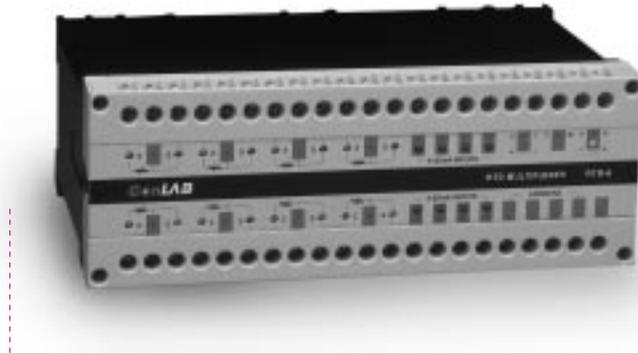


- 8 - Pt-100 INPUTS
- 8 - CURRENT INPUTS
- ACCURACY OF 0.1%
- PLATINUM LINEARIZATION
- PLC ENHANCEMENT
- CABLES SAVINGS
- 3-YEAR WARRANTY



The RTM-8 is a 16 channel analog multiplexer divided into eight, 3-wire, Pt-100 sensors and eight 4-20 mA process current inputs.

The RTM-8 creates savings of Pt-100 transmitters, wiring cables and PLC's analog inputs. The RTM-8 also enhances small PLCs limited by their analog inputs capacity, by using a single analog input to acquire as many analog inputs as required.

The RTM-8 output is 4-20 mA which is simply connected to a single PLC's analog input. The input selection function is performed via four binary control lines (address) initialized by the PLC program, assuring full data synchronization between the controller and the multiplexer.

The RTM-8 is provided with an Enable control line. When disabled, the RTM-8 unit's output is in a Hi-Z state allowing several units to be connected in parallel to a single controller input by tying their outputs

together, applying the same address lines, but providing a separate Enable control line to each multiplexer. The PLC's program must keep all but the selected multiplexer in a disabled state.

The RTM-8 is an all solid state unit, multiplexing the input channels with a switching time of less than 20 micro-seconds.

Each of the Pt-100 inputs is a complete signal conditioner. They include a DIP switch array for coarse channel ranging as well as Zero and Span fine tuning multi-turn potentiometers on the front panel.

Superb lead length compensation circuitry is provided for long distance connection of Pt-100 probes.

The RTM-8 is housed in a polycarbonate enclosure which can be mounted on a 35 mm standard DIN rail.

# SPECIFICATIONS

# RTM-8

## INPUTS:

RTD: 8 - Pt-100 channels  
 Analog Current: 8 - 0/4-20 mA channels  
 Logic (control): 4 Address + 1 Enable input

## RTD INPUTS:

Current Excitation: < 1.1mA

## RANGE:

Zero: -50 to +200°C  
 Span: 50 to 750°C

## LEAD COMPENSATION:

Error of  $\pm 0.025^\circ\text{C}/10\Omega$  lead resistance

**MAXIMUM LEAD RESISTANCE:** 60 $\Omega$  (one way)

## CURRENT INPUTS

Maximum Input Current: 30 mA  
 Reverse Polarity Protection: Yes

## CONTROL INPUTS

Logic: True High or True Low (User selectable)  
 Logic Levels: Low < 0.5 Vdc  
 5 Vdc < High < 40 Vdc

**LOGIC INPUT IMPEDANCE:** > 4K $\Omega$

**OUTPUT:** 4 - 20 mA

## ACCURACY

(combines linearity, hysteresis and repeatability)  
 Pt-100 inputs: <  $\pm 0.1\%$  of span maximum  
 Current Inputs: <  $\pm 0.1\%$  of span maximum

**SWITCHING TIME:** < 20  $\mu\text{sec}$  (into a resistive load)

## INDICATORS:

1 power "ON" indicator Yellow LED  
 8 current input channels red LEDs

**SUPPLY VOLTAGE:** 24  $\pm 10\%$  Vdc (regulated)

**SUPPLY CONSUMPTION:** < 100 mA

**TEMPERATURE STABILITY:**  $\pm 0.01\%$  of span/ $1^\circ\text{C}$

**OPERATING TEMPERATURE:** 0 - 60°C

**STORAGE TEMPERATURE:** -25 to + 85°C

**HUMIDITY:** 5 - 95% relative, non condensed

**FUSE:** 150 mA, 5x20 mm fast-blown

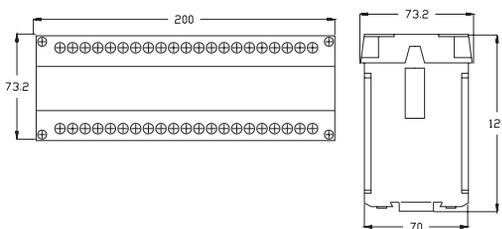
**HOUSING:** Plastic Polycarbonate

## PROTECTION LEVEL:

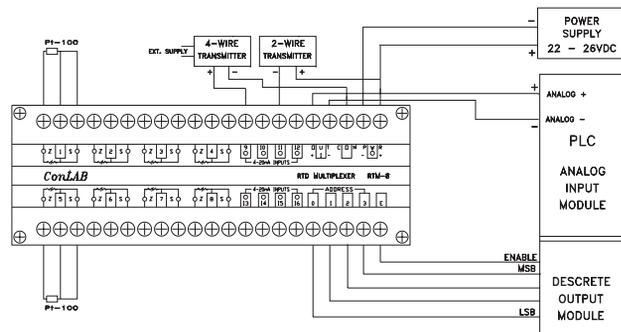
Box: According to IP-50 DIN 40050  
 Terminals: According to IP-20 DIN 40050

**WEIGHT:** 0.85 Kg

Dimensions (mm)



Connection Diagram



data subject to change without notice

**ConLAB**  
 Control Laboratories Ltd.

20, Hamezuda st. P.O.Box 100. Azor 58190, Israel. Tel +972-3-556-7688 Fax +972-3-556-9540

Rev 8/95