FIRE SUPPRESSION CHARGING LOCKERS
USER MANUAL

SPECIFICATION

QMP Fire Safe Charging Lockers provide safe, and convenient mains charging for batteries of portable handheld devices, power tools and all other small appliances that utilise a rechargeable battery. The fire suppression system used in QMP's Fire Safe Charging Lockers is designed to mitigate against the increased risk of Li Ion battery fires. Activated at 68°C, the system will flood the locker with the FirePro active agent, consisting of potassium salts (K2CO3) extinguishing any fire because of overcharging or poorly maintained batteries. Each aerosol has a service life of 15 years and should be replaced once expired. Available in a range of designs to suit all requirements, these lockers feature a perforated door to allow adequate ventilation, along with a variety of lock types. Each unit is CE marked and fully compliant with all EU safety standards.

Fitted with standard plug

Code	Description	Size H.W.D. mm
LFS183045-4	4 comp std plug	1800.300.450
LFS183045-6	4 comp std plug	1800.300.450
LFS183045-8	4 comp std plug	1800.300.450
LFS183045-10	4 comp std plug	1800.300.450

Fitted with RCD plug

Code	Description	Size H.W.D. mm
LFC183045-4	4 comp RCD plug	1800.300.450
LFC183045-6	5 comp RCD plug	1800.300.450
LFC183045-8	6 comp RCD plug	1800.300.450
LFC183045-10	8 comp RCD plug	1800.300.450

TEL: 01384 899800

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EMAIL: sales@qmp.uk.com

Quality Metal Products, Timmis Rd, Lye, Stourbridge, West Midlands, DY9 7BQ

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LOCKER CONSTRUCTION

- 0.7mm mild steel, pop riveted carcass construction.
- Delivered assembled.
- Pre-drilled carcass for nesting lockers together.
- Fitted with 1.2mm mild steel security shelves to prevent any unauthorised access to the below compartment. 25kg max UDL.
- CE marked and tested.
- Available in either standard plug or RCD plug socket.
- Fitted with standard master cam locks with 2,000 differs.
- Reaction to Fire Classification EN 13501-1 - documents available.
- Doors are attached by pop rivets to the right-hand side of the carcass with two butt hinges and fitted with 10-disc key operated cam lock, supplied with 2 keys.

PAINT FINISH

- Three stage pre-treatment and phosphate coating.
- Carcass and doors are finished in a high-quality epoxy polyester full-gloss powder coating, oven-cured at 180°C, and incorporating a Germ Guard anti-bacterial additive for enhanced hygiene protection.
- Carcass powder coated with RAL 7035 Light Grey.

Door Colour Options	RAL
Red	3003
Green	6024
Light Blue	5012
Dark Blue	5017
Light Grey	7035
Yellow	1018

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OPERATING CONDITIONS & INSTALLATION

- For internal use only, not suitable for external environments.
- An RCD adaptor should be used based on an individual risk assessment if a non-RCD option was purchased.
- Ensure batteries that are used in the lockers are in good condition and OEM charging units are used.
- Avoid placing batteries or chargers directly beneath the Firepro suppression aerosol cannisters.
- Do not use damaged batteries or chargers.
- Ensure that the installation location remains within a safe ambient temperature of below 68°c. This is to prevent accidental discharge of the fire suppression system.
- Ensure the surrounding area allows sufficient airflow and that the internal compartments do not trap excessive heat.
- Avoid locating the locker directly adjacent to high heat equipment or in direct sun (if near windows) unless shading/ventilation is provided.
- No not position directly beneath smoke detection systems, if possible, as any leakage of dispersed fire suppressant may cause them to activate.
- Ensure the environment does not allow excessive moisture, condensation or corrosive atmospheres (e.g., near chemical, saline or open water spray environments) that could degrade the powder-coat, galvanised steel or electrical components.
- Choose a location where the locker is on a stable, level surface and away from hazards (forklift traffic, collisions, heavy vibration) to prevent damage.
- Ensure doors can open freely, maintenance access is possible, and compartments are accessible to users.
- Leave clearance around the locker to accommodate heat dissipation, wiring access and servicing.
- Avoid placing in fire exit routes or blocking ventilation grills.
- When installing the locker for the first time, the supplied 3v CR2 battery will need to be fitted to make ready the FirePro fire suppression system.
- Supplied battery located inside the FPC-4R controller (see instructions below how to retrieve battery and install).
- **Doors to be kept shut when compartments are not in use!**

OPERATING CONDITIONS & INSTALLATION

BATTERY TO BE REPLACED EVERY 12 MONTHS AS PART OF ANNUAL MAINTENANCE ROUTINE

- Ohmic resistance of the aerosols are to be checked every 12 months (see page 6 of the Firepro FPC-4R manual below). This is to be completed by a competent maintenance person or electrician.

