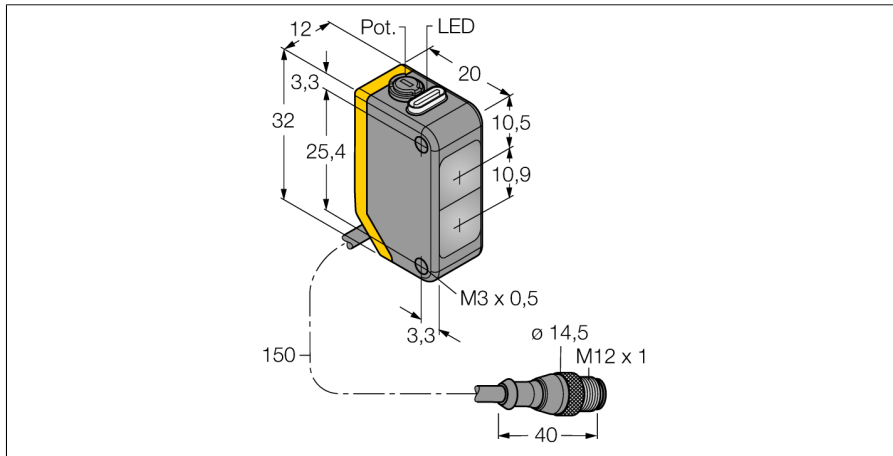


**Photoelectric sensor
diffuse mode sensor
Q20PDQ5**



- Cable with male end, M12 x 1, 4-pin, PVC, 150 mm
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

Wiring diagram



Type code	Q20PDQ5
Ident no.	3078191
Operating mode	diffuse mode sensor
Light type	red
Wavelength	630 nm
Range	1...250 mm
Ambient temperature	-20...+60 °C
Operating voltage	10...30VDC
Residual ripple	< 10 % U _s
DC rated operational current	≤ 100 mA
No-load current I ₀	≤ 18 mA
Reverse polarity protection	yes
Output function	changover contact, PNP
Switching frequency	≤ 600 Hz
Readiness delay	≤ 100 ms
Design	rectangular, Q20
Dimensions	20 x 12 x 32 mm
Housing material	plastic, ABS
Lens	plastic, acrylic
Connection	cable with connector, PVC, M12 x 1
Cable length	0.15 m
Protection class	IP67
Power-on indication	LED green
Switching state	LED yellow
Error indication	LED green flashing
Excess gain indication	LED yellow flashing

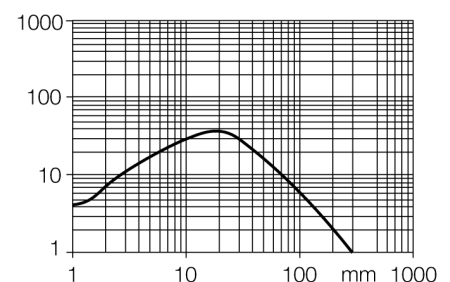
Functional principle

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 sensing range of diffuse mode sensors thus largely depends on the reflectivity of the target.

Excess gain curve

Excess gain in relation to the distance

Excess gain curve



**Photoelectric sensor
diffuse mode sensor
Q20PDQ5**

TURCK

Industrial
Automation

Accessories

Type code	Ident no.	Description	Dimension drawing
SMBQ20H	3079041	Mounting bracket, stainless steel, horizontally mounted, for Q20	
SMBQ20L	3079040	Mounting bracket, stainless steel, rectangular, for Q20	
SMBQ20LV	3079042	Mounting bracket, stainless steel, rectangular, for Q20	
SMBQ20U	3079043	Protective housing, stainless steel, for Q20	

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 www.turck.com	

Photoelectric sensor
diffuse mode sensor
Q20PDQ5

Wiring accessories

Type code	Ident no.	Description	Dimension drawing
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 www.turck.com	