



# FORTRESS



## Safety Switches for Automation



THE QUEEN'S AWARDS  
FOR ENTERPRISE:  
INTERNATIONAL TRADE  
2018





# Safety Switches for Automation

## Who are Fortress?

Fortress designs and manufactures customised safety equipment, protecting people working in hazardous workplaces. We offer a tailored safety solution which is reliable and extremely durable, guaranteeing minimal downtime while always keeping your people as safe as possible. This brochure lists a selection of our standard safety switch and guard locking products. To learn more visit our website at [www.fortressinterlocks.com](http://www.fortressinterlocks.com) or get in touch via email using the contact details available on the back page.

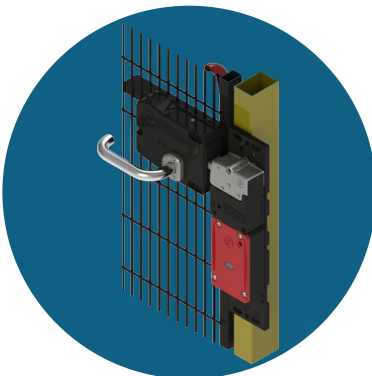
## What is a Safety Switch?

A safety switch device is used to create a stop command upon a guard opening. These products use positive break dual channel safety (2NC) to signal an access request.

## What is Guard Locking?

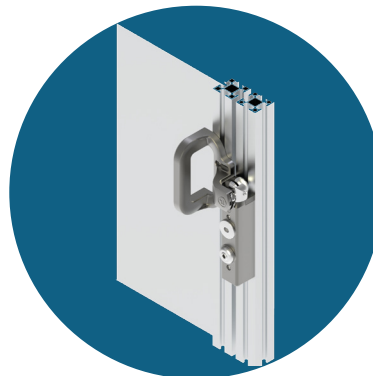
Guard Locking is used to keep a guard locked and closed until it is safe to enter. Typically a stop command is created upon the guard unlocking. These products use a solenoid to control access and enforce a run down time.

### Heavy Duty



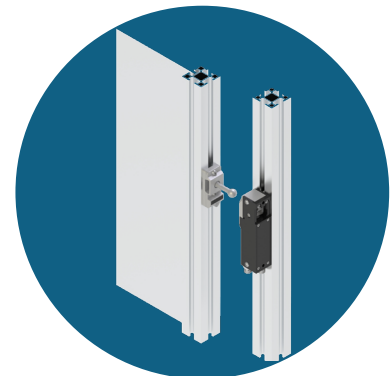
amGardpro is the ultimate range of safety gate products for heavy duty applications. Available pre-mounted to a plate and pre-wired for simple installation.

### Medium Duty



tGard is an easily customisable range of compact aluminium alloyed products for medium duty applications.

### Compact Guard Lock



Atom is a range of highly robust, high coded and compact guard locking and safety switch products.

### Safety Switches

### Safety Switches with Guard Locking

### Non-Contact Safety Switches

#### Heavy

#### Medium

#### Compact

#### Heavy

#### Medium

#### Compact

#### NCS

#### FRNK

#### Page 3

#### Page 5

#### Page 8

#### Page 4

#### Page 6

#### Page 8

#### Page 7



	Heavy	Medium	Compact	Heavy	Medium	Compact	NCS	FRNK
Non-Locking	✓	✓	✓				✓	✓
Locking				✓	✓	✓		
Safety Contacts	2NC	2NC	OSSD PNP	2NC	2NC	OSSD PNP	2NC	2NC
Performance Level	Ple	PLd	Ple	Ple	PLd	Ple	Ple	Ple
Monitoring	1NO & LED Status	1NO & LED Status	1NO & LED Status	2 x 1NO & LED Status	2 x 1NO & LED Status	2 x 1NO & LED Status	1NO & LED Status	1NO
Locking or Unlocking Power				24V	24V	24V		
House Material	Zinc Alloy with Stainless Steel	Aluminium Alloy	Zinc Alloy with Stainless Steel	Zinc Alloy with Stainless Steel	Aluminium Alloy	Zinc Alloy with Stainless Steel	Stainless Steel	ABS Polymer
Misalignment Capability (X,Y,Z)	+/-10/10/10mm	+/- 4/4/4mm	+/- 8/8/8mm	+/-10/10/10mm	+/- 4/4/4mm	+/- 8/8/8mm	+/- 20/20/20mm	+/- 15/8/8mm
Actuator Retention Force	N/A	N/A	N/A	10,000N	2500N	8000N	N/A	N/A
Coding Level	Low	Low	High	Low	Low	High	Low	High
Cascadable			✓			✓		
Cable Connection	M12	M12	Up to 2x M12	M12	M12	Up to 2x M12	M12	M12

