


UM 18 Ultrasonic sensor

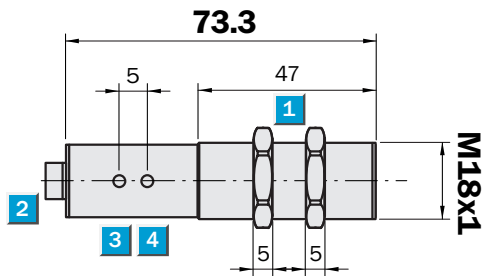


 **Operating distance**
30 ... 250 mm

Ultrasonic sensor

- Independent of material shape (also foils, glass, bottles)
- Synchronisation and temperature compensation
- Insensitive to dirt, dust and fog
- 1 switching output or 2 switching outputs (PNP or NPN) or analogue output
- Scanning mode and deflector mode

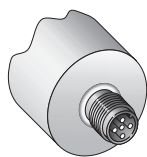
Dimensional drawing



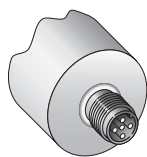
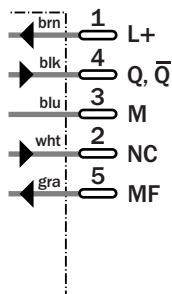
- 1** Locking nuts, 24 mm A/F
- 2** Connection plug M12
- 3** LED 1 (UM 18-51112, UM 18-51114, UM 18-11116 and UM 18-11117)
- 4** LED 2 (UM 18-51112, UM 18-51114, UM 18-11116 and UM 18-11117)

Connection types

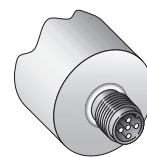
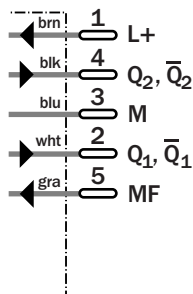
UM18-51111	UM18-51112	UM18-11116
UM18-51115	UM18-51114	UM18-11117



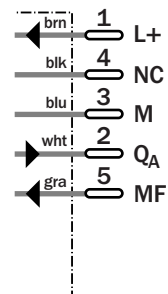
5-pin, M12



5-pin, M12



5-pin, M12



UM 18 Ultrasonic sensor

Technical data		UM18-	51111	51112	51114	51115	11116	11117				
Operating distance	30 mm ... 250 mm (< 350 mm)											
(maximum scanning distance)												
Ultrasonic frequency	320 kHz											
Resolution	0.36 mm											
Reproducibility	typ. ± 0.15 % of final value											
Accuracy	≤ 2 % of final value											
Operating voltage	$V_s = 10 \dots 30$ V DC											
Residual ripple	10 %											
Idle current consumption	≤ 40 mA											
Housing material sensor	Brass tube, nickel plated											
	Plastic parts: PBT											
	Ultrasonic converter: polyurethane foam, epoxy resin with glass content											
Enclosure rating to EN 60 529	IP 67											
Connection type	Plug M12, 5-pin											
Display elements	2 yellow LEDs											
Ambient temperature	Operating: $-25 \text{ }^\circ\text{C} \dots +70 \text{ }^\circ\text{C}$ Storage: $-40 \text{ }^\circ\text{C} \dots +85 \text{ }^\circ\text{C}$											
Weight	65 g approx. (with 2 nuts)											
Control input MF	Teach-in											
Switching outputs PNP, invertable	1 x PNP ¹⁾ 2 x PNP ²⁾											
Switching outputs NPN, invertable	1 x NPN ³⁾ 2 x NPN ⁴⁾											
Analogue output 4 ... 20 mA	$R_L \leq 100 \text{ } \Omega$ at $10 \text{ V} \leq V_s \leq 20 \text{ V}$ $R_L \leq 500 \text{ } \Omega$ at $V_s \geq 20 \text{ V}$											
0 ... 10 V	$R_L \geq 100 \text{ k}\Omega$ at $V_s \geq 15 \text{ V}$											
Temperature compensation	Yes											
Synchronisation option	Yes											
Functional display	Yes											
Scanning mode	Yes											
Object between sensor and background mode	Yes											
Switching hysteresis	2.0 mm ± 10 %											
Switching frequency	15 Hz											
Response time	32 ms											
Standby delay	< 300 ms											

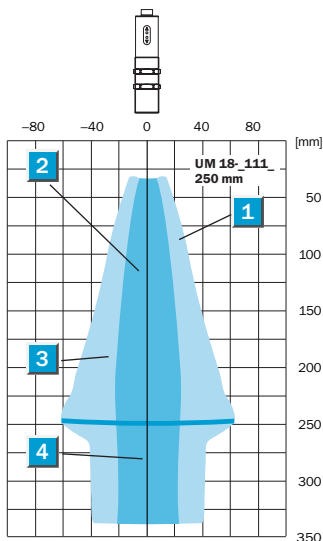
¹⁾ (L+) - 2 V, $I_{\text{max}} = 500$ mA, short-circuit proof

²⁾ (L+) - 2 V, $I_{\text{max}} = 2 \times 500$ mA, short-circuit proof

³⁾ M + 2 V, $I_{\text{max}} = 500$ mA, short-circuit proof

⁴⁾ M + 2 V, $I_{\text{max}} = 2 \times 500$ mA, short-circuit proof

Detection ranges



- | | |
|---|---|
| 1 | Aligned plate 500 x 500 mm ² |
| 2 | Tube diameter 10 mm |
| 3 | Operating distance |
| 4 | Maximum scanning distance |

Order information

Type	Order no.
UM18-51111	6 028 965
UM18-51112	6 028 964
UM18-51114	6 028 973
UM18-51115	6 028 974
UM18-11116	6 029 507
UM18-11117	6 029 508

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[E2FMX1R5D12M](#) [E2K-F10MC1](#) [5M](#) [EC3016PPASL-1](#) [EI1204TBOSL-6](#) [EI5515NPAP](#) [BSA-08-25-08](#) [IC08ANC15PO-K](#) [25.161.3253.0](#)
[25.332.0653.1](#) [25.352.0653.0](#) [25.352.0753.0](#) [25.523.3253.0](#) [922FS1.5C-A4P-Z774](#) [SC606ABV0S30](#) [SM552A100](#) [SM952A126100LE](#)
[SM956A132600](#) [A1220EUA-T](#) [F3S-A162-U](#) [CL18](#) [QT-08L](#) [34.110.0010.0](#) [TL-C2MF1-M3-E4](#) [IA08BLF15NOM5](#) [IA08BSF15NOM5](#)
[IA12ASF04DOM1](#) [IS2](#) [IS31SE5000-UTLS2-TR](#) [34.110.0021.0](#) [34.110.0022.0](#) [CA150-120VACDC](#) [VM18VA3000Q](#) [XS508BSCBL2](#)
[XS512BLNAM12](#)