



# GNI-3 Magnetic Interlock Switch

## Operating Instructions for GNI-3 Safety Switches

### Features:

- Easy installation
- Non-contact operation
- Compact, rugged design
- Conformity to EN14119
- No maintenance
- High tolerance to misalignment

The Tapeswitch GNI-3 magnetic interlock provides a low-cost solution for guarding personnel access into dangerous areas. This makes it ideal for use on guard doors and perimeter gates.

The moulded ABS enclosure combines high resistance to industrial contaminants with an IP67 protection rating which allows for power cleaning or even immersion.



### KEEP THIS GUIDE FOR FUTURE REFERENCE

The information is designed to help suitably qualified personnel install and operate Tapeswitch Ltd, safety equipment. Before using this product, read this guide thoroughly along with any relevant European and/or National Standards E.g. Machinery Directive 2006/42/EC and its Amendments, Provision and Use of Work Equipment Regulations. **Further information can be obtained from Tapeswitch Ltd.**

Technical Specifications	GNI-3S	GNI-3S-QD
Interlock Contacts	2 Normally Open	2 Normally Open
Interlock Contact Max. Rating	24VDC / 500mA Resistive	24VDC / 500mA Resistive
Internal Fuse Rating	500mA	500mA
Auxiliary Contacts	1 Normally Closed	1 Normally Closed
Auxiliary Contact Max. Rating	500mA Resistive	500mA Resistive
Operating Temperature	-10°C to +55°C	-10°C to +55°C
Construction	Red ABS, Resin Filled	Red ABS, Resin Filled
Enclosure Rating	IP67	IP67
Operating Distance	18mm (Front) 9mm (Side)	18mm (Front) 9mm (Side)
Coding	None	None
Mounting	4 X M4 Security Screws	4 X M4 Security Screws
Connection	Pre-wired	M12 6-PIN Quick Disconnect
Cable Length	05 Metre	N/A

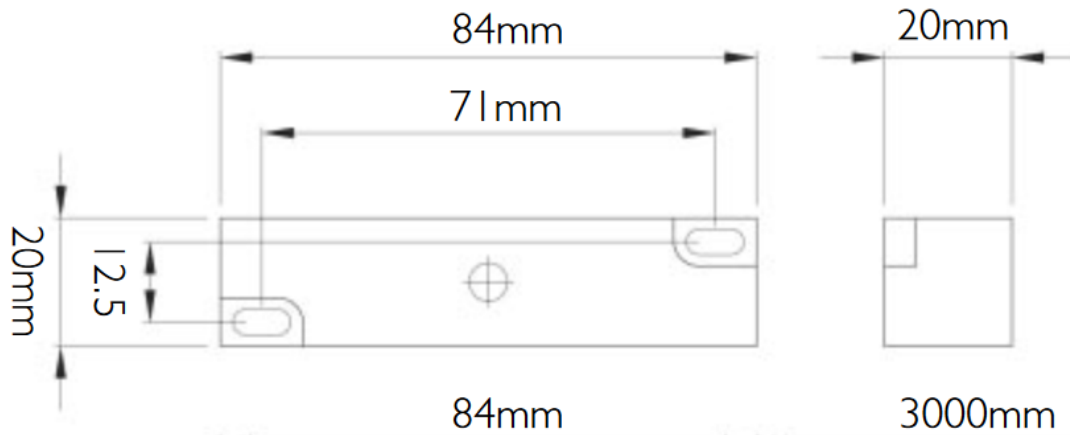
### Safety Related Data

B10d	2,000,000	PFH	$6.52 \times 10^{-8}$
TM (Mission Time)	> 20 Years	DC	99%
PFHd	$4.3 \times 10^{-8}$ See Note 1	SFF	98%
MTTFd	High > 100 Years (Based on usage rate of 360 Days/Year, 24 Hours/Day, 10 Operations/Hour)		
Note 1	Based on dual channel wiring according to CAT 4. Diagnostic coverage provided by downstream control logic. DC - medium, MTTFd = 100 Years. May be suitable for performance level applications PLe according to ISO 13849-1. (SIL 3 according to IEC 62061)		

### Safety Standards

Approvals	CE Complies with all relevant sections of the CE Marking Directive
	UL 508 Industrial Control (Pending) TUV Approved (Pending)
European Directives	Machinery Directive 2006/42/EC, Low Voltage Directive 2006/95/EC; EMC Directive 2014/30/EU, RoHS Directive 2011/65/EC
European Standards	BS EN 12100 Safety of Machinery. General principles for design.
	BS EN ISO 14119 Safety of Machinery. Interlocking devices associated with guards. Principles for design and selection. BS EN ISO 13849 Safety of Machinery. Safety related parts of control systems.
	BS EN ISO 62061 Safety of Machinery. Functional safety of safety related electrical, electronic and programmable electronic control systems
	BS EN 60204 Safety of Machinery. Electrical equipment of machines.
	BS EN 60947-5-1 Low-voltage switchgear and controlgear.
	BS EN 60947-5-3 Low-voltage switchgear and controlgear.

