

## USi-safety evaluation unit

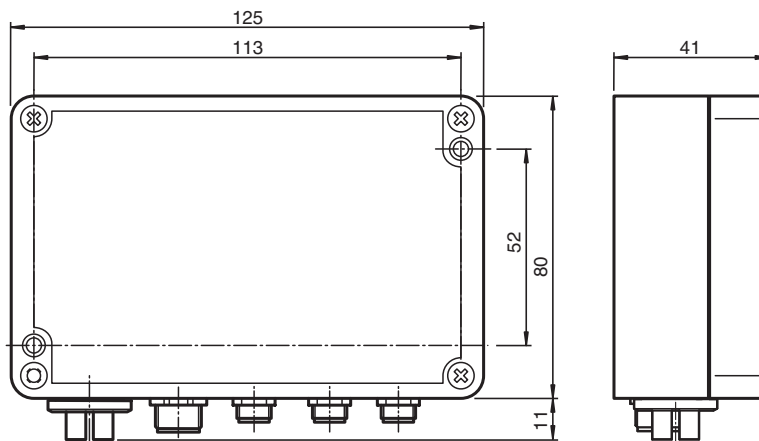
### USI-F262-2E5-V19-S2D3

- 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 )

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

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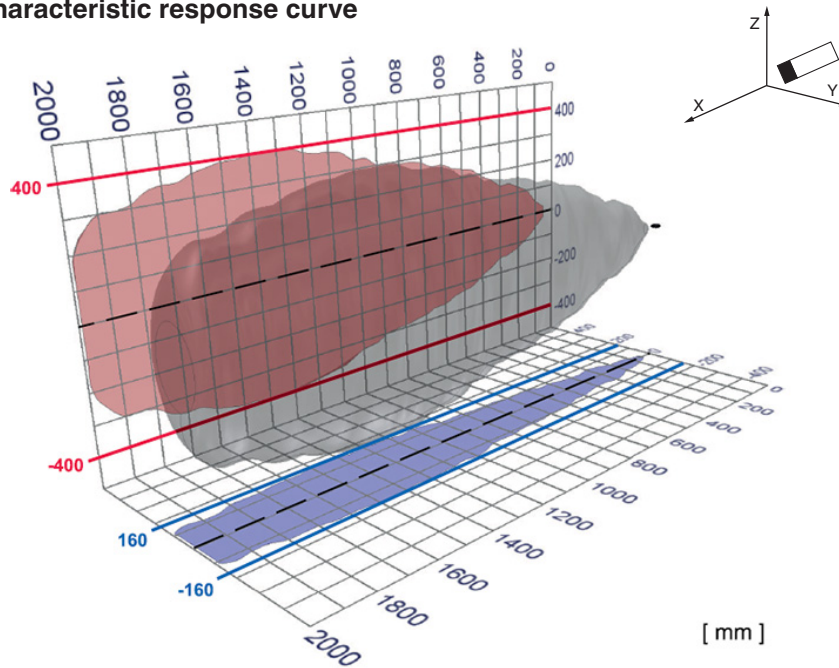
## Technical Data

Recovery time		typ. 990 ms ( 330 ... 3300 ms )
MTTF <sub>d</sub>		316 a
Diagnostic Coverage (DC)		87 %
<b>Electrical specifications</b>		
Fusing		2 A , slow
Operating voltage	U <sub>B</sub>	21 ... 28 V DC typ. 24 V DC
No-load supply current	I <sub>0</sub>	≤ 150 mA
Power consumption	P <sub>0</sub>	max. 3.6 W
<b>Interface</b>		
Interface type		USB 2.0
<b>Inputs</b>		
Input type		2 inputs for ultrasonic transducers 1 input for temperature sensor
<b>Output 1</b>		
Output type		safety output OSSD Normally closed, Power FET PNP OSSD 1.1 and OSSD 1.2
Switching voltage		max. U <sub>B</sub>
Switching current		150 mA per output
<b>Output 2</b>		
Output type		safety output OSSD Normally closed, Power FET PNP OSSD 2.1 and OSSD 2.2
Switching current		150 mA per output
<b>Output 3</b>		
Output type		Normally open/normally closed switchable, Power FET PNP signal output OUT1
Switching voltage		max. U <sub>B</sub>
Switching current		150 mA
<b>Output 4</b>		
Output type		Normally open/normally closed switchable, Power FET PNP signal output OUT2
Switching voltage		max. U <sub>B</sub>
Switching current		150 mA
<b>Compliance with standards and directives</b>		
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
<b>Approvals and certificates</b>		
CCC approval		CCC approval / marking not required for products rated ≤36 V
<b>Ambient conditions</b>		
Ambient temperature		-30 ... 50 °C (-22 ... 122 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
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
<b>Material</b>		
Housing		diecast aluminum
Mass		450 g
<b>Factory settings</b>		
Default setting		See the original instructions

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## Characteristic Curve







### Characteristic response curve



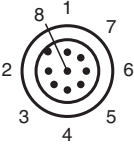
## Commissioning

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](http://www.pepperl-fuchs.com).

## Matching System Components

	<b>USI2500-27X13E-1,5M-V3</b>	Ultrasonic transducer with cable 1.5 m, exclusively for the USi-safety evaluation unit
	<b>USI2500-27X13E-3M-V3</b>	Ultrasonic transducer with cable 3 m, exclusively for the USi-safety evaluation unit
	<b>V19-G-BK2M-PUR-U/ABG</b>	Female cordset single-ended M12 straight A-coded, 8-pin, PUR cable black, shielded, UL approved
	<b>USI-MH-27X13-V-01</b>	Vertical mounting bracket exclusively for the USi-safety ultrasonic transducer
	<b>USI-MH-27X13-H-01</b>	Horizontal mounting bracket exclusively for the USi-safety ultrasonic transducer
	<b>USI-TEMP-1,5M-V312</b>	Temperature sensor exclusively for the USi-safety evaluation unit

Connection

Connector X1	Signal	Pin	Circular connector
Supply voltage	+U <sub>S</sub> , -U <sub>S</sub>	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 2.1	OSSD 2.2	5	
Signal output 1	OUT 1	6	
Signal output 2	OUT 2	8	

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