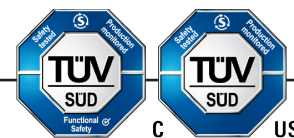


Operating Instructions: Trapped Key Adaptors



Adaptors

Description

Trapped Key Adaptors are an optional attachment for the amGardpro range. They can be used to provide the function of an access lock, or alternatively provide a personnel key function to prevent unexpected start up. The releasing versions of the lock adaptors are the type that **MUST** be used in conjunction with any type of escape release function.

proE - Extracted Key Lock Adaptor

Extracted Key Lock Adaptor is an optional attachment for the amGardpro range. It can be used to provide an enhanced safety key function by ensuring the machine operator has personnel key whilst within the guard perimeters.

- Only 1 Extracted Key Adaptor can be fitted in a configuration.
- Provides forced extracted personnel key.
- Available with standard and padlockable dustcovers.
- Masterable locks available.



proLock - Adaptor for Safety

The normal use of the Safety Key Adaptor is to provide additional personnel keys to an extracted key. Each person can take a key to prevent being accidentally locked inside a guarded area. This unit 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).

- Up to 10 key adaptors in one configuration.
- Provides a unique link to the mGard range (for teach box functionality inside the guarded area as an example).
- Available with standard and padlockable dustcovers.
- Masterable locks available.



proLock - Adaptor for Access

The normal use of the Access Key Adaptor is to prevent unauthorised personnel from opening a guard and stopping a machine. Ideally suited for authorised access only, or linked access to other machinery that is required to be isolated before access. This ensures a specific sequence of operation. Can be combined with other personnel key adaptors to create a key exchange.

- Up to 10 key adaptors in one configuration.
- Provides a unique link to the mGard range (for power / control isolation at a separate location).
- Available with standard and padlockable dustcovers.
- Masterable locks available.



Options & Ordering Information

Adaptor Type	Version*	Lock Type	Dustcover Options	Part No.
Extracted	Release	Standard	No Dustcover	EKR1
			Dustcover	EKR2
			Padlockable Dustcover	EKR3
		Master	No Dustcover	EKR6
			Dustcover	EKR7
			Padlockable Dustcover	EKR8
	No Release	Standard	No Dustcover	EKL1
			Dustcover	EKL2
			Padlockable Dustcover	EKL3
		Master	No Dustcover	EKL6
			Dustcover	EKL7
			Padlockable Dustcover	EKL8

Operating Instructions: Trapped Key Adaptors

Adaptor Type	Version*	Lock Type	Dustcover Options	Part No.
Safety	Release	Standard	No Dustcover	SKR1
			Dustcover	SKR2
			Padlockable Dustcover	SKR3
		Master	No Dustcover	SKR6
			Dustcover	SKR7
			Padlockable Dustcover	SKR8
	No Release	Standard	No Dustcover	SKL1
			Dustcover	SKL2
			Padlockable Dustcover	SKL3
		Master	No Dustcover	SKL6
			Dustcover	SKL7
			Padlockable Dustcover	SKL8
Access	Release	Standard	No Dustcover	AKR1
			Dustcover	AKR2
			Padlockable Dustcover	AKR3
		Master	No Dustcover	AKR6
			Dustcover	AKR7
			Padlockable Dustcover	AKR8
	No Release	Standard	No Dustcover	AKL1
			Dustcover	AKL2
			Padlockable Dustcover	AKL3
		Master	No Dustcover	AKL6
			Dustcover	AKL7
			Padlockable Dustcover	AKL8

*Releasing versions are the type that **MUST** be used if used in conjunction with any type of escape release function.

Important:

This product is designed for use according to the installation and operating instructions enclosed. It must be installed by competent and qualified personnel who have read and understood the whole of this document prior to commencing installation. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired. Any modification to or deviation from these instructions invalidates all warranties. Fortress Interlocks Ltd accepts no liability whatsoever for any situation arising from misuse or misapplication of this product.

It is important that the correct version of this unit is selected. If there is any requirement for an escape release element in the product, then the releasing version must be used.

