

# 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.

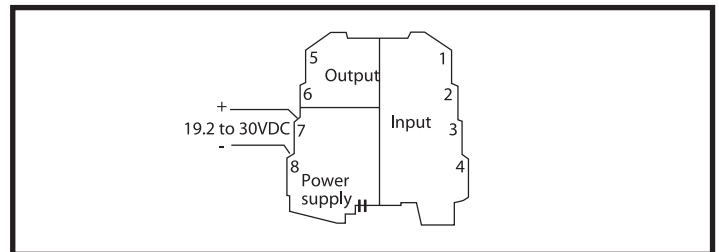


### ► Features

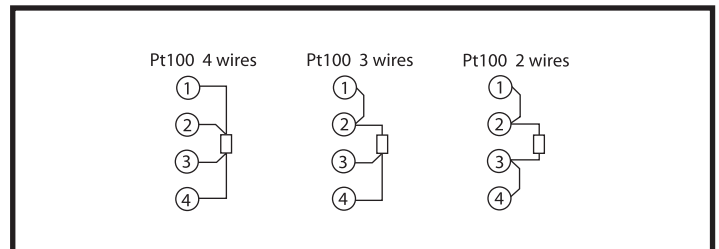
- Input: Pt100 (2, 3, 4 wires,  $-150^{\circ}\text{C}$  to  $+650^{\circ}\text{C}$ )
- Output Current: 0 to 20, 4 to 20, 20 to 0, 20 to 4mA
- Output Voltage: 0 to 5, 1 to 5, 0 to 10, 10 to 0VDC
- 1500Vrms Galvanic Isolation, 3-Way
- 19.2 to 30VDC Power
- Spring Cage Clamp Connection
- 14-Bit Resolution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

### Electrical Connections

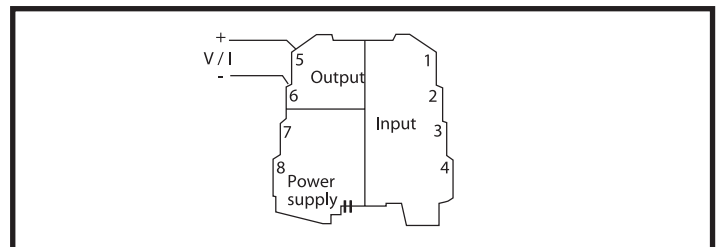
#### Power supply



#### 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: $<900\mu\text{A}$ 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	$\pm 0.1\%$ (max)
Thermal Drift	$<100\text{ppm}/^{\circ}\text{K}$
A/D Conversion	14-bit
Processing	Floating point 32-bit
Response Time, 90% Span (selectable)	$<50\text{ms}$ (without filter), $<200\text{ms}$ (with filter)
Isolation	1500Vrms (1 minute), 3-Way
Dip-Switch Configuration	Sets input and output ranges, sensor type, filter and faults
Status Indicators (LED)	Internal fault, configuration error, connection fault
Output (selectable)	
Current	0 to 20, 4 to 20, 20 to 0 or 20 to 4mA Load resistance: $500\Omega$ (max)
Current Output Maximum	25mA
Fault Output	102.5% or 105% of full-scale value in case of over-range
Voltage	0 to 5, 1 to 5, 0 to 10 or 10 to 0VDC Load resistance: $2\text{k}\Omega$ (min)
Power Supply	19.2 to 30VDC
Power Consumption	500mW (21mA at 24VDC)
Hot Swapping	Yes
Environmental	
Operating Temp. Range	$-20^{\circ}\text{C}$ to $+65^{\circ}\text{C}$
Storage Temp. Range	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$
Relative Humidity	0 to 90%, Noncondensing
IP Protection	IP20
Emissions	EN61000-6-4
Immunity	EN61000-6-2
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)

## Ordering Information

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

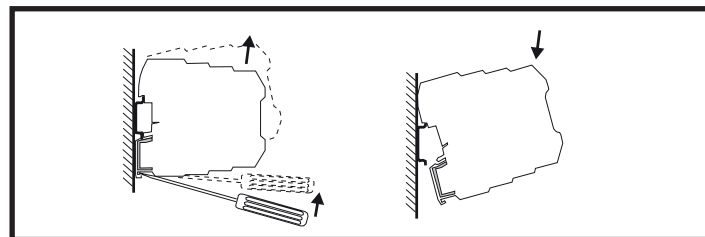
## Accessories

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

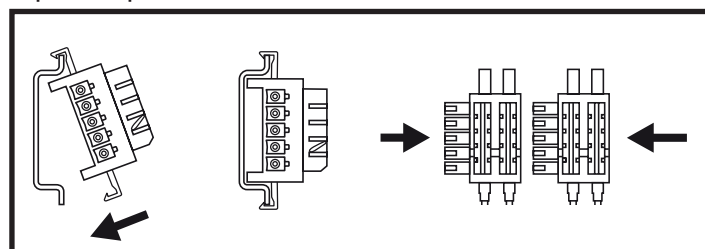
NOTES: \* Contact factory or your local Dataforth sales office for maximum values.

## Installation

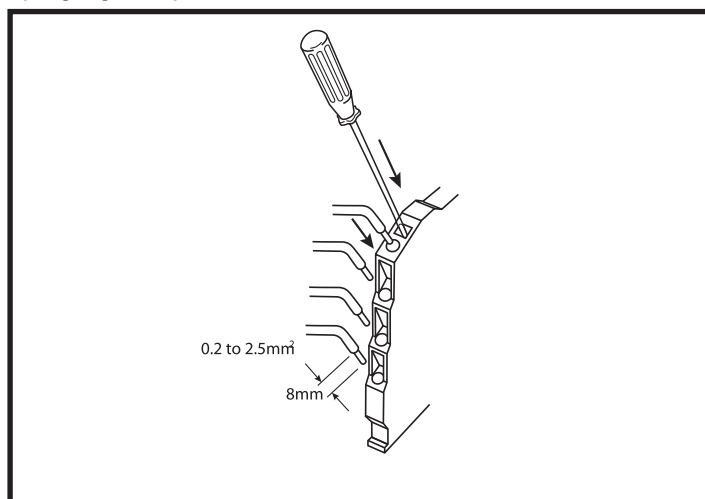
### Inserting/extracting module on DIN guide



### Expandable power-bus connector



### Spring cage clamp connection



## Dimensional Drawing

