IDEEM 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 14 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>CPC, CMC, and CMC-F Non-Contact Coded Magnetic Safety Switches</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Part Number</strong></td>
</tr>
<tr>
<td>CPC-115005</td>
</tr>
<tr>
<td>CPC-115006</td>
</tr>
<tr>
<td>CPC-115007</td>
</tr>
<tr>
<td>CMC-138005</td>
</tr>
<tr>
<td>CMC-138006</td>
</tr>
<tr>
<td>CMC-F-135006</td>
</tr>
</tbody>
</table>

Quick Disconnect Versions (M12 8-pin)
| CPC-115008 | $117.00 | Plastic | 250mm | 2 NC, 1 NO | 0.2A |
| CMC-138008 | $176.00 | Stainless steel | 250mm | 2 NC, 1 NO | 0.2A |

Female Quick Disconnect Lead

<table>
<thead>
<tr>
<th><strong>Part Number</strong></th>
<th><strong>Price</strong></th>
<th><strong>Description</strong></th>
<th><strong>Exit Type/Cable Length</strong></th>
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<tbody>
<tr>
<td>140101</td>
<td>$32.50</td>
<td>Female QD Lead</td>
<td>M12 Female 5m, 8-pin</td>
</tr>
<tr>
<td>140102</td>
<td>$51.00</td>
<td>Female QD Lead</td>
<td>M12 Female 10m, 8-pin</td>
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</tbody>
</table>

For the latest prices, please check AutomationDirect.com.
IDEEM 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

Switch

Actuator

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tESC-170 Safety Electrical Components 1-800-633-0405
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.

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### Magnetic Switches

<table>
<thead>
<tr>
<th>Lead Color</th>
<th>Type of Circuit</th>
<th>Output Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Green</td>
<td>NO</td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>NC2</td>
<td>+200 mA max. 24 VDC</td>
</tr>
<tr>
<td>White</td>
<td>NC2</td>
<td>+200 mA max. 24 VDC</td>
</tr>
<tr>
<td>Red</td>
<td>NC1</td>
<td>+200 mA max. 24 VDC</td>
</tr>
<tr>
<td>Blue</td>
<td>NC1</td>
<td>+200 mA max. 24 VDC</td>
</tr>
</tbody>
</table>

* Not used on switches with single NC contacts.

### Coded Magnetic and RFID Switches

<table>
<thead>
<tr>
<th>Lead Color</th>
<th>Type of Circuit</th>
<th>Output Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orange</td>
<td>Auxiliary (NO)</td>
<td>+200 mA max. 24 VDC</td>
</tr>
<tr>
<td>Brown</td>
<td>Auxiliary (NO)</td>
<td>+200 mA max. 24 VDC</td>
</tr>
<tr>
<td>Yellow</td>
<td>NC2</td>
<td>+200 mA max. 24 VDC (Optocoupler)</td>
</tr>
<tr>
<td>Green</td>
<td>NC2</td>
<td>+200 mA max. 24 VDC (Optocoupler)</td>
</tr>
<tr>
<td>Black</td>
<td>NC1</td>
<td>+200 mA max. 24 VDC (Optocoupler)</td>
</tr>
<tr>
<td>White</td>
<td>NC1</td>
<td>+200 mA max. 24 VDC (Optocoupler)</td>
</tr>
<tr>
<td>Red</td>
<td>Supply +24 VDC</td>
<td>+200 mA max. 24 VDC</td>
</tr>
<tr>
<td>Blue</td>
<td>Supply 0VDC</td>
<td>+10% / -15%</td>
</tr>
</tbody>
</table>

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# IDEM Non-Contact Safety Switches Specifications

## Non-contact Safety Switches Specifications

| Switching Reliability (B10d) | 3.3 x 10^6 operations at 100 mA load | No mechanical parts implemented |
| ISO 13849-1 | Up to category 4 with safety relay |
| ISO 13849-1 | Up to PLe depending upon system architecture |
| EN 62061 | Up to SIL3 depending upon system architecture |
| Safety Data - Annual Usage | 8 cycles per hour / 24 hours per day / 365 days |
| PFHd | 2.8 x 10^-10 |
| Proof Test Interval (Life) | 20 Years |
| MTTFd | 866 Years |
| Agency Approvals | CE, cULus |

## 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. |
- 24 VDC, 0.2A Max. (Optocoupler) |

### Contact Ratings: Monitoring (Auxiliary) Contact NO
- Voltage free: 24 VDC, 0.2A 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) |
- NA |

###Initial Contact Resistance
- <500 milliohm |

###Minimum Switched Current
- 10 VDC, 1mA |

###Dielectric Withstand
- 250 VAC |

###Insulation Resistance
- 100 Miohms |

###Recommended Setting Gap
- 5mm |

###NC Switching Distance
- Sae (assured ON) 8mm close; Sar (assured OFF) 20 mm open |

###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 |

###Body Material - 316 Stainless Steel
- CMR, CMR-F, LMR, SMR, SMR-F |

###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, IP66K |

###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. |

###Mounting Bolts (recommended)
- 2 x M4; Tightening torque: 1.0 Nm |

Note: Always mount onto non-Ferrous materials.

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**Misalignment Range**

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