

871TM 2-Wire AC/DC PLC Interfacer

Stainless Steel Face/Threaded Short Stainless Steel Barrel



871TM AC/DC Cable Style
12, 18, 30 mm



871TM AC/DC Mini
Quick-Disconnect Style
12, 18, 30 mm



871TM AC/DC Micro
Quick-Disconnect Style
12, 18, 30 mm



871TM AC/DC EAC Micro
Quick-Disconnect Style
12 mm

Specifications

| | |
|-------------------------------|--|
| Load Current | 2...25 mA |
| Leakage Current | ≤0.9 mA at 24V DC ≤1.7 mA at 20...120V AC/DC; ≤2.5 mA at 121...250V AC/DC |
| Operating Voltage | 20...250V AC/DC |
| Voltage Drop | ≤8V at 25 mA DC ≤10V at 25 mA AC |
| Repeatability | 10% typical |
| Hysteresis | 10% typical |
| False Pulse Protection | Incorporated |
| Transient Noise Protection | Incorporated |
| Radio Frequency Protection | 10V per meter Frequency range 20...1000MHz |
| Certifications | UL Listed, CSA Certified and CE Marked for all applicable directives |
| Enclosure | NEMA 1, 2, 3, 3R, 4, 4X, 6, 6P, 12, 13, IP67 (IEC 529) all models; 1200 psi (8270 kPa) washdown; stainless steel face and barrel; ToughLink™ and micro connector versions are also rated IP69K (IEC 529) |
| Connections | Cable: 2 m (6.5 ft) length A2—2-conductor #22 AWG PVC C2—2-conductor #22 AWG ToughLink H2—2-conductor #18 AWG ToughLink Quick-Disconnect: 3-pin mini style 3-pin micro style 4-pin EAC micro style |
| LED | Red: Output energized |
| Operating Temperature [C (F)] | -25...+70° (-13...+158°) |
| Shock | 30 g, 11 ms |
| Vibration | 55 Hz, 1 mm amplitude, 3 planes |

Correction Factors

| Target Material | Correction Factor |
|-----------------|-------------------|
| Steel | 1.0 |
| Stainless Steel | 0.8...1.0 |
| Brass | 0.4...0.7 |
| Aluminum | 0.4...0.7 |
| Copper | 0.2...0.5 |

Features

- Designed for low load current PLC, I/O, and PC applications
- 2-wire operation
- 2-conductor, 3-pin or 4-pin connection
- 20...250V AC/DC
- Normally open or normally closed output
- False pulse, transient noise, and radio frequency protection
- UL Listed, CSA Certified, and CE Marked for all applicable directives

Inductive Proximity Sensors
871TM 2-Wire AC/DC PLC Interfacer
Stainless Steel Face/Threaded Short Stainless Steel Barrel

