Magnetic Actuation Switching Tolerance up to 12mm

Will operate with most Safety Relays

Compact yet robust fitting suitable for all small guard applications.

Can be mounted unobtrusively in channels or behind doors – left or right cable exit

Hygienic screw cap covers ensure suitability for Food Processing washdown.

Cost effective interlock solution.

Wide sensing at 12mm and high tolerance to misalignment.

High current switching capability to 0.5A.

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

2NC 1NO circuits

Quick connect versions M12 - 8 way or M8 - 4 way

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

Connection example – magnetic switches

Sales Number | Type | Cable Length | Circuits
---|---|---|---
114001 | MPR Cable Right | 2M | 2NC
114002 | MPR Cable Left | 5M | 2NC
114003 | MPR Cable Right | 10M | 2NC
114004 | MPR Cable Right | QC-M12 | 2NC
114005 | MPR Cable Left | 2M | 2NC 1NO
114006 | MPR Cable Right | 5M | 2NC 1NO
114007 | MPR Cable Right | 10M | 2NC 1NO
114008 | MPR Cable Right | QC-M12 | 2NC 1NO
114009 | MPR Cable Left | 2M | 2NC
114100 | MPR Cable Left | 5M | 2NC
114101 | MPR Cable Left | 10M | 2NC
114102 | MPR Cable Left | QC-M12 | 2NC
114103 | MPR Connector Left | 2M | 2NC 1NO
114104 | MPR Connector Left | 5M | 2NC 1NO
114105 | MPR Connector Left | 10M | 2NC 1NO
114106 | MPR Connector Left | QC-M12 | 2NC 1NO

Alternative QC version

M8 Universal 2NC versions 4 way integral connector

M8 Connector Right

114020 | MPR Connector Right | QC-M8 2NC | Close 10mm Open 20mm
114021 | MPR Connector Left | QC-M8 2NC | Close 10mm Open 20mm
114022 | MPR Connector Left | QC-M8 1NC 1NO | Close 10mm Open 20mm
114023 | MPR Connector Left | QC-M8 1NC 1NO | Close 10mm Open 20mm
114024 | MPR Connector Right | QC-M8 2NC | Close 4mm Open 10mm
114025 | MPR Connector Left | QC-M8 2NC | Close 4mm Open 10mm
114026 | MPR Connector Right | QC-M8 1NC 1NO | Close 4mm Open 10mm
114027 | MPR Connector Left | QC-M8 1NC 1NO | Close 4mm Open 10mm

For all IDEM switches the NC circuits are closed when the guard is closed and the actuator present
Magnetic Actuation - Power series

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

Switching Tolerance up to 12mm

Universal fitting - established 22mm fixing footprint suitable for most general applications.
Can be high pressure hosed at high temperature - IP69K.
Withstands environments where high humidity or hose down is required.
Durable polyester housing.
Wide 12mm sensing – high tolerance to misalignment.
Long life high switching capability to 1A.
Up to: PLe ISO 13849-1 SIL 3 EN 62061 Cat.4 EN 954-1
2NC 1NO circuits
Quick connect versions

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</td>
<td>Yellow NO</td>
</tr>
<tr>
<td>6</td>
<td>Green NO</td>
</tr>
<tr>
<td>7</td>
<td>Black NC2</td>
</tr>
<tr>
<td>1</td>
<td>White NC2</td>
</tr>
<tr>
<td>2</td>
<td>Red NC1</td>
</tr>
<tr>
<td>3</td>
<td>Blue NC1</td>
</tr>
</tbody>
</table>

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

Connection example - magnetic switches

Single switch connected to an SCR-2 or SCR-3 to give Dual Channel monitoring with Manual Start. Optional auxiliary circuit provides for remote signalling from switch.

For all IDEM switches the NC circuits are closed when the guard is closed and the actuator present
EUROMAG - Magnetic Non Contact - Type: LPR

Magnetic Actuation - Power series

Switching Tolerance up to 12mm

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

Popular European fitting suitable for all industry applications.

Wide 12mm sensing – high tolerance to misalignment

Narrow fitting for flush mounting

Long Life High Power switching capability up to 1A.

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

2NC + 1NO circuits

Quick connect versions

Connection example - magnetic switches

Quick Connect (QC)

M12 8 Way Male Plug Pin view from switch

Standard Lead Colour

Circuit (Actuator Present)

1 White NC2

2 Red NC1

3 Blue NC1

4 Yellow NO

5 Green NO

6 Black NC2

7 NC

8 NC

Three 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.

