

Z-LINE

OVERVIEW

Z-Line series offers a full range of signal conditioners including **Signal Converters, Transmitters, Galvanic Isolators, Splitters, Trip Amplifiers** and **Maths Modules**. They are easy to use, simple to install and have a universal (ac/dc) low voltage supply.

Specifications Z-LINE

Power supply : 10 – 40 Vdc / 19 – 28 Vac / 85..265 Vac/dc / 5..30 Vdc loop powered
Maximum power consumption : 2.5 W
Isolation: from 1500 Vrms (up to 4.000 Vrms) for 1 minute at three points (power supply/input/output)
Operating temperature: 0 - +50 °C / -10..+60 °C
Storage temperature: -20 - +70 °C
Maximum humidity: 90% at +40 °C (non-condensing)
Connections: Screw-fit removable terminals for wires up to 2.5 mm²
Mounting: For guide 35 mm DIN 46277
Case dimensions: 17.5 x 100 x 112 mm
Case material: Nylon 6 filled with 30% fibreglass – self-extinguishing class V0

CE and UL Standards



All Serie Z products comply with the directives concerning electromagnetic compatibility in INDUSTRIAL ENVIRONMENTS:

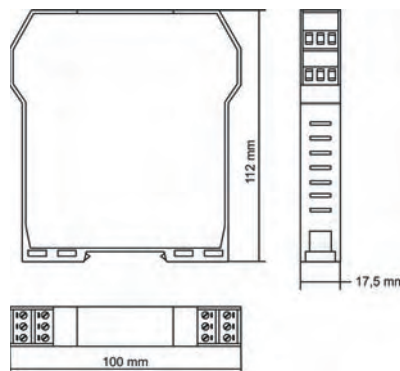
EMISSION in compliance with:

- Standard EN 50081-2
- Conducted EN 55011
- Radiated EN 55011

IMMUNITY in compliance with:

- Standard EN 50082-2:
- ESD EN 61000-4-2
- Burst EN 61000-4-4
- Radio frequency EN 50140 / 141

Dimensions



Highlights



Connections and Mechanics

- Screw-fit removable terminals
- Rail mounting
- Compact housing (17.5 mm wide)



Parameters configuration

- Configuration via DIP switch / Software (Z-SETUP) / Hand Held configurator (Test-3)
- Setup software for universal converter
- Selection input / output / filter / scaling / com / burn out etc.



Transducers power supply

- Source for transducers
- Active input 2 wires
- Minimum voltage of 20 Vdc and current of 20 mA




















Standard signals

- ANALOG: currents (bidirectional, active or passive), voltage (bipolar), resistance (2 or 3 wires potentiometer, rheostat), electric parameters
- SENSORS: RTD (thermoresistance 2, 3, 4 wires), TC (thermocouples J K R S T E B N), Load Cell (strain gauge)
- Any kind of PULSES
- Electric parameters: W, I, V, cosfi, f



Isolation & Power Supply

- 3 way (Input / Supply / Output) galvanic isolation from 1.500 to 4.000 Vac
- Supply range: from 10 to 265 Vac/dc
- Switching supply

