

## UM18

### Ultrasonic sensor



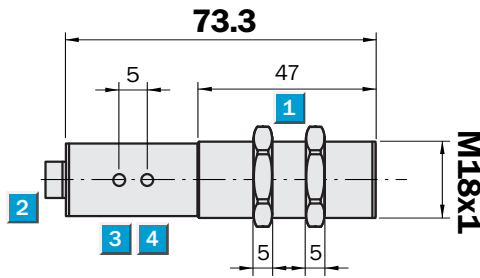
**Operating distance**  
30 ... 250 mm

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



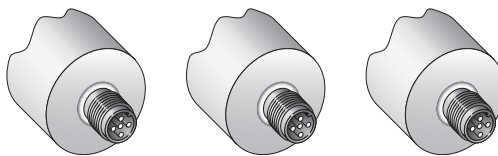
#### Dimensional drawing



- 1 Locking nuts, 24 mm A/F
- 2 Connection plug M12
- 3 LED 1 (UM18-51112, UM18-51114, UM18-11116 and UM18-11117)
- 4 LED 2 (UM18-51112, UM18-51114, UM18-11116 and UM18-11117)

#### Connection types

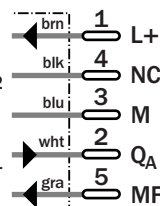
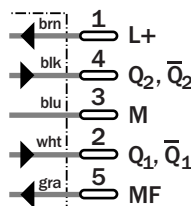
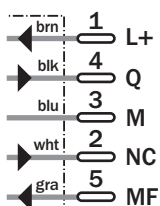
UM18-51111	UM18-51112	UM18-11116
UM18-51115	UM18-51114	UM18-11117



5-pin, M12

5-pin, M12

5-pin, M12

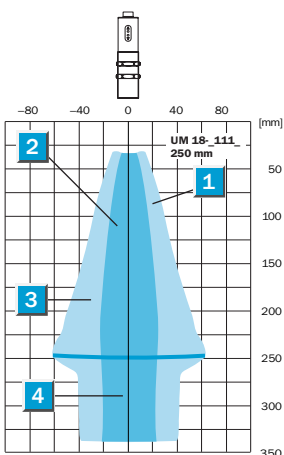


Technical data		UM18-	51111	51112	51114	51115	11116	11117				
<b>Operating distance</b>	30 mm ... 250 mm (< 350 mm)											
<b>(maximum scanning distance)</b>												
Ultrasonic frequency	320 kHz											
Resolution	0.36 mm											
Reproducibility	typ. ±0.15 % of final value											
Accuracy	≤ 2 % of final value											
<b>Operating voltage</b>	$V_s = 10 \dots 30$ 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 °C ... +70 °C											
	Storage: -40 °C ... +85 °C											
Weight	65 g approx. (with 2 nuts)											
Control input MF	Teach-in											
Switching outputs PNP	1 x PNP <sup>1)</sup>											
	invertable 2 x PNP <sup>2)</sup>											
Switching outputs NPN	1 x NPN <sup>3)</sup>											
	invertable 2 x NPN <sup>4)</sup>											
Analogue output	4 ... 20 mA											
	$R_L \leq 100$ W at $10$ V ≤ $V_s \leq 20$ V											
	$R_L \leq 500$ W at $V_s \geq 20$ V											
	0 ... 10 V											
	$R_L \geq 100$ kW at $V_s \geq 15$ 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 msv											

<sup>1)</sup> (L+) - 2 V,  $I_{max} = 500$  mA, short-circuit proof  
<sup>2)</sup> (L+) - 2 V,  $I_{max} = 2 \times 500$  mA, short-circuit proof

<sup>3)</sup> M + 2 V,  $I_{max} = 500$  mA, short-circuit proof  
<sup>4)</sup> M + 2 V,  $I_{max} = 2 \times 500$  mA, short-circuit proof

**Measurement ranges**



**Order information**

Type	Order no.
UM18-51111	6028965
UM18-51112	6028964
UM18-51114	6028973
UM18-51115	6028974
UM18-11116	6029507
UM18-11117	6029508

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