

MANUFACTURER DOCUMENT PACKAGE

# Manufacturer's Manual

Reference package for procurement and maintenance review

GE 90-30 SERIES PLC

## HE693RTD600R

SIX-CHANNEL RTD INPUT MODULE

Used with the applicable Series 90-30 temperature I/O configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: GE official manufacturer documentation

## CHAPTER 1: DESCRIPTION

### 1.1 Product Description

The RTD Input Modules allow RTD temperature sensors to be directly connected to the PLC without external signal processing (transducers, transmitters, etc.). All analog and digital processing of the RTD signal is performed on the module, and temperature values in 0.5°C or 0.5°F increments are written to the 90-30 %AI input table. All modules feature six channels, and support PT-90 (MIL-7990), PT-100 ( $\alpha=.00385$ , .003902 and .03906), Ni-120, Cu-10, Cu-50, Cu-53, Cu-100, Pt-1000, TD5R and Linear Resistance.

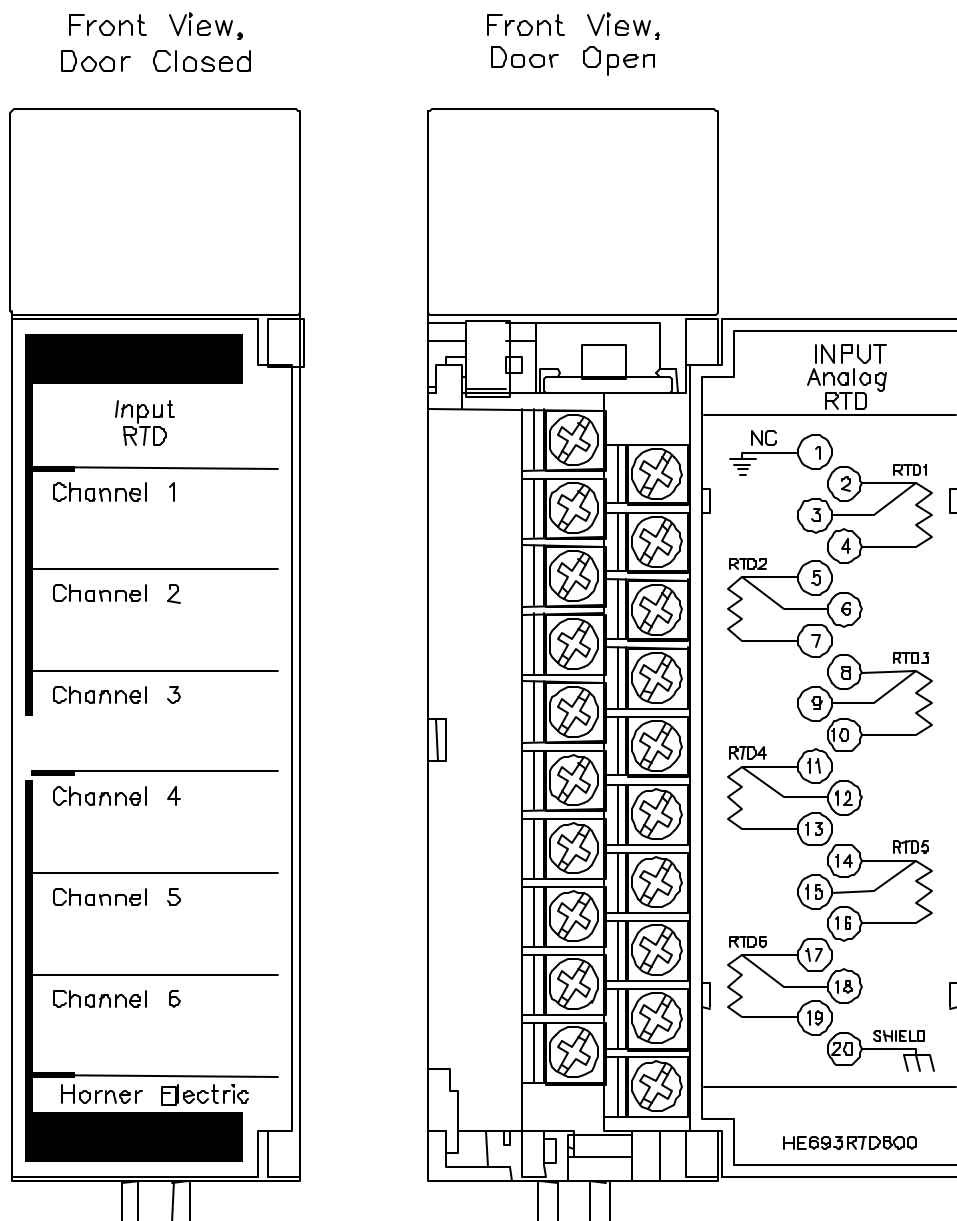


Figure 1.1 – Front

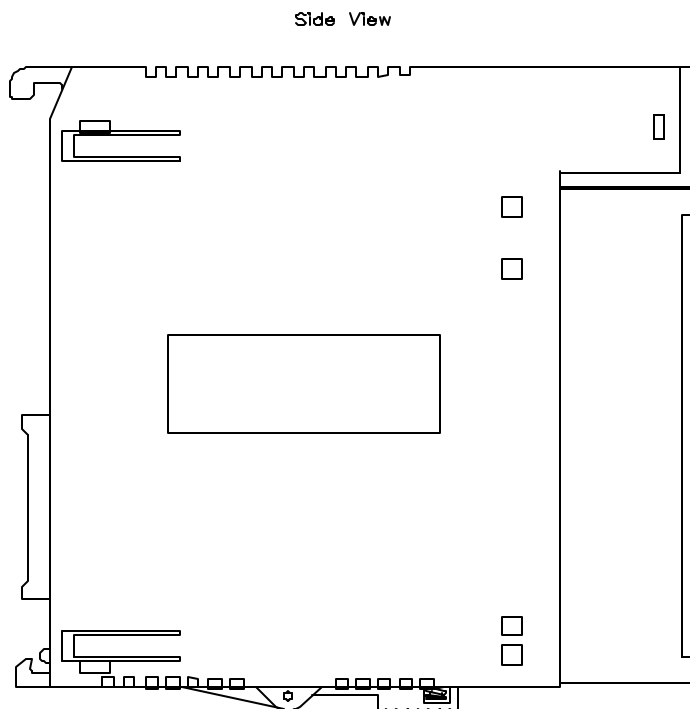


Figure 1.2 – Side View

RTD600.DWG

## 1.2 Specifications

Table 1.1 - HE693RTD600-24 Specifications

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|-------------------------------------------|-------------------------|-------------------|------------------------------------|--------------------------------------------------------------------------------|
| <b>Power Consumption (Typical)</b>        |                         | 75mA @ 5VDC       | <b>Number of Channels</b>          | 6                                                                              |
| <b>Types Supported</b>                    | <b>Pt-100E</b>          | -200 to 850°C     | <b>I/O Points Required</b>         | 6%AI                                                                           |
|                                           | <b>Pt-100C</b>          | -100 to 650°C     | <b>Input Impedance</b>             | >1000 Meg $\Omega$                                                             |
