

Ultrasonic Diffuse, NPN/PNP Output Types UA18CLD.. .O, UA30CLD25 .O

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- Cylindrical M18 and M30 polyester housing
- Sensing distance: 100-600 mm, 200-1500 mm or 300-2500 mm
- Power supply: 18 to 30 VDC
- Output: Transistor NPN or PNP, 500 mA
- 8° beam angle
- Protection: Short-circuit, reverse polarity, transients
- Protection degree IP 67
- 2 m cable, M12 plug or M12 pig tail

Product Description

A family of diffuse ultrasonic sensors with sensing range from 100-600 mm, 200-1500 mm and 300-2500 mm with repeatability as low as 0.2 %. Set point is adjustable by potentiometer and outputs are either PNP or NPN with NO switching. The family is ideal for detection of any

material independent of material, colour, light or smoke. Due to use of microprocessor control the digital filtering makes the sensor immune to most electromagnetic interferences. The control input enables synchronisation in an easy way.

Ordering Key

UA 18 CLD 15 PO M1

Ultrasonic sensor	_____
Housing style	_____
Housing size	_____
Housing material	_____
Housing length	_____
Detection principle	_____
Sensing distance	_____
Output type	_____
Output configuration	_____
Connection	_____

Type Selection

Housing diameter	Body style	Connec- tion	Rated operating dist. (S _n)	Ordering no. Transistor NPN	Ordering no. Transistor PNP
M18	Long	Cable	100-600 mm	UA 18 CLD 06 NO	UA 18 CLD 06 PO
M18	Long	Pigtail	100-600 mm		UA 18 CLD 06 PC M1
M18	Long	Pig tail	100-600 mm	UA 18 CLD 06 NO M1	UA 18 CLD 06 PO M1
M18	Long	Cable	200-1500 mm	UA 18 CLD 15 NO	UA 18 CLD 15 PO
M18	Long	Pig tail	200-1500 mm	UA 18 CLD 15 NO M1	UA 18 CLD 15 PO M1
M30	Long	Cable	300-2500 mm	UA 30 CLD 25 NO	UA 30 CLD 25 PO
M30	Long	Plug M12	300-2500 mm	UA 30 CLD 25 NO M1	UA 30 CLD 25 PO M1

Specifications

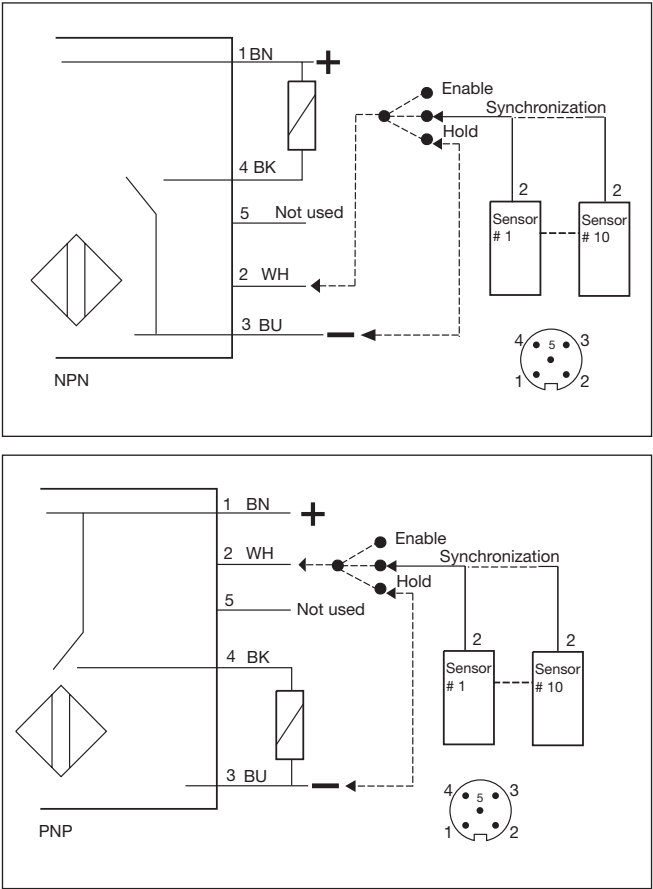
Rated operational volt. (U _e)	18 to 30 VDC (ripple included)	Power ON delay	< 10 ms
Ripple	≤ 10%	Off-state current	NPN: 100 µA PNP: 300 µA
Output current (I _e)	max. 500 mA (continuous)	Operating frequency	UA18CLD06 25 Hz UA18CLD15 8 Hz UA30CLD25 1 Hz
No-load supply current (I _e)	≤ 35 mA	Carrier frequency	180 KHz
Protection	Short-circuit, transients and reverse polarity	Response time	UA18CLD06 < 40 ms (typ. 20 ms) UA18CLD15 < 125 ms (typ. 63 ms) UA30CLD25 < 1 s (typ. 500 ms)
Rated insulation voltage	> 1 kV	Hysteresis (H) (differential travel)	Approx. 2%
Linearity error	< 0.3%	Temperature compensation	Yes
Repeat accuracy (R)	≤ 0.2%	Beam angle	8°
Rated operating distance	UA18CLD06 100-600 mm UA18CLD15 200-1500 mm UA30CLD25 300-2500 mm		
Adj. of sensing distance	Potentiometer		
Voltage drop	NPN: 1.6 V PNP: 2.5 V		