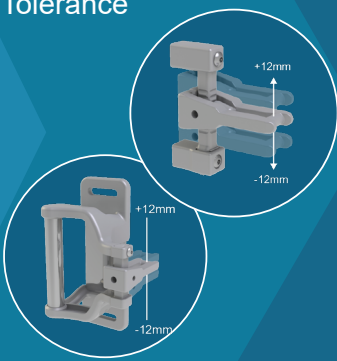
Misalignment capability; misalignment of actuator and sensor or with actuator and guard; X/Y/Z where X is distance to actuator, Y is horizontal misalignment and Z is vertical misalignment.

# Heavy Duty Safety Switch

**Robust**  
Metal Alloy  
Enclosure



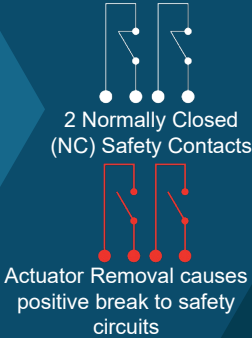
**Resilient**  
High Misalignment  
Tolerance



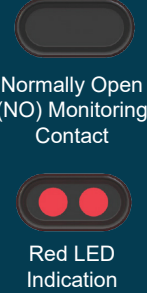
**Effortless**  
Installation



**Redundancy**  
Positive Break Dual  
Channel 2NC Safety



**Monitor**  
System State

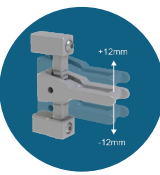


**Part Number**

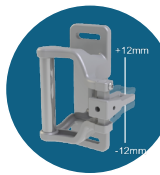
Select a Heavy Duty Safety Switch beginning HDSS-

Choose from  
Two Actuators

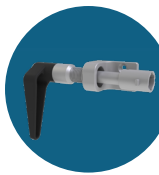
Select your  
Actuator Entry



**Sliding  
Doors**



**Hinged  
Doors**



**Rotary  
Handle**

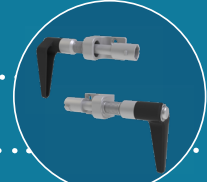
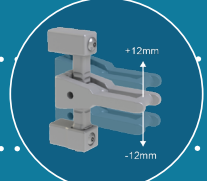
HDSS-001

HDSS-002

HDSS-003

HDSS-004

HDSS-005



Slide from  
Left



Slide from  
Right



Hinged  
Door



Hinged  
Left



Hinged  
Right

**Safety Switch**



**Pre-Wired  
Disconnect**



**M12 8-Pin**

Do you need a cable with this product?

**CABLE-5M-D3**

5m Cable to Suit 8-Pin Connector

**5m  
(16.4ft)**

**CABLE-10M-D3**

10m Cable to Suit 8-Pin Connector

**10m  
(32.8ft)**

**CABLE-20M-D3**

20m Cable to Suit 8-Pin Connector

**20m  
(65.6ft)**



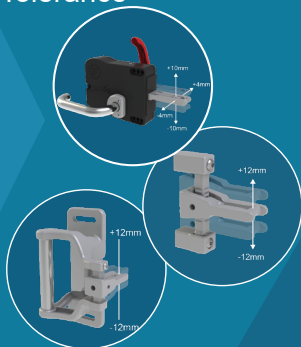
# Heavy Duty Guard Lock

**Robust**  
Metal Alloy  
Enclosure

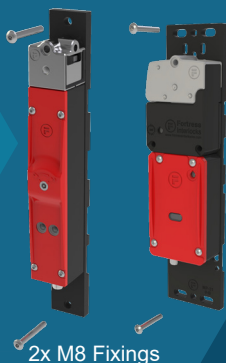


Head Retention Force  
10,000N

**Resilient**  
High Misalignment  
Tolerance



**Effortless**  
Installation

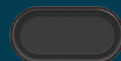


**Redundancy**  
Positive Break Dual  
Channel 2NC Safety



**Monitor**  
System State via  
Feedback

2NC Guard Locked  
2NC Guard Closed  
2x 1NO Monitor



Guard Unlocked  
Guard Closed  
Yellow LED Illuminated



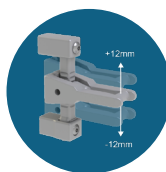
Guard Unlocked  
Guard Open  
Red LED Illuminated



