

Photoelectrics Through-beam System, Relay Output Type MPF.RSL



- Industrial doors and gates
- Range: 15 m
- Modulated infrared light
- Amplifier with "Snap-ON" photoelectric switches
- Supply voltage: 12-24 VAC/DC
- Output: SPST relay (low voltage)
- LED indications for light ON and supply ON
- 4 module M36 DIN rail housing
- Ø12 mm "Snap-ON", Ø18 or M14 photoelectric housing
- 1, 2 or 3 multiplexed channels
- Positive safety, NF P25-362 standard



Product Description

The MPFRS.. is a family of inexpensive general purpose photoelectric sensors in 3 different types of housings with separate amplifier. They are designed to meet the requirements for industrial doors and gates. The "Snap-ON" photo switch can be mounted in material with a thickness from 0.6 mm and up to 2.25 mm. The sensor set is easy to use and no adjustments are necessary. The amplifier has a

test input designed to disable the emitters and therefore evaluate the sensor function. Multiplexed channels prevent cross-talk between each set of photosensors. The amplifier is available with the following voltage: 12-24 VAC/DC. The output is made as positive security e.g. power lost, short-circuit or broken sensor cable makes the relay go to off state.

Ordering Key

Amplifier

MPF 3 230 RSL

Type _____
Number of channels _____
Voltage supply _____
Output relay _____
Safety _____
Low voltage _____

Sensor

MPF T 15 M14 4

Type _____
Emitter _____
Range _____
Housing diameter _____
Optical angle _____

Type Selection, Amplifier

Housing
W x H x D

70 x 57 x 86 mm

Ordering no.
Supply: 12-24 VAC/DC

MPF1-912 RSL
MPF2-912 RSL
MPF3-912 RSL

Type Selection, Photoelectric Switch

Housing diameter	Rated operational distance (S _n)	Optical angle	Ordering no. Emitter	Ordering no. Receiver	Ordering no. Fitting
Ø12 mm	15 m	4°	MPFT 15-4	MPFR-4	AMPF-MB1
M14	15 m	4°	MPFT 15-M14-4	MPFR-M14-4	
D18	15 m	4°	MPFT 15-D18-4	MPFR-D18-4	
Fitting for Ø12					

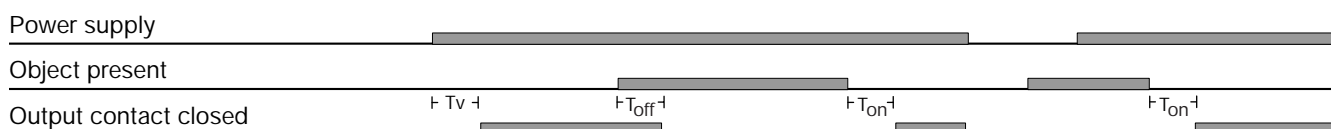
Specifications, Amplifier

Rated operational volt. AC types (U_B) Terminals 1 & 3	12-24 VAC/DC \pm 15%, 50 to 60 Hz	Output function	MPF1+2 MPF3	Relay 2 x SPST Relay 2 x SPST + 2 x SPST
Dielectric voltage	4 kVAC (rms)	Indication function	Supply ON Beam ON (no object present)	LED, green LED, yellow
Rated impulse withstand volt.	4 kV (1.2/50 μ s)	Environment	Overvoltage category Degree of protection Pollution degree	III (IEC 66064) IP 40 (IEC 60529/60947-5-2) 3 (IEC 60664/60664A, 60947-1)
Rated operational power AC supply DC supply	3 VA 2 W	Temperature	Operating Storage	-20° to +60°C (-4° to +140°F) -30° to +80°C (-22° to +176°F)
Output Specifications Resistive load 600.000 switching Max. switching power	0.5 A@50 VAC/30 VDC 30 W/62.5 VA	Connection		Screw terminals (max. 2.5 mm ²)
Rated insulation volt. (U_i)	50 VAC (rms), 50 VDC	Protection output		Reverse output, transients, short-circuit
Operating frequency (f) Light/dark ratio 1:1 Contact output	10 Hz	Test input		Max. 28 V@15 mA AC/DC
Response time OFF-ON (t_{ON}) ON-OFF (t_{OFF})	\leq 50 ms \leq 40 ms	Housing material		PC
Power ON delay (t_v)	\leq 300 ms	Weight		126 g
		CE-marking		Yes

