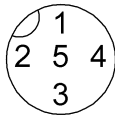
### Output/Interface

Analog output	Analog, voltage 0...5 V
Duration of time function	0/10/.../90 ms (10 steps)
Switching output	PNP/NPN normally open/normally closed (NO/NC)
Time function	switch-off delay

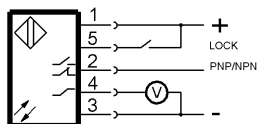
### Range/Distance

Range	0...100 mm
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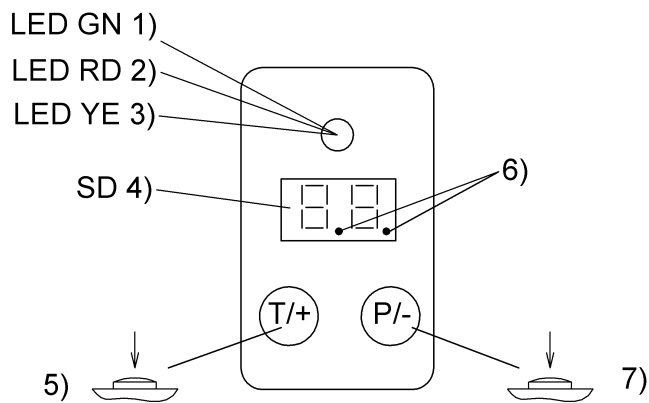
## Connector Drawings



## Wiring Diagrams



## Help Views



- 1) Setting/Teach "Dark"
- 2) Output function/Error
- 3) Setting/Teach "Light"
- 4) Signal strength/switchpoint
- 5) Teach-in, Switchpoint >>
- 6) Transmitting power
- 7) Setup menu, switchpoint <<

## Opto Symbols