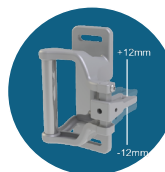
**Part Number**

Select a Heavy Duty Guard Lock beginning HDGL-

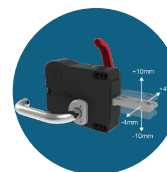
Choose from  
Three Actuators



**Sliding  
Doors**



**Hinged  
Doors**



**Escape  
Release  
Handle**

Select your  
Actuator Entry

Left Entry (Sliding / Hinged to Left of Door)  
Right Entry (Sliding / Hinged to Right of Door)

**HDGL-001**

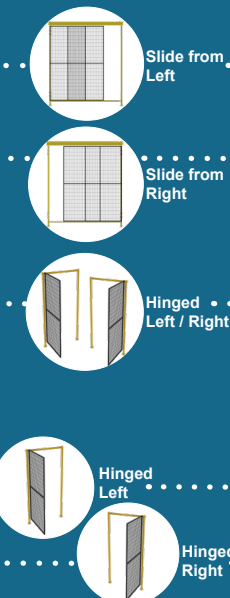
**HDGL-002**

**HDGL-003**

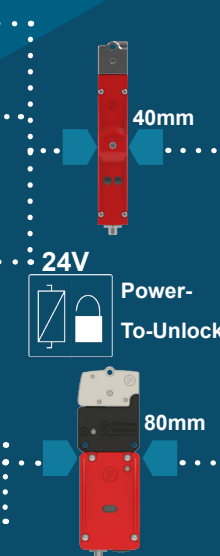
Did You Know?  
The Red Internal Handle  
Operates as an Escape  
Release, Overriding the locking  
mechanism of the Guard Lock  
to open the Guard.

**HDGL-004**

**HDGL-005**



**Guard Locking  
Type**



**Pre-Wired  
Disconnect**



**M12 10-Pin**

**Power-to-Lock  
version of this  
product instead?**



**Power-To-  
Lock**

**HDGL-001-PTL**

**HDGL-002-PTL**

**HDGL-003-PTL**

**HDGL-004-PTL**

**HDGL-005-PTL**

**Do you need a cable with this product?**

**CABLE-5M-D8**

5m Cable to Suit 10 / 12-Pin Connector

**5m  
(16.4ft)**

**CABLE-10M-D8**

10m Cable to Suit 10 / 12-Pin Connector

**10m  
(32.8ft)**

**CABLE-20M-D8**

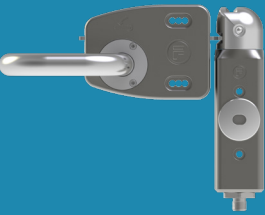
20m Cable to Suit 10 / 12-Pin Connector

**20m  
(65.6ft)**



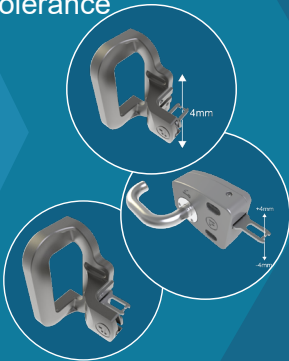
# Medium Duty Safety Switch

**Robust**  
Metal Alloy  
Enclosure



Up to Performance  
Level d

**Resilient**  
High Misalignment  
Tolerance



**Effortless**  
Installation



2x M5 Fixings

**Redundancy**  
Positive Break Dual  
Channel 2NC Safety



**Monitor**  
System State

2 Normally Closed  
(NC) Safety  
Contacts



Actuator Removal  
causes positive break  
to safety circuits



## Part Number

Select a Medium Duty Safety Switch beginning TH-

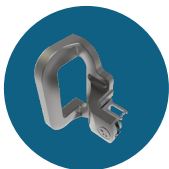
Choose from  
Three Actuators



Hinged  
Handle

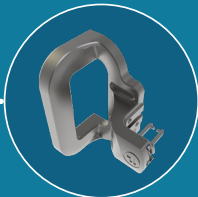


Ergonomic  
Handle



Sliding  
Handle

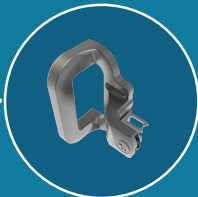
THHSMQ3



THNSMQ3



THSSMQ3



## Safety Switch



## Pre-Wired Disconnect



M12 8-Pin

## Do you need a cable with this product?

CABLE-5M-TQ3

5m Cable to Suit 8-Pin Connector

5m  
(16.4ft)

