

DSCP61

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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°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.

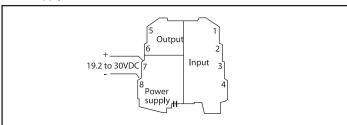


Features

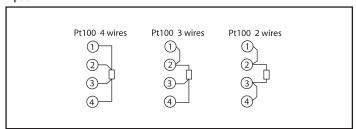
- Input: Pt100 (2, 3, 4 wires, -150°C to +650°C)
- Output Current: 0 to 20, 4 to 20, 20 to 0, 20 to 4mA
- Output Voltage: 0 to 5, 1 to 5, 0 to 10, 10 to 0VDC
- 1500Vrms Galvanic Isolation, 3-Way
- 19.2 to 30VDC Power
- Spring Cage Clamp Connection
- 14-Bit Resolution
- Better than ±0.1% Accuracy
- ·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

Electrical Connections

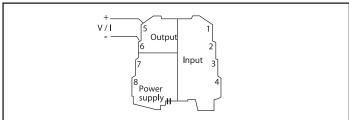
Power supply



Input



Output



Specifications Typical** at T_A = +25°C and +24VDC loop power

$\begin{array}{c} \text{Over-range} \\ \text{Voltage} \\ \end{array} \begin{array}{c} \text{O to 5, 1 to 5, 0 to 10 or 10 to 0VDC} \\ \text{Load resistance: } 2k\Omega \text{ (min)} \\ \end{array} \\ \text{Power Supply} \\ \text{Power Consumption} \\ \text{Hot Swapping} \\ \end{array} \begin{array}{c} \text{19.2 to 30VDC} \\ \text{500mW (21mA at 24VDC)} \\ \text{Yes} \\ \end{array} \\ \text{Mechanical Dimensions} \\ \text{(w x h x d)} \\ \text{(6.2mm x 93.1mm x 102.5mm)} \\ \text{Housing} \\ \end{array} \\ \begin{array}{c} \text{Terminal housing for mounting on} \\ \text{35mm DIN 46277} \\ \text{Connections} \\ \end{array} \\ \text{Spring cage clamp} \\ \text{Weight} \\ \end{array} \\ \begin{array}{c} \text{1.8 ounces (50g)} \\ \text{Environmental} \\ \end{array}$	opeoinoacions typ	ical at 1 _A = 125 G and 124 V BG 100p power
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 Dip-Switch Configuration Status Indicators (LED) Output (selectable) Current Current Output Maximum Fault Output Fault Output Power Supply Power Consumption Hot Swapping Mechanical Dimensions (w x h x d) Housing Accepts 2-, 3-, or 4-wire RTDs Sensor current: <900μA Cable resistance: 200Ω per wire (max) Measurement range: -150°C to +650°C (settable) Span: 50°C (min) Input voltage: 32 VDC (max) ±0.1% (max) +10.10ppm/°K 14-bit Floating point 32-bit Floating point 32-bit Floating point 32-bit Sensor current (selectable) (selectable) (selectable) Span: 50°C (min) 14-bit Floating point 32-bit Sensor current (selectable) (selectable) (solectable) (selectable) (solectable) (Module	DSCP61
Thermal Drift A/D Conversion Processing Response Time, 90% Span (selectable) Isolation Dip-Switch Configuration Status Indicators (LED) Output (selectable) Current Current Output Maximum Fault Output Power Supply Power Consumption Hot Swapping Mechanical Dimensions (w x h x d) Thermal Drift A/D Conversion Processing Response Time, 90% Span (selectable) Span (selectable) Span (selectable) Status Indicators (LED) Status Indicators (LED) O to 20, 4 to 20, 20 to 0 or 20 to 4mA Load resistance: 500Ω (max) 25mA 102.5% or 105% of full-scale value in case of over-range O to 5, 1 to 5, 0 to 10 or 10 to 0VDC Load resistance: 2kΩ (min) 19.2 to 30VDC 500mW (21mA at 24VDC) Yes Mechanical Dimensions (w x h x d) Housing Terminal housing for mounting on 35mm DIN 46277 Spring cage clamp Weight 1.8 ounces (50g)	Pt100 Probe	Sensor current: <900μA Cable resistance: 20Ω per wire (max) Measurement range: –150°C to +650°C (settable) Span: 50°C (min)
