

# DSCP61



## Pt100-to-DC Current/Voltage Converter

### DESCRIPTION

The 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: 0-20mA, 4-20mA, 20mA-0, 20-4mA
- Output Voltage: 0-5VDC, 1-5VDC, 0-10VDC, 10-0VDC
- 1500Vrms Galvanic Isolation, 3-way
- 19.2-30VDC 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

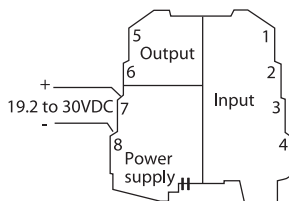
### BENEFITS

- Stable Output
- Fast Response
- Small, Slim Packaging Saves Space and Cost
- Flame-retardant Shell

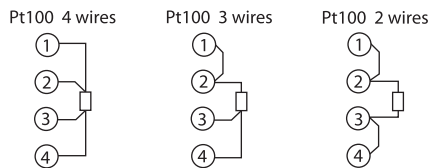
### APPLICATIONS

- Data Acquisition
- Test and Measurement
- Control Systems

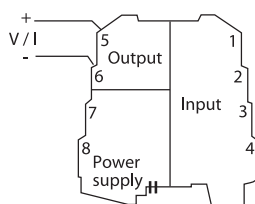
#### Power Supply



#### Input



#### Output



#### DSCP61 Electrical Connections

**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	$\pm 0.1\%$ (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
Status Indicators (LED)	Internal Fault, Configuration Error, Connection Fault
Output (selectable) Current Current Output Maximum Fault Output Voltage	0-20mA, 4-20mA, 20mA-0 or 20-4mA Load Resistance: 500 $\Omega$ (max) 25mA 102.5% or 105% of Full-scale Value in Case of Over-range 0-5VDC, 1-5VDC, 0-10VDC or 10-0VDC 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**

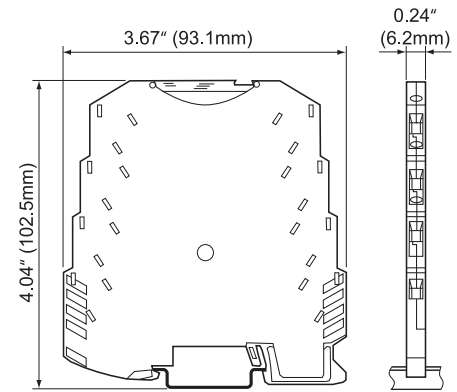
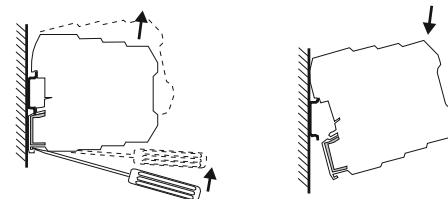
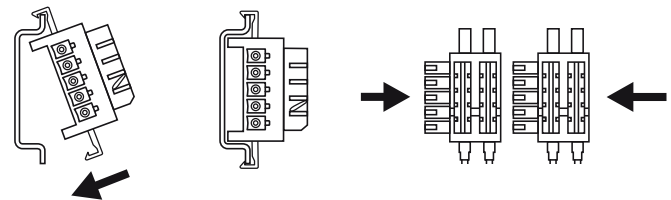
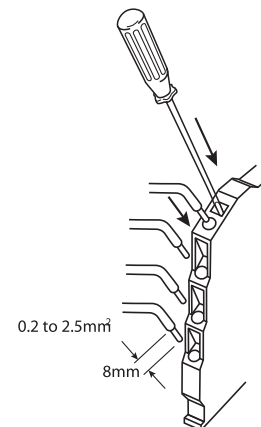
Model	Description
DSCP61	Pt100-to-DC Current/Voltage Converter

**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.


**Figure 1: Dimensional Drawing**
**Inserting/Extracting Module on DIN Guide**

**Expandable Power-bus Connector**

**Spring-cage Clamp Connection**

**Figure 2: Module Installation**