HYGIEMAG - MAGNETIC Non Contact - Type: MMR-H

Coded Magnetic Actuation  Switching Tolerance up to 10mm

Compact yet robust fitting suitable for all small guard applications.
Through hole fixing to enable front mounting no food trap areas
Suitable for CIP SIP cleaning - Food Contact or Splash Zones EHEDG guidelines
Cost effective interlock solution.
Wide sensing at 10mm.

Can be mounted unobtrusively in channels or behind doors - left or right cable exit
UP to: PLe ISO 13849-1  SIL 3  EN 62061  Cat. 4  EN 954-1
2NC 1NO circuits

Specifications:
- Specified to 105C but designed to work up to 125C.
- Will operate with most Safety Relays

Stainless Steel Housing

- Left or Right cable exit available

Quick Connect (QC)
- M12 8 Way Male Plug
- Pin view from switch
- Standard Lead Colour
- Circuit (Actuator Present)

<table>
<thead>
<tr>
<th>Sales Number</th>
<th>Type</th>
<th>Cable Length</th>
<th>Circuits</th>
</tr>
</thead>
<tbody>
<tr>
<td>131001</td>
<td>MMR-H</td>
<td>2M</td>
<td>2NC</td>
</tr>
<tr>
<td>131002</td>
<td>MMR-H</td>
<td>5M</td>
<td>2NC</td>
</tr>
<tr>
<td>131003</td>
<td>MMR-H</td>
<td>10M</td>
<td>2NC</td>
</tr>
<tr>
<td>131004</td>
<td>MMR-H</td>
<td>QC-M12</td>
<td>2NC</td>
</tr>
<tr>
<td>131005</td>
<td>MMR-H</td>
<td>2M</td>
<td>2NC 1NO</td>
</tr>
<tr>
<td>131006</td>
<td>MMR-H</td>
<td>5M</td>
<td>2NC 1NO</td>
</tr>
<tr>
<td>131007</td>
<td>MMR-H</td>
<td>10M</td>
<td>2NC 1NO</td>
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<tr>
<td>131008</td>
<td>MMR-H</td>
<td>QC-M12</td>
<td>2NC 1NO</td>
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<tr>
<td>131009</td>
<td>MMR-H</td>
<td>2M</td>
<td>2NC 1NO</td>
</tr>
<tr>
<td>131100</td>
<td>MMR-H</td>
<td>5M</td>
<td>2NC 1NO</td>
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<tr>
<td>131101</td>
<td>MMR-H</td>
<td>10M</td>
<td>2NC 1NO</td>
</tr>
<tr>
<td>131102</td>
<td>MMR-H</td>
<td>QC-M12</td>
<td>2NC 1NO</td>
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<td>131103</td>
<td>MMR-H</td>
<td>2M</td>
<td>2NC 1NO</td>
</tr>
<tr>
<td>131104</td>
<td>MMR-H</td>
<td>5M</td>
<td>2NC 1NO</td>
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<td>131105</td>
<td>MMR-H</td>
<td>10M</td>
<td>2NC 1NO</td>
</tr>
<tr>
<td>131106</td>
<td>MMR-H</td>
<td>QC-M12</td>
<td>2NC 1NO</td>
</tr>
<tr>
<td>140101</td>
<td>Female QC Lead</td>
<td>M12 Female 5m.</td>
<td>8 way</td>
</tr>
<tr>
<td>140102</td>
<td>Female QC Lead</td>
<td>M12 Female 10m.</td>
<td>8 way</td>
</tr>
</tbody>
</table>

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

Standards:
- EN1088  IEC 60947-5-3  EN 60204-1
- EN 954-1  IEC 13849-1
- U.S.  UL508

