

THYRISTOR CONTROLS SINGLE PHASE 0-10VDC

EY1..

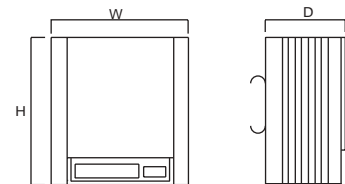
<p>These thyristor controls accept 0-10vdc input signals from temperature controllers to regulate the current flow to electric heaters or other resistive loads in order to achieve accurate proportional control. The unit operates on the burst fire zero voltage switching principle. Zero voltage switching for minimum RFI. Burst firing for minimum harmonic distortion. The full load is switched on & off in timed bursts and is proportional to the input signal.</p>		<p>For other voltages DO NOT exceed the fuse rating.</p> <p>The EY1-1.5 does not have an internal fuse. A high speed semi-conductor fuse should be fitted externally.</p> <p>All other units have fast semi-conductor fuses to protect against short circuit & overload.</p> <p>Max. ambient is 40°C - derate 20% at 50°C.</p> <p>Aluminium body with cooling fins.</p> <p>Metal cover</p>
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Type	Phase	Max Heater Duty kW	VAC	Supply Hz	Internal Fuse	Dissipated Heat (Watts)	Load	Mounting	Protection
EY1-1.5	1	1.5	230	50/60	-	1.8 x load current	>100KΩ	Din Rail	IP00
EY1-3	1	3.5	230	50/60	15A	1.8 x load current	>100KΩ	Din Rail	IP00
EY1-7	1	7.0	230	50/60	30A	1.8 x load current	>100KΩ	Din Rail	IP00
EY1-12	1	12.5	230	50/60	55A	1.8 x load current	>100KΩ	Bracket	IP00

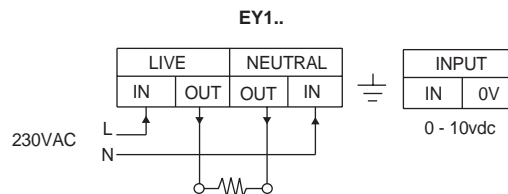
Ensure unit is adequately ventilated to dissipate internally generated heat.
 For larger heaters the load can be split between two thyristors controlled from a single temperature controller.
 For use with 0-10vdc temperature controllers - see separate data sheet.

DIMENSIONS:

Type	H	W	D
EY1-1.5	82	90	50
EY1-3	150	90	65
EY1-7	150	102	102
EY1-12	200	130	168



WIRING:



On 0-10vdc input, both the ground (0V) & signal wires must be connected. If the input signal is cut the thyristor output will be zero. During long 'off' periods the power supply to the thyristor should be turned off. Heaters should be protected with a high temp cut-out. Select a thyristor **allowing** for heater battery & supply voltage tolerances which may cause the current to increase by approx 20%.

Note the fuse ratings. One internal fuse is fitted to protect the thyristor only. All cables & external fuses must be fitted according to local regulations & safety requirements.

Load terminal size: EY1-1.5 / EY1-3 2.5mm² EY1-7 4mm² EY1-12 16mm² Input signal terminal size 0.5-2.5mm²

Min sensor / control signal cable size 7/0.2mm Max length 100m. The screen should be earthed at controller end only. Keep sensor/control signal wires away from power cables/units which may cause interference. Screened cable is recommended.

INSTALLATION:

Allow 25mm clearance on horizontal axis & 100mm on vertical axis between units. Air must be allowed to flow freely through the unit. Fit grilles or louvres to the top & bottom of any enclosures. Install with the cooling fins vertically - Forced ventilation may be necessary. Do not exceed the maximum ambient temperature.

FAULT FINDING:

Check the 0-10Vdc input ground & signal wires are in the correct terminals.
 If the internal fuse is blowing : Check the fuse rating & ensure the fuse is screwed down tightly.
 Check all terminals & wiring connections are TIGHT. Loose connections can cause bad contact/arcing or the terminal to overheat.
 Check electric heater or load rating. Check other units which may cause excessive current to be drawn.
 Check for short circuit on wiring or heater. Check supply voltage variations.

CAUTION:

These products may be connected to 230VAC supply. Device should be checked by a qualified technician before applying any voltage.
 Isolate device from electrical supply before removing cover. Observe all relevant safety precautions, wiring/earthing regulations and electrical ratings.
 Observe design limits of temperatures. Observe precautions for handling electrostatic sensitive devices.
 Always ensure the device operates at the correct temperature. If failure of the device can cause damage a safety backup control should be fitted.
 All data is for guidance purposes only, subject to change without prior notice and not guaranteed to be absolutely correct unless confirmed by us in writing.

