

# amGardpro Product Catalogue

Modular Safety Gate Switches

## “Who we are and What we do”

Fortress Interlocks helps customers protect their personnel and capital assets. The company has over 40 years of experience in the safety market, designing and manufacturing safety access and control systems based at its headquarters in Wolverhampton, UK. These systems create safe workplaces where employees in industrial environments are safeguarded from injury and equipment is protected from damage. A world leader in access control systems, Fortress products guarantee that actions and events are undertaken in a pre-determined sequence ensuring a safe working environment.

The company’s products are suitable for applications across a wide industrial base including power generation and distribution, steel, automotive, recycling, building materials, food and beverage, robotics and palletisers. Its extensive product offering and interlocking experience allows Fortress to provide unique solutions for all safeguarding applications. It regularly creates bespoke solutions, often by customising its standard products.




**mGard** is the premier range of modular robust trapped key interlocks for heavy duty applications. Trapped key interlocking is a tried and tested method of mechanically safeguarding dangerous machines and hazardous processes, and is suitable for use up to SIL 3 (EN/IEC 62061), Category 4 and PLe (EN/ISO 13849-1) as certified by TÜV SÜD. It is called "Trapped Key" as it works by releasing and trapping keys in a predetermined sequence. After the control or power has been isolated, a key is released that can be used to grant access to individual or multiple doors.




**amGardpro** is the ultimate range of modular safety gate switch interlocks for heavy duty applications. Its unique modular construction allows easy configuration and provides total electro-mechanical solutions for practically any safeguarding application up to SIL3 (EN/IEC 60261) Category 4 and PLe (EN/ISO 13849-1) as certified by TÜV SÜD.




**tGard** offers total integration of control and safety. This is Fortress’ brand new product that is customisable as standard. Its unique design allows the configuration of safety gate switches, trapped key interlocks and machine control stations or any configuration of all three. **tGard** elements are housed in a metal body to create a simple and robust safety system.



For 3D animated product views and specific application information, visit our web site [www.fortressinterlocks.com](http://www.fortressinterlocks.com).

## Fortress Interlocks

Protecting People

Protecting Industry

Protecting Productivity

*“For anyone who needs to protect people and machinery, Fortress is the interlock company that offers reliable, cost effective customised solutions”.*

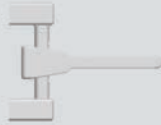


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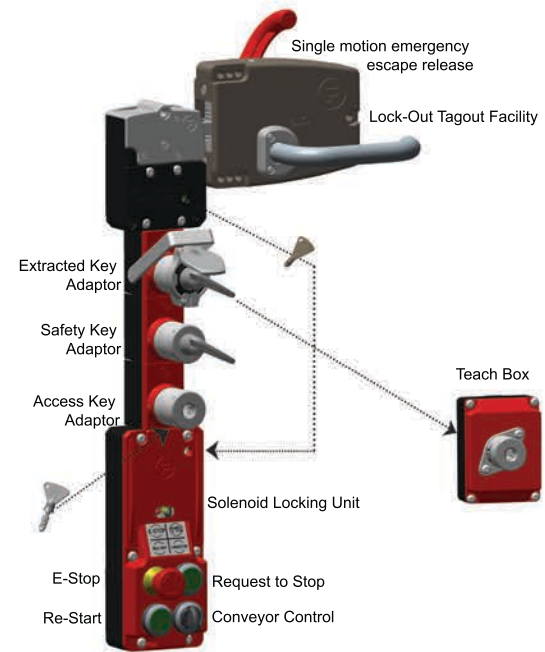
With its unrivalled design concept, amGardpro offers a range of fully integrated safety interlocks, including solenoid and non-solenoid safety switches complete with a host of additional options including key control modules, emergency release, redundant sensors, lock out/tag out and push buttons, estops and indication lights for enhanced functionality. The robust construction of this range makes it ideal for use in a wide range of industrial applications when safety, strength and reliability are of paramount importance.

The **amGardpro** system replaces all adaptations normally fitted within a guarding system, such that additional hardware like door catches, actuators, closing mechanisms, internal mechanisms, key functions including authorised access and deadlocks may be no longer needed. All of these separate functions can be incorporated into amGardpro configurations, resulting in the most flexible safety interlock solution available for today's industrial environment.



Actuators		<p><b>Actuators</b></p> <p>Handle Actuators Tongue Actuator All in One Head and Handle Actuator Slidebars</p>
Head Modules		<p><b>Head Modules</b></p> <p>Handle Actuator Head Module Tongue Actuator Head Module All in One Head and Handle Unit Padlock Adaptor Foot (to terminate mechanical lock)</p>
Adaptors		<p><b>Adaptors</b></p> <p>Safety Key Adaptors Access Key Adaptors Extracted Key Adaptors Internal Release Adaptors</p>
Electrical Switching / Locking		<p><b>Electrical Switching / Locking</b></p> <p>Safety Switch Bodies Solenoid Controlled Lock Bodies Extended body Solenoid Controlled Lock Bodies Explosion Proof Switch Bodies Foot (to terminate mechanical lock)</p> <p></p> <p>AS-interface versions available European, Canadian and North American approvals</p>
Option PODs		<p><b>Option PODs</b></p> <p>Key Switch Option Pod Indicator Lamp Option Pod Pushbutton Option Pod</p> <p></p> <p>AS-interface versions available European, Canadian and North American approvals</p>

- Improved Standards Compliance**
- Complies with all new and forthcoming machine safety standards.
  - Integrated redundancy sensor solution (with coding options).
  - Single motion emergency escape release regardless of solenoid or trapped key locking mechanisms.
- Enhanced Machine Control Functionality**
- Integrated pushbutton control in single unit.
  - Up to 4 Illuminated Pushbuttons/Lamps/Selector Switches, including 1 E-Stop.
  - Up to 10 Safety/Access keys in one configuration.
- Enhanced Strength**
- Stainless steel heads with mounting point, increasing retention force to **market leading 10KN**.
  - Standardisation and enhancement of all anti-vibration features.
  - Improved weather resistance.





