

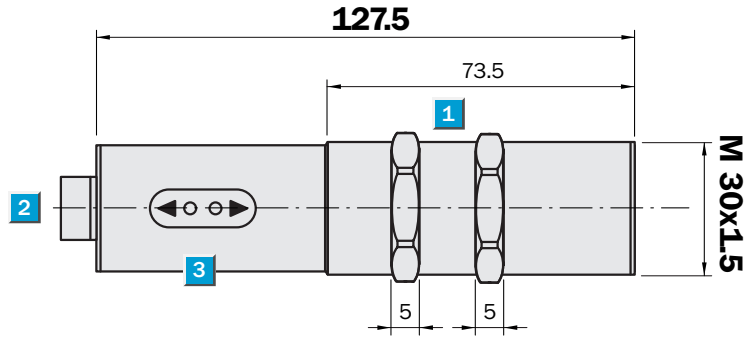


Operating scanning range
30 ... 1300 mm

Ultrasonic sensor

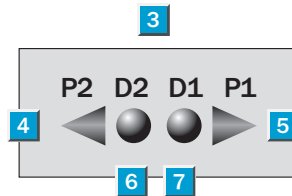
- Independent of material shape (including films, glass and bottles)
- Teach-in
- Insensitive to dirt, dust and fog
- Operating scanning range up to 1300 mm
- Binary outputs or analogue output

Dimensional drawing



Adjustments possible

All types



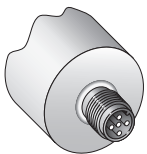
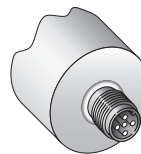
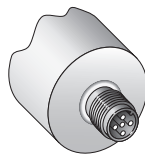
- 1 Fastening nuts, width across 36 mm
- 2 Connection plug M12
- 3 Control and display panel
- 4 Setting key 2
- 5 Setting key 1
- 6 LED 2
- 7 LED 1

Connection types

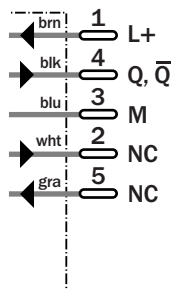
UM30-11111
UM30-12111
UM30-13111

UM30-11112
UM30-12112
UM30-13112

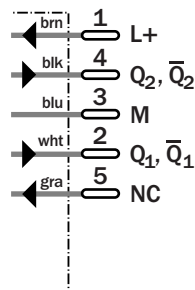
UM30-11113
UM30-12113
UM30-13113



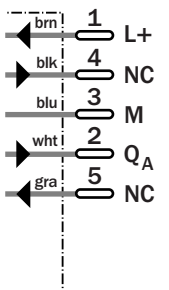
5-pin, M12



5-pin, M12



5-pin, M12



Accessories

Mounting systems

Technical data		UM30-	11111	11112	11113	12111	12112	12113	13111	13112	13113	
Operating scanning range	30 ... 250 mm (350)											
(limiting scanning range)	60 ... 350 mm (600)											
	200 ... 1300 mm (2000)											
Ultrasonic frequency	320 kHz											
	400 kHz											
	200 kHz											
Resolution	0.36 mm											
Reproducibility	± 0.15 % of final value											
Accuracy	≤ 2 % of final value											
Supply voltage V_s	9 ... 30 V DC ¹⁾											
Residual ripple	± 10 %											
Current consumption ²⁾	≤ 60 mA											
Switching outputs, reversible ³⁾	Q: PNP											
	Q ₁ , Q ₂ : 2 x PNP											
Analogue output, reversible ^{3) 4)}	Q _A : 4 ... 20 mA/0 ... 10 V											
Response time	50 ms											
	70 ms											
	110 ms											
Switching frequency	11/s											
	8/s											
	6/s											
Switching hysteresis	20 mm											
	5 mm											
	2.5 mm											
Standby delay	2 s											
Connection type	Plug M12, 5-pin											
Enclosure rating	IP 65											
Ambient temperature	Operation -20 °C ... +70 °C											
	Storage -40 °C ... +85 °C											
Weight	260 g											
Housing material	Nickel-plated brass											

¹⁾ Limit values

²⁾ Without load

³⁾ Outputs short-circuit protected
 $I_{max} = 200 \text{ mA}$
 PNP: High = $V_s - (< 2 \text{ V})$ /LOW = 0 V