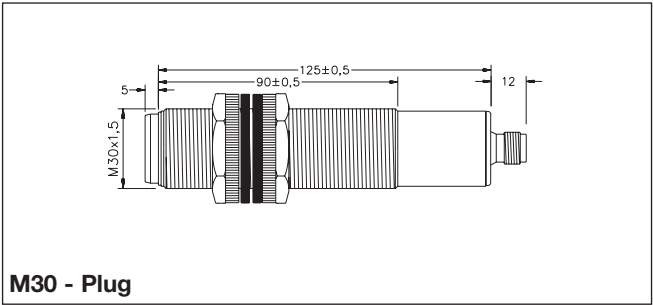
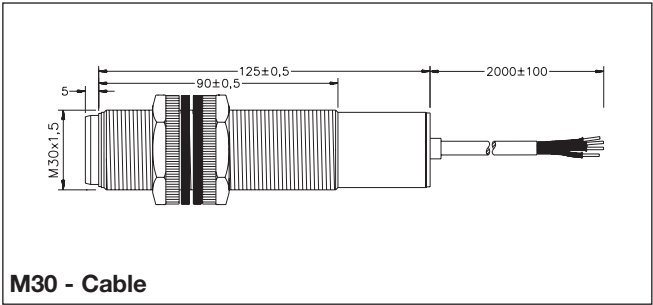
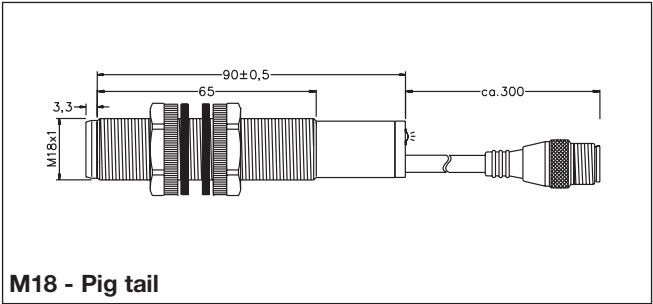
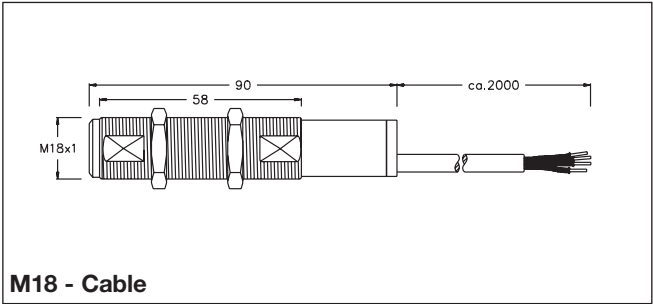
Specifications (cont.)

