



# CSR/604/1004/1504

POWER REGULATOR CHIP

CSR

X10203

## INTRODUCTION

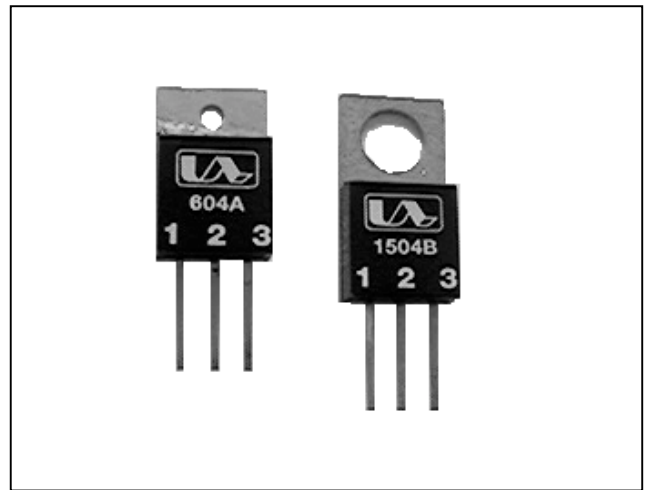
The CSR Power Regulator chip is a compact and robust unit, which is capable of controlling single-phase mains driven loads of up to 15 amps. Used in conjunction with variable resistance (potentiometer), the chip gives a fully adjustable output from zero to maximum voltage.

## APPLICATIONS

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

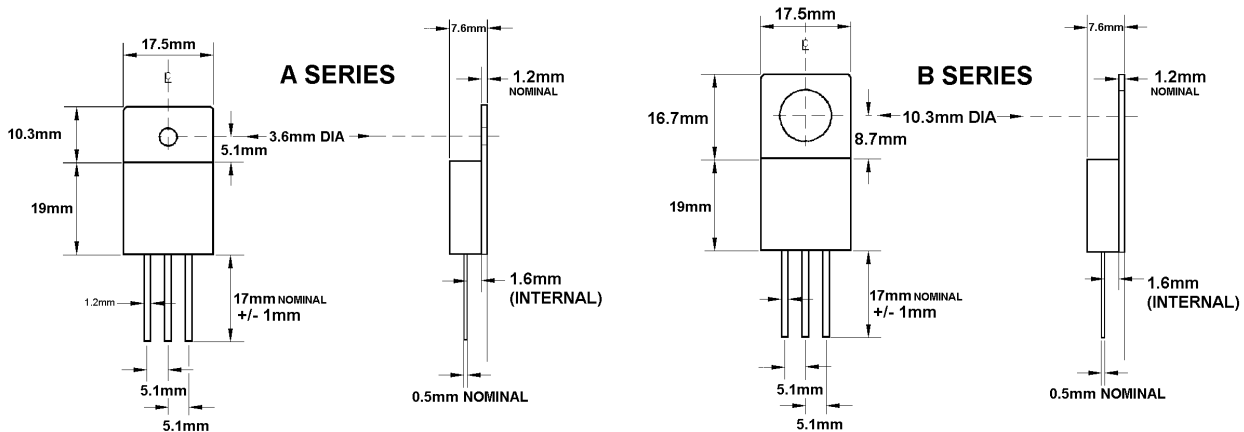
## FEATURES

- Available in 6, 10, and 15 ampere rating.
- Flexibility of mounting.
- Easy installation (3 pin connections).
- Isolated Tab.
- Low cost.



