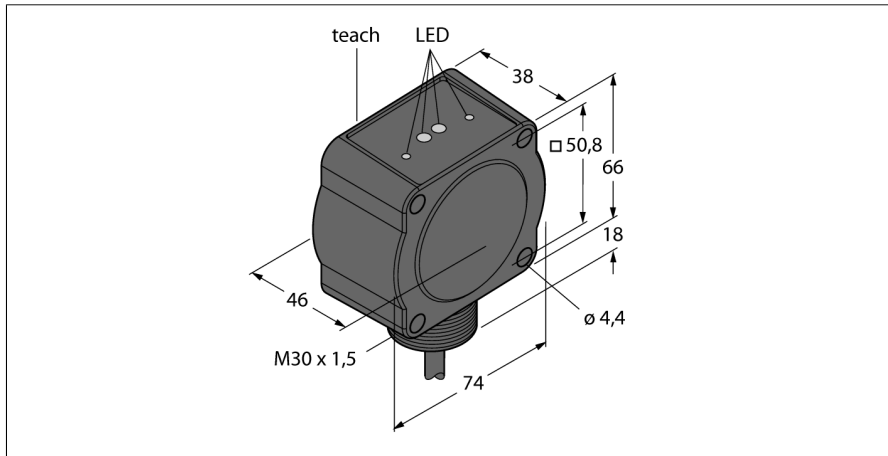
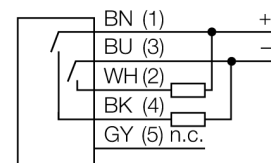


**Radar sensor
QT50R-EU-AFH**



- **FMCW radar (frequency-modulated continuous wave radar), detects stationary and moving objects**
- **Max. range 24 m**
- **Configuration via DIP switch**
- **Cable, 2 m**
- **Protection class IP67**
- **Approved for Europe with the exception of the UK**
- **Operating voltage 12...30 VDC**
- **PNP/NPN switching output**

Wiring diagram



Functional principle

An FMCW radar is a frequency modulated continuous wave radar. FMCW is the English abbreviation for Frequency Modulated Continuous Wave. Non-modulated continuous wave radar devices have a disadvantage that the distance cannot be measured as there is no time reference. A time reference of this nature for measurement of the distance of stationary objects can be generated with the assistance of frequency modulation. Using this method a signal is emitted which continually changes the frequency. A periodic, linear frequency which varies upwards and downwards is used to limit the frequency range and to simplify the signal evaluation. The factor for the rate of change df/dt remains constant. If an echo signal is received, the shift is offset just like a pulse radar and the amount of frequency shift is therefore directly related to the distance travelled.

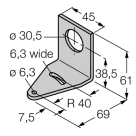
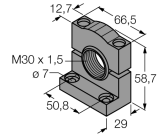
Type code	QT50R-EU-AFH
Ident no.	3025366
Range	1000...24000 mm
Ambient temperature	-40...+65 °C
Operating voltage	12...30VDC
No-load current I_0	≤ 100 mA
Short-circuit protection	yes/ cyclic
Reverse polarity protection	yes
Output function	NO/NC programmable, PNP/NPN
Design	rectangular, QT50
Housing material	plastic, ABS
Connection	cable
Cable length	2 m
Protection class	IP67
MTTF	100 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED green
Switching state	LED yellow
Excess gain indication	LED red

Radar sensor QT50R-EU-AFH

TURCK

Industrial
Automation

Accessories

Type code	Ident no.	Description	Dimension drawing
SMB30A	3032723	Mounting bracket, stainless steel, for sensors with 30 mm thread	
SMB30MM	3027162	Mounting bracket, rectangular, stainless steel, for sensors with 30 mm thread, wide holes for accurate alignment	
SMB30SC	3052521	Mounting bracket, PBT black; for 30 mm thread; with 4 screws M5 x 0.8	

Function accessories

Type code	Ident no.	Description	Dimension drawing
QT50RCK	3079975	Schutzkappe, verhindert Wasserfilm oder Eisbildung auf der aktiven Fläche, benötigt bei Regen oder Schnee	
BRTR-CC20E	3011118	Radar Reflektor, großer Tetraeder, geschützt durch Plastikgehäuse, 7-fache Funktionsreserve bei 6 m Abstand, optional	