$\begin{array}{c} \text{Current} & 0 \text{ to } 20, 4 \text{ to } 20, 20 \text{ to } 0 \text{ or } 20 \text{ to } 4\text{mA} \\ \text{Load resistance: } 500\Omega \text{ (max)} \\ 25\text{mA} \\ \text{Fault Output} & 102.5\% \text{ or } 105\% \text{ of full-scale value in case of over-range} \\ \text{Voltage} & 0 \text{ to } 5, 1 \text{ to } 5, 0 \text{ to } 10 \text{ or } 10 \text{ to } 0\text{VDC} \\ \text{Load resistance: } 2\text{k}\Omega \text{ (min)} \\ \text{Power Supply} & 19.2 \text{ to } 30\text{VDC} \\ \text{Power Consumption} & 500\text{mW} \text{ (21mA at } 24\text{VDC)} \\ \text{Hot Swapping} & 9.24\text{" x } 3.6\text{" x } 4.04\text{"} \\ \text{(6.2mm x } 93.1\text{mm x } 102.5\text{mm}) \\ \text{Housing} & \text{Terminal housing for mounting on } \\ \text{35mm DIN } 46277 \\ \text{Connections} & \text{Spring cage clamp} \\ \text{Weight} & 1.8 \text{ ounces } \text{ (50g)} \\ \text{Environmental} \\ \end{array}$	Thermal Drift A/D Conversion Processing Response Time, 90% Span (selectable) Isolation Dip-Switch Configuration	<100ppm/°K 14-bit 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,
Power Consumption Hot Swapping Mechanical Dimensions (w x h x d) Housing Terminal housing for mounting on 35mm DIN 46277 Connections Spring cage clamp Weight 1.8 ounces (50g)	Current Current Output Maximum Fault Output	Load resistance: 500Ω (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
(w x h x d) (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	Power Consumption	500mW (21mA at 24VDC)
35mm DIN 46277 Connections Spring cage clamp Weight 1.8 ounces (50g) Environmental		
Weight 1.8 ounces (50g) Environmental	Housing	
Environmental	Connections	Spring cage clamp
	Weight	1.8 ounces (50g)
Storage Temp. Range —20°C to +65°C Relative Humidity 0 to 90% Noncondensing IP Protection IP20 Emissions EN61000-6-4 Immunity EN61000-6-2	Operating Temp. Range Storage Temp. Range Relative Humidity IP Protection Emissions	0 to 90,% Noncondensing IP20 EN61000-6-4

Ordering Information

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

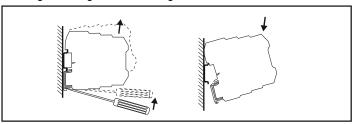
Accessories

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

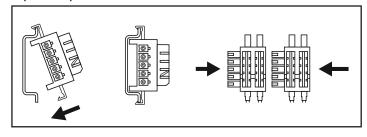
NOTES: *Contact factory or your local Dataforth sales office for maximum values.

Installation

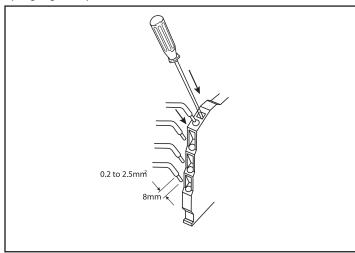
Inserting/extracting module on DIN guide



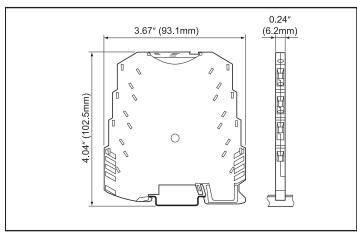
Expandable power-bus connector



Spring cage clamp connection



Dimensional Drawing



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