## INSTALLATION

### DIMENSIONS



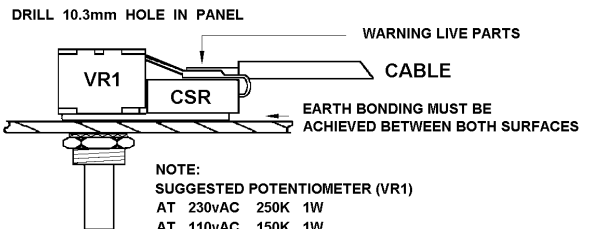
### INSTALLATION

#### MOUNTING INSTRUCTIONS

"A" VERSION : FASTEN DIRECTLY TO HEATSINK FOR GOOD EARTH BONDING

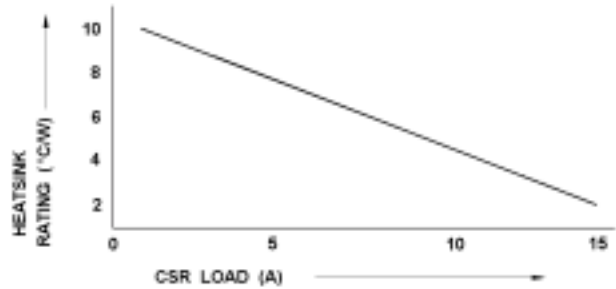
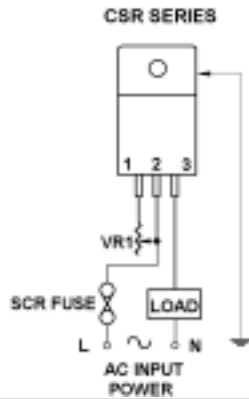
"B" VERSION : ATTACH DIRECTLY TO THE POTENTIOMETER TO THE PANEL (AS EXAMPLE - SIDE ELEVATION).

GENERAL NOTE: WHEN FIXING CSR TO ADDITIONAL HEATSINK, A SMEAR OF HEATSINK COMPOUND SHOULD BE USED BETWEEN THE BONDED SURFACES TO AID THERMAL DISSIPATION  
NOTE: HEATSINK MUST BE EARTHED



NOTE:  
SUGGESTED POTENTIOMETER (VR1)  
AT 230vAC 250K 1W  
AT 110vAC 150K 1W

**INSTALLATION**



**SPECIFICATIONS**

	UNIT	CSR 604A	CSR 604B	CSR 1004A	CSR 1004B	CSR 1504A	CSR 1504B
RMS max. On state current	A	6	6	10	10	15	15
Peak one cycle surge current	A	100	100	120	120	150	150
Maximum off leakage current	MA	-----		2	-----		
Minimum holding load current	MA	-----		30	-----		
RMS input voltage +/- 10% @ 50/60 Hz	V	-----		110/230	-----		
Repetitive peak voltage	V	-----		400	-----		
Total conduction phase angle (typical)	Degrees	-----		0 to 160°	-----		
Controlled phase angle (typical)	Degrees	-----		30 to 160°	-----		
Power transfer at max. Current (efficiency)	%	-----		99	-----		
Tab surface operating range	°C	-----		0 to + 70	-----		
Storage temperature	°C	-----		0 to + 75	-----		
Insulation withstand capability	V	-----		1500 for 1 min.	-----		
I <sup>2</sup> t limiting values for fusing	A <sup>2</sup> s	18	18	50	50	100	100

**FUSING**

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (Semiconductor-MCB) for 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 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. (See Declaration of Conformity)

**RECOMMENDATIONS**

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

CODE	IDENTITY	DESCRIPTION
X10229	RFI	Single Phase Filtering recommendations - 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.
AP02/4	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.E. wiring regulations (BS7671) by suitably qualified/trained personnel. The regulations contain important requirements regarding safety of electrical equipment (For International Standards refer to I.E.C/ directive IEC 950).

**ORDER CODE:**

State part number: CSR 'A' OR 'B' + (Load rating) and (Supply voltage)  
Optional extras include: Knob. Dial. Heatsink compound.



**UNITED AUTOMATION LIMITED**

1 Southport Business Park  
Kew  
Southport, PR8 4HQ  
ENGLAND

Tel: 0044 (0) 1704 – 516500 Main  
Tel: 0044 (0) 1704 – 516516 Sales  
Fax: 0044 (0) 1704 – 516501  
Enquiry@united-automation.com

