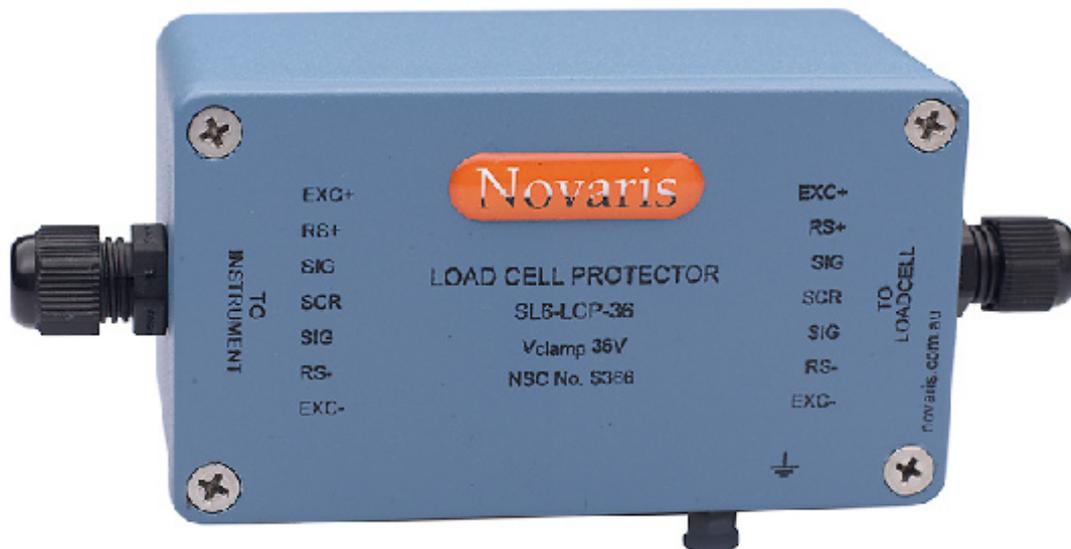


Novaris[®]

PART OF THE POWERCOM GROUP

Load Cell Protectors

Installation Instructions



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 user instructions apply to the range of Novaris load cell protectors.

Cat No.:

LCP-18
LCP-36

LCP-18-PCB
LCP-36-PCB

- 1.2 These products protect against the effects of lightning induced surges and other transient overvoltages.

They provide both common-mode and transverse-mode protection, which is essential for the effective protection of any system.

- 1.3 The Novaris load cell protectors are fitted to an IP65 aluminium enclosure as standard. However, a printed circuit board (PCB) only version is also available.

- 1.4 Load cell protectors are suitable for both 4 and 6 wire load cells and measuring instruments.



Figure 1: Novaris load cell protectors

2. Before Installation

- 2.1 Ensure that the maximum operating voltage of the signal lines does not exceed the clamping voltage of the load cell protector.
- 2.2 Ensure that the maximum operating current of the signal lines does not exceed the maximum load current of the load cell protectors as stated in the specifications.
- 2.3 Turn the power off before beginning the installation.

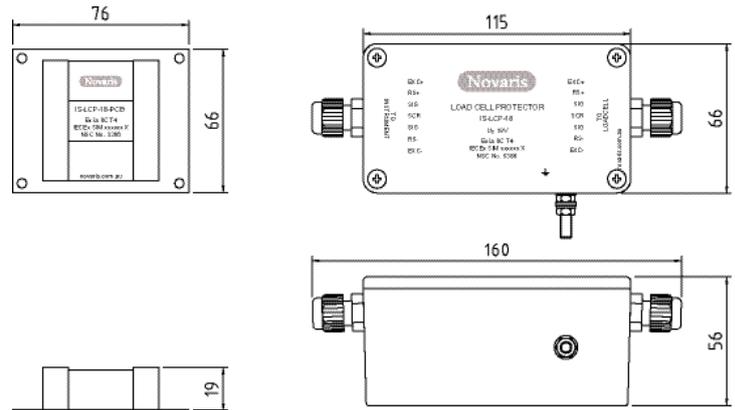


Figure 2: Dimensions of the load cell protectors

3. Installation

- 3.1 **Point of Connection:** The surge protector should be connected at the closest practical point to the equipment to be protected.
- 3.2 **Mounting:** The load cell protectors are fitted with an IP65 enclosure as standard and are suitable for installation in exposed environments.

