

HYGIEMAG - MAGNETIC Non Contact - Type: MMR-H

Coded Magnetic Actuation

Switching Tolerance up to 10mm



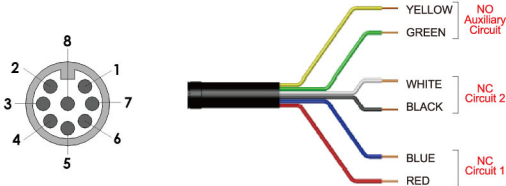
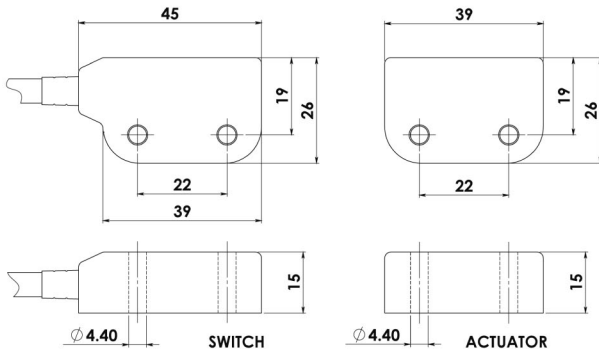
Compact yet robust fitting suitable for all small guard applications.
 Through hole fixing to enable front mounting no food trap areas
 Suitable for CIP SIP cleaning - Food Contact or Splash Zones EHEDG guidelines
 Cost effective interlock solution.
 Wide sensing at 10mm.
 Can be mounted unobtrusively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

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

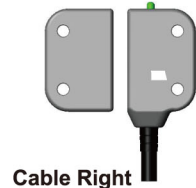
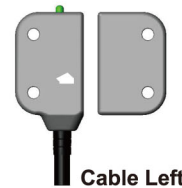


Quick Connect (QC)	Standard Lead Colour	Circuit (Actuator Present)
M12 8 Way Male Plug Pin view from switch		
4	Yellow	NO
6	Green	NO
7	Black	NC2
1	White	NC2
2	Red	NC1
3	Blue	NC1

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

Safety Classification and Reliability Data:

Switching Reliability: 3.3×10^8 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
 Safety Data - Annual Usage PFHd: 8 cycles per hour / 24 hours per day / 365 days 2.52×10^{-8}
 Proof Test Interval (Life) MTTFd: 47 years / 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: Sao 10mm Close Sar 20mm Open (Target to target)
 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)
 Temperature Range: -25 +105C.
 Enclosure 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



Sales Number	Type	Cable Length	Circuits
131001	MMR-H Cable Right	2M	2NC
131002	MMR-H Cable Right	5M	2NC
131003	MMR-H Cable Right	10M	2NC
131004	MMR-H Cable Right	QC-M12	2NC
131005	MMR-H Cable Right	2M	2NC 1NO
131006	MMR-H Cable Right	5M	2NC 1NO
131007	MMR-H Cable Right	10M	2NC 1NO
131008	MMR-H Cable Right	QC-M12	2NC 1NO
131009	MMR-H Cable Left	2M	2NC
131010	MMR-H Cable Left	5M	2NC
131011	MMR-H Cable Left	10M	2NC
131012	MMR-H Cable Left	QC-M12	2NC
131013	MMR-H Cable Left	2M	2NC 1NO
131014	MMR-H Cable Left	5M	2NC 1NO
131015	MMR-H Cable Left	10M	2NC 1NO
131016	MMR-H Cable Left	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 NC circuits are closed when the guard is closed and the actuator present



HYGIEMAG - Magnetic Non Contact - Type: SMR

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



Switching Tolerance up to 12mm

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

Specifically 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

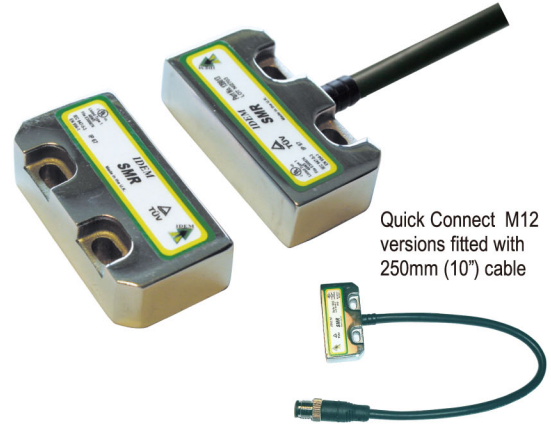
Wide 12mm sensing high tolerance to misalignment

High switching capability - up to 1A.

