

HD SIGNAL CONDITIONER SERIES

RTD TRANSMITTER

MODEL
HD-RTD

MODEL & SUFFIX CODE SELECTION

MODEL HD-RTD

Input signal

1	(-)60-(+)40°C	A	0-300°C
2	(-)50-(+)50°C	B	0-400°C
3	0-50°C	C	0-500°C
4	0-100°C	O	Spec Order
5	0-150°C		
6	0-200°C		

Output1 signal

1	0-10mVDC	A	4-20mADC
2	0-100mVDC	B	1-5mADC
3	0-1VDC	C	0-20mADC
4	0-10VDC	D	0-1mADC
5	0-5VDC	O	Spec Order
6	1-5VDC		

Output2 signal

Availability as Output1
N:None

Display

A:Percent
B:Input signal
C:Output signal
O:Others
N:None

Power

X:110V AC Y:220V AC
Z:24V DC O:Others



GENERAL SPECIFICATIONS

Construction : plug-in

Connection : M3.5 screw terminals

Housing material : flame-resistant resin (black)

Isolation : input to output to power
(non-isolated between I/O)

LCD meter : indicating input; 0.1% increments

Overrange output : approx. -10 ~ +120% at 1 ~ 5V

Front adjustments : zero and span; $\pm 5\%$

Burnout protection : upscale standard; downscale optional

Linearization : standard

INPUT & OUTPUT

• **INPUT** : 2- or 3-wire RTDs

Maximum leadwire resistance : 200 Ω per wire (3-wire)

Sensing current : 2mA (Pt)

Temperature range

RTD	USABLE RANGE		MIN. SPAN	
	°C	°F	°C	°F
JPt 100	-200 to +500	-328 to +932	50	90
Pt 100/JIS	-200 to +500	-328 to +1202	50	90
Pt 100/DIN	-200 to +650	-328 to +1202	50	90
Pt 50	-200 to +500	-328 to +932	100	180
Ni 508.4	-50 to +200	-58 to +392	30	54

ORDERING INFORMATION

Specify code number and variables.

• **Code number** : ex) HD-RTD-4AANY

• **Temperature range** (e.g. 0 ~ 500°C)

• **Special input and output ranges** : code:0

A : -10 ~ 20mA

V : 0 ~ ± 15 V

■ OUTPUT

• DC Current : 0 – 20mA DC

Minimum span : 1mA

Zero suppression/elevation : max. 1.5 times span

Load resistance

Output	Load Resistance
4 – 20mA	: 750 (Ω maximum)
2 – 10mA	: 1500
1 – 5mA	: 3000
0 – 20mA	: 750
0 – 16mA	: 900
0 – 10mA	: 1500
0 – 1mA	: 15k

•DC Voltage : -10 – +12V DC

Minimum span : 5mV

Zero suppression/elevation : max. 1.5 times span

Load resistance : output drive 10mA maximum;

5mA for negative voltage output; at $\geq 0.5V$

Output	Load Resistance
0 – 10mV	: 10k (Ω minimum)
0 – 100mV	: 100k
0 – 1V	: 100
0 – 10V	: 1000
0 – 5V	: 500
1 – 5V	: 500

INSTALLATION

Power input

AC : rating $\pm 10\%$, 50/60 ± 2 Hz, approx. 2VA

DC : rating $\pm 10\%$, or 85 – 150V for 110V rating
(ripple 10% p-p max.)
approx. 2W (80mA at 24V)

Operating temperature : -5 to +60°C (23 to 140°F)

Operating humidity : 30 to 90% RH (non-condensing)

Mounting : surface or DIN rail

Dimensions : W50 x H80 x D123 mm

See General Spec. Sheet Page B-1.

Weight :

Terminal assignment : See General Spec. Sheet Page B-1.

PERFORMANCE in percentage of span

Accuracy : $\pm 0.1\%$

Temp. coefficient : $\pm 0.015\%/^{\circ}\text{C}$ ($\pm 0.008\%/^{\circ}\text{F}$)

Ripple : 0.25% p-p max. (100/120Hz)

Response time : $\leq 0.4(400\text{ms})$ seconds (0 – 90%)

approx. 25 milliseconds with option

Burnout response : ≤ 10 seconds

Line voltage effect : $\pm 0.1\%$ over voltage range

Insulation resistance : $\geq 100M\Omega$ with 500V DC

Dielectric strength : 1500V AC @1 minute

(RB : input or output to power to ground)

(RBS : input to output to power to ground)

Common mode voltage : 30V RMS (CSA)

Surge withstand Voltage : 1.2/50 μsec , $\pm 5KV$

(INPUT to OUTPUT to GROUND)

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

