2.5kW, 3kW & 4kW DIN MOUNTING 1-PHASE BURST FIRE POWER CONTROLLER INSTALLATION INSTRUCTIONS

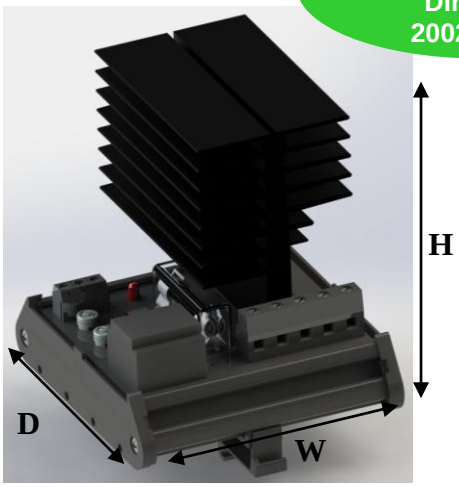
PR1-(DIN-F) SERIES

X10714

Safety warning

1. This unit is supplied with a fail-safe fuse for unit protection. See SPECIFICATION/INSTALLATION section for further details.
2. All HAZARDOUS LIVE terminals – Isolate supply before commencing any installation work.
3. Unit must be secured on DIN rail using the DIN-rail fastening and installed in an additional enclosure/cabinet with adequate ventilation.

RoHS Compliant
Directive 2002/95/EC



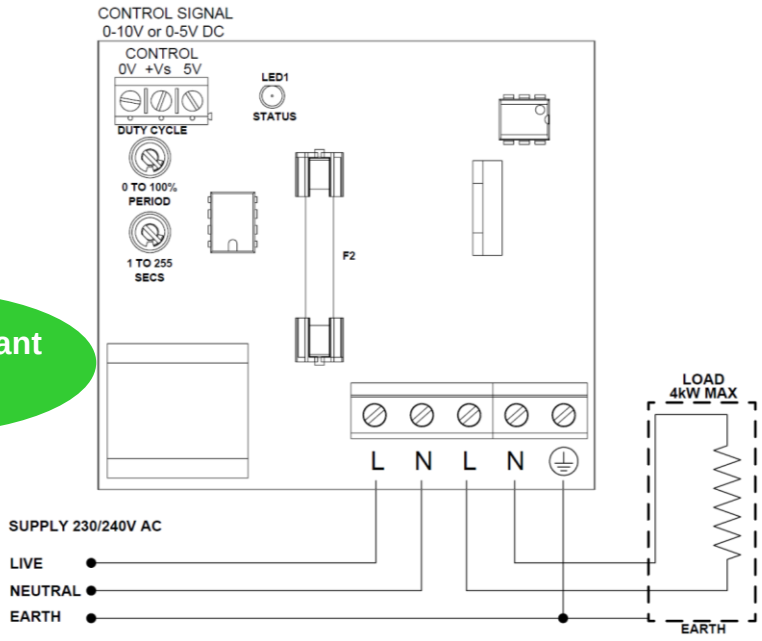
Features

- 2.5kW, 3kW and 4 kW models available
- Integral heat sink for maximum power capability.
- 2.5 and 3kW heatsink length = 50mm
- 4kW heatsink length = 75mm
- Simple DIN Rail or Panel mounting
- LED power level indication
- Over temperature protection with auto shutdown and reset

Applications

Suitable for electric heater batteries, ceiling or radiant heating, hot water tanks, heating cable, furnace, ovens and plastic processing equipment.

CONNECTIONS



FUNCTIONS

Cycle Time and Signal Rescaling
The cycle time is preset. An input signal is needed to control the output of the unit.
CAUTION: Adjustment of the cycle time and signal rescaling is possible using VR1 and VR2 but is not normally required. Incorrect settings of these controls can cause an overload condition, failure and permanent damage.
DO NOT ATTEMPT TO ADJUST THESE CONTROLS WITHOUT REFERENCE TO THE SUPPLIER/MANUFACTURER.

Manual Override
The PR1 controller is supplied preset to the auto 'A' position. It is possible to manually override the input signal by placing the J1 jumper plug in the 'M' position. With the jumper in the 'M' position the load will be 100% ON. The output load can be adjusted downwards using the signal rescaling facility (see above section).

