

# X10203 – CSR-A/B

## CSR-A & B Series Power Regulator Chip



### Issue 7

#### 1 Introduction

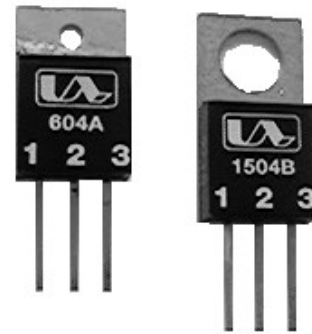
The CSR power regulator chip is a compact and robust unit, which is capable of controlling single-phase mains driven loads of up to 15A. Used in conjunction with variable resistance (potentiometer), the chip gives a fully adjustable output from zero to maximum voltage.

#### 2 Applications

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

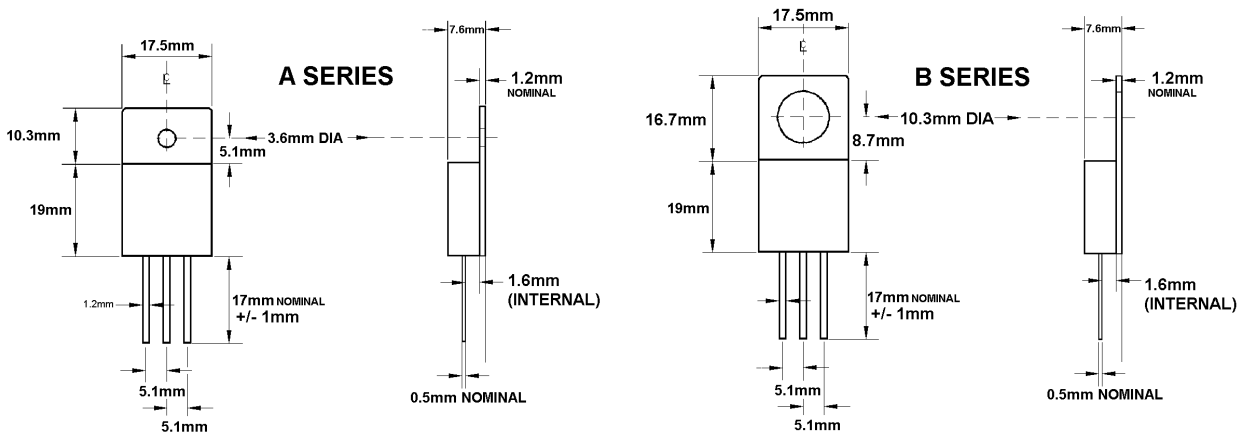
#### 3 Features

- Available in 6, 10, and 15A ratings
- Flexibility of mounting
- Easy installation (three pin connections)
- Isolated tab
- Low cost



#### 4 Installation

##### DIMENSIONS



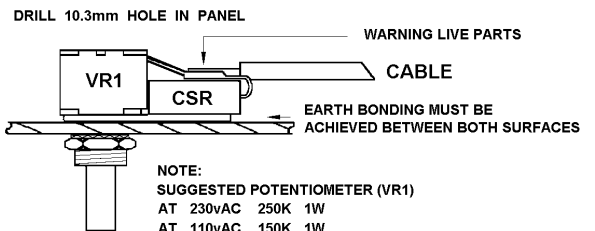
##### INSTALLATION

###### 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



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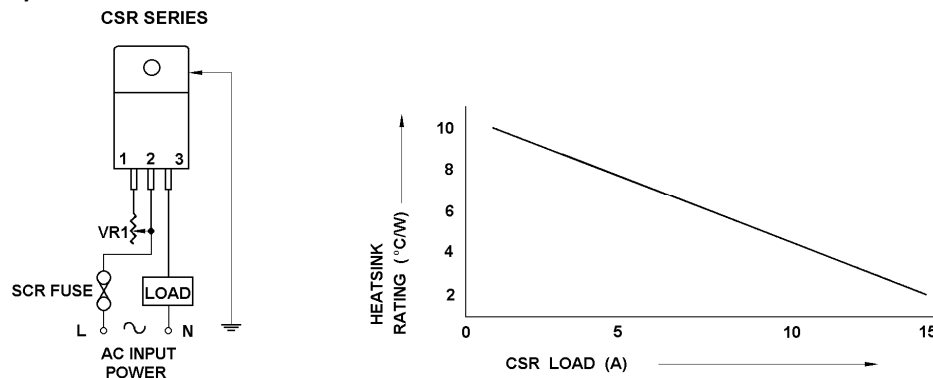
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4.1 **INSTALLATION** Stainless steel typically 15 times less thermally conductive and mild steel which is typically 5 times less thermally conductive.



## 5 Technical Specifications

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

**NOTE:** For supply voltages above 120V or 240V AC, the controller may not turn off fully.

## 6 Fusing

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

## 7 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.

## 8 Recommendations & Safety Requirements

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

Code	Identity	Description
X10229	RFI	Filtering 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
X10378	ILR	Inductive loads remedy sheet for use with phase angle controllers
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.

## 9 Order Code

<b>State Part Number</b>	A01110, A01210 CSR ‘A’ or ‘B’ + (load rating) and (supply voltage)
<b>Optional Extras</b>	Knob, dial, heatsink compound



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