MAGNETIC NON CONTACT SAFETY INTERLOCK SWITCHES

# HYGIEMAG - Magnetic Non Contact Type: SMR

## **FEATURES:**

Specifically designed for Food Processing applications -Stainless Steel 316 Mirror Polished finish (Ra4) Suitable for CIP and SIP cleaning -

Food Splash Zones EHEDG guidelines

Universal housing - 22mm fixing hole centre with a 50mm wide body

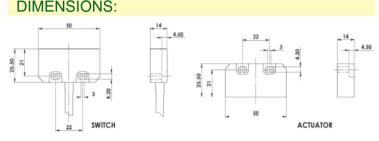
Wide sensing at 12mm with high tolerance to misalignment

Can be high pressure hosed at high temperature

High switching capability - up to 1.0A

Up to: PLe ISO13849-1 2NC 1NO circuits

Quick Connect versions available



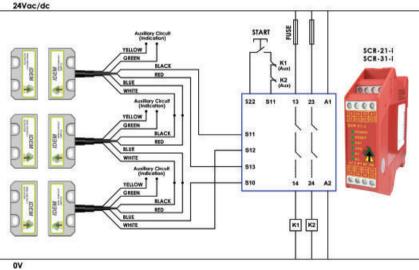
Stainless Steel 316 Housing mirror polished (Ra4) Magnetic Actuation - Power Series 230Vac/24Vdc 1.0A Switching Tolerance up to 12mm

Will operate with most Safety Relays



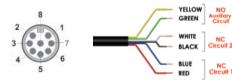
Quick Connect M12 versions fitted with 250mm (10") cable

# CONNECTION EXAMPLE: Magnetic Switches



ISO14119 EN60947-5-1

Three SMR switches connected to an SCR-21-i or SCR-31-i to give dual channel guard monitoring with monitored manual start and contactor feedback check. Auxiliary circuits provide remote signalling from each switch.



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

| Quick Connect QC<br>M12 8 Way Male Plug<br>Pin view from Switch | Standard<br>Lead Colour | Circuit<br>(Actuator Present) |
|---|-------------------------|-------------------------------|
| 4   | Yellow                  | NO                            |
| 6   | Green                   | NO                            |
| 7   | Black                   | NC2                           |
| 1   | White                   | NC2                           |
| 2   | Red                     | NC1                           |
| 0   | Dive                    | NC4                           |

|                 | Pin view from Switch | Lead Coloui     | (Actuator Fresent) |
|-----------------|----------------------|-----------------|--------------------|
|                 | 4                    | Yellow          | NO                 |
|                 | 6                    | Green           | NO                 |
|                 | 7                    | Black           | NC2                |
|                 | 1                    | White           | NC2                |
|                 | 2                    | Red             | NC1                |
|                 | 3                    | Blue            | NC1                |
|                 |                      |                 |                    |
| SALES<br>NUMBER | TYPE                 | CABLE<br>LENGTH | CIRCUITS           |
| 139009          | Hygiemag SMR         | 2M              | 2NC                |

|      | M12 8 Way Male Plug<br>Pin view from Switch | Lead Colour | (Actuator Present) |
|------|---|-------------|--------------------|
|      | 4   | Yellow      | NO                 |
|      | 6   | Green       | NO                 |
|      | 7   | Black       | NC2                |
|      | 1   | White       | NC2                |
|      | 2   | Red         | NC1                |
|      | 3   | Blue        | NC1                |
|      |   |             |                    |
| ALES | TYPE  | CABLE       | CIRCUITS           |

| SALES<br>NUMBER | TYPE         | CABLE<br>LENGTH | CIRCUITS |
|-----------------|--------------|-----------------|----------|
| 139009          | Hygiemag SMR | 2M              | 2NC      |
| 139010          | Hygiemag SMR | 5M              | 2NC      |
| 139011          | Hygiemag SMR | 10M             | 2NC      |
| 139012          | Hygiemag SMR | QC-M12          | 2NC      |
| 139013          | Hygiemag SMR | 2M              | 2NC 1NO  |
| 139014          | Hygiemag SMR | 5M              | 2NC 1NO  |
| 139015          | Hygiemag SMR | 10M             | 2NC 1NO  |
| 139016          | Hygiemag SMR | QC-M12          | 2NC 1NO  |
| 139017          | Hygiemag SMR | 2M              | 1NC      |
| 139018          | Hygiemag SMR | 5M              | 1NC      |
| 139019          | Hygiemag SMR | 10M             | 1NC      |
| 139020          | Hygiemag SMR | QC-M12          | 1NC      |
| 139021          | Hygiemag SMR | 2M              | 1NC 1NO  |
| 139022          | Hygiemag SMR | 5M              | 1NC 1NO  |

### Safety Classification and Reliability Data: Mechanical Reliability B10d

Standards:

ISO13849-1 Safety Data - Annual Usage

Safety Channel 1 NC Safety Channel 2 NC Safety Channel 3 NO Fuse Contact Release Time Initial Contact Resistance Minimum Switched Current Dielectric Withstand Insulation Resistance

Recommended Setting Gap Switching Distance (Target to Target)
Tolerance to Misalignment Switching Frequency Approach Speed Body Material Operating Temperature Enclosure Protection

Shock Resistance Vibration Resistance Cable Type Mounting Bolts Mounting Position

3.3 x 106 operations at 100mA load Up to PLe depending upon system architecture 8 cycles per hour/24 hours per day/365 days MTTFd 470 years Voltage Free: 250Vac 1.0A Max. Rating

EN60204-1 ISO13849-1 EN62061 UL508

Voltage Free: 250Vac 1.0A Max. Rating Voltage Free: 24Vdc 0.2A Max. Rating Internal 1.0A (F) External 0.8A (F) (User)

<500 milliohm 10Vdc 1mA 250Vac 100 Mohms 5mm 8mm Close Sar 22mm Open

5mm in any direction from 5mm setting gap 1.0Hz maximum

200mm/min to 1000mm/sec Stainless Steel 316 mirror polished finish to Ra4 -25C +105C (CIP SIP cleaning) IP69K (NEMA PW12) IP67 (NEMA 6) IEC68-2-27 11ms IEC68-2-6 10-55Hz 1mm

PVC 6 core 6mm OD Conductors 0.25mm<sup>2</sup> 2xM4 Tightening torque 1.0Nm

139023

Hygiemag SMR

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

10M

1NC 1NO