IDEM CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches

CPC Series Plastic Housing
CMC Series Stainless Steel Housing
CMC-F Series Stainless Steel Housing Rear Mount

- Coded magnetic actuation
- Universal housing suitable for most general applications
- Can be high-pressure hosed at high temperature - IP69K rated
- LED indication
- Wide 34 mm sensing distance, high tolerance to misalignment
- Long life switching capability - up to 0.2A
- Will operate with most safety relays
- Available with 2m, 5m, or 10m cable or 250mm pigtail with quick-disconnect cable

CMC Series Only
- Specifically designed for food processing applications
- Suitable for CIP SIP cleaning - Food Splash Zones per EHEDG guidelines
- 316 Stainless steel mirror polished finish

CMC-F Only
- Same as CMC series, but with no-food-trap housing - rear mounting holes
- 5m cable only

See Dimensions later in this section.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Price</th>
<th>Body Material</th>
<th>Cable Length</th>
<th>Circuits</th>
<th>Contact Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPC-115005</td>
<td>$93.00</td>
<td>Plastic</td>
<td>2m</td>
<td>2 NC, 1 NO</td>
<td>0.2A</td>
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<tr>
<td>CPC-115006</td>
<td>$99.00</td>
<td>Plastic</td>
<td>5m</td>
<td></td>
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<tr>
<td>CPC-115007</td>
<td>$114.00</td>
<td>Plastic</td>
<td>10m</td>
<td></td>
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<td>CMC-138005</td>
<td>$149.00</td>
<td>Stainless steel</td>
<td>2m</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CMC-138006</td>
<td>$157.00</td>
<td>Stainless steel</td>
<td>5m</td>
<td></td>
<td></td>
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<tr>
<td>CMC-F-135006</td>
<td>$157.00</td>
<td>Stainless steel</td>
<td>5m</td>
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</tr>
<tr>
<td>CPC-115008</td>
<td>$119.00</td>
<td>Plastic</td>
<td>250mm</td>
<td>2 NC, 1 NO</td>
<td>0.2A</td>
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<td>CPC-138008</td>
<td>$180.00</td>
<td>Stainless steel</td>
<td>250mm</td>
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</table>

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Price</th>
<th>Description</th>
<th>Exit Type/Cable Length</th>
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<tbody>
<tr>
<td>140101</td>
<td>$33.00</td>
<td>Female QD Lead</td>
<td>M12 Female 5m, 8-pin</td>
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<tr>
<td>140102</td>
<td>$52.00</td>
<td>Female QD Lead</td>
<td>M12 Female 10m, 8-pin</td>
</tr>
</tbody>
</table>
IDEM CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

mm [inch]

CPC Series

Pigtail

Quick Disconnect

For the latest prices, please check AutomationDirect.com.

See our website: www.AutomationDirect.com for complete Engineering drawings.
IDEM CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

mm [inch]

CMC Series

Pigtail

Quick Disconnect

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IDEM CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches

Dimensions

mm [inch]

CMC-F Series

Pigtail

For the latest prices, please check AutomationDirect.com.
Magnetic Switches

<table>
<thead>
<tr>
<th>Quick Disconnect Connector Pin Out</th>
<th>Lead Color</th>
<th>Type of Circuit (Actuator Present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Yellow</td>
<td>NO</td>
</tr>
<tr>
<td>6</td>
<td>Green</td>
<td>NO</td>
</tr>
<tr>
<td>7</td>
<td>Black</td>
<td>NC2</td>
</tr>
<tr>
<td>1</td>
<td>White</td>
<td>NC2</td>
</tr>
<tr>
<td>2</td>
<td>Red</td>
<td>NC1</td>
</tr>
<tr>
<td>3</td>
<td>Blue</td>
<td>NC1</td>
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Coded Magnetic and RFID Switches

<table>
<thead>
<tr>
<th>Quick Disconnect Connector Pin Out</th>
<th>Lead Color</th>
<th>Type of Circuit (Actuator Present)</th>
<th>Output Types (Solid State)</th>
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<tbody>
<tr>
<td>8</td>
<td>Orange</td>
<td>Auxiliary (NO)</td>
<td>200 mA max. 24 VDC</td>
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<tr>
<td>5</td>
<td>Brown</td>
<td>Auxiliary (NO)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Yellow</td>
<td>NC2 +</td>
<td>200 mA max. 24 VDC (Optocoupler)</td>
</tr>
<tr>
<td>6</td>
<td>Green</td>
<td>NC2 -</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Black</td>
<td>NC1 +</td>
<td>200 mA max. 24 VDC (Optocoupler)</td>
</tr>
<tr>
<td>1</td>
<td>White</td>
<td>NC1 -</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Red</td>
<td>Supply +24 VDC</td>
<td>Supply 24 VDC +10% / 15%</td>
</tr>
<tr>
<td>3</td>
<td>Blue</td>
<td>Supply 0VDC</td>
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</tr>
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IDEM Non-Contact Safety Switches