<table>
<thead>
<tr>
<th>Sales Number</th>
<th>Type</th>
<th>Cable Length</th>
<th>Circuits</th>
</tr>
</thead>
<tbody>
<tr>
<td>110009</td>
<td>Euromag LPR</td>
<td>2M</td>
<td>2NC</td>
</tr>
<tr>
<td>110010</td>
<td>Euromag LPR</td>
<td>5M</td>
<td>2NC</td>
</tr>
<tr>
<td>110011</td>
<td>Euromag LPR</td>
<td>10M</td>
<td>2NC</td>
</tr>
<tr>
<td>110012</td>
<td>Euromag LPR</td>
<td>QC-M12</td>
<td>2NC</td>
</tr>
<tr>
<td>110013</td>
<td>Euromag LPR</td>
<td>2M</td>
<td>2NC</td>
</tr>
<tr>
<td>110014</td>
<td>Euromag LPR</td>
<td>5M</td>
<td>2NC</td>
</tr>
<tr>
<td>110015</td>
<td>Euromag LPR</td>
<td>10M</td>
<td>2NC</td>
</tr>
<tr>
<td>110016</td>
<td>Euromag LPR</td>
<td>QC-M12</td>
<td>2NC</td>
</tr>
<tr>
<td>110021</td>
<td>Euromag LPR</td>
<td>2M</td>
<td>1NC</td>
</tr>
<tr>
<td>110022</td>
<td>Euromag LPR</td>
<td>5M</td>
<td>1NC</td>
</tr>
<tr>
<td>110023</td>
<td>Euromag LPR</td>
<td>10M</td>
<td>1NC</td>
</tr>
<tr>
<td>110024</td>
<td>Euromag LPR</td>
<td>QC-M12</td>
<td>2NC</td>
</tr>
</tbody>
</table>

www.idemsafety.com
EUROMAG Non Contact Magnetic Switches - Type LPR (with Integral LED)

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

Integral LED indication of sensing position.

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

Popular European fitting suitable for all industry applications, 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 (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>Yellow</td>
<td>NC 2</td>
</tr>
<tr>
<td>Green</td>
<td>NC 2</td>
</tr>
<tr>
<td>Black</td>
<td>NC 1</td>
</tr>
<tr>
<td>White</td>
<td>NC 1</td>
</tr>
<tr>
<td>Red</td>
<td>Supply + 24Vdc</td>
</tr>
<tr>
<td>Blue</td>
<td>Supply 0Vdc</td>
</tr>
</tbody>
</table>

140101 Female QC Lead M12 Female 5m. 8 way
140102 Female QC Lead M12 Female 10m. 8 way
110300 Plastic 8mm Spacers for use when mounted on Ferrous Materials. (1 X Switch 1 X Actuator)

LED colour and status

<table>
<thead>
<tr>
<th>Sales Number</th>
<th>Type</th>
<th>Cable Length</th>
<th>Output Circuits</th>
</tr>
</thead>
<tbody>
<tr>
<td>110101</td>
<td>Euromag LPR (with LED)</td>
<td>2M</td>
<td>2NC</td>
</tr>
<tr>
<td>110102</td>
<td>Euromag LPR (with LED)</td>
<td>5M</td>
<td>2NC</td>
</tr>
<tr>
<td>110103</td>
<td>Euromag LPR (with LED)</td>
<td>10M</td>
<td>2NC</td>
</tr>
<tr>
<td>110104</td>
<td>Euromag LPR (with LED)</td>
<td>QC-M12</td>
<td>2NC</td>
</tr>
<tr>
<td>110105</td>
<td>Euromag LPR (with LED)</td>
<td>2M</td>
<td>2NC</td>
</tr>
<tr>
<td>110106</td>
<td>Euromag LPR (with LED)</td>
<td>5M</td>
<td>2NC</td>
</tr>
<tr>
<td>110107</td>
<td>Euromag LPR (with LED)</td>
<td>10M</td>
<td>2NC</td>
</tr>
<tr>
<td>110108</td>
<td>Euromag LPR (with LED)</td>
<td>QC-M12</td>
<td>2NC</td>
</tr>
</tbody>
</table>

For all iDEM switches the NC circuits are closed when the guard is closed and the actuator present.
Magnetic Actuation – Power series

Switching Tolerance up to 12mm

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

Can be high pressure hosed at high temperature - IP69K

Slim fitting suitable for all industry applications.

Easy to install within narrow frame structures.

Operates from 2 sides for ease of application.

Wide 12mm sensing high tolerance to misalignment.

High switching capability - Medium Duty 1A. Heavy Duty 2A.

