



DC signal input /DC signal output      1 input 1 output

**Overview**

1 input with DC signal, 1 output with DC signal.

Power supply 24VDC or 85VAC~265VAC.

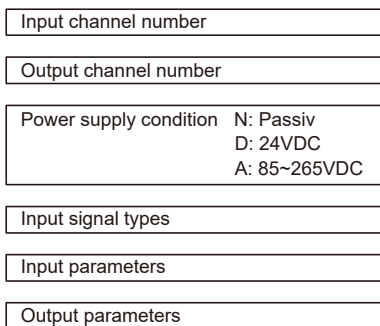
In the "Common model and specifications" the number "8" means "customizable".

**Specifications**

Input impedance	(PHG-11DD Serie) Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$ (PHG-11ND-11) 120 $\Omega$ +output load
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5mA$
Accuracy of active products/ passive products accuracy	$\pm 0.1\%F.S/\pm 0.3\%F.S$
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	35%~85% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 10ms$
Power consumption	The current output is about 0.8W and the voltage output is about 0.5W
MTBF	80,000 hours

**Model definition**

PHG-11DD-□□



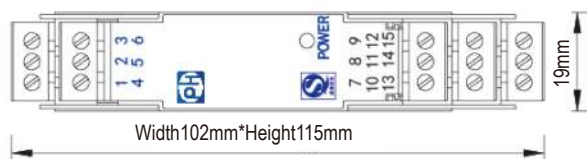
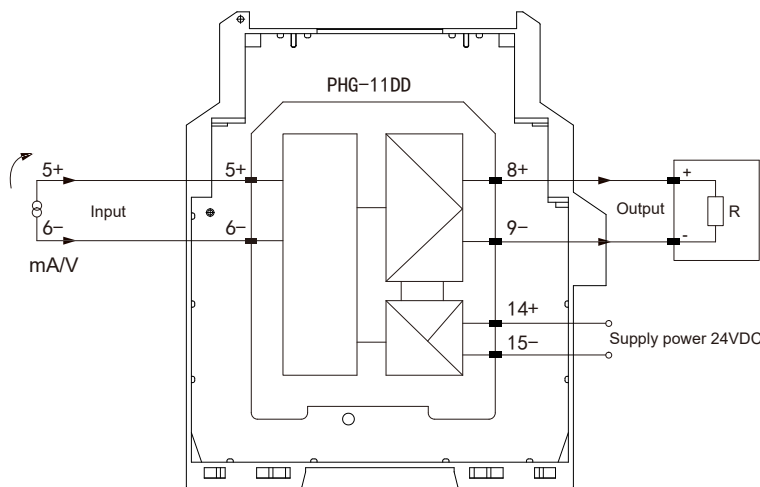
Parameters definition	
Code	Parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10V$
8	Customizable

**Common models and parameters**

Model	Channel numbers	Input	Output	Power supply condition
PHG-11DD-11	1 input 1 output	4~20mA	4~20mA	24VDC
PHG-11DD-13	1 input 1 output	4~20mA	0~5V	24VDC
PHG-11DD-14	1 input 1 output	4~20mA	0~10V	24VDC
PHG-11DD-15	1 input 1 output	4~20mA	1~5V	24VDC
PHG-11DD-31	1 input 1 output	0~5V	4~20mA	24VDC
PHG-11DD-33	1 input 1 output	0~5V	0~5V	24VDC
PHG-11DD-34	1 input 1 output	0~5V	0~10V	24VDC
PHG-11DD-41	1 input 1 output	0~10V	4~20mA	24VDC
PHG-11DD-43	1 input 1 output	0~10V	0~5V	24VDC
PHG-11DD-44	1 input 1 output	0~10V	0~10V	24VDC
PHG-11DD-61	1 input 1 output	0~75mV	4~20mA	24VDC
PHG-11DD-63	1 input 1 output	0~75mV	0~5V	24VDC
PHG-11DD-64	1 input 1 output	0~75mV	0~10V	24VDC
PHG-11DD-77	1 input 1 output	±10V	±10V	24VDC
PHG-11ND-11	1 input 1 output	4~20mA	4~20mA	No
PHG-11DD-88	1 input 1 output	Customizable	Customizable	24VDC

**Top view    Terminal assignments    Schematic diagram**

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input+	DC signal
6	Input-	
8	Output+	DC signal
9	Output-	





DC signal input /DC signal output      1 input 2 outputs

**Overview**

1 input with DC signal, 2 outputs with DC signal.

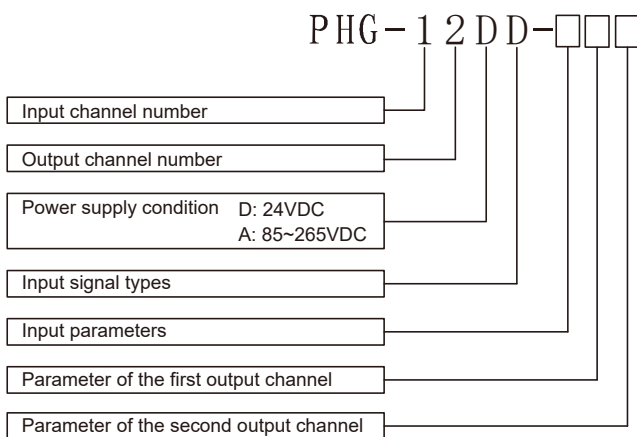
Power supply 24VDC or 85VAC~265VAC.

In the "Common model and specifications" the number "8" means "customizable".

**Specifications**

Input impedance	Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5mA$
Accuracy	$\pm 0.1\%F.S$
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	35%~85% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 10ms$
Power consumption	The current output is about 1.3W and the voltage output is about 0.5W
MTBF	80,000 hours

**Model definition**



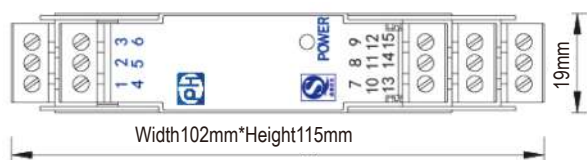
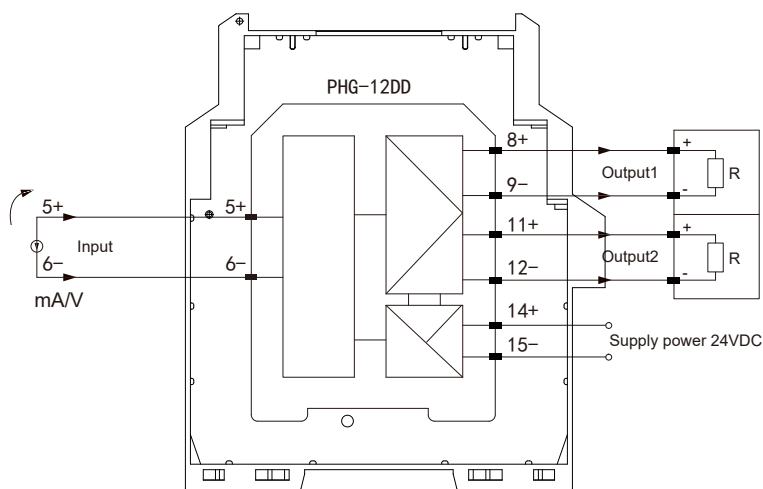
Parameters definition	
Code	Parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10V$
8	Customizable

Common models and parameters

Model	Channel numbers	Input	Output1	Output2	Power supply condition
PHG-12DD-111	1 input 2 outputs	4~20mA	4~20mA	4~20mA	24VDC
PHG-12DD-113	1 input 2 outputs	4~20mA	4~20mA	0~5V	24VDC
PHG-12DD-114	1 input 2 outputs	4~20mA	4~20mA	0~10V	24VDC
PHG-12DD-311	1 input 2 outputs	0~5V	4~20mA	4~20mA	24VDC
PHG-12DD-313	1 input 2 outputs	0~5V	4~20mA	0~5V	24VDC
PHG-12DD-314	1 input 2 outputs	0~5V	4~20mA	0~10V	24VDC
PHG-12DD-333	1 input 2 outputs	0~5V	0~5V	0~5V	24VDC
PHG-12DD-411	1 input 2 outputs	0~10V	4~20mA	4~20mA	24VDC
PHG-12DD-413	1 input 2 outputs	0~10V	4~20mA	0~5V	24VDC
PHG-12DD-414	1 input 2 outputs	0~10V	4~20mA	0~10V	24VDC
PHG-12DD-444	1 input 2 outputs	0~10V	0~10V	0~10V	24VDC
PHG-12DD-611	1 input 2 outputs	0~75mV	4~20mA	4~20mA	24VDC
PHG-12DD-633	1 input 2 outputs	0~75mV	0~5V	0~5V	24VDC
PHG-12DD-644	1 input 2 outputs	0~75mV	0~10V	0~10V	24VDC
PHG-12ND-666	1 input 2 outputs	0~75mV	0~75mV	0~75mV	24VDC
PHG-12DD-888	1 input 2 outputs	Customizable	Customizable	Customizable	24VDC

Top view    Terminal assignments    Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input+	DC signal
6	Input-	
8	Output1+	DC signal
9	Output1-	
11	Output2-	DC signal
12	Output2-	





DC signal input /DC signal output      1 input 3 outputs

**Overview**

1 input with DC signal, 3 outputs with DC signal

Power supply 24VDC or 85VAC~265VAC

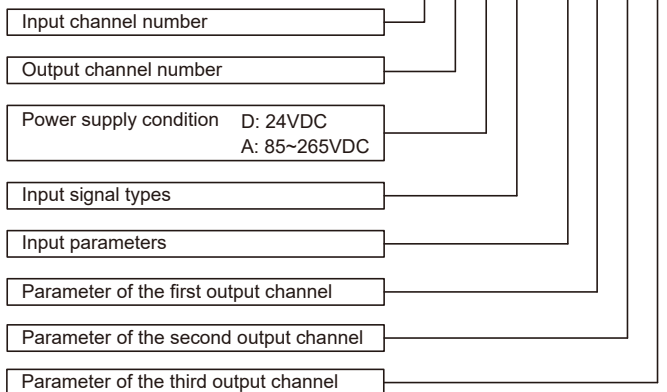
In the "Common model and specifications" the number "8" means "customizable"

**Specifications**

Input impedance	Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5mA$
Accuracy	$\pm 0.1\%F.S$
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	35%~85% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 10ms$
Power consumption	The current output is about 2.2W and the voltage output is about 1W
MTBF	80,000 hours

**Model definition**

PHG-13DD-□□□

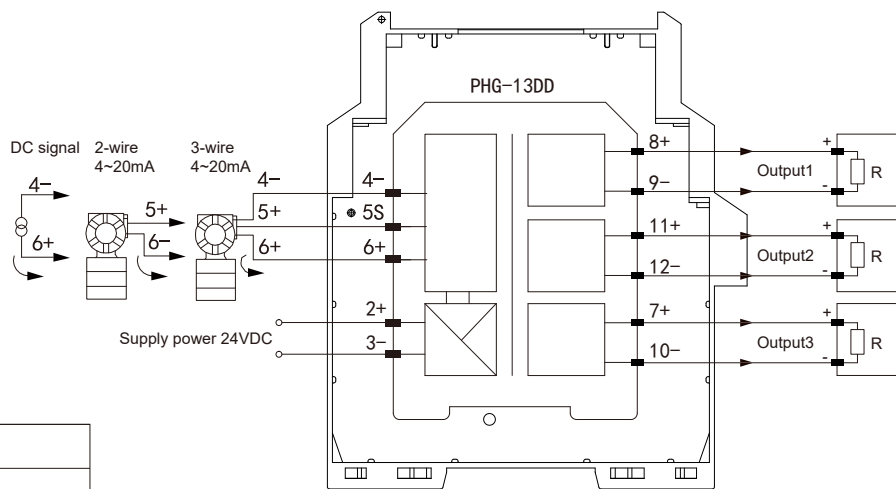


Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10V$
8	Customizable

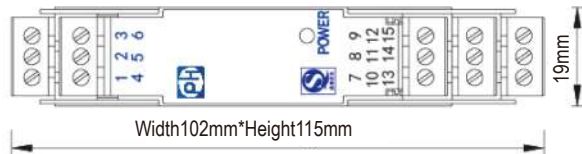
Common models and parameters

Model	Channel numbers	Input	Output1	Output2	Output3	Power supply condition
PHG-13DD-1111	1 input 3 outputs	4~20mA	4~20mA	4~20mA	4~20mA	24VDC
PHG-13DD-1133	1 input 3 outputs	4~20mA	4~20mA	0~5V	0~5V	24VDC
PHG-13DD-1144	1 input 3 outputs	4~20mA	4~20mA	0~10V	0~10V	24VDC
PHG-13DD-3111	1 input 3 outputs	0~5V	4~20mA	4~20mA	4~20mA	24VDC
PHG-13DD-3133	1 input 3 outputs	0~5V	4~20mA	0~5V	0~5V	24VDC
PHG-13DD-3144	1 input 3 outputs	0~5V	4~20mA	0~10V	0~10V	24VDC
PHG-13DD-3333	1 input 3 outputs	0~5V	0~5V	0~5V	0~5V	24VDC
PHG-13DD-4111	1 input 3 outputs	0~10V	4~20mA	4~20mA	4~20mA	24VDC
PHG-13DD-4133	1 input 3 outputs	0~10V	4~20mA	0~5V	0~5V	24VDC
PHG-13DD-4144	1 input 3 outputs	0~10V	4~20mA	0~10V	0~10V	24VDC
PHG-13DD-4444	1 input 3 outputs	0~10V	0~10V	0~10V	0~10V	24VDC
PHG-13DD-6111	1 input 3 outputs	0~75mV	4~20mA	4~20mA	4~20mA	24VDC
PHG-13DD-6333	1 input 3 outputs	0~75mV	0~5V	0~5V	0~5V	24VDC
PHG-13DD-6444	1 input 3 outputs	0~75mV	0~10V	0~10V	0~10V	24VDC
PHG-13ND-2888	1 input 3 outputs	Two or three-wire system or 4~20mA	Customizable	Customizable	Customizable	24VDC
PHG-13ND-5888	1 input 3 outputs	Two-wiresystem 4~20mA	Customizable	Customizable	Customizable	24VDC
PHG-13DD-8888	1 input 3 outputs	Customizable	Customizable	Customizable	Customizable	24VDC

