▶ DATAFORTH®

DSCP55

Pt100, Ni100/Loop-powered Converter

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DESCRIPTION

The DSCP55 RTD loop-powered converter provides a single channel of RTD-input which is amplified, linearized, and converted to a high-level 4-20mA or 20-4mA output. Inputs may be connected by 2-, 3-, or 4-wires and measurement range may be configured by dip-switch.

FEATURES

• Input: Pt100 (–200°C to + 650°C) Ni100 (–60°C to + 250°C)

• Output Current: 4-20mA or 20-4mA

• Spring-cage Clamp Connection

• 16-bit Resolution

• Better than ±0.1% Accuracy

• Configuration by Dip-switch
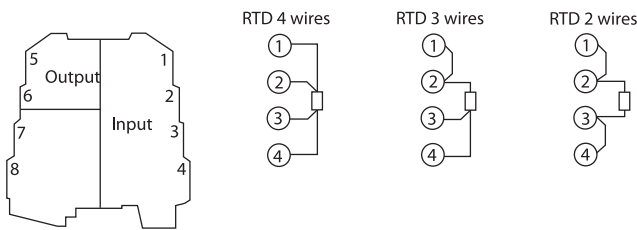
• Compact 6.2mm DIN Housing

• CE Compliant

BENEFITS

• No Additional Power Supply Required

• Easy Wiring
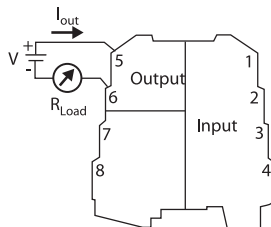
• Lower Cost

• Hazardous Area Approvals

APPLICATIONS

• Data Acquisition
• Test and Measurement
• Control Systems

• Current Repeater
• Resistive Load Drives
• Medical, Industrial, etc. Needing Electrical Isolation for Safety

Input

Output and Power Supply

DSCP55 Electrical Connections

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

Module	DSCP55
Input (selectable) Pt100 Probe EN 60751	Accepts 2-, 3-, or 4-wire RTDs Sensor Current: 750µA Cable Resistance: 25Ω (max) per Wire Measurement Range: – 200°C to +650°C (settable) Span: 20°C (min)
Ni100 Probe	Accepts 2-, 3-, or 4-wire RTDs Sensor Current: 750µA Cable Resistance: 25Ω (max) per Wire Measurement Range: –60°C to +250°C (settable) Span: 20°C (min)
Accuracy Thermal Drift A/D Conversion Response Time, 90% Span (selectable) Isolation Dip-switch Configuration Status Indicators (LED)	±0.1% (max) <100ppm/°K 16-bit <220ms (without filter), <620ms (with filter) No Sets Input and Output Ranges, Sensor Type, Filter and Faults Internal Fault, Configuration Error, Connection Fault
Output (selectable) Current Current Output Maximum Fault Output Hot Swapping Loop Supply Voltage	4-20mA or 20-4mA Load resistance: 1200Ω (max) 30mA 102.5% or 105% of Full-scale Value in Case of Over-range Yes 5-30VDC
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	1.6 ounces (45g)
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

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

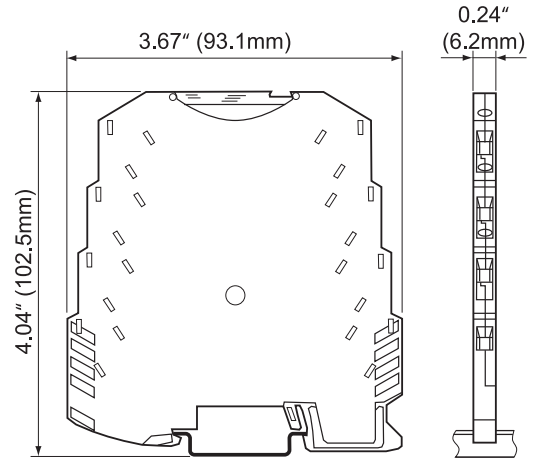## Ordering Information

Model	Description
DSCP55	Pt100, Ni100 Loop-powered Converter

Figure 1: Dimensional Drawing

SECTION 7 – DSCL-DSCP-DSCT