**BEWARE OF INTENTIONAL MISUSE CAUSED BY OPERATORS WANTING TO BYPASS SAFETY SYSTEMS. THE INSTALLER SHOULD ASSESS THE RISKS AND MITIGATE AGAINST THEM.
IF YOU HAVE ANY QUESTIONS OR QUERIES OF ANY NATURE WHATSOEVER PLEASE CONTACT THE SUPPLIER WHO WILL BE PLEASED TO ADVISE AND ASSIST.**

It is the user's responsibility to implement proper management controls and risk assessment for master and spare keys, without which they can be used to defeat trapped key interlock systems; ISO/TS 19837 can offer further guidance.

Operating Instructions: Trapped Key Adaptors

amGardpro Trapped Key Adaptors Technical Specification

Materials	Housing	Die-cast zinc alloy to BSEN12844
	Internals	Stainless steel to BS3146
Paint Finishes	Body	Gloss powder coat on passivated zinc alloy - Black
	Lid	Red
	Lock	Satin chrome plated
	Lock Front	Stainless steel to BS3146
	Key Gate (Extracted only)	Stainless steel to BS3146
Mechanical Life		≤ 1,000,000 Switching Cycles
Shock and Vibration Resistance		Tested in accordance with GS-ET-19
Performance Level		PLe
B10d		5,000,000 Operations
Environment		Indoor & Outdoor
Ambient Temperature		-5°C to 80°C (23°F to 176°F)
Maximum Relative Humidity		80%@≤31°C; 50%@40°C

amGardpro Trapped Key Adaptors Safety Functions

amGardpro Trapped Key Adaptors Safety Functions		Part No.
Safety Function 1	Door cannot be opened unless access key inserted and rotated in lock	AKL / R
Safety Function 2	Breaks contacts when access key inserted and rotated in lock	
Safety Function 3	Door cannot be opened unless safety key rotated and removed from lock	SKL / R / EKL / R
Safety Function 4	Breaks safety contacts when safety key rotated and removed from lock	