CABLE-10M-TQ3

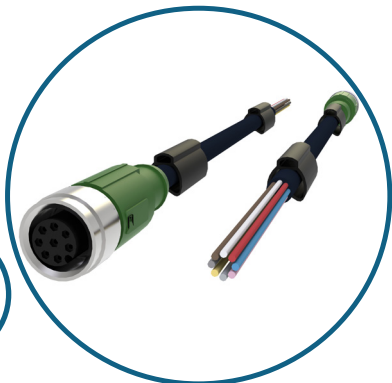
10m Cable to Suit 8-Pin Connector

10m  
(32.8ft)

CABLE-20M-TQ3

20m Cable to Suit 8-Pin Connector

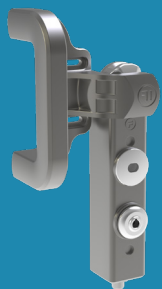
20m  
(65.6ft)





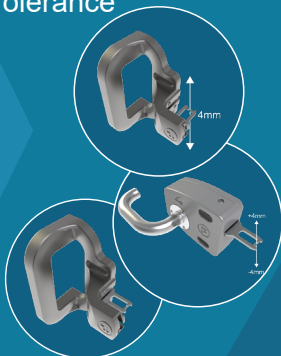
# Medium Duty Guard Lock

**Robust**  
Metal Alloy  
Enclosure



Head Retention Force  
2,500N

**Resilient**  
High Misalignment  
Tolerance



**Effortless**  
Installation



2x M5 Fixings

**Redundancy**  
Positive Break Dual  
Channel 2NC Safety



**Monitor**  
System State via  
Feedback

2NC Guard Locked  
2NC Guard Closed  
2x 1NO Monitor



Guard Unlocked  
Guard Closed  
Green LED Illuminated



Guard Unlocked  
Guard Open  
Red LED Illuminated



**Part Number**

Select a Medium Duty Guard Lock beginning TH-

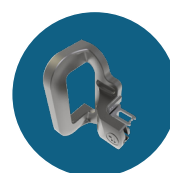
Choose from  
Three Actuators



Hinged  
Handle



Ergonomic  
Handle



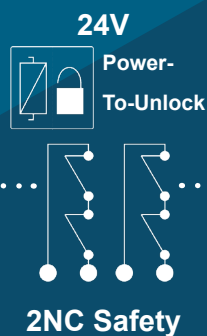
Sliding  
Handle

THHSMDUQM

THNSMDUQM

THSSMDUQM

Guard Locking  
Type



Pre-Wired  
Disconnect



M12 12-Pin

## Medium Duty Control Only

THCETP6P7QM

E-Stop



Blue Pushbutton



White Pushbutton



Do you need a cable with this product?

CABLE-5M-TQM

5m Cable to Suit 12-Pin Connector

5m  
(16.4ft)

CABLE-10M-TQM

10m Cable to Suit 12-Pin Connector

10m  
(32.8ft)

CABLE-20M-TQM

20m Cable to Suit 12-Pin Connector

20m  
(65.6ft)

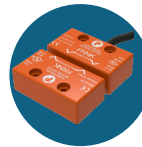


# Compact Safety Switch

## Part Number

## Select a Compact Safety Switch-

### Material



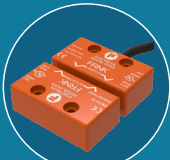
ABS Polymer



Stainless Steel

### Non-Contact Type

FRNK-21-DC-LQD



High Coded RFID

NCS-11SSR-A



Magnetic

### Disconnect



M12 8-Pin

## Do you need a cable with this product?

CABLE-5M-NCS

5m Cable to Suit 8-Pin Connector

5m  
(16.4ft)

CABLE-10M-NCS

10m Cable to Suit 8-Pin Connector

10m  
(32.8ft)

CABLE-20M-NCS

20m Cable to Suit 8-Pin Connector

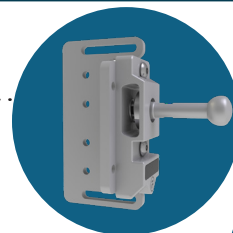
20m  
(65.6ft)