**amGardpro Application Example I**

This example shows the safeguarding of robot areas in which **amGardpro** products offer a combined mechanical and electrical solution.

**1 NO2C6SKL12LL411LOWB00N**

By pressing the access request button, the machine or installation is shut down, by the machine control system.

The solenoid, controlled by the machine control system restricts the release of keys A until the guarded area or machine is safe to enter (indicated by the yellow status LEDs).

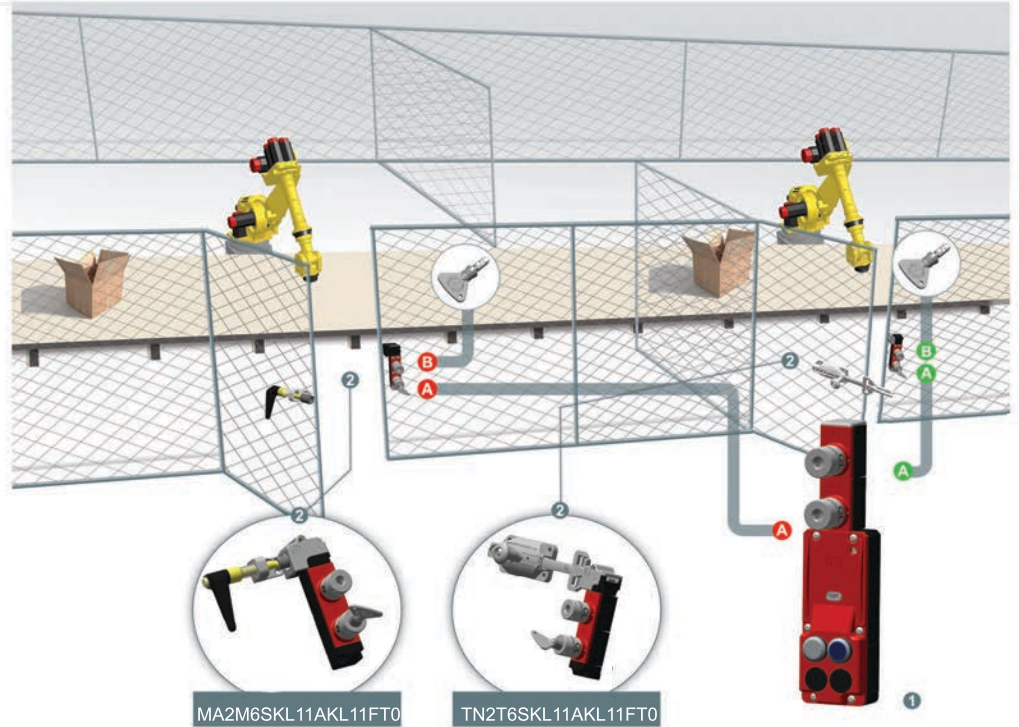
Energising the solenoid breaks the dual safety circuits to prevent unexpected re-start.

Both safety keys A can now be released indicated by the red status LED.

**2 TN2T6SKL11AKL11FT0**

Keys A can be used to unlock the door locks and release the safety keys B. These can be taken inside the guarded area to prevent personnel being trapped and/or an accidental machine restart.

By reversing this compulsory procedure the machine can safely be restarted.



MA2M6SKL11AKL11FT0

TN2T6SKL11AKL11FT0

**amGard Application Example II**

This example shows the safeguarding of a potentially dangerous area with a teach mode function inside.

**1 TN2T6SL411BK21**

Removal of the key from one of the pods at the doors selects machine stop at the end of a run down cycle. The solenoid is then energised by the machine control system and access can be gained.

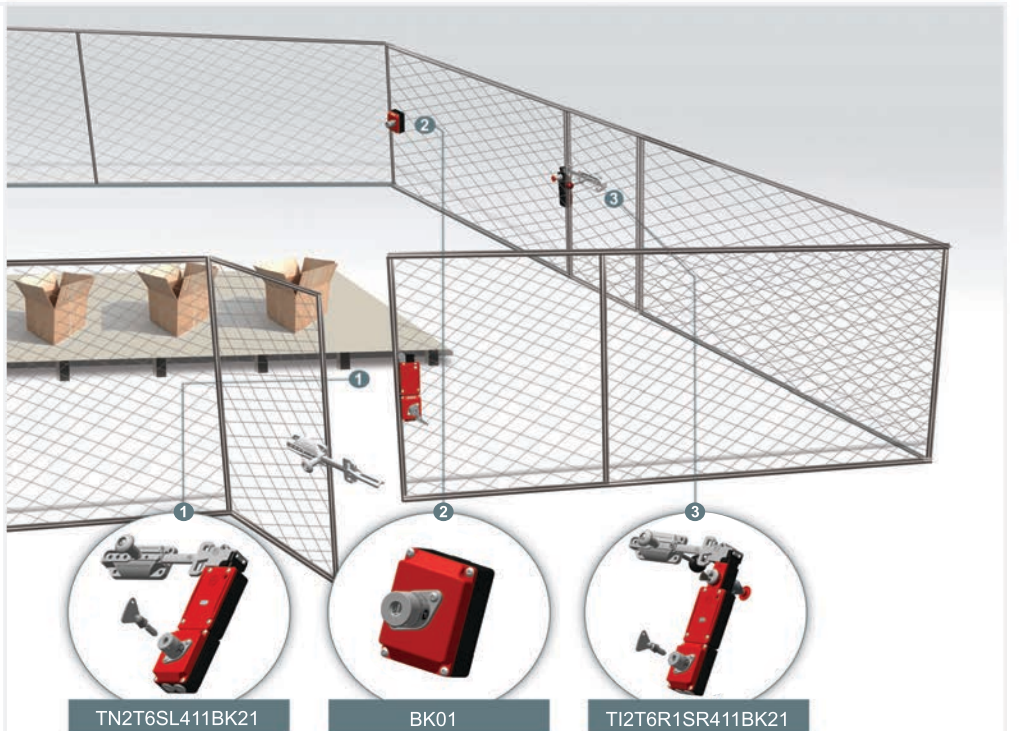
The operator can take the safety key into the potentially hazardous area preventing restart.