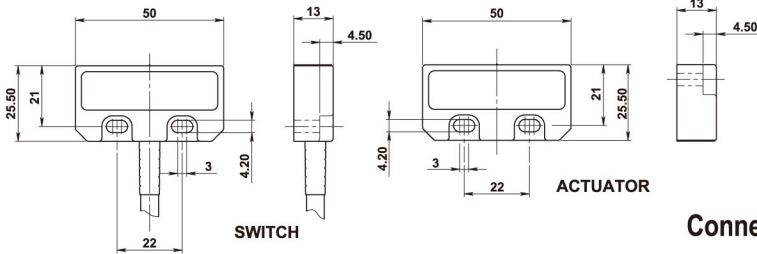
Up to : PLe ISO 13849-1 SIL 3 EN 62061 Cat. 4 EN 954-1

Quick connect versions

Stainless Steel Housing

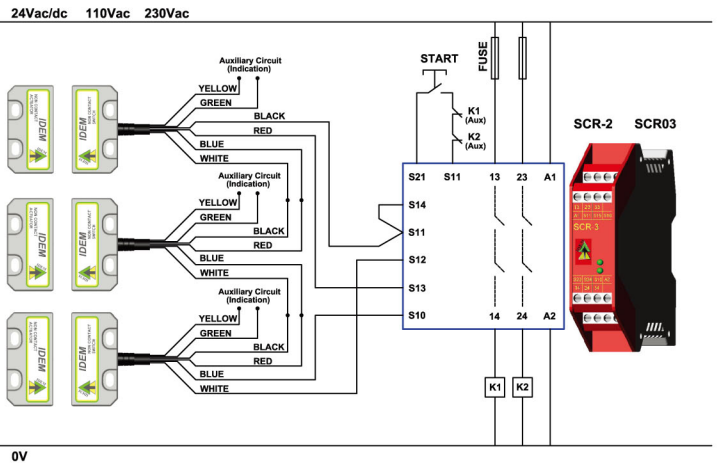
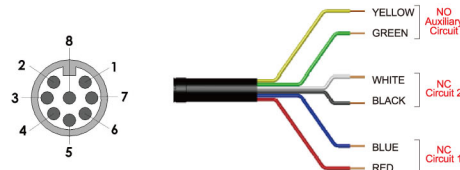


Quick Connect M12 versions fitted with 250mm (10") cable



Connection example - magnetic switches

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



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.

Standards EN1088 IEC 60947-5-3 EN 60204-1
ISO 13849-1 EN62061 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
EN 954-1	up to PLe depending upon system architecture
ISO 13849-1	up to SIL3 depending upon system architecture
EN 62061	8 cycles per hour / 24 hours per day / 365 days
Safety Data - Annual Usage PFHd	2.52 x 10 ⁻⁸
Proof Test Interval (Life) MTTFd	47 years / 470 years
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
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:	Sao 10mm Close
(Target to target)	Sar 22mm Open
Tolerance to misalignment	5mm in any direction from 5mm setting gap
Switching frequency	1.0 Hz maximum
Approach speed	200mm/m. to 1000mm/m.
Body Material	Stainless Steel 316 Mirror polished finish (Ra4)
Temperature Range	-25 +105C.
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 Tightening torque 1.0 Nm
Mounting Position	Any

Sales Number	Type	Cable 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
139023	Hygiemag SMR	10M	1NC 1NO
139024	Hygiemag SMR	QC-M12	1NC 1NO

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 - Magnetic Non Contact - Type: SMR-H



Magnetic Actuation

Switching Tolerance up to 12mm

Will operate with most Safety Relays

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

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

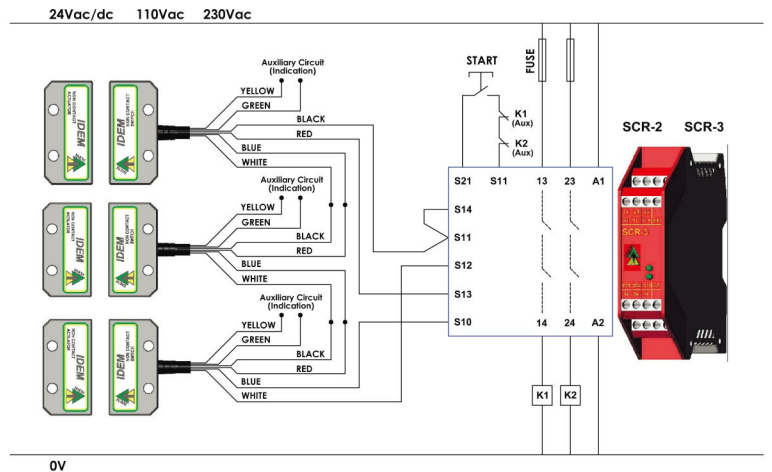
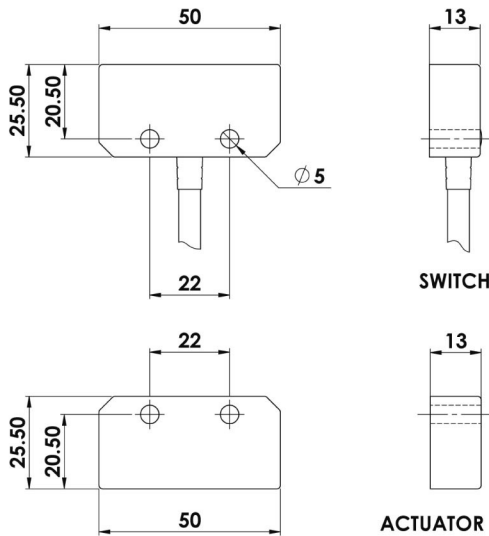
2NC 1NC circuits