OPERATING CONDITIONS & INSTALLATION
BATTERY REPLACEMENT

FirePro FPC-4R extinguishant controller located on top of the locker

Remove the 4 cover screws

Remove the cover and keep the screws in a safe place. Fit the supplied 3v CR2 battery into the battery housing inside the control unit. Make sure the battery is fitted correctly noting the correct polarity.

Fire Controll Unit Battery Replacement Log

System supplied **without** a battery fitted. The supplied battery should be fitted when the locker is installed for the first time. Battery to be **replaced annually** and **logged** on this sheet.
Battery type: **3V CR2**

Replaced / fitted By	Date:	Next Replacement Due:

ADDITIONAL FIREPRO FEATURES

The FirePro FPC-4R V3 controller installed within the locker offers additional features, other than the supplied default configuration. As supplied, the system will detect a heat event using a linear heat detector cable when the internal temperature reaches 68°C. This activates the condensed aerosol units which then extinguish any fires within the locker.

Attached is an overview of the FirePro system which shows the connections and wiring schematics for additional ancillary equipment, such as visual or audible warning beacons or connection to a main fire alarm panel. The system can also have power supplied from a primary 6 -30v DC supply. **THIS MUST ALWAYS BE BACKED UP BY A 3v SECONDARY SUPPLY TO PROVIDE POWER IN THE EVEN OF A POWER FAILURE.** All additional equipment or connections should be completed by a competent fire alarm technician or electrician.

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Operation and User Manual

FPC-4R V3

Panel Fire Protection Controller

Issue July 2018
Version 3

Reinventing
Fire Suppression

FirePro.

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- The electrical panel protection module FPC-4RV3 has the ability to have primary and secondary power sources, capable each, individually or combined, of providing the necessary amperage to activate the two condensed aerosol fire suppression units.
- Internally uses a 3V battery (secondary source) and externally uses any DC power supply between the range of 6-30VDC (primary source). An LED indicator is available to indicate the status of the external primary source.

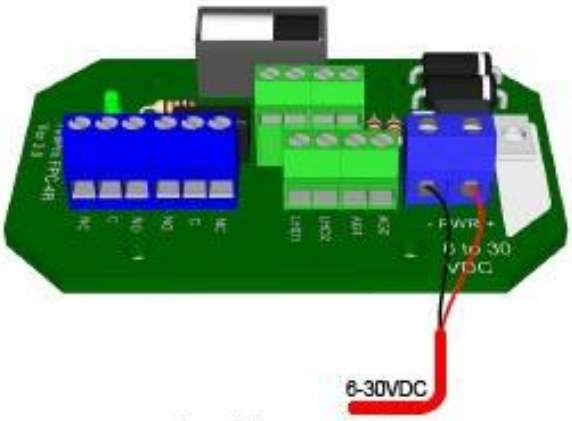

Figure 3: Power connection.

- The FPC-4RV3 module has a voltage-free relay for activating other devices such as the fire alarm panel or to be used as a switch for the power-off of devices such as cooling fans. Multiple system configurations can be achieved by using the FPC-4RV3 module. The relay of the first in sequence FPC-4RV3 can be linked to the next in sequence FPC-4RV3 module. As a result, each unit will activate the other.

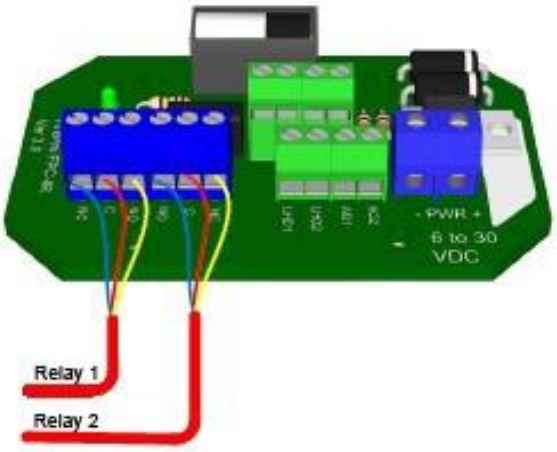

Figure 4: Relay connection

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4. Installation guidelines

The Linear heat detector cable must be installed on the inside of the top metal cover of the electrical panel.
The FPC-4RV3 module must be installed internally (if possible) in the electrical panel, at side and at a distance from the top site around 10cm-20cm.