**2 BK01**

By inserting one of the keys in the stand alone pod inside the guarded area safe programming can be initiated

**3 TI2T6R1SR411BK21**

The LOK internal release option can be used to unlock the door from inside a guarded area should personnel become trapped. By pushing the button on the rear of the unit, the tongue is released from the actuator head and the door can be opened from the inside. This also breaks both safety circuits, which then have to be manually reset before the machine can re-start.



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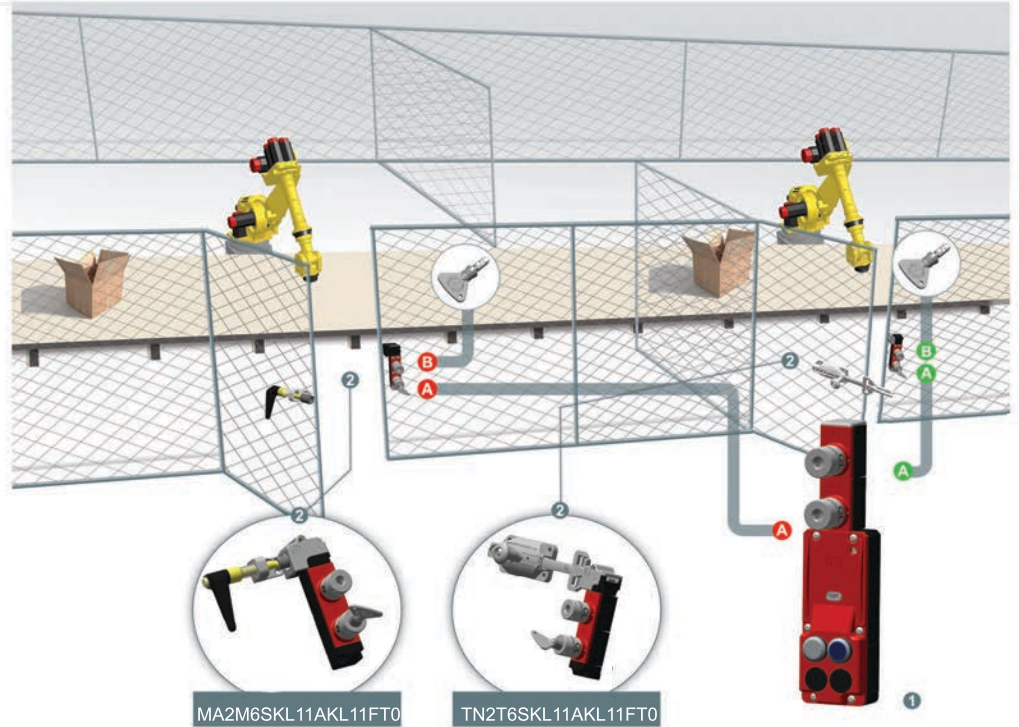
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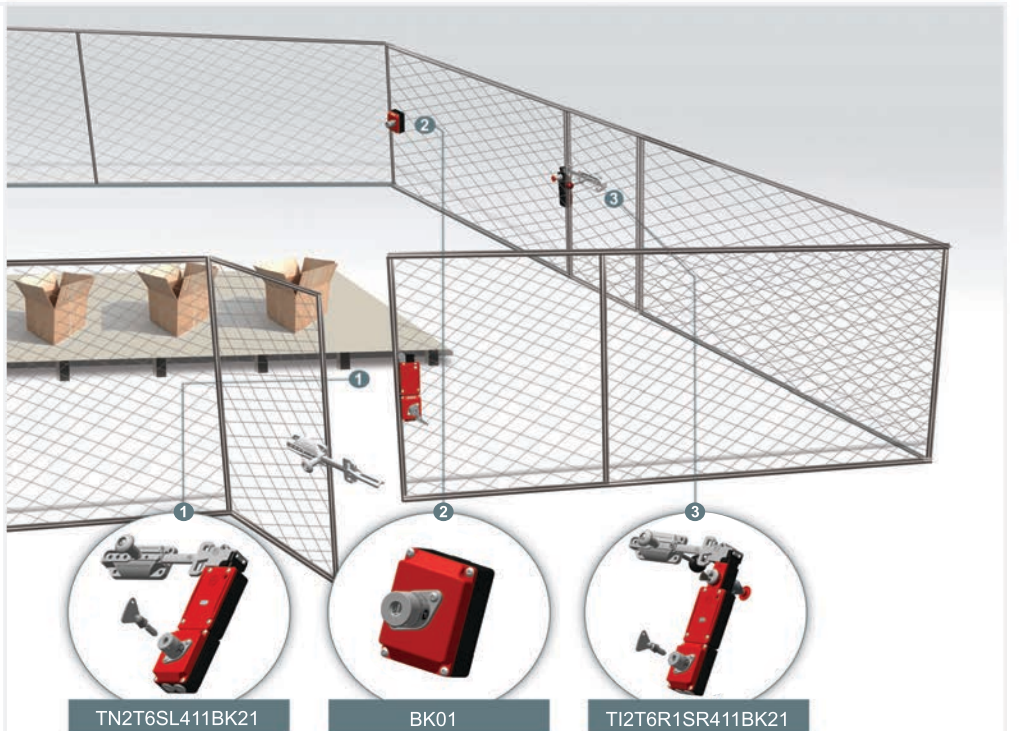
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**Actuators** **Add-Ons**

**MA** proAM Handle  
**MI** proAM Handle with Internal Release

**proAM Handle**

- Used in conjunction with proAM Head.
- Heavy duty handle unit.
- Operating handle can be rotated in 45° increments
- Allows for guard misalignment
- Turning motion holds door closed preventing nuisance trips.
- Extremely high retention force when used in locking applications.
- Ideal for hinged guard doors (especially double doors)

**AM Lock-Out Clip**

Once inserted into the head and padlocked in position, it blocks the handle entry preventing the door being closed and the machine from being restarted.