Safety Classification and Reliability Data:
- Switching Reliability:
  - 3.3 x 10^10 operations at 100mA load
  - up to Category 4 with Safety Relay
- EN 954-1 up to PLe depending upon system architecture
- ISO 13849-1 up to SIL 3 depending upon system architecture
- Safety Data - Annual Usage:
  - 8 cycles per hour / 24 hours per day / 365 days
  - 2.52 x 10^4
- PPFD:
  - 47 years
- MTTFD:
  - 470 years
- Safety Channel 1 NC:
  - 24V dc 0.5 A Max. Rating
- Safety Channel 2 NC:
  - 24V dc 0.5 A Max. Rating
- Safety Channel 3 NO:
  - 24V dc 0.2 A Max. Rating
- Minimum switched current:
  - 10V dc 1mA
- Dielectric withstand:
  - 2500Vac
- Insulation Resistance:
  - 100 Mohms
- Recommended setting gap:
  - 5mm
- Switching Distance:
  - Near 10mm Close
  - Far 20mm Open
- Tolerance to misalignment:
  - 5mm in any direction from 5mm setting gap
- Switching frequency:
  - 1.0 Hz maximum
- Approach speed:
  - 200mm/m. to 1000mm/s.
- Body Material:
  - Stainless Steel 316 Mirror polished finish (Ra4)
  - 2.5 x 105mC
- Temperature Range:
  - IEC 68-2-27 11ms 30g
- Endurance Protection:
  - IP69K IP67
- Shock Resistance:
  - IEC 68-2-27 11ms 30g
- Vibration Resistance:
  - IEC 68-2-6 10-55 Hz. 1mm
- Cable Type:
  - PVC 6 core 6mm O.D.
- Mounting Bolts:
  - 2 x M4 Tightening torque 1.0 Nm
- Mounting Position:
  - Any

www.idemsafty.com

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HYGIEMAG - Magnetic Non Contact - Type: SMR

Magnetic Actuation - Power series 230V.ac 1.0A. / 24V.dc 1.0A. IP69K

Switching Tolerance up to 12mm

Specificially designed for Food Processing applications - Stainless Steel 316 Mirror polished finish (Ra4).

Suitable for CIP SIP cleaning - Food Splash Zones - EHEDG guidelines

Universal Housing - 22mm fixing hole centre - 50mm wide body

Can be high pressure hosed at high temperature - IP69K

Wide 12mm sensing high tolerance to misalignment

High switching capability - up to 1A.

Up to : PLe ISO 13849-1 SIL 3 EN 62061 Cat. 4 EN 954-1

Quick connect versions

Connection example - magnetic switches

Three switches connected to an SCR-2 or SCR-3 to give Dual Channel Guard monitoring but with monitored manual start and contactor feedback check. Auxiliary circuits provide remote signalling from each switch.

For all IDEM switches the NC circuits are closed when the guard is closed and the actuator present.
HYGIEMAG - Magnetic Non Contact - Type: SMR-H

Magnetic Actuation

Switching Tolerance up to 12mm

Will operate with most Safety Relays

Specified to 105°C but designed to work up to 125°C.

Robust Stainless Steel 316 enclosure designed to survive Food and Pharmaceutical applications.

Mirror polished finish (Ra4).

Through Hole Fixing to enable front mounting by hexagon head bolts - no food trap areas.

Suitable for CIP SIP cleaning - Food Contact or splash Zones EHEDG guidelines

Universal Housing - 22mm fixing hole centre - 50mm wide body

Survives high pressure hosing at high temperature - IP69K

Wide 12mm sensing high tolerance to misalignment

Universal fitting - established 22mm fixing footprint suitable for most general applications.

Up to : PLe ISO 13849-1 SIL 3 EN 62061 Cat. 4 EN 954-1

2NC 1NC circuits

Quick connect versions

Stainless Steel Housing

Use Hexagon Head Bolts for ease of cleaning.

Quick Connect (QC)

M12 8 Way Male Plug

Pin view from switch

<table>
<thead>
<tr>
<th>Standard Lead Colour</th>
<th>Circuit (Actuator Present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Yellow</td>
<td>NO</td>
</tr>
<tr>
<td>6 Green</td>
<td>NO</td>
</tr>
<tr>
<td>7 Black</td>
<td>NC2</td>
</tr>
<tr>
<td>2 White</td>
<td>NC2</td>
</tr>
<tr>
<td>3 Blue</td>
<td>NC1</td>
</tr>
</tbody>
</table>

