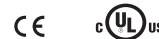


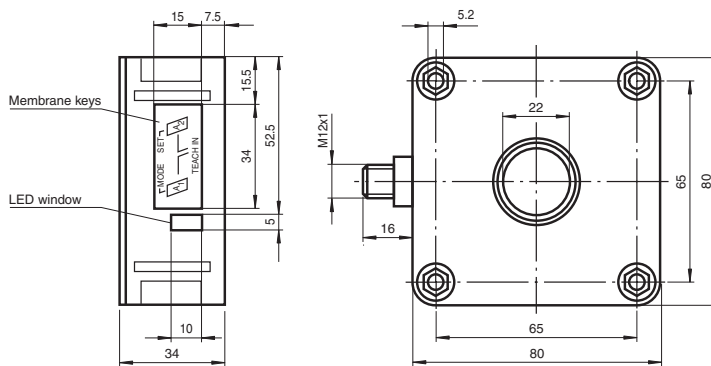
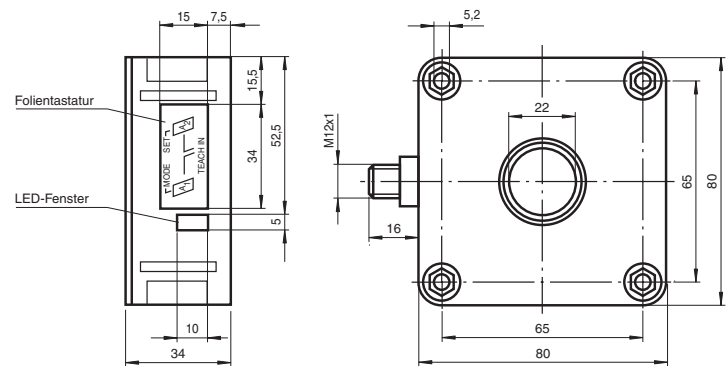
Abmessungen

Dimensions

Ultraschallsensor
Ultrasonic sensor



UB2000-F42-I-V15



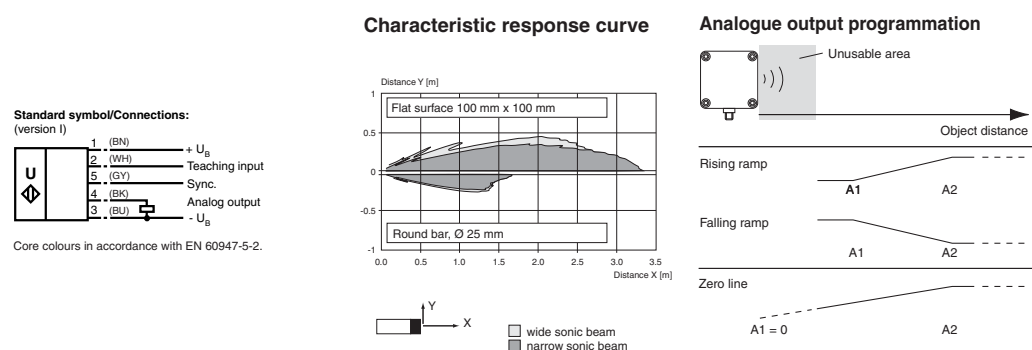
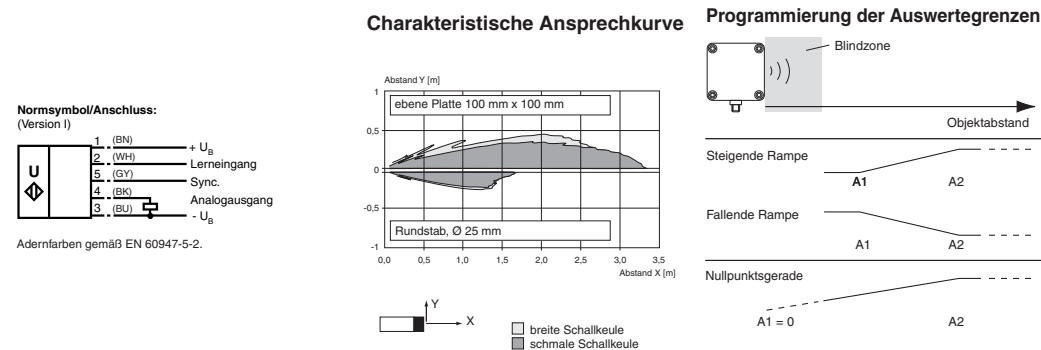
Doc. No.: 45-1494B
DIN A3 -> DIN
Part. No.: 133990
Date: 12/15/2010