Figure 1: Dimensional Drawing - proE Adaptor with No Dustcover

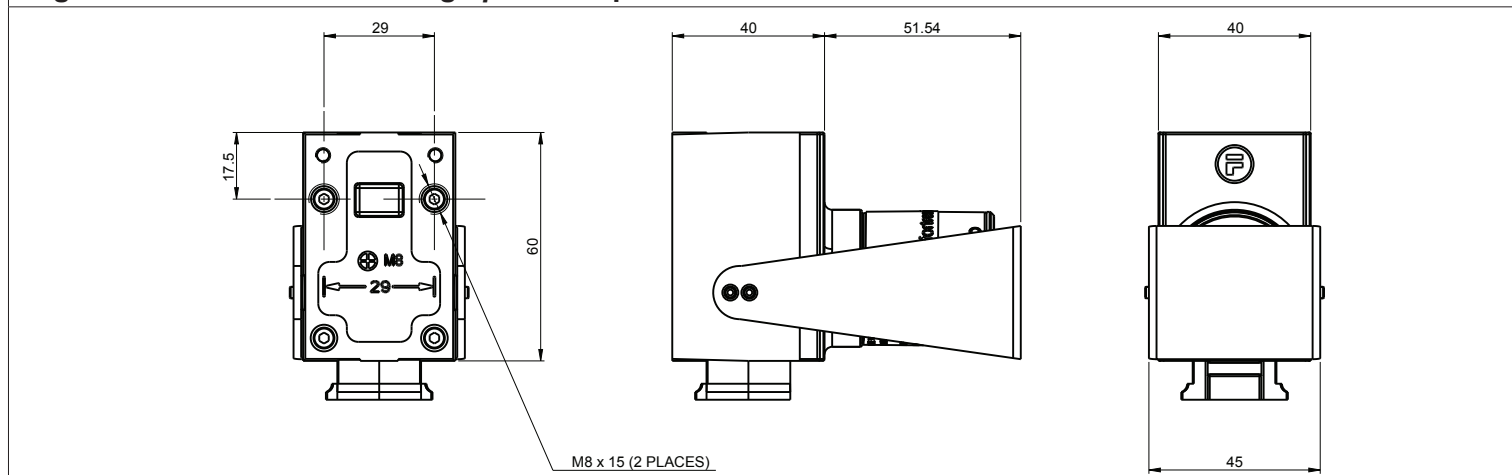
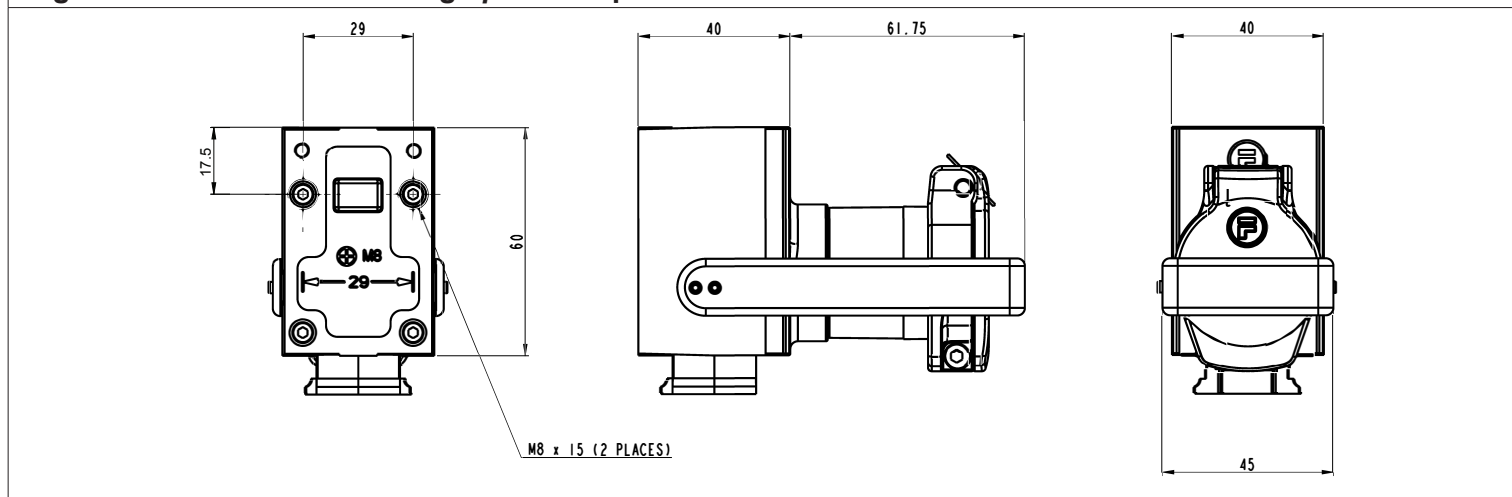


