

# DSCP61

## Pt100-to-DC Current/Voltage Converter



### Description

Each DSCP61 RTD Pt100 Converter provides a single channel of RTD input which is amplified, linearized and converted to a high-level current or voltage output. Inputs may be connected by 2, 3, or 4 wires and measurement range may be configured by dip-switch to cover a range of  $-150^{\circ}\text{C}$  to  $+650^{\circ}\text{C}$ . Power can be applied directly to the converter's terminals or through a DIN rail mounted bus connector accessory, eliminating the need to wire power to each individual converter.

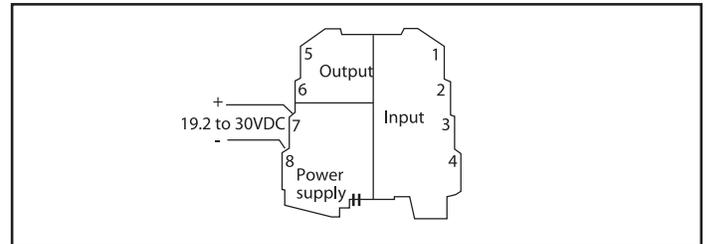


### Features

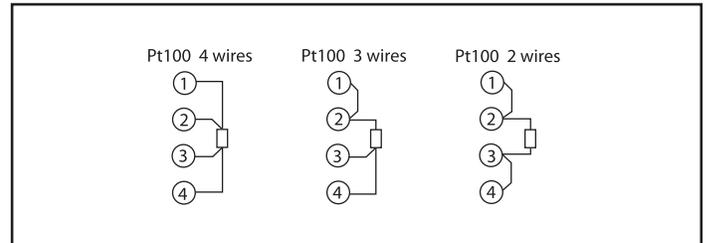
- Input: Pt100 (2, 3, 4 wires,  $-150^{\circ}\text{C}$  to  $+650^{\circ}\text{C}$ )
- Output Current: 0 to 20, 4 to 20, 20 to 0, 20 to 4mA
- Output Voltage: 0 to 5, 1 to 5, 0 to 10, 10 to 0VDC
- 1500Vrms Galvanic Isolation, 3-Way
- 19.2 to 30VDC Power
- Spring Cage Clamp Connection
- 14-Bit Resolution
- Better than  $\pm 0.1\%$  Accuracy
- Configuration by Dip-Switch
- Compact 6.2mm DIN Housing
- CE Compliant

### Electrical Connections

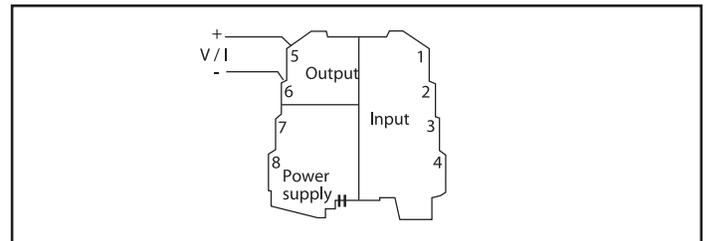
#### Power supply



#### Input



#### Output



**Specifications** Typical\* at  $T_A = +25^{\circ}\text{C}$  and +24VDC loop power

Module	DSCP61
Input (selectable) Pt100 Probe EN 60751	Accepts 2-, 3-, or 4-wire RTDs Sensor current: <math> < 900\mu\text{A}</math> Cable resistance: 20 $\Omega$ per wire (max) Measurement range: $-150^{\circ}\text{C}$ to $+650^{\circ}\text{C}$ (settable) Span: 50 $^{\circ}\text{C}$ (min) Input voltage: 32VDC (max)
Accuracy Thermal Drift A/D Conversion Processing Response Time, 90% Span (selectable) Isolation Dip-Switch Configuration Status Indicators (LED)	$\pm 0.1\%$ (max) <math> < 100\text{ppm}/^{\circ}\text{K}</math> 14-bit Floating point 32-bit <math> < 50\text{ms}</math> (without filter), <math> < 200\text{ms}</math> (with filter) 1500Vrms (1 minute), 3-Way Sets input and output ranges, sensor type, filter and faults Internal fault, configuration error, connection fault
Output (selectable) Current Current Output Maximum Fault Output Voltage	0 to 20, 4 to 20, 20 to 0 or 20 to 4mA Load resistance: 500 $\Omega$ (max) 25mA 102.5% or 105% of full-scale value in case of over-range 0 to 5, 1 to 5, 0 to 10 or 10 to 0VDC Load resistance: 2k $\Omega$ (min)
Power Supply Power Consumption Hot Swapping	19.2 to 30VDC 500mW (21mA at 24VDC) Yes
Mechanical Dimensions (w x h x d)	0.24" x 3.67" x 4.04" (6.2mm x 93.1mm x 102.5mm)
Housing	Terminal housing for mounting on 35mm DIN 46277
Connections	Spring cage clamp
Weight	1.8 ounces (50g)
Environmental Operating Temp. Range Storage Temp. Range Relative Humidity IP Protection	$-20^{\circ}\text{C}$ to $+65^{\circ}\text{C}$ $-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ 0 to 90%, Noncondensing IP20
Emissions Immunity	EN61000-6-4 EN61000-6-2