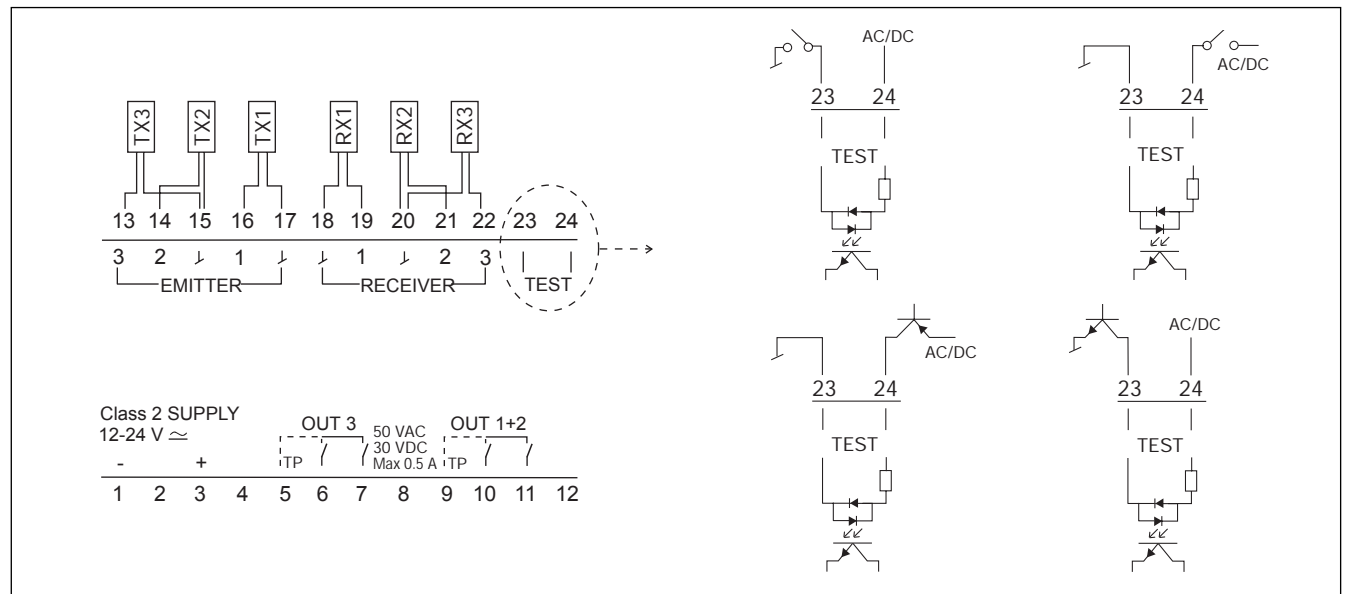
Specifications, Photoelectric Switches

Rated operation dist. (S_n)	15 m	Connection	Cable	PVC, grey, 10 m, \varnothing 2.9 mm ²
Light source Light type	LED 880 nm Infrared modulated	Degree of protection		IP 67 (IEC 60529/60947-5-2)
Ambient light	> 20.000 lux	Mounting	"Snap-ON" Rubber profile Threaded barrel	\varnothing 12 mm or fitting D18 M14
Housing material House Backpart	Ø12/D18 M14 PC Stainless steel/PC ABS PTE	CE-marking		Yes