**AML**

**TA / TK**

**proAT Tongue**

- Used in conjunction with proAT Head.
- Heavy duty tongue unit.
- Ideal for fast, frequent access.
- Operating radius - 900mm.
- 3 position fixing at 90° increments.
- Misalignment tolerance of +/- 12mm.
- 12mm over travel allowance.
- Short TK version available ....

**AT Lock-Out Clip**

Once inserted into the head and padlocked in position, it blocks the tongue entry preventing the door being closed and the machine from being restarted.

**ATL**

**TN** no spring & no internal release    **TF** internal release & spacer  
**TS** spring loaded  
**TI** internal release  
**TM** internal release & short tongue

**proSlidebar**

- Used in conjunction with the proAT Head
- Particular useful for applications using small radius, hinged doors
- Stainless steel casting
- Built in lock-out facility to accommodate a maximum of 4 padlocks with up to 8 mm diameter shackles

*Spring loaded version (TS) is advised when exposed to vibration*

**EN** no internal release  
**EH** internal release

**proHandle**

- Used in conjunction with the proAT Head
- Particularly useful for applications using small radius hinged doors.
- Intuitive opening style.
- Zinc alloy casing.
- Built in lock-out facility to accommodate a maximum of 4 padlocks with up to 8mm diameter shackles.
- Mis-alignment +/- 12mm.
- Escape release option for use with non-locking system (proStop) or push IR only.
- On site handing change possible (refer to installation instructions).

**EI**

**proRelease IR Handle**

To be used in conjunction with proRelease Head units I6 and I7

- Intuitive handle emergency release.
- Emergency release activation releases tongue and opens safety contacts.
- Heavy duty tongue unit.
- Ideal for fast frequent access.
- 2 position mounting at 180° increments allowing on site handing change.
- Mis-alignment tolerance of +/- 10mm
- Multiple mounting options (refer to installation instructions)
- Pin hex key reset function



## Head Modules

**C6** proCap



### proCap

- To terminate assemblies without head modules, for example, solenoid controlled key release
- Removeable to allow for modification.

**M6** proAM Head

**M7** proAM Head c/w drpp down lockout

**M8** proAM Head c/w Lock-Out Clip



### proAM Head

- Used in conjunction with proAM Handle.
- Operating handle can be rotated in 45° increments
- 4 position fixing at 90° increments allowing on site handing change.
- Allows for guard misalignment
- Turning motion holds door closed preventing nuisance trips
- Extremely high retention force when used in locking applications - 10,000N
- Can be fitted with lock-out devices for additional safety

**T6** proAT Head

**T7** proAT Head c/w drop down lock-out

**T8** proAT Head c/w lock-out clip

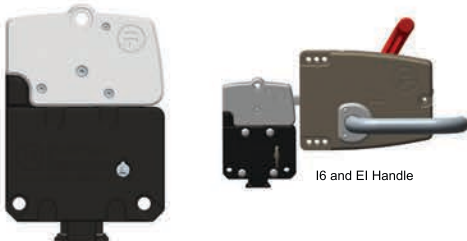


### proAT Head

- Used in conjunction with the proAT Tongue.
- Ideal for fast, frequent access.
- 4 position fixing at 90° increments allowing on site handing change.
- Misalignment tolerance of +/- 12mm.
- 12mm Overtravel allowance.
- Retention force 10,000N when top fixing is used.
- Can be fitted with lock-out devices for additional safety.
- Mounted upside down it is self cleaning, ideal for dusty environments.

**I6** proIR Head (to be used in conjunction with EI)

**I7** proIR Head (to be used in conjunction with EI)



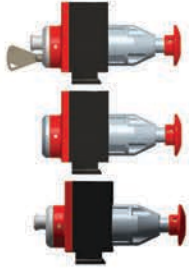
### proRelease IR Handle

The proRelease head is a means of achieving a single action emergency release function from inside a guarded area. It consists of a releasing head and handle pair

- To be used in conjunction with proRelease Handle unit EI which when operated will override any key modules in configuration and stop process.
- Intuitive handle emergency release.
- Emergency release activation releases tongue and opens safety contacts.
- Heavy duty tongue unit.
- Ideal for fast frequent access.

**Adaptors**

- R1-4** proPushIR - Key reset
- R6-9** proPushIR - Pull reset
- RW-Z** proPushIR - Front reset

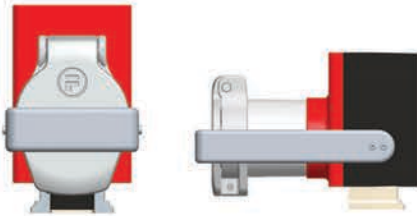


**proIR - Escape Release Adaptor**

proIR Escape release adaptor module is used in conjunction with a releasing amGardpro unit to provide an escape function from an interlocked hazardous area.

- Only 1 proIR adaptor can be fitted in a configuration.
- proIR adaptor must be used in conjunction with 'releasing' type units in the amGardpro range.
- Available for various panel thicknesses (40mm, 60mm, 80mm as standard & variable length).

- EK** proE - Extracted Key Adaptor



**proE - Extracted Key Adaptor**

The proE - Extracted key adaptor ensures that the door cannot be opened until the key has been removed from the lock, and the machine/process cannot be restarted without returning the key(s). It can furthermore prevent personnel being accidentally locked inside a guarded area.

- Provides enhanced safety key function.
- Provides a unique link to mGard range.
- Only 1 Extracted key adaptor can be fitted in a configuration.

