



- Input : DC volts, 0/4~20 mA, Ohms, RTD, Thermocouples, AC Amps, AC volts, load cell, etc.
- Output : DC volts, 0/4~20 mA
- Supply : 12~36 V DC, 85~265 V AC / 50/60 hz
- Input/output/supply isolation : 1000 V AC / 1 min, 250 V AC continuous
- DINRAIL enclosure

GENERAL

BP3SI is a 3-port signal isolator that accepts any one of the common process inputs and generates an isolated current or voltage output.

SPECIFICATIONS All specifications at ambient of 25 °C, unless specified otherwise

INPUTS

Input types	Specify any one listed below B, E, J, K, R, S, T, N, etc.
Thermocouple	Pt100, Pt200, Pt1000, 3-wire
RTD	75 mV / 200 mV / 1 V / 10 V / 100 V / 300 V / 800 V etc. (FS)
DC Voltage	0~20 mA, 4~20 mA
DC Current	500Ω, 1 KΩ, 2 KΩ, 5 KΩ, 10KΩ (FS)
Resistance	0~1 A AC, 0~5 A AC, 0~250 V AC, load cell, etc.
Special	10V DC ± 5%, 30 mA nominal, for 350Ω bridge
Excitation supply for load cell	4-wire or 6-wire (with provision for remote sensing)
Bridge Connection	18 V DC for 2-wire transmitter (provided if input type is DC current - 4~20 mA)
Transmitter supply	User specified
Input range	

ADJUSTMENTS

Zero, span	Multiturn potentiometers through detachable panel
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OUTPUTS

Output types	Current - 0~20 mA, 4~20 mA (Load 600 Ω max) Voltage - 0~1 V DC, 0~10 V DC (Load 1 mA max)
Input / Output relation	RTD - Temperature linear Other inputs - voltage linear (output is proportional to input signal - no linearisation of input is done)
Current limit	Current output - 25 mA Voltage output - 10 mA

ACCURACY

Input / output transfer accuracy	± 0.1% span (includes repeatability, hysteresis & non linearity) See Table 1
Temperature effect on accuracy	See Table 1
Accuracy for different inputs	See Table 1

ISOLATION

Mutual isolation between input / output / supply	1 KV AC RMS / 1 minute, 250 V AC RMS continuous
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POWER SUPPLY

Supply voltage	12~36 V DC 85~265 V AC/DC, 50/60 hz
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ENCLOSURE

Material	ABS plastic
Dimensions (in mm)	75(H) x 55(W) x 110(D)
Mounting	Snap on for 35 mm DIN rail to DIN 46277
Connection, single/stranded wires	≤ 2.5 mm ² , AWG 14

