

Ultrasonic Thru Scan, PNP Output Types UA18CLS..POM1, UA30CLS25POM1

CARLO GAVAZZI



- 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 PNP, normally open, 500 mA
- 8° beam angle
- Protection: Short-circuit, reverse polarity, transients
- Protection degree IP 67
- Pig tail M12 (UA18) or plug M12 (UA30)

Product Description

A family of thru scan 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 output is PNP with NO switching. The family is ideal to use in defining if objects are within defined window and 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 CLS 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 | Connection | Rated operating dist. (S_n) |
|------------------|------------|---------------|---------------------------------|
| M18 | Long | Pig tail, M12 | 100-600 mm |
| M18 | Long | Pig tail, M12 | 200-1500 mm |
| M30 | Long | Plug M12 | 300-2500 mm |

Ordering no.
 Transistor PNP, normally open

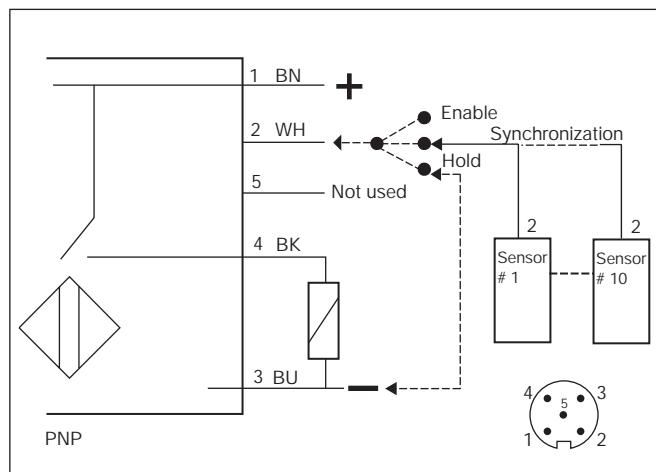
UA 18 CLS 06 PO M1
 UA 18 CLS 15 PO M1
 UA 30 CLS 25 PO M1

Specifications

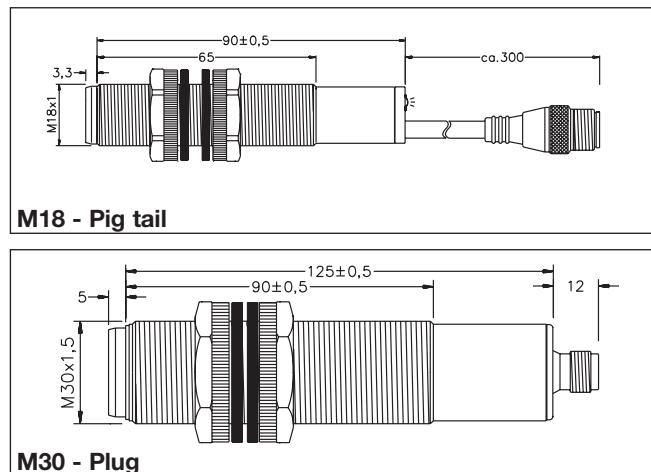
| | |
|-----------------------------------|--|
| Rated operational volt. (U_e) | 18 to 30 VDC (ripple included) |
| Ripple | ≤ 10% |
| Output current (I_o) | max. 500 mA (continuous) |
| No-load supply current (I_o) | ≤ 35 mA |
| Protection | Short-circuit, transients and reverse polarity |
| Rated insulation voltage | > 1 kV |
| Rated operating distance | UA18CLS06 ... 100-600 mm UA18CLS15 ... 200-1500 mm UA30CLS25 ... 300-2500 mm |
| Adjustment of position | Potentiometer |
| Output | Transistor PNP, normally open (NO) |
| Operating frequency | UA18CLS06 ... 25 Hz UA18CLS15 ... 8 Hz UA30CLS25 ... 1 Hz |
| Power-on delay | < 10 ms |
| Carrier frequency | 180 KHz |

| | |
|---|--------------------------------|
| Voltage drop (U_d) | 2.5 V |
| Off-state current (I_{off}) | 300 µA |
| Hysteresis (H) (differential travel) | Approx. 2% |
| Temperature compensation | Yes |
| Beam angle | 8° |
| 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 | |
| Pig tail | M12, 4-pin |
| Plug | M12, 4-pin |
| Cables for plug (M1) | CONB14NF series |
| Weight | UA18 57 g UA30 140 g |
| Tightening torque | UA18 2.6 Nm UA30 7.5 Nm |
| CE-marking | Yes |

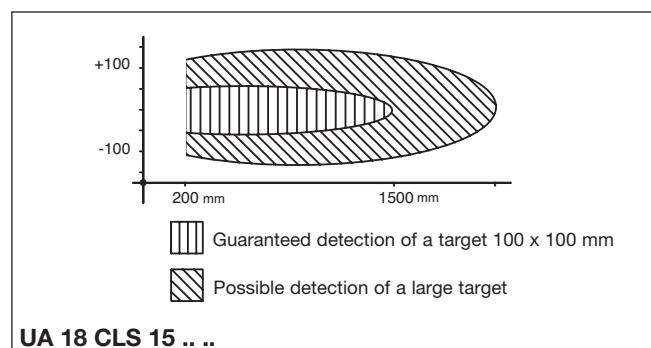
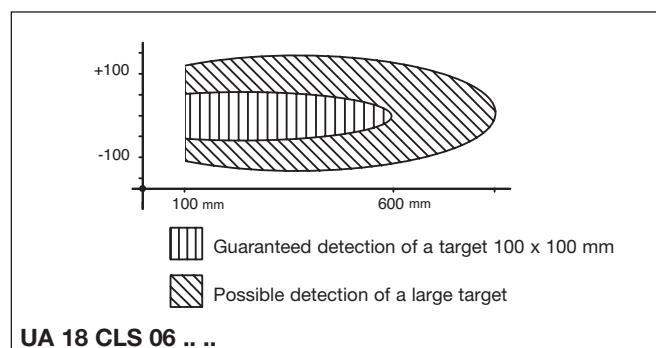
Wiring Diagram



Dimensions

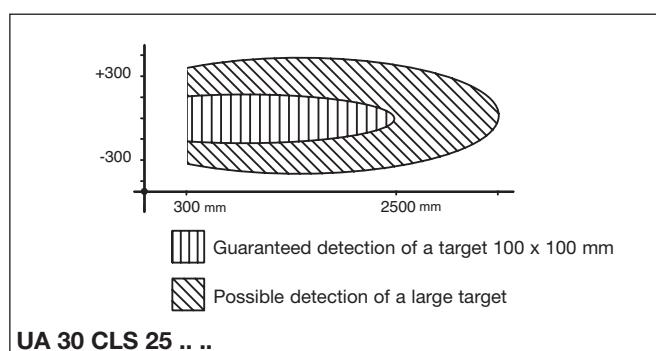


Detection Range



UA 18 CLS 06 ...

UA 18 CLS 15 ...



UA 30 CLS 25 ...

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: cable pulled directly. Correct: cable wound in a loop with a minimum radius of 10 mm. | 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 |
|--|---|--|---|