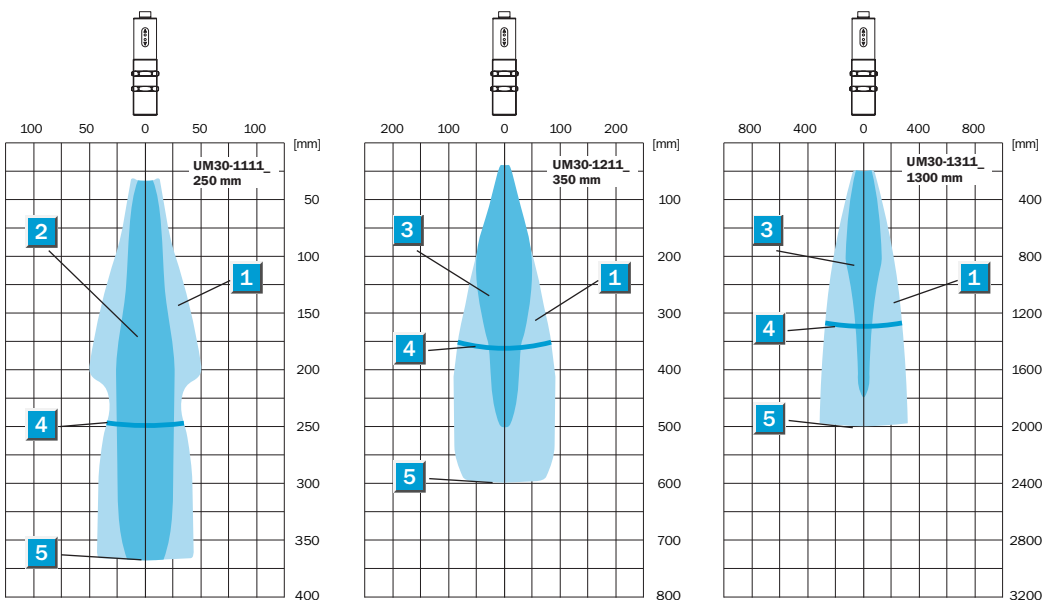
⁴⁾ Automatic switching between voltage and current outputs dependent on load

Current output 4 ... 20 mA:
 $R_L \leq 500 \Omega$, $V_s \geq 20 \text{ V}$;
 $R_L \leq 100 \Omega$, $V_s \geq 12 \text{ V}$
 Voltage output 0 ... 10 V:
 $R_L \geq 100 \text{ k}\Omega$; $V_s > 15 \text{ V}$

⁵⁾ Temperature compensation at -20 ... +65 °C

⁶⁾ Plastic parts: PBT
 Ultrasonic transducer: Polyurethane-foam, glass epoxy resin

Detection ranges



1 Aligned plate 500 x 500 mm

2 Pipe diameter 10 mm

3 Pipe diameter 27 mm

4 Operating scanning range

5 Limiting scanning range

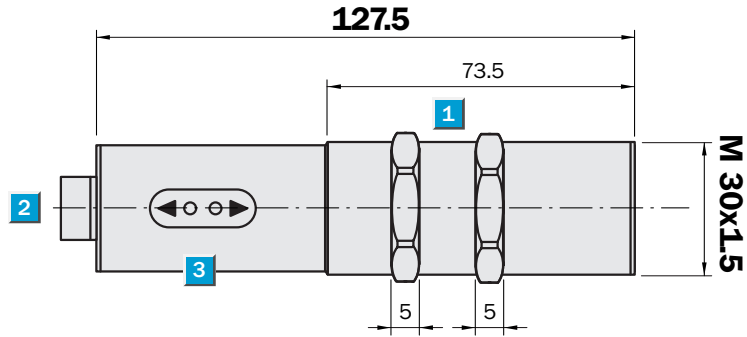
Order information

Type	Order no.
UM30-11111	6025655
UM30-12111	6025656
UM30-13111	6025657
UM30-11112	6025660
UM30-12112	6025661
UM30-13112	6025662
UM30-11113	6025665
UM30-12113	6025666
UM30-13113	6025667