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

2NC + 1NO circuits

Quick connect versions

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>Yellow</td>
<td>NO</td>
</tr>
<tr>
<td>Green</td>
<td>NO</td>
</tr>
<tr>
<td>Black</td>
<td>NC2</td>
</tr>
<tr>
<td>White</td>
<td>NC2</td>
</tr>
<tr>
<td>Red</td>
<td>NC1</td>
</tr>
<tr>
<td>Blue</td>
<td>NC1</td>
</tr>
</tbody>
</table>

Connection example – magnetic switches

24V dc

Three switches connected in series to an SCR-2 or SCR-3 to give Single Channel Guard monitoring but with monitored manual start and contactor feedback check. Allows minimal wiring but higher current switching to K1 and K2 contactors.

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

IDEMAG - Magnetic Non Contact - Type: CPR

Specified to 80°C but designed to work up to 100°C.

Will operate with most Safety Relays

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

Connection diagram

<table>
<thead>
<tr>
<th>Sales Number</th>
<th>Type</th>
<th>Cable Length</th>
<th>Circuits</th>
<th>NC Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>113001</td>
<td>Idemag CPR</td>
<td>2M</td>
<td>2NC</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>113002</td>
<td>Idemag CPR</td>
<td>5M</td>
<td>2NC</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>113003</td>
<td>Idemag CPR</td>
<td>10M</td>
<td>2NC</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>113004</td>
<td>Idemag CPR</td>
<td>QC-M12</td>
<td>2NC</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>113005</td>
<td>Idemag CPR</td>
<td>2M</td>
<td>2NC TNO</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>113006</td>
<td>Idemag CPR</td>
<td>5M</td>
<td>2NC TNO</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>113007</td>
<td>Idemag CPR</td>
<td>10M</td>
<td>2NC TNO</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>113008</td>
<td>Idemag CPR</td>
<td>QC-M12</td>
<td>2NC TNO</td>
<td>Medium 1A</td>
</tr>
<tr>
<td>113009</td>
<td>Idemag CPR</td>
<td>2M</td>
<td>1NC</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>113010</td>
<td>Idemag CPR</td>
<td>5M</td>
<td>1NC</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>113011</td>
<td>Idemag CPR</td>
<td>10M</td>
<td>1NC</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>113012</td>
<td>Idemag CPR</td>
<td>QC-M12</td>
<td>1NC</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>113013</td>
<td>Idemag CPR</td>
<td>2M</td>
<td>1NC TNO</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>113014</td>
<td>Idemag CPR</td>
<td>5M</td>
<td>1NC TNO</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>113015</td>
<td>Idemag CPR</td>
<td>10M</td>
<td>1NC TNO</td>
<td>Heavy 2A</td>
</tr>
<tr>
<td>113016</td>
<td>Idemag CPR</td>
<td>QC-M12</td>
<td>1NC TNO</td>
<td>Heavy 2A</td>
</tr>
</tbody>
</table>

113300 Plastic 8mm Spacers for use when mounted on Ferrous Materials. (1 X Switch 1 X Actuator)

140101 Female QC Lead M12 Female 5m. 8 way
140102 Female QC Lead M12 Female 10m. 8 way
Magnetic Actuation - Power series

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

Switching Tolerance up to 12mm

Robust wide fitting suitable for all industry applications. 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 80C but designed to work up to 100C.

Will operate with most Safety Relays

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

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

Connection example - magnetic switches

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.

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

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80
IDE MAG Magnetic Non Contact - Type: RPR (Plastic)

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
Red Polyester 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
RPR - Plastic Housing

One Switch connected to an SCR-2 or SCR-3 to give Dual Channel Guard monitoring auto start.

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>
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<tbody>
<tr>
<td>4</td>
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</tr>
<tr>
<td>7</td>
<td>Black NC2</td>
</tr>
<tr>
<td>1</td>
<td>White NC2</td>
</tr>
<tr>
<td>2</td>
<td>Red NC1</td>
</tr>
<tr>
<td>3</td>
<td>Blue NC1</td>
</tr>
</tbody>
</table>

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 10^8 operations at 100mA load
up to Category 4 with Safety Relay
up to PLe depending upon system architecture
up to SIL3 depending upon system architecture
8 cycles per hour / 24 hours per day / 365 days
PFHs
2.52 x 10^-8

Proof Test Interval (Life)
47 years
470 years

MTTF
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
Sao 10mm Close

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
UL approved polyester

Temperature Range
-25 / 80C

Enclosure Protection
IP65X / 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 Position
Any

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

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