Sales Number | Type             | Cable Length | Circuits |
-------------|------------------|--------------|---------|
132009       | Hygiemag SMR-H   | 2M           | 2NC     |
132010       | Hygiemag SMR-H   | 5M           | 2NC     |
132011       | Hygiemag SMR-H   | 10M          | 2NC     |
132012       | Hygiemag SMR-H   | QC-M12       | 2NC     |
132013       | Hygiemag SMR-H   | 2M           | 2NC 1NO |
132014       | Hygiemag SMR-H   | 5M           | 2NC 1NO |
132015       | Hygiemag SMR-H   | 10M          | 2NC 1NO |
132016       | Hygiemag SMR-H   | QC-M12       | 2NC 1NO |
140101       | Female QC Lead   | M12 Female 5m | 8 way   |
140102       | Female QC Lead   | M12 Female 10m | 8 way   |
HYGIEMAG - Magnetic Non Contact - Type: SMR-F

Magnetic Actuation - Power series
Switching Tolerance up to 12mm
Temperatures up to 105°C.

Specified to 105°C but designed to work up to 125°C.
Will operate with most Safety Relays

No Food Trap Housing - Rear Mounting Holes

Connection example - magnetic switches

One switch connected to an SCR-2 or SCR-3 to give Dual Channel guard monitoring but with auto start

Quick Connect (QC)
M12 8 Way Male Plug
Pin view from switch
Standard Lead Colour Circuit (Actuator Present)
4 Yellow NO
6 Green NO
7 Black NC2
1 White NC2
2 Red NC1
3 Blue NC1

Sales
Number Type Cable Length Circuits
137009 Hygiemag SMR-F 2M 2NC
137010 Hygiemag SMR-F 5M 2NC
137011 Hygiemag SMR-F 10M 2NC
137012 Hygiemag SMR-F QC-M12 2NC
137013 Hygiemag SMR-F 2M 2NC 1NO
137014 Hygiemag SMR-F 5M 2NC 1NO
137015 Hygiemag SMR-F 10M 2NC 1NO
137016 Hygiemag SMR-F QC-M12 2NC 1NO
137017 Hygiemag SMR-F 2M 1NC
137018 Hygiemag SMR-F 5M 1NC
137019 Hygiemag SMR-F 10M 1NC
137020 Hygiemag SMR-F QC-M12 1NC
137021 Hygiemag SMR-F 2M 1NC 1NO
137022 Hygiemag SMR-F 5M 1NC 1NO
137023 Hygiemag SMR-F 10M 1NC 1NO
137024 Hygiemag SMR-F QC-M12 1NC 1NO

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

www.idemsafety.com
HYGIEMAG - Magnetic Non Contact - Type: LMR

Magnetic Actuation - Power series

Medium Duty versions  230V.ac / 24V.dc 1A.

Switching Tolerance up to 12mm

Specially designed for Food Processing applications - Stainless Steel 316 Mirror polished finish (Ra4).
Suitable for CIP SIP cleaning - Food splash Zones EHEDG guidelines - IP69K
Popular European fitting suitable for all industry applications.
Wide 12mm sensing - high tolerance to misalignment
Narrow fitting for flush mounting and high temperature hosing
Long Life High Power switching capability up to 1A.
Up to: PLe ISO 13849-1 S IL 3 EN 62061  Cat. 4 EN 954-1
2NC + 1NC circuits
Quick connect versions

Connection example – magnetic switches

3 switches connected in series to an SCR-2 or SCR-3 to give Dual Channel monitoring with auto start and contactor feedback check. Optional auxiliary circuits provide for remote signalling from each switch.

Standards EN1088 IEC 60947-5-3  EN 62041-1
ISO 13849-1 EN62061 EN 954-1 UL508
Safety Classification and Reliability Data:

Mechanical Reliability B/Bd
EN 954-1
ISO 13849-1
EN 62061
Safety Data - Annual Usage
PFH/d
Proof Test Interval (Life)
MTTF/d