Top view Terminal assignments Schematic diagram



Terminal	Terminal assignments		
2	Power supply+	24VDC±10%	
3	Power supply-		
	Input with two-wire	Input with three-wire	DC signal
4		Input-	Input-
5	Input+	Power supply with provided power+	
6	Input-	Input+	Input+
8	Output1+	DC signal	
9	Output1-		
11	Output2+	DC signal	
12	Output2-		
7	Output3-	DC signal	
10	Output3-		





DC signal input /DC signal output      1 input 4 outputs

**Overview**

1 input with DC signal, 4 outputs with DC signal

Power supply 24VDC or 85VAC~265VAC

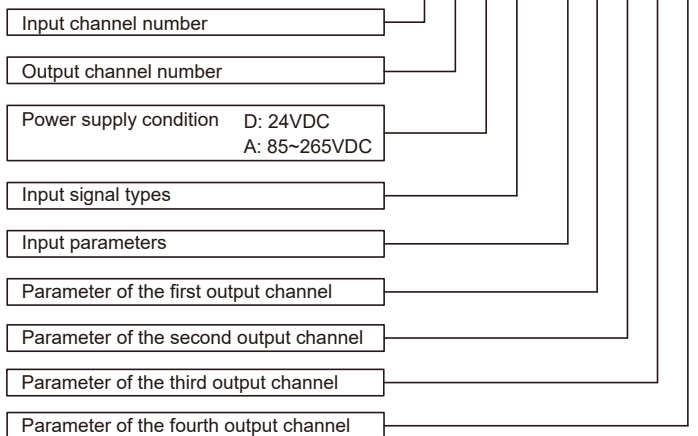
In the "Common model and specifications" the number "8" means "customizable"

**Specifications**

Input impedance	Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5mA$
Accuracy	$\pm 0.1\%F.S$
Temperature drift	0.2% F.S/10 C
Temperature parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 10ms$
Power consumption	The current output is about 2.6W and the voltage output is about 1W
MTBF	80,000 hours

**Model definition**

PHG-14DD-□□□□

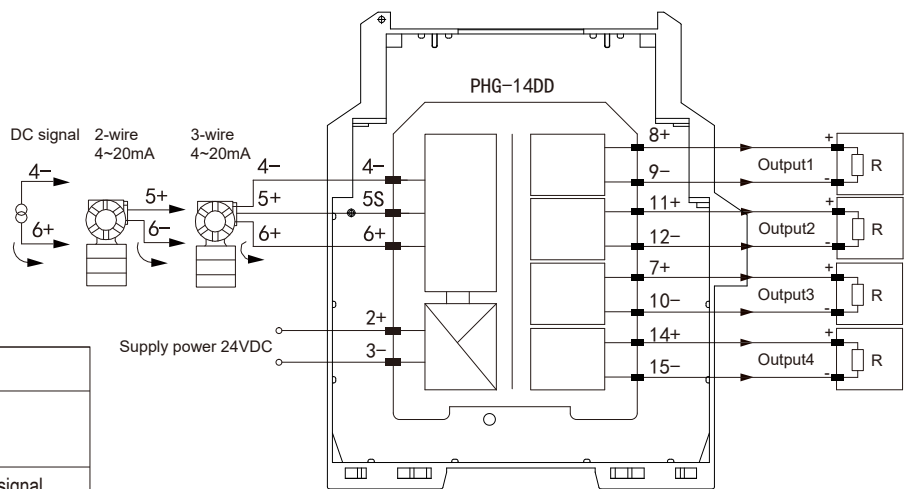


Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10V$
8	Customizable

Common models and parameters

Model	Channel numbers	Input	Output1	Output2	Output3	Output4	Power supply condition
PHG-14DD-11111	1 input 4 outputs	4~20mA	4~20mA	4~20mA	4~20mA	4~20mA	24VDC
PHG-14DD-11333	1 input 4 outputs	4~20mA	4~20mA	0~5V	0~5V	0~5V	24VDC
PHG-14DD-11444	1 input 4 outputs	4~20mA	4~20mA	0~10V	0~10V	0~10V	24VDC
PHG-14DD-21111	1 input 4 outputs	Two or three-wire system or 4~20mA	4~20mA	4~20mA	4~20mA	4~20mA	24VDC
PHG-14DD-31111	1 input 4 outputs	0~5V	4~20mA	4~20mA	4~20mA	4~20mA	24VDC
PHG-14DD-31333	1 input 4 outputs	0~5V	4~20mA	0~5V	0~5V	0~5V	24VDC
PHG-14DD-31444	1 input 4 outputs	0~5V	4~20mA	0~10V	0~10V	0~10V	24VDC
PHG-14DD-33333	1 input 4 outputs	0~5V	0~5V	0~5V	0~5V	0~5V	24VDC
PHG-14DD-41111	1 input 4 outputs	0~10V	4~20mA	4~20mA	4~20mA	4~20mA	24VDC
PHG-14DD-41333	1 input 4 outputs	0~10V	4~20mA	0~5V	0~5V	0~5V	24VDC
PHG-14DD-41444	1 input 4 outputs	0~10V	4~20mA	0~10V	0~10V	0~10V	24VDC
PHG-14DD-44444	1 input 4 outputs	0~10V	0~10V	0~10V	0~10V	0~10V	24VDC
PHG-14DD-61111	1 input 4 outputs	0~75mV	4~20mA	4~20mA	4~20mA	4~20mA	24VDC
PHG-14DD-63333	1 input 4 outputs	0~75mV	0~5V	0~5V	0~5V	0~5V	24VDC
PHG-14ND-28888	1 input 4 outputs	Two or three-wire system or 4~20mA	Customizable	Customizable	Customizable	Customizable	24VDC
PHG-14ND-58888	1 input 4 outputs	Two-wiresystem 4~20mA	Customizable	Customizable	Customizable	Customizable	24VDC
PHG-14DD-88888	1 input 4 outputs	Customizable	Customizable	Customizable	Customizable	Customizable	24VDC

Top view Terminal assignments Schematic diagram



Terminal	Terminal assignments		
2	Power supply+	24VDC±10%	
3	Power supply-		
	Input with two-wire	Input with three-wire	DC signal
4		Input-	Input-
5	Input+	Power supply with provided power	
6	Input-	Input+	Input+
8	Output1+	DC signal	
9	Output1-		
11	Output2+	DC signal	
12	Output2-		
7	Output3-	DC signal	
10	Output3-		
14	Output4-	DC signal	
15	Output4-		







DC signal input /DC signal output      2 inputs 2 outputs

**Overview**

2 inputs with DC signal, 2 outputs with DC signal

Power supply 24VDC or 85VAC~265VAC

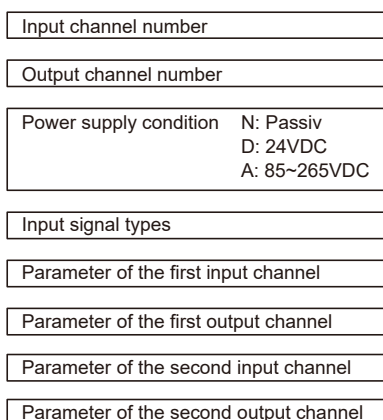
In the "Common model and specifications" the number "8" means "customizable"

**Specifications**

Input impedance	(PHG-11DD Serie) Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$ (PHG-22ND-1111) $120\Omega + \text{output load}$
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5\text{mA}$
Accuracy of active products/passive products accuracy	$\pm 0.1\% \text{F.S} / \pm 0.3\% \text{F.S}$
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 10\text{ms}$
Power consumption	The current output is about 1.8W and the voltage output is about 1W
MTBF	80,000 hours

**Model definition**

PHG-22DD-□□□□



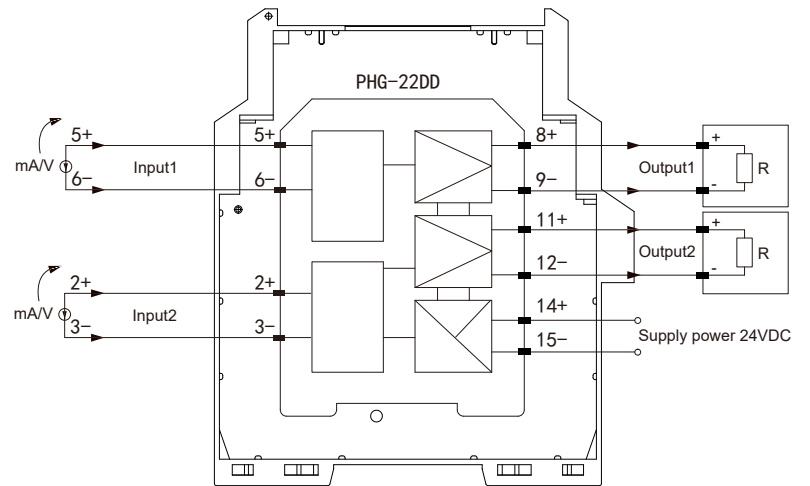
Parameters definition	
Code	Parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10\text{V}$
8	Customizable

Common models and parameters

Model	Channel numbers	Input1	Output1	Input2	Output2	Power supply condition
PHG-22DD-1111	2 inputs 2 outputs	4~20mA	4~20mA	4~20mA	4~20mA	24VDC
PHG-22DD-1113	2 inputs 2 outputs	4~20mA	4~20mA	4~20mA	0~5V	24VDC
PHG-22DD-1114	2 inputs 2 outputs	4~20mA	4~20mA	4~20mA	0~10V	24VDC
PHG-22DD-1133	2 inputs 2 outputs	4~20mA	4~20mA	0~5V	0~5V	24VDC
PHG-22DD-1144	2 inputs 2 outputs	4~20mA	4~20mA	0~10V	0~10V	24VDC
PHG-22DD-1313	2 inputs 2 outputs	4~20mA	0~5V	4~20mA	0~5V	24VDC
PHG-22DD-3311	2 inputs 2 outputs	0~5V	0~5V	4~20mA	4~20mA	24VDC
PHG-22DD-3313	2 inputs 2 outputs	0~5V	0~5V	4~20mA	0~5V	24VDC
PHG-22DD-3314	2 inputs 2 outputs	0~5V	0~5V	4~20mA	0~10V	24VDC
PHG-22DD-3333	2 inputs 2 outputs	0~5V	0~5V	0~5V	0~5V	24VDC
PHG-22DD-3344	2 inputs 2 outputs	0~5V	0~5V	0~10V	0~10V	24VDC
PHG-22DD-3411	2 inputs 2 outputs	0~5V	0~10V	4~20mA	4~20mA	24VDC
PHG-22DD-3434	2 inputs 2 outputs	0~5V	0~10V	0~5V	0~10V	24VDC
PHG-22DD-4444	2 inputs 2 outputs	0~10V	0~10V	0~10V	0~10V	24VDC
PHG-22ND-1111	2 inputs 2 outputs	4~20mA	4~20mA	4~20mA	4~20mA	No
PHG-22DD-8888	2 inputs 2 outputs	Customizable	Customizable	Customizable	Customizable	24VDC

Top view Terminal assignments Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input1+	DC signal
6	Input1-	
2	Input2+	DC signal
3	Input2-	
8	Output1+	DC signal
9	Output1-	
11	Output2-	DC signal
12	Output2-	





DC signal with provided power input /DC signal output      1 input 1 output

### Overview

1 input with DC signal with provided power, 1 output with DC signal

Power supply 24VDC or 85VAC~265VAC

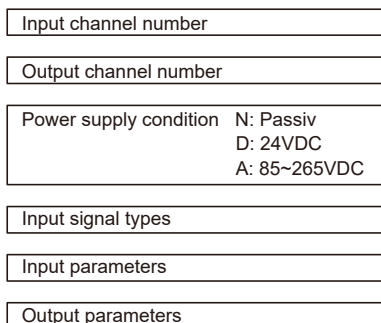
In the "Common model and specifications" the number "8" means "customizable"