Product Selection

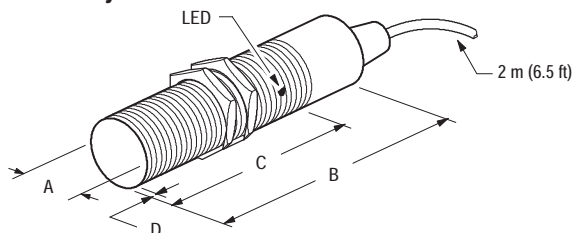
| Barrel Dia. [mm] | Nominal Sensing Distance [mm (in.)] | Shield | Output Config. | Switching Freq. [Hz] | Cat. No. | | | | |
|---|-------------------------------------|--------|----------------|----------------------|------------------|------------------|------------------|------------------|--------------------|
| | | | | | PVC Cable | ToughLink™ Cable | Mini QD Style | Micro QD Style | EAC Micro QD Style |
| 12 | 2 (0.08) | Yes | N.O. | 75 | 871TM-BH2N12-A2 | 871TM-BH2N12-C2 | 871TM-BH2N12-N3 | 871TM-BH2N12-R3 | 871TM-BH2N12-B4 |
| | 4 (0.16) | No | | 35 | 871TM-BH4N12-A2 | 871TM-BH4N12-C2 | 871TM-BH4N12-N3 | 871TM-BH4N12-R3 | — |
| | 2 (0.08) | Yes | N.C. | 75 | — | — | — | 871TM-BH2C12-R3 | — |
| | 4 (0.16) | No | | 35 | — | — | — | 871TM-BH4C12-R3 | — |
| 18 | 5 (0.20) | Yes | N.O. | 65 | 871TM-BH5N18-A2 | 871TM-BH5N18-H2 | 871TM-BH5N18-N3 | 871TM-BH5N18-R3 | — |
| | 8 (0.31) | No | | 30 | 871TM-BH8N18-A2 | 871TM-BH8N18-H2 | 871TM-BH8N18-N3 | 871TM-BH8N18-R3 | — |
| | 5 (0.20) | Yes | N.C. | 65 | — | — | — | 871TM-BH5C18-R3 | — |
| | 8 (0.31) | No | | 30 | — | — | — | 871TM-BH8C18-R3 | — |
| 30 | 10 (0.39) | Yes | N.O. | 45 | 871TM-BH10N30-A2 | 871TM-BH10N30-H2 | 871TM-BH10N30-N3 | 871TM-BH10N30-R3 | — |
| | 15 (0.59) | No | | 20 | 871TM-BH15N30-A2 | 871TM-BH15N30-H2 | 871TM-BH15N30-N3 | 871TM-BH15N30-R3 | — |
| | 10 (0.39) | Yes | N.C. | 45 | 871TM-BH10C30-A2 | 871TM-BH10C30-H2 | 871TM-BH10C30-N3 | 871TM-BH10C30-R3 | — |
| | 15 (0.59) | No | | 20 | 871TM-BH15C30-A2 | 871TM-BH15C30-H2 | 871TM-BH15C30-N3 | 871TM-BH15C30-R3 | — |
| Recommended Standard QD Cordset (-6F = 1.8 m (6 ft), -2 = 2 m (6.5 ft)) | | | | | | | 889N-F3AFC-6F | 889R-F3ECA-2 | 889B-F3AC-2 |

QD Cordsets and Accessories

| Description | Page Number |
|--------------------------|---------------|
| Other Cordsets Available | 8-2 |
| Terminal Chambers | 8-2 |
| Mounting Brackets | 2-210...2-214 |
| End Caps | 2-219, 2-220 |
| Mounting Nuts | 2-221...2-222 |

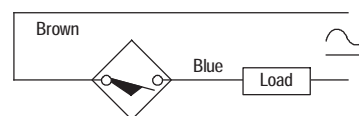
Approximate Dimensions [mm (in.)]

Cable Style



Wiring Diagrams

Normally Open



Note 1: Attach housing to ground.
Note 2: Load can be switched to brown wire.

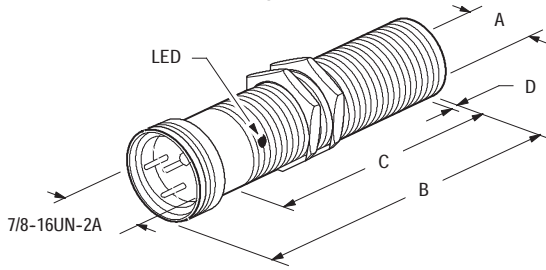
| Thread Size | Shielded | [mm (in.)] | | | |
|-------------|----------|-------------|-------------|-------------|-------------|
| | | A | B | C | D |
| M12 X 1 | Y | 12.0 (0.47) | 49.8 (1.96) | 26.4 (1.04) | 2.5 (0.10) |
| | N | | | 19.5 (0.77) | 9.4 (0.37) |
| M18 X 1 | Y | 18.0 (0.71) | 55.4 (2.18) | 41.7 (1.64) | 2.5 (0.10) |
| | N | | | — | 14.5 (0.57) |
| M30 X 1.5 | Y | 30.0 (1.18) | 57.9 (2.28) | 41.9 (1.65) | 2.5 (0.10) |
| | N | | | 39.4 (1.55) | 18.0 (0.71) |

