Rockwell Automation announces a new line of Allen-Bradley® 871FM Miniature Metal Flat Pack inductive proximity sensors. These IO-Link enabled sensors include fully shielded, stainless steel rectangular housings with stainless steel face and are available in two compact, rectangular housings (8 mm (0.31 in.) and 14 mm (0.55 in.).

The 871FM 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. These sensors are designed to sense the presence of ferrous and nonferrous metal objects without touching them at equal sensing range. The 871FM is offered in general purpose and rugged welding versions with sensing ranges up to 10 mm (0.39 in.).

The weld immune model features ToughCoat Finish™ to help prevent weld slag buildup on the sensor. These sensors have Equal/Factor-1 sensing for all metals and easily mount flush onto the base metal, resulting in a very low profile sensing solution. A variety of quick disconnect and cable options are available. Typical applications include stamping and die, welding, automotive, conveying, food and beverage and more.

IO-Link allows these smart 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™.
871FM Miniature Metal Flat Pack, IO-Link Version 1.1

- 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 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 Metal 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** when enabled, reports the sensor output time from ON (Duration Triggered) to OFF (Duration Not Triggered).
- **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.
- **Signal strength** reports information about the quality of the signal received by the sensor. The higher the signal strength, the stronger the signal received by the sensor.
- **Proximity alarm** provides information when the target is approaching and detected but not close enough to switch sensor output on.

Product Selection - 871FM Miniature Metal Flat Pack


<table>
<thead>
<tr>
<th>Dimensions W x L x H [mm (in.)]</th>
<th>Nominal Sensing Distance [mm (in.)]</th>
<th>Shielded</th>
<th>Output Configuration</th>
<th>Switching Frequency</th>
<th>Weld Immune</th>
<th>Connector Type</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>20(W)x32(L)x8(H) (0.78 x 1.25 x 0.31)</td>
<td>7 mm (0.27)</td>
<td>Yes</td>
<td>Complementary N.O/N.C</td>
<td>&lt;=200 No</td>
<td>PVC Pigtail, DC Micro QD, 4-pin</td>
<td>871FM-M7BA20-FD02</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;=200 Yes -</td>
<td>PVC Pigtail, DC Micro QD, 4-pin, Weld tube cable protection</td>
<td>871FM-MV7BA20-FD02X</td>
<td></td>
</tr>
<tr>
<td>30(W)x52(L)x14(H) (1.18 x 2.04 x 0.55)</td>
<td>10 mm (0.39)</td>
<td></td>
<td></td>
<td>&lt;=200 No</td>
<td>PVC Pigtail, DC Micro QD, 4-pin</td>
<td>871FM-M10BA30-FD02</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;=200 No</td>
<td>PVC Pigtail, DC Micro QD, 4-pin, Weld tube cable protection</td>
<td>871FM-M10BA30-E2</td>
<td></td>
</tr>
</tbody>
</table>

Note: IO-Link Master Module (Catalog No. 1734-4IO1 or 1732-81OLM12R) is required for premier IO-Link integration experience.

Cordsets and Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Catalog Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>IO-Link Master Module for POINT I/O</td>
<td>1734-4IO1</td>
</tr>
<tr>
<td>ArmorBlock IO-Link Master</td>
<td>1732E-81OLM12R</td>
</tr>
<tr>
<td>DC Micro QD cordset, 4-pin, 2 m (6.5 ft)</td>
<td>889D-F4AB-2</td>
</tr>
</tbody>
</table>

Note: EtherCAT is a trademark of the ODVA.

www.rockwellautomation.com

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