



Ultrasonic sensor M18 short design IO-Link

Thanks to the compact and robust design, the U*18S is the optimum solution for difficult application conditions. In combination with selectable output forms, the space-saving version offers flexibility for measuring and switching applications.

In addition, this series can be used either as a diffuse reflection sensor or as a retro-reflective sensor.

Product characteristics

- Simple and fast configuration with IO-Link, teach-in button or wire
- Can be used as a diffuse reflection sensor or retro-reflective sensor
- Reliable measuring regardless of transparency, gloss, surface characteristics and material colour
- Resistant to contamination, moisture, dust and mist
- Stainless steel housing material (DIN 1.4404) or plastic (PBT)
- Two different operating ranges up to 1.2 m
- Switching output NPN/PNP, analogue output
- Parameterization via programming cable
- Temperature compensation

Technical drawing

IMAGE 1/3

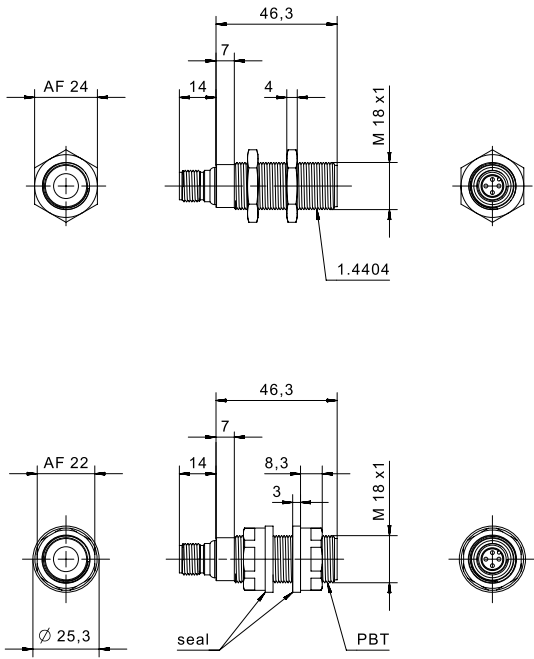


IMAGE 2/3

male M12

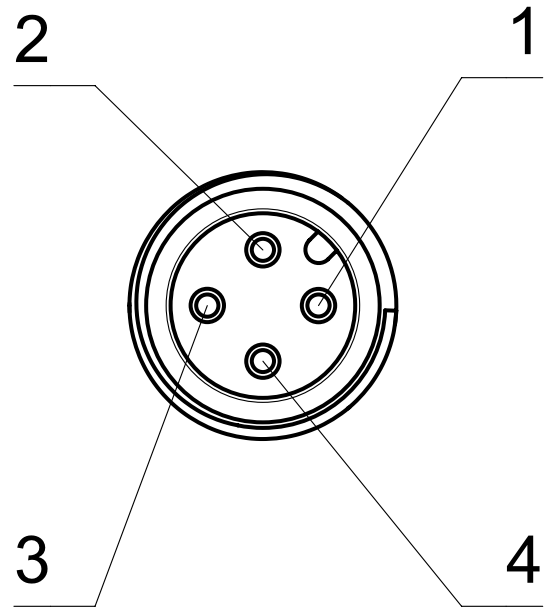
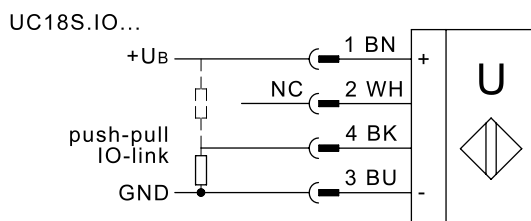


IMAGE 3/3



Electrical data

Attribute	UC18SMIO030	UC18SMIO120	UC18SPI0030	UC18SPI0120
Continuous current	0.1 A			
Switching frequency	10 Hz	3 Hz	10 Hz	3 Hz
Polarity reversal protection	yes			
Switching output	Push-Pull			
Operating voltage min.	10 V DC			
Operating voltage max.	30 V DC			
Current consumption	< 35 mA			
Technology	Ultrasonic			
Operating frequency	300 kHz	200 kHz	300 kHz	200 kHz
Outputs	Push-Pull (IO-Link)			
Operating Mode	diffuse reflection sensor/retro-reflective sensor			
Sensing range	40...300 mm	80...1200 mm	40...300 mm	80...1200 mm
Opening angle of sound cone	7 ±2 °	8 ±2 °	7 ±2 °	8 ±2 °
Ripple	5 %			
Repeating accuracy	1 %			
Resolution	1 mm			
Thermal drift	±2 %			
Overload protection	yes			
Short-circuit protection	yes			
Synchronization	no			
Multiplexing	no			
Linearity error	1 %			
IO-Link	yes			
Minimum distance object/reflector (retro-reflective sensor)	10 %			
Blind zone	40 mm	80 mm	40 mm	80 mm

Electrical data

Attribute	UC18SMIO030	UC18SMIO120	UC18SPIO030	UC18SPIO120
Start-up time digital output	600 ms			
Minimum distance sensor/reflector (retro-reflective sensor)	50 mm	100 mm	50 mm	100 mm
EMC	EN 60947-5-2			
MTTF	216 a			

Properties

Attribute	UC18SMIO030	UC18SMIO120	UC18SPIO030	UC18SPIO120
Accessories supplied	2 Edelstahlmuttern SW24		2 Kunststoffmuttern SW22 + 2 Gummischeiben	
Controls	IO-Link			
Indicators	Switching state: 1 LED yellow, Echo: 1 LED green			
Application specific	IO-Link			

Mechanical data

Attribute	UC18SMIO030	UC18SMIO120	UC18SPIO030	UC18SPIO120
Dimensions	M18x1; L=60,3mm			
Housing design	cylindrical			

Material information

Attribute	UC18SMIO030	UC18SMIO120	UC18SPIO030	UC18SPIO120
Housing material	Edelstahl 1.4404		PBT	
Material sound transducer	Epoxy resin with glass balls			

Environmental conditions

Attribute	UC18SMI0030	UC18SMI0120	UC18SPI0030	UC18SPI0120
Protection class	IP67 DIN EN 60529			
Operating temperature min.	-20 °C			
Max. operating temperature	70 °C			
Min. storage temperature	-30 °C			
Max. storage temperature	80 °C			
Temperature compensation	yes			

Installation

Attribute	UC18SMI0030	UC18SMI0120	UC18SPI0030	UC18SPI0120
Thread	M18			
Torque	50 N m		1 N m	
Weight	80 g		65 g	

Connection

Attribute	UC18SMI0030	UC18SMI0120	UC18SPI0030	UC18SPI0120
Connector type	M12 4-pol.			

Approvals

Attribute	UC18SMI0030	UC18SMI0120	UC18SPI0030	UC18SPI0120
CE label	yes			
UL certification	yes			
CCC certification	<36V ja			

IO-Link

Attribute	UC18SMI0030	UC18SMI0120	UC18SPI0030	UC18SPI0120
Transmission rate	38400 bit/s			
Master port class	Portklasse A			
SIO mode	yes			
Cycle time	3,2 ms	16 ms	3,2 ms	16 ms
Process data width	32 bit			
IO-Link version	1.1			