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FIRE SHUTTER BUYERS GUIDE



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FIRE SHUTTER BUYING GUIDE

Are you looking to Buy or Specify a Fire Shutter?

When purchasing a fire shutter it is important that that product requested is based on your buildings Fire Risk Assessment. If you are not sure then please speak to the person responsible for doing the buildings assessment or your local fire officer or Building Control. Below are some common questions we get asked, from people wanting to buy a fire shutter.

1) Is the fire shutter getting installed over a Window, Door or Servery?

If the fire shutter is fitted over a doorway, servery or any opening that people could go underneath, then the fire shutter must be fitted an Anti Drop Brake. This is designed to prevent the shutter curtain free-falling if the motor fails.

2) Is the opening classed as a “Means of Escape”?

A “Means of Escape” can be defined as the structural means whereby a safe route is provided for people to travel from any location in a building or structure to a place of safety without the need of outside assistance.

If the fire shutter is getting fitted over a “Means of Escape”, then we would advise the following controls, but its important to refer to your Site specific Fire Risk Assessment.

- Independent Heat Detector – The shutter will only close if the area around the shutter becomes hotter than 70oC. If it is this hot around the opening it is deemed that its too hot to walk through the opening.
- Audio Visual Warning – Fitted on both sides of the shutter, provided warning that the shutter is closing.
- Emergency Escape Button, so if someone becomes trapped behind the shutter, they press a Green Button and the shutter will raise, so they can escape.

3) What is the purpose of the Fire Shutter?

Fire Break – To prevent the spread of fire

Refuge – To protect an area from fire

Smoke Barrier – To prevent the lateral spread of smoke. Fire shutters are not designed to prevent the spread of smoke. You would need to look at a smoke curtain if this is required.



4) Can I have a Manual Fire Shutter?

No, you can no longer buy a Manually operated fire shutter. The problem with a Manual Fire Shutter, is that they used to have a very heavy weighted bottom bar, so it could drop the curtain under its own weight. This made it very heavy to operate on a daily basis, so they were only designed to stay in the up position at all times. The other issue with a Manual Fire Shutter, is that you are relying on someone closing the shutter, whilst evacuating the building under a fire activation.

The Fire Shutters today are all electric operation and connected to a fire alarm. The advantage of this is the shutter can be operated on a daily basis for security and if the fire alarm is activated the shutter will automatically close.

5) Do I need a Compact or Industrial fire shutter?

Most of the fire shutters are the compact type of fire shutter. They are tested the same, the main difference is the box size. On a standard door height opening, the compact shutter would have a 300mm x 300mm shutter box. The industrial shutter would be 300mm x 500mm (Motor Side). On smaller opening, the large box on the industrial shutter looks big and out of place. The compact shutter box is compact and neater in design.

For larger opening over 6m wide, then an industrial would be the better option, as we can use bigger industrial motors to lift the heavy door.

6) What can the fire shutter be fixed into?

The fire shutter is tested and certified if installed into Masonry or 6mm structural steel. Any other substrates may not be certified and/or capable of supporting the weight of the shutter.

If the fire shutter cannot be fitted to masonry or steel, then you will need to speak to your local fire officer or building control office, to see if they will sign off the installation. The structure must be able to carry the weight of the shutter (Approx. 25kgs/m²) and enable us to get a minimum thread bearing of 6mm.



7) Does the fire shutter have to be connected into a Fire Alarm?

The fire shutter **MUST** close automatically on fire alarm activation. You can do this by connecting the fire shutter into the Fire Alarm system. If a fire alarm system is not available then it can be connected into a local independent heat detector.

When the fire shutter is fitted over a means of escape, then the shutter **MUST** be connected into a localised heat detector. A heat detector is designed to activate when the temperature reaches 57oC or 90oC. If it is this hot around the opening, then it is highly unlikely you would walk through this opening.

8) Do I need an Audio/Visual Warning Panel?

If the fire shutter is connected into the alarm system, the shutter will automatically close on fire alarm activation. Are people expecting the shutter to automatically close? Audio/Visual panels beep and lights up "Fire Shutter Closing".

9) Do I need staged descent?

Do you need the shutter to partly close for a set time and then fully close? This could be to provide a smoke barrier or provide a chance for people to escape.

The audio/visual panels have the facility of staged descent. If this facility is required, then what level do you want it to close too and for what period of time?