- SK** proLock - Safety Key Adaptor



**proLock - Safety Key Adaptor**

The proLock - Adaptor for safety ensures that the door cannot be opened until the key has been turned, and the machine/process cannot be restarted without returning the key(s).

- Provides a safety key function.
- Provides a unique link to mGard range.
- Up to 10 key adaptors in one configuration.

- AK** proLock - Access Key Adaptor



**proLock - Access Key Adaptor**

The proLock Adaptor for Access is ideally suited for authorised access only, or linked access to other machinery. It ensures a specific sequence or operation and can be stacked or combined with other adaptors.

- Provides Access key function.
- Provides a unique link to the mGard range.
- Up to 10 key adaptors in one configuration.

- LT**



**Dual Lock-Out Padlock Adaptor**

This unit is equipped with two padlock positions for use as a voluntary lock-out facility.

- Provides a link with other lock-out tag-out safety procedures
- Accommodates one padlock with 8mm diameter shakles
- Enables quick and easy access



proLock - Access Key Adaptor

AK proLock - Access Key Adaptor



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- Provides Access key function.
- Provides a unique link to the mGard range.
- Up to 10 key adaptors in one configuration.

Single Lock-Out Padlock Adaptor

LO



Provides padlocking only in one position.

- Provides a link with other lock-out tag-out safety procedures
- Accommodates up to 5 padlocks with 7.5mm diameter shackles
- Facilitates enhanced supervisor security

Dual Lock-Out Padlock Adaptor

LT



This unit is equipped with two padlock positions for use as a voluntary lock-out facility.

- Provides a link with other lock-out tag-out safety procedures
- Accommodates one padlock with 8mm diameter shackles
- Enables quick and easy access

proFoot

FOOT



To terminate all non-switch configurations.

- Secures unit firmly to mounting surface
- Removable to allow for modification
- For use in trapped key solutions.
- Seals from dust ingress.

## Electrical Switching/Locking

Base units are the electromechanical elements of the heavy duty modular amGardpro range that interface with safety relays and PLC's providing controlled access to machinery or a guarded area. Tested to over 1 million operations, these units contain dual channel safety circuitry making them suitable for use in applications up to SIL3 (EN/IEC 62061) Category 4 and PLe (ENISO 13849-1).

