

# TSM100

## Transient Suppression Module for RS-485 Communications

Provides Advanced Protection against Electrical Disturbances for RS-485 Systems



## Overview

The TSM100 RS-485 Transient Suppression Module has been developed by Instance Global – Managing Data Xchange S.L. to help protect RS-485 communication systems 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 TSM100 features two galvanically isolated RS-485 ports. The TSM100 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.

## 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

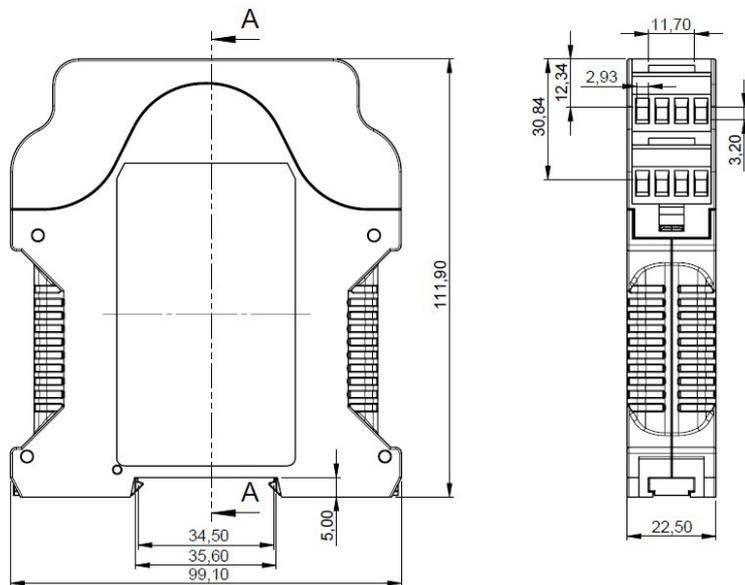


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# Specifications

## Dimension Diagram

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



## Power

Operating Voltages: 18V – 36V (24V Nominal)  
 Current Consumption: 100mA (at 24V)  
 Current Rating: 1.0A (fused)

## Interfaces

RS485: Port A: Selectable Fixed Termination (120Ω)  
 Port B: Selectable Fixed Termination (120Ω)  
 Port A & Port B: Isolated (2.5kV)  
 Baud Rate: 9600 to 115200 (selectable / configurable)  
 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, RoHs, WEEE compliant  
 EMC: EN 61000-6-2, Immunity Standard (Industrial Environments)  
 EN 61000-6-4, Emission Standard (Industrial Environments)  
 Safety: EN 60950, IT Equipment



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