Quick connect versions

Stainless Steel Housing



Use Hexagon Head Bolts for ease of cleaning.

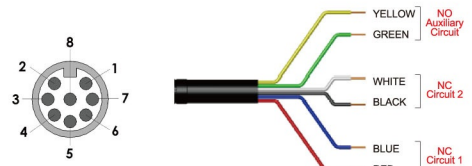


Standards EN1088 IEC 60947-5-3 EN 60204-1
ISO 13849-1 EN62061 EN 954-1 UL508

Safety Classification and Reliability Data:

Mechanical Reliability B10d	3.3 x 10 ⁶ operations at 100mA load
EN 954-1	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	2.52 x 10 ⁻⁸
Proof Test Interval (Life)	47 years
MTTFd	470 years
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
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:	Sao 10mm Close
(Target to target)	Sar 22mm 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)
Temperature Range	-25 +105C.
Enclosure 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

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



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

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



HYGIEMAG - Magnetic Non Contact - Type: SMR-F

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



Switching Tolerance up to 12mm IP69K

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

Temperatures up to 105C.

Specifically 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

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

2NC + 1NC circuits

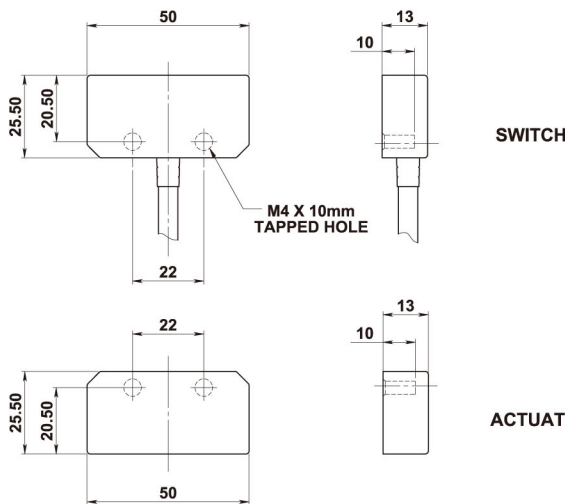
Quick connect versions

No Food Trap Housing -
Rear Mounting Holes

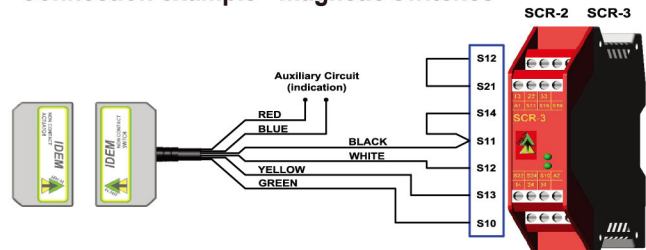
Quick Connect M12
versions fitted with
250mm (10") cable



Stainless Steel Housing



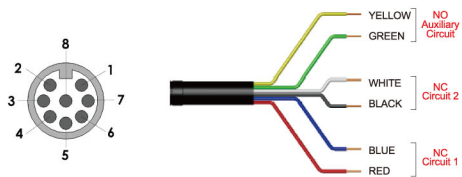
Connection example - magnetic switches



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

Standards	EN1088 IEC 60947-5-3 EN 60204-1 ISO 13849-1 EN62061 EN 954-1 UL508
Safety Classification and Reliability Data:	
Mechanical Reliability B10d	3.3 x 10 ⁶ operations at 100mA load
EN 954-1	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	2.52 x 10 ⁻⁸
Proof Test Interval (Life)	47 years
MTTFd	470 years
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
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:	Sao 10mm Close
(Target to target)	Sar 22mm 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)
Temperature Range	-25 +105C.
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 Tightening torque 1.0 Nm
Mounting Position	Any

