

Magnetically Operated: LMR (HGIEMAG)

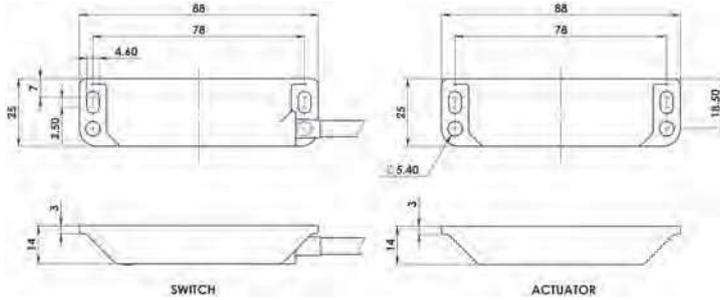
FEATURES:

Specifically designed for Food Processing applications:
 - Stainless Steel 316 Mirror Polished finish (Ra4)
 Suitable for CIP and SIP cleaning:
 - Food Splash Zones EHEDG guidelines - IP69K.
 Wide sensing at 12mm with high tolerance to misalignment.
 Narrow fitting enables flush mounting.
 Can be high pressure hosed at high temperature.
 Long life high power switching capability - up to 1.0A.
 Up to: PLe ISO13849-1.
 2NC 1NO circuits. Quick Connect versions available.

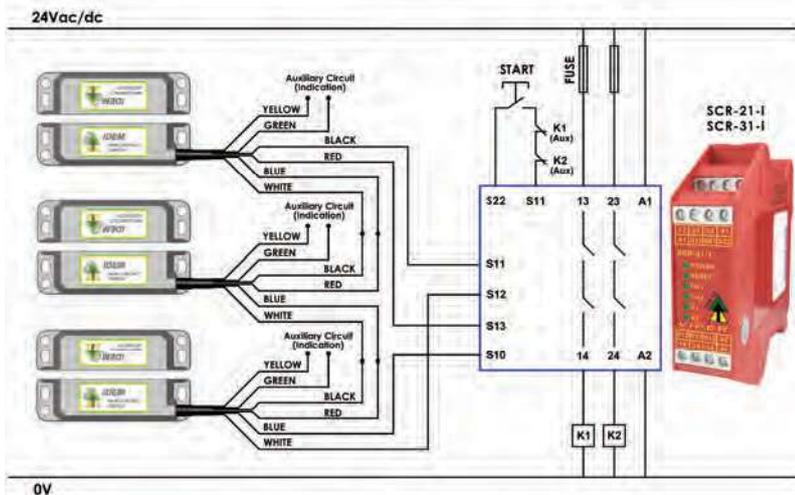
**Stainless Steel 316 Housing mirror polished (Ra4).
 Magnetic Actuation - Power Series 230Vac/24Vdc 1.0A.
 Switching Tolerance up to 12mm.
 Will operate with most Safety Relays.**

IP69K

DIMENSIONS:

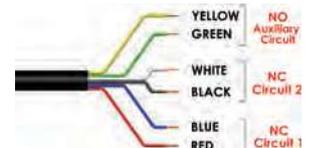
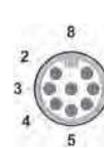


CONNECTION EXAMPLE: Magnetic Switches



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

Three switches connected in series to an SCR-21-i or SCR-31-i to give Dual Channel guard monitoring with Monitored Manual Start and Contactor Feedback check. Optional auxiliary circuits provide for remote signalling from each switch.



Standards: ISO14119 EN60947-5-3
 EN60204-1 ISO13849-1 EN62061 UL508

Safety Classification and Reliability Data:
 Mechanical Reliability B10d 3.3 x 10⁶ operations at 100mA load
 ISO13849-1 Up to PLe depending upon system architecture
 Safety Data – Annual Usage 8 cycles per hour/24 hours per day/365 days
 MTTFd 470 years

Technical Specification:
 Medium Duty Safety Channel 1 NC Voltage Free: 250Vac 1.0A Max. Rating
 Safety Channel 2 NC Voltage Free: 250Vac 1.0A Max. Rating
 Safety Channel 3 NO Voltage Free: 24Vdc 0.2A Max. Rating
 Fuse Internal 1.0A (F) External 0.8A (F) (User)
 Contact Release Time <2ms
 Initial Contact Resistance <500 milliohm
 Minimum Switched Current 10Vdc 1mA
 Dielectric Withstand 250Vac
 Insulation Resistance 100 Mohms
 Recommended Setting Gap 5mm
 Switching Distance Sao 8mm Close Sar 22mm Open
 Tolerance to Misalignment 5mm in any direction from 5mm setting gap
 Switching Frequency 1.0Hz maximum
 Approach Speed 200mm/min to 1000mm/sec
 Body Material Stainless Steel 316 mirror polished finish to Ra4
 Operating Temperature -25C +105C (CIP SIP cleaning)
 Enclosure Protection IP69K (QC versions IP67 for connector)
 Shock Resistance IEC68-2-27 11ms 30g
 Vibration Resistance IEC68-2-6 10-55Hz 1mm
 Cable Type PVC 6 core 6mm OD Conductors 0.25mm²
 Mounting Bolts 2xM4 Tightening torque 1.0Nm
 Mounting Position Any

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
133009	Hygiemag LMR	2M	2NC
133010	Hygiemag LMR	5M	2NC
133011	Hygiemag LMR	10M	2NC
133012	Hygiemag LMR	QC-M12	2NC
133013	Hygiemag LMR	2M	2NC 1NO
133014	Hygiemag LMR	5M	2NC 1NO
133015	Hygiemag LMR	10M	2NC 1NO
133016	Hygiemag LMR	QC-M12	2NC 1NO



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

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

Magnetically Operated: LMR with LED (HYGIEMAG)

FEATURES:

2NC circuits for connection to safety relays to achieve up to:
- PLe ISO13849-1.

