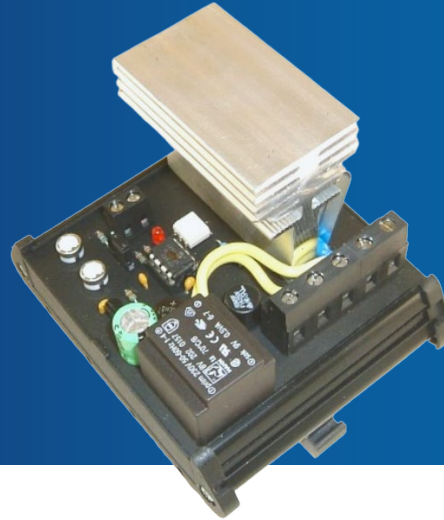


X10714
HVAC | HEATER BATTERY CONTROLLER

PR1-DIN-2.5kW

Up to 2.5kW, 230v
 DIN Mounted Single Phase Burst Fire HVAC Power



CONTACT US:

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KEY FEATURES:

- ✓ **Two Models:** Standard or remote 24V DC input
- ✓ **Integrated Heatsink:** Ensures maximum power capability
- ✓ **0-10V DC Control Input:** For precise control
- ✓ **Easy Installation:** Simple DIN-rail or panel mounting
- ✓ **LED Power Level Indication:** Clear visual status
- ✓ **Over Temperature Protection:** Auto shutdown and reset for safety

APPLICATIONS:

- Ideal for:
- Electric heater batteries
 - Ceiling or radiant heating
 - Hot water tanks
 - Heating cables
 - Furnaces
 - Ovens
 - Plastic processing equipment

The **PR1-DIN 2.5kW** thyristor stack offers seamless control of single-phase resistive loads using advanced burst firing technology. Designed for HVAC applications, this controller features fast pulse zero volts switching to minimize flicker and eliminate RFI problems. It also includes an auto-reset temperature trip, integral semiconductor fuses, and a heatsink for efficient cooling. With easy access to signal and power terminals, installation is straightforward and user-friendly.

TECHNICAL SPECIFICATIONS

Power/Current Ratings	Max. 2.5kW (10.9A) @ 230V RMS
Input Supply Voltage	230V AC RMS ±10%
Remote 24V DC Input Supply	24V DC ±10% (for 24V DC model only)
Frequency	50/60Hz
Ambient Temperature	35°C (maximum)
Control Signal	0 to 10V DC
Working Temperature	Max. 65°C
Cable Terminations	- Mains Supply: 2.5mm ² terminal
	- Control Signal: 1.5mm ² terminal
	- 24V DC Supply: 1.5mm ² terminal
Fusing	- PCB mount TR5-F1A, 250V AC (PCB protection)
	- SCR 250Vrms fast acting HS fuse (16LCT) or breaker MCB (Z-type) - 16A (device protection)
Thermal Cut Out	90°C (off); 85°C (on) ±1°C
Dimensions	83mm (H) x 75mm (W) x 94mm (D)
Terminal Torque Settings	0.8Nm (power terminals only)
Fixing	TS35 DIN-rail mounting

Note: SAFETY WARNING – Hazardous live parts exist on this board. Metal parts, particularly the heatsink, may get very hot during operation.



