DSCL24 (Multi-Channel)

Factory Configurable Isolators - DIN or Panel Mount

Description

Each multi-channel DSCL24 module provides up to 252 different configurations of process current or voltage inputs and outputs. The factory default setting provides 4-20mA input and output current. Alternatively, users may complete and submit a specific configuration table that instructs the factory on how to solder in configuration jumpers.

Each module provides full 3-way isolation with 2300Vrms CMV input to output and 3700Vrms CMV power supply to I/O protection (Figure 1). Two module versions are offered that accept universal power supply of either 24 to 60VDC or AC and 85 to 230VDC or AC with the alternating current usage accepting 45 to 400Hz power.

▶ Features

- Uses Universal Power Supply of 24 to 60V or 85 to 230V AC/DC
- Factory Configured Soldered Jumpers Allows up to 250+ I/O Settings
- Three-Way Isolation for 2300Vrms Protection
- Prevents Ground-Loop Problems
- Prevents the Transfer of Interference Voltages and Currents
- High Accuracy Over Full Span
- No Recalibration or Maintenance Required
- Narrow DIN Package, Mounts up to 27 Devices into a 19" Rack Space
- DIN Rail or Panel Mountable
- CE Compliant

Discontinued

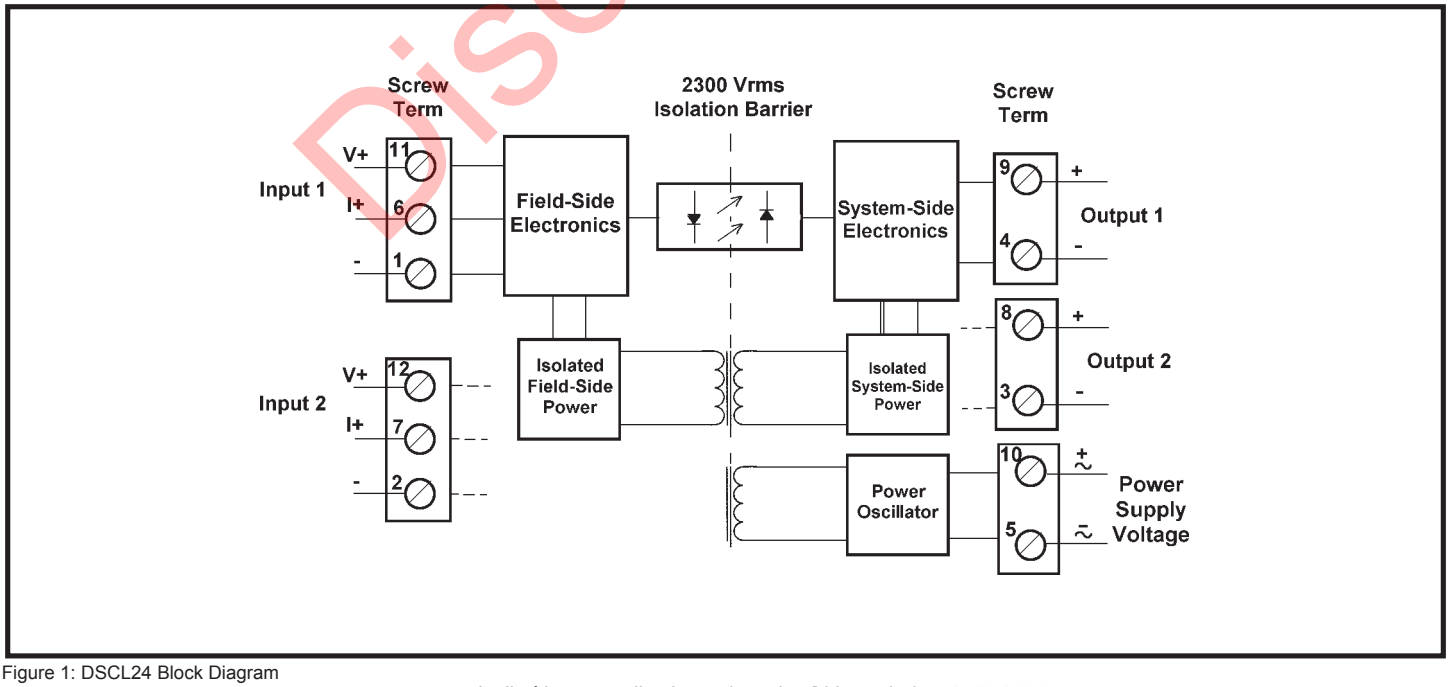


Figure 1: DSCL24 Block Diagram

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Specifications

Typical* at T_A=+25°C and 24VDC or 230VAC ±10% supply voltage

Module	DSCL24-11,-12
Input Range(1)	4-20mA
Input Limit	40mA, ±40mA
CMV Input to Output	2300Vrms, 1 min.
CMV Power Supply to I/O	3700Vrms, 1 min.
Accuracy (at 250Ω Load)	±0.1% Span Typical, ±0.2% Span Max
Input Resistance	15Ω Current Mode
Linearity	Included in Accuracy
Stability	<100ppm/°C
Input Overshoot	<20µA (Typical 5µA)
Output Range(1)	4-20mA
Limit Upper Range	40mA
Bandwidth, –3dB	15Hz
CMR (50Hz or 60Hz)	110dB
NMR	16dB at 50/60Hz
Response Time	30ms, to 90% Span
Load Resistance Range	≤600Ω Current Mode
Output Noise	<0.5% p-p
Power Supply	
Voltage	(24 to 60) or (85 to 230)VDC/AC at 45-400Hz