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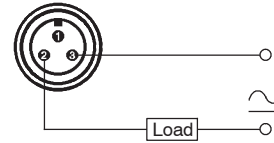
Approximate Dimensions [mm (in.)] (continued)

Mini Quick-Disconnect Style



Wiring Diagrams

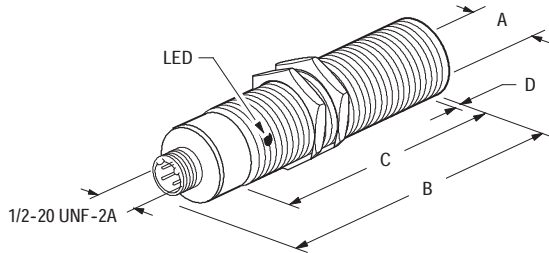
Normally Open



Note 1: Attach housing to ground.
Note 2: Load can be switched to pin 3.

| Thread Size | Shielded | [mm (in.)] | | | |
|-------------|----------|-------------|-------------|-------------|-------------|
| | | A | B | C | D |
| M12 X 1 | Y | 12.0 (0.47) | 63.5 (2.50) | 25.4 (1.00) | 2.5 (0.10) |
| | N | | | 18.5 (0.73) | 9.4 (0.37) |
| M18 X 1 | Y | 18.0 (0.71) | 56.1 (2.21) | 35.1 (1.38) | 2.5 (0.10) |
| | N | | | 29.2 (1.15) | 14.5 (0.57) |
| M30 X 1.5 | Y | 30.0 (1.18) | 68.1 (2.68) | 41.9 (1.65) | 2.5 (0.10) |
| | N | | | 39.4 (1.55) | 18.0 (0.71) |

Micro Quick-Disconnect Style



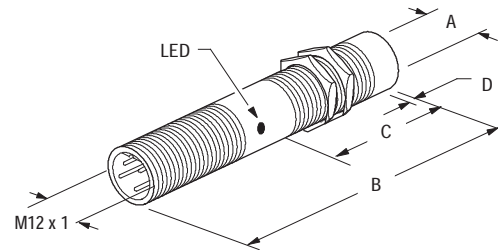
Normally Open



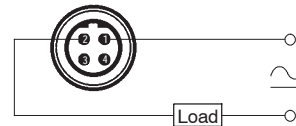
Note 1: Attach housing to ground.
Note 2: Load can be switched to pin 2.

| Thread Size | Shielded | [mm (in.)] | | | |
|-------------|----------|-------------|-------------|-------------|-------------|
| | | A | B | C | D |
| M12 X 1 | Y | 12.0 (0.47) | 61.0 (2.40) | 26.4 (1.04) | 2.5 (0.10) |
| | N | | | 19.6 (0.77) | 9.4 (0.37) |
| M18 X 1 | Y | 18.0 (0.71) | 65.0 (2.56) | 41.7 (1.64) | 2.5 (0.10) |
| | N | | | 39.4 (1.55) | 14.5 (0.57) |
| M30 X 1.5 | Y | 30.0 (1.18) | 66.3 (2.61) | 41.9 (1.65) | 2.5 (0.10) |
| | N | | | 39.4 (1.55) | 18.0 (0.71) |

EAC Micro Quick-Disconnect Style



Normally Open



Note 1: No ground pin. Attach housing to ground.
Note 2: Load can be switched to pin 2.

| Thread Size | Shielded | [mm (in.)] | | | |
|-------------|----------|-------------|-------------|-------------|------------|
| | | A | B | C | D |
| M12 X 1 | Y | 12.0 (0.47) | 61.0 (2.40) | 26.4 (1.04) | 2.5 (0.10) |