## Specifications

Range of provided voltage	≥16V
Input impedance	Type of voltage≥100KΩ, current type ≤100Ω
Load capacity	Current type load resistance ≤500Ω, voltage type load current < 5mA
Accuracy of active products/ passive products accuracy	± 0.1%F.S/± 0.3%F.S
Temperature drift	0.2% F.S/10 °C
Environmental parameters	-20 °C ~+60 °C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10% or AC 85VAC~265VAC
Response time	<10ms
Power consumption	The current output is about 1.4W and the voltage output is about 1W
MTBF	80,000 hours

## Model definition

PHG-11DE-□□

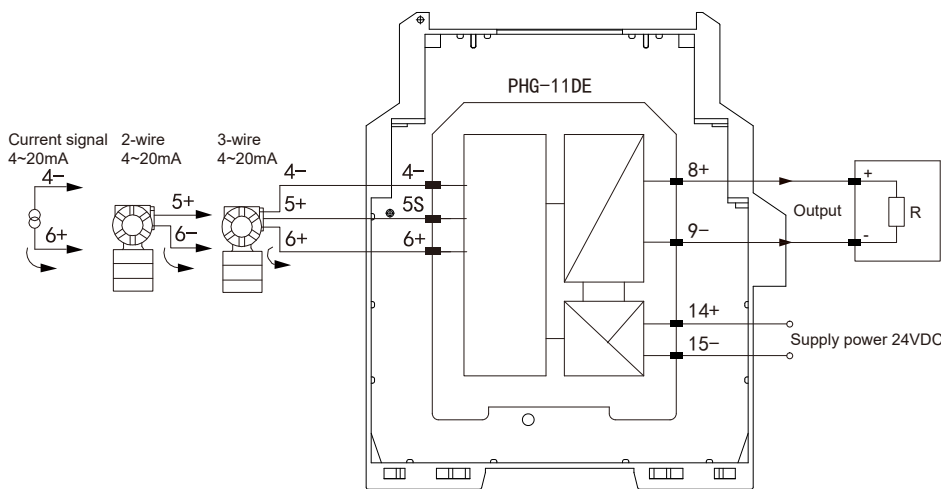


Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	±10V
8	Customizable

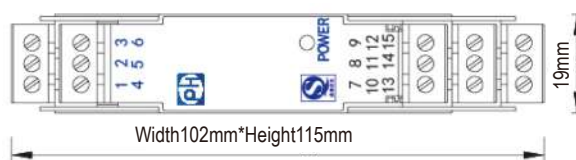
**Common models and parameters**

Model	Channel numbers	Input	Output	Power supply condition
PHG-11DE-21	1 input 1 output	2-wire, 3-wire or 4~20mA	4~20mA	24VDC
PHG-11DE-23	1 input 1 output	2-wire, 3-wire or 4~20mA	0~5V	24VDC
PHG-11DE-24	1 input 1 output	2-wire, 3-wire or 4~20mA	0~10V	24VDC
PHG-11DE-25	1 input 1 output	2-wire, 3-wire or 4~20mA	1~5V	24VDC
PHG-11DE-51	1 input 1 output	2-wire 4~20mA	4~20mA	24VDC
PHG-11DE-53	1 input 1 output	2-wire 4~20mA	0~5V	24VDC
PHG-11DE-58	1 input 1 output	2-wire 4~20mA	Customizable	24VDC
PHG-11DE-52	1 input 1 output	2-wire 4~20mA	2-wire 4~20mA	24VDC
PHG-11DE-28	1 input 1 output	2-wire, 3-wire or 4~20mA	Customizable	24VDC
PHG-11DE-31	1 input 1 output	3-wire 4~20mA	4~20mA	24VDC

**Top view Terminal assignments Schematic diagram**



Terminal	Terminal assignments		
14	Power supply+	24VDC±10%	
15	Power supply-		
	Input with 2-wire	Input with 3-wire	Current signal
5	Input+	Supply power with provided power+	
4		Input-	Input-
6	Input-	Input+	Input+
8	Output+	DC signal	
9	Output-		





DC signal with provided power input /DC signal output      1 input 2 outputs

**Overview**

1 input with DC signal with provided power, 2 outputs with DC signal

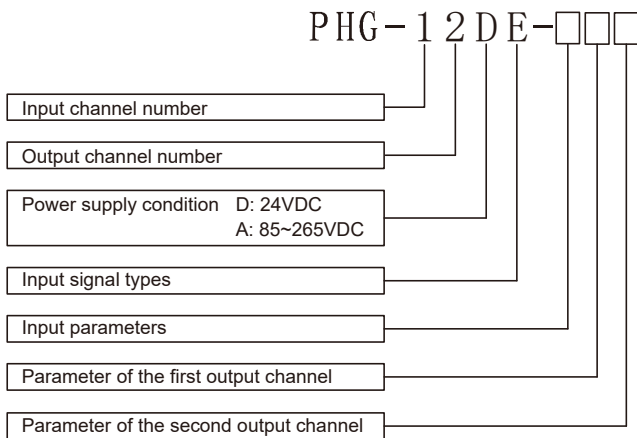
Power supply 24VDC or 85VAC~265VAC

In the "Common model and specifications" the number "8" means "customizable"

**Specifications**

Range of provided voltage	≥16V
Input impedance	Type of voltage≥100KΩ, current type ≤100Ω
Load capacity	Current type load resistance ≤500Ω, voltage type load current < 5mA
Accuracy	± 0.1%F.S
Temperature drift	0.2% F.S/10 °C
Environmental parameters	-20 °C ~+60 °C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10% or AC 85VAC~265VAC
Response time	<10ms
Power consumption	The current output is about 1.8W and the voltage output is about 1W
MTBF	80,000 hours

**Model definition**

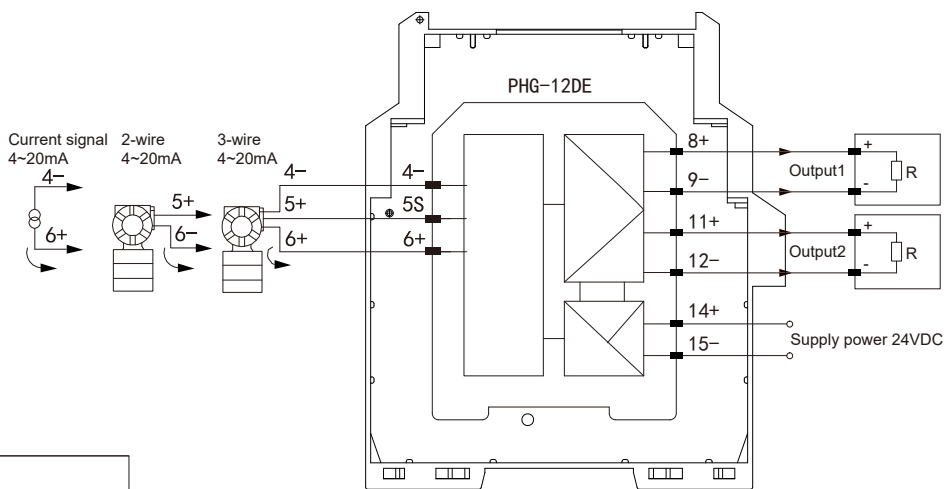


Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	±10V
8	Customizable

**Common models and parameters**

Model	Channel numbers	Input	Output1	Output2	Power supply condition
PHG-12DE-211	1 input 2 outputs	2-wire, 3-wire or 4~20mA	4~20mA	4~20mA	24VDC
PHG-12DE-213	1 input 2 outputs	2-wire, 3-wire or 4~20mA	4~20mA	0~5V	24VDC
PHG-12DE-214	1 input 2 outputs	2-wire, 3-wire or 4~20mA	4~20mA	0~10V	24VDC
PHG-12DE-233	1 input 2 outputs	2-wire, 3-wire or 4~20mA	0~5V	0~5V	24VDC
PHG-12DE-234	1 input 2 outputs	2-wire, 3-wire or 4~20mA	0~5V	0~10V	24VDC
PHG-12DE-244	1 input 2 outputs	2-wire, 3-wire or 4~20mA	0~10V	0~10V	24VDC
PHG-12DE-255	1 input 2 outputs	2-wire, 3-wire or 4~20mA	1~5V	1~5V	24VDC
PHG-12DE-288	1 input 2 outputs	2-wire, 3-wire or 4~20mA	Customizable	Customizable	24VDC
PHG-12DE-511	1 input 2 outputs	2-wire 4~20mA	4~20mA	4~20mA	24VDC
PHG-12DE-588	1 input 2 outputs	2-wire 4~20mA	Customizable	Customizable	24VDC
PHG-12DE-311	1 input 2 outputs	3-wire 4~20mA	4~20mA	4~20mA	24VDC

**Top view    Terminal assignments    Schematic diagram**



Terminal	Terminal assignments		
14	Power supply+	24VDC±10%	
15	Power supply-		
	Input with 2-wire	Input with 3-wire	Current signal
5	Input+	Supply power with provided power+	
4		Input-	Input-
6	Input-	Input+	Input+
8	Output1+	DC signal	
9	Output1-		
11	Output2+	DC signal	
12	Output2-		





DC signal with provided power input /DC signal output      2 inputs 2 outputs

### Overview

2 inputs with DC signal with provided power, 2 outputs with DC signal

Power supply 24VDC or 85VAC~265VAC

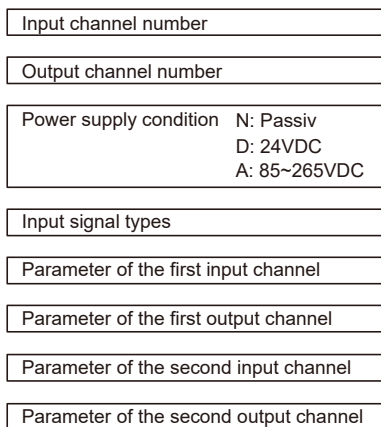
In the "Common model and specifications" the number "8" means "customizable"

## Specifications

Range of provided voltage	≥16V
Input impedance	Type of voltage≥100KΩ, current type ≤100Ω
Load capacity	Current type load resistance ≤500Ω, voltage type load current < 5mA
Accuracy of active products/ passive products accuracy	± 0.1%F.S/± 0.3%F.S
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10% or AC 85VAC~265VAC
Response time	<10ms
Power consumption	The current output is about 2.8W and the voltage output is about 1.5W
MTBF	80,000 hours

## Model definition

PHG-22DE-□□□□

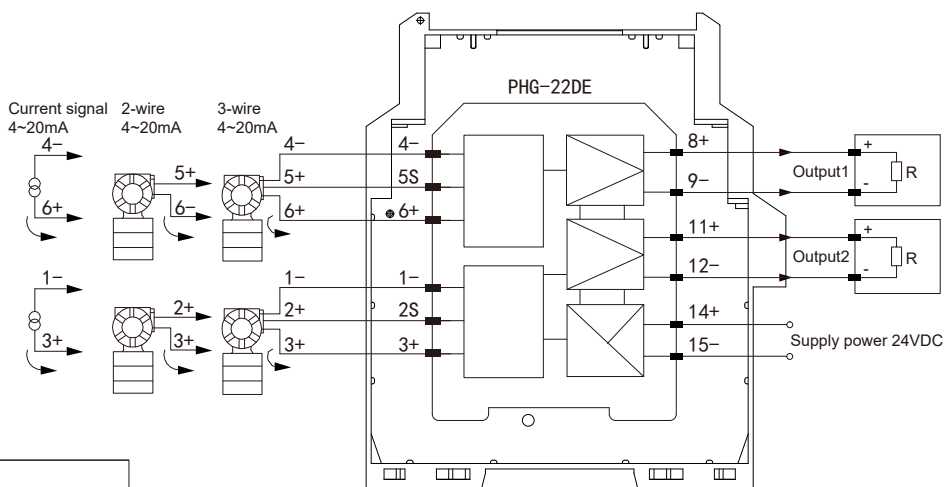


Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	±10V
8	Customizable

Common models and parameters

Model	Channel numbers	Input1	Output1	Input2	Output2	Power supply condition
PHG-22DE-2121	2 inputs 2 outputs	2-wire, 3-wire or 4~20mA	4~20mA	2-wire, 3-wire or 4~20mA	4~20mA	24VDC
PHG-22DE-2123	2 inputs 2 outputs	2-wire, 3-wire or 4~20mA	4~20mA	2-wire, 3-wire or 4~20mA	0~5V	24VDC
PHG-22DE-2124	2 inputs 2 outputs	2-wire, 3-wire or 4~20mA	4~20mA	2-wire, 3-wire or 4~20mA	0~10V	24VDC
PHG-22DE-2323	2 inputs 2 outputs	2-wire, 3-wire or 4~20mA	0~5V	2-wire, 3-wire or 4~20mA	0~5V	24VDC
PHG-22DE-2324	2 inputs 2 outputs	2-wire, 3-wire or 4~20mA	0~5V	2-wire, 3-wire or 4~20mA	0~10V	24VDC
PHG-22DE-2424	2 inputs 2 outputs	2-wire, 3-wire or 4~20mA	0~10V	2-wire, 3-wire or 4~20mA	0~10V	24VDC
PHG-22DE-2525	2 inputs 2 outputs	2-wire, 3-wire or 4~20mA	1~5V	2-wire, 3-wire or 4~20mA	1~5V	24VDC
PHG-22DE-2828	2 inputs 2 outputs	2-wire, 3-wire or 4~20mA	Customizable	2-wire, 3-wire or 4~20mA	Customizable	24VDC
PHG-22DE-5121	2 inputs 2 outputs	2-wire 4~20mA	4~20mA	2-wire 4~20mA	4~20mA	24VDC
PHG-22DE-5828	2 inputs 2 outputs	2-wire 4~20mA	Customizable	2-wire 4~20mA	Customizable	24VDC
PHG-22DE-5252	2 inputs 2 outputs	2-wire 4~20mA	2-wire 4~20mA	2-wire 4~20mA	2-wire 4~20mA	24VDC
PHG-22DE-3131	2 inputs 2 outputs	3-wire 4~20mA	4~20mA	3-wire 4~20mA	4~20mA	24VDC