Medium Duty Safety Channel 1 NC
Voltage free : 250V ac 1.0 A Max. Rating
Safety Channel 2 NC
Voltage free : 250V ac 1.0 A Max. Rating
Safety Channel 3 NO
Voltage free : 24V dc 0.2 A Max. Rating
Medium Duty Fuse
Internal 1.0 A, (F) External 0.8A (F) (user)
Contact release time <2ms
Initial contact resistance <500 milliohm
Minimum switched current 10V, dc 1mA
Dielectric withstand 250V ac
Insulation Resistance 100 Mohms
Recommended setting gap 5mm
Switching Distance: Sar 10mm Open
(target to target)
Tolerance to misalignment 5mm in any direction from 5mm setting gap
Switching frequency 1.0 Hz maximum
Approach speed 200mm/min. to 1000mm/min.
Body Material Stainless Steel 316 Mirror polished finish (Ra4).
Temperature Range -25 +105C.
Endurance Protection IP69K (NEMA PW12) IP67 (NEMA 6)
Shock Resistance IEC 68-2-27 11ms 30g
Vibration Resistance IEC 68-2-6 10-55 Hz. 1mm
Cable Type PVC, 6 core 6mm O.D.
Mounting Bolts 2 x M4 Tightening torque 1.0 Nm
Mounting Position Any

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

www.idemsafety.com
HYGIEMAG Non Contact Magnetic Switches - Type LMR (with Integral LED)

2NC circuits for connection to safety relays to achieve up to PLe / Category 4 to ISO 13849-1

Choice of LED versions:
- Green – on when guard is closed
- Red – on when guard is open

Stainless Steel 316 Housing – IP69K suitable for high pressure hosing
European style narrow fitting for flush mounting
Wide 10mm sensing – high tolerance to misalignment
Long Life High Power switching capability up to 1A.
M12 Quick connect versions

Note: The LED does not indicate the status of the NC Safety Contacts, but indicates that the actuator is aligned to give optimum performance.

Quick Connect M12 versions fitted with 250mm (10") cable

Operating direction for optimum performance

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

Stainless Steel Housing

<table>
<thead>
<tr>
<th>Standards</th>
<th>EN1088  IEC 60947-5-3  EN 60204-1  EN 954-1  UL508  ISO13849-1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Channels</td>
<td>NC1 and NC2</td>
</tr>
<tr>
<td>Fuses (NC Circuits)</td>
<td>0.8A (F)</td>
</tr>
<tr>
<td>Contact release time</td>
<td>&lt;2ms</td>
</tr>
<tr>
<td>Initial contact resistance</td>
<td>&lt;500 milliOhm</td>
</tr>
<tr>
<td>Minimum switched current</td>
<td>10V, dc 1mA</td>
</tr>
<tr>
<td>Dielectric withstand</td>
<td>250V,ac</td>
</tr>
<tr>
<td>Insulation Resistance</td>
<td>100 Mohms</td>
</tr>
<tr>
<td>Recommended setting gap</td>
<td>5mm</td>
</tr>
<tr>
<td>LED supply voltage</td>
<td>24V,dc +/- 10%</td>
</tr>
<tr>
<td>NC Switching Distance</td>
<td>10mm Close</td>
</tr>
<tr>
<td>(Target to target)</td>
<td>22mm Open</td>
</tr>
<tr>
<td>LED (Green)</td>
<td>Typical: 8mm ON 15mm OFF</td>
</tr>
<tr>
<td>LED (Red)</td>
<td>Typical: 8mm OFF 15mm ON</td>
</tr>
<tr>
<td>Tolerance to misalignment</td>
<td>5mm in any direction from 5mm setting gap</td>
</tr>
<tr>
<td>Switching frequency</td>
<td>1.0 Hz maximum</td>
</tr>
<tr>
<td>Approach speed</td>
<td>200mm/min. to 1000mm/s</td>
</tr>
<tr>
<td>Body Material</td>
<td>Stainless Steel 316</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-25 / 105C.</td>
</tr>
<tr>
<td>Enclosure Protection</td>
<td>IP67 / IP69K</td>
</tr>
<tr>
<td>Shock Resistance</td>
<td>IEC 68-2-7 11ms 30g</td>
</tr>
<tr>
<td>Vibration Resistance</td>
<td>IEC 68-2-6 10-55 Hz 1mm</td>
</tr>
<tr>
<td>Mechanical Life Expectancy</td>
<td>10,000,000 switchings</td>
</tr>
<tr>
<td>Electrical Life Expectancy</td>
<td>1,000,000 switchings</td>
</tr>
<tr>
<td>De-rating Safety Factor</td>
<td>2</td>
</tr>
<tr>
<td>Tested to 2,000,000 cycles at 24V, 0.2A</td>
<td></td>
</tr>
<tr>
<td>Cable Type</td>
<td>PVC 6 core 6mm O.D. Max.</td>
</tr>
<tr>
<td>Mounting Bolts</td>
<td>2 x M4 Tightening torque 1.0 Nm</td>
</tr>
</tbody>
</table>