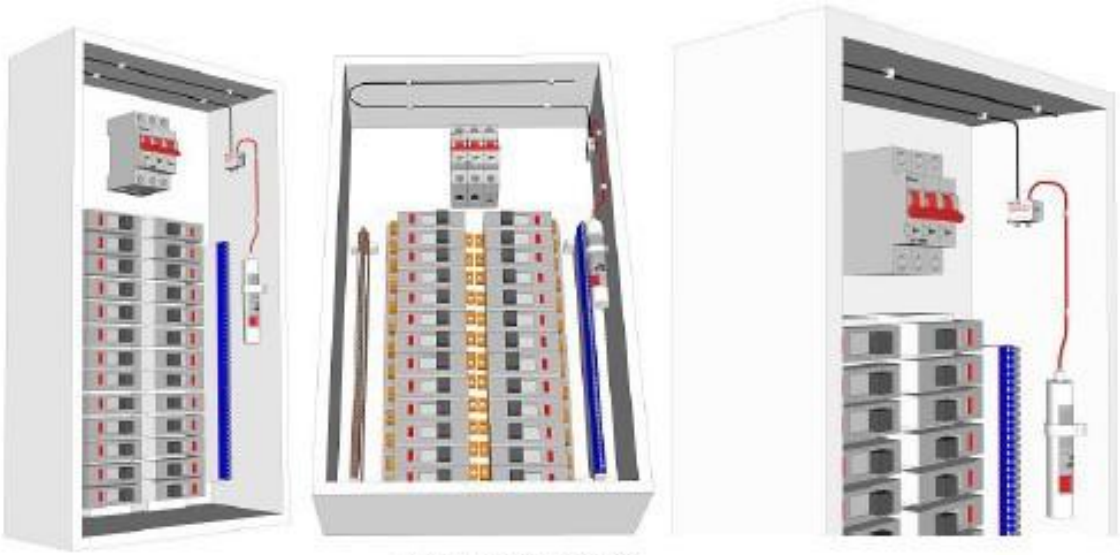

Figure 5: Typical installation

5. Specifications

FPC-4RV3	Terminals	 FPC-4RM in metal box	 FPC-4R in plastic box
Dimensions		11.7cm X 11.7cm X 4.8cm	10.2cm X 7.0cm X 5.0cm
I/P terminal	LHD1	Linear Heat Detector cable **max 10m length**	
I/P terminal	LHD2	Linear Heat Detector cable **max 10m length**	
I/P terminal	PWR	6 to 30Vdc (Primary Power Source)	
Battery	CR2 (3V)	3Vdc Lithium battery (Secondary Power Source)	
O/P terminal	AG1	Aerosol Generator 1	
O/P terminal	AG2	Aerosol Generator 2	
Double Pole Relay	C	Channel 1, Common	
	NO	Channel 1, Normally Open	
	NC	Channel 1, Normally Close	
	C	Channel 2, Common	
	NO	Channel 2, Normally Open	
	NC	Channel 2, Normally Close	
I/P Rating		IP30	IP65

Table1: Specifications

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6. Typical Application wiring

Below you can find a typical example for automatic activation system.

