



# 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.

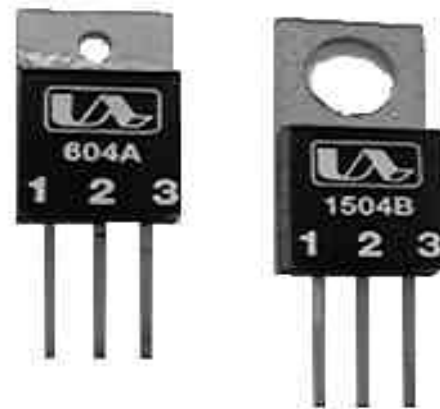
### APPLICATIONS

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

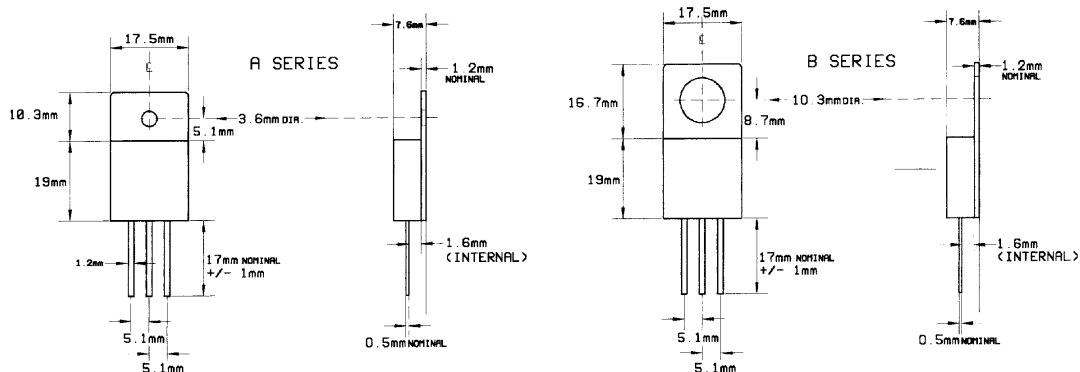
- Available in 6, 10, and 15 ampere rating.
- Flexibility of mounting.
- Easy installation (3 pin connections).
- Low hysteresis level.
- Low cost.

### EXAMPLES



### INSTALLATION

#### DIMENSIONS

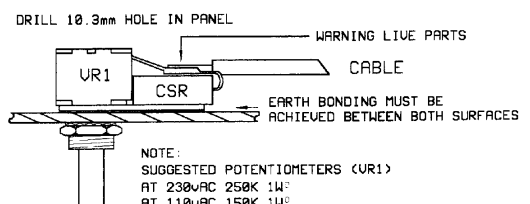


#### INSTALLATION

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

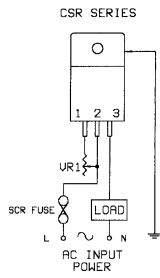
"B" VERSION: ATTACH DIRECTLY BY THE POTENTIOMETER TO THE PANEL (AS EXAMPLE - SIDE ELEVATION).

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

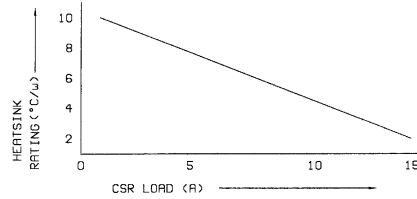


## INSTALLATION

### CONNECTIONS



### COOLING REQUIREMENTS



## SPECIFICATIONS

|   | UNIT    | CSR   | CSR  | CSR             | CSR   | CSR   | CSR   |
|---|---------|-------|------|-----------------|-------|-------|-------|
|   |         | 604A  | 604B | 1004A           | 1004B | 1504A | 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. | ----- |       |       |

## FUSING:

It is recommended to use semiconductor (fast acting) type fuses or circuit breakers (Semiconductor - MCB) for unit protection. (See SRA Datasheet for further information).

## CE MARKING

This product family carries a "CE marking". These phase angle type controllers require a suitable remote filter. For information see recommendation section and contact our sales desk. (See Declaration of Conformity).

## RECOMMENDATION

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

| 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; 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  
Southport, PR8 4HQ, U.K.

Tel (01704)-565713  
Fax (01704)-569760

Page No 2 of 2 Issue 2 17/07/98