Quick Connect (QC)

<table>
<thead>
<tr>
<th>M12 8 Way Male Plug</th>
<th>Pin view from switch</th>
<th>Standard Lead Colour</th>
<th>Circuit (Actuator Present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
<td>NC 1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Red</td>
<td>Supply + 24Vdc</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Blue</td>
<td>Supply 0Vdc</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Yellow</td>
<td>NC 2</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Green</td>
<td>NC 2</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Black</td>
<td>NC 1</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

140101 Female QC Lead M12 Female 5m. 8 way
140102 Female QC Lead M12 Female 10m. 8 way

<table>
<thead>
<tr>
<th>LED colour and status</th>
<th>Sales Number</th>
<th>Type</th>
<th>Cable Length</th>
<th>Output Circuits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED Green (illuminated when guard is closed)</td>
<td>133120</td>
<td>Hygiemag LMR (with LED)</td>
<td>2M</td>
<td>2NC</td>
</tr>
<tr>
<td></td>
<td>133121</td>
<td>Hygiemag LMR (with LED)</td>
<td>5M</td>
<td>2NC</td>
</tr>
<tr>
<td></td>
<td>133122</td>
<td>Hygiemag LMR (with LED)</td>
<td>10M</td>
<td>2NC</td>
</tr>
<tr>
<td></td>
<td>133123</td>
<td>Hygiemag LMR (with LED)</td>
<td>QC-M12</td>
<td>2NC</td>
</tr>
<tr>
<td>LED Red (illuminated when guard is open)</td>
<td>133124</td>
<td>Hygiemag LMR (with LED)</td>
<td>2M</td>
<td>2NC</td>
</tr>
<tr>
<td></td>
<td>133125</td>
<td>Hygiemag LMR (with LED)</td>
<td>5M</td>
<td>2NC</td>
</tr>
<tr>
<td></td>
<td>133126</td>
<td>Hygiemag LMR (with LED)</td>
<td>10M</td>
<td>2NC</td>
</tr>
<tr>
<td></td>
<td>133127</td>
<td>Hygiemag LMR (with LED)</td>
<td>QC-M12</td>
<td>2NC</td>
</tr>
</tbody>
</table>
**HYGIEMAG - Magnetic Non Contact - Type: CMR**

**Magnetic Actuation - Power series**

Heavy Duty: 230V.ac / 24V.dc 2.0A.  
Medium Duty: version 1.0A.

Specified for Food Processing applications - Stainless Steel 316 Mirror polished finish (Ra4).

Suitable for CIP SIP cleaning - Food Splash Zones EHEDG guidelines

Slim 20mm wide housing - can be fitted into narrow channels

Wide 12mm sensing high tolerance to misalignment

High switching capability - up to 2A.

Up to: PLe ISO 13849-1  SIL 3 EN 62061  Cat.4 EN954-1

---

**Connection example – magnetic switches**

Quick Connect (QC) M12 8 Way Male Plug  
Pin view from switch

<table>
<thead>
<tr>
<th>Pin</th>
<th>Standard Lead Colour</th>
<th>Circuit (Actuator Present)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White</td>
<td>NC1</td>
</tr>
<tr>
<td>2</td>
<td>Black</td>
<td>NC2</td>
</tr>
<tr>
<td>3</td>
<td>Red</td>
<td>NC1</td>
</tr>
<tr>
<td>4</td>
<td>Yellow</td>
<td>NO</td>
</tr>
<tr>
<td>5</td>
<td>Green</td>
<td>NO</td>
</tr>
</tbody>
</table>