Top view Terminal assignments Schematic diagram



Terminal	Terminal assignments		
14	Power supply+	24VDC±10%	
15	Power supply-		
	Input with 2-wire	Input with 3-wire	Current signal
5	Input1+	Supply power with provided power1+	
4		Input1-	Input1-
6	Input1-	Input1+	Input1+
2	Input2+	Supply power with provided power2+	
1		Input2-	Input2-
3	Input2-	Input2+	Input2+
8	Output1+	DC signal	
9	Output1-		
11	Output2+	DC signal	
12	Output2-		







AC signal input /DC signal output      1 input 1 output

**Overview**

1 input with AC signal, 1 output with DC signal

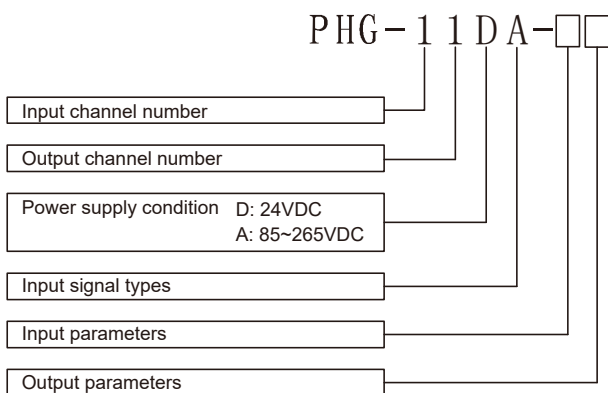
Power supply 24VDC or 85VAC~265VAC

In the "Common model and specifications" the number "8" means "customizable"

**Specifications**

Input impedance	Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5mA$
Accuracy	$\pm 0.1\%F.S$
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 1s$
Power consumption	The current output is about 1.0W and the voltage output is about 0.7W
MTBF	80,000 hours

**Model definition**



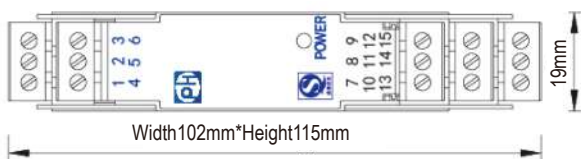
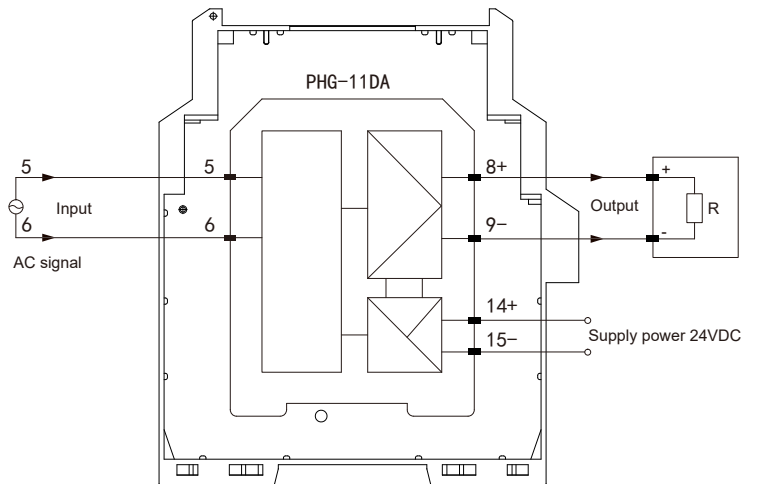
Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10V$
8	Customizable

Common models and parameters

Model	Channel numbers	Input	Output	Power supply condition
PHG-11DA-11	1 input 1 output	0~5AAC	4~20mA	24VDC
PHG-11DA-13	1 input 1 output	0~5AAC	0~5V	24VDC
PHG-11DA-14	1 input 1 output	0~5AAC	0~10V	24VDC
PHG-11DA-31	1 input 1 output	0~265VAC	4~20mA	24VDC
PHG-11DA-33	1 input 1 output	0~265VAC	0~5V	24VDC
PHG-11DA-34	1 input 1 output	0~265VAC	0~10V	24VDC
PHG-11DA-81	1 input 1 output	0~500VAC	4~20mA	24VDC
PHG-11DA-83	1 input 1 output	0~500VAC	0~5V	24VDC
PHG-11DA-84	1 input 1 output	0~500VAC	0~10V	24VDC
PHG-11DA-88	1 input 1 output	Customizable	Customizable	24VDC

Top view Terminal assignments Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input~	AC signal
6	Input~	
8	Output+	DC signal
9	Output-	





AC signal input /DC signal output      1 input 2 outputs

**Overview**

1 input with AC signal, 2 outputs with DC signal

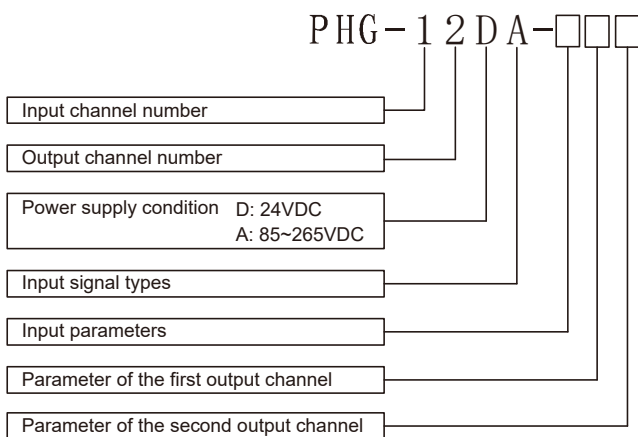
Power supply 24VDC or 85VAC~265VAC

In the "Common model and specifications" the number "8" means "customizable"

**Specifications**

Input impedance	Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5mA$
Accuracy	$\pm 0.1\%F.S$
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 1s$
Power consumption	The current output is about 1.3W and the voltage output is about 0.7W
MTBF	80,000 hours

**Model definition**



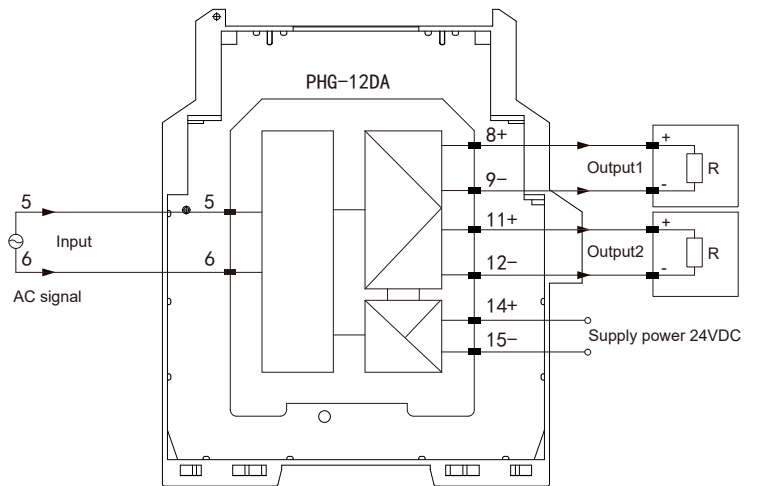
Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10V$
8	Customizable

Common models and parameters

Model	Channel numbers	Input	Output1	Output2	Power supply condition
PHG-12DA-111	1 input 2 outputs	0~5AAC	4~20mA	4~20mA	24VDC
PHG-12DA-113	1 input 2 outputs	0~5AAC	4~20mA	0~5V	24VDC
PHG-12DA-114	1 input 2 outputs	0~5AAC	4~20mA	0~10V	24VDC
PHG-12DA-311	1 input 2 outputs	0~265VAC	4~20mA	4~20mA	24VDC
PHG-12DA-333	1 input 2 outputs	0~265VAC	0~5V	0~5V	24VDC
PHG-12DA-344	1 input 2 outputs	0~265VAC	0~10V	0~10V	24VDC
PHG-12DA-811	1 input 2 outputs	0~500VAC	4~20mA	4~20mA	24VDC
PHG-12DA-833	1 input 2 outputs	0~500VAC	0~5V	0~5V	24VDC
PHG-12DA-844	1 input 2 outputs	0~500VAC	0~10V	0~10V	24VDC
PHG-12DA-888	1 input 2 outputs	Customizable	Customizable	Customizable	24VDC

Top view    Terminal assignments    Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input~	AC signal
6	Input~	
8	Output1+	DC signal
9	Output1-	
11	Output2-	DC signal
12	Output2-	





AC signal input /DC signal output      2 inputs 2 outputs

**Overview**

2 inputs with AC signal, 2 outputs with DC signal

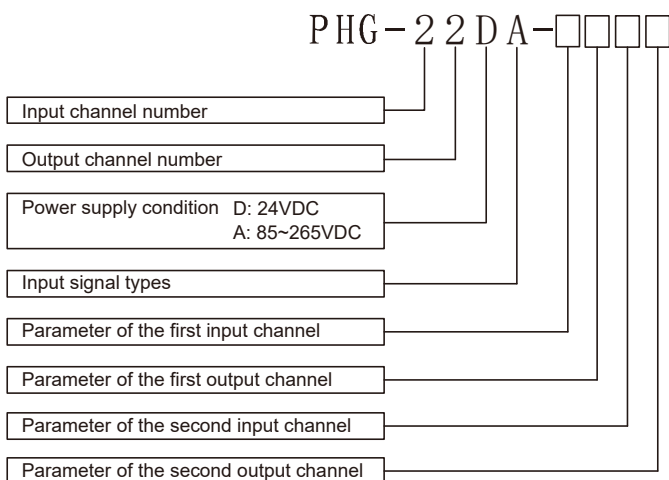
Power supply 24VDC or 85VAC~265VAC

In the "Common model and specifications" the number "8" means "customizable"

**Specifications**

Input impedance	Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5mA$
Accuracy	$\pm 0.1\%F.S$
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 1s$
Power consumption	The current output is about 2.0W and the voltage output is about 1.5W
MTBF	80,000 hours

**Model definition**



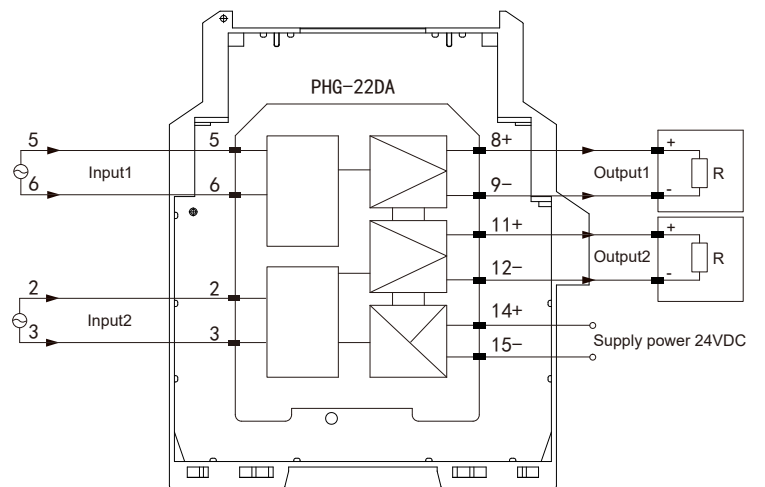
Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10V$
8	Customizable

Common models and parameters

Model	Channel numbers	Input1	Output1	Input2	Output2	Power supply condition
PHG-22DA-1111	2 inputs 2 outputs	0~5AAC	4~20mA	0~5AAC	4~20mA	24VDC
PHG-22DA-1113	2 inputs 2 outputs	0~5AAC	4~20mA	0~5AAC	0~5V	24VDC
PHG-22DA-1114	2 inputs 2 outputs	0~5AAC	4~20mA	0~5AAC	0~10V	24VDC
PHG-22DA-1313	2 inputs 2 outputs	0~5AAC	0~5V	0~5AAC	0~5V	24VDC
PHG-22DA-1414	2 inputs 2 outputs	0~5AAC	0~10V	0~5AAC	0~10V	24VDC
PHG-22DA-3131	2 inputs 2 outputs	0~265VAC	4~20mA	0~265VAC	4~20mA	24VDC
PHG-22DA-3333	2 inputs 2 outputs	0~265VAC	0~5V	0~265VAC	0~5V	24VDC
PHG-22DA-3434	2 inputs 2 outputs	0~265VAC	0~10V	0~265VAC	0~10V	24VDC
PHG-22DA-8181	2 inputs 2 outputs	0~500VAC	4~20mA	0~500VAC	4~20mA	24VDC
PHG-22DA-8383	2 inputs 2 outputs	0~500VAC	0~5V	0~500VAC	0~5V	24VDC
PHG-22DA-8384	2 inputs 2 outputs	0~500VAC	0~5V	0~500VAC	0~10V	24VDC
PHG-22DA-8888	2 inputs 2 outputs	Customizable	Customizable	Customizable	Customizable	24VDC

Top view    Terminal assignments    Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input1~	AC signal
6	Input1~	
8	Output1+	DC signal
9	Output1-	
2	Input2~	AC signal
3	Input2~	
11	Output2-	DC signal
12	Output2-	





Potentiometer signal input /DC signal output 1 input 1 output

**Overview**

1 potentiometer signal input, 1 DC signal output.

