MCIH

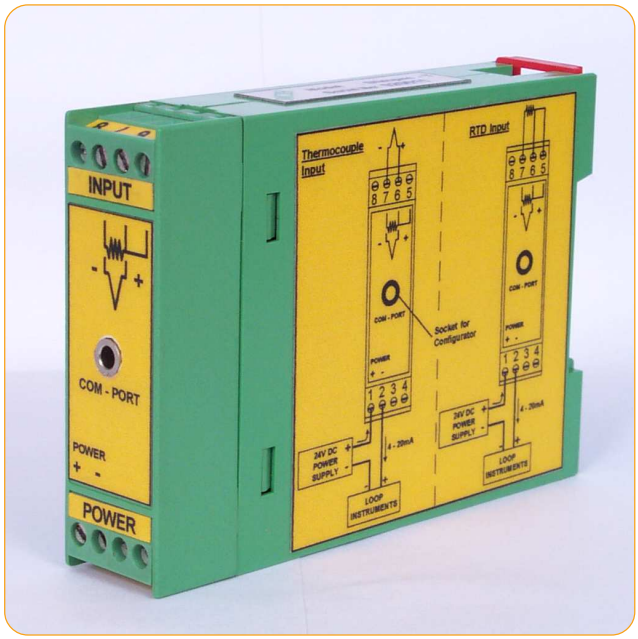
Cerebrum Series

RAIL MOUNTED TEMPERATURE TRANSMITTER

Slimpac - T

FEATURES

- Microcontroller based design
- Occupies just 22.5mm of Din rail
- Plug in terminals for easy replacement
- Accepts 9 types of T/Cs & Pt,Ni RTDs
- Linearisation of T/C & RTD inputs
- Optoisolated output
- Configurable through configurator



About *Slimpac - T....*

Slimpac - T is a microcontroller based programmable 2-wire transmitter engineered for thermocouple and RTD inputs. Slimpac - T occupies only 22.5mm of Din Rail space, the slimmest among the Din Rail mounted signal conditioners. The transmitter is fully configurable through the configurator model Easycon - TT. The configuration socket near the terminal block of the module gives access to the configurator to modify the transmitter parameters like input type, range, calibration etc. The process parameter being sensed can also be read by the Easycon - TT configurator.

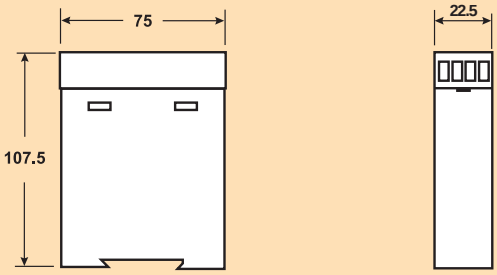
Slimpac - T has many design features enhancing the reliability of the instrument. The module employs a 16-bit delta-sigma A/D converter to accurately process the thermocouple and RTD signals. The input and output electronics of the transmitter are optoisolated to handle common mode voltages associated with input signals from earthed thermocouples/signals from harsh industrial environments. The cold junction compensation for thermocouple inputs is carried out in a more realistic way through a semiconductor sensor at the vicinity of the input terminals where the cold junction is formed.

GENERAL SPECIFICATIONS

Power Supply : 12 - 50V DC,
Two wire Loop power supply.
Operating Temp. : 0 to 60 °C.
Storage Temp. : 0 to 70 °C.

Humidity : 0-90% (Non Condensing).
Housing : ABS Enclosure.
Mounting : DIN rail 35mm Top-Hat.
Termination : Plug-in terminals (2.5 mm^2 wires).

DIMENSIONS : In mm



Document Number
SLMPAC- 1-410

PERFORMANCE SPECIFICATIONS

INPUT

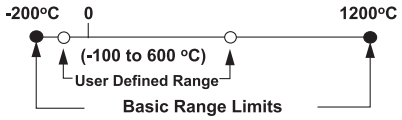
Types and Accuracy

Input [1]	Basic Range [2]	Accuracy [3]	
		Below 0°C	Above 0°C
T/C-J	-200 to 700 °C	±2°C	±1°C
T/C-K	-200 to 1200 °C	±2°C	±1°C
T/C-E	0 to 800 °C		±1°C
T/C-T	-200 to 400 °C	±2°C	±1°C
T/C-R	0 to 1700 °C		±5°C
T/C-S	0 to 1700 °C		±5°C
T/C-B	200 to 1820 °C		±5°C
T/C-C	0 to 2320 °C		±5°C
T/C-N	-270 to 1300 °C	±5°C	±2°C
Pt100 (α 385)[4]	-200 to 850 °C	±1°C	±1°C
Pt100 (α 392)	-100 to 450 °C	±1°C	±1°C
Ni-120	-80 to 260 °C	±0.5°C	±0.5°C
Ohms	0 to 400 Ω		±0.05%
mV	-10 to 75 mV		±0.05%

Note 1: All T/Cs as per NIST Monograph 125. Range of temperature indicated refers to the working temperature range of respective thermocouple.