The LCP-xx-PCB units are not fitted with an enclosure and must be mounted on stand-offs at least 5mm tall to protect the unit from short circuit. The LCP-xx-PCB must not be installed in an exposed environment.

- 3.3 **Isolation:** These units must be galvanically isolated using a suitable safety barrier.

- 3.4 **Wiring:** Load cell protectors are connected in series with the equipment (Figure 3).

The load cell or measuring equipment to be protected is connected to the load cell (equipment) side of the load cell protector. The field wiring is connected to the instrument (line) side of the load cell protector.

For 4-wire load cells, the RS+ and RS- terminals can be left unconnected.

3.4 Earthing: The surge protector must be earthed to the same point as the equipment to be protected. The earth stud of the load cell protector must be directly connected to the load cell body (e.g. the metal enclosure of the load cell). The connection should be made using a using multistranded conductor with cross-sectional area of at least 6mm².

IMPORTANT: Because the earth is shunt-connected, the inductance of the connection has a significant effect on performance. Most importantly, **the length of the earth connection must be kept as short as possible**. This is not the case with the other connections because they are series-connected.

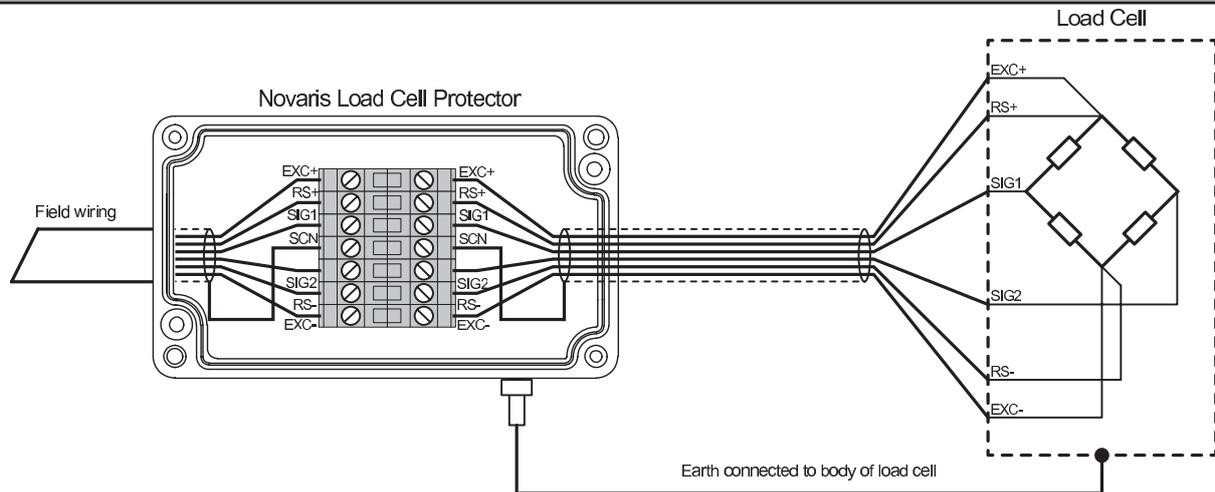


Figure 3: Installation of load cell protector

4. After Installation

- 4.1 Check the installation by testing that the equipment is operating correctly.
- 4.2 Novaris load cell protectors are extremely robust and require very little maintenance. Periodic inspections and testing is recommended.
- 4.3 Novaris load cell protectors have no user serviceable parts. Please contact Novaris for a replacement unit.



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