---

**Sales Number | Type | Cable | Circuits | NC Duty**

<table>
<thead>
<tr>
<th>Sales Number</th>
<th>Type</th>
<th>Cable</th>
<th>Circuits</th>
<th>NC Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>138017</td>
<td>Hygiemag CMR</td>
<td>2M</td>
<td>2NC</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>138018</td>
<td>Hygiemag CMR</td>
<td>5M</td>
<td>2NC</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>138019</td>
<td>Hygiemag CMR</td>
<td>10M</td>
<td>2NC</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>138020</td>
<td>Hygiemag CMR</td>
<td>QC-M12</td>
<td>2NC</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>138021</td>
<td>Hygiemag CMR</td>
<td>2M</td>
<td>2NC TNO</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>138022</td>
<td>Hygiemag CMR</td>
<td>5M</td>
<td>2NC TNO</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>138023</td>
<td>Hygiemag CMR</td>
<td>10M</td>
<td>2NC TNO</td>
<td>Medium 1A</td>
</tr>
<tr>
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<td>Hygiemag CMR</td>
<td>QC-M12</td>
<td>2NC TNO</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>138025</td>
<td>Hygiemag CMR</td>
<td>2M</td>
<td>1NC</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>138026</td>
<td>Hygiemag CMR</td>
<td>5M</td>
<td>1NC</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>138027</td>
<td>Hygiemag CMR</td>
<td>10M</td>
<td>1NC</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>138028</td>
<td>Hygiemag CMR</td>
<td>QC-M12</td>
<td>1NC</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>138029</td>
<td>Hygiemag CMR</td>
<td>2M</td>
<td>1NC TNO</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>138030</td>
<td>Hygiemag CMR</td>
<td>5M</td>
<td>1NC TNO</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>138031</td>
<td>Hygiemag CMR</td>
<td>10M</td>
<td>1NC TNO</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>138032</td>
<td>Hygiemag CMR</td>
<td>QC-M12</td>
<td>1NC TNO</td>
<td>Heavy 2A</td>
</tr>
</tbody>
</table>

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

---

**Safety Standards and Reliability Data:**

- EN1088
- IEC 60477-5:3
- EN 62040-1
- ISO 13849-1
- EN60811
- EN 904-1
- UL508

**Mechanical Reliability B10D:** 3.3 x 10^6 operations at 100mA load

- up to Category 4 with Safety Relay
- up to PLe depending upon system architecture

**Safety Data - Annual Usage:**

- Proof Test Interval (Life): 7 years
- Proof Test Interval (MTTF): 47 years

**Contact Rating:**

- 50 ms

**Dielectric withstand:**

- 250V ac

**Insulation Resistance:**

- 100 Mohms

**Recommended setting gap:**

- 5mm

**Switching Distance:**

- 10mm Close
- 22mm Open

**Tolerance to misalignment:**

- 5mm in any direction from 5mm setting gap

**Switching frequency:**

- 1.0 Hz maximum

**Approach speed:**

- 200mm/min., to 1000mm/min.

**Material:**

- Stainless Steel 316 Mirror polished finish (Ra4)

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**Specifications:**

- Quick Connect M12 versions fitted with 250mm (10’) cable

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**www.idemsafety.com**
HYGIEMAG - Magnetic Non Contact - Type: CMR-F

Magnetic Actuation - Power series

Switching Tolerance up to 12mm
Heavy Duty 230V.ac / 24V.dc 2.0A.
Medium Duty version 1.0A.

Specially designed for Food Processing applications- Stainless Steel 316 Mirror polished finish (Ra4).
Suitable for CIP SIP cleaning - mounting holes are at the rear - no food traps
Suitable for Food Contact Zones - EHEDG guidelines
Industry standard fixings - can be high pressure hosed at high temperature
Wide 12mm sensing high tolerance to misalignment
High switching capability - up to 2A.

Up to : PLe ISO 13849-1 SIL 3 EN 62061 Cat. 4 EN 954-1

No Food Trap Housing Rear Mounting Holes

Specified to 105C but designed to work up to 125C.
Will operate with most Safety Relays

Stainless Steel Housing

Quick Connect M12 versions fitted with 250mm (10") cable

Connection example – magnetic switches

24V dc

<table>
<thead>
<tr>
<th>Switching Frequency</th>
<th>1.0 Hz maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approach speed</td>
<td>200mm/m to 1000mm/s.</td>
</tr>
<tr>
<td>Body Material</td>
<td>Stainless Steel 316 Mirror polished finish (Ra4)</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>–25 +106C.</td>
</tr>
<tr>
<td>Enclosure Protection</td>
<td>IP69K (NEMA PW12) IP67 (NEMA 6)</td>
</tr>
<tr>
<td>Shock Resistance</td>
<td>IEC 68-2-27 11ms 30g</td>
</tr>
<tr>
<td>Vibration Resistance</td>
<td>IEC 68-2-6 10-55 Hz. 1mm</td>
</tr>
<tr>
<td>Cable Type</td>
<td>PVC 6 core 9mm O.D.</td>
</tr>
<tr>
<td>Mounting Bolts</td>
<td>2 x M4 Tightening torque 1.9Nm</td>
</tr>
<tr>
<td>Mounting Position</td>
<td>Any</td>
</tr>
</tbody>
</table>