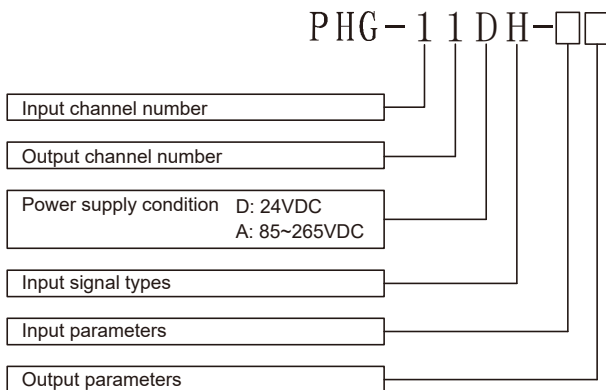
The conversion circuit sends 2.5V voltage to the input potentiometer, and the potentiometer transmit the divided voltage value back to the circuit.

In the "Common model and specifications" the number "8" means "customizable".

**Specifications**

Load capacity	Current type load resistance≤500Ω, voltage type load current<5mA
Accuracy	± 0.1%F.S
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10% or AC 85VAC~265VAC
Response time	<10ms
Power consumption	The current output is about 0.8W and the voltage output is about 0.5W
MTBF	80,000 hours

**Model definition**



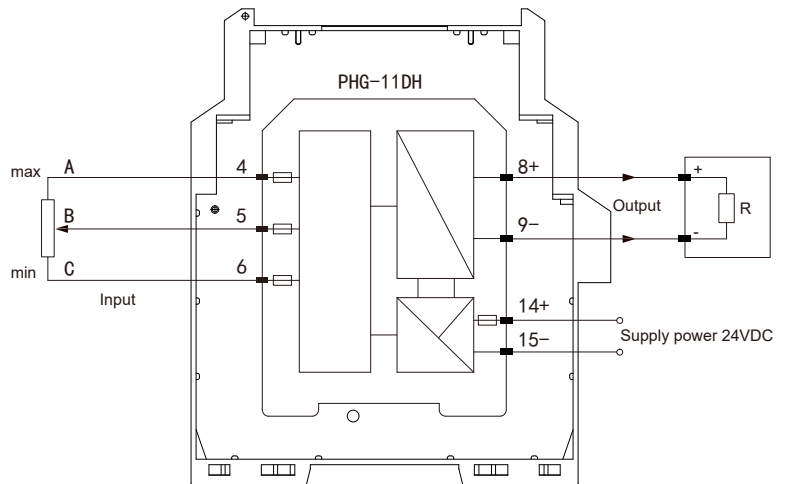
Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	±10V
8	Customizable

Common models and parameters

Model	Channel numbers	Input	Output	Power supply condition
PHG-11DH-11	1 input 1 output	0~1KΩ	4~20mA	24VDC
PHG-11DH-13	1 input 1 output	0~1KΩ	0~5V	24VDC
PHG-11DH-14	1 input 1 output	0~1KΩ	0~10V	24VDC
PHG-11DH-41	1 input 1 output	0~2KΩ	4~20mA	24VDC
PHG-11DH-43	1 input 1 output	0~2KΩ	0~5V	24VDC
PHG-11DH-44	1 input 1 output	0~2KΩ	0~10V	24VDC
PHG-11DH-51	1 input 1 output	0~5KΩ	4~20mA	24VDC
PHG-11DH-53	1 input 1 output	0~5KΩ	0~5V	24VDC
PHG-11DH-54	1 input 1 output	0~5KΩ	0~10V	24VDC
PHG-11DH-71	1 input 1 output	0~10KΩ	4~20mA	24VDC
PHG-11DH-73	1 input 1 output	0~10KΩ	0~5V	24VDC
PHG-11DH-74	1 input 1 output	0~10KΩ	0~10V	24VDC
PHG-11DH-88	1 input 1 output	Customizable	Customizable	24VDC

Top view Terminal assignments Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
8	Output+	DC signal
9	Output-	
4	A	Input
5	B	
6	C	







Potentiometer signal input /DC signal output 1 input 2 outputs

**Overview**

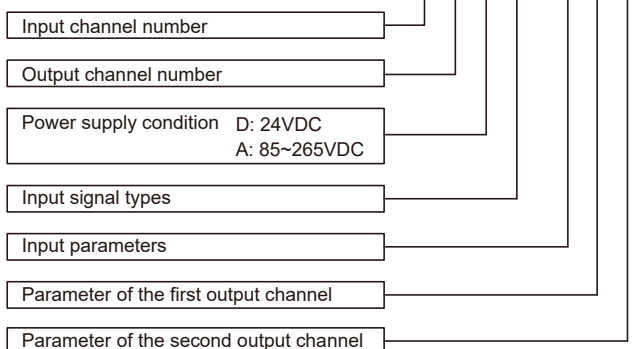
1 potentiometer signal input, 2 DC signal outputs.  
 The conversion circuit sends 2.5V voltage to the input potentiometer, and the potentiometer transmit the divided voltage value back to the circuit.  
 In the "Common model and specifications" the number "8" means "customizable".

**Specifications**

Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5\text{mA}$
Accuracy	$\pm 0.1\% \text{F.S}$
Temperature drift	$0.2\% \text{F.S}/10\text{C}$
Environmental parameters	$-20\text{C} \sim +60\text{C}$
Relative humidity	35%~85% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100\text{M}\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 10\text{ms}$
Power consumption	The current output is about 1.3W and the voltage output is about 0.5W
MTBF	80,000 hours

**Model definition**

PHG-12DH-□□



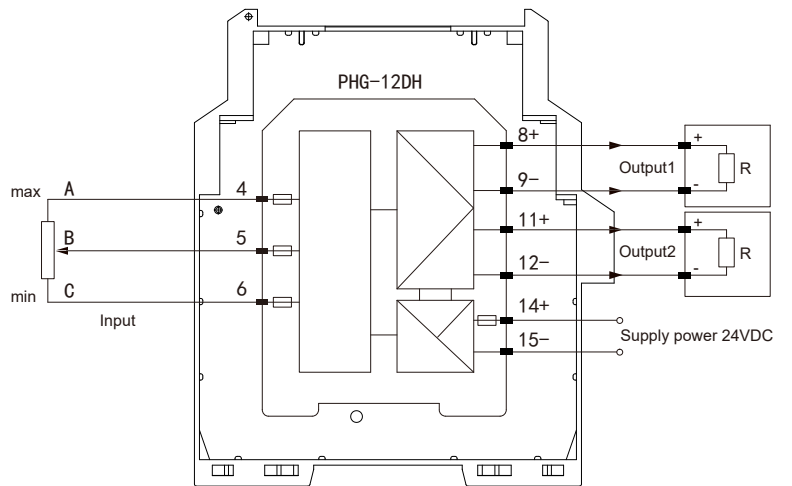
Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10\text{V}$
8	Customizable

## Common models and parameters

Model	Channel numbers	Input	Output1	Output2	Power supply condition
PHG-12DH-111	1 input 2 outputs	0~1KΩ	4~20mA	4~20mA	24VDC
PHG-12DH-113	1 input 2 outputs	0~1KΩ	4~20mA	0~5V	24VDC
PHG-12DH-114	1 input 2 outputs	0~1KΩ	4~20mA	0~10V	24VDC
PHG-12DH-133	1 input 2 outputs	0~1KΩ	0~5V	0~5V	24VDC
PHG-12DH-144	1 input 2 outputs	0~1KΩ	0~10V	0~10V	24VDC
PHG-12DH-511	1 input 2 outputs	0~5KΩ	4~20mA	4~20mA	24VDC
PHG-12DH-513	1 input 2 outputs	0~5KΩ	4~20mA	0~5V	24VDC
PHG-12DH-514	1 input 2 outputs	0~5KΩ	4~20mA	0~10V	24VDC
PHG-12DH-533	1 input 2 outputs	0~5KΩ	0~5V	0~5V	24VDC
PHG-12DH-544	1 input 2 outputs	0~5KΩ	0~10V	0~10V	24VDC
PHG-12DH-711	1 input 2 outputs	0~10KΩ	4~20mA	4~20mA	24VDC
PHG-12DH-713	1 input 2 outputs	0~10KΩ	4~20mA	0~5V	24VDC
PHG-12DH-714	1 input 2 outputs	0~10KΩ	4~20mA	0~10V	24VDC
PHG-12DH-733	1 input 2 outputs	0~10KΩ	0~5V	0~5V	24VDC
PHG-12DH-744	1 input 2 outputs	0~10KΩ	0~10V	0~10V	24VDC
PHG-12DH-888	1 input 2 outputs	Customizable	Customizable	Customizable	24VDC

## Top view    Terminal assignments    Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
8	Output1+	DC signal
9	Output1-	
11	Output2+	DC signal
12	Output2-	
4	A	Input
5	B	
6	C	





Potentiometer signal input /DC signal output

2 inputs 2 outputs

### Overview

2 potentiometer signal inputs, 2 DC signal outputs.

Power supply condition: 85VAC~265VAC or 24VDC.

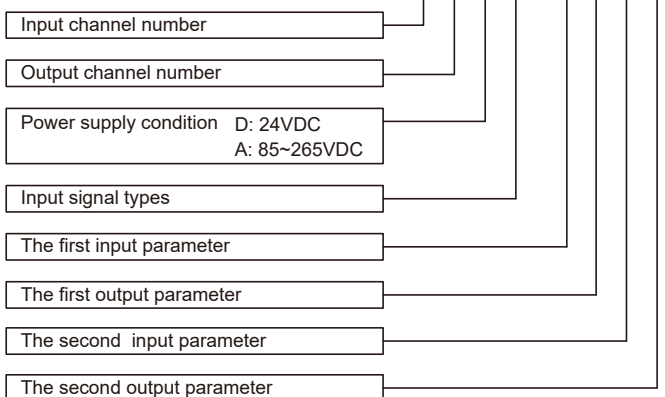
In the "Common model and specifications" the number "8" means "customizable".

## Specifications

Input impedance	Type of voltage $\geq 100K\Omega$ , current type $\leq 100\Omega$
Load capacity	Current type load resistance $\leq 500\Omega$ , voltage type load current $< 5mA$
Accuracy	$\pm 0.1\%F.S$
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply $\geq 100M\Omega$ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC $\pm 10\%$ or AC 85VAC~265VAC
Response time	$< 10ms$
Power consumption	When the power supply is 24VDC, the current output $< 2W$
MTBF	80,000 hours