proStop - Non Solenoid Safety Switch Body		Product Types																																																																																																
<p><b>ST</b> proStop</p>  <p>               available         </p>	<p>The proStop - non solenoid safety switch is ideal for quick access to machines with no or short run-down cycles.</p> <ul style="list-style-type: none"> <li>• LED indicators for status identification</li> <li>• To be used with safety relay and/or safety PLC control systems.</li> <li>• European, Canadian and North American Approvals</li> </ul>	<table border="1"> <tr> <td>Control</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC</td> <td>ST401</td> </tr> <tr> <td>110V AC</td> <td>ST101</td> </tr> <tr> <td>230V AC</td> <td>ST201</td> </tr> </table>	Control	Ref No	24V AC/DC	ST401	110V AC	ST101	230V AC	ST201																																																																																								
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proLok and proLok+ - Solenoid Controlled Body		Product Types																																																																																																
<p><b>SL</b> proLok</p> <p><b>SR</b> proLok - Releasing version</p>  <p>               available         </p>	<p>The proLok solenoid controlled body is used to manage activities by means of a solenoid control element. There are several versions of this unit.</p> <p>The proLok+ extended solenoid controlled body is used to manage activities by means of a solenoid control element. There are three basic types, Standard, Power to Lock and ASi. It may be used to include the use of pushbuttons, selector switches, lamps, E-Stops and/or Magnetic/RFID sensors within one enclosure.</p> <p><b>proLok &amp; proLok+ - Standard</b></p> <ul style="list-style-type: none"> <li>• LED indicators for status identification.</li> <li>• Ideal for machines with run-down cycles.</li> <li>• Split voltage available on request.</li> <li>• To be used with safety relay and/or safety PLC control systems.</li> </ul> <p><b>proLok &amp; proLok+ - Power to Lock</b></p> <ul style="list-style-type: none"> <li>• LED indicators for status identification.</li> <li>• Split voltage available on request.</li> <li>• To be used with safety relay and/or safety PLC control systems.</li> </ul> <p><b>proLok &amp; proLok+ - AS interface</b></p> <ul style="list-style-type: none"> <li>• Ideal for machines with run-down cycles</li> <li>• LED indicators for status identification</li> <li>• To be used with a safety relay and/or safety PLC control systems.</li> </ul> <p><b>proLok &amp; proLok+ - Un-Monitored Solenoid</b></p> <ul style="list-style-type: none"> <li>• LED indicators for status identification</li> <li>• To be used with safety relay and/or safety PLC control systems.</li> </ul>	<table border="1"> <tr> <td>Control / Solenoid - Standard</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SL411</td> <td>LL411</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SL111</td> <td>LL111</td> </tr> <tr> <td>230V AC / 230V AC</td> <td>SL211</td> <td>LL211</td> </tr> <tr> <td>Control / Solenoid - Releasing</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SR411</td> <td>LR411</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SR111</td> <td>LR111</td> </tr> <tr> <td>230V AC / 230V AC</td> <td>SR211</td> <td>LR211</td> </tr> <tr> <td>Control / Solenoid - Pwr to Lock</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SL461</td> <td>LL461</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SL161</td> <td>LL161</td> </tr> <tr> <td>Pwr to Lock - Releasing</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SR461</td> <td>LR461</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SR161</td> <td>LR161</td> </tr> <tr> <td>Asi</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SL811</td> <td>LL811</td> </tr> <tr> <td>ASi - Releasing</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SR811</td> <td>LR811</td> </tr> <tr> <td>Un-Monitored Solenoid</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SL416</td> <td>LL416</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SL116</td> <td>LL116</td> </tr> <tr> <td>230V AC / 230V AC</td> <td>SL216</td> <td>LL216</td> </tr> <tr> <td>Un-Monitored Solenoid Releasing</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SR416</td> <td>LR416</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SR116</td> <td>LR116</td> </tr> <tr> <td>230V AC / 230V AC</td> <td>SR216</td> <td>LR216</td> </tr> <tr> <td>Individual Safety Circuits Releasing</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SR468</td> <td>LR468</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SR168</td> <td>LR168</td> </tr> <tr> <td>Power to Lock</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SL468</td> <td>LL468</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SL168</td> <td>LL168</td> </tr> </table>	Control / Solenoid - Standard	Ref No	Ref No	24V AC/DC / 24V AC/DC	SL411	LL411	110V AC / 110V AC	SL111	LL111	230V AC / 230V AC	SL211	LL211	Control / Solenoid - Releasing	Ref No	Ref No	24V AC/DC / 24V AC/DC	SR411	LR411	110V AC / 110V AC	SR111	LR111	230V AC / 230V AC	SR211	LR211	Control / Solenoid - Pwr to Lock	Ref No	Ref No	24V AC/DC / 24V AC/DC	SL461	LL461	110V AC / 110V AC	SL161	LL161	Pwr to Lock - Releasing	Ref No	Ref No	24V AC/DC / 24V AC/DC	SR461	LR461	110V AC / 110V AC	SR161	LR161	Asi	Ref No	Ref No	24V AC/DC / 24V AC/DC	SL811	LL811	ASi - Releasing	Ref No	Ref No	24V AC/DC / 24V AC/DC	SR811	LR811	Un-Monitored Solenoid	Ref No	Ref No	24V AC/DC / 24V AC/DC	SL416	LL416	110V AC / 110V AC	SL116	LL116	230V AC / 230V AC	SL216	LL216	Un-Monitored Solenoid Releasing	Ref No	Ref No	24V AC/DC / 24V AC/DC	SR416	LR416	110V AC / 110V AC	SR116	LR116	230V AC / 230V AC	SR216	LR216	Individual Safety Circuits Releasing	Ref No	Ref No	24V AC/DC / 24V AC/DC	SR468	LR468	110V AC / 110V AC	SR168	LR168	Power to Lock	Ref No	Ref No	24V AC/DC / 24V AC/DC	SL468	LL468	110V AC / 110V AC	SL168	LL168
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110V AC / 110V AC	SR161	LR161																																																																																																
Asi	Ref No	Ref No																																																																																																
24V AC/DC / 24V AC/DC	SL811	LL811																																																																																																
ASi - Releasing	Ref No	Ref No																																																																																																
24V AC/DC / 24V AC/DC	SR811	LR811																																																																																																
Un-Monitored Solenoid	Ref No	Ref No																																																																																																
24V AC/DC / 24V AC/DC	SL416	LL416																																																																																																
110V AC / 110V AC	SL116	LL116																																																																																																
230V AC / 230V AC	SL216	LL216																																																																																																
Un-Monitored Solenoid Releasing	Ref No	Ref No																																																																																																
24V AC/DC / 24V AC/DC	SR416	LR416																																																																																																
110V AC / 110V AC	SR116	LR116																																																																																																
230V AC / 230V AC	SR216	LR216																																																																																																
Individual Safety Circuits Releasing	Ref No	Ref No																																																																																																
24V AC/DC / 24V AC/DC	SR468	LR468																																																																																																
110V AC / 110V AC	SR168	LR168																																																																																																
Power to Lock	Ref No	Ref No																																																																																																
24V AC/DC / 24V AC/DC	SL468	LL468																																																																																																
110V AC / 110V AC	SL168	LL168																																																																																																
proLokIR and proLokIR+ - Solenoid controlled body with Escape Release		Product Types																																																																																																
<p><b>SE</b> proLokIR</p> 	<p>These units are equipped with escape release</p> <p><b>proLokIR &amp; proLokIR+ - Standard</b></p> <ul style="list-style-type: none"> <li>• LED indicators for status identification.</li> <li>• Ideal for machines with run-down cycles.</li> <li>• To be used with safety relay and/or safety PLC control systems.</li> <li>• On activation of escape release, the safety contacts are broken.</li> </ul> <p><b>proLokIR &amp; proLokIR+ - AS interface</b></p> <ul style="list-style-type: none"> <li>• Ideal for machines with run-down cycles.</li> <li>• LED indicators for status identification.</li> <li>• To be used with safety relay and/or safety PLC control systems.</li> <li>• For use in AS-i Safe environments</li> <li>• On activation of escape release the safety contacts are broken.</li> </ul>	<table border="1"> <tr> <td>Control / Solenoid - Standard</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SE411</td> <td>LE411</td> </tr> <tr> <td>110V AC / 110V AC</td> <td>SE111</td> <td>LE111</td> </tr> <tr> <td>230V AC / 230V AC</td> <td>SE211</td> <td>LE211</td> </tr> <tr> <td>Asi</td> <td>Ref No</td> <td>Ref No</td> </tr> <tr> <td>24V AC/DC / 24V AC/DC</td> <td>SE811</td> <td>LE811</td> </tr> </table>	Control / Solenoid - Standard	Ref No	Ref No	24V AC/DC / 24V AC/DC	SE411	LE411	110V AC / 110V AC	SE111	LE111	230V AC / 230V AC	SE211	LE211	Asi	Ref No	Ref No	24V AC/DC / 24V AC/DC	SE811	LE811																																																																														
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proLokIR+ - Solenoid controlled body with Escape Release

Product Types proLokIR proLokIR+

LE proLokIR+



These units are equipped with escape release

proLok & proLokIR+ - Individual

- Ideal for machines with run-down cycles.
- LED indicators for status identification.
- To be used with safety relay and/or safety PLC control systems.
- On activation of escape release, the safety contacts are broken.
- Solenoid monitored by 1 x NC volt free contact and 1 x NO contact (input shared with head).
- Head monitored by 1 x NC volt free and 1 x NO contact input shared with solenoid.

