

# XP95 DIN-RAIL DUAL ISOLATOR

## FUNCTION

The XP95 DIN-rail Dual Isolator provides, in one housing, two independent isolators which sense and isolate short-circuits on XP95 loops and spurs.

## FEATURES

The isolators are loop-powered and are polarity sensitive. A maximum of twenty XP95 detectors may be installed between isolators.

When a short-circuit condition exists on either side of the isolator, its yellow LED is illuminated.

## PROTOCOL COMPATIBILITY

The unit is intended for use in systems using the Apollo Series 90, XP95 or Discovery protocols.

## OPERATION

Under normal operating conditions, a low impedance is present between the two negative terminals of each isolator channel so that power and signals are passed to the next base in line.

If a short-circuit or abnormally low impedance occurs across the loop, the fall in voltage is sensed and the isolator isolates the negative supply in the direction of the fault. In this condi-



*Isolator, part no. 55000-802, shown as one of a cluster of DIN-rail mounted interfaces*

tion, the yellow LED of the affected channel will be illuminated. The isolated section of loop is tested using a current pulse every five seconds. When the short-circuit is removed the power will automatically be restored.

The two isolator channels are not interconnected internally, and operate completely independently of one another.



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## MECHANICAL CONSTRUCTION

The DIN-rail isolator is supplied in a standard housing which is clipped onto a standard 35mm DIN rail (DIN 46277) or fixed directly to the enclosure using two 4mm screws.

Connections are made via plug-in terminal blocks which accept wires up to 2.5mm<sup>2</sup>.

Two yellow LEDs – one per channel – are visible through the top cover of the enclosure. When a channel is in an isolating condition, the associated LED is illuminated continuously.

### Dimensions and weight of Isolator:

110 x 107 x 20mm                      90g

## Technical Data

Maximum supply voltage	30V DC + 9V protocol pulses
Volt drop	
at 50m A	10mV
at 500mA	100mV
Switch-on voltage	Input 17.5V, output 15V
Switch-on time (to step), 2kΩ load at 18V	30mS
Isolation time, 2Ω load at 28V	20μS
Isolating voltage	14V DC
Isolation indicator	Yellow LED, lit continuously in isolation condition
Current consumption	
at 18V	27μA
at 28V	47μA
at 18V and adjacent sector isolated	4mA
Maximum line current	
non-isolating continuous	1.0A
transition into isolation	3.0A
On resistance	0.2Ω
Reset resistance at 18V with short after next isolator	300Ω
EMC	
Emission	To BS EN 50081-1
Immunity	To BS EN 50130-4
Operating temperature	-20° C to +60° C
Storage temperature	-30° C to +80° C
Relative humidity (no condensation/icing)	0%–95%
Design environment	Indoor use only

**CE** marked

## Schematic Diagram and Wiring Connections