## Model definition

PHG-22DH-□□□



### Parameters definition

Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	$\pm 10V$
8	Customizable

## Common models and parameters

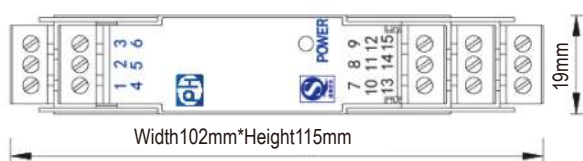
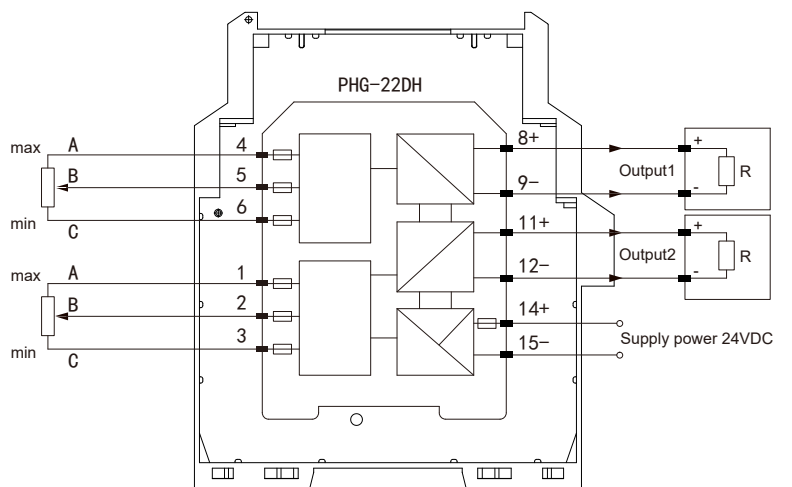
Model	Channel numbers	Input1	Output1	Input2	Output2	Power supply condition
PHG-22DH-1111	2 inputs 2 outputs	0~1KΩ	4~20mA	0~1KΩ	4~20mA	24VDC
PHG-22DH-1113	2 inputs 2 outputs	0~1KΩ	4~20mA	0~1KΩ	0~5V	24VDC
PHG-22DH-1114	2 inputs 2 outputs	0~1KΩ	4~20mA	0~1KΩ	0~10V	24VDC
PHG-22DH-1313	2 inputs 2 outputs	0~1KΩ	0~5V	0~1KΩ	0~5V	24VDC
PHG-22DH-1414	2 inputs 2 outputs	0~1KΩ	0~10V	0~1KΩ	0~10V	24VDC
PHG-22DH-5151	2 inputs 2 outputs	0~5KΩ	4~20mA	0~5KΩ	4~20mA	24VDC
PHG-22DH-5153	2 inputs 2 outputs	0~5KΩ	4~20mA	0~5KΩ	0~5V	24VDC
PHG-22DH-5154	2 inputs 2 outputs	0~5KΩ	4~20mA	0~5KΩ	0~10V	24VDC
PHG-22DH-5353	2 inputs 2 outputs	0~5KΩ	0~5V	0~5KΩ	0~5V	24VDC
PHG-22DH-5454	2 inputs 2 outputs	0~5KΩ	0~10V	0~5KΩ	0~10V	24VDC
PHG-22DH-7171	2 inputs 2 outputs	0~10KΩ	4~20mA	0~10KΩ	4~20mA	24VDC
PHG-22DH-7173	2 inputs 2 outputs	0~10KΩ	4~20mA	0~10KΩ	0~5V	24VDC
PHG-22DH-7174	2 inputs 2 outputs	0~10KΩ	4~20mA	0~10KΩ	0~10V	24VDC
PHG-22DH-7373	2 inputs 2 outputs	0~10KΩ	0~5V	0~10KΩ	0~5V	24VDC
PHG-22DH-7474	2 inputs 2 outputs	0~10KΩ	0~10V	0~10KΩ	0~10V	24VDC
PHG-22DH-8888	2 inputs 2 outputs	Customizable	Customizable	Customizable	Customizable	24VDC

### Top view

### Terminal assignments

### Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
8	Output1+	DC signal
9	Output1-	
11	Output2-	DC signal
12	Output2-	
4	A	Input1
5	B	
6	C	
4	A	Input2
5	B	
6	C	





RTD signal input /DC signal output      1 input 1 output

### Overview

Single RTD signal input, single DC signal output.

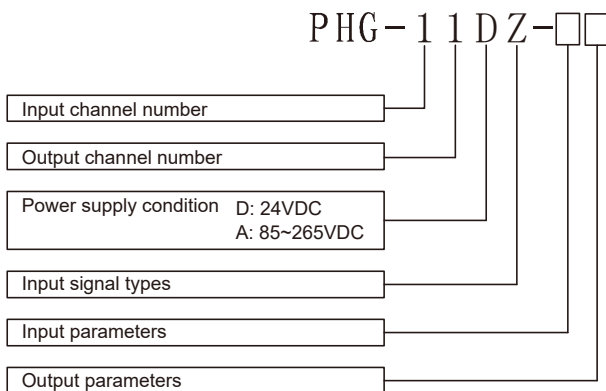
Intelligently programmable, the actual measuring range of RTD can be set by computer.

In the "Common model and specifications" the number "8" means "customizable".

## Specifications

RTD excitation current	800uA
Load capacity	Current type load resistance≤500Ω, voltage type load current<5mA
Accuracy	± 0.1%F.S
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10% or AC 85VAC~265VAC
Response time	<200ms
Power consumption	The current output is about 1W and the voltage output is about 0.8W.
MTBF	80,000 hours

## Model definition



Input RTD and measurement range		
Code	RTD model	Measurement range
2	Cu50	-50~+150 C
3	Cu100	-50~+150 C
4	Pt100	-200~+850 C
5	Pt10	-200~+850 C
6	Pt1000	-200~+850 C

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

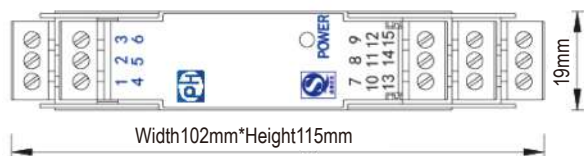
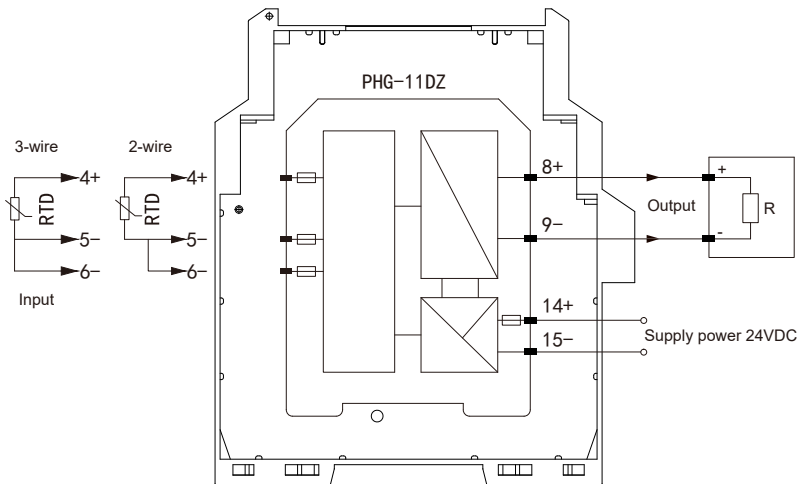
Common models and parameters

Model	Channel numbers	Input	Output	Power supply condition
PHG-11DZ-21	1 input 1 output	Cu50 (-50~+150 C)	4~20mA	24VDC
PHG-11DZ-22	1 input 1 output	Cu50 (-50~+150 C)	0~20mA	24VDC
PHG-11DZ-23	1 input 1 output	Cu50 (-50~+150 C)	0~5V	24VDC
PHG-11DZ-24	1 input 1 output	Cu50 (-50~+150 C)	0~10V	24VDC
PHG-11DZ-31	1 input 1 output	Cu100 (-50~+150 C)	4~20mA	24VDC
PHG-11DZ-32	1 input 1 output	Cu100 (-50~+150 C)	0~20mA	24VDC
PHG-11DZ-33	1 input 1 output	Cu100 (-50~+150 C)	0~5V	24VDC
PHG-11DZ-34	1 input 1 output	Cu100 (-50~+150 C)	0~10V	24VDC
PHG-11DZ-41	1 input 1 output	Pt100 (-200~+850 C)	4~20mA	24VDC
PHG-11DZ-42	1 input 1 output	Pt100 (-200~+850 C)	0~20mA	24VDC
PHG-11DZ-43	1 input 1 output	Pt100 (-200~+850 C)	0~5V	24VDC
PHG-11DZ-44	1 input 1 output	Pt100 (-200~+850 C)	0~10V	24VDC
PHG-11DZ-51	1 input 1 output	Pt10 (-200~+850 C)	4~20mA	24VDC
PHG-11DZ-52	1 input 1 output	Pt10 (-200~+850 C)	0~20mA	24VDC
PHG-11DZ-53	1 input 1 output	Pt10 (-200~+850 C)	0~5V	24VDC
PHG-11DZ-54	1 input 1 output	Pt10 (-200~+850 C)	0~10V	24VDC
PHG-11DZ-88	1 input 1 output	Customizable	Customizable	24VDC

Note: When make an order, please indicate the actual measured temperature range after the product model.

Top view Terminal assignments Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
	2-wire input	3-wire input
4	Input+	Input+
5	Input-	Input-
6	Short connected with terminal 5	Input-
8	Output+	DC signal
9	Output-	



- Note: 1. When the input is with three-wire RTD signal, the resistance values of three wires should be equal as much as possible.
- 2. When the input is with two-wire RTD signal, terminals 5 and 6 must be short-connected.



RTD signal input /DC signal output      1 input 2 outputs

**Overview**

Single RTD signal input, dual DC signal output.

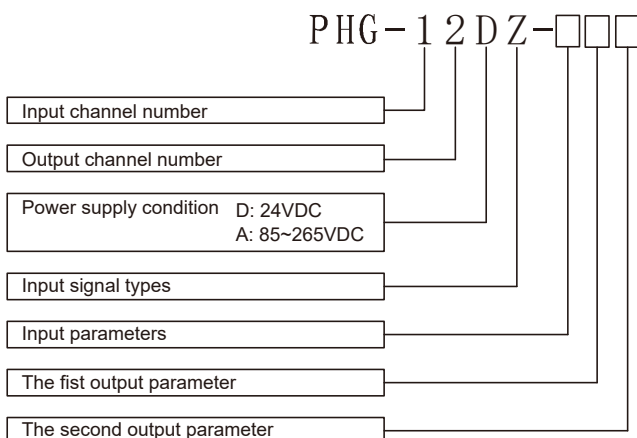
Intelligently programmable, the actual measuring range of RTD can be set by computer.

In the "Common model and specifications" the number "8" means "customizable".

**Specifications**

RTD excitation current	800uA
Load capacity	Current type load resistance≤500Ω, voltage type load current<5mA
Accuracy	± 0.1%F.S
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10% or AC 85VAC~265VAC
Response time	<200ms
Power consumption	The current output is about 1.4W and the voltage output is about 0.8W.
MTBF	80,000 hours

**Model definition**



Input RTD and measurement range		
Code	RTD model	Measurement range
2	Cu50	-50~150 C
3	Cu100	-50~150 C
4	Pt100	-200~850 C
5	Pt10	-200~850 C
6	Pt1000	-200~850 C

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

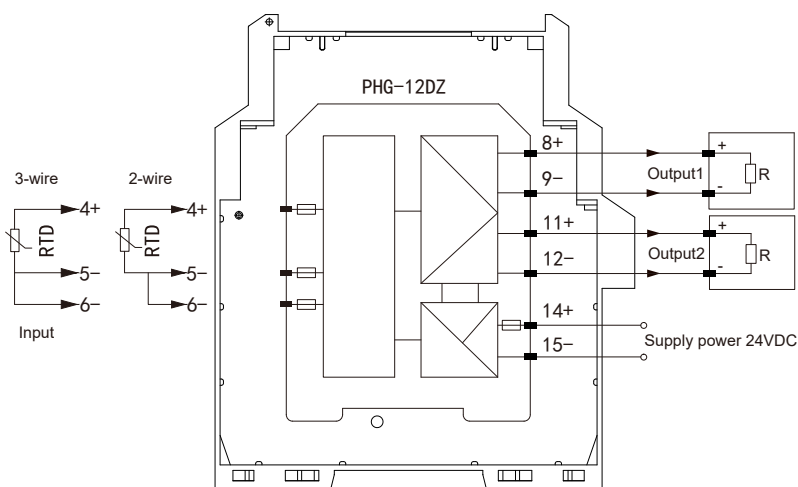
**Common models and parameters**

Model	Channel numbers	Input	Output1	Output2	Power supply condition
PHG-12DZ-211	1 input 2 outputs	Cu50 (-50~+150 C)	4~20mA	4~20mA	24VDC
PHG-12DZ-212	1 input 2 outputs	Cu50 (-50~+150 C)	4~20mA	0~20mA	24VDC
PHG-12DZ-213	1 input 2 outputs	Cu50 (-50~+150 C)	4~20mA	0~5V	24VDC
PHG-12DZ-214	1 input 2 outputs	Cu50 (-50~+150 C)	4~20mA	0~10V	24VDC
PHG-12DZ-311	1 input 2 outputs	Cu100 (-50~+150 C)	4~20mA	4~20mA	24VDC
PHG-12DZ-411	1 input 2 outputs	Pt100 (-200~+850 C)	4~20mA	4~20mA	24VDC
PHG-12DZ-412	1 input 2 outputs	Pt100 (-200~+850 C)	4~20mA	0~20mA	24VDC
PHG-12DZ-413	1 input 2 outputs	Pt100 (-200~+850 C)	4~20mA	0~5V	24VDC
PHG-12DZ-414	1 input 2 outputs	Pt100 (-200~+850 C)	4~20mA	0~10V	24VDC
PHG-12DZ-422	1 input 2 outputs	Pt100 (-200~+850 C)	0~20mA	0~20mA	24VDC
PHG-12DZ-423	1 input 2 outputs	Pt100 (-200~+850 C)	0~20mA	0~5V	24VDC
PHG-12DZ-433	1 input 2 outputs	Pt100 (-200~+850 C)	0~5V	0~5V	24VDC
PHG-12DZ-434	1 input 2 outputs	Pt100 (-200~+850 C)	0~5V	0~10V	24VDC
PHG-12DZ-444	1 input 2 outputs	Pt100 (-200~+850 C)	0~10V	0~10V	24VDC
PHG-12DZ-511	1 input 2 outputs	Pt10 (-200~+850 C)	4~20mA	4~20mA	24VDC
PHG-12DZ-512	1 input 2 outputs	Pt10 (-200~+850 C)	4~20mA	0~20mA	24VDC
PHG-12DZ-513	1 input 2 outputs	Pt10 (-200~+850 C)	4~20mA	0~5V	24VDC
PHG-12DZ-514	1 input 2 outputs	Pt10 (-200~+850 C)	4~20mA	0~10V	24VDC
PHG-12DZ-522	1 input 2 outputs	Pt10 (-200~+850 C)	0~20mA	0~20mA	24VDC
PHG-12DZ-523	1 input 2 outputs	Pt10 (-200~+850 C)	0~20mA	0~5V	24VDC
PHG-12DZ-888	1 input 2 outputs	Customizable	Customizable	Customizable	24VDC

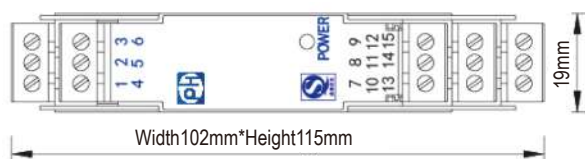
Note: When make an order, please indicate the actual measured temperature range after the product model.

