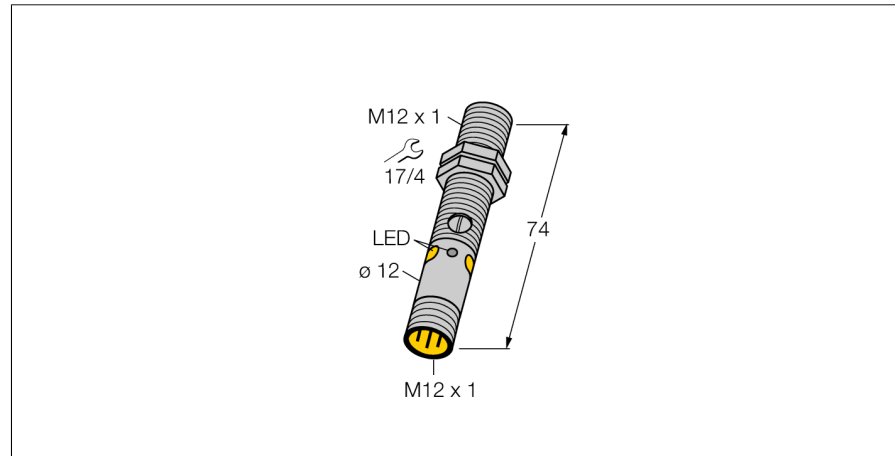
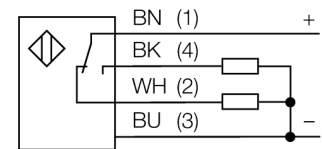


**Photoelectric sensor  
diffuse mode sensor  
M12PDQ8**



- Male M12 x 1, 4-pin
- Protection classes IP67 / IP68
- Metal housing
- LED all-round visible
- Indication of insufficient excess gain
- Sensitivity adjustable via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

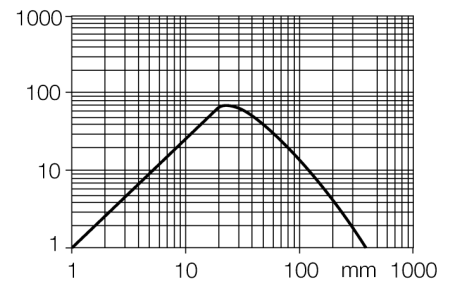
**Wiring diagram**



**Functional principle**

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects a sufficient amount of light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the reflectivity of the target.

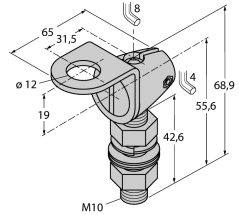
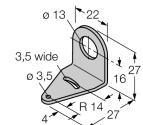
**Excess gain curve**



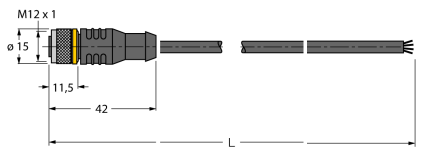
<b>Type code</b>	M12PDQ8
Ident no.	3077179
<b>Operating mode</b>	diffuse mode sensor
Light type	red
Wavelength	660 nm
Range	0...400 mm
Ambient temperature	-20...+60 °C
<b>Operating voltage</b>	10...30VDC
Residual ripple	< 10 % U <sub>s</sub>
DC rated operational current	≤ 100 mA
No-load current I <sub>0</sub>	≤ 20 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	changover contact, PNP
Switching frequency	≤ 1000 Hz
Readiness delay	≤ 100 ms
<b>Design</b>	threaded barrel, M12
Dimensions	74 mm
Housing diameter	12 mm
Housing material	metal, CuZn, nickel-plated
Lens	plastic, PMMP
Connection	male, M12 x 1
Protection class	IP68
MTTF	46 years acc. to SN 29500 (Ed. 99) 40 °C
<b>Power-on indication</b>	LED green
Switching state	LED yellow
Error indication	LED green flashing
Excess gain indication	LED yellow flashing

**Photoelectric sensor  
diffuse mode sensor  
M12PDQ8**

**Accessories**

Type code	Ident no.	Description	Dimension drawing
SMB12FAM10	3011221	Mounting bracket, stainless steel, for M12, M10 x 1.5 thread	
SMB12MM SMBQS12PD	3027635 3059606	Mounting bracket, stainless steel, for M12 Mounting bracket; material VA 1.4401, for Q12 & M12 series	

**Wiring accessories**

Type code	Ident no.	Description	Dimension drawing
RKC4.4T-2/TEL	6625013	Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>	
WKC4.4T-2/TEL	6625025	Connection cable, female M12, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>	