

# MODBUS TRANSMITTERS

## NOVUS DIGIRAIL

### MODELS

The DigiRail line of transmitters complies 3 models, according to their input or output types:

**DigiRail-1A** and **DigiRail-2A**, with 1 or 2 universal analog inputs respectively.

**DigiRail-4C**, with 4 digit counters;

**DigiRail-2R**, with 2 timer relay outputs.

The **Digirail** line of smart transmitters with Modbus RTU communication interface provide a simple way for integrating analog or digital signals to supervisory systems. Featuring up to two universal input analog signal channels they are the most economical way to deliver analog inputs to PLC's and SCADA systems.

The input signals are isolated from power thus protecting the electrical instruments by eliminating ground loop effects. This reduces substantially the undesirable interferences and instabilities in sensor measurements.

**Digirail** can be easily configured and calibrated via the digital interface by using the windows based **Digiconfig** software.

### SPECIFICATIONS

Analog inputs: programmable for thermocouples J, K, T, E, N, R, S, B, Pt100, mV, V, mA.

Cold junction compensation for thermocouples and compensation for Pt100 3-wire cables

Open loop detection for thermocouples, Pt100 and mV.

Sampling rate for 1 analog input: 10Hz for mV, V and mA. 5Hz for thermocouples and Pt100.

Analog input resolution: 17 bits.

User define linearization for the analog inputs.

Digital inputs: in voltage, 4 to 35V to activate. Internally limited current in 5mA.

Digital outputs: 3A / 250Vac SPDT relay, resistive load.

Voltage: 10 to 35Vdc, 50mA maximum current.

2-wire RS485 communication with Modbus RTU protocol. Configurable address and baud rate (1,200 to 115,200bps).

LED indicators for communication and status. Key for resetting communication parameters to original factory default.

Accuracy (at 25 C): Pt100, mV, V and mA: 0.15% of full scale.

Thermocouples: 0.25% of full scale.

Temperature effect: 0.003% of full scale/ C

Cold junction compensation for thermocouples: 1 C at 25 C 0.05 C/ C.

Isolation: 1000Vac from inputs (analog or digital) and power or communication.

Communication and power are not isolated from one another nor are the analog inputs from each other. Every two digital inputs are isolated other pairs of same inputs.

Windows based configurator software.

Dimensions: 72x78x19mm

Mounting 35mm DIN rail

Working temp: 0 to 70 C



### CONFIGURATION

**DigiRail** Configuration is done via the RS485 interface by using Modbus RTU commands.

The **DigiConfig** software allows for configuration of all DigiRail features as well as complete calibration and diagnosis. It automatically detects active devices in the Modbus network e permits configuration of all.

