

FEATURES

- ◆ Wide choice of Input Types.
- ◆ Software selectable mA & V output.
- ◆ Three Port Isolation.
- ◆ Linearisation of T/C and RTD inputs.
- ◆ Realistic Cold Junction Compensation.
- ◆ Fully Configurable through Keypad.
- ◆ Accepts non-standard Signal Inputs.
- ◆ Powering Options: 20-35V DC / Mains.



About *Cutepac*.....

Cutepac range of Smart signal convertors / isolators from MCIH are designed to perform signal conditioning, conversion and isolation in the Smart way. Cutepac is a Microcontroller based back panel instrument with universal input capabilities covering seven types of Thermocouples, Pt-100 Rtd, mV, Resistance, mA and Voltage signals and provides opto isolated mA or Voltage outputs representing the input.

Cutepac is designed with the sole concept of total flexibility and configurability. Selection of input and output types, ranging of the input, linear/sq.root/function and digital filtering are site configurable through front panel Keypad.

Cutepac has a rugged hardware offering reliable and stable performance in harsh environments. With *Three Port Isolation*, Cutepac eliminates ground loop problems associated with field signals from earthed T/C's, RTD's, Loadcell outputs etc., and also protects the downstream systems like DCS, PLC and Panel instruments from lethal common mode voltages.

Cutepac does not have any potentiometer or DIP switch in its hardware, which means hardware access is not required for calibration or configuration. This unique feature enhances operational reliability of the instrument. The password protected calibration mode makes it tamper proof

GENERAL SPECIFICATIONS

Power Supply : 90 to 270V AC/ 50 to 60 Hz(2W)
optional - 20 to 35V DC (2W).

Operating Temp : 0 to 55 °C.

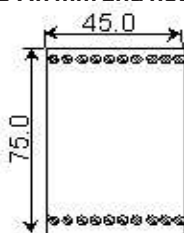
Storage Temp : 0 to 70 °C.

Humidity : 0-90% (Non Condensing).

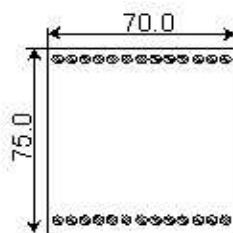
Mounting : Back panel / Din rail 35mm - tophat.

DIMENSIONS : In mm and not to scale

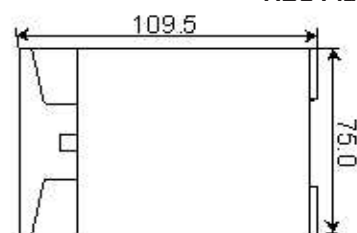
ABS Plastic enclosure



Cutepac - 1



Cutepac - 2



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	± 1°C	± 0.5°C
T/C-K	-200 to 1200 °C	± 1°C	± 0.5°C
T/C-E	0 to 800 °C		± 0.5°C
T/C-T	-200 to 400 °C	± 1°C	± 0.5°C
T/C-R	0 to 1700 °C		± 2.0°C
T/C-S	0 to 1700 °C		± 2.0°C
T/C-B	200 to 1700 °C		± 4.0°C
Pt-100	-200 to 850 °C	± 2°C	± 0.5°C

Input ¹	Basic Range ²	Accuracy
mV	-75 to +75 mV	±0.1% FS
Ohms 1	0 to 400 Ω	±0.05% FS
Ohms 2	0 to 6000 Ω	±0.1% FS
mA 1	0 to 20 mA	±0.05% FS
mA 2	4 to 20 mA	±0.05% FS
V 1	1 to 5 V	±0.05% FS
V 2	0 to 10 V	±0.05% FS
V 3	-10 to 10 V	±0.1% FS

Note 1: All T/Cs as per NIST Monograph 125. . Pt 100 as per DIN 43760. Range of temperature indicated refers to the working temperature range of respective thermo couple.

Note 2: *Cutepac* output can be made to represent any range defined by the user confined with in the basic range in the table.



Example: Input: Type-K (-200 to 1200°C). Output of 4 -20 mA Corresponds to a User defined range of -100 to 600°C.

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

INPUT (Continued)

Impedance : 51Ω for mA, 1MΩ for Voltage and 10MΩ for mV inputs
Excitation : 200 μA 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 sensor embedded in terminals.
C J C : ± 0.5°C over operating temperature

DISPLAY

Type : 4 digit LED / seven segment - 8mm
Function : Input display / Configuration display.

OUTPUT

Type : 0-20mA / 4-20mA / 0-5 V / 1-5V / 0-10V Selectable through Keypad.
Accuracy : 0.05% of FS (D/A accuracy only).
Load : 850Ω (max) for mA. 1KΩ (min) for V.

ISOLATION

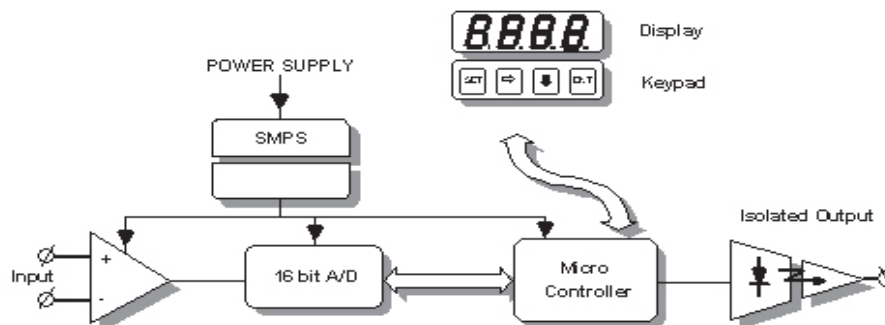
Type : Three port Isolation by Opto couplers. Input, Output and power supply ports are isolated from each other.

Voltage : 600 V DC or AC peak.

SOFTWARE CONFIGURABLE FUNCTIONS

I/O Relation : Linear / Square root / Characterisation
Input Filter : Time const. configurable up to 120 secs.
Calibration : Password protected, Calibration through Keypad. No trimpot adjustments required.

FUNCTIONAL SCHEMATIC



ORDERING INFORMATION

Power Supply	No of outputs	Model No.	Power Supply	No of Outputs	Model No.
90 to 270 AC, 50-60 Hz	ONE	Cutepac - 1H	20 to 35 V DC	ONE	Cutepac - 1L
	TWO	Cutepac - 2H		TWO	Cutepac - 2L

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Specifications are subject to change with out any notice due to continuous development.