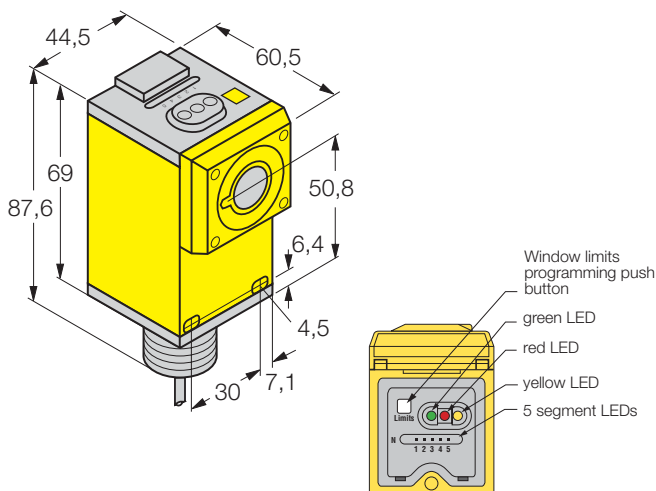


Remote Ultrasonic Sensors

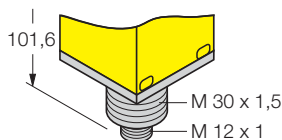


Dimensions [mm]

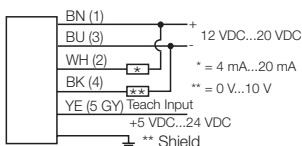
● Cable



● Connector



Wiring



** Shield wire should be connected to earth ground or DC common

Q45UR Series DC-Operation with Digital Output

Supply voltage U_B	12 VDC...24 VDC
Ripple V_{pp}	$\leq 10\%$
No load current	≤ 100 mA
Protection	short-circuit reverse polarity
Output	npn, pnp selectable N.C./N.O.
Transistor output	
Continuous load current	≤ 150 mA
Sensing window	
Range	50 mm...250 mm (Teach-mode setup)
Repeat accuracy	$\pm 0,2\%$ of sensing distance (either window or set point)
Temperature drift	$\pm 0,03\%/^{\circ}\text{C}$ ($0^{\circ}\text{C}...+50^{\circ}\text{C}$) $\pm 0,05\%/^{\circ}\text{C}$ ($-25^{\circ}\text{C}...+70^{\circ}\text{C}$)
Response speed	40 ms or 160 ms (switch selectable)
Material	
Controller housing	Thermoplastic polyester
Controller transparent cover	Acrylic
Protection class (IEC 60529/EN 60529)	IP67
Temperature range	$-25^{\circ}\text{C}...+70^{\circ}\text{C}$
Cable	2 m, PVC, $5 \times 0,34$ mm ²
Connector	<i>Euro-Style</i> 5-pin
Indicator LED's	
Yellow	output status
Green	power-on
Green flashing	output overload
Red flashing	target within sensing window (flashing frequency in proportion to the received signal strength)
5 segment red LED	target position

Accessories

Brackets, Controller

SMB30MM	37 849 00	angle bracket
SMB30S	34 706 00	swivel mount bracket
SMB30C	34 701 00	split clamp bracket

Connectors

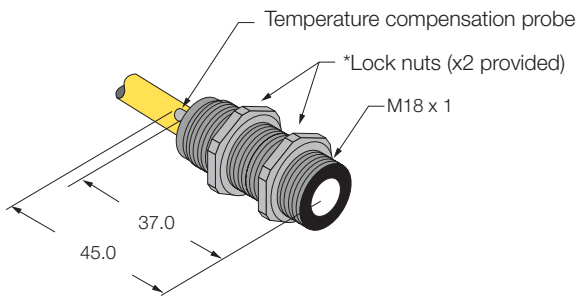
MQDEC2-506	30 608 10	straight type
MQDEC2-506RA	30 608 13	right-angled type

Transducers for Remote Ultrasonic Sensors Q45UR Series



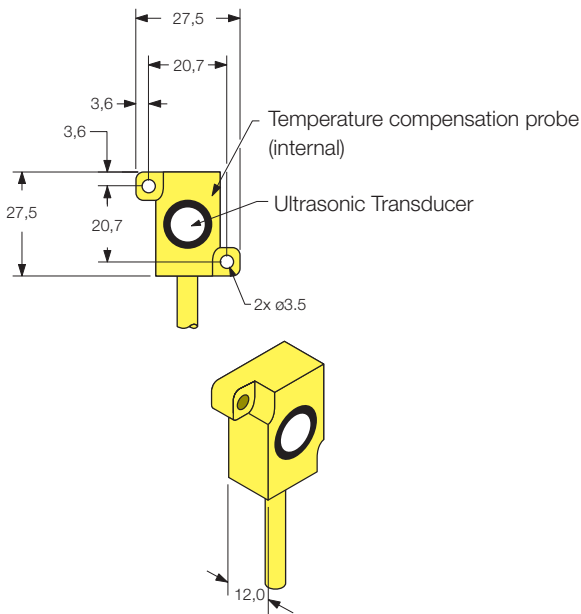
Dimensions [mm]

