

Teachable 30 mm Diameter Precision Digital Outputs

FEATURES

- Two independent setpoints
- Teach-in programming
- N.O., N.C. window characteristic possible



ORDER GUIDE

| Sensor Package Style | Sensing Range* mm (in.) | Termination** | Digital Output | Catalog Listing |
|-------------------------------------|---------------------------|---------------|----------------|---------------------|
| 30 mm (1.18 in.) Stainless Steel | 800 - 6000 (31.5-236) | Connector | PNP | 946-A4V-2D-001-65E |
| | 200 - 1000 (7.87-39.4) | Connector | PNP | 946-A4V-2D-001-175E |
| | 60 - 300 (2.36-11.8) | Connector | PNP | 946-A4V-2D-001-400E |

* Standard target is 120 mm thick square of mild steel perpendicular to ultrasonic beam.

**Includes 2 meter cable with straight connector.

SPECIFICATIONS

SENSING CHARACTERISTICS

| Catalog Listings | 946A4V-3D-001-65E | 946-A4V-2D-001-175E | 946-A4V-2D-001-400E |
|-------------------------------|--|---------------------|---------------------|
| Max. Sensing Distance | 6000 mm (236 in.) | 1000 mm (39.4 in.) | 300 mm (11.8 in.) |
| Min. Sensing Distance | 800 mm (31.5 in.) | 200 mm (7.87 in.) | 60 mm (2.36 in.) |
| Beam Angle | 5° | | |
| POWER SUPPLY | | | |
| Supply Voltage | 10 - 30 VDC | | |
| Supply Current | <25 mA without load | | |
| Circuit Protection | Reverse polarity | | |
| OUTPUT CHARACTERISTICS | | | |
| Load Current | 0 - 200 mA | | |
| Hysteresis | ≤3.2% | | |
| Switching Frequency | 1 Hz | 5Hz | 15 Hz |
| Repeatability | ≤ 0.1% of reading | | |
| Setpoint Adjustment | Programmable with probe coded plug | | |
| Circuit Protection | Short Circuit | | |
| ENVIRONMENTAL | | | |
| Operating Temperature | -25 to 70°C (-13 to 150°F) | | |
| Storage Temperature | -40 to 85°C (-40 to 185°F) | | |
| Sealing | IP 65 | | |
| SPECIAL FEATURES | | | |
| LED Indicator | RED - Illuminates when object is not recognized, probe coded plug withdrawn or short circuited YELLOW - Illuminates when indicating output function or output status GREEN - Illuminates when target is recognized during "teach mode" or normal operation | | |



Distributor:
Elblinger Elektronik GmbH
Lange Wanne 25
38259 Salzgitter

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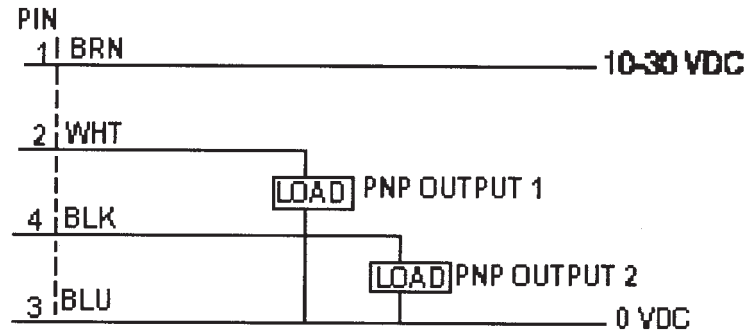
e-mail: mail@elblinger-elektronik.de
Internet: www.elblinger-elektronik.de