10) Do I need an Emergency Escape Button?

This is a Green push button that is fitted on one side of the shutter. If the shutter closes by the fire alarm and someone gets trapped behind the shutter, they can press the button and the shutter will open and then auto close.

11) Can I have the fire shutter painted a colour?

The standard finish on a Fire Shutter, is Galvanised which is a metallic silver. Galvanised finish is an industrial looking finish. We can powder coat the fire to any BS or RAL colour to compliment the colour scheme. If you have a specific colour that you require, then speak to our sales team.

If you need any help or advice, then please speak to our Sales Team. We are more than happy to help you find the correct product for your application.



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INSTALLATION REQUIREMENTS

APPLICATION

This product is designed in accordance with BS EN 13241-1:2014+A1:2018 and BS EN 16034:2014, and is suitable for installation as fire resisting shutter. The shutter has been tested under controlled conditions. The primary goal is to offer fire compartmentation and/or on escape routes. The shutter can be used on a daily for security.

FIRE TESTING STANDARDS

- Fire Resistance test in accordance with BS EN 13241-1:2014+A1:2008
- Fire resistance performance characteristics to BS EN 16034:2014
- CE Marked

INSTALLATION COMPLIANCE

- Fire shutters on escape routes should not present undue delay or complexity.
- It is the responsibility of the installer, building manager and respective fire officer to ensure that the final installation is adequately risk assessed in consideration of the building type and use, as well as applicable standards BS EN 13241 and BS EN 16034, and local building regulations.
- The fire shutter is only permitted to be installed into appropriate masonry or steel.
- The shutter will not close in the event of a cable breakage, please ensure the cables are adequately protected.
- The substrate, supporting structures and fixings used must be equal to or greater than the fire rating of fire shutter.



OPERATION

- Tubular motor within the barrel assembly, featuring limit setting and thermal trip to prevent overheating.
- Draw 240V, a 13amp fuse spur must be available for installation
- The product will feature a safety brake with interlock facility

CONTROLS

- Key switch control
- Installation and commissioning must be completed with the Security Direct supplied controller and battery-back up.
- The BBU must be wired directly to a 240 volt mains supply.
- The controller must be wired to the fire alarm system (locally or building).
- The Fire Shutter installation must be checked weekly to ensure the operation of the BBU and alarm system are working correctly.
- The BBU will monitor the mains supply, this must be checked weekly via the digital display.
- The BBU will hold power capable of closing the product on alarm activation for a maximum of 30 days from removing from a mains supply – although this must be avoided on identification via weekly checks.
- The Fire Shutter will automatically close on receipt of a fire alarm signal, the installer must ensure that an adequate risk assessment has been completed as this will contravene BS EN 13241 – photocells are available to offer protection, however offer no performance guarantees in the event of a fire and may be inhibited by smoke/fire, and may inhibit the ability to close (should the photocell be blocked for example).
- Audio/Visual warning is needed locally at the Fire Shutter when the product closes on receipt of a fire alarm signal, this can be through the existing building fire system or via a device connected to the control panel.



SUBSTRATE AND FIXINGS REQUIREMENTS

MASONRY

- Masonry to have equal to or greater density than 1600kg/m² and a thickness of 102.5mm
- Must be fire rated equal to or greater than the fire rating of the shutter
- Must be able to support the full weight of the fire shutter (approx. 25 kg/m²)
- M8 grade 4.6 (10mm sleeves) or greater sleeve anchor bolts may be used

STEEL

- Steel substrate must be minimum of 6mm thick steel
- Steel must be fixed into suitable masonry or structural steel substrate
- Must be fire rated equal to or greater than the fire rating of the shutter
- Must be able to support the full weight of the fire shutter (approx. 25 kg/m²)
- For non blind application a M8 4.6 grade nut and bolt may be used, and the supporting steel must be equal to or greater than 5mm.
- For blind applications the structure may be tapped if it is greater than 6mm thickness and M8 grade 4.6 bolt is used.