Figure 2: Dimensional Drawing - proE Adaptor with Standard Dustcover



Operating Instructions: Trapped Key Adaptors

Figure 3: Dimensional Drawing - *proE* Adaptor with Padlockable Dustcover

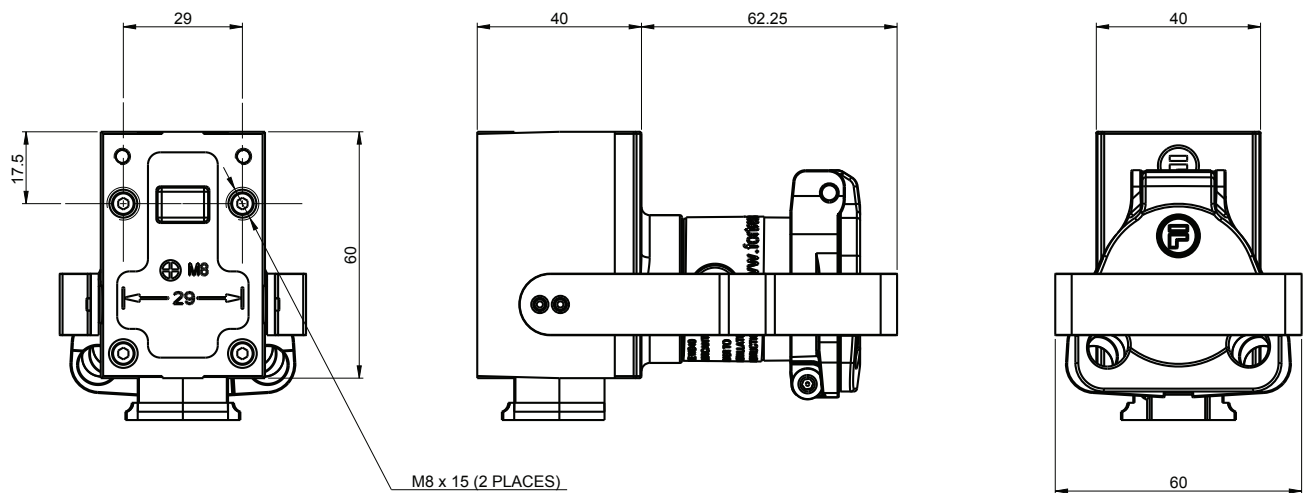


Figure 4: Dimensional Drawing - *proLock* with No Dustcover

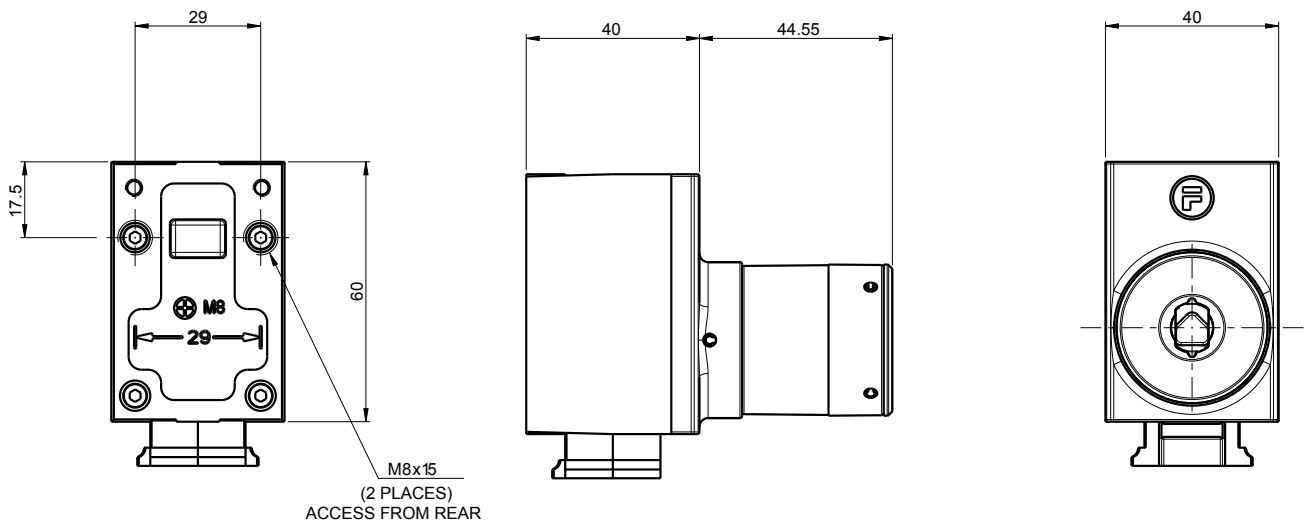
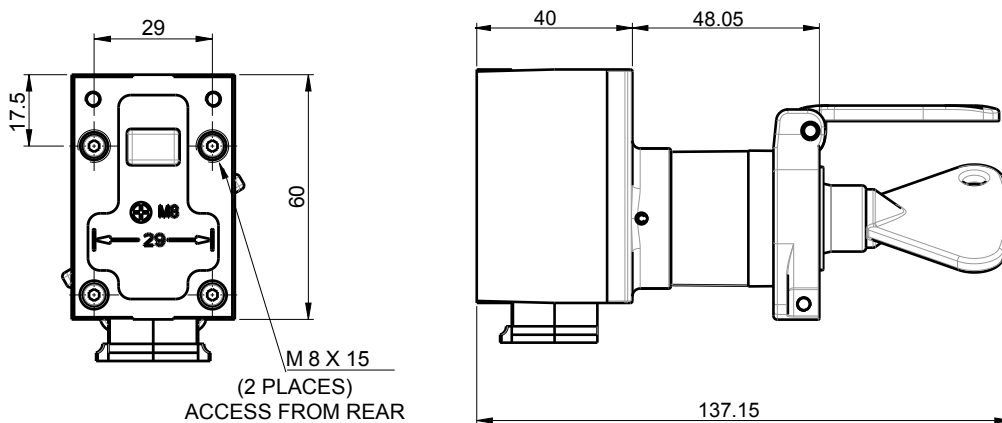


