FEATURES

- **4-20 mA LOOP POWER, LINEAR TO TEMPERATURE**
- **0.1% FS MAX TOTAL ERROR**
- **REVERSE POLARITY PROTECTION**
- **SURGE PROTECTION**
- **NON-ISOLATED**
- **3-WIRE OR 2-WIRE CONNECTION TO THE RTD**
- **HEAD MOUNT OR DIN RAIL MOUNT**
- **44.4 mm dia x 19 H mm (1.75" dia x 0.75"H) (HIGHT INCLUDES THE TERMINALS)**
- **WEIGHT 20 g (0.7 oz)**
- **CAN BE POWERED AND ITS SIGNAL MEASURED AND DISPLAYED BY GRD101 REMOTE DISPLAY USING JUST 2 WIRES**
- **VARIETY OF RTDs AND RANGES**
- **LOW COST**

APPLICATIONS

- **PRECISE TEMPERATURE MEASUREMENT**
- **TEMPERATURE CONTROL**
- **HVAC**
- **SCADA**

1. DESCRIPTION

GTT101 is a high accuracy 2-wire loop power 4-20 mA RTD transmitter that can be mounted in the protection head of the RTD or on a DIN rail (using the DIN rail mounting kit). It connects to the RTD using 3-wires and compensates for their resistance. It can also be connected to the RTD using 2 wires.

The output current 4-20 mA is linear to the temperature and the output is reverse polarity and surge protected.

With its high accuracy, small size and weight, its mounting options and low cost GTT101 are the perfect temperature transmitters for almost any application requiring accurate temperature.

GTT101 can be connected using 2 wires only to GRD101 remote display. Thus the temperature transmitter can be mounted in the head of the RTD but the temperature reading can be delivered in the control room by the panel mount GRD101. If a MODBUS enabled devices is connected to GRD101 the temperature can be sent over a network, radio or a wireless link to a master computer, recording station or a customer.

2. ABSOLUTE MAXIMUM RATINGS *

Operating temperature -30 ℃ to +85 ℃
Loop Power voltage 42 VDC

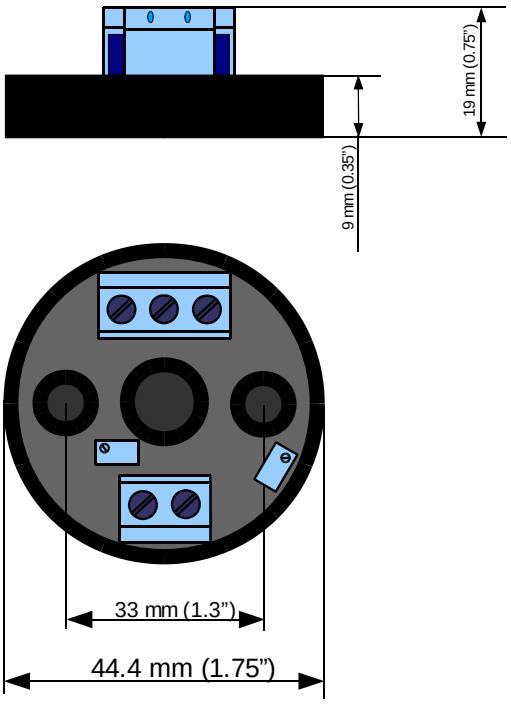
*** NOTICE: Stresses above those ratings may cause permanent damage to the device.**

3. CHARACTERISTICS

Parameter	Conditions	Min	Typ	Max	Units
Power Supply					
Voltage	Ambient temperature 25 ° C	8	24	36	V DC
Input					
RTD, 3 or 2 wire	Variety of RTDs, look at the table below				
Analog Output					
Error	250 ohm load, 24 V, Amb. Temp. 25 ℃, Note 1			0 .1	% FS
Linearization	Output is linear to temperature, by IEC751				
Temperature coefficient	-30 ℃ to +85 ℃, 24 V			70	ppm/℃
Max load	-30 ℃ to +85 ℃, 24 V			900	ohm
Max load	-30 ℃ to +85 ℃, 36 V			1400	ohm

Note 1: The parameter includes all errors, non-linearity and noise at constant voltage and ambient temperature.