Sales Number | Type     | Cable Length | Circuits | NC Duty |
-------------|----------|--------------|----------|---------|
135017       | Hygiemag CMR-F | 2M       | 2NC       | Medium 1A |
135018       | Hygiemag CMR-F | 5M       | 2NC       | Medium 1A |
135019       | Hygiemag CMR-F | 10M      | 2NC       | Medium 1A |
135020       | Hygiemag CMR-F | QC-M12   | 2NC       | Medium 1A |
135021       | Hygiemag CMR-F | 2M       | 2NC 1NO   | Medium 1A |
135022       | Hygiemag CMR-F | 5M       | 2NC 1NO   | Medium 1A |
135023       | Hygiemag CMR-F | 10M      | 2NC 1NO   | Medium 1A |
135024       | Hygiemag CMR-F | QC-M12   | 2NC 1NO   | Medium 1A |
135025       | Hygiemag CMR-F | 2M       | 1NC       | Heavy 2A |
135026       | Hygiemag CMR-F | 5M       | 1NC       | Heavy 2A |
135027       | Hygiemag CMR-F | 10M      | 1NC       | Heavy 2A |
135028       | Hygiemag CMR-F | QC-M12   | 1NC       | Heavy 2A |
135029       | Hygiemag CMR-F | 2M       | 1NC 1NO   | Heavy 2A |
135030       | Hygiemag CMR-F | 5M       | 1NC 1NO   | Heavy 2A |
135031       | Hygiemag CMR-F | 10M      | 1NC 1NO   | Heavy 2A |
135032       | Hygiemag CMR-F | QC-M12   | 1NC 1NO   | Heavy 2A |
140101       | Female QC Lead | M12 Female 5m. 8 way |
140102       | Female QC Lead | M12 Female 10m. 8 way |

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

www.idemssafety.com
HYGIEMAG - Magnetic Non Contact - Type: WMR

Magnetic Actuation - Power series

Heavy Duty 230V.ac / 24V.dc 2.0A.

Switching Tolerance up to 12mm IP69K

Specially designed for Food Processing applications- Stainless Steel 316 Mirror polished finish (Ra4).

Suitable for CIP SIP cleaning - Food splash Zones EHEDG guidelines

Industry standard fixings - can be high pressure hosed at high temperature - IP69K

Wide 12mm sensing high tolerance to misalignment

High switching capability - Heavy Duty 2A.

Up to : PLe ISO 13849-1 SIL 3 EN 62061 Cat. 4 EN 954-1

Specified to 105°C but designed to work up to 125°C.

Will operate with most Safety Relays

Stainless Steel Housing

Quick Connect M12 versions fitted with 250mm (10") cable

Operators Direction

Quick Connect (QC)
M12 8 Way Male Plug
Pin view from switch

- Yellow NO
- Green NO
- Black NC2
- White NC2
- Red NC1
- Blue NC1

- 24V dc

Three switches connected in series to an SCR-2 or SCR-3 to give Dual Channel Guard monitoring but with monitored manual start and contactor feedback check.

Standards
EN1088
IEC 60947-5-3
EN 00204-1
ISO 13849-1
EN 62061
EN 954-1
UL508

Safety Classification and Reliability Data:

Mechanical Reliability B10d
- 3.3 x 10^6 operations at 100mA load
- up to Category 4 with Safety Relay

ISO 13849-1
- up to PLe depending upon system architecture

EN 62061
- up to SIL 3 depending upon system architecture

Safety Data - Annual Usage

PFHd
- 8 cycles per hour / 24 hours per day / 365 days
- 2.5 x 10^-6

Test Life
- 47 years

MTHFd
- 470 years

Heavy Duty Safety Channel 1 NC
- Safety Channel 2 NC
- Safety Channel 3 NO
- Heavy Duty Fuse

