

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.



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 $\pm 0.1\%$ Accuracy
- Configuration by Dip-switch
- Compact 6.2mm DIN Housing
- CE Compliant

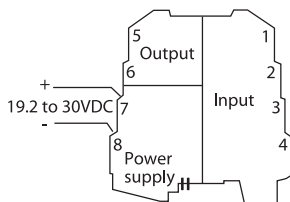
BENEFITS

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

APPLICATIONS

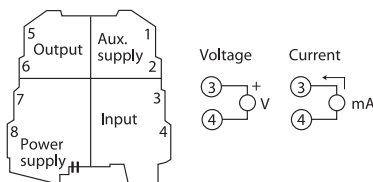
- Data Acquisition
- Test and Measurement
- Control Systems

Power Supply

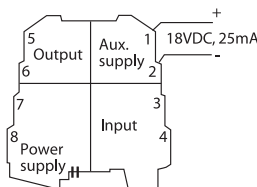


Input

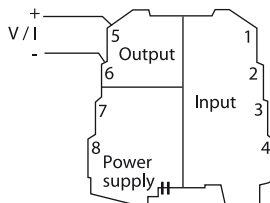
Voltage and Current (passive)



Current (active)



Output



DSCP64 Electrical Connections

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

Module	DSCP64
Input (selectable) Voltage	0-5VDC, 1-5VDC, 0-10VDC, 2-10VDC (Input R = 110k Ω)
Current	0-20mA, 4-20mA (Input R = 35 Ω)
Accuracy	$\pm 0.1\%$ (max)
Thermal Drift	<120ppm/ $^\circ\text{K}$
A/D Conversion	14-bit
Processing	Floating Point 32-bit
Response Time, 90% Span, (selectable)	<35ms (without filter), <74ms (with filter)
Isolation	1500Vrms (1 minute), 3-way
Dip-switch Configuration	Sets Input and Output Ranges, 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: 500 Ω (max)
Current Output Maximum	25mA
Fault Output	102.5% or 105% of Full-scale Value in Case of Over-range
Voltage	0-5VDC, 1-5VDC, 0-10VDC or 2-10VDC Load Resistance: 2k Ω (min)
Auxiliary Power Supply	17VDC-21VDC, 0 to 25mA
Power Supply	19.2-30VDC
Power Consumption	23mA (max) at 24VDC with Output at 20mA and Auxiliary Supply Not Used 45mA (max) at 24VDC with Output at 21mA and Auxiliary Supply at 21mA
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 $^\circ\text{C}$ to +65 $^\circ\text{C}$
Storage Temp. Range	-40 $^\circ\text{C}$ to +85 $^\circ\text{C}$
Relative Humidity	0 to 90%, Noncondensing
IP Protection	IP20
Emissions	EN61000-6-4
Immunity	EN61000-6-2

Ordering Information

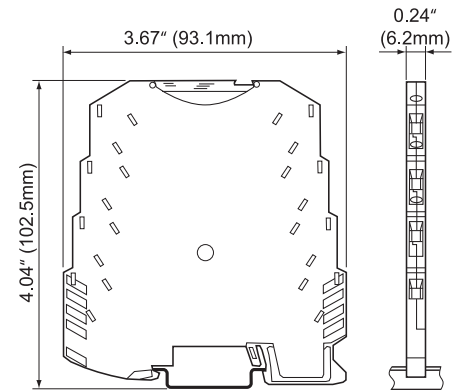
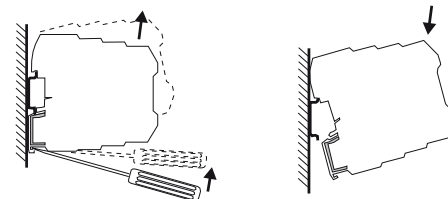
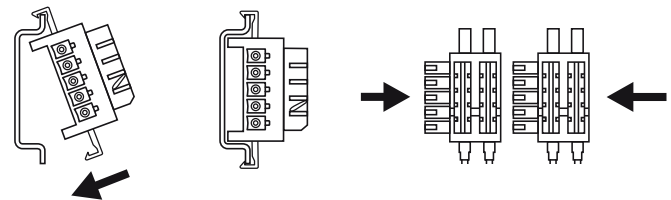
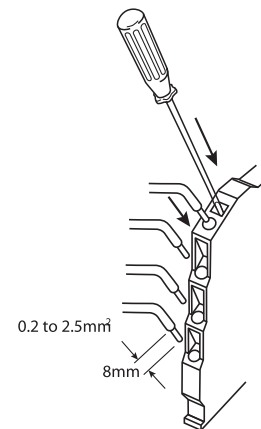
Model	Description
DSCP64	DC Voltage/Current Converter

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