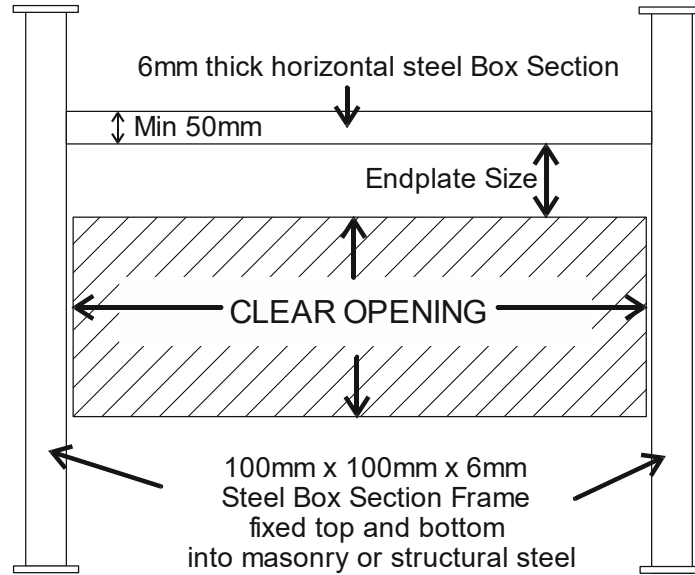
STUD/PARTITION WALLS

- The fire shutter has NOT been tested into stud walls. You will need to check that your fire officer to see if they will accept a non tested substrate.
- Metsec stud walling is NOT suitable as it will not provide a sufficient fixing and will not carry the weight of the shutter.
- The shutter is not tested into timber stud walls. You will need to check that your fire officer to see if they will accept a non tested substrate.
- We recommend a Steel sub frame is fitted into a stud wall, to ensure it meets the certification and fixing requirements. See Drawing.
- Must be fire rated equal to or greater than the fire rating of the shutter.
- Must be able to support the full weight of the fire shutter (approx. 25 kg/m²)



STEEL SUBFRAME

If you are creating a Steel sub frame to install the fire shutter. Please see below the requirements.

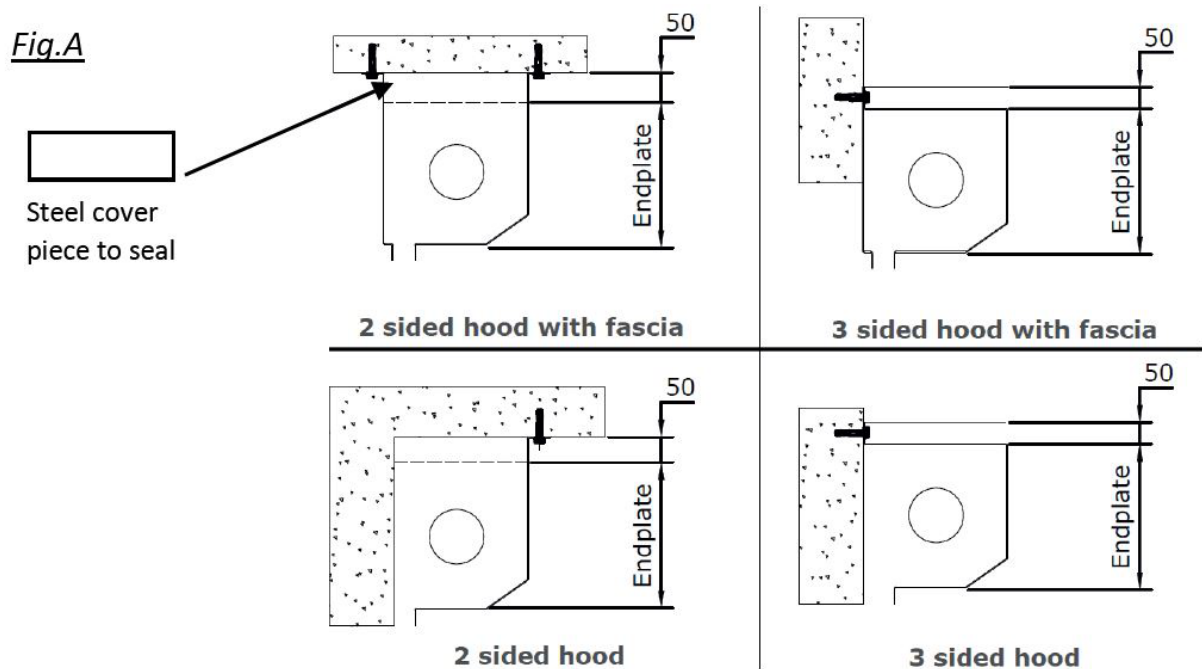




VERTICAL EXPANSION

Under a fire situation the shutter box is designed to expand upwards. It is important that this is taken into consideration when surveying or installing the fire shutter.

