



REMOTE MONITORING SPECIALISTS

## INSTALLATION GUIDE

### Conet Dual Termination Board C6170

The Conet Dual Termination Board is used to provide redundancy on Conet/c networks.

It links two Maxiflex systems using two separate Conet/c networks in two separate cables thus providing fall over networking should there be a failure in any one of the two cables.

An additional power supply is needed in each cable which switches over to the other cable should the cable fail.

The switching over of the cable is controlled by each CPU using special embedded software which handles the fall-over function. The CPU switches on a Digital Output. This Digital Output switches 24V to the Dual Termination Board thus switching the Conet connection over to the second cable.

#### Application Examples

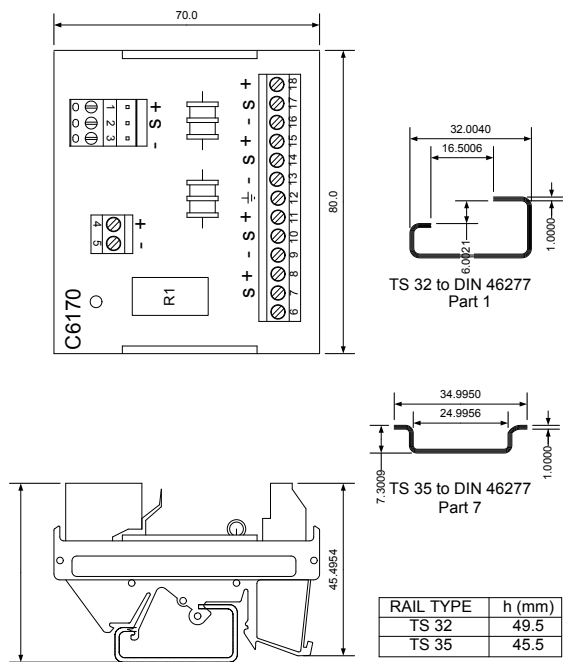
- Critical Conet/c networks

#### Features

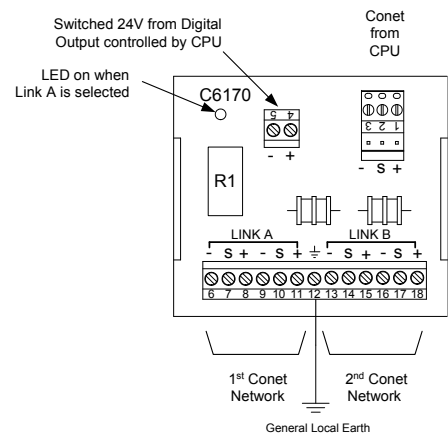
- DIN Rail (35x7mm) mounting
- Operates on 24Vdc
- Built in suppression for both networks.
- LED indication of relay status

