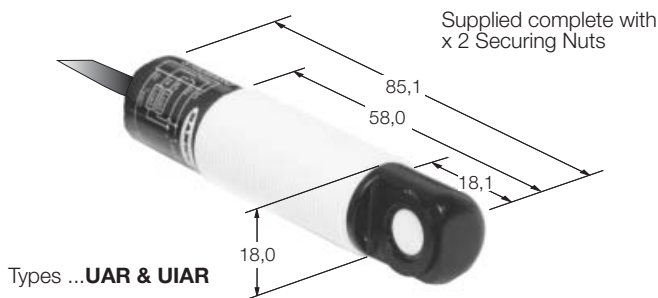
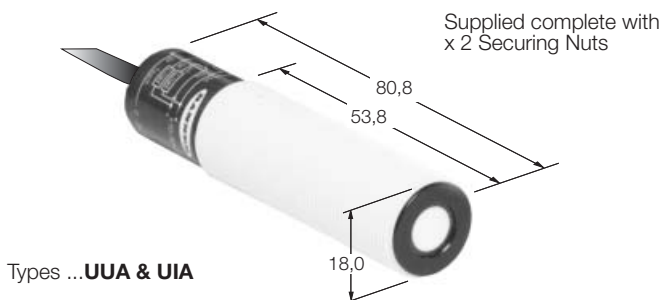


Ultrasonic Sensors

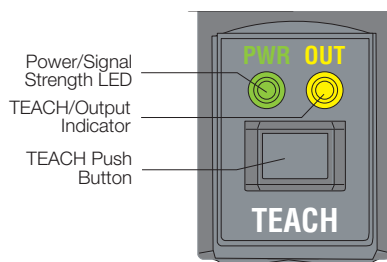
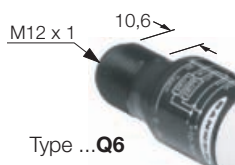


Dimensions [mm]

● With Cable

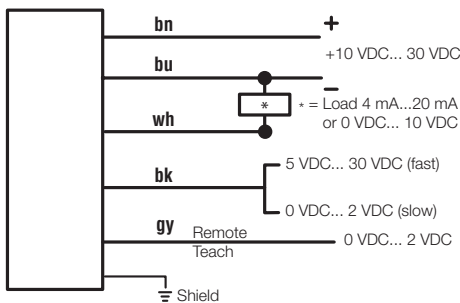


● With Connector



Sensor Controls & Indications

Wiring



U-Gage™ S18U Series With Analogue Output

GENERAL

Supply voltage U_s	10 VDC...30 VDC
ripple V_{pp}	≤ 10 %
no load current	≤ 65 mA
Protection	short-circuit reverse polarity
Output	0 VDC...10 VDC or 4 mA...20 mA (depending on model)
load current	≤ 40 mA
load impedance	≤ 1 kΩ
Sensing window (adjustable)	30 mm...300 mm with Teach-in-function (see table overleaf)
Minimum window size	5 mm
Resolution	for 2,5 ms response: ± 1 mm for 30 ms response: ± 0,5 mm
Linearity	for 2,5 ms response: ± 1 mm for 30 ms response: ± 0,5 mm
Temperature effect	0,02%/°C
Response time	2,5 ms/30 ms (connection dependant)
Material	housing: ABS/Polycarbonate switch: Santoprene Lightpipe indicators: Acrylic
Protection class	IEC IP67
Temperature range	-20...+60 °C
Cable	2 m, PVC, 5 x 0.34 mm ²
Connector	5-pin M12 x 1

INDICATOR LED'S (see also opposite)

Teach/Output (yellow/red)

Yellow ON	Target is within taught limits
OFF	Target is outside window limits
Red ON	Sensor is in Teach mode

Power/Signal Strength

Green ON	Sensor operating normally, good target
Red ON	Target is weak or outside sensing range
OFF	Power OFF

ACCESSORIES

Brackets

SMB18A	34 702 00	mounting bracket 90°
SMB18SF	30 525 19	mounting bracket swivel polyester
SMB18UR	30 525 17	mounting bracket universal

Connectors

MQDEC2-506	30 608 10	5-pin M12 x 1 straight
MQDEC2-506RA	30 608 13	5-pin M12 x 1 right angle

Ultrasonic Sensors

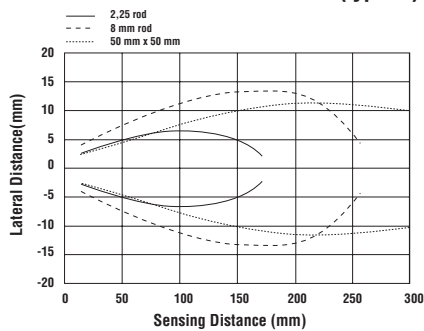
U-Gage™ S18U Series

With Analogue Output

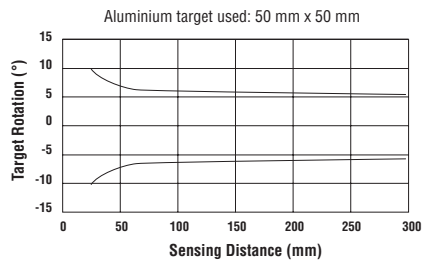
Type	Sensing range (mm)	Response time (ms)	Connection	Ident. number
SI8UUA	30...300	2,5/30	cable	30 026 99
SI8UUAQ	30...300	2,5/30	connector	30 027 00
SI8UIA	30...300	2,5/30	cable	30 027 02
SI8UIAQ	30...300	2,5/30	connector	30 027 03
S18UUAR	30...300	2,5/30	cable	30 027 05
S18UUARQ	30...300	2,5/30	connector	30 027 06
S18UIAR	30...300	2,5/30	cable	30 0 27 08
S18UIARQ	30...300	2,5/30	connector	30 027 09

S18U RESPONSE CURVES




S18U Effective Beam Pattern (typical)



S18U Maximum Target Rotation Angle



Teaching Minimum & Maximum Limits

	Push Button	Result
Programming Mode	<ul style="list-style-type: none"> Push and hold push button  	Output LED: ON Red Power LED: ON Green (good signal) or ON Red (no signal)
Teach First Limit	<ul style="list-style-type: none"> Position the target for the first limit 	Power LED: Must be ON Green
	<ul style="list-style-type: none"> "Click" the push button  	Teach accepted (Sensor learns the 0 VDC or 4 mA limit) Output LED: flashing Red Teach not accepted Output LED: ON Red
Teach Second Limit	<ul style="list-style-type: none"> Position the target for the second limit 	Power LED: Must be ON Green
	<ul style="list-style-type: none"> "Click" the push button  	Teach accepted (Sensor learns the 10 VDC or 20 mA limit) Output LED: Yellow or OFF Teach not accepted Output LED: flashing Red

General Notes:

The Auto-Window feature is used to teach a sensing distance threshold centred within a fixed sensing window (a 100 mm window centred on the position taught). This procedure centres the analogue output on the taught position at approximately 5VDC or 12 mA. See Installation Guide for more information.

Push button lockout Enables or disables the push button to prevent anyone on the production floor from adjusting any of the programming settings.

Teaching can also be carried out via the Remote Line. See Installation Guide for more information.

The U gage S18U sensor may be programmed for either a positive or a negative output slope depending on which limit is taught first.

Subject to changes without notice • Edition 04.03 • P/N ED137



IMPORTANT SAFETY WARNING! 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.