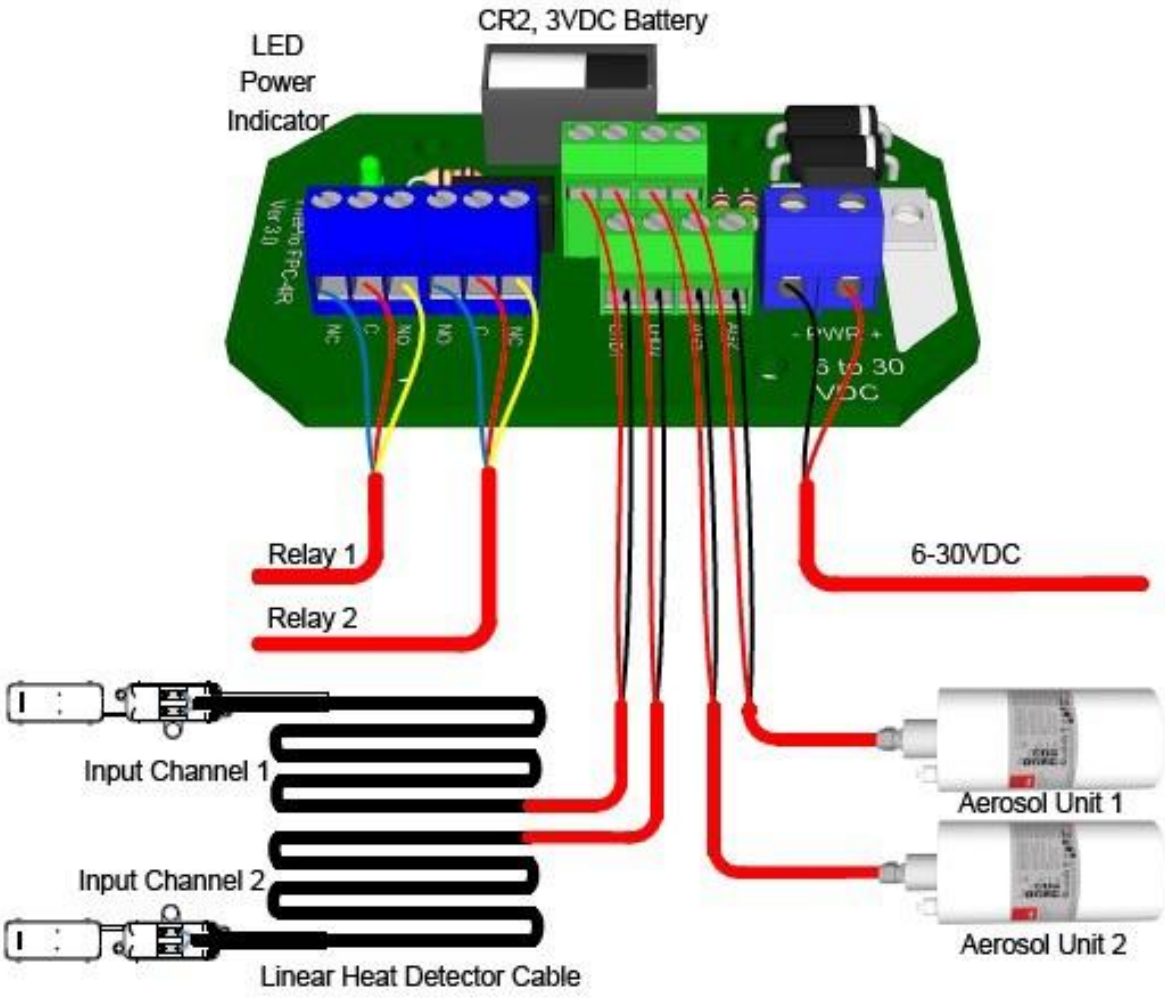

Figure 6: Typical wire configuration.

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7. Testing and Commissioning

7.1 Commissioning and Testing of the Release lines connection

For Testing, Commissioning and Simulation purposes, each Aerosol unit is disconnected from the system and replaced by an indication circuit as per the below schematic diagram. Each indication circuit includes a resistor and an LED. Each indication circuit is installed in parallel to each release line.