Tolerance	DC –15% to +33%, AC ±15%
Power Consumption	DC ≤1.6W, AC ≤3.4VA
Environmental	Weight Approximately 180g.
Housing Material	Lexan 940 (UL 94 V-O)
Shock Test	50g (3 Shocks, 6 Axis)
Operating Temp. Range	–25°C to +55°C
Storage Temp. Range	–40°C to +70°C
Relative Humidity	0 to 75% Noncondensing
Emissions	EN50081-2 (Radiated, Conducted)
Immunity	EN50082-2 (ESD, RF, EFT)

NOTES:
* Contact factory or your local Dataforth sales office for maximum values.
(1) 250+ unique I/O ranges are factory configurable. See Table 1 for configuration options.

Configuration Options

The default setting of factory stock modules is 4 to 20mA for both module input and output.

Alternatively, users may complete and submit Table 1 specifics that the factory will use to apply solder-in jumpers configuring the module as desired.

NOTE: Modules once configured for a specific user I/O range cannot be subsequently reconfigured.

Factory Configuration

Check-mark the desired Input and Output range for each channel in the table at right. Copy and submit this configuration sheet with your purchase order. The factory will assign a DSCL24-xxxx part number to your specific configuration. This part number may be used on subsequent orders. The 'Span' and 'Zero' potentiometers allow ±10% adjustments beyond the following factory solder jumper settings.

Table 1: Configuration Checklist

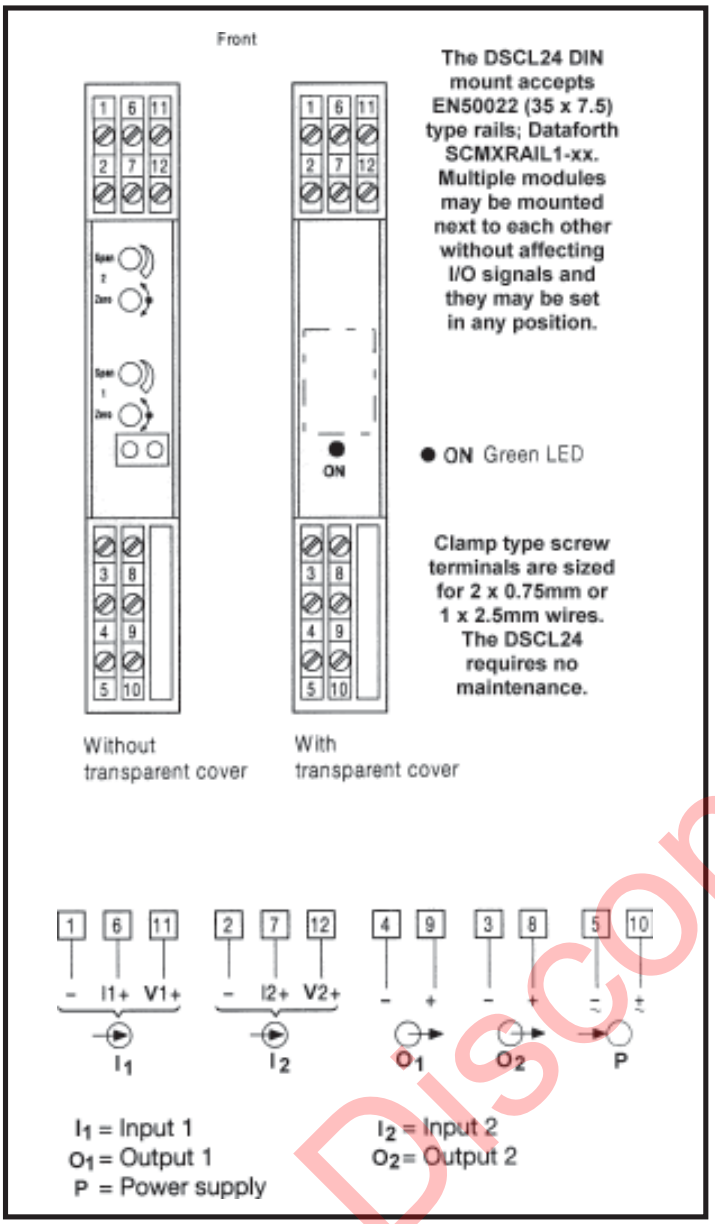
Input Current (mA)	Chn 1	Chn 2
0 to 0.1		
0 to 0.2		
0 to 0.5		
0 to 1		
0 to 2		
0 to 5		
0 to 10		
0 to 20		
0.2 to 1		
1 to 5		
2 to 10		
4 to 20		
-0.1 to 0.1		
-0.2 to 0.2		
-0.5 to 0.5		
-1 to 1		
-2 to 2		
-5 to 5		
-10 to 10		
-20 to 20		
Input Voltage (V)	**Chn 1**	**Chn 2**
0 to 0.1		
0 to 0.2		
0 to 0.5		
0 to 1		
0 to 2		
0 to 5		
0 to 10		
0 to 20		
0 to 40		
0.2 to 1		
1 to 5		
2 to 10		
4 to 20		
-0.1 to 0.1		
-0.2 to 0.2		
-0.5 to 0.5		
-1 to 1		
-2 to 2		
-5 to 5		
-10 to 10		
-20 to 20		
Output Current (mA)	**Chn 1**	**Chn 2**
0 to 20		
4 to 20		
-20 to 20		
Output Voltage (V)	**Chn 1**	**Chn 2**
0 to 10		
2 to 10		
-10 to 10		