**Ordering Information**

Model	Description
DSCP61	Pt100-to-DC Current/Voltage Converter

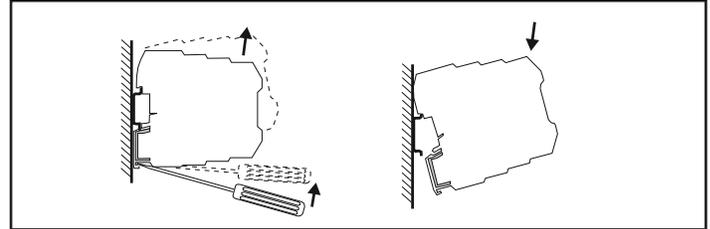
**Accessories**

Model	Description
DSCX-02	DIN Rail Expandable Power-Bus Connector
DSCP70	Power Supply Connection Module

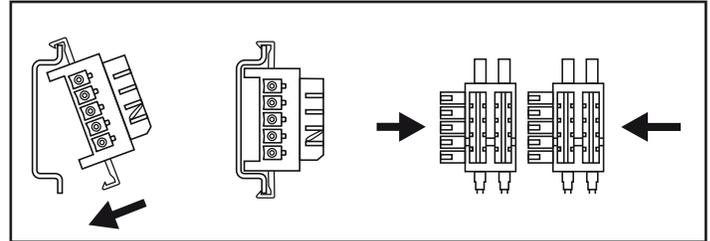
NOTES: \*Contact factory or your local Dataforth sales office for maximum values.

**Installation**

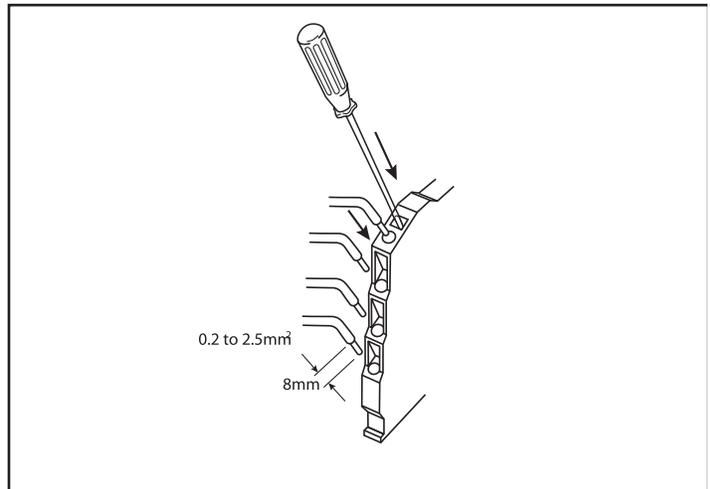
Inserting/extracting module on DIN guide



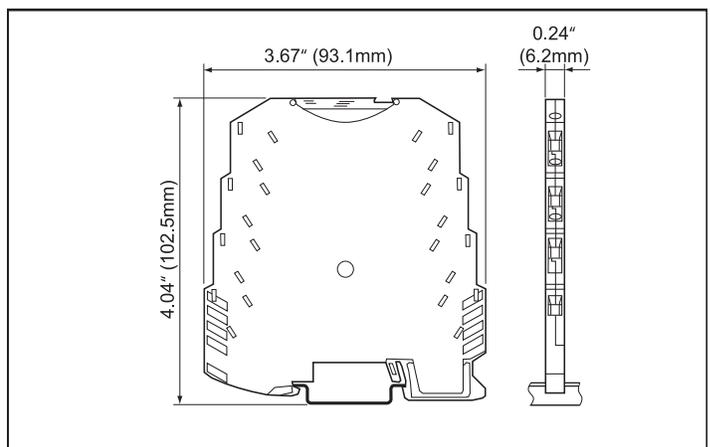
Expandable power-bus connector



Spring cage clamp connection



**Dimensional Drawing**



DSCP