Ambient temperature	Operating	-15° to +70°C (5° to +158°F)
	Storage	-25° to +75°C (-13° to +167°F)
	Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
Housing material	Polyester PBTP	
Connection	Cable	2 m, 5 x 0.25 mm²
	Plug	M12 x 1
	Pig tail	M12, 4-pin
	Cables for plug (M1)	CONM14 series
Weight	UA18	96 g
	UA18 M1	57 g
	UA30	199 g
	UA30 M1	140 g
Tightening torque	M18	2.6 Nm
	M30	7.5 Nm
CE-marking	Yes	

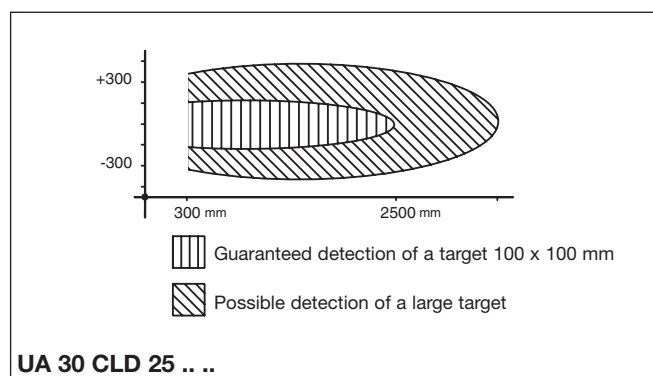
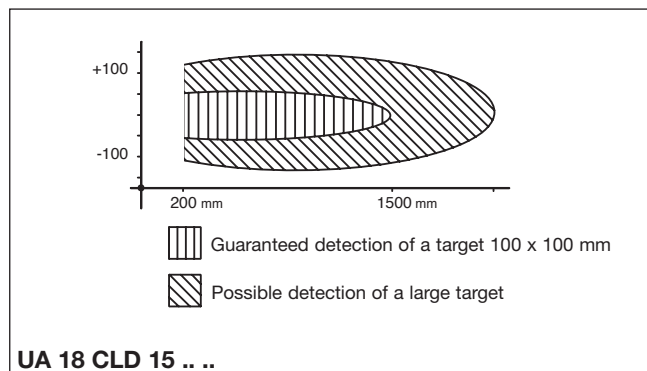
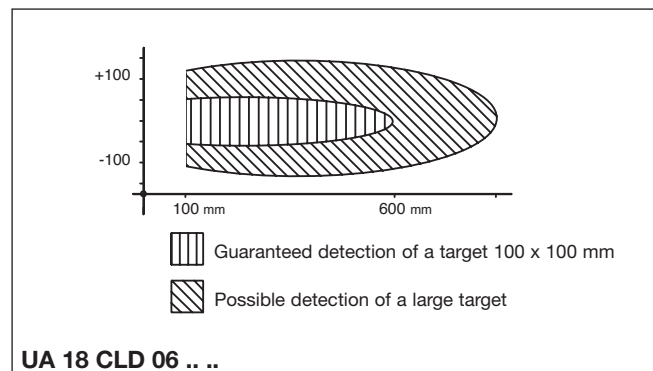
Wiring Diagrams



Dimensions



Detection Range



Installation Hints

<p>To avoid interference from inductive voltage/ current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables</p>	<p>Relief of cable strain</p> <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p> <p>A proximity switch should not serve as mechanical stop</p>	<p>Switch mounted on mobile carrier</p> <p>Any repetitive flexing of the cable should be avoided</p>
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