**Top view    Terminal assignments    Schematic diagram**

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
8	Output1+	DC signal
9	Output1-	
11	Output2+	DC signal
12	Output2-	
	2-wire input	3-wire input
4	Input+	Input+
5	Input-	Input-
6	Short connected with terminal 5	Input-



- Note: 1. When the input is with three-wire RTD signal, the resistance values of three wires should be equal as much as possible.
- 2. When the input is with two-wire RTD signal, terminals 5 and 6 must be short-connected.







RTD signal input /DC signal output      2 inputs 2 outputs

### Overview

Dual RTD signal input, dual DC signal output.

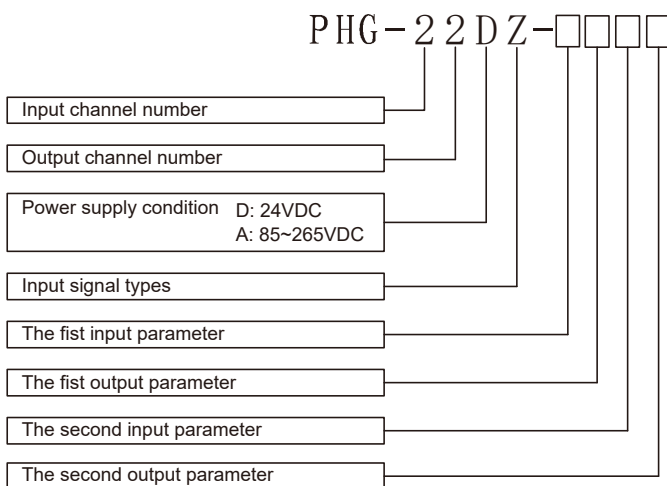
Intelligently programmable, the actual measuring range of RTD can be set by computer.

In the "Common model and specifications" the number "8" means "customizable".

## Specifications

RTD excitation current	800uA
Load capacity	Current type load resistance≤500Ω, voltage type load current<5mA
Accuracy	± 0.1%F.S
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	<95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10% or AC 85VAC~265VAC
Response time	<200ms
Power consumption	The current output is about 1.8W and the voltage output is about 1W.
MTBF	80,000 hours

## Model definition



### Input RTD and measurement range

Code	RTD model	Measurement range
2	Cu50	-50~150 C
3	Cu100	-50~150 C
4	Pt100	-200~850 C
5	Pt10	-200~850 C
6	Pt1000	-200~850 C

### Parameters definition

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

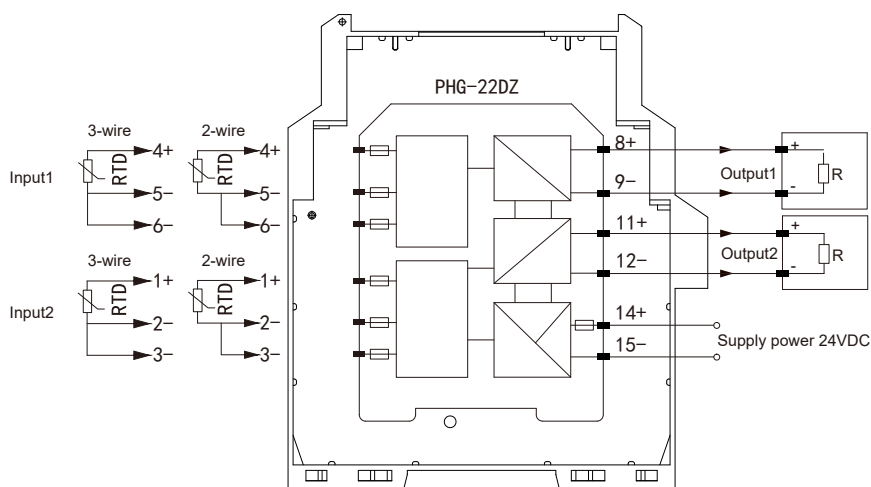
Common models and parameters

Model	Channel numbers	Input1	Output1	Input2	Output2	Power supply condition
PHG-22DZ-2121	2 inputs 2 outputs	Cu50 (-50~+150 C)	4~20mA	Cu50 (-50~+150 C)	4~20mA	24VDC
PHG-22DZ-2222	2 inputs 2 outputs	Cu50 (-50~+150 C)	0~20mA	Cu50 (-50~+150 C)	0~20mA	24VDC
PHG-22DZ-2323	2 inputs 2 outputs	Cu50 (-50~+150 C)	0~5V	Cu50 (-50~+150 C)	0~5V	24VDC
PHG-22DZ-2424	2 inputs 2 outputs	Cu50 (-50~+150 C)	0~10V	Cu50 (-50~+150 C)	0~10V	24VDC
PHG-22DZ-3131	2 inputs 2 outputs	Cu100 (-50~+150 C)	4~20mA	Cu100 (-50~+150 C)	4~20mA	24VDC
PHG-22DZ-4141	2 inputs 2 outputs	Pt100 (-200~+850 C)	4~20mA	Pt100 (-200~+850 C)	4~20mA	24VDC
PHG-22DZ-4142	2 inputs 2 outputs	Pt100 (-200~+850 C)	4~20mA	Pt100 (-200~+850 C)	0~20mA	24VDC
PHG-22DZ-4143	2 inputs 2 outputs	Pt100 (-200~+850 C)	4~20mA	Pt100 (-200~+850 C)	0~5V	24VDC
PHG-22DZ-4144	2 inputs 2 outputs	Pt100 (-200~+850 C)	4~20mA	Pt100 (-200~+850 C)	0~10V	24VDC
PHG-22DZ-4242	2 inputs 2 outputs	Pt100 (-200~+850 C)	0~20mA	Pt100 (-200~+850 C)	0~20mA	24VDC
PHG-22DZ-4243	2 inputs 2 outputs	Pt100 (-200~+850 C)	0~20mA	Pt100 (-200~+850 C)	0~5V	24VDC
PHG-22DZ-4343	2 inputs 2 outputs	Pt100 (-200~+850 C)	0~5V	Pt100 (-200~+850 C)	0~5V	24VDC
PHG-22DZ-4344	2 inputs 2 outputs	Pt100 (-200~+850 C)	0~5V	Pt100 (-200~+850 C)	0~10V	24VDC
PHG-22DZ-4444	2 inputs 2 outputs	Pt100 (-200~+850 C)	0~10V	Pt100 (-200~+850 C)	0~10V	24VDC
PHG-22DZ-5151	2 inputs 2 outputs	Pt10 (-200~+850 C)	4~20mA	Pt10 (-200~+850 C)	4~20mA	24VDC
PHG-22DZ-5152	2 inputs 2 outputs	Pt10 (-200~+850 C)	4~20mA	Pt10 (-200~+850 C)	0~20mA	24VDC
PHG-22DZ-5153	2 inputs 2 outputs	Pt10 (-200~+850 C)	4~20mA	Pt10 (-200~+850 C)	0~5V	24VDC
PHG-22DZ-5154	2 inputs 2 outputs	Pt10 (-200~+850 C)	4~20mA	Pt10 (-200~+850 C)	0~10V	24VDC
PHG-22DZ-5252	2 inputs 2 outputs	Pt10 (-200~+850 C)	0~20mA	Pt10 (-200~+850 C)	0~20mA	24VDC
PHG-22DZ-5253	2 inputs 2 outputs	Pt10 (-200~+850 C)	0~20mA	Pt10 (-200~+850 C)	0~5V	24VDC
PHG-22DZ-8888	2 inputs 2 outputs	Customizable	Customizable	Customizable	Customizable	24VDC

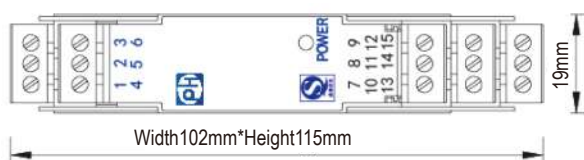
Note: When make an order, please indicate the actual measured temperature range after the product model.

Top view Terminal assignments Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
8	Output1+	DC signal
9	Output1-	
11	Output2+	DC signal
12	Output2-	
	2-wire input	3-wire input
4	Input1+	Input1+
5	Input1-	Input1-
6	Short connected with terminal 5	Input1-
1	Input2+	Input2+
2	Input2-	Input2-
3	Short connected with terminal 2	Input2-



- Note: 1. When the input is with three-wire RTD signal, the resistance values of three wires should be equal as much as possible.
- 2. When the input is with two-wire RTD signal, terminals 5 and 6 (2 and 3) must be short-connected.





TC signal input /DC signal output      1 input 1 output

**Overview**

Single TC signal input, single DC signal output.

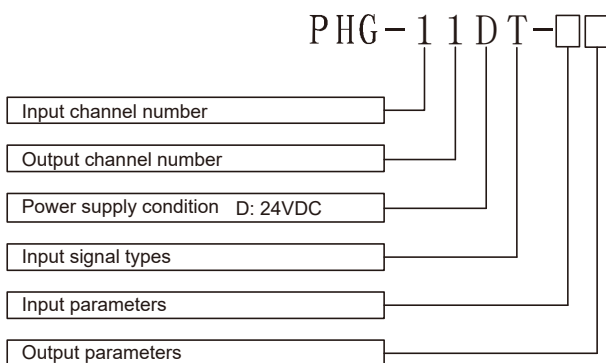
Intelligently programmable, the actual measuring range of TC can be set by computer.

In the "Common model and specifications" the number "8" means "customizable".

**Specifications**

Input resistance	≥100KΩ
Load capacity	Current type load resistance≤500Ω, voltage type load current<5mA
Accuracy	± 0.1%F.S
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10%
Response time	<200ms
Power consumption	About 1 W
MTBF	80,000 hours

**Model definition**



Code	TC model	Measurement range	Minimum range
1	K	-150~+1370 C	120 C
2	S	-40~+1700 C	600 C
3	E	-80~+700 C	500 C
4	J	-80~+900 C	100 C
5	B	+320~+1820 C	780 C
6	T	-160~+390 C	100 C
7	R	-40~+1700 C	600 C
8	N	0~+600 C	100 C

Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	±10V
8	Customizable

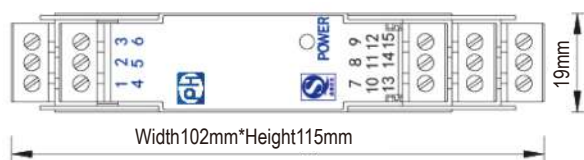
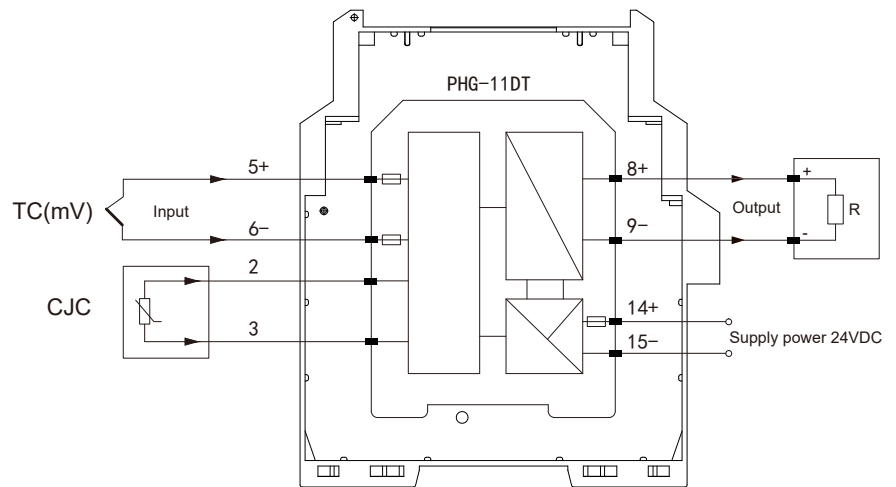
Common models and parameters

Model	Channel numbers	Input	Output	Power supply condition
PHG-11DT-11	1 input 1 output	K (-150~+1370 C)	4~20mA	24VDC
PHG-11DT-13	1 input 1 output	K (-150~+1370 C)	0~5V	24VDC
PHG-11DT-14	1 input 1 output	K (-150~+1370 C)	0~10V	24VDC
PHG-11DT-21	1 input 1 output	S (-150~+1370 C)	4~20mA	24VDC
PHG-11DT-23	1 input 1 output	S (-150~+1370 C)	0~5V	24VDC
PHG-11DT-24	1 input 1 output	S (-150~+1370 C)	0~10V	24VDC
PHG-11DT-31	1 input 1 output	E (-80~+700 C)	4~20mA	24VDC
PHG-11DT-33	1 input 1 output	E (-80~+700 C)	0~5V	24VDC
PHG-11DT-34	1 input 1 output	E (-80~+700 C)	0~10V	24VDC
PHG-11DT-41	1 input 1 output	J (-80~+900 C)	4~20mA	24VDC
PHG-11DT-43	1 input 1 output	J (-80~+900 C)	0~5V	24VDC
PHG-11DT-44	1 input 1 output	J (-80~+900 C)	0~10V	24VDC
PHG-11DT-51	1 input 1 output	B (320~+1820 C)	4~20mA	24VDC
PHG-11DT-53	1 input 1 output	B (320~+1820 C)	0~5V	24VDC
PHG-11DT-54	1 input 1 output	B (320~+1820 C)	0~10V	24VDC
PHG-11DT-61	1 input 1 output	T (-160~+390 C)	4~20mA	24VDC
PHG-11DZ-71	1 input 1 output	R (-40~+1700 C)	4~20mA	24VDC
PHG-11DZ-88	1 input 1 output	Customizable	Customizable	24VDC

Note: When make an order, please indicate the actual measured temperature range after the product model.