TEMPERATURE, HUMIDITY

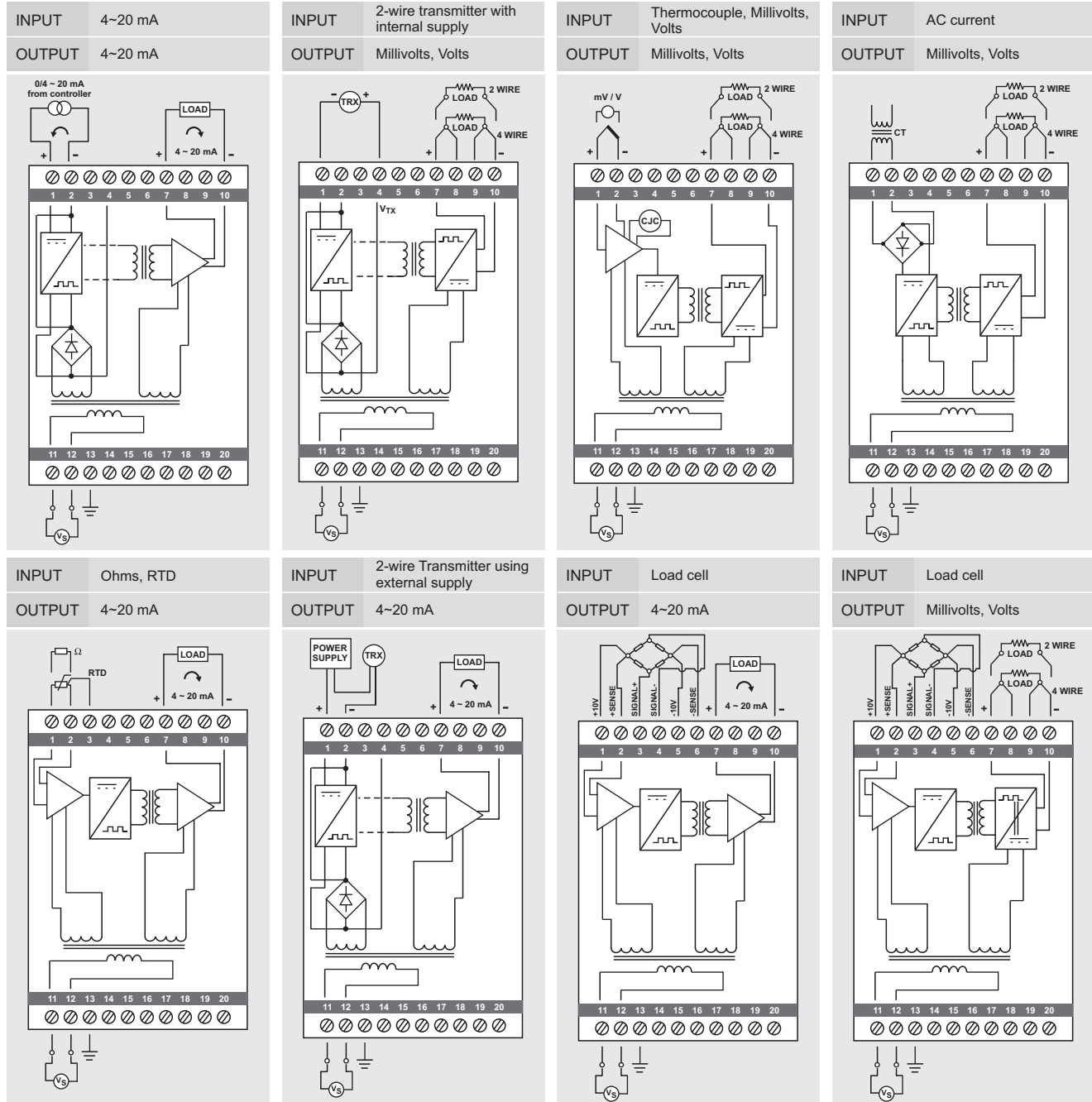
Ambient, operation	0 to 60 °C
Relative humidity	0 ~ 95%

TABLE 1

Input	Range	Accuracy (% of span)	Temperature effect on accuracy (% of span/°C)
DC Current	0~20 mA, 4~20 mA	± 0.1	± 0.01
DC Current	0~1 A DC, 0~5 A DC	± 0.25	± 0.01
DC Voltage	Upto 10 V DC	± 0.1	± 0.01
DC Voltage	> 10 V DC	± 0.25	± 0.01
AC Current	0~1 A AC, 0~5 A AC	± 0.5	± 0.01
AC Voltage	Any (<500 V AC)	± 0.5	± 0.01
RTD, Pt100, Pt50, etc.	Any	± 0.1	± 0.01
Thermocouple	Any	± 0.1 of span ± thermocouple non-linearity error	± 0.01
Load Cell	5mV~50mV (Excitation supply : 10V DC)	± 0.1	± 0.02 for 12~36 V DC supply ± 0.04 for 85~265 V AC/DC supply

EXAMPLES OF CONNECTION DIAGRAMS

BP3SI can be supplied with any combination of input/output/supply. Examples & options are given below.



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