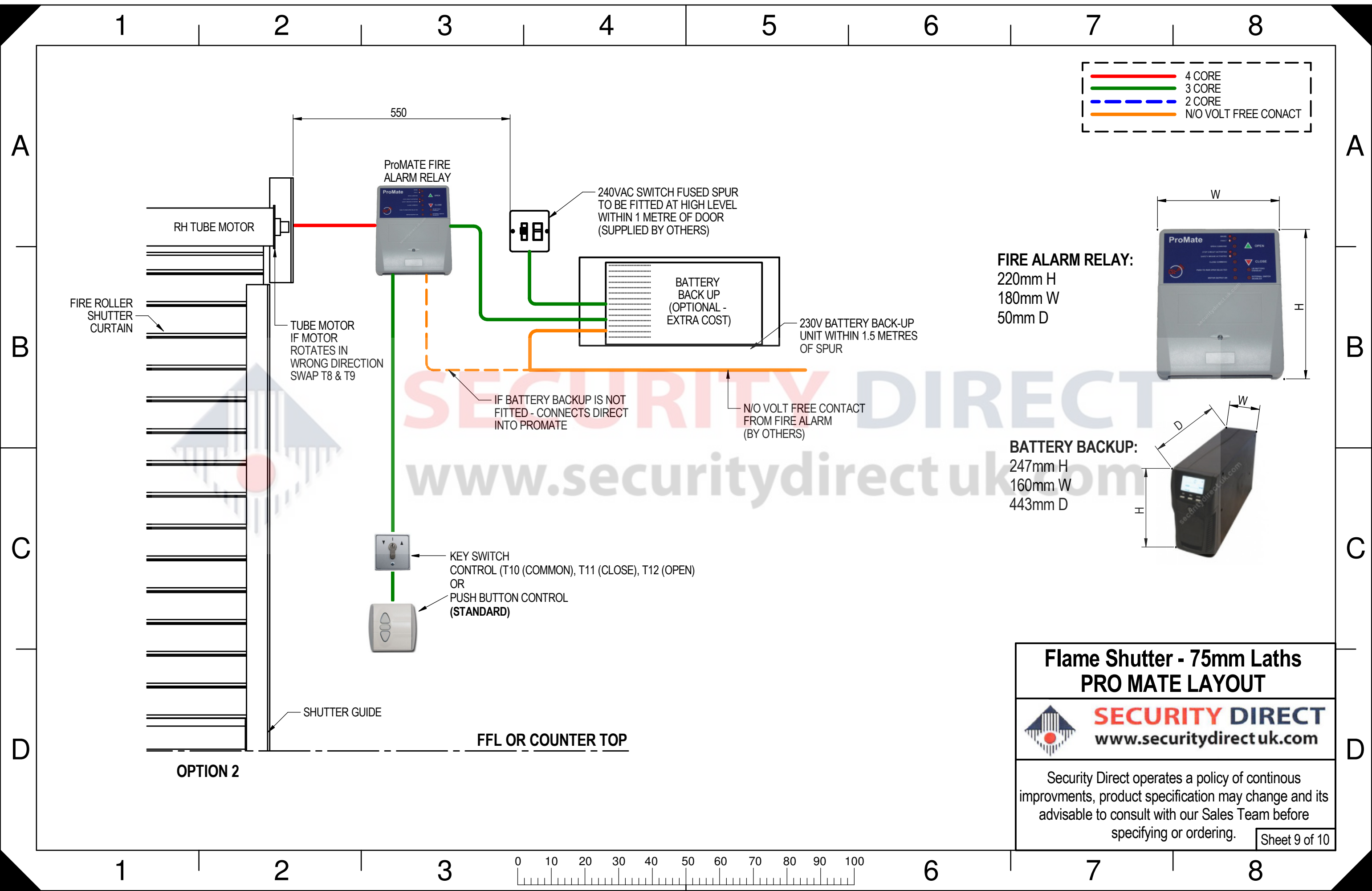
When face fixing the box lid, there is 50mm up stand on the box lid. If you are reveal fixing the box lid stand 50mm above the end plates.



