

# Novaris<sup>®</sup>

PART OF THE POWERCOM GROUP

## Surge Counters

### Installation Instructions



Thankyou for choosing Novaris surge protection.

Novaris has been designing and manufacturing lightning and electrical disturbance protection for over 15 years. We specialise in the protection of power and data signalling. Our products are in use Australia wide, and internationally, and we are now world leaders in lightning and surge technology.

At our Australian headquarters we operate a full time research and development group, employing professional engineers, technical officers and drafting support staff. Our testing laboratory is capable of generating and measuring simulated lightning impulses in accordance with world power and telecommunications standards. We also have offices and distributors throughout Australia and world wide.

Novaris designs and manufactures all the products bought by you at our manufacturing locations under the ISO 9001:2000 quality assurance system. Giving you the reassurance that you surge protection will protect your equipment.

We guarantee the quality of our products.

We stand by our products for their quality, and ingenuity. If there are any improvements you feel can make on our products, please call us, email us, or visit us. Our engineering sales team are always keen to hear from our customers.

If you require further information about our company or have a suggestion to change this product to suit your need better,

Please call us on:           (+613) 6229 7233  
Or email us on:            info@novaris.com.au  
Include in the subject line: "product improvement"

**IMPORTANT:** Please read these instructions carefully. Whilst straightforward, the installation of these devices is critical to their performance. Installation should only be carried out by a suitably qualified person in accordance with all relevant standards.

### 1. Introduction

- 1.1 These installation instructions apply to the Novaris range of surge counters with the following catalogue numbers:
- TSC1-IP65
  - TSC1-DIN
  - TSC1-DIN-EC
- 1.2 These products are used to count the number of surges experienced at a site. The TSC1-DIN-EC also doubles as an earth clamp. This eliminates the problems associated with having two separate earths by clamping the two together during a surge.



Figure 1: TSC1-IP65 & TSC1-DIN

### 2. Installation of TSC1-IP65

- 2.1 Using the clamps provided, the TSC1-IP65 model is simply clamped to a downconductor (as shown in Figure 2) or to an earth return conductor of a surge diverter or surge filter.

To adjust the clamps, remove the clear plastic front of the unit. The clamps may then be tightened or loosened using a suitably long phillips head screwdriver in the four round holes at the corners of the TSC1-IP65.



Figure 2: Installation of TSC1-IP65

### 3. Installation of TSC1-DIN & TSC1-DIN/EC

- 3.1 **TSC1-DIN:** If using a MEN wiring system, the TSC1-DIN should be connected between the neutral terminal of a surge filter or surge diverter and the neutral bar for the system. In a non MEN system the TSC1-DIN should be connected between the earth terminal of a surge filter or surge diverter and earth. Lead lengths must be kept as short as possible.
- 3.2 **TSC1-DIN/EC:** The TSC1-DIN-EC model is connected between two different earthing systems as shown in Figure 4. Again, lead lengths must be kept as short as possible.
- 3.3 **Earth:** All units should be mounted on a DIN rail. For safety it is crucial the DIN rail is electrically connected to earth.
- 3.4 **Display unit:** The display unit is connected as shown in Figure 6. The connecting leads do not need to be kept short but should be routed away from electrically noisy environments. This allows the display unit to be panel mounted in a convenient location.

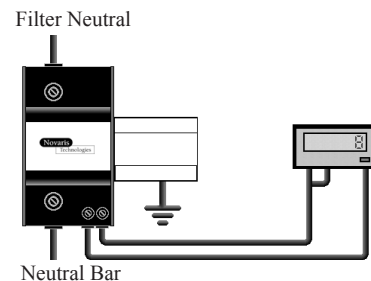


Figure 3: Installation of TSC1-DIN in MEN system

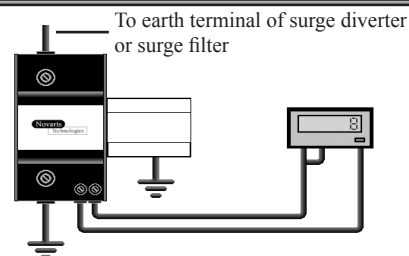


Figure 4: Installation of TSC1-DIN in Non MEN system

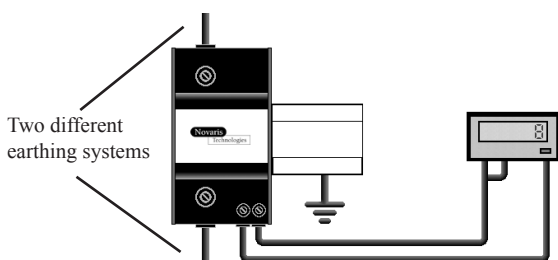


Figure 5 : Installation of TSC1-DIN-EC

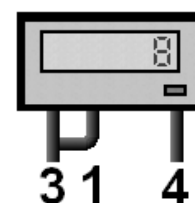


Figure 6 : Wiring Display Unit



72 Browns Road, Kingston, TAS. 7050  
AUSTRALIA

Telephone: +61 3 6229 7233  
Facsimile: +61 3 6229 9245  
E-mail: [sales@novaris.com.au](mailto:sales@novaris.com.au)  
Web site: [www.novaris.com.au](http://www.novaris.com.au)

No.15, 2nd Floor Jalan Tembaga SD 5/2  
Sri Damansara Industrial Park,  
52200 Kuala Lumpur, Malaysia  
Telephone: 603-6273 1599  
Facsimile: 603-6272 2599  
E-mail: [sales@novaris.com.my](mailto:sales@novaris.com.my)  
Web site: [www.novaris.com.au](http://www.novaris.com.au)