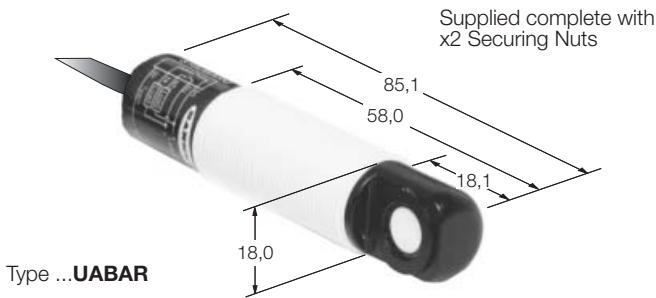
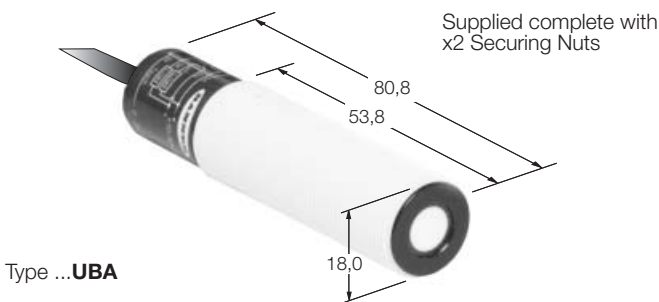


## Ultrasonic Sensors

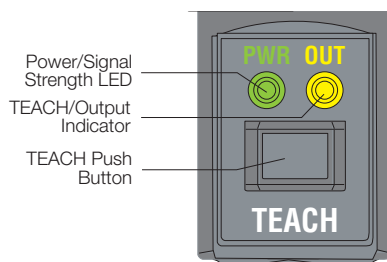
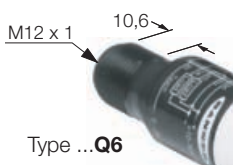


### Dimensions [mm]

#### ● With Cable

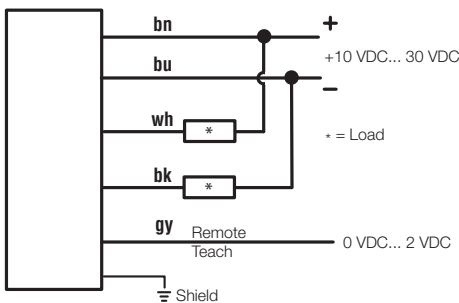


#### ● With Connector



Sensor Controls & Indications

### Wiring



## U-Gage™ S18U Series With Digital Output

### GENERAL

Supply voltage $U_s$	10 VDC...30 VDC
ripple $V_{pp}$	$\leq 10 \%$
no load current	$\leq 65 \text{ mA}$
Protection	short-circuit reverse polarity

### Output

transistor output	PNP or NPN
response time delay	300 ms
continuous load current	$\leq 100 \text{ mA}$
Ultrasonic frequency	300 kHz
Sensing window (adjustable)	30 mm...300 mm with Teach-in-function (see table overleaf)
Repeat accuracy	0,5 mm
Hysteresis	0,7 mm
Minimum window size	5 mm
Temperature effect	0,02%/°C
Response time	5 ms
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 <sup>2</sup>
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 (N.O. mode)
Red ON	Sensor is in Teach mode (N.O. 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

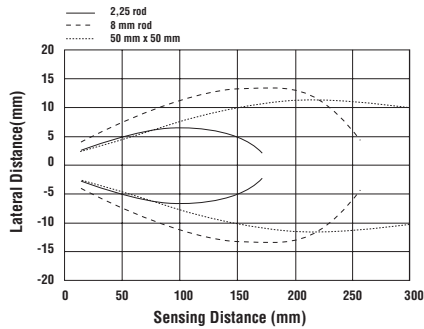
## U-Gage™ S18U Series

### With Digital Output

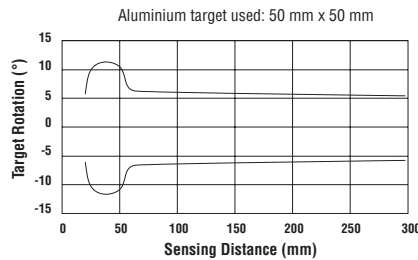
Type	Sensing range (mm)	Response time (ms)	Digital Output	Connection	Ident. number
<b>S18UBA</b>	30...300	5	PNP/NPN	cable	30 027 11
<b>S18UBAQ</b>	30...300	5	PNP/NPN	connector	30 027 12
<b>S18UBAR</b>	30...300	5	PNP/NPN	cable	30 027 14
<b>S18UBARQ</b>	30...300	5	PNP/NPN	connector	30 027 15

#### S18U RESPONSE CURVES




**S18U Effective Beam Pattern (typical)**



**S18U Maximum Target Rotation Angle**



#### Teaching Minimum & Maximum Limits

	Push Button	Result
<b>Programming Mode</b>	<ul style="list-style-type: none"> <li>Push and hold push button </li> </ul>	<b>Output LED:</b> ON Red <b>Power LED:</b> ON Green (good signal) OR ON Red (no signal)
<b>Teach First Limit</b>	<ul style="list-style-type: none"> <li>Position the target for the first limit</li> </ul>	<b>Power LED:</b> Must be ON Green
	<ul style="list-style-type: none"> <li>“Click” the push button </li> </ul>	<b>Teach accepted</b> <b>Output LED:</b> flashing Red <b>Teach not accepted</b> <b>Output LED:</b> ON Red
<b>Teach Second Limit</b>	<ul style="list-style-type: none"> <li>Position the target for the second limit</li> </ul>	<b>Power LED:</b> Must be ON Green
	<ul style="list-style-type: none"> <li>“Click” the push button </li> </ul>	<b>Teach accepted</b> <b>Output LED:</b> Yellow or OFF <b>Teach not accepted</b> <b>Output LED:</b> flashing Red

**General Notes:**

When using the Auto-Window feature, teaching the same limit twice for the same output automatically centres a 10 mm window on the taught position. 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.

Subject to changes without notice • Edition 04.03 • P/N ED139



**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.