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SENSING YOUR NEEDS

Elektrischer Anschluss/Kurven/Zusätzliche Informationen

Electrical Connection / Curves / Additional Information



Steckverbinder V15



Connector V15



Technische Daten

Technical data

Allgemeine Daten		
Erfassungsbereich	60 ... 2000 mm	
Einstellbereich	90 ... 2000 mm	
Blindzone	0 ... 60 mm	
Normmessplatte	100 mm x 100 mm	
Wandlerfrequenz	ca. 175 kHz	
Ansprechverzögerung	ca. 150 ms	
Anzeigen/Bedienelemente		
LED grün	permanent grün: Power on	
LED gelb	permanent: Objekt im Auswertebereich blinkend: Lernfunktion	
LED rot	Normalbetrieb: "Störung" Lernfunktion: kein Objekt erkannt	
Elektrische Daten		
Betriebsspannung	U_B	10 ... 30 V DC, Welligkeit 10 % _{SS}
Leerlaufstrom	I_0	≤ 50 mA
Eingang/Ausgang		
Synchronisation	bidirektional 0-Pegel: $-U_B \dots +1$ V 1-Pegel: $+4$ V... $+U_B$ Eingangsimpedanz: > 12 K Ω Synchronisationsimpuls: ≥ 100 μ s, Synchronisationsimpulspause: ≥ 2 ms	
Synchronisationsfrequenz		≤ 30 Hz
Gleichtaktbetrieb		≤ 30/n Hz, n = Anzahl der Sensoren
Ausgang		
Ausgangstyp	1 Analogausgang	4 ... 20 mA
Voreinstellung	Auswertegrenze A1: 90 mm, Auswertegrenze A2: 2000 mm, breite Ultraschallkeule	
Auflösung		0,7 mm
Kennlinienabweichung		± 1 % vom Endwert
Reproduzierbarkeit		± 0,1 % vom Endwert
Lastimpedanz		0 ... 300 Ω
Temperatureinfluss		± 1 % vom Endwert
Umgebungsbedingungen		
Umgebungstemperatur		-25 ... 70 °C (-13 ... 158 °F)
Lagertemperatur		-40 ... 85 °C (-40 ... 185 °F)
Mechanische Daten		
Anschlussart		Gerätestecker M12 x 1, 5-polig
Schutzart		IP54
Material		
Gehäuse		ABS
Wandler		Epoxidharz/Glashohlkugelmischung; Schaum Polyurethan, Deckel PBT
Masse		140 g
Normen- und Richtlinienkonformität		
Normenkonformität		
Normen		EN 60947-5-2:2007 IEC 60947-5-2:2007 EN 60947-5-7:2003 IEC 60947-5-7:2003

General specifications		
Sensing range	60 ... 2000 mm	
Adjustment range	90 ... 2000 mm	
Unusable area	0 ... 60 mm	
Standard target plate	100 mm x 100 mm	
Transducer frequency	approx. 175 kHz	
Response delay	approx. 150 ms	
Indicators/operating means		
LED green	solid green: Power on	
LED yellow	solid: object in evaluation range flashing: program function	
LED red	normal operation: "fault" program function: no object detected	
Electrical specifications		
Operating voltage	U_B	10 ... 30 V DC, ripple 10 % _{SS}
No-load supply current	I_0	≤ 50 mA
Input/Output		
Synchronization	bi-directional 0 level: $-U_B \dots +1$ V 1 level: $+4$ V... $+U_B$ input impedance: > 12 K Ω synchronization pulse: ≥ 100 μ s, synchronization interpulse period: ≥ 2 ms	
Synchronization frequency		≤ 30 Hz
Common mode operation		≤ 30/n Hz, n = number of sensors
Output		
Output type	1 analog output	4 ... 20 mA
Default setting	evaluation limit A1: 90 mm, evaluation limit A2: 2000 mm, wide sound lobe	
Resolution		0.7 mm
Deviation of the characteristic curve		± 1 % of full-scale value
Repeat accuracy		± 0.1 % of full-scale value
Load impedance		0 ... 300 Ohm
Temperature influence		± 1 % of full-scale value
Ambient conditions		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		Device connector M12 x 1, 5-pin
Protection degree		IP54
Material		
Housing		ABS
Transducer		epoxy resin/hollow glass sphere mixture; foam polyurethane, cover PBT
Masse		140 g
Compliance with standards and directives		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007 EN 60947-5-7:2003 IEC 60947-5-7:2003



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