Specifications

Non-contact Safety Switches Specifications

<table>
<thead>
<tr>
<th>Safety Classification and Reliability Data</th>
<th>Non-Contact Magnetic Switches</th>
<th>Non-Contact Coded Magnetic Switches</th>
<th>Non-Contact RFID Coded Switches</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 13849-1</td>
<td>Up to category 4 with safety relay</td>
<td>Up to PLe depending upon system architecture</td>
<td>Up to SIL3 depending upon system architecture</td>
</tr>
<tr>
<td>EN 62061</td>
<td>Up to SIL3, depending upon system architecture</td>
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<td></td>
</tr>
<tr>
<td>Safety Data - Annual Usage</td>
<td>8 cycles per hour / 24 hours per day / 365 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PFHd</td>
<td>$2.8 \times 10^{-10}$</td>
<td>$2.6 \times 10^{-10}$</td>
<td>$4.77 \times 10^{-10}$</td>
</tr>
<tr>
<td>Proof Test Interval (Life)</td>
<td>20 Years</td>
<td></td>
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<tr>
<td>MTTFd</td>
<td>866 Years</td>
<td>1100 years</td>
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<tr>
<td>Agency Approvals</td>
<td>CE, cULus</td>
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</tbody>
</table>

Electrical and General Specifications

Contact Ratings: Safety Contact NC

- MPR: Voltage free: 250 VAC, 0.5 A Max.
- LPR, LMR, SPR, SMR, SMR-F: Voltage free: 250 VAC, 1.0 A Max.
- CPR, CMR, CMR-F, WPR: Voltage free: 250 VAC, 2.0 A Max.

Contact Ratings: Monitoring (Auxiliary) Contact NO

- Voltage free: 24 VDC, 0.2 A Max.

Recommended Fuses (NC Circuits)

- MPR: Fuse externally 0.4A (F)
- LPR, LMR, SPR, SMR, SMR-F, CMR, CMR-F: Fuse externally 0.8A (F)
- CPR, WPR: Fuse externally 1.6A (F)

Contact Release Time

- <2ms
- NA

Initial Contact Resistance

- <500 milliohm
- NA

Minimum Switched Current

- 10 VDC, 1mA

Dielectric Withstand

- 250 VAC

Insulation Resistance

- 100 Megohms

Recommended Setting Gap

- 5mm

NC Switching Distance

- Sao (assured ON): 8mm close; Sar (assured OFF): 20 mm open

NC Switching Operation

- For all switches the NC circuits are closed when the guard is closed and the actuator is present.

NO Switching Operation

- Opens before NC circuits close

Tolerance to Misalignment

- 5mm in any direction from 5mm setting gap (See Misalignment Range drawing on this page)

Switching Frequency

- 1.0 Hz Max.

Approach Speed

- 200 mm per minute to 1000 mm per second

Body Material - Polyester

- CPR, LPR, MPR, SPR, WPR
- CPC, LPC, MPC, SPC, WPC
- CMC, CMC-F, LMC, SMC, SMC-F
- LPF, SPF

Body Material - 316 Stainless Steel

- CMR, CMR-F, LMR, SMR, SMR-F
- NA

Operating Temperature Range

- Polyester: -25° to +80°C (-13° to +176°F)
- 316 Stainless Steel: -25° to +105°C (-13° to +221°F)
- NA

Storage Temperature (Low)

- -55° to -40°C (-67° to -40°F)

Enclosure Protection

- IP67, IP69K

Shock Resistance

- IEC 68-2-27 11 ms 30g

Vibration Resistance

- IEC 68-2-6 10-55 Hz 1mm

Cable Type

- PVC, 6.5 mm outside diameter max.
- PVC, 6mm outer diameter max.

Mounting Bolts (recommended)

- 2 x M4; Tightening torque: 1.0 Nm

Note: Always mount onto non-Ferrous materials.

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Misalignment Range
Safety Products

Warning: Safety products sold by AutomationDirect are Safety components only. The purchaser/installer is solely responsible for the application of these components and ensuring all necessary steps have been taken to assure each application and use meets all performance and applicable safety requirements and/or local, national and/or international safety codes as required by the application. AutomationDirect cannot certify that our products, used solely or in conjunction with other AutomationDirect or other vendors’ products, will assure safety for any application. Any person using or applying any products sold by AutomationDirect is responsible for learning the safety requirements for their individual application and applying them, and therefore assumes all risks, and accepts full and complete responsibility, for the selection and suitability of the product for their respective application.

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