4. DIMENSIONS



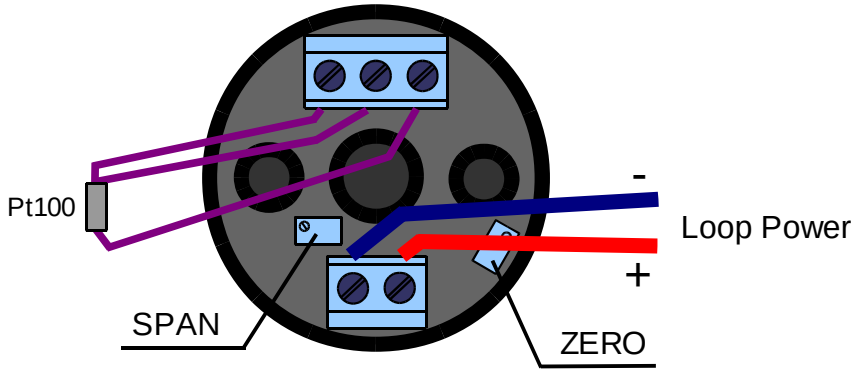
4. APPLICATION

4.1. ELECTRICAL

4.1.1. Wiring

The wiring diagram is shown below.

NOTE: There is no isolation between the RTD and the output. It is the user's responsibility to consider this fact and implement appropriate wiring in the user's specific application.



5. ORDERING

For ordering please use the following G Instruments part numbers:

	Description	*G Instruments PN*
GTT101-0	Pt100, Alpha = 0.00385, -40 to 120° F (-40 to 49° C)	30148
GTT101-1	Pt100, Alpha = 0.00385, 0 to 200° F (-18 to 93° C)	30149
GTT101-2	Pt100, Alpha = 0.00385, 0 to 300° F (-18 to 149° C)	30150
GTT101-3	Pt100, Alpha = 0.00385, 0 to 500° F (-18 to 260° C)	30151
GTT101-4	Pt100, Alpha = 0.00385, 0 to 750° F (-18 to 399° C)	30152
GTT101-5	Pt100, Alpha = 0.00385, 0 to 1000° F (-18 to 538° C)	30153
GTT101-6	Pt100, Alpha = 0.00385, -40 to 275° F (-40 to 135° C)	30193
GTT101-0C	Pt100, Alpha = 0.00385, -50 to 50° C (-58 to 122° F)	30216
GTT101-1C	Pt100, Alpha = 0.00385, 0 to 50° C (32 to 122° F)	30217
GTT101-2C	Pt100, Alpha = 0.00385, 0 to 100° C (32 to 212° F)	30218
GTT101-3C	Pt100, Alpha = 0.00385, 0 to 200° C (32 to 392° F)	30219
GTT101-4C	Pt100, Alpha = 0.00385, 0 to 300° C (32 to 572° F)	30220
GMK35-0	Mounting kit for 35 mm DIN rail	30155

NOTE 1: All RTDs by IEC 751, unless otherwise noted

NOTE 2: For other types of RTDs (Pt100 with alpha = 0.00391, Ni by DIN43760, Cu), other resistance (Pt500, Pt1000) or other ranges contact G Instruments.

IMPORTANT NOTICE

G Instruments reserves the right to make corrections, modifications, enhancements, improvements and other changes to its products at any time without notice.

Customers should obtain the latest relevant information before placing orders and should verify that such information is current and complete.

G Instruments does not assume any liability arising from the use of any device or circuit described herein, nor does it convey any license under its patent rights or the rights of others.

Customers are responsible for their products and applications using G Instruments devices. To minimize the risks associated with customer products and applications, customers should provide adequate design and operating safeguards.

G Instruments products are not authorized for use as critical components in life support devices or systems without express written approval of G Instruments.

Trademarks and registered trademarks are the property of their respective owners.