CSR1 & CSR2-B & E SERIES

CSR1/2-B/E

X10282

INTRODUCTION

The CSR power regulators are compact and robust units, which are capable of controlling single-phase mains driven loads of up to 15A. The CSR2 series regulators come in two styles, open (type B) and enclosed (type E), with the enclosed version having its own heatsink. The regulator gives a fully adjustable output from zero to maximum voltage. The standard unit is rated for 110V and 230V ac, but other voltages are available on request.

APPLICATIONS

Suitable for conventional resistive heating elements such as ovens, quartz lamps, moulders and dryers. Also suitable for some inductive loads such as transformers, fans and motors.

FEATURES

RoHS Compliant

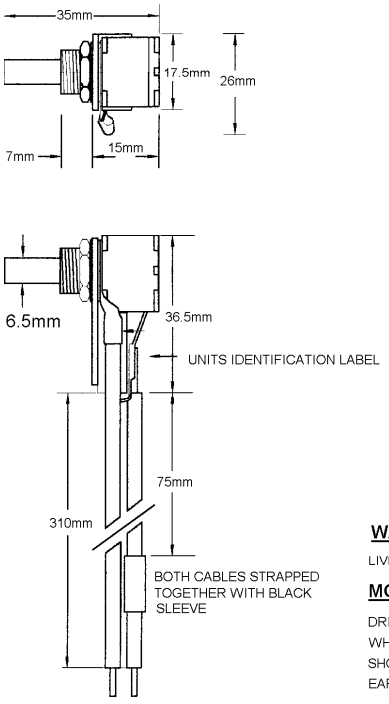
EXAMPLE - CSR2-

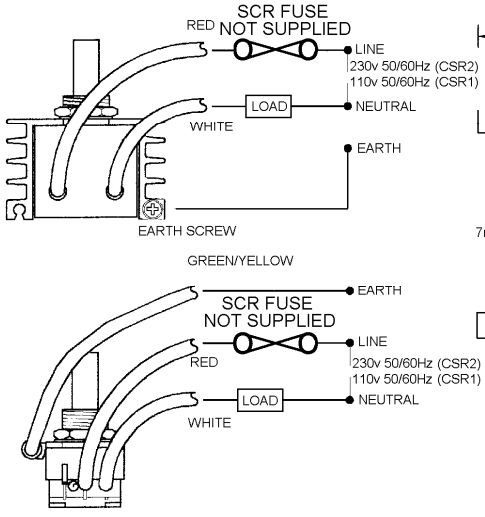
- Available in 6, 10, and 15A ratings.
- Compact and easy to use.
- Simple installation - with or without heatsink.
- Discrete component giving high reliability.
- Cost effective.

INSTALLATIONS

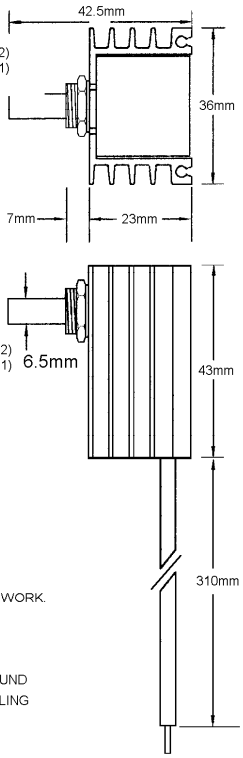
DIMENSIONS AND CONNECTIONS

CSR2 B SERIES





CSR2 E SERIES



WARNING

LIVE TERMINALS SWITCH OFF SUPPLY BEFORE COMMENCING ANY SERVICE WORK.

MOUNTING INSTRUCTIONS

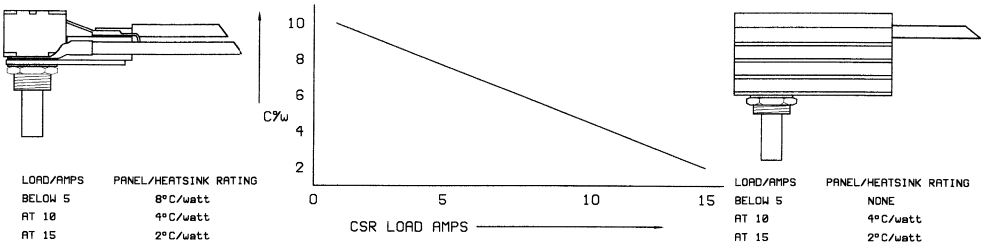
DRILL A 10.3mm HOLE

WHEN FIXING CSR TO ADDITIONAL HEATSINK, A SMEAR OF HEATSINK COMPOUND SHOULD BE USED BETWEEN THE BONDED SURFACES TO AID THERMAL COUPLING

EARTH BONDING SHOULD BE ACHIEVED BETWEEN ALL MATING SURFACES

INSTALLATIONS COOLING REQUIREMENTS Heatsink rating v rms maximum current

TO PREVENT IC OVERHEATING, THE CSR SHOULD BE FIXED FLUSH AND TIGHTLY TO A THERMALLY CONDUCTIVE PANEL OR HEATSINK WITH A SMEAR OF HEATSINK COMPOUND TO AID HEAT DISSIPATION



LOAD/AMPS	PANEL/HEATSINK RATING
BELOW 5	8°C/watt
AT 10	4°C/watt
AT 15	2°C/watt

LOAD/AMPS	PANEL/HEATSINK RATING
BELOW 5	NONE
AT 10	4°C/watt
AT 15	2°C/watt

SPECIFICATIONS

	UNIT	CSR1 (110V) & CSR2 (230V)					
TYPE		6B	6E	10B	10E	15B	15E
Maximum on-state current, I_{max} (tab @70ºC)	A rms	6	6	10	10	15	15
Peak one cycle surge currents	A	100	100	120	120	150	150
Off - leakage current (maximum)	mA	2					
Minimum holding load current	mA	30					
rms input voltage +/- 10% @ 50/60 Hz	V	110 or 230					
Repetitive peak voltage (tab @ 70ºC)	V	400					
Hysteresis	%	5					
Total conduction phase angle (typical)	degrees	0 to 160°					
Controlled phase angle (typical)	degrees	30 to 160°					
Power transfer at I_{max} (efficiency)	%	99					
Tab surface operating range	ºC	0 to + 75					
Storage temperature	ºC	0 to + 75					
Insulation withstand capability (tab @ 70ºC)	V	1500 for 1 min.					
I^2t limiting values for fusing	A^2s	18	18	50	50	100	100
Mounting hole diameter (minimum)	mm	10.3	10.3	10.3	10.3	10.3	10.3

FUSING

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (semiconductor- MCB) for unit protection. On initial 'switch on' some loads may need an increased Factor of Safety (F of S) for unit and/or device protection. See SRA Data sheet for further information.

CE MARKING

This product family carries a "CE marking". These phase angle controllers need a suitable remote filter. For more information see *recommendations* section and contact our sales desk.

RECOMMENDATIONS

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

CODE	IDENTITY	DESCRIPTION
X10229	RFI	Filtering recommendation - addressing 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 & Earth requirements; Fusing recommendations.
P01.1	COS	UAL Conditions of sale.

NOTE: It is recommended that installation and maintenance of this equipment should be done with reference to the current edition of the I.E.T. (formally I.E.E.) regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding installation and safety of electrical equipment. Specific installers should refer to local and national regulations.

ORDER CODE: State part number: **CSR1 or 2** (*Denotes supply voltage*) + (**current rating**) + *type* '**B'** *or* '**E'**
Optional extras include: knob, dial, heatsink compound, filters.
Note: When ordering a filter, the current the CSR is to be used at will be required.

CE

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