

Hinge Interlock Safety Switch Type: HSM

FEATURES:

IDEM's HSM Hinge Switch has a die cast housing with a mirror polished finish and has been designed to be mounted for interlock position sensing of hinged moving guards.

The HSM has been designed to be fitted to the hinged axis of machine guard doors and provide a robust hinge function in addition to interlock position sensing.

It has positive opening contacts in accordance with IEC 60947-5-1 and after fitting the switch offers a very high degree of anti-tamper.

The HSM is used to mount the machine guard door into the machine guard frame and contact blocks are available in slow make/break 3NC 1NO, or 2NC 2NO.

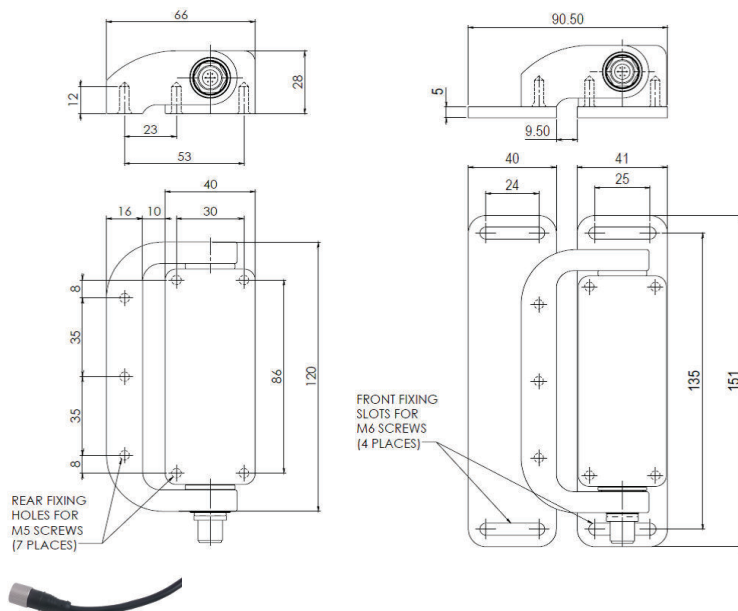
Enclosures are protected to IP67 / IP69K with a low profile, hygienic design for washdown.

OPERATION:

Operation of the switches is achieved by the rotating action of a cam and actuator to cause deflection of the switch plunger.

Positive actuation of the contacts is achieved at only 6 degrees of opening of the guard and can be adjusted up to 12 degrees if required upon installation.

DIMENSIONS:

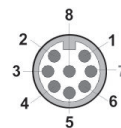


FEMALE QC LEADS	LENGTH	SALES NUMBER
M12 8 Way	5m (15ft)	140101
M12 8 Way	10m (30ft)	140102

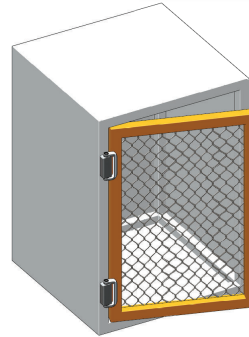
Standards: ISO 14119, IEC 60947-5-1, EN60204-1
ISO 13849-1, EN62061

Safety Classification & Reliability Data:

Mechanical Reliability B10d	1.5 x 10 ⁶ operations at 100mA load
ISO 13849-1	Up to PLe depending upon system architecture
EN62061	Up to SIL3 depending upon system architecture
Safety Data – Annual Usage	8 cycles per hour/24 hours per day/365 days
	MTTFd 356 years
Utilization Category	AC15 A300 3A
Thermal Current (Ith)	10A
Overload protection fuse (fuse externally)	10A (FF)
Rated Insulation/Withstand Voltages	600VAC/2500VAC
Actuator Rotation for Positive Opening	6 degrees 0.5Nm (Type Zb contacts)
Maximum Approach Withdrawal Speed	600mm/s
Body Material	Die Cast (black plated mirror finish)
Enclosure Protection	IP67 / IP69K
Operating Temperature	-25C +80C
Vibration	IEC 68-2-6 10-55Hz+1Hz
	Excursion: 0.35mm, 1 octave/min
Conduit Entry	Various (see sales part numbers)
Fixing	7 x M5
Tightening Torque (all mounting bolts)	4Nm
Mounting Position	Any
Pollution Degree	3
Short Circuit Overload Protection	Fuse externally 10A (FF)



MIRROR
POLISHED
DIE CAST
HOUSING



APPLICATION EXAMPLE:

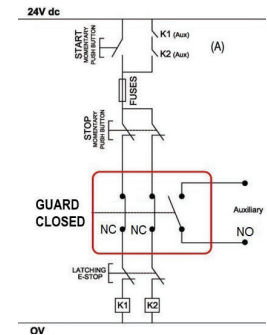
Door Interlock - Dual Channel non-monitored.

This system shows interlock switch circuits configured to allow dual circuit direct feeds to contactor coils K1 and K2.

When the start button is pressed and then released, the auxiliary contacts (A) of contactors K1 and K2 maintain the feed to the contactor coils.

Opening of the Interlock Switch or depressing the E Stop will isolate power to the contactor coils.

Re-start can only occur providing the Guard is closed and the E Stop is reset. System is shown with the guards closed and machine able to start.



Function	Quick Connect (QC) M12 8 Way Male (on Flying Lead 250mm) Pin View from Switch
NC3 or NO2 (optional)	4
NC3 or NO2 (optional)	3
NO (auxiliary)	2
NO (auxiliary)	8
NC1	7
NC1	1
NC2	6
NC2	5

SALES NUMBER	CONTACTS	CABLE LENGTH	ORIENTATION
351001	3NC 1NO	5m	Right Handed
351002	3NC 1NO	10m	Right Handed
351003	3NC 1NO	QC-M12	Right Handed
351004	2NC 2NO	5m	Right Handed
351005	2NC 2NO	10m	Right Handed
351006	2NC 2NO	QC-M12	Right Handed
351007	3NC 1NO	5m	Left Handed
351008	3NC 1NO	10m	Left Handed
351009	3NC 1NO	QC-M12	Left Handed
351010	2NC 2NO	5m	Left Handed
351011	2NC 2NO	10m	Left Handed
351012	2NC 2NO	QC-M12	Left Handed
351020			Blank Hinge Die-Cast