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Connection Guide

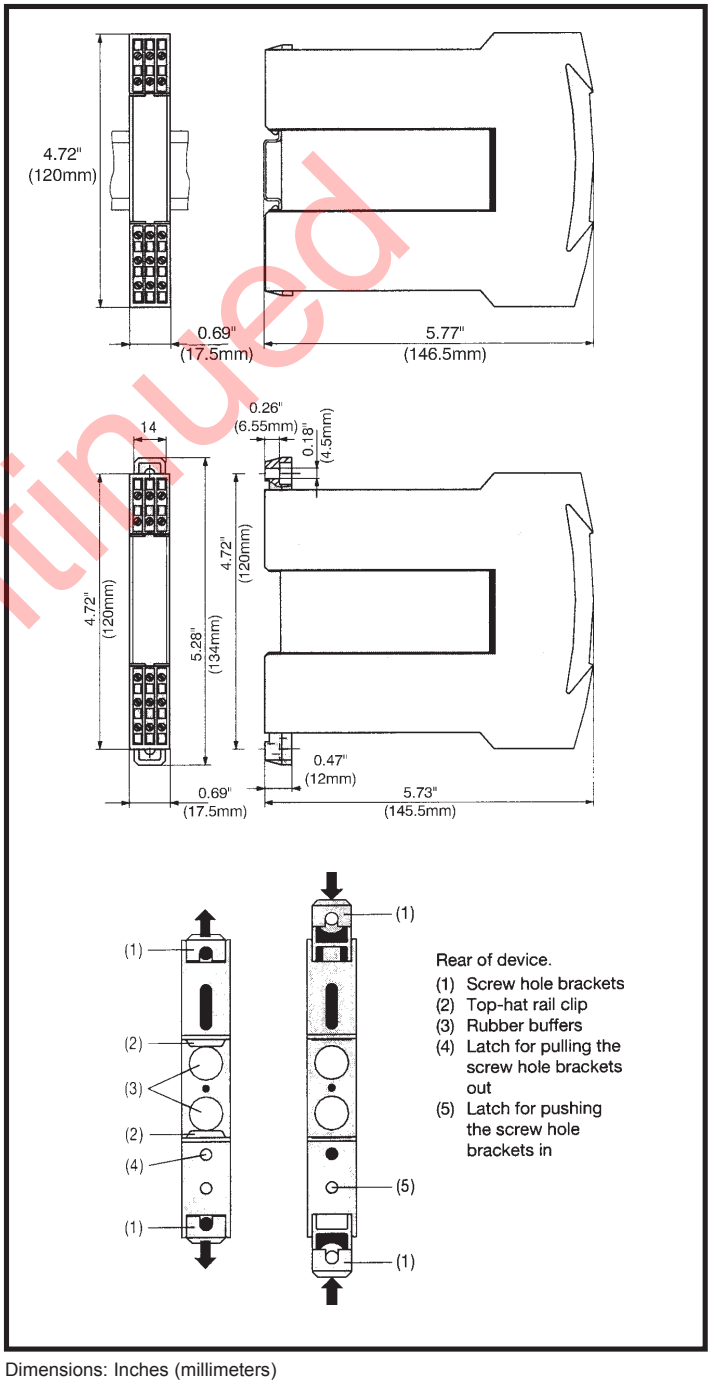


Ordering Information

Model	Input (default*)	Output (default*)	Power Supply
DSCL24-11	(2) 4-20mA, 4-20mA	(2) 4-20mA, 4-20mA	24-60VDC/AC
DSCL24-12	(2) 4-20mA, 4-20mA	(2) 4-20mA, 4-20mA	85-230VDC/AC

NOTES:
* 250+ unique I/O ranges are factory configurable. See Table 1 for configuration options.

Dimensions and Mounting



Dimensions: Inches (millimeters)

Discontinued

DSCL

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