

INS007

Transient Suppression Module for RS-485 Communications

- Provides Advanced Protection against Electrical Disturbances for RS-485 Systems



The INS007 RS-485 Transient Suppression Module has been developed by INS Technologies to help protect RS-485 communication systems against common electrical disturbances.

FEATURES

- Power supply protection (immunity and fused)
- Signal (RS-485) protection (isolation and immunity)
- 2.5kV Galvanic Isolation of the RS-485 Ports
- ESD Protection (EN 61000-4-2): Level 4 (8kV Contact and 15 kV Air)
- EFT Protection (EN 61000-4-4): Level 4 (4kV on power port, 2kV on signal port)
- Surge Protection (EN 61000-4-5): Level unspecified (6 kV)
- Simple LED system status indication
- RS-485 Ports have selectable fixed terminations
- Baud rate selectable from 9600 - 115200 bits/sec
- DIN rail mounting

The INS007 protects against the following common electrical disturbances:

- Electrostatic Discharge (ESD) – Caused by personnel, who may have become electrostatically charged, touching the equipment or other equipment nearby.
- Electrical Fast Transient (EFT) – Bursts of fast low energy transients, produced by the switching of inductive loads, that are induced into signal and data circuits.
- Slow high energy voltage surge (Surge) – Slow high energy transients which may be induced into power and signal cables by lightning strikes in the vicinity.

The INS007 features two galvanically isolated RS-485 ports. The INS007 modules can be installed between communication equipment in areas that are susceptible to electrical disturbances, offering an increased level of protection to the communication equipment.

The INS007 has selectable 'break signal overdrive' protection. This limits the maximum 'break signal' to a predetermined length preventing a system failure due to unwanted continuous 'low' drive onto the system bus.

SPECIFICATIONS

DIMENSIONS

Dimensions:	99.1 X 111.9 X 22.5 mm
Weight:	200g
Mounting:	DIN Rail

POWER

Operating voltage:	18 to 36V (24V DC nominal)
Current Consumption:	100mA (at 24V)
Current Rating:	1.0A (fused)

INTERFACES

RS-485:
 Port A - Selectable Fixed Termination (1200)
 Port B - Selectable Fixed Termination (1200)
 Port A & Port B - Isolated (2.5kV)
 Baud Rate - 9600 to 115200 (configurable)
 Break Signal Overdrive (selectable)

Power Supply:
 Power In to Power Out, 1.0A fused

TEMPERATURE

Operating:	-10 to 50°C
Storage:	-40 to 70°C

AGENCY APPROVALS AND STANDARDS

CE, UKCA, RoHs, WEEE compliant
 EMC: EN 61000-6-2
 EMC: EN 61000-6-4
 Safety: EN 60950

WIRING DIAGRAM

