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°C to +650°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°C to +650°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 ±0.1% Accuracy
- Configuration by Dip-switch
- Compact 6.2mm DIN Housing
- CE Compliant

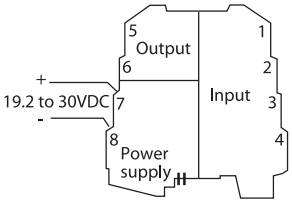
BENEFITS

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

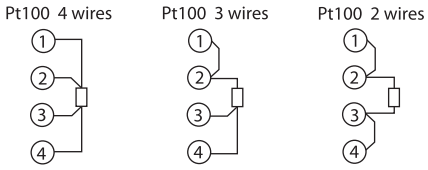
APPLICATIONS

- Data Acquisition
- Test and Measurement
- Control Systems

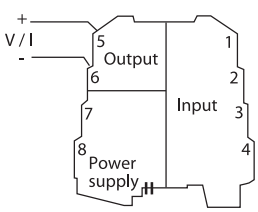
Power Supply



Input



Output



DSCP61 Electrical Connections

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Specifications

Typical* at T_A = +25°C and +24VDC Loop Power

Module	DSCP61
Input (selectable) Pt100 Probe EN 60751	 Accepts 2-, 3-, or 4-wire RTDs Sensor Current: <900µA Cable Resistance: 20Ω per wire (max) Measurement Range: –150°C to +650°C (settable) Span: 50°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)	±0.1% (max) <100ppm/°K 14-bit Floating Point 32-bit <50ms (without filter), <200ms (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	 0-20mA, 4-20mA, 20mA-0 or 20-4mA Load Resistance: 500Ω (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: 2kΩ (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 Emissions Immunity	 –20°C to +65°C –40°C to +85°C 0 to 90%, Noncondensing IP20 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.

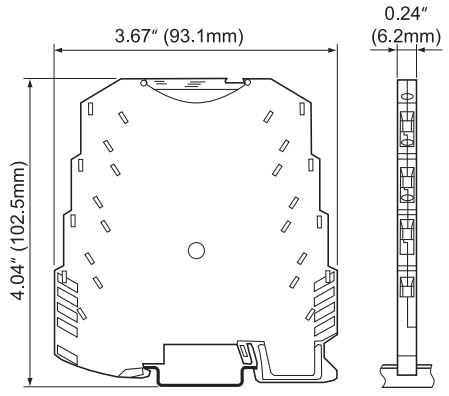
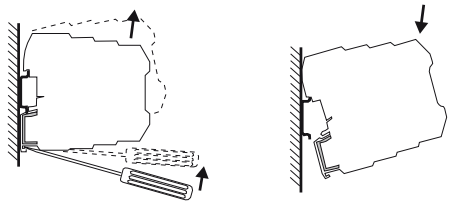
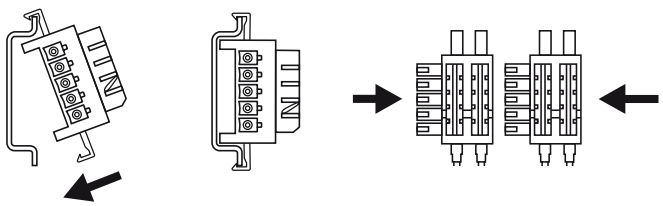


Figure 1: Dimensional Drawing

Inserting/Extracting Module on DIN Guide



Expandable Power-bus Connector



Spring-cage Clamp Connection

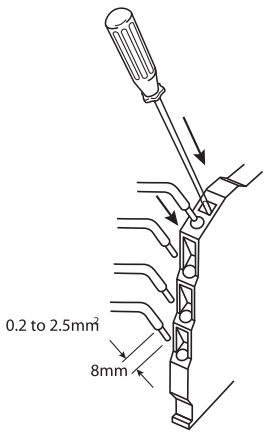


Figure 2: Module Installation

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