Top view Terminal assignments Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input+	TC millivolt signal
6	Input-	
2	CJC	Cold junction compensation
3	CJC	
8	Output-	DC signal
9	Output+	





TC signal input /DC signal output      1 input 2 outputs

**Overview**

Single TC signal input, dual DC single outputs.

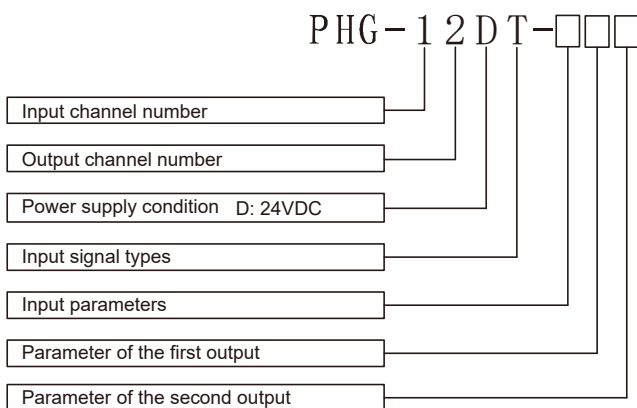
Intelligently programmable, the actual measuring range of TC can be set by computer.

In the "Common model and specifications" the number "8" means "customizable".

**Specifications**

Input resistance	≥100KΩ
Load capacity	Current type load resistance≤500Ω, voltage type load current<5mA
Accuracy	± 0.1%F.S
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10%
Response time	<200ms
Power consumption	About 1.4 W
MTBF	80,000 hours

**Model definition**



Input RTD and measurement range			
Code	TC model	Measurement range	Minimum range
1	K	-150~+1370 C	120 C
2	S	-40~+1700 C	600 C
3	E	-80~+700 C	500 C
4	J	-80~+900 C	100 C
5	B	+320~+1820 C	780 C
6	T	-160~+390 C	100 C
7	R	-40~+1700 C	600 C
8	N	0~+600 C	100 C

Parameters definition	
Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	±10V
8	Customizable

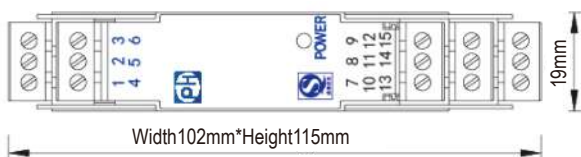
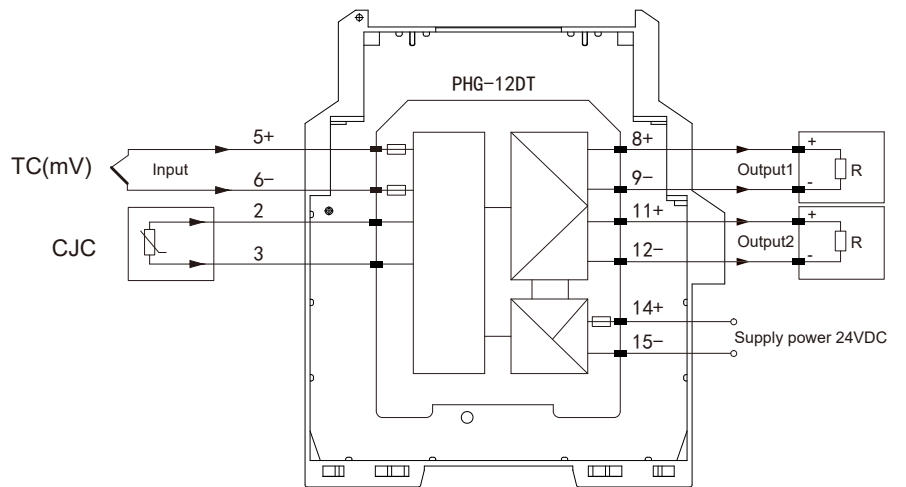
Common models and parameters

Model	Channel numbers	Input	Output1	Output2	Power supply condition
PHG-12DT-111	1 input 2 outputs	K (-150~+1370 C)	4~20mA	4~20mA	24VDC
PHG-12DT-133	1 input 2 outputs	K (-150~+1370 C)	0~5V	0~5V	24VDC
PHG-12DT-144	1 input 2 outputs	K (-150~+1370 C)	0~10V	0~10V	24VDC
PHG-12DT-211	1 input 2 outputs	S (-150~+1370 C)	4~20mA	4~20mA	24VDC
PHG-12DT-233	1 input 2 outputs	S (-150~+1370 C)	0~5V	0~5V	24VDC
PHG-12DT-244	1 input 2 outputs	S (-150~+1370 C)	0~10V	0~10V	24VDC
PHG-12DT-311	1 input 2 outputs	E (-80~+700 C)	4~20mA	4~20mA </td <td>24VDC</td>	24VDC
PHG-12DT-333	1 input 2 outputs	E (-80~+700 C)	0~5V	0~5V	24VDC
PHG-12DT-344	1 input 2 outputs	E (-80~+700 C)	0~10V	0~10V	24VDC
PHG-12DT-411	1 input 2 outputs	J (-80~+900 C)	4~20mA	4~20mA	24VDC
PHG-12DT-433	1 input 2 outputs	J (-80~+900 C)	0~5V	0~5V	24VDC
PHG-12DT-444	1 input 2 outputs	J (-80~+900 C)	0~10V	0~10V	24VDC
PHG-12DT-511	1 input 2 outputs	B (320~+1820 C)	4~20mA	4~20mA	24VDC
PHG-12DT-533	1 input 2 outputs	B (320~+1820 C)	0~5V	0~5V	24VDC
PHG-12DT-544	1 input 2 outputs	B (320~+1820 C)	0~10V	0~10V	24VDC
PHG-12DT-611	1 input 2 outputs	T (-160~+390 C)	4~20mA	4~20mA	24VDC
PHG-12DT-711	1 input 2 outputs	R (-40~+1700 C)	4~20mA	4~20mA	24VDC
PHG-12DT-888	1 input 2 outputs	Customizable	Customizable	Customizable	24VDC

Note: When make an order, please indicate the actual measured temperature range after the product model.

Top view    Terminal assignments    Schematic diagram

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input+	TC millivolt signal
6	Input-	
2	CJC	Cold junction compensation
3	CJC	
8	Output1+	DC signal
9	Output1-	
11	Output2+	DC signal
12	Output2-	





TC signal input /DC signal output      2 inputs 2 outputs

**Overview**

Dual input with TC signal, dual output with DC signal.

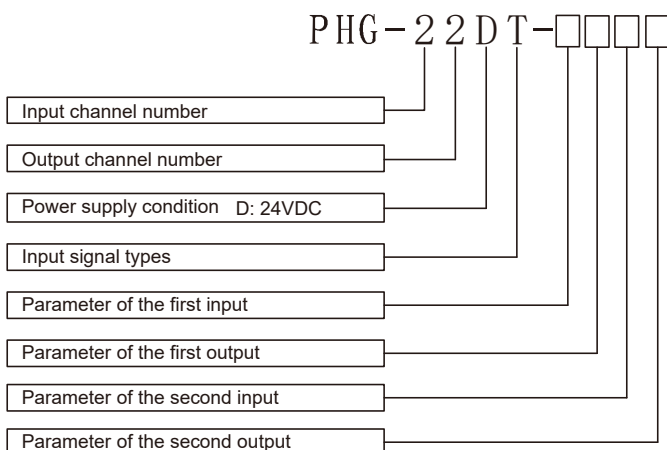
Intelligently programmable, the actual measuring range of TC can be set by computer.

In the "Common model and specifications" the number "8" means "customizable".

**Specifications**

Input resistance	≥100KΩ
Load capacity	Current type load resistance≤500Ω, voltage type load current<5mA
Accuracy	± 0.1%F.S
Temperature drift	0.2% F.S/10 C
Environmental parameters	-20 C ~+60 C
Relative humidity	10%~95% no condensation
Insulation resistance	Between input and output, between input, output and power supply≥100MΩ (500VDC)
Dielectric strength	Between input and output, between input, output and power supply 1500VAC/min
Power supply	24VDC±10%
Response time	<200ms
Power consumption	About 1.8 W
MTBF	80,000 hours

**Model definition**



Code	TC model	Measurement range	Minimum range
1	K	-150~+1370 C	120 C
2	S	-40~+1700 C	600 C
3	E	-80~+700 C	500 C
4	J	-80~+900 C	100 C
5	B	+320~+1820 C	780 C
6	T	-160~+390 C	100 C
7	R	-40~+1700 C	600 C
8	N	0~+600 C	100 C

Code	Output parameters
1	4~20mA
3	0~5V
4	0~10V
5	1~5V
6	0~75mV
7	±10V
8	Customizable

**Common models and parameters**

Model	Channel numbers	Input1	Output1	Input2	Output2	Power supply condition
PHG-22DT-1111	2 inputs 2 outputs	K (-150~+1370 C)	4~20mA	K (-150~+1370 C)	4~20mA	24VDC
PHG-22DT-1313	2 inputs 2 outputs	K (-150~+1370 C)	0~5V	K (-150~+1370 C)	0~5V	24VDC
PHG-22DT-1414	2 inputs 2 outputs	K (-150~+1370 C)	0~10V	K (-150~+1370 C)	0~10V	24VDC
PHG-22DT-2121	2 inputs 2 outputs	S (-150~+1370 C)	4~20mA	S (-150~+1370 C)	4~20mA	24VDC
PHG-22DT-2323	2 inputs 2 outputs	S (-150~+1370 C)	0~5V	S (-150~+1370 C)	0~5V	24VDC
PHG-22DT-2424	2 inputs 2 outputs	S (-150~+1370 C)	0~10V	S (-150~+1370 C)	0~10V	24VDC
PHG-22DT-3131	2 inputs 2 outputs	E (-80~+700 C)	4~20mA	E (-80~+700 C)	4~20mA	24VDC
PHG-22DT-3333	2 inputs 2 outputs	E (-80~+700 C)	0~5V	E (-80~+700 C)	0~5V	24VDC
PHG-22DT-3434	2 inputs 2 outputs	E (-80~+700 C)	0~10V	E (-80~+700 C)	0~10V	24VDC
PHG-22DT-4141	2 inputs 2 outputs	J (-80~+900 C)	4~20mA	J (-80~+900 C)	4~20mA	24VDC
PHG-22DT-4343	2 inputs 2 outputs	J (-80~+900 C)	0~5V	J (-80~+900 C)	0~5V	24VDC
PHG-22DT-4444	2 inputs 2 outputs	J (-80~+900 C)	0~10V	J (-80~+900 C)	0~10V	24VDC
PHG-22DT-5151	2 inputs 2 outputs	B (320~+1820 C)	4~20mA	B (320~+1820 C)	4~20mA	24VDC
PHG-22DT-5353	2 inputs 2 outputs	B (320~+1820 C)	0~5V	B (320~+1820 C)	0~5V	24VDC
PHG-22DT-5454	2 inputs 2 outputs	B (320~+1820 C)	0~10V	B (320~+1820 C)	0~10V	24VDC
PHG-22DT-6161	2 inputs 2 outputs	T (-160~+390 C)	4~20mA	T (-160~+390 C)	4~20mA	24VDC
PHG-22DT-7171	2 inputs 2 outputs	R (-40~+1700 C)	4~20mA	R (-40~+1700 C)	4~20mA	24VDC
PHG-22DT-8888	2 inputs 2 outputs	Customizable	Customizable	Customizable	Customizable	24VDC

Note: When make an order, please indicate the actual measured temperature range after the product model.

**Top view    Terminal assignments    Schematic diagram**

Terminal	Terminal assignments	
14	Power supply+	24VDC±10%
15	Power supply-	
5	Input1+	TC millivolt signal
6	Input1-	
2	Input2+	TC millivolt signal
3	Input2-	
1	CJC	Cold junction compensation
4	CJC	
8	Output1+	DC signal
9	Output1-	
11	Output2+	DC signal
12	Output2-	