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

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 - Magnetic Non Contact - Type: LMR

Magnetic Actuation - Power series



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

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

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 SIL 3 EN 62061 Cat. 4 EN 954-1

2NC + 1NC circuits

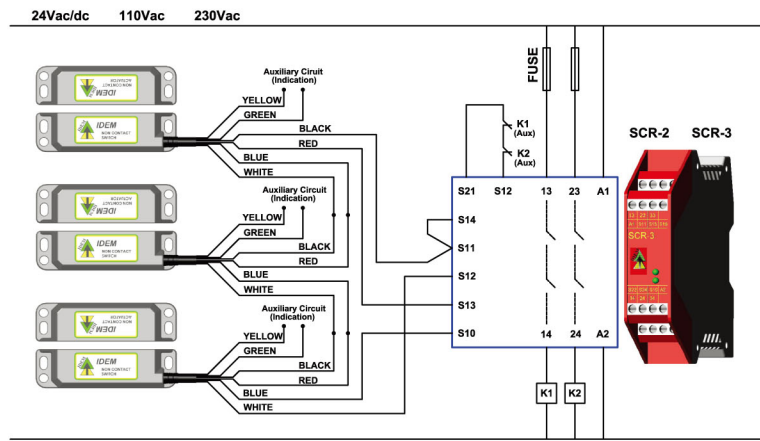
Quick connect versions

Stainless Steel Housing



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

Connection example – magnetic switches



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

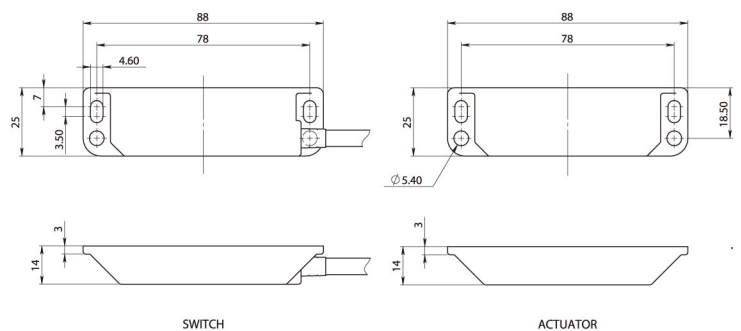
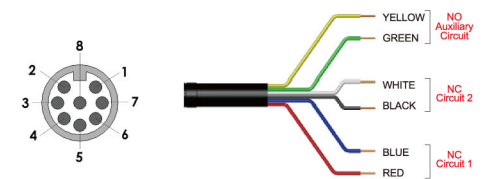
Three switches connected in series to an SCR-2 or SCR-3 to give Dual Channel monitoring with auto start and contactor feedback check. Optional auxiliary circuits provide for remote signalling from each switch.

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

Safety Classification and Reliability Data:

Mechanical Reliability B10d	3.3 x 10 ⁶ operations at 100mA load
EN 954-1	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	2.52 x 10 ⁻⁸
Proof Test Interval (Life)	47 years
MTTFd	470 years
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:	Sao 10mm Close
(Target to target)	Sar 22mm 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).
Temperature Range	-25 +105C.
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 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



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

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



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

European style narrow fitting for flush mounting

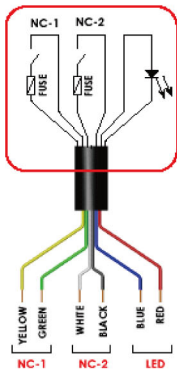
Wide 10mm sensing – high tolerance to misalignment

Long Life High Power switching capability up to 1A.

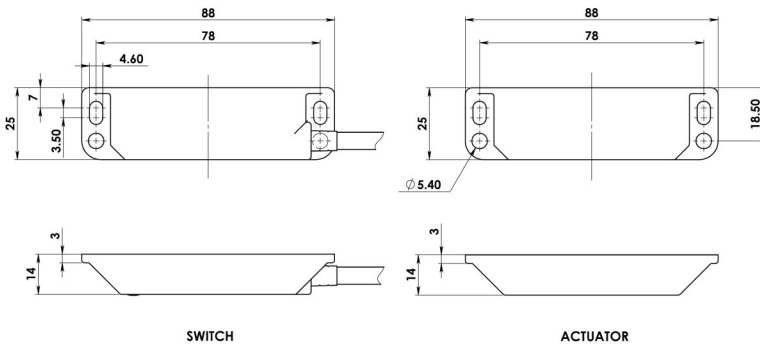
M12 Quick connect versions



Stainless Steel Housing



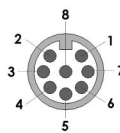
Note: The LED does not indicate the status of the NC Safety Contacts, but indicates that the actuator is aligned to give optimum performance.



