

USi-safety evaluation unit

USI-F262-2E5-V19-S2D3

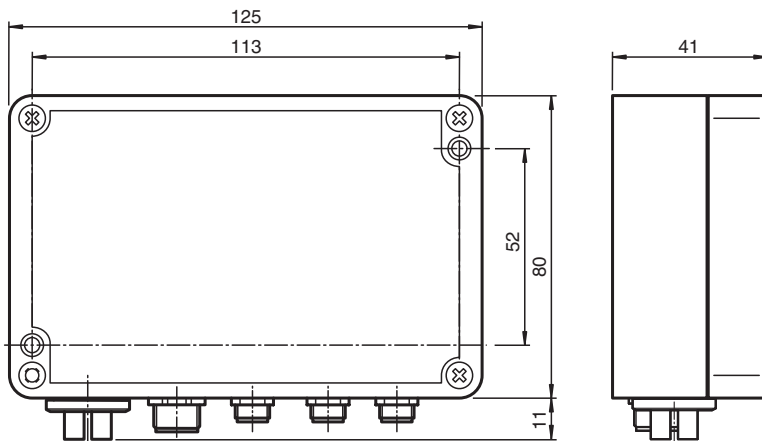


- Category 3 PL d (EN ISO 13849) for each ultrasonic transducer without redundancy
- Multiple device installation possible, no mutual interference (no cross-talk)
- Safety outputs OSSD
- Adjustable sound cone
- Temperature compensation
- Parameterization, commissioning and reporting via USi-safety parameterization software

Evaluation unit exclusively for the ultrasonic sensor system USi-safety



Dimensions



Technical Data

General specifications		
Type		USi-safety evaluation unit
Sensing range		1 ... 250 cm typ. 200 cm
Adjustment range		1 ... 250 cm
Dead band		1 cm
Object size		typ. Ø 1 cm
Transducer frequency		typ. 103 kHz
Resolution		1 cm
Target velocity		axial (max.): typ. 2 m/s (up to 2.5 m/s)
Repeat accuracy		± 0 cm
Hysteresis	H	typ. 0 cm (0 up to SP1/10)
Temperature influence		automatic or manual temperature compensation available , without temperature compensation: 0.17 %/K
Functional safety related parameters		
Performance level (PL)		PL d
Category		Cat. 3
Reaction time		typ. 100 ms (99 ... 660 ms)
Recovery time		typ. 990 ms (330 ... 3300 ms)

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Technical Data

MTTF _d		316 a
Diagnostic Coverage (DC)		87 %
Electrical specifications		
Fusing		2 A , slow
Operating voltage	U _B	21 ... 28 V DC typ. 24 V DC
No-load supply current	I ₀	≤ 150 mA
Power consumption	P ₀	max. 3.6 W
Interface		
Interface type		USB 2.0
Inputs		
Input type		2 inputs for ultrasonic transducers 1 input for temperature sensor
Output 1		
Output type		safety output OSSD Normally closed, Power FET PNP OSSD 1.1 and OSSD 1.2
Switching voltage		max. U _B
Switching current		150 mA per output
Output 2		
Output type		safety output OSSD Normally closed, Power FET PNP OSSD 2.1 and OSSD 2.2
Switching current		150 mA per output
Output 3		
Output type		Normally open/normally closed switchable, Power FET PNP signal output OUT1
Switching voltage		max. U _B
Switching current		150 mA
Output 4		
Output type		Normally open/normally closed switchable, Power FET PNP signal output OUT2
Switching voltage		max. U _B
Switching current		150 mA
Compliance with standards and directives		
Standard conformity		
Standards		IEC 60947-5-2 IEC 60204-1 EN ISO 13849 IEC 61326-3-1:2007 IEC/CISPR 11 group 1, class A
Approvals and certificates		
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		-30 ... 50 °C (-22 ... 122 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		Connector plug
Degree of protection		IP65
Connection		for power supply and outputs: connector plug M12, 8-pin, connection line max. 30 m for temperature sensor: socket M8, 6-pin for ultrasonic transducer: for each socket M8, 3-pin for parameterization: socket Mini USB
Material		
Housing		diecast aluminum
Mass		450 g
Dimensions		
Height		41 mm
Width		91 mm

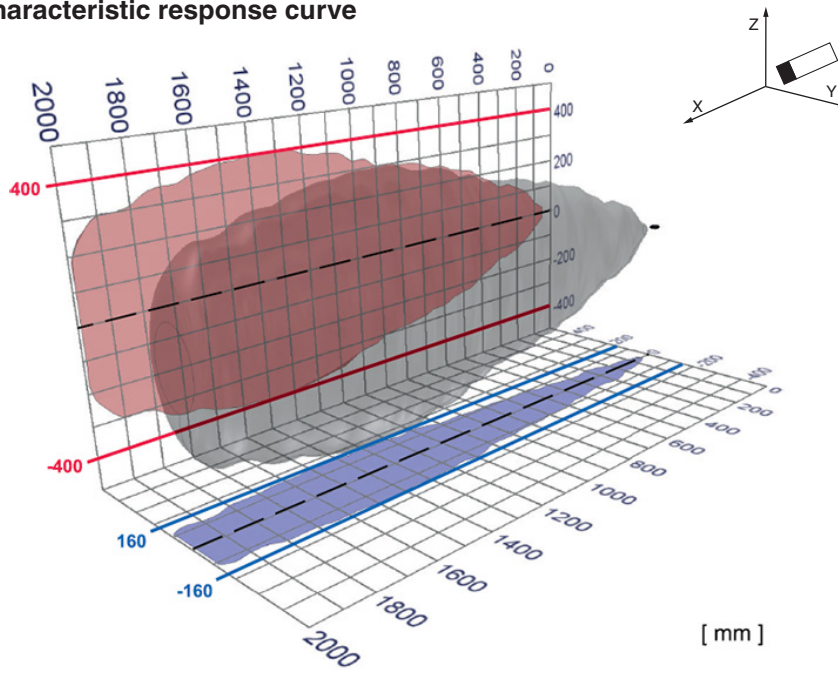
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Length	125 mm
Factory settings	
Default setting	See the original instructions

Characteristic Curve

Characteristic response curve

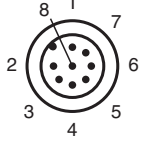


Commissioning

This component is only intended for use in conjunction with the ultrasonic sensor system USi-safety. Further details, mounting and commissioning instructions for the safe ultrasonic sensor system USi-safety can be found in the original instructions on the respective product page at www.pepperl-fuchs.com.

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Connection

Connector X1	Signal	Pin	Circular connector
Supply voltage	+U _S , -U _S	2, 7	
Safe output 1.1	OSSD 1.1	1	
Safe output 1.2	OSSD 1.2	3	
Safe output 2.1	OSSD 2.1	4	
Safe output 2.2	OSSD 2.2	5	
Signal output 1	OUT 1	6	
Signal output 2	OUT 2	8	