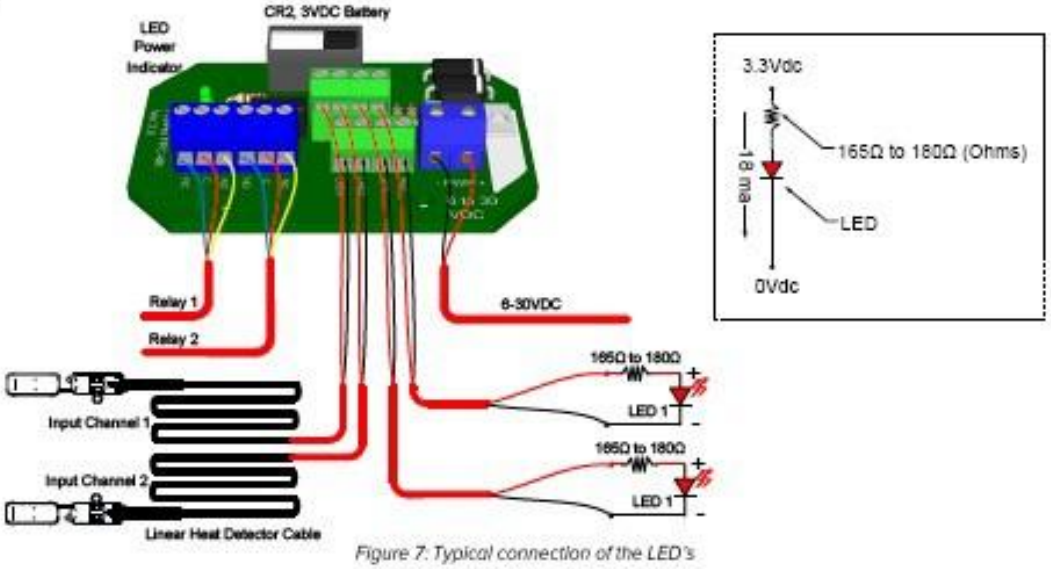

Figure 7: Typical connection of the LED's

1) Remove both powers connected to the system.
   This includes the external power supply and Battery.
2) Connect the indication circuit as described above.
3) Power the system
4) Short circuit the two wires to the LHD1 cable (Linear Heat detector cable).
5) Observe whether the two LEDs illuminate and the relay is activated.
6) Restore the open circuit of the two wires to the LHD1 cable.
7) Observe whether the two LEDs are off and the relay is deactivated.
8) Test the LHD2 cable as described on points 4,5,6,7 above.
9) If no problem has been observed, power off the system.
10) By using an ohm meter ensure that the ohmic resistance of the aerosol units is between 1.6Ω to 3.6Ω.
11) Replace the indication circuit with the aerosol units.

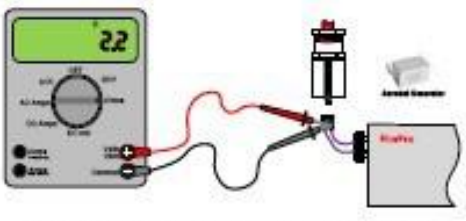

Figure 8: Measuring the Aerosol unit resistance

FIRE SUPPRESSION CHARGING LOCKERS
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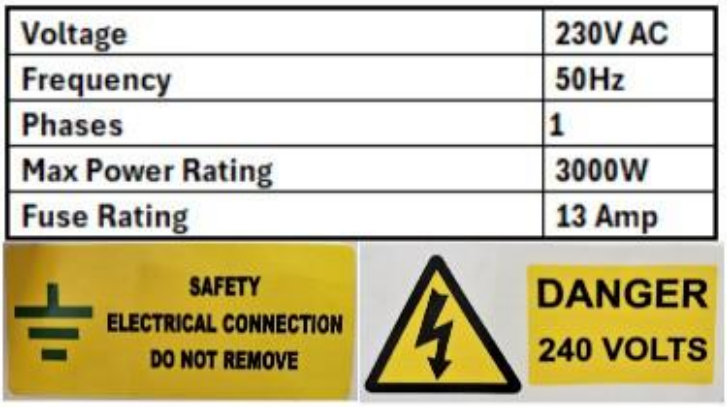
LABEL ALLOCATION



CLEANING & MAINTENANCE

- Clean paint work periodically with warm soapy water or foaming cleaner.
- Oil hinges and lock sparingly as required with a light oil (3in1 or similar).
- Dry thoroughly to prevent streaks or corrosion spots.
- Routinely inspect the lockers for any signs or damage, electrical safety, locks & hinges, ventilation and labels.
- Always unplug or isolate power before any cleaning or maintenance.
- Check for damaged power cables and replacements should only be made by a competent/trained electrician.
- Replace 3v CR2 battery every 12 months.

