Photoelectrics
Through-beam for Separate Amplifier
Types MOFT, MOFR

Product Description
Small through beam photoelectric switch. Range up to 50 m. 3 beam angles. Waterproof, for dirty environment, i.e. water, dust, steam etc. To be used with amplifiers series S142. - S143. 15 m shielded cable, PVC. Ø 10 x 42 mm polycarbonate or M12 or M14 stainless steel housing. Straight optical axis.

Ordering Key

Type Selection

<table>
<thead>
<tr>
<th>Housing diameter</th>
<th>Rated operating dist. (S.)</th>
<th>Optical angle</th>
<th>Emitter Ordering no.:</th>
<th>Ordering no.:</th>
<th>Receiver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ø 10 mm</td>
<td>5 m</td>
<td>2°</td>
<td>MOFT 5</td>
<td>MOFR</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 m</td>
<td>2°</td>
<td>MOFT 20</td>
<td>MOFR-5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 m</td>
<td>5°</td>
<td>MOFT 20-5</td>
<td>MOFR-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 m</td>
<td>8°</td>
<td>MOFT 20-8</td>
<td>MOFR-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 m</td>
<td>2°</td>
<td>MOFT 50</td>
<td>MOFR</td>
<td></td>
</tr>
<tr>
<td>M12</td>
<td>5 m</td>
<td>2°</td>
<td>MOFT 5-M12-2</td>
<td>MOFR-M12-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 m</td>
<td>5°</td>
<td>MOFT-M12-5</td>
<td>MOFR-M12-5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5 m</td>
<td>8°</td>
<td>MOFT-M12-8</td>
<td>MOFR-M12-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 m</td>
<td>2°</td>
<td>MOFT 20-M12-2</td>
<td>MOFR-M12-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20 m</td>
<td>5°</td>
<td>MOFT 20-M12-5</td>
<td>MOFR-M12-5</td>
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<tr>
<td></td>
<td>20 m</td>
<td>8°</td>
<td>MOFT 20-M12-8</td>
<td>MOFR-M12-8</td>
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</tr>
<tr>
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<td>50 m</td>
<td>2°</td>
<td>MOFT 50-M12-2</td>
<td>MOFR-M12-2</td>
<td></td>
</tr>
<tr>
<td>M14</td>
<td>20 m</td>
<td>8°</td>
<td>MOFT 20-M14-8</td>
<td>MOFR-M14-8</td>
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</tr>
</tbody>
</table>

Specifications Emitter

Rated operational volt. (Ue) 3 V, (square wave) supplied by amplifier
Supply current (I0) MOFT 5 ≤ 10 mA
MOFT 20 ≤ 15 mA
MOFT 20-5 ≤ 50 mA
MOFT 20-8 ≤ 50 mA
MOFT 50 ≤ 50 mA
Light source GaAlAs LED, 880 nm
Light type Infrared, modulated ± 2°, ± 5°, ± 8°
Optical angle
Indications On amplifier
Protection Short-circuit, reverse polarity

Specifications Receiver

Rated operational volt. (Ue) 8 VDC supplied by amplifier
Supply current (I0) ≤ 11 mA
Sensitivity Adjustable on amplifier
Optical angle ± 2°, ± 5°, ± 8°
Ambient light 10,000 lux (sensitivity ±5%)
Note: The actual range will be within ±5% of the set range at an ambient light of 10,000 lux
Operating frequency (f) See amplifier data
Response time (tOFF & tON) See amplifier data
Power ON delay (tON) See amplifier data
Indications On amplifier
Protection Short-circuit, reverse polarity

Specifications are subject to change without notice (20.08.01)
General Specifications

Environment
- Overvoltage category: III (IEC 60664/60664A; 60947-1)
- Pollution degree: 3 (IEC 60664/60664A; 60947-1)
- Degree of protection: IP 66/IP 67 (IEC 60529; 60947-1)

Temperature
- Operating: -20° to +60°C (-4° to +140°F)
- Storage: -40° to +80°C (-40° to +176°F)

Vibration
- 10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)

Shock
- 2 x 1 m & 100 x 0.5 m (IEC 60068-2-6)

Dielectric voltage
- 500 VAC (rms)

Housing material
- Polycarbonate, black

Connection cable
- Emitter: Grey, 15 m oilproof PVC, Ø 4 mm, 1 x 0.25 mm², shielded
- Receiver: Black, 15 m oilproof PVC, Ø 4 mm, 1 x 0.25 mm², shielded

Weight (cable incl.)
- 347 g emitter
- 347 g receiver

CE-marking
- Yes

Dimensions

Wiring Diagrams

S142....

S143....
Delivery Contents

- MOFT.. and MOFR
- All M12-types: 2 pcs. M12 nuts
- All M14-types: 2 pcs. M14 nuts
- Packaging: Plastic bag, emitter and receiver packed separately

Accessories

- Mounting bracket MB-M01

Installation Hints

<table>
<thead>
<tr>
<th>Relief of cable strain</th>
<th>Protection of the sensing face</th>
<th>Switch mounted on mobile carrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incorrect</td>
<td>A proximity switch should not serve as mechanical stop</td>
<td>Any repetitive flexing of the cable should be avoided</td>
</tr>
<tr>
<td>Correct</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The cable should not be pulled</td>
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</tr>
</tbody>
</table>

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.