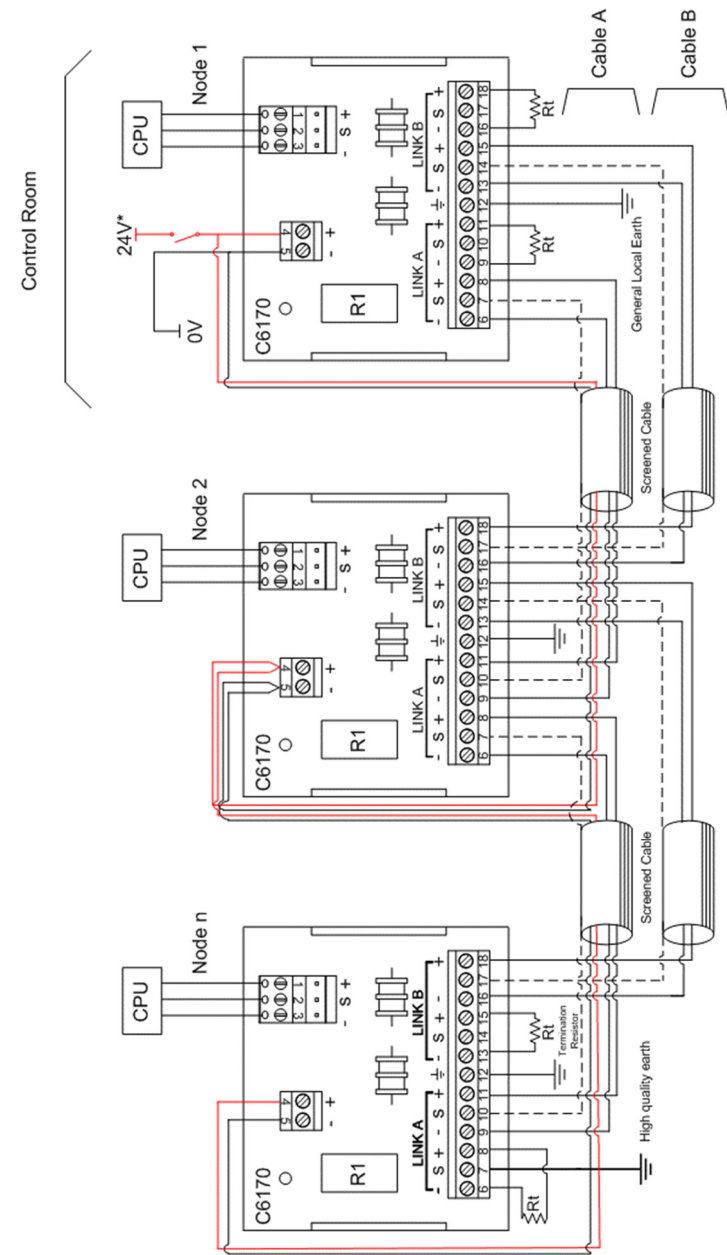


# Mechanical Dimensions



# Block Diagram





## Conet Recommended Installation Practices

Refer to Conet Datasheet for more details on Conet networks.

1. Use a C6170 Conet Dual Termination Board to connect every node to the network. This provides five benefits:
  - a) High voltage transient suppression via gas discharge devices;
  - b) Easy loop-through connections via paralleled terminals;
  - c) Ability to connect and disconnect node via removable terminal block without disturbing network wiring. This can be done while the network is live;
  - d) Facility to connect a line termination resistor directly into the unused terminals at each end of the line;
  - e) Facility to connect screen to earth.
2. Connect a line termination resistor at each end of the network. This is usually 100 ohms, 1 Watt, but may be accurately determined using the Conet Line Tester.
3. Ground the Conet screen to a High Quality Earth at only ONE point on the network. This prevents ground loops due to differing potentials around the plant. Each C6170 termination board must be connected to a General Local Earth nearby, to provide a discharge path for the gas discharge devices. (See diagram below).
4. Do NOT suspend the cable high above ground in places where it is especially susceptible to lightning strikes.
5. Avoid running the cable next to high voltage carriers, e.g. 6kV lines as this makes it vulnerable to induced noise.
6. Do NOT tee off the main Conet line more than 20 metres as this may introduce line reflections and error signals.
7. Assign node IDs in ascending order on the network, beginning with ID 1. The physical location of the node does not make any difference, but Conet works most efficiently when there are no gaps in node IDs and they begin at 1.

8. Test the proposed cable for the installation with the Conet Line Tester prior to installing it. This device injects a signal which can be analyzed with an oscilloscope to determine the cable characteristics. Conet is designed to operate on 6V differential voltage but will operate as low as 600mV provided the waveform is not too distorted.
9. Use radio links to aid in commissioning a system which is spread out over a large area. A field telephone may be used with unused pairs in a multi-core cable.

## Specifications

### Input Voltage

DC Input voltage range	22 to 26Vdc
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### Mechanical

Weight (Unpacked)	90g approx
Dimensions	70mm x 80mm x 47mm (including terminals)

### Compliance to Standards

Safety	IEC950; EN 60950:1995
Emissions	EN 55011 :1997 Group I, Class A
Immunity – ESD	IEC 61000-4-2:1995, level 3
Immunity – RF Fields	IEC 61000-4-3:1995, level 3
Immunity – Fast Transients	IEC 61000-4-4:1995 2 kV – AC & DC Power Ports 1 kV – other input/output lines
Insulation Resistance (100% tested)	100 Mohm at 500Vdc input to outputs to ground
Insulation Breakdown (100% tested)	1500Vac input to earth for 1s 1000Vac output to earth for 1s.

### Ordering Information

ORDER CODE	DESCRIPTION
C6170	Conet Dual Termination Board

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