SWITCH

ACTUATOR

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.

Standards EN1088 IEC 60947-5-3 EN 60204-1
EN 954-1 UL508 ISO13849-1

Safety Channels NC1 and NC2 Voltage free : 250V.ac 1.0 A Max.

- Fuses (NC Circuits) Fuse externally 0.8A (F)
- 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
- LED supply voltage 24V.dc +/- 10%
- NC Switching Distance: (Target to target)
 - 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 1.0 Hz maximum
- Approach speed 200mm/m. to 1000mm/s.
- Body Material Stainless Steel 316
- Temperature Range -25 / 105C.
- Enclosure Protection IP67 / IP69K
- Shock Resistance IEC 68-2-27 11ms 30g
- Vibration Resistance IEC 68-2-6 10-55 Hz. 1mm
- Mechanical Life Expectancy 10,000,000 switchings
- Electrical Life Expectancy 1,000,000 switchings
- De-rating Safety Factor 2
- Tested to 2,000,000 cycles at 24V. 0.2A
- Cable Type PVC 6 core 6mm O.D. Max.
- Mounting Bolts 2 x M4 Tightening torque 1.0 Nm

Quick Connect (QC)	Standard Lead Colour	Circuit (Actuator Present)
M12 8 Way Male Plug Pin view from switch		
4	Yellow	NC 2
6	Green	NC 2
7	Black	NC 1
1	White	NC 1
2	Red	Supply + 24Vdc
3	Blue	Supply 0Vdc

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

LED colour and status	Sales Number	Type	Cable Length	Output Circuits
LED Green (illuminated when guard is closed)	133120	Hygiemag LMR (with LED)	2M	2NC
	133121	Hygiemag LMR (with LED)	5M	2NC
	133122	Hygiemag LMR (with LED)	10M	2NC
	133123	Hygiemag LMR (with LED)	QC-M12	2NC
LED Red (illuminated when guard is open)	133124	Hygiemag LMR (with LED)	2M	2NC
	133125	Hygiemag LMR (with LED)	5M	2NC
	133126	Hygiemag LMR (with LED)	10M	2NC
	133127	Hygiemag LMR (with LED)	QC-M12	2NC

HYGIEMAG - Magnetic Non Contact - Type: CMR

Magnetic Actuation - Power series

Switching Tolerance up to 12mm



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

IP69K

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

Medium Duty version 1.0A.

Will operate with most Safety Relays

Specifically designed 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

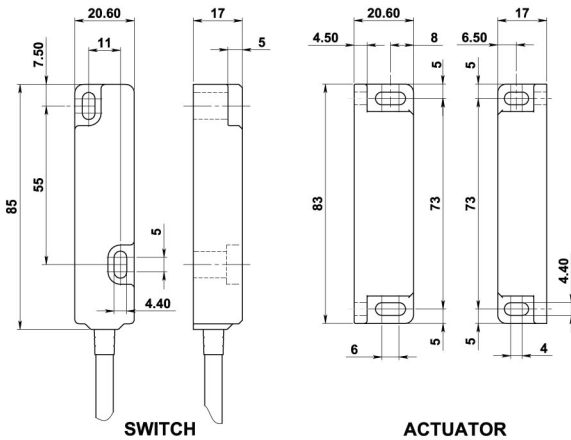
High switching capability - up to 2A.

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

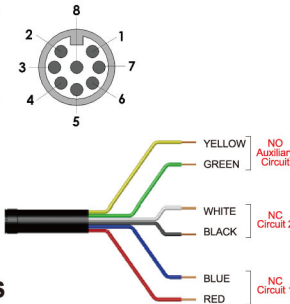
Stainless Steel Housing



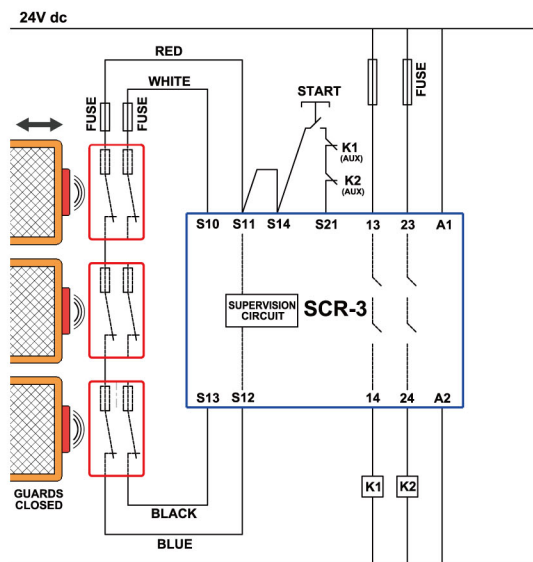
Quick Connect M12 versions fitted with 250mm (10") cable



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



Connection example – magnetic switches



OV

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.

