

Z Line Signal Conditioner – Isolating Loop Power Supply Z109S - PRODUCT MANUAL

GENERAL FEATURES

- Provides 20Vdc stabilised loop power supply at 20mA.
- Input and Output protected against accidental short circuit.
- Full 1,500Vac three port galvanic isolation.
- Retransmits input loop value on output loop.
- Input and Output can be active or passive.
- LED “Power On” indication on front of module.
- Inputs protected from transients up to 400W/ms.
- Compact case, suitable for DIN rail mounting.
- Input, supply and outputs on “plug in” screw terminals.



TECHNICAL SPECIFICATION

Power supply:	19–40 Vdc, 19–28 Vac 50-60Hz, max 2.5W			
Input:	Current: 0-20mA or 4-20mA			
Input Impedance:	20Ω			
Operating Temperature:	Temperature: 0~50°C (See installation section)			
Humidity:	Humidity: 30%~90% @ 40°C, non-condensing			
Storage conditions:	Temperature: -20~70°C.			
Accuracy:	Calibration	Thermal Stability	Linearity	Other
	0.2%	0.02%/°C	0.05%	
Input protection:	100mA continuous, protected against short circuit.			
Standards:	The instrument complies with the following standards: EN50081-2 (electromagnetic emissions, industrial environment) EN50082-2 (electromagnetic immunity, industrial environment) EN61010-1 (safety)			



INSTALLATION

The Z109S module is designed for mounting vertically on symmetrical 35mm (top hat) DIN rail (DIN 46277). For optimal operation and long life the module(s) **must** have adequate ventilation. Avoid positioning cable ducting or other objects that obstruct the ventilation louvers and free flow of air. Avoid fitting modules above heat generating equipment; it is usually advisable position the modules towards the bottom of the panel.

Module Spacing:

It is **always** advisable and recommended to **separate adjacent modules by at least 5mm** for cooling and ventilation.

Where space is at an absolute premium and the modules must be mounted touching each other on the DIN rail, the following limitations apply:-

Maximum Panel Temperature limited to 50°C where

Module power supply voltage is LESS THAN 30Vdc / 26 Vac.

AND

Module DOES NOT supply power to the input loop or sensor.

Maximum Panel Temperature limited to 45°C where

Module power supply voltage IS GREATER THAN 30Vdc / 26 Vac.

OR

Module DOES supply power to the input loop or sensor.

Maximum Panel Temperature limited to 35°C

Module power supply voltage IS GREATER THAN 30Vdc / 26 Vac.

AND

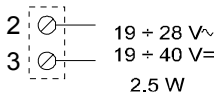
The module DOES supply power to the input loop or sensor.



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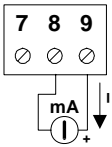
POWER SUPPLY



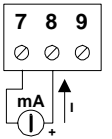
The module accepts any power supply from 19 to 40 Vdc and 19 to 28 Vac. It is not polarity conscious (See INSTALLATION section for further information)

Serious damage to the module can result from exceeding these limits.

INPUT

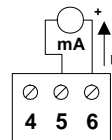


ACTIVE INPUT : Connection for standard 2 wire transmitters, where the loop draws power directly from the Z109S. The power supply is 20Vdc stabilised with a maximum current of 20mA and is protected against accidental short circuit.

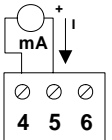


PASSIVE INPUT : Connection for use when the current loop does NOT require power from the module (the loop power is externally supplied)

OUTPUT

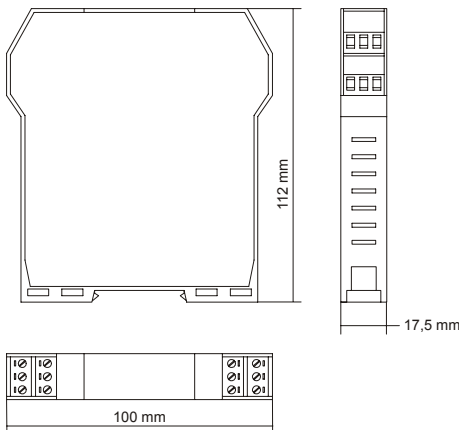


ACTIVE OUTPUT : Connection for use when the output current loop must be powered by the Z109S. Maximum load is 600Ω and the loop power supply is protected against accidental short circuit.

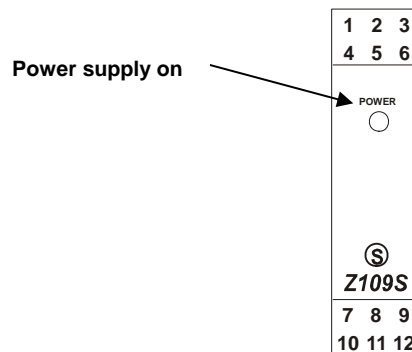


PASSIVE OUTPUT : Connection for use when the output current loop does NOT require power from the module (the output loop power is externally supplied)

DIMENSIONS



FRONT LED INDICATOR



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