Ultrasonic Sensors

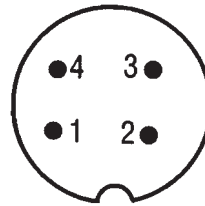
946 Series

Teachable 30 mm Diameter
Precision Digital Outputs

WIRING DIAGRAMS



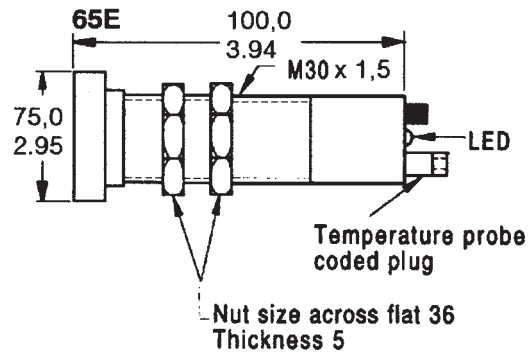
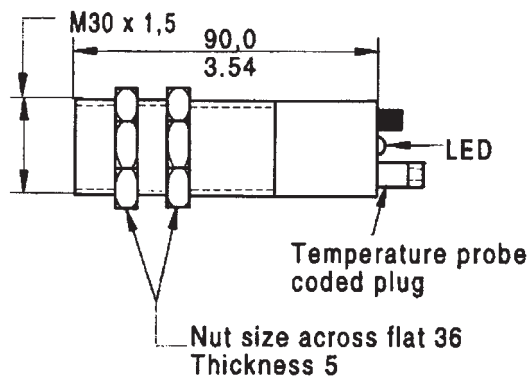
4-pin DC
MICRO CONNECTOR
(M12 x 1)



| PIN | COLOR |
|-----|-------|
| 1 | BROWN |
| 2 | WHITE |
| 3 | BLUE |
| 4 | BLACK |

MOUNTING DIMENSIONS (For reference only)

175E/400E



Proximity

ACCESSORIES

| | Catalog Listing | Features |
|--|-----------------|-----------------------------------|
| 2 Meter cable with straight connector* | 804000A09M020 | Used for wiring to connector |
| 2 Meter cable with right angle connector | 804001A09M020 | Used for wiring to connector |
| 24 VDC Power supply, relay output, 110 VAC input | FF-MADB24RB | See page B24 for more information |

*Supplied with sensor.



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Teachable 30 mm Diameter Precision Analog Outputs

FEATURES

- Voltage and current output
- Teach-in programming
- Measuring range up to 6000 mm (236 inches)



ORDER GUIDE

| Sensor Package Style | Sensing Range* mm (in.) | Termination | Analog Output | Catalog Listing |
|-------------------------------------|----------------------------|-------------|-------------------------|---------------------|
| 30 mm (1.18 in.) Stainless Steel | 800 - 6000 (31.5-236) | Cable | 4 - 20 mA 0 - 10 VDC | 946-A4V-2D-2C0-65E |
| | 500 - 4000 (19.7-157.5) | Cable | 4 - 20 mA 0 - 10 VDC | 946-A4V-2D-2C0-85E |
| | 200 - 2000 (7.87-78.74) | Cable | 4 - 20 mA 0 - 10 VDC | 946-A4V-2D-2C0-175E |
| | 60 - 500 (2.36-19.7) | Cable | 4 - 20 mA 0 - 10 VDC | 946-A4V-2D-2C0-380E |

* Standard target is 120 mm thick square of mild steel perpendicular to ultrasonic beam.