ELECTRICAL COMPONENT SPECIFICATION

Description	Standard/Tests
Cabinet power supply lead (1.5mm minimum)	BS6500
Power supply lead to be fitted with a 13A ceramic fuse to specification	BS1363/A
Mains power RCD plug to be fitted with a 13A ceramic fuse to specification	BS1362
Cabinet internal wiring. Single core flexible insulated cables for switchgear and control gear wiring. Minimum cable size 2.5mm	BS6231
Cabinet electrical circuit conductors to be wired in accordance with specification	BS7671:2018+A2:2022 Table 51
Cabinet identification label	BS7671: 2018+A2:2022 (717.514)
Earth connection warning notices to be permanently fixed in accordance with specification	BS7671: 2018+A2:2022 (514.13.1 i & ii)

EU DECLARATION OF CONFORMITY

In accordance with European Parliament and Council Decision No 768/2008/EC Annex III. **Declaration is issued under the sole responsibility of the manufacturer.**

The object of the declaration described above is in conformity with the relevant EU harmonisation legislation:

2014/35/EU	Low Voltage Directive
2014/30/EU	Electromagnetic Compatibility (EMC)
2011/65/EU	Restriction on the use of certain hazardous substances (RoHS)

References to the relevant harmonised standards used or referenced to the other technical specifications in relation to which conformity is declared:

Reference & Date	Title	Edition
EN60335-1	Household and similar electrical appliances. Safety - General requirements	**2012/A15:2021**
EN61000-6-1	Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments.	**2007**
EN 61000-6-3	Electromagnetic campatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments.	**2007/ A1:2011/ AC:2012**
EN IEC 63000	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.	**2018**

DECLARATION

Number K97969/02

Replaces K97969/01

Issued March 23th, 2018

Valid until November 19th, 2018

Declaration of Conformity,

based on the requirements § 4.4.2, § 4.4.3 and § 7.15 of CEN/TR 15276-1, regarding

FirePro FPC-4R

Ignition module for Non-Pressurized Condensed Aerosol Generators

in conjunction with

- Bi-metal switch
- Heat cable
- Extension cable for bi-metal switch and heat cable

STATEMENT BY KIWA
With this declaration, Kiwa declares that legitimate confidence exists that the products supplied by

FirePro Systems Ltd.

comply with the technical specifications as laid down in this product declaration and marked with the Kiwa®-mark in the manner as indicated in this product declaration.

Luc Leroy
Kiwa

This declaration consists of 6 pages.
Publication of this declaration is allowed.

Note:
Publication of only this front page or parts of the declaration is considered as "not valid".

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DECLARATION

Number K94463/04

Replaces K94463/03

Issued March 23th, 2018

Valid until November 19th, 2018

Declaration of Conformity,

based on the requirements § 4.4.2, § 4.4.3 and § 7.15 of CEN/TR 15276-1, regarding

FirePro

Ignition device for Non-Pressurized Condensed Aerosol Generators

- BTA ignition device (Bulb Thermal Activator)
- FPC-5 ignition device in conjunction with
  - Bi-metal switch
  - Heat cable
  - Extension cable for bi-metal switch and heat cable

STATEMENT BY KIWA
With this declaration, Kiwa declares that legitimate confidence exists that the products supplied by

FirePro Systems Ltd.

comply with the technical specifications as laid down in this product declaration and marked with the Kiwa®-mark in the manner as indicated in this product declaration.

Luc Leroy
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TROUBLE SHOOTING & GENERAL CHECKS

- **Verify mains power -** Ensure the locker is plugged in and the circuit breaker or fuse feeding it is not tripped or blown.
- **No power -** Check that the mains socket is live by testing with another device. If power is confirmed at the socket, inspect the plug, cable, and RCD (if fitted) for signs of damage or faults. Do not continue use until the issue is resolved by a qualified electrician.
- **Check the plug type -** These units come with options for a standard plug or an RCD plug. Confirm you are using the correct configuration.
- **Inspect ventilation and door type -** For perforated-door models, check that airflow isn't blocked (important for charging heat dissipation). For solid-door models, ensure there is adequate ambient ventilation.
- **Check battery/power tool condition -** Sometimes what appears to be a locker fault is actually a tool or battery issue (e.g., a battery not charging properly outside the locker).
- **Lock and access checks -** Ensure compartments are properly closed/latched; an open door or poor lock operation might affect safety features or prevent charging from starting.

REPLACEMENT LOCKS & SPARE KEYS

- Replacement locks are available from: **QMP Ltd**, Timmis Road, Lye, Stourbridge, West Midlands, DY9 7BQ.
  Tel: 44 (0) 1384 899800. **Website:** www.qmp.uk.com. **Email:** sales@qmp.uk.com
- Spare or replacement keys for the lockers are available from: **Fast Key Services Ltd**, Pilot Close, 3 Fulmar Way, Wickford, Essex, SS11 8YW.
  Tel: 01268 562592. **Website:** www.fastkeys.co.uk. **Email:** sales@fastkeys.co.uk.