

# DSCP62

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

### Description

Each 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.

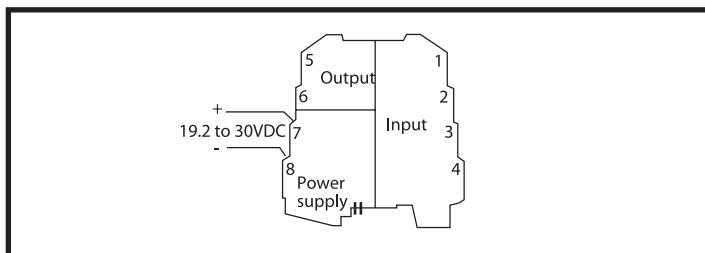


### ► Features

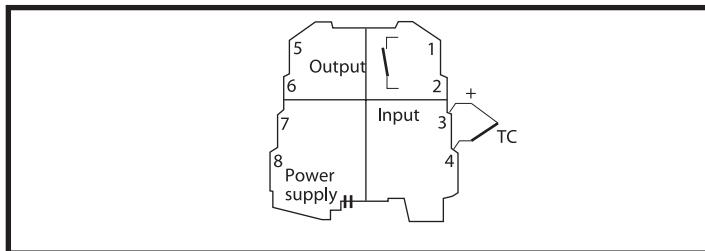
- Input: Thermocouple types J, K, E, N, S, R, B, T
- Output Current: 0 to 20, 4 to 20, 20 to 0, 20 to 4mA
- Output Voltage: 0 to 5, 1 to 5, 0 to 10, 10 to 0VDC
- Auxiliary Relay for Alarm or Control
- 1500Vrms Galvanic Isolation, 3-Way
- 19.2 to 30VDC Power
- Spring Cage Clamp Connection
- 14-Bit Resolution
- Better than  $\pm 0.1\%$  Accuracy
- Configuration by Dip-Switch
- Compact 6.2mm DIN Housing
- CE Compliant

### Electrical Connections

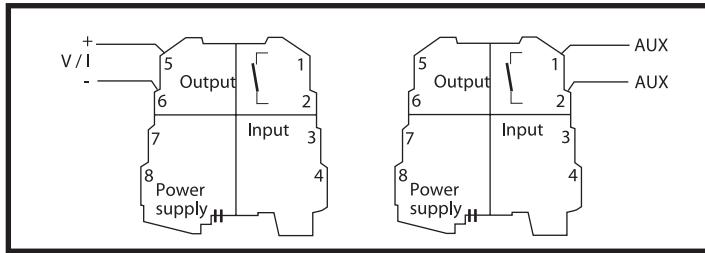
#### Power supply



#### Input



#### Output



Specifications      Typical\* at  $T_A = +25^\circ\text{C}$  and +24VDC loop power

Module	DSCP62
Input (selectable)	
Thermocouple Type EN 60584-1	J, K, E, N, S, R, B, T 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 to 20, 4 to 20, 20 to 0 or 20 to 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 to 5, 1 to 5, 0 to 10 or 10 to 0VDC Load resistance: 2kΩ (min)
Auxiliary Relay Output	Rated 60mA (max) at 24VAC
Power Supply	19.2 to 30VDC
Power Consumption	<600mW (24mA at 24VDC)
Hot Swapping	Yes
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
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)

## Ordering Information

Model	Description
DSCP62	Thermocouple Converter

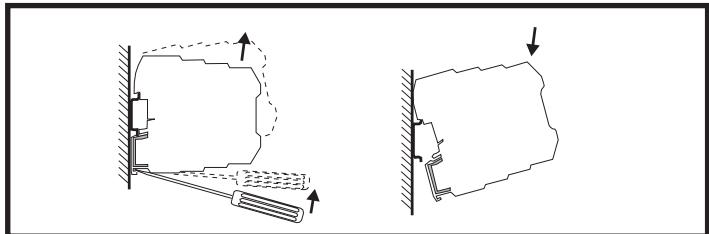
## Accessories

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

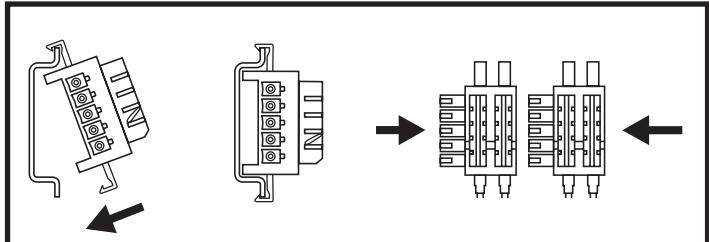
NOTES: \* Contact factory or your local Dataforth sales office for maximum values.

## Installation

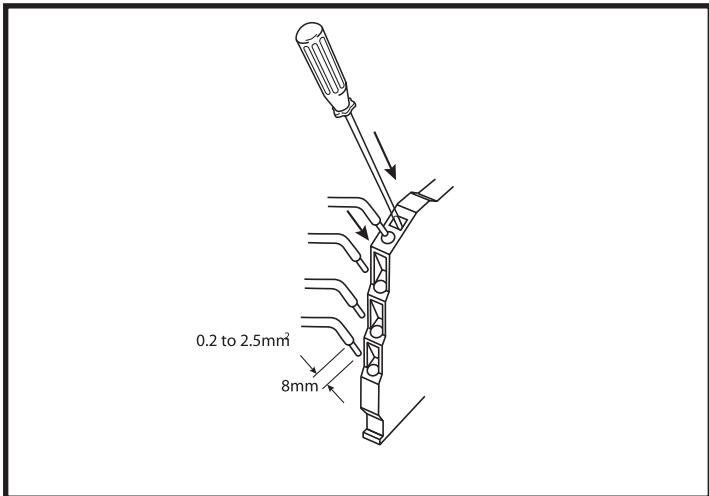
## Inserting/extracting module on DIN guide



## Expandable power-bus connector



## Spring cage clamp connection



## Dimensional Drawing