SPECIFICATIONS

SENSING CHARACTERISTICS

| Catalog Listings | 946-A4V-3D-2C0-65E | 946-A4V-2D-2C0-85E | 946-A4V-2D-2C0-175E | 946-A4V-2D-2C0-380E |
|-------------------------------|--|---------------------|---------------------|---------------------|
| Max. Sensing Distance | 6000 mm (236 in.) | 4000 mm (157.5 in.) | 2000 mm (78.74 in.) | 500 mm (19.7 in.) |
| Min. Sensing Distance | 800 mm (31.5 in.) | 500 mm (19.7 in.) | 200 mm (7.87 in.) | 60 mm (2.36 in.) |
| Beam Angle | 5° | | | |
| POWER SUPPLY | | | | |
| Supply Voltage | 10 - 30 VDC | | | |
| Supply Current | <33 mA without load | | | |
| Circuit Protection | Reverse polarity | | | |
| OUTPUT CHARACTERISTICS | | | | |
| Switching Frequency | 2 Hz | 3.3 Hz | 10 Hz | 28.6 Hz |
| Repeatability | ≤ 0.1% of reading | | | |
| Linearity | ≤ 0.1% | | | |
| Setpoint Adjustment | Programmable with probe coded plug | | | |
| Min. Load Resistance (VDC) | 1000 Ohms (0 - 10 VDC Output) | | | |
| Max. Load Resistance (mA) | 500 Ohms (4 - 20 mA Output) | | | |
| Slope of Output | Positive or Negative; Programmable with Probe Coded Plug | | | |
| Circuit Protection | Short Circuit | | | |
| ENVIRONMENTAL | | | | |
| Operating Temperature | -25 to 75°C (-13 to 167°F) | | | |
| Storage Temperature | -40 to 85°C (-40 to 185°F) | | | |
| Sealing | IP 65 | | | |
| SPECIAL FEATURES | | | | |
| LED Indicator | RED - Illuminates when object is not recognized, probe coded plug withdrawn or short circuited YELLOW - Illuminates when indicating output function or output status GREEN - Illuminates when target is recognized during "teach mode" or normal operation | | | |



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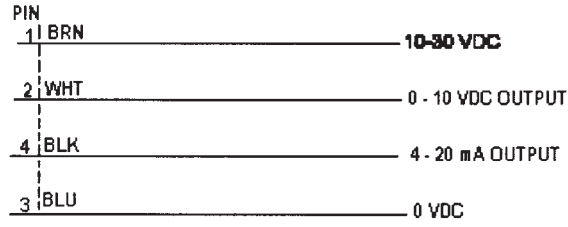
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Ultrasonic Sensors

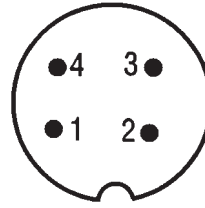
946 Series

Teachable 30 mm Diameter Precision Analog Outputs

WIRING DIAGRAM



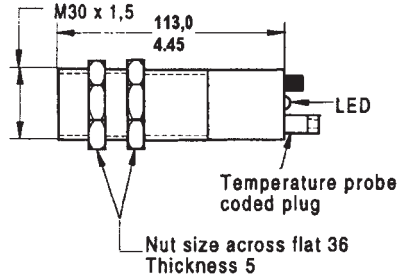
4-pin
MICRO CONNECTOR
(M12 x 1)



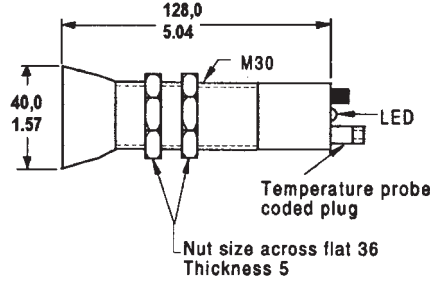
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MOUNTING DIMENSIONS (For reference only)

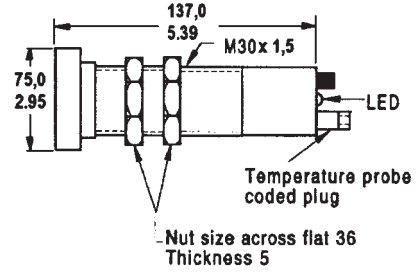
175E/380E



85E



65E



ACCESSORIES

| | Catalog Listing | Features |
|--|-----------------|------------------------------|
| 2 Meter cable with straight connector* | 804000A09M020 | Used for wiring to connector |
| 2 Meter cable with right angle connector | 804001A09M020 | Used for wiring to connector |

*Supplied with sensor

Proximity



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