Integral LED indication of sensing position.

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.

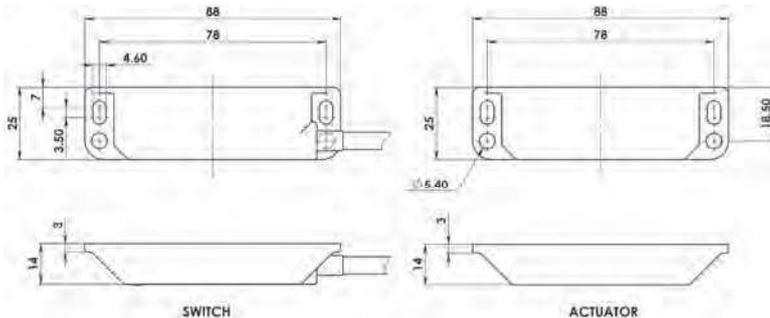
Popular European style narrow fitting for flush mounting.

Wide 10mm sensing with high tolerance to misalignment.

Long life high power switching capability up to 1A.

M12 Quick Connect versions available.

DIMENSIONS:



Recommended operating direction for optimum performance.

Standards: ISO14119 EN60947-5-3
EN60204-1 ISO13849-1 EN62061 UL508

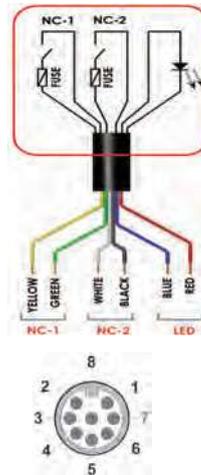
Safety Classification and Reliability Data:

Safety Channels NC1 and NC2	Voltage free: 250Vac 1.0A Max.
Fuse (NC Circuits)	Fuse externally 0.8A (F)
Contact Release Time	<2ms
Initial Contact Resistance	<500 milliohm
Minimum Switched Current	10Vdc 1mA
Dielectric Withstand	250Vac
Insulation Resistance	100 Mohms
Recommended Setting Gap	5mm
LED Supply Voltage	24Vdc +/-10%
NC Switching Distance (Target to Target)	Sao 8mm Close Sar 22mm Open
LED (Green)	Typical 8mm ON 15mm OFF
LED (Red)	Typical 8mm OFF 15mm ON
Tolerance to Misalignment	5mm in any direction from 5mm setting gap
Switching Frequency	1.0Hz maximum
Approach Speed	200mm/min to 1000mm/sec
Body Material	Stainless Steel 316 mirror polished finish Ra4
Operating Temperature	-25C +105C (CIP SIP cleaning)
Enclosure Protection	IP69K (QC versions IP67 for connector)
Shock Resistance	IEC68-2-27 11ms 30g
Vibration Resistance	IEC68-2-6 10-55Hz 1mm
Mechanical Life Expectancy	10,000,000 switching operations
Electrical Life Expectancy	1,000,000 switching operations
De-rating Safety Factor	2
Tested to	2,000,000 cycles at 24V 0.2A
Cable Type	PVC 6 core 6mm OD Conductors 0.25mm ²
Mounting Bolts	2xM4 Tightening torque 1.0Nm
Mounting Position	Any

Integral LED (options available).
Magnetic Actuation - Power Series.
Switching Tolerance up to 10mm.
Will operate with most Safety Relays.



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



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	Standard Lead Colour	Circuit (Actuator Present)
4	Yellow	NC2
6	Green	NC2
7	Black	NC1
1	White	NC1
2	Red	Supply + 24Vdc
3	Blue	Supply 0Vdc

LED COLOUR AND STATUS	SALES NUMBER	TYPE	CABLE LENGTH	OUTPUT CIRCUITS
LED GREEN (Illuminated when the guard is closed)	133120	Hygiemag LMR (with Integral LED)	2M	2NC
	133121	Hygiemag LMR (with Integral LED)	5M	2NC
	133122	Hygiemag LMR (with Integral LED)	10M	2NC
	133123	Hygiemag LMR (with Integral LED)	QC-M12	2NC
LED RED (Illuminated when the guard is open)	133124	Hygiemag LMR (with Integral LED)	2M	2NC
	133125	Hygiemag LMR (with Integral LED)	5M	2NC
	133126	Hygiemag LMR (with Integral LED)	10M	2NC
	133127	Hygiemag LMR (with Integral LED)	QC-M12	2NC

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



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