

E2FM Inductive Proximity Sensors



Stainless Steel Sensors Offer Exceptional Durability to Reduce Your Maintenance Costs

- One-piece 303 stainless steel face/barrel construction resists damage caused by work piece contact, scouring abrasion, and harsh chemicals
- Up to 0.8 mm thick sensing face for superior mechanical durability, wear resistance
- Operation not influenced by the build-up of aluminum or iron cutting chips and weld slag on the sensing face
- 20% longer sensing range (10 mm) with M30 models versus the CENELEC standard 8 mm
- · Wrench flats for easy installation
- 3-wire DC models have built-in connectors; 2-wire DC models have a 0.3 m pig-tail lead with connector
- Thick insulation protects pig-tail lead for increased endurance in harsh environments
- Surge suppressor, load short-circuit protection

Reduce Your Maintenance Costs

- M12 connectors simplify installation, shorten service time
- Thick sensing face withstands repeated scouring to remove weld spatter
- Chemical-resistant 303 stainless steel case reduces failure from corrosion
- Rated IP67 for washdown
- Flush mountable in ferrous materials to protect sensor from side impact damage



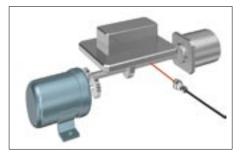
Applications

AUTO BODY WELDING



- Sensing face resists weld splatter
- Withstands repeated scouring abrasion

METAL PROCESSING



- Resists coolants and lubricants
- Resists impact from workpiece collisions
- Ignores build-up of metal cuttings on sensing face

FOOD PACKAGING



- Resists water and chemical washdown
- Mounts flush in conveyor rails

Specifications

- Voltage range: 10 to 30 VDC operating range
- Output type:
 - PNP-NO or NPN-NO (3-wire DC)
 - NO with polarity or NO without polarity (2-wire DC)
- · Load rating:
 - 200 mA at 30 VDC max.; 2 V residual voltage (3-wire DC);
 - 3 to 100 mA; 3 V residual voltage with polarity (2-wire DC)
 - 3 to 100 mA, 5 V residual voltage without polarity (2-wire DC)

- Current consumption: 10 mA max. (3-wire DC)
- Leakage current: 0.8 mA (2-wire DC)
- Circuit protection:
 - 3-wire DC: Reversed power supply polarity protection, Surge suppressor, Load short-circuit protection, and Reversed output polarity protection (except M8 size)
- 2-wire DC: Surge suppressor, Load short-circuit protection
- Differential travel: 15% max. of sensing distance
- Operating ambient: -25° to 70°C, 35% to 95% RH

Ordering Information

DC 2-Wire Proximity Sensors, Pigtail with M12 Connector

| Туре | Size | Sensing distance | Output configuration | Operation mode | Model |
|----------|------|---------------------|-------------------------------------|----------------|-------------------|
| Shielded | М8 | 1.5 mm | Polarity: Yes; Pin arrangement: 1-4 | N.O. | E2FM-X1R5D1-M1GJ |
| | M12 | 2 mm | Polarity: Yes; Pin arrangement: 1-4 | | E2FM-X2D1-M1GJ |
| | | | Polarity: No; Pin arrangement: 3-4 | | E2FM-X2D1-M1GJ-T |
| | M18 | 5 mm | Polarity: Yes; Pin arrangement: 1-4 | | E2FM-X5D1-M1GJ |
| | | | Polarity: No; Pin arrangement: 3-4 | | E2FM-X5D1-M1GJ-T |
| | M30 | 10 mm | Polarity: Yes; Pin arrangement: 1-4 | | E2FM-X10D1-M1GJ |
| | | | Polarity: No; Pin arrangement: 3-4 | | E2FM-X10D1-M1GJ-T |

DC 3-Wire Proximity Sensors, M12 Connector

| Туре | Size | Sensing distance | Operation mode | Model | | |
|----------|------|------------------|----------------|----------------|----------------|--|
| | | | | PNP Output | NPN Output | |
| Shielded | M8 | 1.5 mm | N.O. | E2FM-X1R5B1-M1 | E2FM-X1R5C1-M1 | |
| | M12 | 2 mm | | E2FM-X2B1-M1 | E2FM-X2C1-M1 | |
| | M18 | 5 mm | | E2FM-X5B1-M1 | E2FM-X5C1-M1 | |
| | M30 | 10 mm | | E2FM-X10B1-M1 | E2FM-X10C1-M1 | |

Connector Cordsets and Weld Jackets

| Connector type | Keyway | Cable size | Shape | Length | Part number |
|--------------------------------------|--------|----------------------|-----------------------|----------------|----------------|
| 3-wire DC, female | Single | 22 AWG | Straight connector | 2 m (6.56 ft) | Y96E-43SD2 |
| MicroChange® socket | | | | 5 m (16.40 ft) | Y96E-43SD5 |
| | | | | 10 m (32.8 ft) | Y96E-43SD10 |
| | | | Right angle connector | 2 m (6.56 ft) | Y96E-43RD2 |
| | | | | 5 m (16.40 ft) | Y96E-43RD5 |
| | | | | 10 m (32.8 ft) | Y96E-43RD10 |
| Weld jacket slips over cable and | - | 1/2" jacket diameter | - | 36 inch | Y92E-WJ12X36IN |
| connector to protect against spatter | - | 3/4" jacket diameter | - | 36 inch | Y92E-WJ34X36IN |

Note: Specifications are subject to change.

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