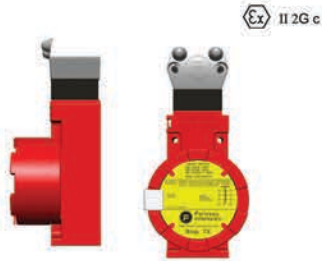
Individual	Ref No	Ref No
24V AC/DC / 24V AC/DC 110V AC / 110V AC	SE418 SE118	LE418 LE118
Individual Power to Lock	Ref No	Ref No
24V AC/DC / 24V AC/DC 110V AC / 110V AC	SE468 SE168	LE468 LE168

Explosion Protected Safety Switch Body

Product Types

STOPEX ATEX certified

STOPUX UL/CSA certified



STOPEX: ATEX certified product. Heavy duty explosion protected safety gate switch. Suitable for zone 1 & 2 environments.

STOPUX: UL / CSA certified product. Heavy duty explosion protected safety gate switch. Suitable for zone 1 & 2 environments.

STOPEX	Ref No
STOPUX	EX401 UX401

Option PODs

proOption Pod module is used to either to add to an amGardpro unit, or use as a standalone product. It may be used to include the use of pushbuttons, selector switches, lamps, E-Stops, and/or Magnetic/RFID sensors within one enclosure. Alternatively, it can be used to house a keyswitch, controlled using a standard Fortress lock and key arrangement.

proOption Pod - Lamps/Pushbuttons/Sensors

Product Types proOption Pod

- B0 Stand Alone Pod
- B1 Pod to proStop Body
- B2 Pod to proLok Body
- L0 Pod to proLok+ Body



Lamp Option pod is an ideal complimentary module where multiple interlocks are used to enhance identification of status. Pushbutton Option pod is ideal for use as an emergency stop or request to start/stop.

Lamps

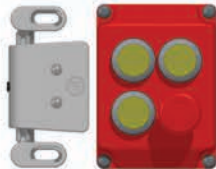
- Easy, clear identification of machine status.
- Can be configured up to three lamps.

Pushbuttons

- Request start/stop at the gate.
- Can be configured up to three pushbuttons.
- Illuminated pushbuttons.
- 2 Position selector switch.
- eStop.
  - 2 NC Safety contacts
  - Twist or Pull
  - Illuminated option for twist

Lamps/Pushbuttons Option Pod	Ref No
Stand Alone Pod	B0.....
Fit to proStop Body	B1.....
Fit to proLok Body	B2.....
Fit to proLok+ Body	L0.....

- B.....C Coded Magnet - Left
- B.....D Coded Magnet - Right



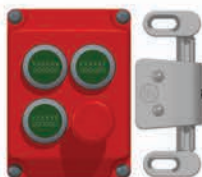
proOption Pod - ASi



If you require e-stops, push buttons, coded magnet switch or key switch options pods to be ASi enabled you must select one of the options below.

ASi	Ref No
ASi Option pod with control only	BA1
ASi Option pod with Safety only	BA2
ASi Option pod with 1 safety 1 control	BA3
ASi Option pod with 2 safety only	BA4
ASi Option pod with 1 control 2 safety	BA5
ASi Option pod with 3 safety only	BA6
ASi Option pod with 1 control 3 safety	BA7

- B.....S RFID - Left
- B.....T RFID - Right




proOption Pod - Sensors


To provide a contactless means of verifying the door open/closed position. This may be used as the primary door sensor when a stand alone option pod is used, or as means of adding a secondary (coded) door sensor to a full door interlock product.

Sensors	Ref No
Coded Magnet - Left hand	B.....C
Coded Magnet - Right hand	B.....D
RFID - Left hand	B.....S
RFID - Right hand	B.....T

**proOption Pod - Key Switch**



**BK0.** Stand Alone Pod  
**BK1.** Fit to proStop Body  
**BK2.** Fit to proLok Body

 The removal of the key operates a set of switches. These can be used for a variety of functions.

- Requesting machine stop at the end of a rundown cycle.
- Enabling teach mode activation.
- Preventing inadvertent re-start.
- Contains 2NC/2NO contact arrangement.
- Switch rating 3A.
- Can be used as a 'stand alone' key switch.











Product Types	proOption Pod
Key Switch Option Pod	Ref No
Stand Alone Pod	BK0.
Fit to proStop Body	BK1.
Fit to proLok Body	BK2.

**Lock and Key Specifications**

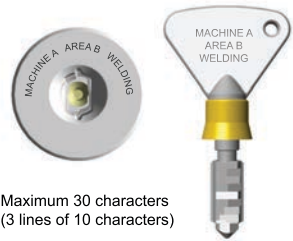
Fortress locks have over 200,000 different lock combinations. Besides the standard basic (CL) it is also possible to have a master series (ML) lock. The ML lock which can be operated by a special cut master key (MLK-SUGS) that fits any mastered lock in a specific mastered lock series. For ease of use all Fortress locks provide key insertion in two orientations.

**Lock and key engravings**

Each different key combination is allocated with an engraved code onto the lock and key, of up to maximum 30 characters (3 lines of 10 characters). This engraving code is used to identify locks and keys and is recorded in a database for continuous cross reference. Required engraving details are therefore to be provided with each order.

