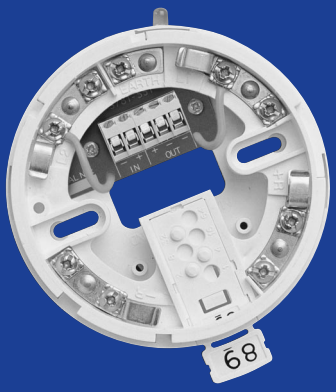
20D ISOLATING BASES



Part Number 45681-321

The Context Plus XP95 20D 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.

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

In applications where it is not necessary to use an isolating base for each detector, up to twenty devices (detectors and interfaces) may be installed between isolating bases, provided that their total switch-on surge current does not exceed 20mA.

Circuits may include spurs, which should be connected between the spare –OUT terminal and the base L1 terminal. Spurs connected in this way appear directly across the loop on the output side of the isolating base. Short-circuit faults on the spur therefore short circuit the loop and vice versa. The effect of such short circuits must be taken into account in the system design and may require the use of extra isolating bases.

For further information on the use of isolators, please refer to the section entitled NOTES ON SHORT CIRCUIT ISOLATION on page 26.

Technical Data

Device Part No: 45681-321 IMC

Maximum Loop Operating Voltage: 28V DC plus 9V protocol pulses

Minimum Normal Loop Operating Voltage: 17V DC

Power-up time: >10mS

Isolation time, 2Ω load at 28V: 20µs

Isolation Voltage: 14V

Isolation Indicator: Yellow LED, lit continually in isolation condition

Current Consumption at 18V: 23µA

Current Consumption at 28V: 43µA

Current Consumption at 18V and adjacent sector isolated: 4mA

Maximum Line Current

Non-isolating continuous: 1.0A;

Transition into isolation): 3.0A

On Resistance: <0.2Ω

Device Reset Resistance: 300Ω

Operating Temperature: -20°C to +60°C

Storage Temperature: -30°C to +80°C

Relative Humidity (no condensation/icing): 0% to 95%

Dimensions: 100mm (diameter) x 24mm (height); 100mm (diameter) x 60mm (height) base with detector fitted

Weight: 100g