# DSCP64

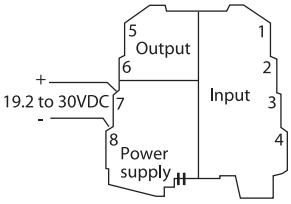
## DC Voltage/Current Converter with Transducer Power Supply

## DESCRIPTION

The DSCP64 voltage/current converter provides a single channel of voltage or current input which is converted to a current or voltage output. An auxiliary power supply is provided for powering the input transducer/sensor. It is designed for Industry-standard voltage or current signals. Input/output range, filter, fault indication, square root function, and other functions may be configured by dip-switch. 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.

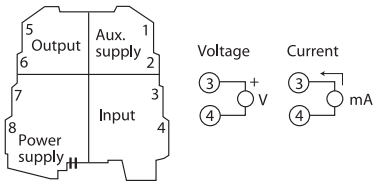


**Power Supply**

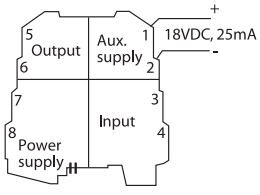



**Input**

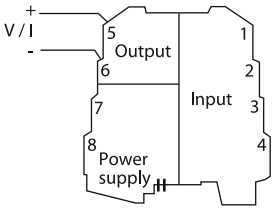
Voltage and Current (passive)




Current (active)




**Output**




**DSCP64 Electrical Connections**

## FEATURES

- Input Voltage: 0-5VDC, 0-10VDC, 0-15VDC, 0-30VDC, 1-5VDC, 2-10VDC
- Input Current: 0-20mA, 4-20mA
- Output Voltage: 0-5VDC, 0-10VDC, 1-5VDC, 2-10VDC
- Output Current: 0-20mA, 4-20mA, 20mA-0, 20-4mA
- 1500Vrms Galvanic Isolation, 4-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

- High-efficiency Energy Conversion
- Helps to Improve Device Energy Utilization

## APPLICATIONS

- Data Acquisition
- Test and Measurement
- Control Systems



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## Specifications

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

| Module | DSCP64 |
|---|---|
| Input (selectable)<br>Voltage<br><br>Current | <br>0-5VDC, 1-5VDC, 0-10VDC, 2-10VDC (Input R = 110kΩ)<br>0-20mA, 4-20mA (Input R = 35Ω) |
| Accuracy<br>Thermal Drift<br>A/D Conversion<br>Processing<br>Response Time, 90% Span, (selectable)<br>Isolation<br>Dip-switch Configuration<br>Status Indicators (LED) | ±0.1% (max)<br><120ppm/°K<br>14-bit<br>Floating Point 32-bit<br><35ms (without filter), <74ms (with filter)<br>1500Vrms (1 minute), 3-way<br>Sets Input and Output Ranges, Filter and Faults<br>Internal Fault, Configuration Error, Connection Fault |
| Output (selectable)<br>Current<br><br>Current Output Maximum<br>Fault Output<br><br>Voltage<br><br>Auxiliary Power Supply | <br>0-20mA, 4-20mA, 20mA-0 or 20-4mA<br>Load Resistance: 500Ω (max)<br>25mA<br>102.5% or 105% of Full-scale Value in Case of Over-range<br>0-5VDC, 1-5VDC, 0-10VDC or 2-10VDC<br>Load Resistance: 2kΩ (min)<br>17VDC-21VDC, 0 to 25mA |
| Power Supply<br>Power Consumption<br><br><br><br>Hot Swapping | 19.2-30VDC<br>23mA (max) at 24VDC with Output at 20mA and Auxiliary Supply Not Used<br>45mA (max) at 24VDC with Output at 21mA and Auxiliary Supply at 21mA<br>Yes |
| Mechanical Dimensions (w x h x d) | 0.24" x 3.67" x 4.04"<br>(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<br>Operating Temp. Range<br>Storage Temp. Range<br>Relative Humidity<br>IP Protection<br>Emissions<br>Immunity | <br>–20°C to +65°C<br>–40°C to +85°C<br>0 to 90%, Noncondensing<br>IP20<br>EN61000-6-4<br>EN61000-6-2 |

## Ordering Information

| Model | Description |
|---|---|
| DSCP64 | DC Voltage/Current 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.

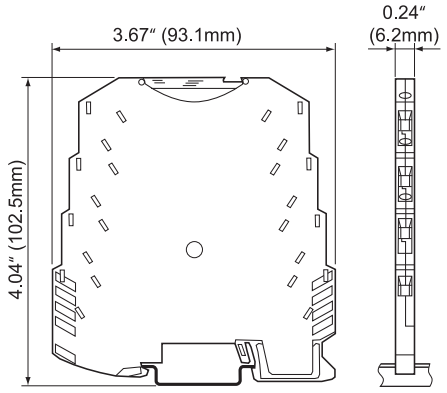
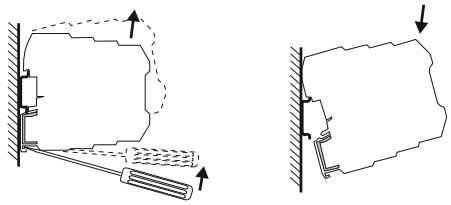
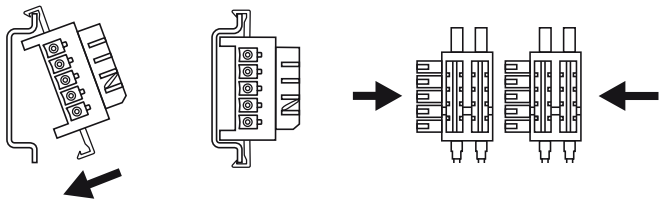



**Figure 1: Dimensional Drawing**

**Inserting/Extracting Module on DIN Guide**



**Expandable Power-bus Connector**



**Spring-cage Clamp Connection**

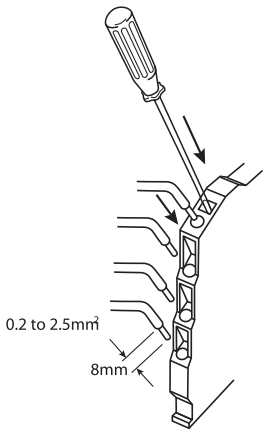



**Figure 2: Module Installation**



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