## Accessories - Compact Guard Lock

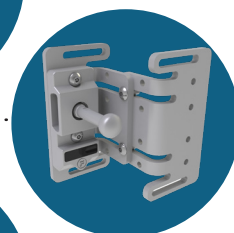
ATM-KB

Single Angled Bracket for Sliding Gates



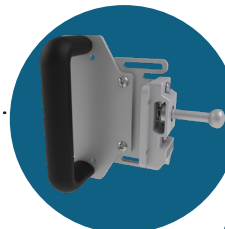
ATM-KC

Angled Bracket for Hinged Gates



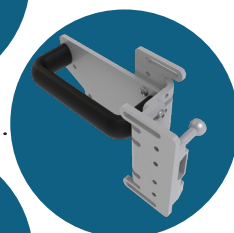
ATM-KL

Actuator with Sliding Handle



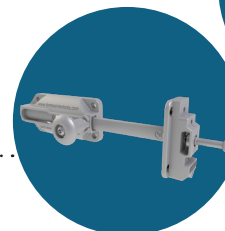
ATM-KH

Actuator with Hinged Handle



ATM-KS

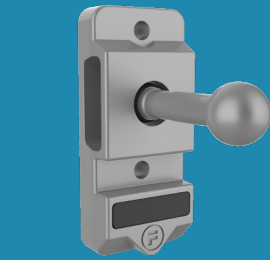
Actuator with Slidebar





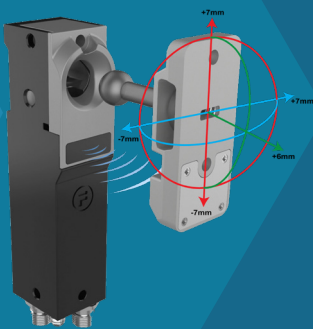
# Compact Guard Lock

High-Coded  
RFID Actuator

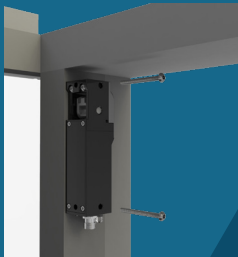


Over 4x10<sup>9</sup> codes

Versatile  
High Misalignment

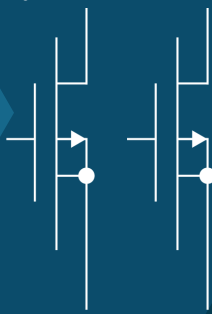


Compact  
Perfect for Small  
Guards

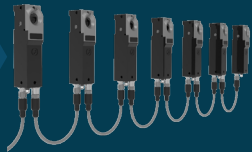


Easy to Install

Redundancy  
Dual Channel OSSD  
Safety Contacts



Expandable  
Easily Extend Systems  
with Daisy-Chaining



## Part Number

Select a Compact Guard Lock beginning ATM-

Safety on  
Guard Locking

Disconnect  
Option

Safety on  
Guard Only

Safety on  
Guard Only

ATM-100A2-A

ATM-100A3-A

ATM-100A1-A

24V  
Power-  
To-Unlock



Daisy chain  
with 2x 5-Pin  
M12



8-Pin M12

5-Pin M12

Power-  
To-Unlock

ATM-110A2-A

ATM-110A3-A

ATM-110A1-A

Power-  
To-Lock

ATM-610A2-A

ATM-610A3-A

ATM-610A1-A

## Do you need a cable with this product?

CABLE-5M-ATD

5m Cable to Suit 5-Pin Daisy Chain

5m  
(16.4ft)

CABLE-10M-ATD

10m Cable to Suit 5-Pin Daisy Chain

10m  
(32.8ft)

CABLE-20M-ATD

20m Cable to Suit 5-Pin Daisy Chain

20m  
(65.6ft)

CABLE-5M-AT3

5m Cable to Suit 8-Pin Connector

5m  
(16.4ft)

CABLE-10M-AT3

10m Cable to Suit 8-Pin Connector

10m  
(32.8ft)

CABLE-20M-AT3

20m Cable to Suit 8-Pin Connector

20m  
(65.6ft)

CABLE-5M-AT1

5m Cable to Suit 5-Pin Connector

5m  
(16.4ft)

CABLE-10M-AT1

10m Cable to Suit 5-Pin Connector

10m  
(32.8ft)

CABLE-20M-AT1

20m Cable to Suit 5-Pin Connector

20m  
(65.6ft)

SHORTING-PLUG-ATD

5-Pin End of Chain









# FORTRESS

## FORTRESS

“

We have the peace of mind that our workers are safe and protected by fortress equipment.

”



## FORTRESS

“

Fortress is best at providing customised solutions at a rapid turnaround - reacting immensely to a challenge to put the customer's needs first.

”



## FORTRESS

“

Fortress' best quality is providing each customer the most robust and safe solution - all while being completely customizable and retaining a high level of quality.

”



## FORTRESS

“

We value suppliers that can help navigate the standards and provide guidance that is directly linked to our applications.

”



## Fortress Global Offices

[www.fortress-safety.com](http://www.fortress-safety.com)

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