● M18C2.0 and S18C2.0 sensors



*S18C2.0 sensor has locknuts with grip

● Q13C2.0



M18C2.0

Material	stainless steel (x2 locknuts included)
Front cover	ULTEM®
Rear cover	TEXIN®
Protection class (IEC 60529/EN 60529)	IP65
Cable	2 m, PVC, 4 x 0,34 m2
Connector	<i>Euro-Style</i> 5-pin
Ultrasonic beam angle	3,5°

S18C2.0

Material	thermoplastic polyester (x2 locknuts with grip included)
Front cover	ULTEM®
Rear cover	TEXIN®
Protection class (IEC 60529/EN 60529)	IP65
Cable	2 m, PVC, 4 x 0,34 m2
Connector	<i>Euro-Style</i> 5-pin
Ultrasonic beam angle	3,5°

Q13C2.0

Material	glass reinforced thermoplastic polyester, epoxy encapsulated
Protection class (IEC 60529/EN 60529)	IP65
Cable	2 m, PVC, 4 x 0,34 m2
Connector	<i>Euro-Style</i> 5-pin
Ultrasonic beam angle	3,5°

Accessories

Brackets, Sensors

SMB18A	34 702 00	angle bracket
SMB18C	34 700 00	split clamp bracket
SMB18S	34 707 00	swivel mount bracket

Remote Ultrasonic Sensors

Adjustment of the sensing distance (open cover on top of the controller housing)

Push Button	Status indication
Step 1 Hold push button for approx. 2 s until green LED turns off.	green LED first ON; then goes OFF yellow LED on - indicates TEACH mode red LED flashes in direct proportion to received signal strength when target is detected; LED OFF if no target is detected
Step 2 First limit (near or far) Place target at first limit and click push button less than 2 s	green LED off yellow LED flashes at 2 Hz - indicates ready for TEACHING red LED on shortly; then flashes in direct proportion to the received signal strength
Step 3 * Second limit (near or far) Place target at second limit and click push button less than 2 s	green LED first off; then glows steadily to indicate RUN mode yellow LED on shortly; then LED on or off according to output status (RUN mode) red LED on shortly; then flashes in direct proportion to the received signal strength (RUN mode)

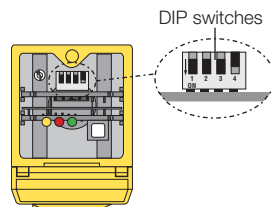
* Target positions must be at least 5 mm apart. If the target is held at the same position a sensing window is established centered around the target and as wide as specified by DIP switch 2 and 3.

PQ45UR DIP-switch setting configurations (DIP switches beneath cover on top of the controller housing)

Switch	Position	Function	Description
1	ON	N.C.	Output energizes when target is not sensed within the window limits.
	OFF *	N.O.	Output energizes when target is sensed within the window limits.
2 - 3**	OFF - OFF	1 mm	Window size; sensing set point $\pm 0,5$ mm
	ON - OFF	2 mm	Window size; sensing set point $\pm 1,0$ mm
	OFF - ON *	3 mm	Window size; sensing set point $\pm 1,5$ mm
	ON - ON	4 mm	Window size; sensing set point $\pm 2,0$ mm
4	ON	40 ms	Response time
	OFF *	160 ms	Response time

* Factory programming

** If two different positions are used, this setting is ignored.



Remote Ultrasonic Sensors

Q45UR Series DC-Operation with Digital Output

<i>Model</i>	<i>Ident number</i>	<i>Type</i>	<i>Programmable range [mm]</i>	<i>Switching hysteresis [mm]</i>	<i>Output</i>	<i>Connection</i>
Q45UR3-BA63-C	30 521 34	controller			pnP, npN	cable
Q45UR3-BA63-CQ6	30 530 11	controller			pnP, npN	connector
M18C2.0	30 530 22	sensor	50...250	0,5		
Q13C2.0	30 594 24	sensor	50...250	0,5		
S18C2.0	30 568 27	sensor	50...250	0,5		
Q45UR3-BA63-CK	30 537 42	kit with M18C2.0	50...250	0,5	pnP, npN	cable
Q45UR3-BA63-CKQ	30 594 25	kit with Q13C2.0	50...250	0,5	pnP, npN	cable
Q45UR3-BA63-CKS	30 594 28	kit with S18C2.0	50...250	0,5	pnP, npN	cable
Q45UR3-BA63-CQ6K	30 537 41	kit with M18C2.0	50...250	0,5	pnP, npN	connector
Q45UR3-BA63-CQ6KQ	30 594 27	kit with Q13C2.0	50...250	0,5	pnP, npN	connector
Q45UR3-BA63-CQ6KS	30 594 30	kit with S18C2.0	50...250	0,5	pnP, npN	connector

All sensors have **temperature compensation**



These sensors do not include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can result in either an energised or de-energised output condition. These products should not be used as sensing devices for personnel safety.