Over temperature protection
An electronic thermal cut-out is fitted to heatsink to protect against over temperature. The PR1 regulator will switch off the load if the Heatsink temperature exceeds 90°C. once the heatsink temperature is below 85°C the unit should switch back on. Under normal operating the heatsink should not exceed 90°C, but may occur if the ambient temperature exceeds 40°C.

ORDER DETAILS

Stock code	Description
A407272-HV	PR1-DIN-F 2.5kW(230V)
A407273-HV	PR1-DIN-F 3kW(230V)
A407274-HV	PR1-DIN-F 4kW(230V)

INSTALLATION

Cooling requirements
This robust stack assembly has an operational temperature of 65°C when naturally cooled and has a built in 90°C over temperature trip on the heatsink as a safety feature. The unit should be mounted vertically, with heatsink fins top to bottom, and with sufficient surrounding air space to maximise natural convection cooling. If the unit is mounted in an enclosure or cabinet, adequate ventilation and/or forced air-cooling should be fitted.

Load considerations
The PR-series of power controllers are designed for resistive type loads, e.g. Heaters. Unusual heating loads such as Molybdenum, Platinum or Tungsten have a typical, 10:1, hot to cold, resistance ratio and therefore, when cold, draw larger currents than normal. This range is fitted with a TRIAC power device.

Connections
This unit has simple clamp type terminal connectors for all auxiliary-wiring requirements.

Fastening
The unit is secured by DIN-rail mounting feet for quick installation/removal

Fusing
It is recommended that the specified type fuses (as supplied) be used as replacements for fail-safe protection. See SRA Data sheet X10255 for further information. Other external supplies should be fused accordingly.

CE Marking
This family carries a "CE" marking. These burst fire controllers do not normally require a remote filter. For more information, contact our sales desk. A Declaration of Conformity is available on request.

SPECIFICATIONS

Max Power/current ratings:	2.5kW (11A), 3.0kW (13A), 4.0kW (17.4A) @ a typical supply of 230V RMS		
Input voltage:	230V RMS +/- 10%		
Frequency:	50/60Hz		
Control input - Signal:	0 to 10V dc (factory set) OR 0 to 5V		
- Manual:	Manual control (using 5k potentiometer – NOT supplied)		
Over temperature:	Trip in temperature @ 90ºC, +/- 1ºC		
	Trip out temperature @ 85ºC, +/- 1ºC		
Cable terminations:	Power & earth	(all models)	2.5mm² maximum cable entry
	Control signal	(all models)	1.5mm² maximum cable entry
Terminal torque settings:	0.5Nm - for all power and earth terminals.		
Fusing 2.5kW	F16A (6mm Ø x 32mm) - ceramic quick blow type ferrule fuse		
3kW	F16A (6mm Ø x 32mm) - ceramic quick blow type ferrule fuse		
4kW	F20A (6mm Ø x 32mm) - ceramic quick blow type ferrule fuse		
Working temperature:	65°C (maximum operational)		
Dimensions (2.5kW & 3kW):	94mm (D) x 86mm (W) x 105mm (H) – includes DIN rail clip		
Dimensions (4kW):	106mm (D) x 86mm (W) x 105mm (H) – includes DIN rail clip		
Fixing:	TS35 DIN rail mounting		

Note: SAFETY WARNING – Isolate supply before carrying out servicing work; Metal parts, in particular the heatsink, may get very hot when the unit is fully operational; DO NOT COVER heatsink ventilation slots.
It is essential that a load break switch and a contact breaker is installed in the load supply. The supply to the contactor coil should be interrupted by an over-temperature thermostat located in the heater battery and also upon detection of airflow loss.

RECOMMENDATIONS

Additional supporting documents, which may be appropriate for your application, are available on request.

NOTE: - It is recommended that installation and maintenance of this equipment should be carried out by suitably qualified/trained personnel with reference to the current edition of the I.E.E. wiring regulations (BS7671 The regulations contain important requirements regarding the safety of electrical equipment. For International Standards refer to I.E.C/ Directive IEC 950.

CE

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