



DPT02

# Digital Universal input Signal Converter



## Application

### 〈 Feature 〉

- Measuring input type : DC current / DC voltage / Potentiometer / Linear Resistance / RTD / TC
- More output type — analogue output / RS-485.
- 20-point linear calibration function
- Signal isolation function — power supply / analogue input / analogue output / RS-485
- Power supply : 85~253 VAC ; auxiliary supply ( 25~16VDC / 23 mA ) : use for 2-wire & 3-wire transmitter
- User-friendly. High light red LED display panel, 7.6 mm ( height of character ), 3 digits, -199~999, 7-segment display
- High safety & stability, fire-proof case, moisture-proof cover, DIN rail installation
- Field — Chemical Industry / Energy / Water Circulation System / Oil & Gas / Marine / Factory Automation / Metal & Steel / Cement / Pulp & Paper / Pharmaceuticals / Food & Beverage

## Specification

### Input

DC voltage	0-1V / 0.2-1V / 0-10V / 0.5V / 1-5V / 2-10V
DC current	0-20mA / 4-20mA
RTD	PT100 2/3/4 Wire / PT1000 2/3/4 Wire
Thermocouple ( TC )	J / K / T type
Linear Resistance ( LIN. R )	0...10 k ohms
Potentiometer	10...100 k ohms

### Output

output	0-20mA / 4-20mA / 20-0mA / 20-4mA / 0-1V / 0.2-1V / 0-10V / 0.5V / 1-5V / 2-10V 1-0V / 1-0.2V / 5-0V / 5-1V / 10-0V / 10-2V RS-485
signal connection	2-wire / 3-wire
linear accuracy	output : $\pm 0.2\%$ F.S. display : $0.1\%$ F.S. $\pm 1$ digital
display type	LED 7-segment display
display range	-199~+999
decimal	0~2 place
height of character	7.6 mm
load resistance	4~20mA : $RL < (+V-10)/0.02 < 500$ Ohm. 0~10V $\geq 10K\Omega$
sampling time	4 cycle / sec
parameter setting mode	keyborad
alert action direction	up or down
delay time of alert action	0~3600 s
analog output Resolution	16 bit
analog output response speed	< 300ms
ModBus	RS-485 Modbus RTU
communication transmission rate	9600 / 19200 / 38400 / 57600 / 115200 bps

### Environment

working temp.	-10...+60 °C
working humidity	0~95 % (non-cond.)
storage temp.	-25...+70 °C

### Electrical

power supply	85~253 VAC
electrical connection	terminal

### Auxiliary supply

auxiliary supply	23mA@16...25VDC
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### Installation

installation	DIN rail
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### Isolation

power supply / analogue input / analogue output / RS-485	
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### Protect

protection rating	IP 20
electric protection	Ⓞpolarity protection Ⓞover-voltage

### Certification

certification	CE
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### Material

case	ABS fire-proof class ( UL94V-0 )
weight	158 g

## Ordering Guide

type	DPT02	—	B	A
output	1 Analog Output	—	A	
	2 Analog Output	—	B	
	1 Analog Output + RS-485	—	C	
input	DC voltage / DC current			A
	RTD / LIN. R			B
	Thermocouple ( TC )			C
	Input (entire function)			U

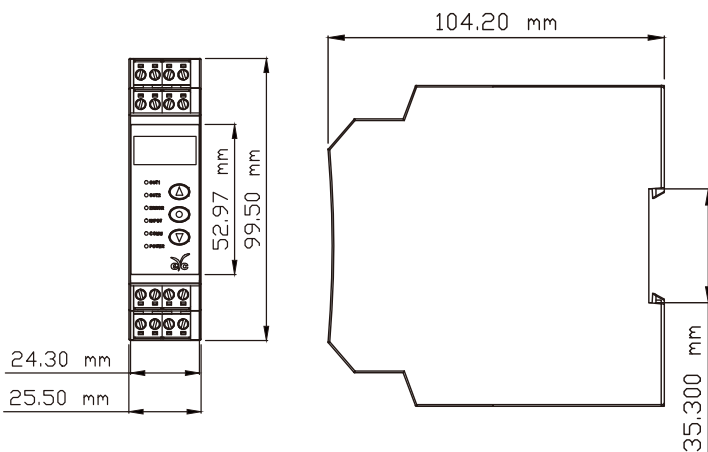
Connection Diagram

31	34	<b>DPT02-A ( 1 analogue output )</b>	<b>DPT02-B ( 2 analogue output )</b>
21 22 23 24		31 : 85~253 VAC 34 : 85~253 VAC	31 : 85~253 VAC 34 : 85~253 VAC 21 : -A.OUT2 22 : +A.OUT2
<b>eyc</b>		1 : 2 : -mA -V 3 : +mA 4 : +exc. +V	Pt(b) 4,3 Pt(B) 4,3,2 Pt(A) 4,3,2 Pt(a) 4  +TC* -TC*  Potm.1 Potm.3 Potm.2
1 2 3 4		11 : -A.OUT1 12 : +A.OUT1	
11 12 13 14		13 : 14 :	

31	34	<b>DPT02-C ( 1analogue output + RS-485 )</b>	
21 22 23 24		31 : 85~253 VAC 34 : 85~253 VAC	
<b>eyc</b>		1 : 2 : -mA -V 3 : +mA 4 : +exc. +V	Pt(b) 4,3 Pt(B) 4,3,2 Pt(A) 4,3,2 Pt(a) 4  +TC* -TC*  Potm.1 Potm.3 Potm.2
1 2 3 4		11 : -A.OUT1 12 : +A.OUT1	
11 12 13 14		13 : RS-485 D- 14 : RS-485 D+	

\* TC Type connect PT100 (Reference Point)

Diagram



TC output ( TC : J / K / T ) Type Connection

31	34	Name	Cold Junction Compensation Resistor
21 22 23 24		Oder No.	8205302010
<b>eyc</b>		Product	
*1 : TC connector way			
*2 : Standard option Cold junction compensation (CJC) connector way			
1 2 3 4			
11 12 13 14			