	Operating scanning range
	30 ... 1300 mm
Ultrasonic sensor	

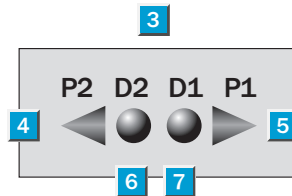
- Independent of material shape (including films, glass and bottles)
- Teach-in
- Insensitive to dirt, dust and fog
- Operating scanning range up to 1300 mm
- Binary outputs or analogue output

Dimensional drawing



Adjustments possible

All types

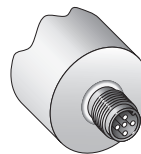
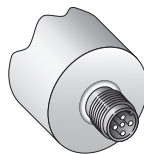


- 1 Fastening nuts, width across 36 mm
- 2 Connection plug M12
- 3 Control and display panel
- 4 Setting key 2
- 5 Setting key 1
- 6 LED 2
- 7 LED 1

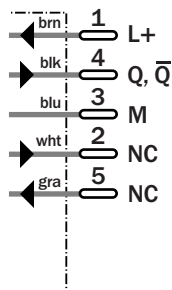
Connection types

UM30-12115
UM30-11115
UM30-13115

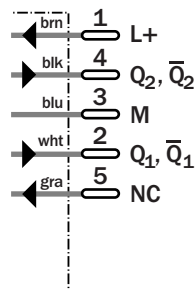
UM30-11114
UM30-13114
UM30-12114



5-pin, M12



5-pin, M12



Accessories

Mounting systems



Technical data		UM30-	11115	11114	12115	12114	13115	13114				
Operating scanning range	30 ... 250 mm (350)											
(limiting scanning range)	60 ... 350 mm (600)											
	200 ... 1300 mm (2000)											
Ultrasonic frequency	320 kHz											
	400 kHz											
	200 kHz											
Resolution	0,36 mm											
Reproducibility	± 0.15 % of final value											
Accuracy	≤ 2 % of final value											
Supply voltage V_s	9 ... 30 V DC ¹⁾											
Residual ripple	± 10 %											
Current consumption ²⁾	≤ 60 mA											
Switching outputs, reversible ³⁾	Q: NPN											
	Q ₁ , Q ₂ : 2 x NPN											
Response time	50 ms											
	70 ms											
	110 ms											
Switching frequency	11/s											
	8/s											
	6/s											
Switching hysteresis	20 mm											
	5 mm											
	2.5 mm											
Standby delay	2 s											
Connection type	Plug M12, 5-pin											
Enclosure rating	IP 65											
Ambient temperature	Operation -20 °C ... +70 °C ⁴⁾											
	Storage -40 °C ... +85 °C											
Weight	260 g											
Housing material ⁵⁾	Nickel-plated brass											