- Standards EN1088 IEC 60947-5-3 EN 60204-1 ISO 13849-1 EN62061 EN 954-1 UL508
- Safety Classification and Reliability Data:
- Mechanical Reliability B10d: 3.3 x 10⁶ 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 SIL3 depending upon system architecture
 - EN 62061: 8 cycles per hour / 24 hours per day / 365 days
 - Safety Data - Annual Usage: 2.52 x 10⁻⁸
 - PFHd: 47 years
 - Proof Test Interval (Life): 470 years
 - MTTFd: 470 years
 - Heavy Duty Safety Channel 1 NC: Voltage free : 250V.ac 2.0 A Max. Rating
 - Safety Channel 2 NC: Voltage free : 250V.ac 2.0 A Max. Rating
 - Safety Channel 3 NO: Voltage free : 24V.dc 0.2 A Max. Rating
 - Fuse: Internal 2.0 A (F) External 1.6A (F)
 - 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
 - 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: Sao 10mm Close Sar 22mm Open (Target to target)
 - 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)
 - Temperature Range: -25 +105C.
 - 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 Tightening torque 1.0 Nm
 - Mounting Position: Any

Sales Number	Type	Cable Length	Circuits	NC Duty
138017	Hygiemag CMR	2M	2NC	Medium 1A
138018	Hygiemag CMR	5M	2NC	Medium 1A
138019	Hygiemag CMR	10M	2NC	Medium 1A
138020	Hygiemag CMR	QC-M12	2NC	Medium 1A
138021	Hygiemag CMR	2M	2NC 1NO	Medium 1A
138022	Hygiemag CMR	5M	2NC 1NO	Medium 1A
138023	Hygiemag CMR	10M	2NC 1NO	Medium 1A
138024	Hygiemag CMR	QC-M12	2NC 1NO	Medium 1A
138025	Hygiemag CMR	2M	1NC	Heavy 2A
138026	Hygiemag CMR	5M	1NC	Heavy 2A
138027	Hygiemag CMR	10M	1NC	Heavy 2A
138028	Hygiemag CMR	QC-M12	1NC	Heavy 2A
138029	Hygiemag CMR	2M	1NC 1NO	Heavy 2A
138030	Hygiemag CMR	5M	1NC 1NO	Heavy 2A
138031	Hygiemag CMR	10M	1NC 1NO	Heavy 2A
138032	Hygiemag CMR	QC-M12	1NC 1NO	Heavy 2A

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

HYGIEMAG - Magnetic Non Contact - Type: CMR-F

Magnetic Actuation - Power series No Food Trap Housing Rear Mounting Holes



Switching Tolerance up to 12mm IP69K

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

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

Medium Duty version 1.0A.

Stainless Steel Housing

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

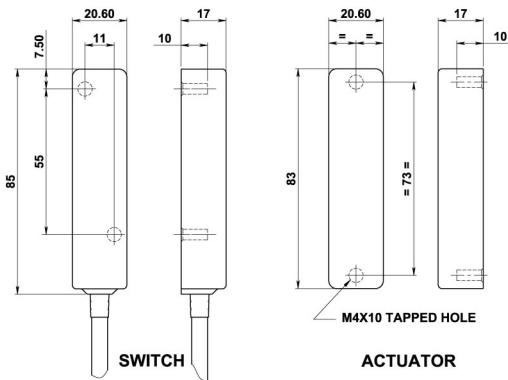
Wide 12mm sensing high tolerance to misalignment

High switching capability - up to 2A.

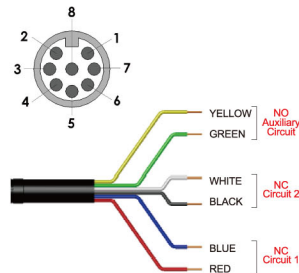
Up to : PLe ISO 13849-1 SIL 3 EN 62061 Cat. 4 EN 954-1



