

# Photoelectrics Through-beam for Separate Amplifier Types MMF, MNF



- Range: 15 m
- Easy alignment
- Modulated infrared light
- High immunity to ambient light
- For amplifier series S142.
- Degree of protection IP 66/IP 67
- For harsh environment
- High penetration power
- 15 m shielded PVC cable
- Ø 20 mm Polycarbonate housing



## Product Description

High power through-beam photoelectric switch. Range up to 15 m. Very high ambient light immunity. Easy alignment through wide angle beam. Waterproof, for dirty environ-

ment, i.e.: water, dust, steam etc. To be used with amplifier series S142. Ø 20 x 86 mm Polycarbonate housing. 2 optical axes: straight or 90° angle, 15 m shielded PVC cable.

## Ordering Key

**MMF TR 15**

Type \_\_\_\_\_  
 Emitter & Receiver \_\_\_\_\_  
 Range \_\_\_\_\_

## Type Selection

Housing diameter	Rated operating distance (S <sub>n</sub> )	Optical axis	Ordering no. Emitter & Receiver
Ø 20	15 m	straight	<b>MMFTR 15</b>
Ø 20	15 m	90° angle	<b>MNFTR 15</b>

## Specifications Emitter

Rated operational volt. (U <sub>e</sub> )	3 V, (square wave) supplied by amplifier
Supply current (I <sub>o</sub> )	< 30 mA
Light source	GaAlAs LED, 880 nm
Light type	Infrared, modulated
Optical angle	± 8°
Indications	None

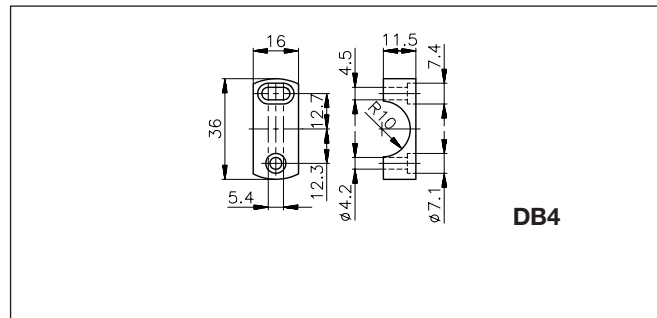
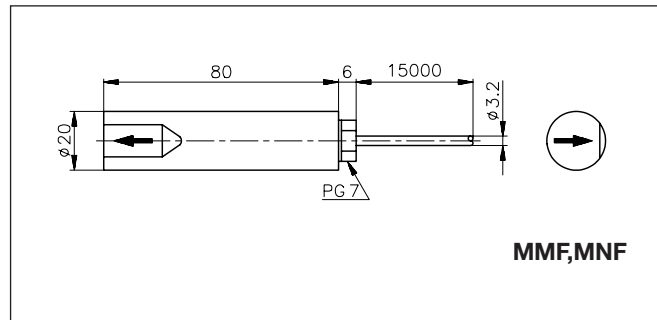
## Specifications Receiver

Rated operational volt. (U <sub>e</sub> )	8 VDC supplied by amplifier
Supply current (I <sub>o</sub> )	≤ 10 mA
Sensitivity	Adjustable on amplifier
Optical angle	± 7.5°
Ambient light	Max. 50,000 lux
Operating frequency (f)	See amplifier data
Response time (t <sub>ON</sub> & t <sub>OFF</sub> )	See amplifier data
Power ON delay (t <sub>v</sub> )	See amplifier data
Indications	On amplifier

## General Specifications

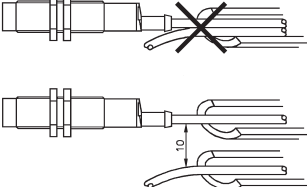
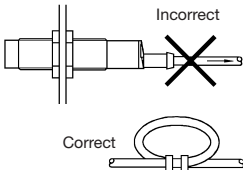
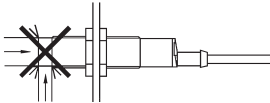
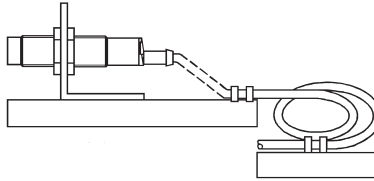
<b>Environment</b>	
Overvoltage category	III (IEC 60664/664A; 60947-1)
Pollution degree	3 (IEC 60664/664A; 60947-1)
Degree of protection	IP 66, IP 67 (IEC 60529; 60947-1)
<b>Temperature</b>	
Operating	-20° to +60°C (-4° to +140°F)
Storage	-40° to +80°C (-40° to +176°F)
<b>Vibration</b>	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
<b>Shock</b>	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
<b>Dielectric voltage</b>	500 VAC (rms)
<b>Housing material</b>	
Body	Polycarbonate, black
Front	Polycarbonate, black
Back	Polyamide, black
Mounting bracket DB4	Polycarbonate, black
<b>Connection cable</b>	
Emitter MMFT, MNFT:	Grey, 15 m oilproof PVC, 1 x 0.25 mm <sup>2</sup> shielded
Receiver MMFR, MNFR:	Black, 15 m oilproof PVC, 1 x 0.25 mm <sup>2</sup> shielded
<b>Weight (cable incl.)</b>	300 g
<b>CE-marking</b>	Yes

## Dimensions



**Note:** Operation diagram and truth table please refer to amplifier data sheet, type S1420 or S1421.

## 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>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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## Wiring Diagrams

Please refer data sheet type S1420, 1421.

## Delivery Contents

- Photoelectric switch: MNFT15 and MNFR15 or MMFT15 and MMFR15
- 2 mounting brackets DB4
- **Packaging:** plastic bag, emitter and receiver packed together

## Accessories