Contact release time
- <2ms

Initial contact resistance
- <500 milliohm

Minimum switched current
- 10V dc 1mA

Dielectric withstand
- 250V(ac)

Insulation Resistance
- 100 Mohms

Recommended setting gap
- 5mm

Switching Distance:
- (Target to target)
- Sar 10mm Close
- Sar 22mm Open

Tolerance to misalignment
- 5mm in any direction from 5mm setting gap

Switching frequency
- 1.0 Hz maximum

Approach speed
- 200mm/s to 1000mm/s

Body Material
- Stainless Steel 316 Mirror polished finish (Ra4).

Temperature Range
- -25 - +105°C

Enclosure Protection
- IP69K (NEMA PW12)
- IP67 (NEMA 6)

Shock Resistance
- IEC 68-2-27 11ms 30g

Vibration Resistance
- IEC 68-2-6 10-55 Hz. 1mm

Cable Type
- PVC 6 core 6mm O.D.

Mounting Bolts
- 2 x M4

Mounting Position
- Any

Sales Number  Type  Cable Length  Circuits
136001  Hygiemag WMR  2M  2NC
136002  Hygiemag WMR  5M  2NC
136003  Hygiemag WMR  10M  2NC
136004  Hygiemag WMR  QC-M12  2NC
136005  Hygiemag WMR  2M  2NC TNO
136006  Hygiemag WMR  5M  2NC TNO
136007  Hygiemag WMR  10M  2NC TNO
136008  Hygiemag WMR  QC-M12  2NC TNO
136009  Hygiemag WMR  2M  1NC TNO
136010  Hygiemag WMR  5M  1NC TNO
136011  Hygiemag WMR  10M  1NC TNO
136012  Hygiemag WMR  QC-M12  1NC TNO

140101  Female QC Lead  M12 Female 5m  8 way
140102  Female QC Lead  M12 Female 10m  8 way

For all IDEM switches the NC circuits are closed when the guard is closed and the actuator present
HYGIEMAG - Code Non Contact - Type: RMR

Magnetic Actuation  Switching Tolerance up to 10mm

Cylindrical fitting suitable for all industry applications.
Easy to install - M30 threaded body - easy to set
Wide 10mm sensing
Suitable for the harsh environments of Food processing and packaging
Stainless Steel 316 housing
UP to: PLe ISO 13849-1 SIL3 EN 62061 Cat. 4 EN 954-1
2NC 1NO circuits
Quick connect versions.

Will operate with most Safety Relays

RMR - S/Steel Housing

Quick Connect (QC)

<table>
<thead>
<tr>
<th>M12 8 Way Male Plug Pin view from switch</th>
<th>Standard Lead Colour</th>
<th>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>
</tr>
</tbody>
</table>

Three Switches connected in series to an SCR-2 or SCR-3 to give Dual Channel Guard monitoring auto start and contactor feedback check.

Standards
EN1088 IEC 60947-5-3 EN 60204-1
ISO 13849-1 EN62061 EN 954-1 UL508

Safety Classification and Reliability Data
Switching Reliability 3.3 x 10^6 operations at 100mA load
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
PFHt 2.52 x 10^6
Proof Test Interval (Life)
47 years
MTTF 470 years
Safety Channel 1 NC 24V dc 0.5 A Max. Rating
Safety Channel 2 NC 24V dc 0.5 A Max. Rating
Safety Channel 3 NO 24V dc 0.2 A Max. Rating
Minimum switched current
10V dc 1mA
Dielectric withstand
250V ac
Insulation Resistance 100 Mohms
Recommended setting gap 5mm
Switching Distance Sae 10mm Close
(Target to target) Sae 20mm Open
Tolerance to misalignment 4mm in any direction from 4mm setting gap
Switching frequency 1.0Hz maximum
Approach speed 200mm/min. to 1000mm/s.
Body Material Stainless Steel 316
Temperature Range -25 / 105°C
Enclosure Protection IP69K, IP67
Shock Resistance IEC 60068-2-27 11ms 30g
Vibration Resistance IEC 68-2-6 10-55 Hz, 1mm
Cable Type PVC 6 core 6mm O.D.
Mounting Position Any

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

www.idemssafety.com