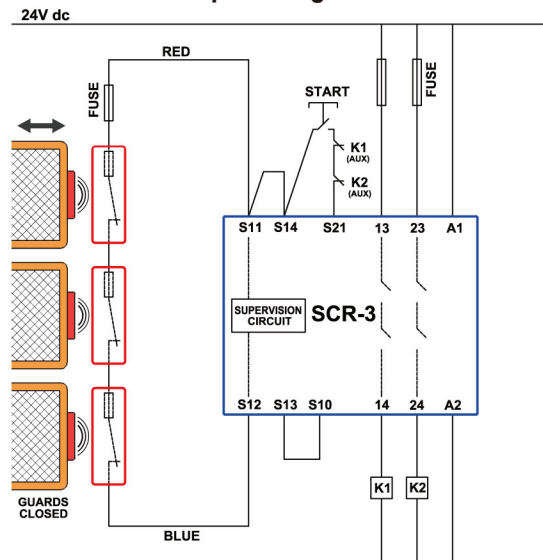
Quick Connect M12 versions fitted with 250mm (10") cable



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



Connection example – magnetic switches



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

- Standards EN1088 IEC 60947-5-3 EN 60204-1
ISO 13849-1 EN62061 EN 954-1 UL508
- Safety Classification and Reliability Data:
- Mechanical Reliability B10d 3.3 x 10⁶ 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 SIL3 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 2.52 x 10⁻⁸
 - Proof Test Interval (Life) 47 years
 - MTTFd 470 years
 - Heavy Duty Safety Channel 1 NC Voltage free : 250V.ac 2.0 A Max. Rating
 - Safety Channel 2 NC Voltage free : 250V.ac 2.0 A Max. Rating
 - Safety Channel 3 NO Voltage free : 24V.dc 0.2 A Max. Rating
 - Fuse Internal 2.0 A. (F) External 1.6A (F)
 - 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
 - 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: Sao 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/m. to 1000mm/s.
 - Body Material Stainless Steel 316 Mirror polished finish (Ra4)
 - Temperature Range -25 +105C.
 - 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 Tightening torque 1.0 Nm
 - Mounting Position Any

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

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.

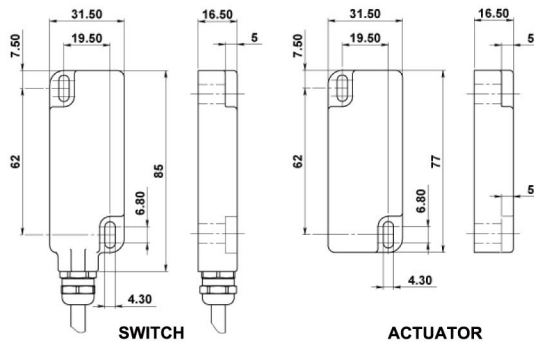
Up to : PLe ISO 13849-1 SIL 3 EN 62061 Cat. 4 EN 954-1

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

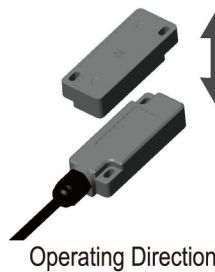
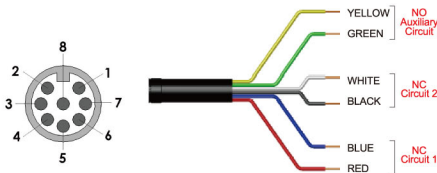
Stainless Steel Housing



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



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



Operating Direction

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

Safety Classification and Reliability Data:

Mechanical Reliability B10d 3.3 x 10⁶ operations at 100mA load
EN 954-1 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 2.52 x 10⁻⁸

Proof Test Interval (Life) 47 years
MTTFd 470 years

Heavy Duty Safety Channel 1 NC Voltage free : 250V.ac 2.0 A Max. Rating
Safety Channel 2 NC Voltage free : 250V.ac 2.0 A Max. Rating
Safety Channel 3 NO Voltage free : 24V.dc 0.2 A Max. Rating
Heavy Duty Fuse Internal 2.0 A (F) External 1.6 A(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: Sao 10mm Close Sar 22mm Open (Target to target)

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).

Temperature Range -25 +105C.

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

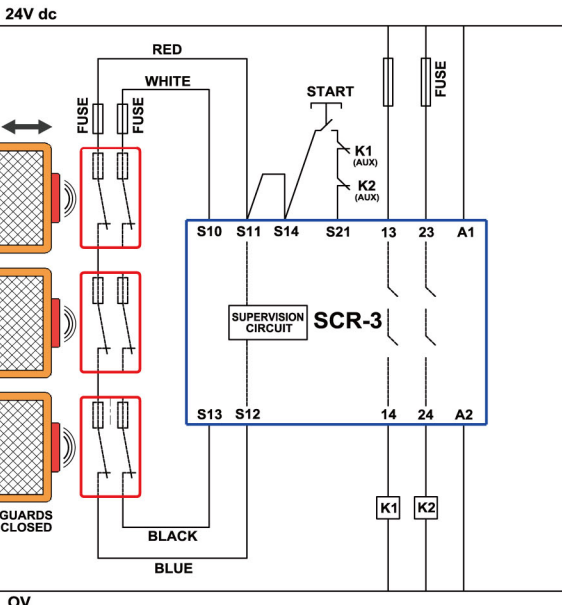
Shock Resistance IEC 68-2-27 11ms 30g

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

Cable Type PVC 6 core 6mm O.D.