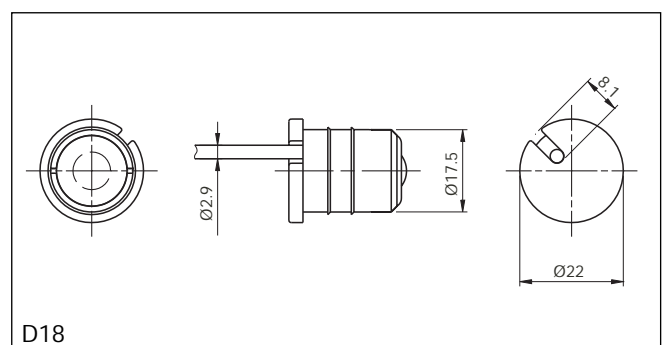
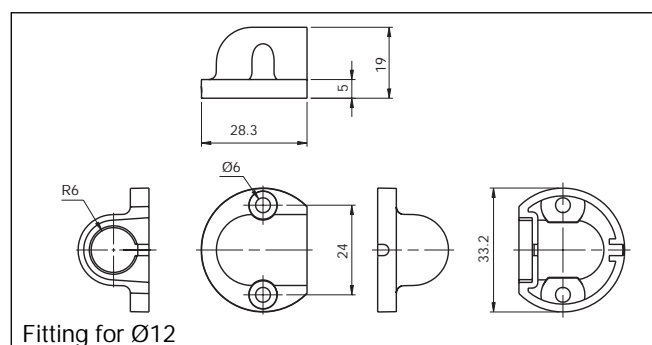
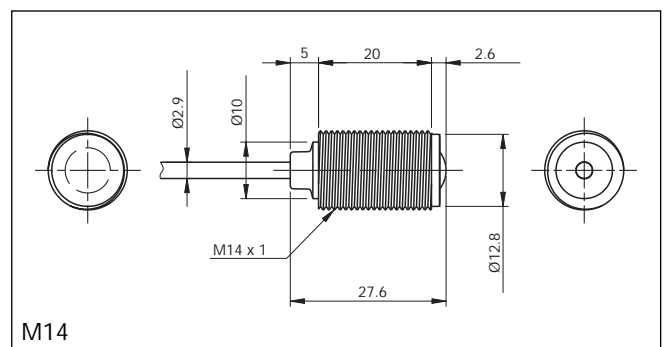
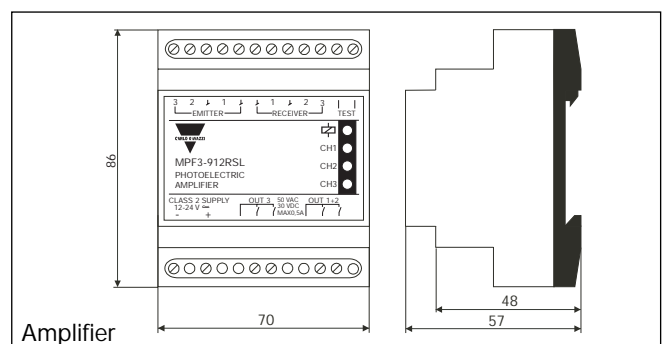
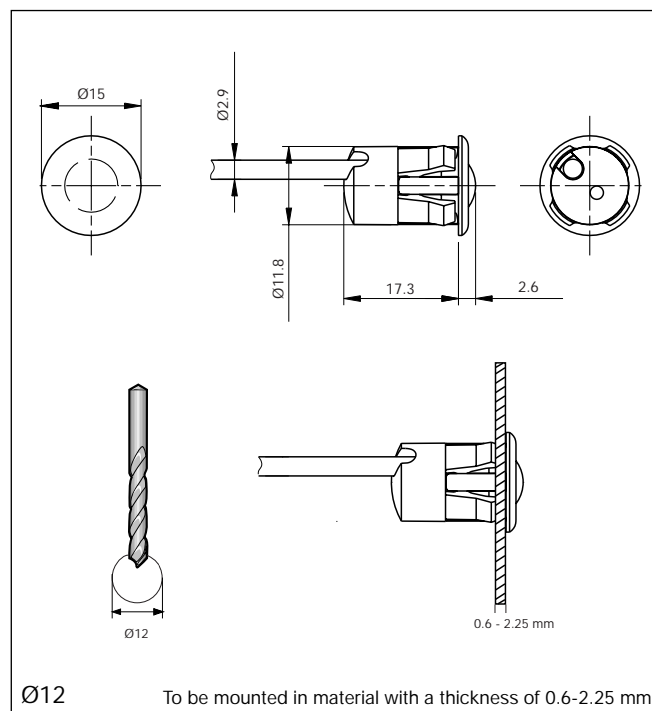
Operation Diagram



Wiring Diagrams

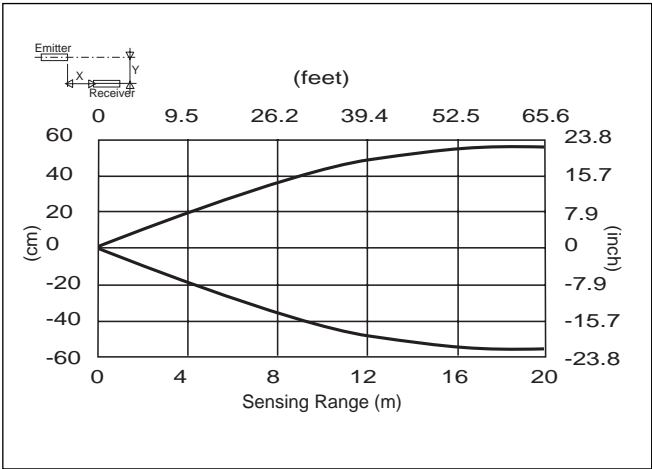


Dimensions

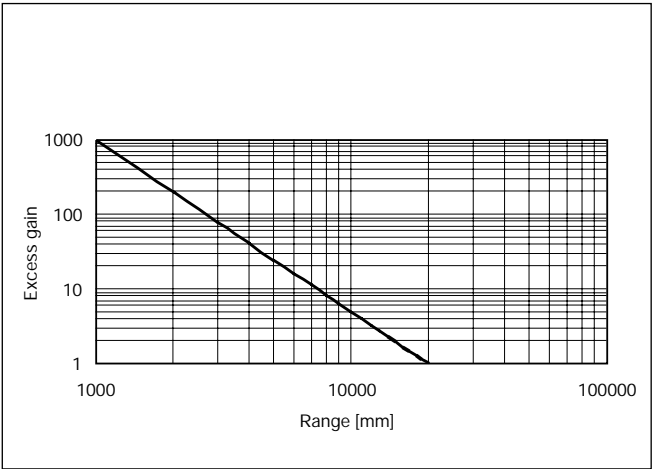




Detection Diagram



Excess Gain



Installation Hints

<p>To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables</p>	<p>Relief of cable strain</p> <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p> <p>A proximity switch should not serve as mechanical stop</p>	<p>Switch mounted on mobile carrier</p> <p>Any repetitive flexing of the cable should be avoided</p>
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Delivery Contents

- Amplifier, MPF..
- Installation instruction
- **Packaging:** cardboard box