|                                           | <b>Pt-100Z</b>          | -200 to 300°C     | <b>Fault Protection</b>            | Zener Diode Clamp                                                              |
|                                           | <b>Pt-1000</b>          | -100 to 850°C     | <b>A/D Conversion Type</b>         | 16 bit, Integrating                                                            |
|                                           | <b>Cu-10</b>            | -200 to 260°C     | <b>Update Time</b>                 | 50 Channels per second                                                         |
|                                           | <b>Cu-50</b>            | 0 to 100°C        | <b>Average RTD current, PT-100</b> | 330 microamps                                                                  |
|                                           | <b>Cu-53</b>            | -200 to 260°C     | <b>Channel to Channel Tracking</b> | 0.1°C                                                                          |
|                                           | <b>Cu-100</b>           | -200 to 200°C     | <b>Resolution</b>                  | 0.5°C or 0.5°F                                                                 |
|                                           | <b>Ni-120</b>           | -100 to 270°C     | <b>Accuracy</b>                    | $\pm 0.5^\circ\text{C}$ typical,<br>$\pm 1.0^\circ\text{C}$ for Cu-10 and TD5R |
|                                           | <b>Linear</b>           | 0 to 200 $\Omega$ | <b>Operating Temperature</b>       | 0 to 60°C (32° to 140°F)                                                       |
|                                           | <b>TD5R</b>             | -40 to 150°C      | <b>Relative Humidity</b>           | 5% to 95% non-condensing                                                       |
|                                           | <b>Pt-90 (MIL-7990)</b> | -50 to 200°C      |                                    |                                                                                |