¹⁾ Limit values

²⁾ Without load

³⁾ Outputs short-circuit protected

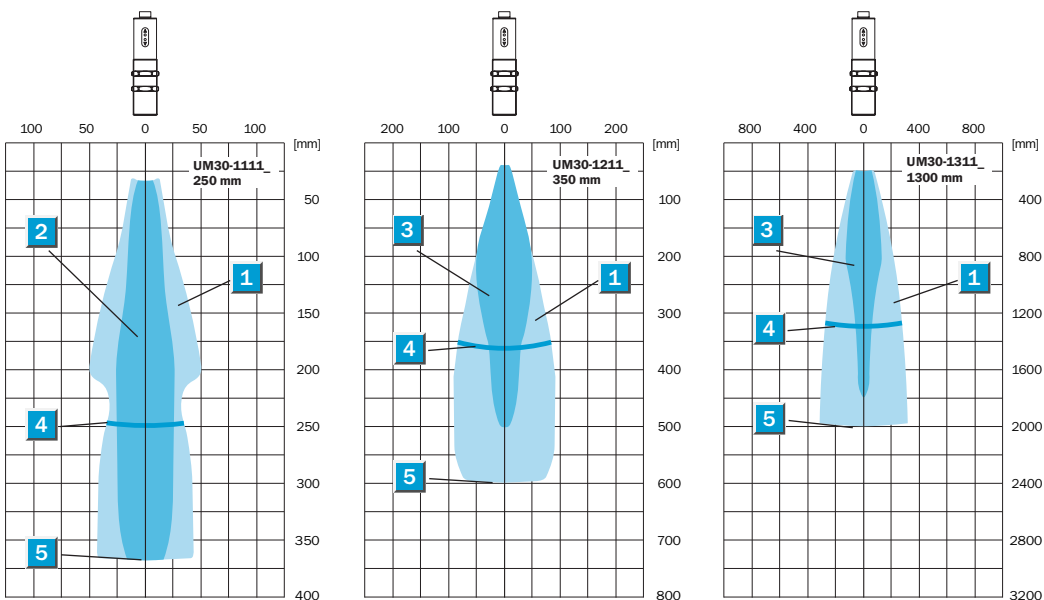
$I_{max} = 200 \text{ mA}$

NPN: High = V_s / LOW ≤ 2 V

⁴⁾ Temperature compensation
at -20 °C ... +65 °C

⁵⁾ Plastic parts: PBT
Ultrasonic transducer: Polyurethane-
foam, glass epoxy resin

Detection ranges



1 Aligned plate 500 x 500 mm

2 Pipe diameter 10 mm

3 Pipe diameter 27 mm

4 Operating scanning range

5 Limiting scanning range

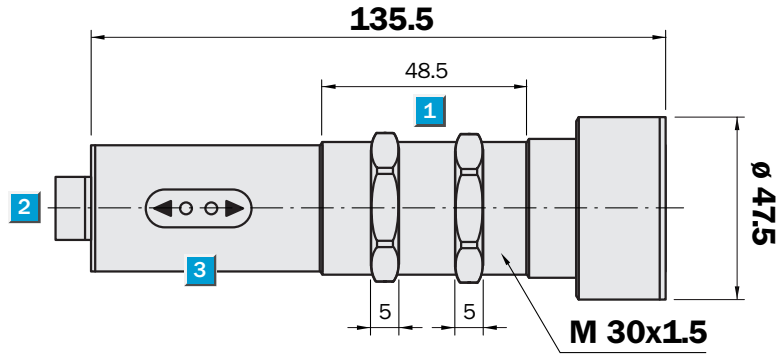
Order information

Type	Order no.
UM30-11114	6030551
UM30-11115	6030542
UM30-12114	6030552
UM30-12115	6030543
UM30-13114	6030553
UM30-13115	6030544

	Operating scanning range 350 ... 3400 mm
Ultrasonic sensor	

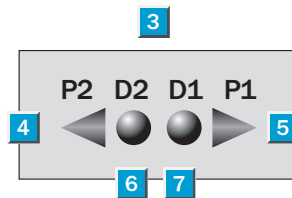
- Independent of material shape (including films, glass and bottles)
- Teach-in
- Insensitive to dirt, dust and fog
- Operating scanning range up to 3400 mm
- Binary outputs or analogue output

Dimensional drawing



Adjustments possible

All types



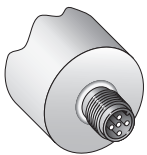
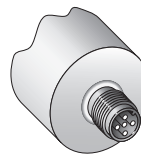
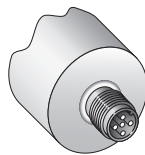
- 1 Fastening nuts, width across 36 mm
- 2 Connection plug M12
- 3 Control and display panel
- 4 Setting key 2
- 5 Setting key 1
- 6 LED 2
- 7 LED 1

