DSCP62

Thermocouple-to-DC Current/Voltage Converter with Relay Output

DESCRIPTION

The DSCP62 thermocouple converter provides a single channel of thermocouple-input which is amplified, linearized, and converted to a high-level current or voltage output. Thermocouple type, measurement range, filter, output type and range, and fault indication may be configured by dip-switch. An auxiliary relay output is provided to generate an alarm or act as a thermostat. 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: Thermocouple types J, K, E, N, S, R, B, T
- Output Current: 0-20mA, 4-20mA, 20mA-0, 20-4mA
- Output Voltage: 0-5VDC, 1-5VDC, 0-10VDC, 10-0VDC
- Auxiliary Relay for Alarm or Control
- 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

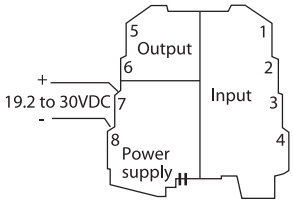
BENEFITS

- Robust Interference-free Signal
- Enables Use of Copper Extension Cable in Place of More Expensive Solutions

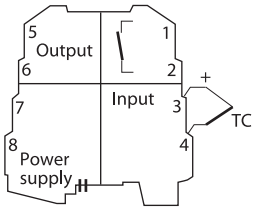
APPLICATIONS

- Data Acquisition
- Test and Measurement
- Control Systems

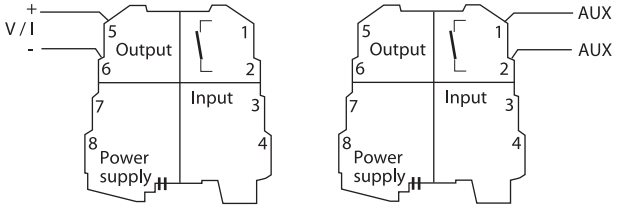
Power Supply



Input



Ouput



DSCP62 Electrical Connections

Specifications

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

Module	DSCP62
Input (selectable)	
Thermocouple Type	J, K, E, N, S, R, B, T
EN 60584-1	Measurement Range: Depends on Thermocouple Type and Dip-switch Setting Span: 100°C (min)
Input Impedance	10MΩ
Accuracy	±0.1% (max)
Cold Junction Error	1.5°C (max)
Thermal Drift	<120ppm/°K
A/D Conversion	14-bit
Processing	Floating Point 32-bit
Response Time, 90% Span (selectable)	<25ms (without filter), <55ms (with filter)
CMRR	>135dB, Referred to Power Supply Side
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	0-20mA, 4-20mA, 20mA-0 or 20-4mA Load Resistance: 500Ω (max)
Current Output Protection	25mA (max)
Fault Output	102.5% or 105% of Full-scale Value in Case of Over-range
Voltage	0-5VDC, 1-5VDC, 0-10VDC or 10-0VDC Load Resistance: 2kΩ (min)
Auxiliary Relay Output	Rated 60mA (max) at 24VAC
Power Supply	19.2-30VDC
Power Consumption	<600mW (24mA at 24VDC)
Hot Swapping	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	1.6 ounces (46g)
Environmental	
Operating Temp. Range	–20°C to +65°C
Storage Temp. Range	–40°C to +85°C
Relative Humidity	0 to 90%, Noncondensing
IP Protection	IP20
Emissions	EN61000-6-4
Immunity	EN61000-6-2

Ordering Information

Model	Description
DSCP62	Thermocouple 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.

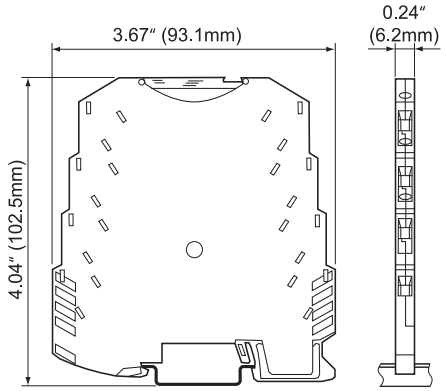
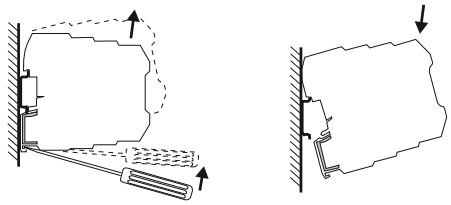
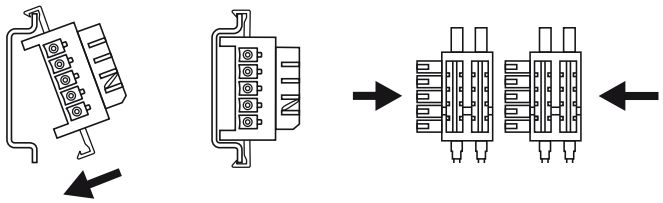


Figure 1: Dimensional Drawing

Inserting/Extracting Module on DIN Guide



Expandable Power-bus Connector



Spring-cage Clamp Connection

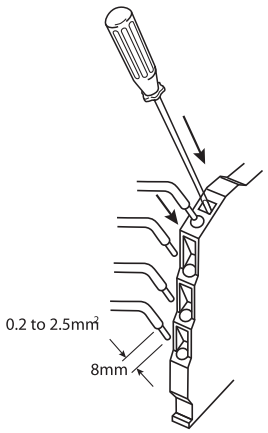


Figure 2: Module Installation