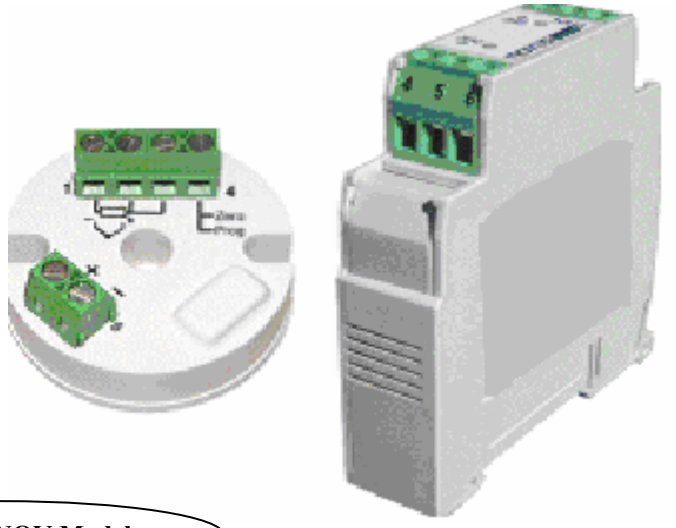
SERVOTECH

*Temperature management by design*

# MICROPROCESSOR BASED ISOLATED TEMPERATURE TRANSMITTER



**R11 IHIRNOV Model**

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**R11 IHIRNOV Head mount and Din Rail mount units are fully programmable isolated temperature transmitters dedicated to Pt100 and thermocouple industrial sensors. Both units can be easily user configured for input type and working range by means of an interface cable connected to a PC by RS-232 port**

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**Servotech R11** transmitters are a 2-wire in-head temperature transmitters with galvanic isolation between input and output. Microprocessor based, it was designed for flexibility accepting mV,

**Servotech Instrumentation Ltd**
6 William Pickering Drive, Albany, P O Box 302-561, N.H.M.C, Auckland, New Zealand • Phone: 64-9-415 8362 • Toll Free: 0800 737 868 • Fax: 64-9-415 8361 • Email: sales@servotech.co.nz • Website: www.servotech.co.nz.

Pt100 and a variety of thermocouples as the input sensor. The R11 delivers a scalable linear 4-20mA output current proportional to the sensor temperature. Servotech provides transmitter configuration for parameter setup (sensor type, temperature range, filter, etc). Call our technicians on ++64-9-415 8361 for assistance

Servotech R11 isolated transmitters are available in Head Mount and Din-Rail Mount design.

## *Technical Specifications*

**Sensor input**: User defined. The following is a range of supported sensor

| Sensor Type | Range | Minimum measurement span |
|---|---|---|
| Thermocouple K | -150 to 1370°C | 100°C |
| Thermocouple J | -100 to 760°C | 100°C |
| Thermocouple R | -50 to 760°C | 400°C |
| Thermocouple S | -50 to 760°C | 400°C |
| Thermocouple T | -160 to 400°C | 100°C |
| Thermocouple N | -270 to 1300°C | 100°C |
| Thermocouple E | -90 to 720°C | 100°C |
| Thermocouple B | 500 to 1820°C | 400°C |
| Pt100 | -200 to 600°C | 40°C |
| Voltage | 0 to 50mV | 5mV |

**Thermocouples:** Types J, K, R, S, T, N, E and B, according to IEC 60584. Impedance » 1MΩ

**Pt100:** Excitation: 180µA.
2 or 3-wire connection (for 2-wire sensors, tie terminals 2 and 3 together).
ά = 0.00385, according to IEC 60751.

**Voltage:** 0 to 50mVdc; Impedance » 1 MΩ

| | |
|---|---|
| **Output** | 2-wire 4-20mA, linear with respect to the measured temperature |
| **Total accuracy** | better than 0.3% of the maximum range for thermocouples and 0.2% for Pt100 and voltage |
| **Resolution** | 0.001 A (14 bits) |
| **Response Time** | 5 500 ms |
| **Power supply** | 12 to 35Vdc, across the transmitter |
| **Maximum load (RL)** | RL (max.)= (Vcc- 12) I 0,02 [Ω], where: Vcc= Power supply voltage |
| **Operating Temperature** | -40 to 85°C |
| **Humidity** | 0 to 90% RH |
| **Electromagnetic compatibility** | EN 50081-2, EN 50082-2 |
| **Isolation** | 1000Vac for 1 minute between sensor input and the 4-20mA loop |
| **Housing** | ABS plastic. Dimensions. 44mm (diameter) x 25mm (height) |

**Internal protection against polarity inversion.**
**Cold junction compensation for thermocouples.**

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