	Z102	Z110	Z-4AI-D	Z-4TC-D	Z-SG
					
	Potentiometric to DC isolator / converter	DC current isolator (loop-powered)	4 Current / voltage A/D converter	4 Thermocouples A/D converter	Strain gauge to DC isolator / converter
FUNCTIONAL DIAGRAM					
ORDER CODE	Z102	Z110S (single channel) Z110D (double channel)	Z-4AI-D	Z-4TC-D	Z-SG
INPUT	NR 1 TYPE Potentiometer 2 wires: 0..300 Ω (I=6mA); 0..500 Ω (I=3,6 mA); 0..1 KΩ (I=1,8 mA) 3 wires: Vref=1,8 Vcc, from 200 Ω to 1 MΩ	1, 2 Current (mA) 4..20 mA	4 Voltage (V) 2..10 V f.s Resolution 16.000 points Impedance: 100 KΩ Current (mA) ±20 mA (bipolar) Resolution 16.000 points Impedance: 100 Ω	4 Voltage ± 80 mV Impedance 10 MΩ Thermocouples Type J, K, R, S, T, E; B, N	1 analog, 1 digital Analog Strain gauge load cell, 4 or 6 bridge connections, min 87 Ω for 1.4 load cells (350 Ω) or 1.8 load cells (1.000 Ω); Sensitivity: 1..64 mV/V Digital Tare calibration / threshold weight
OUTPUT	NR 1 TYPE Voltage (V) 4 scales: 0..5, 1..5, 0..10, 2..10 V Load impedance > 2,5 KΩ Current (mA) 2 scales: 0..20, 4..20 mA Loop impedance < 600 Ω	1,2 Current (mA) 4..20 mA	2 Digital Channels from/to control unit (1 settable as clock or reset input)	2 Digital Channels from/to control unit (1 settable as clock or reset input)	1 analog, 1 digital Current (mA) 0..20, 4..20 mA Voltage (V) 0..10, 0..5 Vdc Digital Tare calibration / threshold weight
INTERFACE			RS485 2 wires, 1.200..115k bps RS232 (setup)	RS485 2 wires, 1.200..115k bps RS232 (setup)	RS485 ModBUS RTU 2 wires, 1.200..115k bps RS232, 2.400 bps
PRECISION CLASS	0,2%	0,1%			0,01%
THERMAL DRIFT	0,02 % f.s. / °	0,02 % f. / °C			0,0025% / °C
LINEARITY	0,05 %	0,1 % f.s			0,01%
SETTINGS	DIP switch (zero, span)		PLC IEC 61131 libraries DIP switch (filter time, input time, scales, serial interface)	PLC IEC 61131 libraries DIP switch (filter time, input time, scales, serial interface)	DIP Switch Z-NET3 (PC software)
POWER SUPPLY	9..30 (option) - 19..40 Vdc 19..28 Vac (50..60 Hz)	Self powered on input	9..30 (option) - 19..40 Vdc 19..28 Vac (50..60 Hz)	9..30 (option) - 19..40 Vdc 19..28 Vac (50..60 Hz)	10..40 Vdc 19..28 Vac
CONSUMPTION	2,5 W				2 W
ISOLATION & PROTECTIONS	1.500 Vac 3 way 400 W/ms impulsive over-voltages	I/O isolation 1.500 Vac I/O protection: up to 35 Vdc max	1.500 Vac Input protection 60 V continuous	1.500 Vac Input protection 60 V continuous	1.500 Vac
FRONT LED	Power supply		Power supply Fault Data transmission Data receiving	Power supply Fault Data transmission Data receiving	Power supply Fault Data transmission Data receiving
RESPONSE TIME	40 ms	100 ms	< 400 ms	< 400 ms	< 10 ms
OPERATING TEMP.	0..+50°C	0..+50°C	0..+50°C	0..+50°C	-10..+65°C
DIMENSIONS	17,5 x 100 x 112 mm	17,5 x 100 x 112 mm	17,5 x 100 x 112 mm	17,5 x 100 x 112 mm	17,5 x 100 x 112 mm
CONNECTIONS	Screw fit removable terminals	Screw fit removable terminals	Screw fit removable terminals	Screw fit removable terminals	Screw fit removable terminals
WEIGHT	200 g	200 g	200 g	200 g	200 g
APPROVALS			 	 	
NORMS	EN 55011, EN 61000-4-2, EN 61000-4-4, EN 50140 / 141	EN 55011, EN 61000-4-2, EN 61000-4-4, EN 50140 / 141	EN 55011, EN 61000-4-2, EN 61000-4-4, EN 50140 / 141	EN 55011, EN 61000-4-2, EN 61000-4-4, EN 50140 / 141	EN 61000-6-4, EN 61000-6-2, EN 61010-1, EN 60742, IEC 61131