

Ultrasonic Diffuse, Programmable Outputs Types UA 30 CLD .. F. M7

CARLO GAVAZZI



- Cylindrical M30 polyester housing
- Sensing distance: 150-1500 mm, 250-2000 mm or 350-3500 mm
- Programmable outputs: Analogue (0-10 V or 4-20 mA, inverted or non-inverted) and 2 PNP open collector, NO/NC switching outputs, 100 mA
- Programmable hysteresis, switching frequency and set points
- RS 232 interface
- Power supply: 19 to 30 VDC
- 8° beam angle
- Protection: Short-circuit, reverse polarity, transients
- Protection degree IP 67
- M16 plug

Product Description

A family of diffuse ultrasonic sensors with sensing range from 150-1500 mm, 250-2000 mm and 350-3500 mm with programmable settings by Windows based software. The programmability of the sensors gives the possibility of an universal application in any area of industrial environment. The outputs are 0-10V

or 4-20mA and RS232 interface, which make it possible to communicate with BUS-systems. Due to use of micro-processor control the digital filtering makes the sensor very immune against most electromagnetic interferences and enables synchronisation in an easy way.

Ordering Key

UA 30 CLD 15 FK M7

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

Type Selection

Housing diameter	Connection	Rated operating dist. (S _r)	Ordering no. Analogue 0-10 V	Ordering no. Analogue 4-20 mA
M30	M16	150-1500 mm	UA 30 CLD 15 FK M7	UA 30 CLD 15 FG M7
M30	M16	250-2000 mm	UA 30 CLD 20 FK M7	UA 30 CLD 20 FG M7
M30	M16	350-3500 mm	UA 30 CLD 35 FK M7	UA 30 CLD 35 FG M7

Specifications

Rated operational volt. (U_e)	19 to 30 VDC (ripple included)	Output, switching (cont.)	Programmable
Ripple	≤ 10%	Set points/limits	Programmable Hi/Lo
Output current (I_e)	max. 100 mA (continuous)	Set point adjustment	
No-load supply current (I_e)	≤ 35 mA	Output, information	Serial HEX/BCD
Protection	Short-circuit, transients and reverse polarity	Interface	RS 232
Rated insulation voltage	> 1 kV	Indication	Alignment LED
Control input	Hold/Synchronisation	Repeat accuracy (R)	≤ 0.2%
Output, analogue		Rated operating distance	
UA30CLD..FKM7	Analogue 0-10 or 10-0 VDC, programmable	UA30CLD15	150-1500 mm
UA30CLD..FGM7	Analogue 4-20 or 20-4 mA, programmable	UA30CLD20	250-2000 mm
Scaling	Programmable	UA30CLD35	350-3500 mm
Linearity	± 0.5%/3 mm	Operating frequency	5-30 Hz, programmable
Repeatability	± 2 mm_0.4%	Response times	
Output, switching	2 x PNP, open collector, NO/NC, 100 mA, programmable.	UA30CLD15	100 ms
		UA30CLD20	300 ms
		UA30CLD35	500 ms
		Hysteresis (H)	
		(differential travel)	Programmable
		Temperature compensation	Yes
		Beam angle	8°

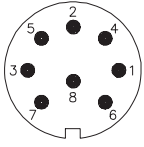


Specifications (cont.)

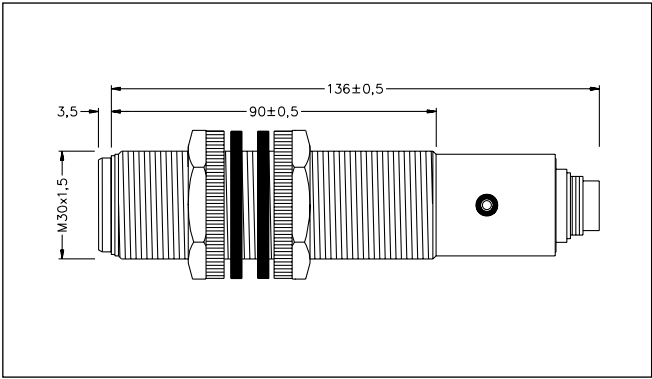
Ambient temperature	
Operating	-15° to +70°C (5° to +158°F)
Storage	-25° to +75°C (-13° to +167°F)
Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
Housing material	Polyester PBTP
Connection	
Plug	M16, 8-pin (CONB-A, CONB-S)
Weight	154 g
Tightening torque	7.6 Nm
CE-marking	Yes

Wiring

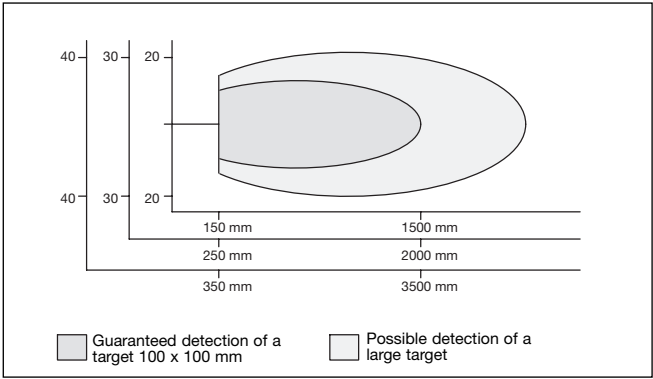
Pin	Function
1	24 VDC
2	0 V GND
3	Output, 0-10 V
4	Switching output 1 (PNP)
5	Switching output 2 (PNP)
6	Hold
7	RS232 RxD .. RS485-B
8	RS232 TxD .. RS485-A



Dimensions

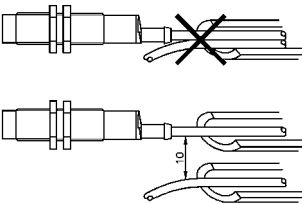


Detection Range



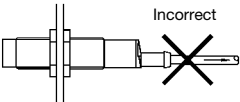
Installation Hints

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



Relief of cable strain

Incorrect

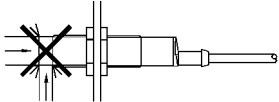


Correct



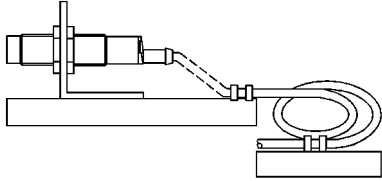
The cable should not be pulled

Protection of the sensing face



A proximity switch should not serve as mechanical stop

Switch mounted on mobile carrier



Any repetitive flexing of the cable should be avoided