

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.

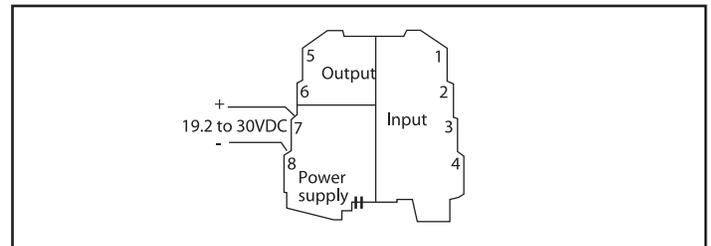


Features

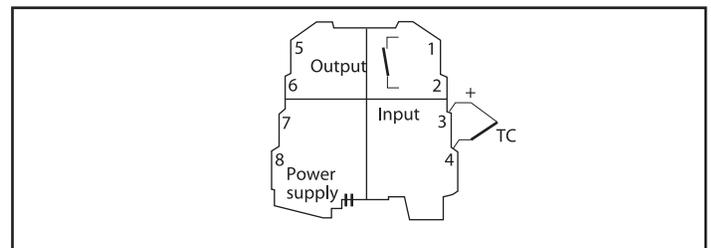
- Input: Thermocouple types J, K, E, N, S, R, B, T
- Output Current: 0 to 20, 4 to 20, 20 to 0, 20 to 4mA
- Output Voltage: 0 to 5, 1 to 5, 0 to 10, 10 to 0VDC
- Auxiliary Relay for Alarm or Control
- 1500Vrms Galvanic Isolation, 3-Way
- 19.2 to 30VDC Power
- Spring Cage Clamp Connection
- 14-Bit Resolution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

Electrical Connections

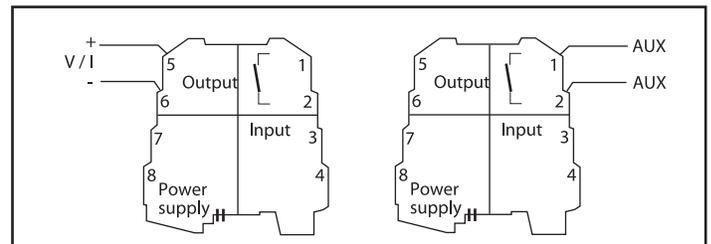
Power supply



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 thermo- couple type and dip-switch setting Span: 100°C (min) 10MΩ |
| 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) 25mA (max) |
| Current Output Protection 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) Rated 60mA (max) at 24VAC |
| Auxiliary Relay Output | |
| Power Supply | 19.2 to 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

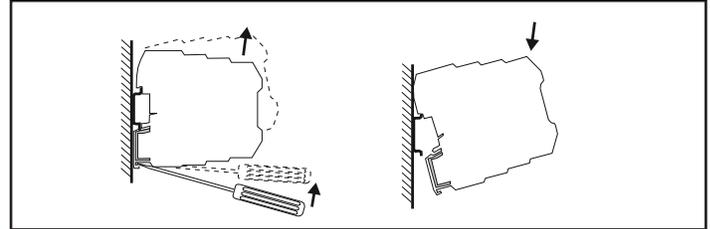
| Model | Description |
|---------|---|
| DSCX-02 | DIN Rail Expandable Power-Bus Connector |
| DSCP70 | Power Supply Connection Module |

NOTES:

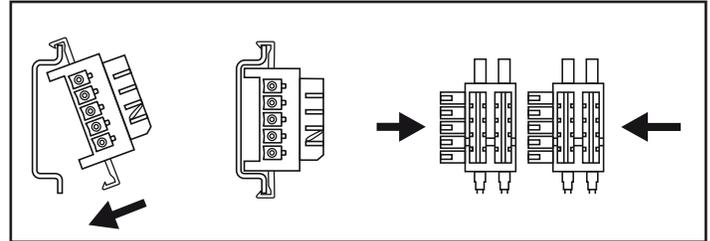
*Contact factory or your local Dataforth sales office for maximum values.

Installation

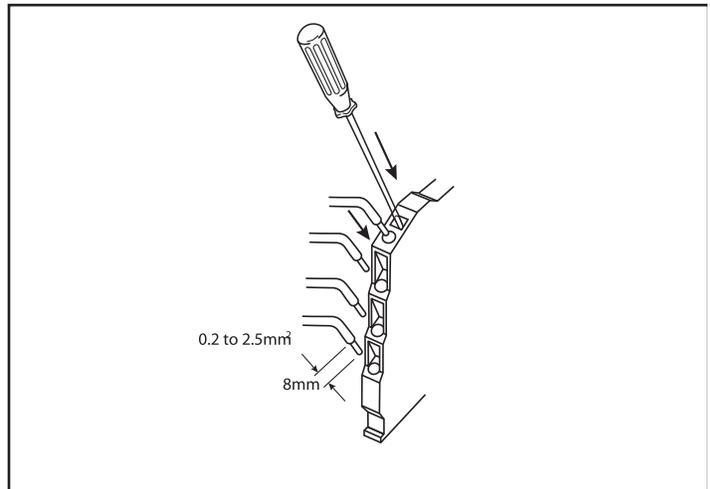
Inserting/extracting module on DIN guide



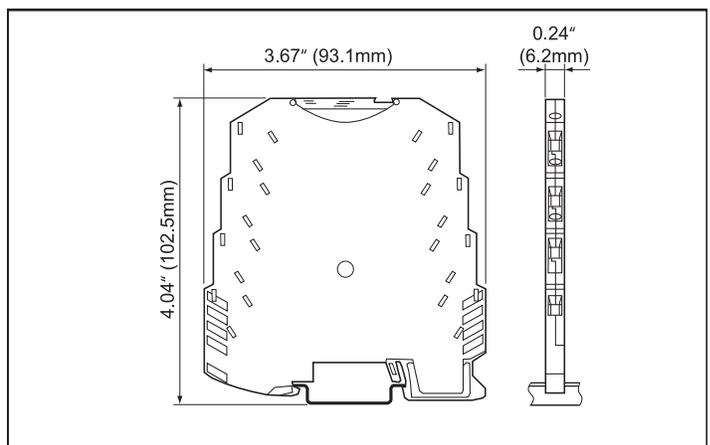
Expandable power-bus connector



Spring cage clamp connection



Dimensional Drawing



DSCP