Connection types

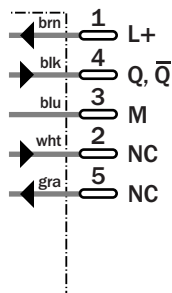
UM30-14111
UM30-14115

UM30-14112
UM30-14114

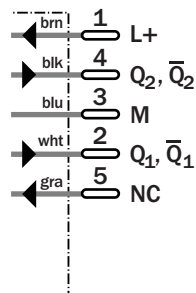
UM30-14113



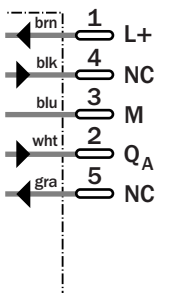
5-pin, M12



5-pin, M12



5-pin, M12



Accessories

Mounting systems



Technical data		UM30-	14111	14112	14113	14114	14115						
Operating scanning range	350 ... 3400 mm (5000)												
(limiting scanning range)													
Ultrasonic frequency	120 kHz												
Resolution	1 mm												
Reproducibility	± 0.15 % of final value												
Accuracy	≤ 2 % of final value												
Supply voltage V_s	DC 9 ... 30 V ¹⁾												
Residual ripple	± 10 %												
Current consumption ²⁾	≤ 60 mA												
Switching outputs, reversible ³⁾	Q: PNP												
	Q: NPN												
	Q ₁ , Q ₂ : 2 x PNP												
	Q ₁ , Q ₂ : 2 x NPN												
Analogue output, reversible ^{3) 4)}	Q _A : 4 ... 20 mA/0 ... 10 V												
Response time	180 ms												
Switching frequency	3/s												
Switching hysteresis	50 mm												
Standby delay	2 s												
Connection type	Plug M12, 5-pin												
Enclosure rating	IP 65												
Ambient temperature ⁵⁾	Operation -20 °C ... +70 °C												
	Storage -40 °C ... +85 °C												
Weight	310 g												
Housing material	Nickel-plated brass												

¹⁾ Limit values

²⁾ Without load

³⁾ Outputs short-circuit protected

$I_{max} = 200 \text{ mA}$

PNP: High = $V_s - (< 2 \text{ V}) / \text{LOW} = 0 \text{ V}$

NPN: High = $V_s / \text{LOW} \leq 2 \text{ V}$

⁴⁾ Automatic switching between voltage and current outputs dependent on load

Current output 4 ... 20 mA:

$R_L \leq 500 \Omega$, $V_s \geq 20 \text{ V}$;

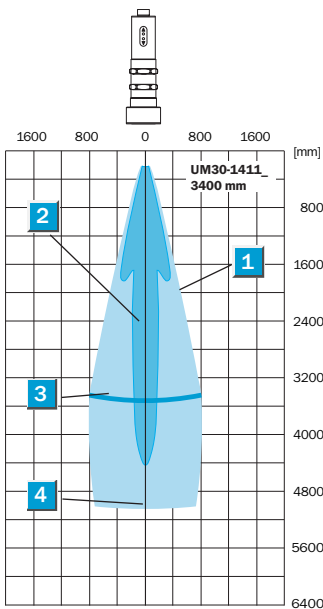
$R_L \leq 100 \Omega$, $V_s \geq 12 \text{ V}$

Voltage output 0 ... 10 V:

$R_L \geq 100 \text{ k}\Omega$; $V_s > 15 \text{ V}$

⁵⁾ Temperature compensation at -20 ... +65 °C

Detection ranges



1 Aligned plate 500 x 500 mm

2 Pipe diameter 27 mm

3 Operating scanning range

4 Limiting scanning range

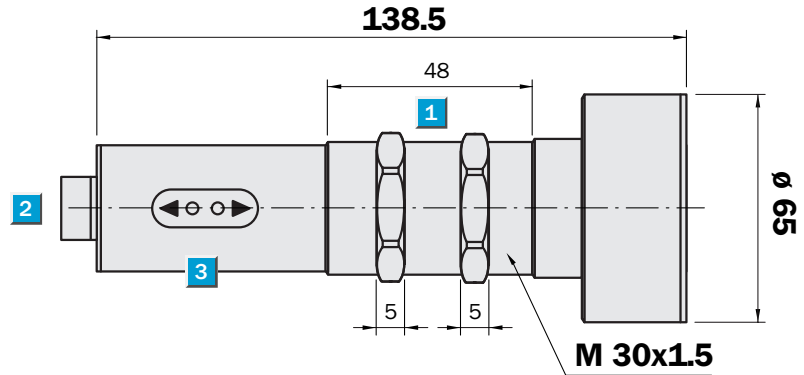
Order information

Type	Order no.
UM30-14111	6025658
UM30-14112	6025663
UM30-14113	6025668
UM30-14114	6030555
UM30-14115	6030546

	Operating scanning range 800 ... 6000 mm
Ultrasonic sensor	

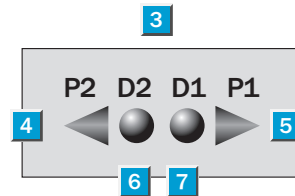
- Independent of material shape (including films, glass and bottles)
- Teach-in
- Insensitive to dirt, dust and fog
- Operating scanning range up to 6000 mm
- Binary outputs or analogue output