Mounting Bolts 2 x M4 Tightening torque 1.0 Nm

Mounting Position Any



OV

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.

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 1NO
136006	Hygiemag WMR	5M	2NC 1NO
136007	Hygiemag WMR	10M	2NC 1NO
136008	Hygiemag WMR	QC-M12	2NC 1NO
136009	Hygiemag WMR	2M	1NC 1NO
136010	Hygiemag WMR	5M	1NC 1NO
136011	Hygiemag WMR	10M	1NC 1NO
136012	Hygiemag WMR	QC-M12	1NC 1NO

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

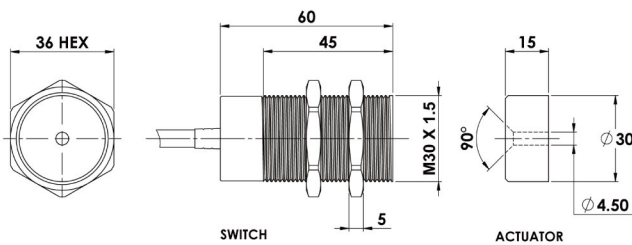
UP to: PLe ISO 13849-1 SIL3 EN 62061 Cat. 4 EN 954-1

2NC 1NO circuits

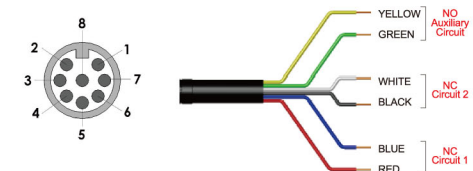
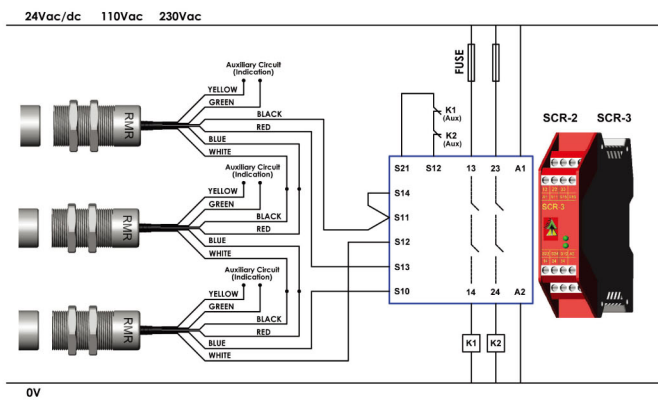
Quick connect versions.

Will operate with most Safety Relays

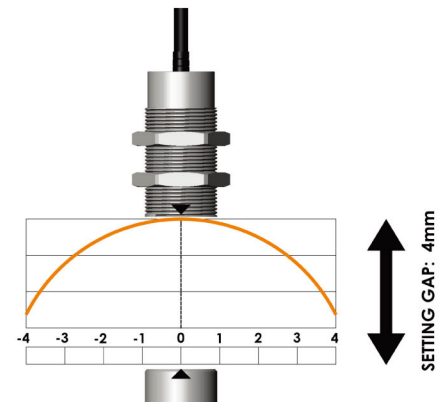
RMR - S/Steel Housing



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



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 EN 954-1 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	2.52 x 10 ⁻⁶
Proof Test Interval (Life)	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	250V. ac
Insulation Resistance	100 Mohms
Recommended setting gap	5mm
Switching Distance:	Sao 10mm Close Sar 20mm Open
(Target to target)	
Tolerance to misalignment	4mm in any direction from 4mm setting gap
Switching frequency	1.0 Hz maximum
Approach speed	200mm/m. to 1000mm/s.
Body Material	Stainless Steel 316
Temperature Range	-25 / 105C
Enclosure 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 Position	Any

Sales Number	Type	Cable Length	Circuits
134009	Hygiemag RMR S/Steel 316	2M	2NC
134010	Hygiemag RMR S/Steel 316	5M	2NC
134011	Hygiemag RMR S/Steel 316	10M	2NC
134012	Hygiemag RMR S/Steel 316	QC-M12	2NC
134013	Hygiemag RMR S/Steel 316	2M	2NC 1NO
134014	Hygiemag RMR S/Steel 316	5M	2NC 1NO
134015	Hygiemag RMR S/Steel 316	10M	2NC 1NO
134016	Hygiemag RMR S/Steel 316	QC-M12	2NC 1NO

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



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