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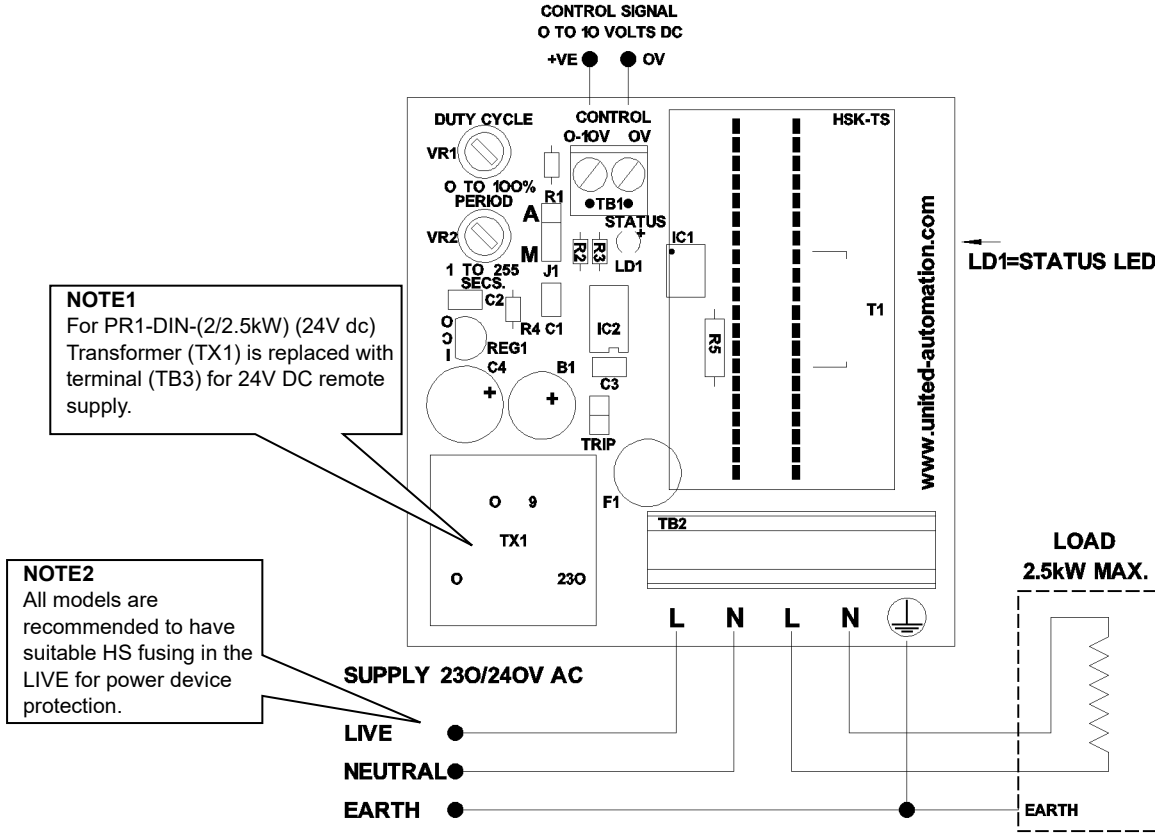
PR1-DIN-2.5kW

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DIN Mounted Single Phase Burst Fire HVAC Power Regulators

INSTALLATION

DIMENSIONS & CONNECTIONS



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FUNCTIONS

Cycle Time and Signal Rescaling

The cycle time is preset. A 0 to 10V DC input signal controls the load proportionally:

- 5V input signal: 50% load ON
- 2.5V input signal: 25% load ON
- 10V input signal: 100% load ON

CAUTION: Adjusting the cycle time and signal rescaling via VR1 and VR2 is possible but generally unnecessary. Incorrect settings can cause overload, failure, and permanent damage. DO NOT attempt adjustments without consulting the supplier/manufacturer.

Manual Override

The PR1 controller defaults to the auto 'A' position. Manual override is available by moving the J1 jumper plug to the 'M' position, and setting the load to 100% ON. The output load can then be reduced using the signal rescaling feature.

Over Temperature Protection

An electronic thermal cut-out in the heatsink prevents overheating. If the heatsink temperature exceeds 90°C, the PR1 regulator will disconnect the load. It will reconnect once the temperature drops below 85°C. Normally, the heatsink temperature stays below 90°C, but it may rise if the ambient temperature exceeds 35°C.



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Up to 2.5kW, 230v

DIN Mounted Single Phase Burst Fire HVAC Power Regulators

RECOMMENDATIONS

FUSING

It is recommended that semiconductor, fast-acting type fuses or circuit breakers (Semiconductor-MCB) be used for unit protection. On initial operation some loads may need an increased Factor of Safety (F of S) for unit and/or device protection. See the SRA datasheet for further information.

CE Marking

This product family carries a “CE” marking. These burst firing type controllers do not require a filter. For information see recommendation section and contact our sales desk. See the Declaration of Conformity.

DOCUMENTS

Other documents available on request, which may be appropriate for your application:

Code	Identity	Description
X10229	RFI	Filter recommendations: Addressing the EMC Directive
X10213	ITA	Interaction: Uses for phase angle and for burst fire control
X10255	SRA	Safety Requirements: Addressing the Low Voltage Directive (LVD) including, Thermal Data/Cooling, Live Parts Warning, Earthing Requirements and Fusing Recommendations
P01.1	COS	UAL Conditions of Sale

It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding the safety of electrical equipment. For International standards refer STANDARDS on D of C.

PRODUCT CODE AND RELATED PRODUCT CODE

Product Code	Product Description
A407260-HV	PR1-DIN-2.5kW - Standard 230V model
	PR1-DIN-2.5kW - 24V dc remote signal supply input model



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