

ISOLATING BASE



S-A4007

TECHNICAL DATA

Minimum supply voltage in normal operating conditions	17 V DC
Maximum supply voltage	28 V DC (plus 9 V DC protocol pulses)
Isolation indicator	Yellow LED, lit continuously in isolation condition
Current consumption	
at 18 V DC	23 μ A
at 28 V DC	43 μ A
at 18 V DC and adjacent sector isolated	4 mA
Maximum line current	1.0 A
Non - isolating continuous	
Transition into isolation	3.0 A
EMC	BS 61000 - 6 - 3 Emission To BS EN50081 - 1 Immunity To BS EN50130 - 4
Operating temperature	-20°C to +60°C
Storage temperature	-30°C to +80°C
Relative humidity (nocondensation/icing)	0 - 95%
Design environment	Indoor use only
Dimension: (diameter x height)	100 mm x 24 mm
Detector in base	100 mm x 60 mm
Weight	100 g

DESCRIPTION

The Isolating Base senses and isolates short circuit faults on loops and spurs.

The base is loop - powered, polarity sensitive and accepts the XPERT card to set the associated device address. In short-circuit conditions the integral yellow LED is illuminated. The detector associated with the base remains active under short-circuit conditions. Power and signals to the affected section are restored automatically when the fault is cleared. The Isolating Base is intended for use with equipment using the SHIELD communication protocol.

OPERATING PRINCIPLE

Under normal operating conditions, a low impedance is present between the - IN and - OUT terminals of the base, so that power and signal pass to the next base in line.

If a short-circuit or abnormally low impedance occurs, the fall in voltage is sensed and the base isolates the negative supply in the direction of the fault. The isolated section is tested using a current pulse every five seconds. When the short-circuit is removed, the power will automatically be restored.

If it is a requirement that no device is lost in the event of a single short-circuit fault, every detector should be fitted to an isolating base. In applications where it is not necessary to use an isolating base for each detector, up to twenty detectors or equivalent surge current may be installed between isolating bases. Consult engineering guides or PIN sheets for quiescent current values of protected devices.

Fig. 1 - Schematic wiring diagram of Isolating Base

