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Ultrasonic Sensor Series LS20

- **Measuring ranges from 30..8000 mm**
- **Switching- and analogue outputs**
- **Teach-In function**
- **Foreground fade-out**
- **Operating temperature -25..70 °C**
- **Protection class IP67**

Characteristics

The LS20 measures the distance to an object within the detection zone contact less. Depending on the adjusted detect distance the switched output is set. LS sensors have internal temperature compensation. Because the sensors heat up on their own, the temperature compensation reaches its optimum working point after approximately 30 minutes of operation. The sensors indicate a blind zone, in which the distance cannot be measured. The operating range indicates the distance of the sensor that can be applied with normal reflectors with sufficient function reserve.

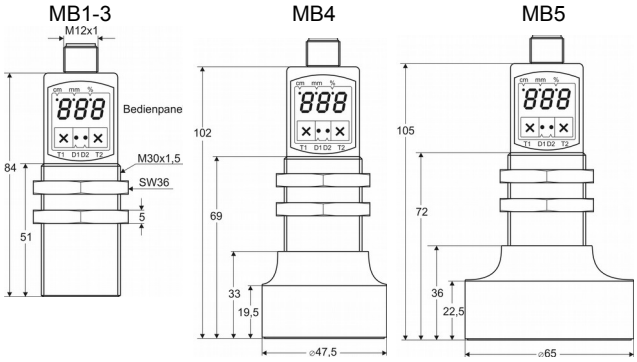
Technical data

Power supply
Supply voltage U_B : 9..30 V DC, reverse polarity protection
Voltage ripple : ±10 %
No-load supply current : ≤ 80 mA
Operating temperature : -25..70 °C
CE-conformity : EN60947-5-2

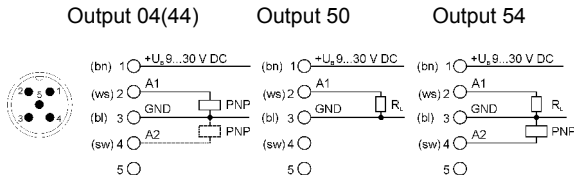
Detecting zones	MB1	MB2	MB3	MB4	MB5
Min. range [mm]	30	60	200	350	600
Optimal range [mm]	250	350	1300	3400	6000
Max. range [mm]	350	600	2000	5000	8000
Ultrasonic frequency [Hz]	320	400	200	120	80
Solution, sampling rate [mm]	0.18	0.18	0.18	0.18	0.18

Display : LED red, 7,6 mm
Indicating range : 0..999 Digit
LED´s : output indicators, 3-colors
Output
Switched output PNP : U_S=U_B-2 V; Imax 200 mA, short circuit proof, NO orNC programmable
-Switching hysteresis : programmable
-Switching frequency : max. 11 Hz
-Response time : min. 50 ms
-Start-up delay : <300 ms
Current output : 4..20 mA, RL ≤100 Ω at 9 V ≤UB≤20 V RL ≤500 Ω at UB>20 V
Voltage output : 0..10 V RL ≥100 kΩ at UB>15 V
Case : brass sleeve, nickel-plated;
Plastic parts : PBT, TPU;
Ultrasonic transducer : Polyurethane foam Epoxy resin with glass content
Weight : 150..270 g
Connection : 5-pole plug M12, PBT
Protection class : IP67

Dimensions



Connection diagram



Ordering code

LS20 - 1. [ ] - 2. [ ] - 3. [ ]

1.	**Ranges [mm]** min..optimal/maximal detecting zones	
	1	30..250/350
	2	60..350/600
	3	200..1300/2000
	4	350..3400/5000
	5	600..6000/8000
2.	**Output**	
	04	1 PNP-switching output
	44	2 PNP-switching outputs
	50	1 analogue output 4..20 mA/0..10 V DC
	54	1 analogue output, 1 PNP-switching output
3.	**Options**	
	00	without option
	VA	case stainless steel 1.4571
	Accessory connection cable	
	SKM5E-02	2 m
	SKM5E-02VA	2 m, plug material stainless steel
	SKM5E-05	5 m
	SKM5E-05VA	5 m, plug material stainless steel