Note 2: *Slimpac - T* output can be made to represent any range defined by the user confined within the basic range in the table.

Example: For Type-K Input -200°C & 1200°C are the basic range



limits. The Tx. can be ranged to any value inbetween the basic range limits to get an output of 4-20 mA. In the example -100 to 600°C corresponds to an User defined range.

Note 3: Accuracy refers to input accuracy at 25°C ambient.

Note 4: Pt100 (α 385) conforms to DIN 43760.

INPUT (Continued ...)

Impedance : 10MΩ for mV inputs.
Excitation : 400µA for resistance inputs.
Sensor break : Configurable as Up scale / Down scale.
Filter : Programmable Digital Filter.
Linearisation : Inbuilt thro' software for T/C & Pt-100.
C J C : By solid state sensor.
C J C error : ± 0.5 °C over operating temperature.
Temp. drift : ± 100ppm / °C on span.
± 100ppm / °C on zero.

OUTPUT

Type : Two wire type 4-20mA.
Limits : 3.8mA and 21mA.
Accuracy : ±0.05% of FS (D/A accuracy only).
Load : 600Ω (max.) at 24V Loop supply.
1900Ω (max.) at 50V Loop supply.

ISOLATION

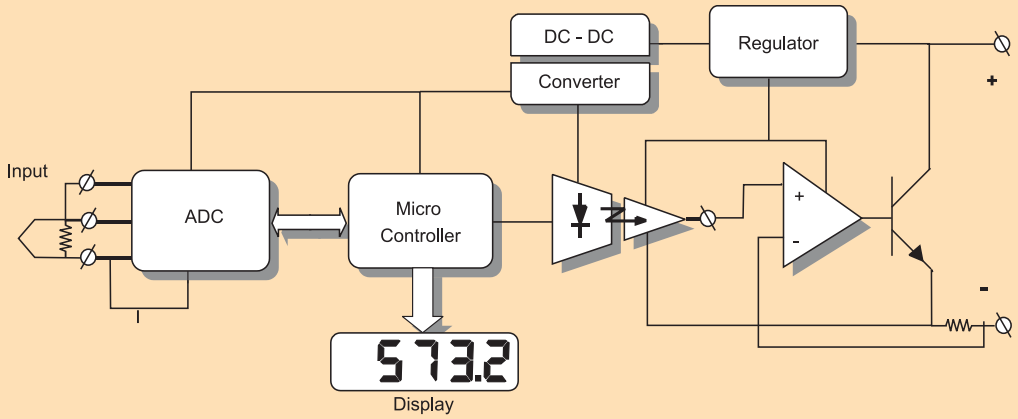
Type : Input output Isolation by Opto couplers.
Voltage : 600 V DC or AC peak.

CONFIGURABLE PARAMETERS (THROUGH EASYCON)

Input type : Any of the 9 T/Cs, 3 RTDs,mV or Ohms.
Input range : Any range within basic range limits.
Input Filter : Time const. configurable up to 10 secs.
Sensor break : Up scale / Down scale.
Calibration : Password protected, Calibration through Configurator. No trimpot adjustments required.

For Thermocouple and RTD input types not listed in the table, please contact Factory.

FUNCTIONAL SCHEMATIC



ORDERING INFORMATION

Rail mounted Temperature transmitter - Model : Slimpac - T .
Configurator - Model : Easycon - TT

Configurator is a must for changing the configurable parameters

MEDICAL & CONTROL INSTRUMENTS HOUSE (I) PVT. LTD
 # 14, Sakthi Srinivasan Salai, Kumaran Kudil, Thuraipakkam, Chennai 600 097. India.
Tel: +91 44 24580420, +91 9444579095 Fax: +91 44 24580320 Email: sales@mcih.in
www.mcih.in