Minimum Fixings Required

Masonry - M6 x 70mm Fisher FSA 8mm Sleeve anchors with steel and nylon washers

Steel - M8 bolt, length to suit steelwork, with steel and nylon washers



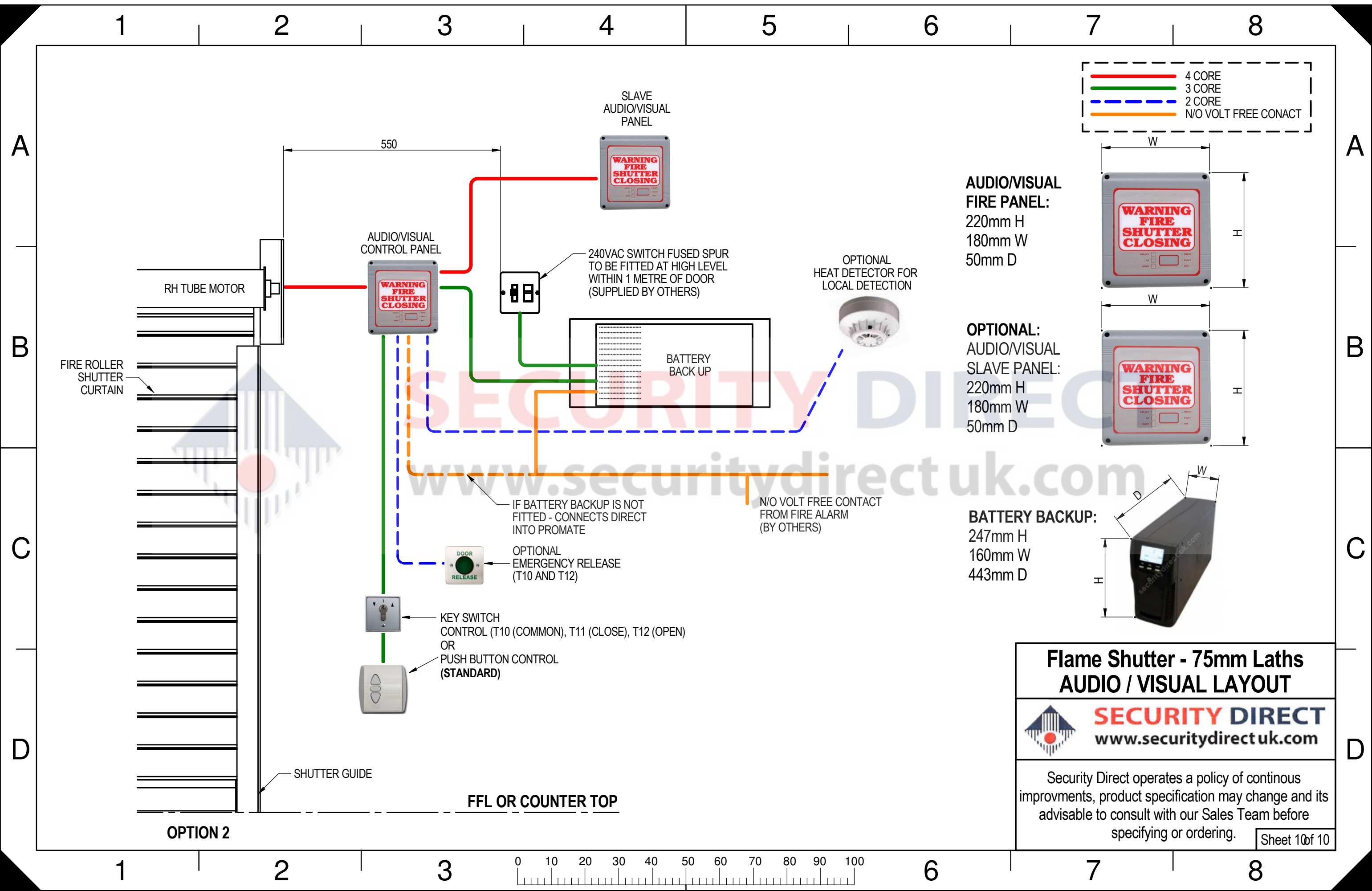
**Flame Shutter - 75mm Laths
 PRO MATE LAYOUT**



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Sheet 9 of 10



**Flame Shutter - 75mm Laths
AUDIO / VISUAL LAYOUT**



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Sheet 10 of 10