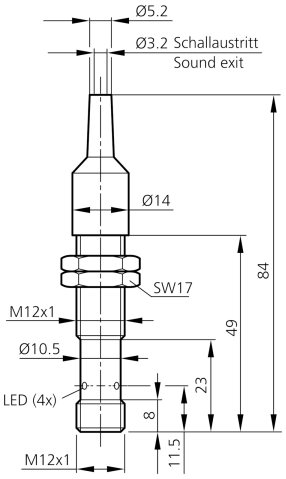
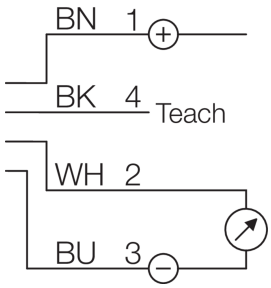
212880
US 12 M 150 FB IU-B4
Ultrasonic sensor

- IO-Link
- Configurable as an ultrasonic sensor or barrier
- 3 different teach modes
- Working range adjustable
- Very narrow detection lobe / no blind area due to focus nozzle
- Switching functions: Closer/opener, window function teach-able
- Resistant to dirt
- Small design
- Robust metal housing
- Protection class IP 67





BK: black BN: brown BU: blue WH: white

Function

NO+NC mA V IO-Link

Technical data (typ.)	+20°C, 24 V DC
Electrical features	
Service voltage	18 … 30 V DC
No-load current (max.)	40 mA (24 V DC)
Inverse polarity protection	yes, except for the analog output PIN2
Short-circuit protection	Yes
Insulation voltage endurance	500 V
Mechanical features	
Housing dimensions	M12 x 85 mm
Thread	M12 x 1
Housing length	85 mm
Transmission exit	axial
Assembly distance (sensor to sensor)	60 mm
Housing material	Brass (CuZn, nickel-plated)
Material	Epoxy resin, PUR (Transducer surface)
Weight	30 g
Certifications, approvals	
Protection class	III, operation on protective low voltage
Approvals	UL

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Technical data (typ.)	+20°C, 24 V DC
General features	
Operating principle	Ultrasonic sensor, Ultrasonic barrier
Evaluation	digital, analog (With IO-Link)
Design	Thread
Characteristics	IO-Link, Focusing nozzle
Parallel operation possible	Yes
Functional scope	
Operation modes	STANDARD, Master / slave function (synchronization or multiplex operation)
Scope of delivery	Sensor, 2 x M12 nuts
Functions	Teach, Out 1, IO-Link, multiplex, synchronization (PIN 4), Analog 0…10V / 4…20mA / 0…20mA (Pin 2)
Output, input, interface	
Switching output	Push-pull, 150 mA, NO/NC, switchable
Max. switch current	150 mA
Voltage drop (max.)	2 V
Analog output	0 … 10 V, 4 … 20 mA (0 ... 20 mA IO-Link)
Interface	IO-Link (V1.1, COM2 38.4 kBd, Smart Sensor Profile)
Load resistance	> 10 KΩ (0 … 10 V) / < 400 Ω (4 … 20 mA / 0 ... 20 mA)
Detection range, measuring range, tolerance limits	
Nominal switching distance (Sn)	150 mm
Range	0 … 150 mm
Adjustment range	0 … 150 mm (Teach in)
Resolution	1.0 mm (IO-Link Process Value)
Resolution analog output	0.04 mm (at max. measuring range for analog output; calculated from: [Set measuring range / 4095])
Standardized measuring plate	20 x 20 mm
Switching hysteresis (max.)	2 … 20 mm (Adjustable by IO-Link)
Reproducibility	< 0.5 mm
Linearity error	± 0.4 %
Display, operation	
Sensitivity adjustment	Remote teach
Display	LED 1x green - Status, 1x yellow - Switching output
Time behavior	
Measuring frequency	400 Hz
Ultrasonic frequency	400 kHz
Switching frequency	20 Hz
Readiness delay (max.)	300 ms
Ambient conditions	
Shock/vibration load	30 g, 11 ms / 10 … 55 Hz, 1.0 mm
Ambient temperature during operation	-25 … +70 °C
Temperature drift	0.2 %/K (uncompensated)
Temperature drift	< 1 %/Sn
Protection type	IP 67
Electrical connection	
Connection	Connector, M12, 4-pin
Accessories	
Connection cable	VKHM … /4

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More information / accessories	**https://www.di-soric.com/212880**

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