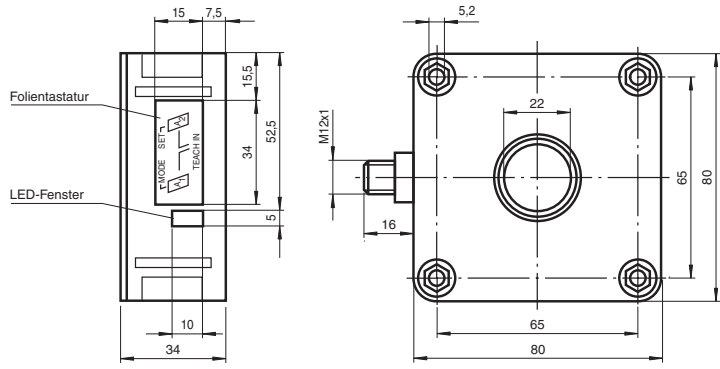
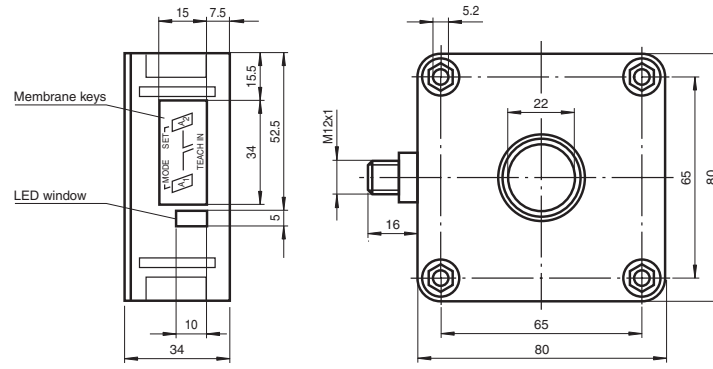


## Abmessungen



## Dimensions



## Ultraschallsensor Ultrasonic sensor



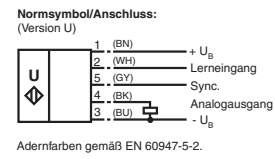
### UB2000-F42-U-V15

Doc. No.: 45-1495B  
DIN A3 -> DIN  
Part. No.: 133981  
Date: 12/15/2010

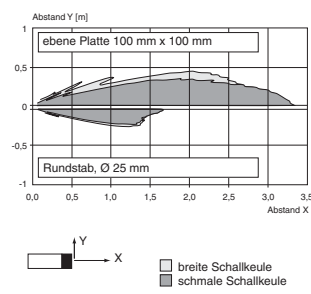


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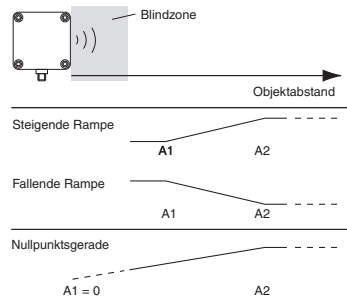
## Elektrischer Anschluss/Kurven/Zusätzliche Informationen



### Charakteristische Ansprechkurve



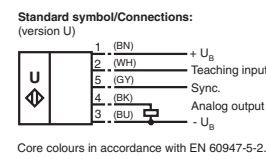
### Programmierung der Auswertegrenzen



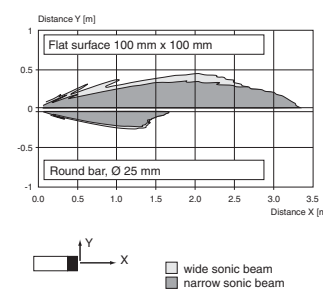
### Steckverbinder V15



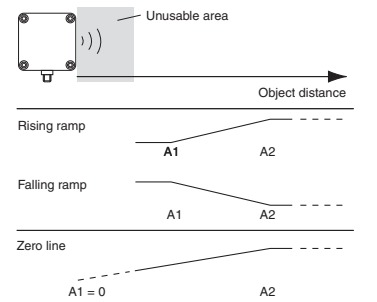
## Electrical Connection / Curves / Additional Information



### Characteristic response curve



### Analogue output programming



### Connector V15



## Technische Daten

<b>Allgemeine Daten</b>		
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
<b>Anzeigen/Bedienelemente</b>		
LED grün		permanent grün: Power on
LED gelb		permanent: Objekt im Auswertebereich blinkend: Lernfunktion
LED rot		Normalbetrieb: "Störung" Lernfunktion: kein Objekt erkannt
<b>Elektrische Daten</b>		
Betriebsspannung	$U_B$	17 ... 30 V DC, Welligkeit 10 % <sub>SS</sub>
Leerlaufstrom	$I_0$	≤ 50 mA
<b>Eingang/Ausgang</b>		
Synchronisation		bidirektional 0-Pegel: $-U_B \dots +1$ V 1-Pegel: $+4$ V... $+U_B$ Eingangsimpedanz: > 12 kΩ Synchronisationsimpuls: ≥ 100 μs, Synchronisationsimpulspause: ≥ 2 ms
Synchronisationsfrequenz		
Gleichtaktbetrieb		≤ 30 Hz
Multiplexbetrieb		≤ 30/n Hz, n = Anzahl der Sensoren
<b>Ausgang</b>		
Ausgangstyp		1 Analogausgang 0 ... 10 V
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		> 1 kΩ
Temperatureinfluss		± 1 % vom Endwert
<b>Umgebungsbedingungen</b>		
Umgebungstemperatur		-25 ... 70 °C (-13 ... 158 °F)
Lagertemperatur		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanische Daten</b>		
Anschlussart		Gerätestecker M12 x 1, 5-polig
Schutzart		IP54
Material		
Gehäuse		ABS
Wandler		Epoxidharz/Glashohlkugelmischung; Schaum Polyurethan, Deckel PBT
Masse		140 g
<b>Normen- und Richtlinienkonformität</b>		
Normenkonformität		
Normen		EN 60947-5-2:2007 IEC 60947-5-2:2007 EN 60947-5-7:2003 IEC 60947-5-7:2003

## Technical data

<b>General specifications</b>		
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
<b>Indicators/operating means</b>		
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
<b>Electrical specifications</b>		
Operating voltage	$U_B$	17 ... 30 V DC, ripple 10 % <sub>SS</sub>
No-load supply current	$I_0$	≤ 50 mA
<b>Input/Output</b>		
Synchronization		bi-directional 0 level: $-U_B \dots +1$ V 1 level: $+4$ V... $+U_B$ input impedance: > 12 kΩ synchronization pulse: ≥ 100 μs, synchronization interpulse period: ≥ 2 ms
Synchronization frequency		
Common mode operation		≤ 30 Hz
Multiplex operation		≤ 30/n Hz, n = number of sensors
<b>Output</b>		
Output type		1 analog output 0 ... 10 V
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		> 1 kΩ
Temperature influence		± 1 % of full-scale value
<b>Ambient conditions</b>		
Ambient temperature		-25 ... 70 °C (-13 ... 158 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
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
<b>Compliance with standards and directives</b>		
Standard conformity		
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007 EN 60947-5-7:2003 IEC 60947-5-7:2003