Standard	 <b>CLIN lock</b> Standard CL lock no dustcover	 <b>CLIS lock</b> Standard CL lock with stainless steel dustcover	 <b>CLS lock</b> Full Stainless Steel CL lock with stainless steel dustcover	 <b>CLK-SUS</b> Standard key for use on all CL lock types	
	Master	 <b>MLIN lock</b> Masterable ML lock no dustcover	 <b>MLIS lock</b> Masterable ML lock with stainless steel dustcover	 <b>MLSS lock</b> Full Stainless Steel masterable ML lock with stainless steel dustcover	 <b>MLK-SUGS</b> Standard cut key for use on all ML type locks <b>MLK-SUCM</b> Master cut key for use on all ML lock types
		As an option Fortress locks can also be supplied with Padlockable dustcovers, that incorporates two padlock holes which can be fitted with lockout hasps and scissor hasps between 3mm and 8mm in diameter as shown below.			
		Dustcover Options	 <b>CLDC</b> Stainless Steel Dustcover	 <b>PLDC</b> Stainless Steel Padlockable Dustcover	

Key and lock engravings



Maximum 30 characters  
(3 lines of 10 characters)



**MAM6SL401 & TAT6SL401**

The solenoid controlled safety switch body (proLOK) can be equipped with two different head types, creating door/hatch lock configurations that restrict access to the safeguarded area until it is safe to enter.

**MAM6ST401 & TAT6ST401**

The safety switch body (proSTOP) can be equipped with two different head types. These configurations select machine stop and detect the position of doors/hatches that gives access to the safeguarded area or machine.

**amGardpro Technical Specification**

Housing Materials	Zinc Alloy to BSEN12844 & Stainless Steel
Paint Finishes	Glass powder coat on passivated base material
Ingress Protection	IP67
Mechanical Life	>1,000,000 Switching Cycles
Performance Level	PLe
B10d	5,000,000
Ambient Temperature	-5°C to +40°C / 60°C
Switches Conformance	DIN VDE 0060 Part 206 & IEC 947-5-1
Maximum Frequency of Ops	7,200 per hour
Connector Type	Spring Activated Vibration Proof Block

**Switching Specifications**

Switching Principal	Positive Break (safety circuits)
Switch Circuit Current	3A
Minimum Switch Current	1mA at 5 VDC
Maximum Switching Voltage	230V AC Max
Utilisation Category	AC 15 or DC13
Switching Contact Element	4NC/2NO (proLOK), 2NC/1NO (proSTOP)
Control Voltage	24V AC/DC, 110V AC or 230V AC
Insulating Resistance	20M Ohm
Insulating Voltage	2500V AC
Solenoid Power Rating	12W (current at Nominal 24V DC = 500mA. Quasient current = 350mA)
Solenoid Rating (Duty Cycle)	100%
Solenoid Voltage	24V AC/DC, 110V AC and 230V AC
Solenoid Voltage Tolerance	90% to 110% of nominal
Cable Size	26 - 14 AWG

Quick Disconnect Connector Options

Connector Type	Image	Diagram	No. Pins	Max Voltage	Connector	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Pin 6	Pin 7	Pin 8	Pin 9	Pin 10	Pin 11	Pin 12	Pin 13	Pin 14	Pin 15	Pin 16	Pin 17	Pin 18	Pin 19	
D1			5	300v	M12	Brown	White	Blue	Black	Grey															
D2			12	300v	UN2	Orange	Blue	White/Black	Red/Black	Green/Black	Orange/Black	Blue/Black	Black/White	Green/Yellow	Red	White	Black								
D3			8	60v	M12	White	Brown	Green	Yellow	Grey	Pink	Blue	Red												
D6			14	30v	M16	Brown	Red/Blue	Black	Pink	Green	Blue	Orange	N Grey/Brown	O Violet	P Red	R White	S Grey	T Yellow	U Tan						
D7			10	60v	M12	White	Brown	Green	Yellow	Grey	Pink	Blue	Red	Orange	Tan										
D8			12	60v	M12	White	Brown	Green	Yellow	Grey	Pink	Blue	Red	Orange	Tan	Black	Violet								
D9			12	300v	M23	Brown	Brown/White	Blue	White	Green	Yellow	Grey	Pink	Red	Black	Violet	Green/Yellow								
E3			10	300v	UN2	Orange	Blue	White/Black	Red/Black	Green/Black	Orange/Black	Red	Green/Yellow	Black	White										
E4			19	300v	UN2	Violet	Red	Grey	Red/Blue	Blue	Green	Brown	White/Green	White/Yellow	White/Grey	Black	Green/Yellow	Yellow/Brown	Brown/Green	White	Yellow	Pink	Grey/Brown	Grey/Pink	
F2			19	300v	M23	Violet	Red	Grey	Red/Blue	Green	Blue	Grey/Pink	White/Green	White/Yellow	White/Grey	Black	Green/Yellow	Yellow/Brown	Brown/Green	White	Yellow	Pink	Grey/Brown	Brown	

AM Handle



MA\*

AT Tongue



TA\*

Slidebar



TI\*  
TN\*  
TS\*

All in 1 Head & Handle Combination



I6  
I7

EI2  
EI4

EH / EN Handle



EN4



EH2  
EH4

Actuators

Cap



C6

AT Head



T6  
T7  
T8

AM Head



M6  
M7  
M8

Head Modules

Extracted Key Adaptor



EK\*\*

Safety Key Adaptor



SK\*\*

Access Key Adaptor



AK\*\*

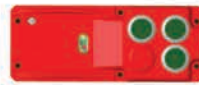
Internal Release



R1	R6	RW
R2	R7	RX
R3	R8	RY
R4	R9	RZ

Adaptors

Extended Solenoid Controlled Switch Body



LL\*\*\*  
LR\*\*\*

Non Solenoid Switch Body



ST\*\*\*

Solenoid Controlled Switch Body



SL\*\*\*  
SR\*\*\*

Solenoid Controlled Switch Body with Internal Release



SE\*\*\*



LE\*\*\*

Explosion Proof Safety Switch Body



EX  
UX



Foot

FT0

Electrical Switching / Locking

RFID Pod



B0\*  
B1\*  
B2\*

Key Switch Pod



BK\*\*

Pushbutton / Lamp Pod



B0\*\*\*\*  
B1\*\*\*\*  
B2\*\*\*\*

AM Lock-Out Clip



AML

AT Lock-Out Clip



ATL

Drop Down Lock-Out



DD7

Accessories





A HALMA COMPANY



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