871P VersaCube
Inductive Proximity Sensors

General Purpose, Automotive and Welding Applications

**Features**

- 10…30V DC operating voltage
- 4-Wire complementary N.O. and N.C. outputs (PNP or NPN)
- Long sensing ranges, shielded 20 mm and unshielded 40 mm configurations, flush and non-flush mounting
- Unique and high-visibility status and signal strength indication
- Equal/Factor-1 sensing for all metals
- Weld field immune (WFI) electronics
- Optional heavy duty metal base or ToughCoat Finish™ for welding applications
- 2-Piece design with flexible mounting capabilities
- Reverse polarity, short circuit, false pulse, noise and overload protections

**Benefits**

- Cost-effective for a wide range of general purpose, welding and hygienic applications
- Enhanced feature set with increased performance
- Added mounting features and options for new and drop-in retrofit applications
- Easy viewing with large indicators for status and diagnostics
- Quick installation with variable position-sensing face and mounting options
- Detect different materials – iron, stainless steel, brass, aluminum, copper at the same rated sensing distance without a correction factor
- ToughCoat Finish on sensor face resists weld slag splatter

**Long-Range Sensing, Versatility and Durability**

Rockwell Automation is pleased to introduce the new Allen-Bradley® 871P VersaCube® inductive proximity sensor. These new 4-Wire DC sensors integrate both standard and specialty features into a redesigned 40 mm rectangular housing suited for an even wider range of general purpose and welding applications.

The new 871P WFI VersaCube models provide a level of performance far beyond that of similar products. The VersaCube offers extended range, complementary (N.O. + N.C.) outputs and equal sensing distance for all metals. The VersaCube features a new high-visibility status indicator that can be seen from a long distance at 360°. When coupled with the unique mounting flexibility of the VersaCube, installation, alignment and troubleshooting are greatly simplified.

For the most demanding applications, the 871P VersaCube can be ordered with a heavy-duty metal base, which provides enhanced strength and durability, or with ToughCoat Finish, our patented weld-slag resistant coating applied to the sensing face. ToughCoat Finish prevents the adhesion and accumulation of weld splatter, as well as the associated problems – including physical damage or “burn-through” to the internal components. The result is a sensor that lasts considerably longer than its standard weld field immune counterparts.
## Product Selection

**Inductive Proximity Sensors: General Purpose / Heavy Duty / Weld-Field Immune / ToughCoat Finish**

<table>
<thead>
<tr>
<th>Head Size</th>
<th>Weld-Field Immune</th>
<th>Nominal Sensing Distance [mm (in.)]</th>
<th>Shielded</th>
<th>Output</th>
<th>Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 mm</td>
<td>Yes</td>
<td>20 (0.79)</td>
<td>Yes</td>
<td>PNP</td>
<td>871P-D20BP40-D4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40 (1.57)</td>
<td>No</td>
<td>NPN</td>
<td>871P-D20BN40-D4</td>
</tr>
<tr>
<td></td>
<td>Yes w/ToughCoat</td>
<td>20 (0.79)</td>
<td>Yes</td>
<td>PNP</td>
<td>871P-DV20BP40-D4</td>
</tr>
<tr>
<td></td>
<td>Weld Slag Finish</td>
<td>40 (1.57)</td>
<td>No</td>
<td>NPN</td>
<td>871P-DV40BP40-D4</td>
</tr>
</tbody>
</table>

Note: Recommended Standard QD Cordset (-2 = 2 m (6.5 ft) / Standard PVC: 889D-F4AC-2 / ToughWeld™ CPE: 889D-F4WE-2

1. 871P is available with ToughCoat Finish on the sensor face. This is a proprietary material which resists the adhesion and accumulation of weld-slag particles thereby extending sensor performance and life.

### Mounting Accessories

<table>
<thead>
<tr>
<th>Description</th>
<th>Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard zinc mounting bracket</td>
<td>871A-PBR</td>
</tr>
<tr>
<td>Stainless steel mounting L-bracket and 22 mm plastic mounting nut</td>
<td>871A-BRS59</td>
</tr>
<tr>
<td>Plastic mounting nut, 22 mm</td>
<td>871T-N9</td>
</tr>
</tbody>
</table>

* Models shown with optional Quick Disconnect Cordset (not included)

Learn more about 871P VersaCube Inductive Proximity Sensors at ab.com.

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