871FM Miniature Flat Pack Inductive Sensors Now with IO-Link

Allen-Bradley

Ideal for Limited Space Applications

Features and Benefits

- Miniature rectangular size (5 mm and 8 mm) is ideal for space critical applications
- IO-Link communications (select normally open, PNP models) help minimize downtime and increase productivity
- Enhanced for switching frequencies up to 5000 Hz
- Standard sensing ranges up to 3 mm (0.11 in.)
- Reverse polarity, short circuit, and overload protection
- Convenient flush mounting
- Quick disconnect and cable options

What is IO-Link?

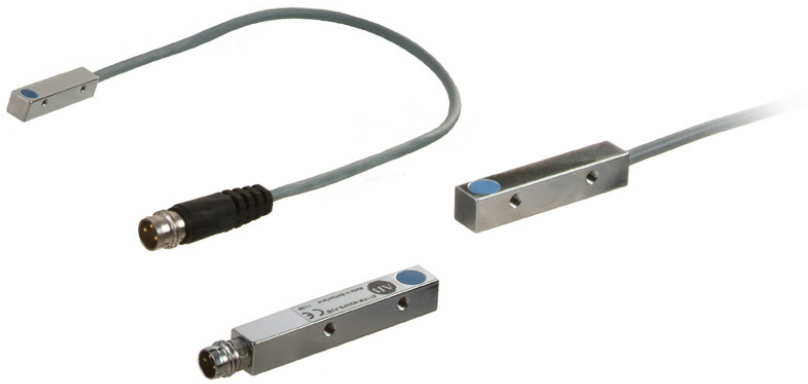
IO-Link is a worldwide open-standard protocol that allows sensors to easily integrate into The Connected Enterprise. Benefits of IO-Link technology include:

- Reduced inventory and operating costs
- Increased uptime/productivity
- Simplified design, installation, setup and maintenance
- Enhanced flexibility and scalability

IO-Link enabled sensors offer advanced features and diagnostics that can only be accessed through an IO-Link master.

- Real time diagnostics and sensor health
- Automatic device configuration (ADC)
- Multiple profiles
- Descriptive tags
- Device specific parameters

IO-Link Master



IO-Link

Rockwell Automation announces enhancements to the Allen-Bradley® 871FM Miniature Flat Pack inductive proximity sensor line to include IO-Link functionality on select PNP N.O. models. IO-Link allows sensors to easily integrate with The Connected Enterprise, delivering data from the sensor directly into a control system in a cost-efficient and easy-to-use manner via an IO-Link master and EtherNet/IP™.

The 871FM Miniature Rectangular Sensors can be applied where traditional tubular proximity sensors cannot, whether you're trying to sense small parts, space is at a premium, or both. Designed to sense the presence of ferrous and nonferrous metal objects without touching them, the self-contained 871FM sensors have a chrome-plated housing and sensing ranges up to 3 mm (.011 in.). In addition to their compact size, these miniature rectangular models allow you additional flexibility based on their thru-hole mounting style which eliminates the need for a traditional bracket. Plus, their shielded construction allows these sensors to be mounted flush onto the base metal, resulting in a very low profile sensing solution. A variety of quick disconnect and cable options are available.

871FM Miniature Flat Pack, IO-Link Version 1.0

- IO-Link is a worldwide open-standard peer-to-peer serial communication protocol (IEC 61131-9) that allows sensors and actuators to easily integrate into The Connected Enterprise.
- The IO-Link enabled 871FM miniature sensor—when connected to an IO-Link master—shares device identity, parameters, real-time diagnostics and process data with the control system to optimize machine setup, maintenance and troubleshooting.
- By combining simple implementation with powerful data and diagnostics, IO-Link sensors provide simplified integration and seamless visibility of your processes to increase uptime and productivity.

871FM Miniature Flat Pack, IO-Link Device Specific Parameters

- **Output status** provides indication when the target is detected.
- **Margin status** provides indication when the target is detected beyond 80% of the specified operating range.
- **Timer functions** enable the manipulation of the sensor's output signal (i.e., Delay On, Stretch On…etc.) in relation to a selection of predetermined time periods.
- **Switching mode polarity** allows the device output type (i.e., N.O. or N.C.) to be changed for use in standard IO mode.
- **Detection counter** tallies the number of switching operations.
- **Temperature functions** identify the actual internal temperature of the sensor and the maximum internal temperature of the device recorded over the operating life of the sensor.

IO-Link Master

Product Selection - 871FM Miniature Flat Pack

Additional product selection available on http://ab.rockwellautomation.com/.

Dimensions W x H x D [mm (in.)]	Nominal Sensing Distance [mm (in.)]	Shielded	Output Configuration	Switching Frequency	Connector Type	Catalog Number
5 x 25 x 5 (0.19 x 0.98 x 0.20)	0.8 (0.03)	yes	N.O., Sink (NPN)	5000	Pico with Lead	871FM-M1NN5-AP3
5 x 25 x 5 (0.19 x 0.98 x 0.20)			N.O., Source (PNP)			871FM-M1NP5-AP3
5 x 22 x 5 (0.19 x 0.86 x 0.20)					PVC Cable	871FM-M1NP5-E2
5 x 22 x 5 (0.19 x 0.86 x 0.20)	1.5 (0.05)		N.O., Sink (NPN)	3000		871FM-M2NN5-E2
5 x 25 x 5 (0.19 x 0.98 x 0.20)			N.O., Source (PNP)		Pico with Lead	871FM-M2NP5-AP3
5 x 22 x 5 (0.19 x 0.86 x 0.20)					PVC Cable	871FM-M2NP5-E2
8 x 35 x 8 (0.31 x 1.37 x 0.31)	2 (0.07)		N.O., Sink (NPN)			871FM-M2NN8-E2
8 x 50 x 8 (0.31 x 1.97 x 0.31)					Pico Quick-Disconnect	871FM-M2NN8-P3
8 x 35 x 8 (0.31 x 1.37 x 0.31)			N.O., Source (PNP)		PVC Cable	871FM-M2NP8-E2
8 x 50 x 8 (0.31 x 1.97 x 0.31)					Pico Quick-Disconnect	871FM-M2NP8-P3
8 x 35 x 8 (0.31 x 1.37 x 0.31)	3 (0.11)	no	N.O., Sink (NPN)	1000	PVC Cable	871FM-N3NN8-E2
8 x 50 x 8 (0.31 x 1.97 x 0.31)					Pico Quick-Disconnect	871FM-N3NN8-P3
8 x 35 x 8 (0.31 x 1.37 x 0.31)			N.O., Source (PNP)		PVC Cable	871FM-N3NP8-E2
8 x 50 x 8 (0.31 x 1.97 x 0.31)					Pico Quick-Disconnect	871FM-N3NP8-P3

Note: IO-Link Master Module for POINT I/O™ (Catalog No. 1734-4IOL) is required for premier IO-Link integration experience.

Cordsets and Accessories

Description	Catalog Number
IO-Link Master Module for POINT I/O	1734-4IOL
DC pico QD cordset, straight, 3-pin, 2 m (6.5 ft)	889P-F3AB-2

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