Dimensional drawing



Adjustments possible

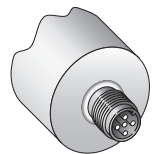
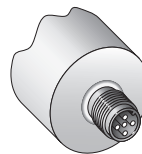
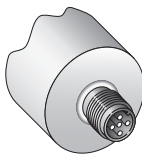
All types



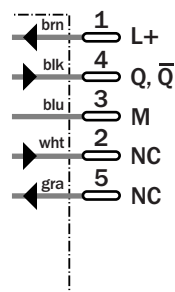
- 1 Fastening nuts, width across 36 mm
- 2 Connection plug M12
- 3 Control and display panel
- 4 Setting key 2
- 5 Setting key 1
- 6 LED 2
- 7 LED 1

Connection types

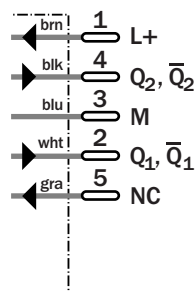
UM30-15111	UM30-15112	UM30-15113
UM30-15115	UM30-15114	



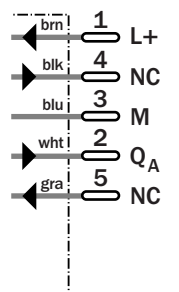
5-pin, M12



5-pin, M12



5-pin, M12



Accessories

Mounting systems



Technical data		UM30-	15111	15112	15113	15114	15115						
Operating scanning range	800 ... 6000 mm (8000)												
(limiting scanning range)													
Ultrasonic frequency	80 kHz												
Resolution	1 mm												
Reproducibility	± 0.15 % of final value												
Accuracy	≤ 2 % of final value												
Supply voltage V_s	DC 9 ... 30 V ¹⁾												
Residual ripple	± 10 %												
Current consumption ²⁾	≤ 60 mA												
Switching outputs, reversible³⁾	Q: PNP												
	Q: NPN												
	Q_1, Q_2 : 2 x PNP												
	Q_1, Q_2 : 2 x NPN												
Analogue output, reversible ^{3) 4)}	Q_A : 4 ... 20 mA/0 ... 10 V												
Response time	240 ms												
Switching frequency	2/s												
Switching hysteresis	100 mm												
Standby delay	2 s												
Connection type	Plug M12, 5-pin												
Enclosure rating	IP 65												
Ambient temperature⁵⁾	Operation -20 °C ... +70 °C												
	Storage -40 °C ... +85 °C												
Weight	360 g												
Housing material	Nickel-plated brass												

1) Limit values

2) Without load

3) Outputs short-circuit protected

 $I_{\max} = 200 \text{ mA}$ PNP: High = $V_s - (< 2 \text{ V})$ / LOW = 0 VNPN: High = V_s / LOW ≤ 2 V

4) Automatic switching between voltage and current outputs dependent on load

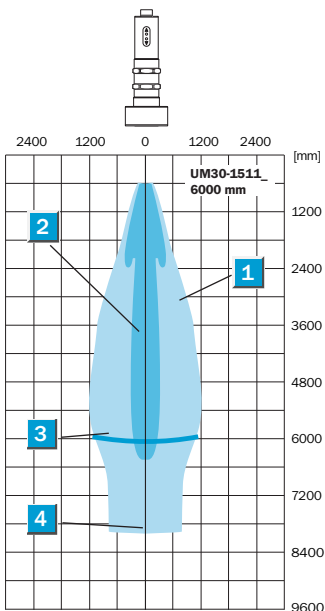
Current output 4 ... 20 mA:

 $R_L \leq 500 \Omega$, $V_s \geq 20 \text{ V}$; $R_L \leq 100 \Omega$, $V_s \geq 12 \text{ V}$

Voltage output 0 ... 10 V:

 $R_L \geq 100 \text{ k}\Omega$; $V_s > 15 \text{ V}$

5) Temperature compensation at -20 ... +65 °C

Detection ranges

1 Aligned plate 500 x 500 mm

2 Pipe diameter 27 mm

3 Operating scanning range

4 Limiting scanning range

Order-information

Type	Order no.
UM30-15111	6025659
UM30-15112	6025664
UM30-15113	6025669
UM30-15114	6030556
UM30-15115	6030547