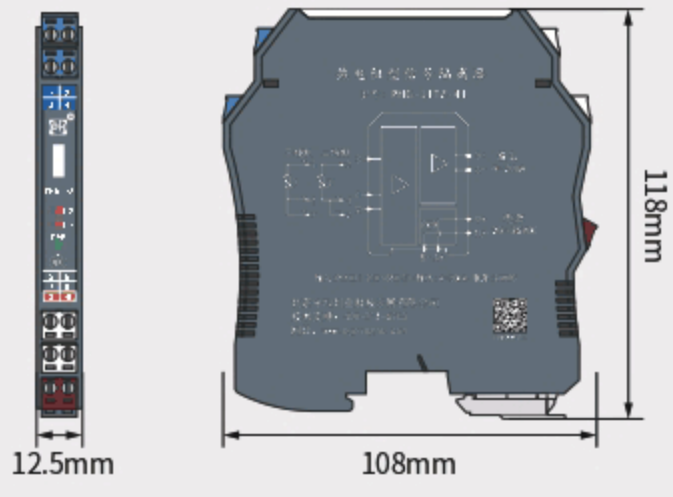
RTD input temperature converter

PHG-11TZ series — 1 input 1 output
PHG-12TZ series — 1 input 2 outputs

Input: Two-wire or three-wire RTD signal

Output: DC signal (current/voltage)



Overview

RTD input temperature transmitter can isolate and convert the thermal resistor (RTD) signal into a DC signal, which is used to drive the load. Intelligent configuration is possible, and the actual range of the thermal resistance can be set through computer software. It has the function of disconnection alarm and out-of-range alarm function.
This product needs to be powered independently, and the power supply, input and output terminals are isolated.

Specifications

Input:

Input signal: Two wire or three wire thermistor signals (see "Input Signal Type and Range Table" for details)
Input disconnection: The default "low alarm" can be modified to "high alarm" through configuration software
Signal range: Corresponding measurement range of thermal resistance
Measurement range: Users make their own configuration when ordering, and indicate it at the tail number or otherwise.
Excitation current: 800μA

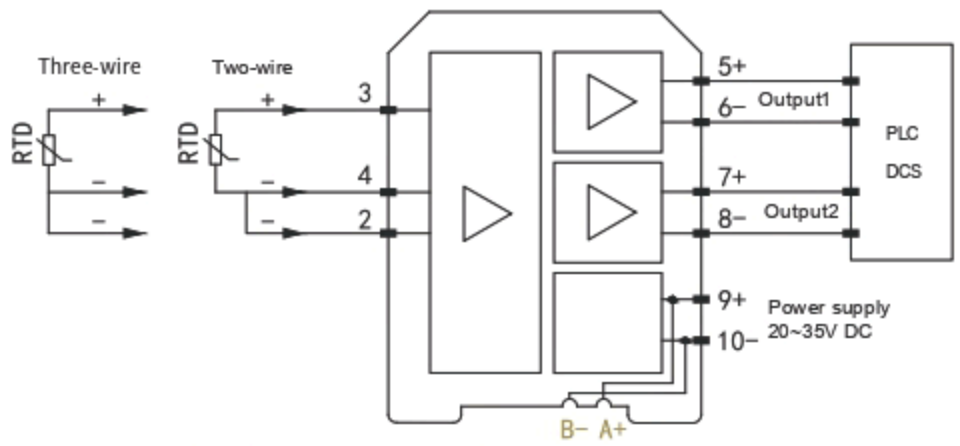
Output:

Output signal: DC signal (current/voltage)
Load capacity: Current load resistance ≤500Ω (can be customized)
Voltage load resistance <5mA (can be customized)

Basic parameters:

Supply voltage: 20~35V DC
Power consumption: Current output <0.8W; voltage output <0.6W (PHG-11TZ series)
Current output <1.2W; voltage output <0.6W (PHG-12TZ series)
LED indicator: Green: Power indicator
Low range alarm L1 light on, high range alarm L2 light on
Output accuracy: Please refer to the "Input Signal Type and Range Table" for details
Response time: Reaching 90% of the final value within 300ms
Temperature drift: 0.005%F.S/℃
Temperature parameters: Working temperature: -20℃~+60℃
Storage temperature:-40℃~+80℃
Relative humidity: 10%~95% RH no condensation
Insulation strength: ≥2000VAC/min (between input/output/power supply)
Insulation resistance: 100MΩ (500 V DC)
(between input/output/power supply)
EMC: GB/T 18268(IEC 61326-3-1)
MTBF: 80000h
Wire requirements: Horizontal cutting surface ≥0.5mm²
Insulation strength ≥500V
Applicable field equipments: Two wire or three wire thermistors
G53, Cu50, Pt100, Pt1000, Ni1000

Connection wiring

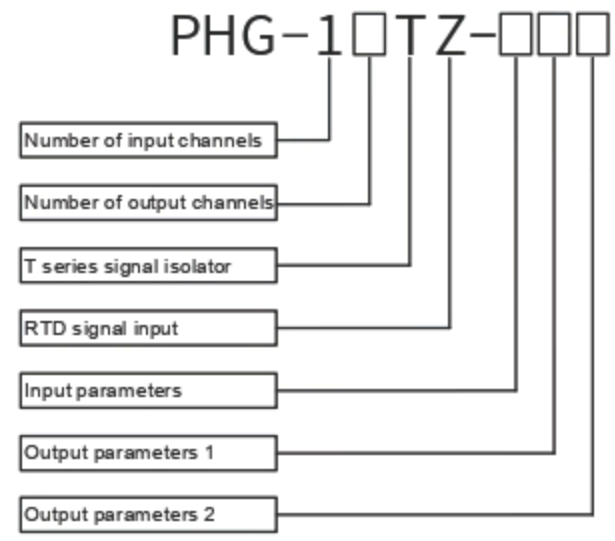


Note: 1. PHG-11TZ - * 1 does not include output part 2
2. The power rail function is an optional function, and users need to specify the power supply method when placing an order
The selection of power rail connectors can refer to page 89 of the "Annex"
3. When inputting a three wire RTD, it is necessary to ensure that the three wires are of equal length as much as possible
4. When inputting a two-wire RTD, safety barrier terminals 4 and 2 must be short circuited

Specifications, models and codes

Input signal type and range table

Code	Model	Measurement range	Minimum range	Conversion accuracy
1	G53	-50~150℃	20℃	0.2℃/0.1%
2	Cu50	-50~150℃	20℃	0.2℃/0.1%
4	Pt100	-200~850℃	20℃	0.2℃/0.1%
6	Pt1000	-200~850℃	20℃	0.2℃/0.1%
7	Ni1000	-60~250℃	20℃	0.2℃/0.1%



Output parameter definitions

Code	Parameters
1	4~20mA
2	0~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	±10V
8	Customized parameters

For example: one input and one output, thermal resistor Pt100 input, 4~20mA output, 24V power supply, model PHG-11TZ-41