Figure 5: Dimensional Drawing - *proLock* with Key & Standard Dustcover



Operating Instructions: Trapped Key Adaptors

Tools and Fixings Required
2.5mm A/F Hex wrench (Torque Setting 0.8 - 1.0 Nm) Ø8.2mm Drill 2 x M8 screws
Mounting
<ol style="list-style-type: none">1. Locate the amGardpro unit containing the trapped key adaptor(s) so it is in a suitable position and within reach for easy user operation.2. Mount the Fortress assembly together with head assembly to a flat metal, static part of the machine. Use M8 screws from the rear. The mounting surface should be flat.3. Refit any lids to host units after cabling is completed.4. All fixing screws must be permanently prevented from removal, either by vibration or by personnel using standard tools.
Testing (Unpowered)
<p>The complete guard installation should be tested prior to use.</p> <p>Access Key Module: All these keys should be inserted and rotated before safety key removal or actuator removal is possible. Solenoid will require unlocking before key rotation. Safety circuits are opened on rotation of access key(s).</p> <p>Extracted / Safety Key Module: All locking means (access lock(s) and / or solenoid) will require unlocking before any extracted / safety key can be turned and removed. Actuator will require the safety key(s) to be rotated before it will be unlocked. Actuator will require extracted key to be rotated, removed and the 'Gate' swung over the front of the lock before it will unlock. Safety circuits remain open, access keys will be trapped and actuator will not be locked until all extracted / safety keys are returned and rotated.</p>
Service and Inspection
<p>Regular inspection of the following is necessary to ensure trouble-free, lasting operation:</p> <ul style="list-style-type: none">• Correct operating function• Secure mounting of components• Debris and wear• WD40 lubricant or equivalent, should be applied to each mechanical element every 10,000 operations, or sooner, to ensure smooth product operation and function. There are no user serviceable parts in this product. If damage or wear is found with an assembly, please contact your local Fortress channel partner. The complete interlock must be replaced after 1 million switching operations.
Disposal
<p>This interlock does not contain any certified hazardous materials so should be disposed of as industrial waste. Electrical items should not be disposed of in general waste and must be appropriately recycled.</p>
Liability Coverage is Voided Under the Following Conditions:
<ul style="list-style-type: none">• If these instructions are not followed.• Non-compliance with safety regulations.• Installation and electrical connection not performed by authorised personnel.• Non-implementation of functional checks.
Protection Against Environmental Influences
<p>A lasting and correct safety function requires that the device be protected against the ingress of foreign bodies such as swarf, sand, blasting shot, etc. The device is to be mounted away from the machine, or by the use of anti-vibration mountings, in order to avoid the effects of vibration, shock and bump.</p> <p>Use in Dusty Environments: Careful product selection is required, which is best performed under the guidance of a Fortress Representative, in order to assess the dust type and product style required. It is normally accepted that the product performs best in a dusty environment when mounted upside down.</p> <p>Use in Corrosive Environments: Careful product selection is required, which is best performed under the guidance of a Fortress Representative.</p>
The manufacturer reserves the right to modify the design at any time and without notice.
This guide should be retained for future reference.