## Dimensions

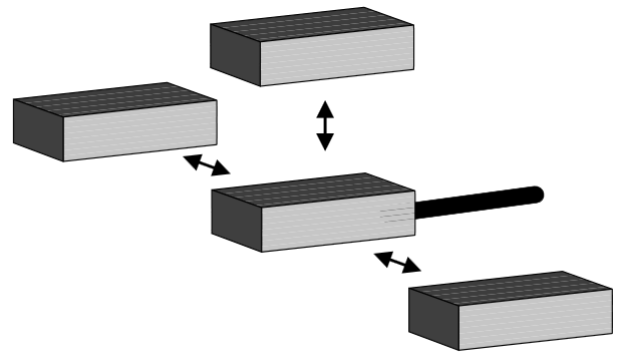


## Operation / Installation

The GNI-3 safety switches can approach each other from most angles. When the guard is closed the targets on the printed face of the switch and actuator must be aligned.

Use the tamper proof screws provided to make the installation more secure.

Do not use the safety switch as a door stop. Leave a minimum of 50 mm between any adjacent switches.



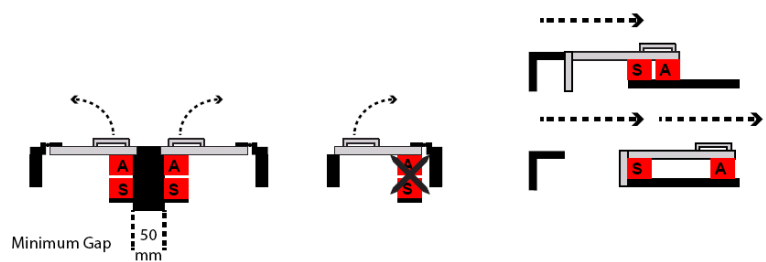
## Mounting

DO NOT mount on hinged side of the guard.

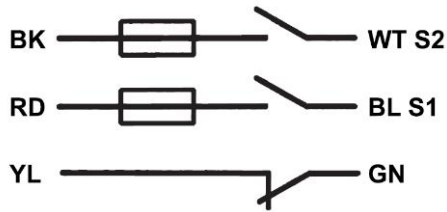
Mount the switch on to the machine frame and the actuator on to the opening edge of the door.

Always try to mount the switch on non-ferrous material. **(Ferrous materials may reduce the switching distance.)**

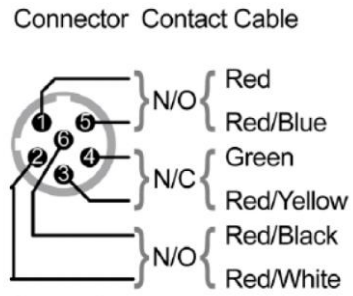
EN14119: Hide the actuator where possible.



## PRE-WIRED



## M12 QUICK DISCONNECT



Connector  
 Micro 1/2" UNF  
 6 pole, Dual Key Way



<b>Contact Operation</b>	<p>The NO contacts on the GNI-3 safety switches are open when the actuator is away from the switch.</p> <p>When the actuator is within the specified operating distance, the NO contacts will close and the NC contact will open.</p>
<b>Fuses</b>	<p>The NO contacts on the GNI-3 safety switches are internally fused at 500mA.</p>

## Important

### CONNECTION TO A SAFETY RELAY

The GNI-3 non-contact safety switches are designed work with safety relays that have a low inrush current on the switch input.

**All control contacts should be externally fused.**

### Maintenance

It is recommended to check the safe operation of the switches and look for signs of damage or excessive wear on a weekly basis. Damaged units should be replaced or returned to the manufacturer for repair where practical.

### Notes

In the interest of product development specifications are subject to change without notice. It is the responsibility of the user to ensure compliance with any acts or by-laws in place. All information regarding Tapeswitch equipment is believed to be accurate at the time of printing. Responsibility cannot be accepted for errors or omissions.



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