



# DSCL and DSCP

## Industrial Loop Isolators and Transmitters

Dataforth's DSCL and DSCP series of products is a complete family of loop and universal AC/DC powered isolators and transmitters in component, DIN and head-mount packages. They include basic loop-powered isolators, wide-range AC/DC powered isolators and transmitters, and fixed-gain or hardware and software configurable models. Depending on the model, they accept a wide range of voltage, current, thermocouple, or RTD input signals then filter, isolate, amplify, linearize, and convert these signals to high-level analog outputs suitable for use in data acquisition, test and measurement, and control system applications. They protect valuable measurement and control signals as well as connected equipment from the dangerous and degrading effects of noise, transient power surges, internal ground loops, and other hazards present in industrial environments.

### Features

- Full Family of Loop Isolators and Transmitters
- Signal-Powered Passive Loop Isolator Models
- Wide Range 24 to 60V or 85 to 230V AC/DC Powered Models
- Jumper and Software Configurable Models
- 6.2mm Dip-switch Configurable Models
- 4000Vrms Isolation
- Multiple Channels per Package Available
- PCB, DIN Rail, Panel, and Instrument Head Mounting Options
- No Recalibration or Maintenance Required
- Fault Detection of Input Signal Available
- CE Compliant
- Manufactured per RoHS II Directive 2011/65/EU





### Loop Isolators and Transmitters Selection Guide

Characteristic	DSCL20	DSCL21	DSCL22	DSCL23	DSCL24 (Single Ch)	DSCL24 (Multi-Ch)	DSCP55
Channels per Module	1	1	1, 2, or 3	1 or 2	1	2	1
Mechanical Format	Component	DIN	DIN	DIN	DIN	DIN	DIN
Isolation Voltage Type	500Vrms Signal & Pwr	500Vrms Signal & Pwr	4000Vrms (1 ch) Signal & Pwr	2300Vrms 3-Way	2300Vrms 3-Way	2300Vrms 3-Way	1500Vrms Signal
Input Range from Field	0/4-20mA	0/4-20mA	0/4-20mA	4-20mA	Std/Jumper	Std/Factory	mV, V, mA, TC, RTD
Output Range to System	0/4-20mA	mA or V	mA or V	4-20mA	Std/Jumper	Std/Factory	mA
Output Split to 2 Channels	—	—	Yes	Yes	—	Yes	—
Accuracy	<±0.1%	<±0.1%	<±0.1%	<±0.2%	<±0.2%	<±0.2%	±0.1%
Bandwidth	750Hz	750Hz	500Hz	200Hz	15Hz	15Hz	1Hz
Load Range Current Voltage	0-600Ω —	0-600Ω >5MΩ	0-1000Ω >5MΩ	0-1000Ω —	0-600Ω >2kΩ	0-600Ω >2kΩ	500Ω 1kΩ
Power Supply	Passive	Passive	Passive	12-30VDC	Univ AC/DC Pwr	Univ AC/DC Pwr	Passive/DC Pwr
Dimensions (h x w x d)	0.8 x 0.4 x 1.6 in	2.9 x 0.5 x 1.9 in	see specs	see specs	4.7 x 0.7 x 5.7 in	4.7 x 0.7 x 5.7 in	3.67 x 0.24 x 4.04 in
Operating Temp Range	-20°C to +65°C	-20°C to +65°C	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C	-20°C to +65°C

### Configurable Transmitters Selection Guide

Characteristic	DSCP20	DSCP61	DSCP62	DSCP63	DSCP64	DSCP65	DSCP81
Channels per Module	1	1	1	1	1	1	1
Mechanical Format	DIN	DIN	DIN	DIN	DIN	DIN	DIN
Isolation Voltage Type	Nonisolated —	1500Vrms Signal	2300Vrms 3-Way				
Input Range from Field	Configurable	RTD	TC	mA or V	mA or V for 2WTX	mV	Configurable
Output Range to System	Configurable	mA or V	Configurable				
Accuracy	<±0.2%	±0.1%	±0.1%	±0.1%	±0.1%	±0.1%	<±0.2%
Bandwidth	Configurable	1Hz	1Hz	1Hz	1Hz	1Hz	Configurable
Load Range Current Voltage	0-900Ω —	500Ω 2kΩ	500Ω 2kΩ	500Ω 2kΩ	500Ω 2kΩ	500Ω 2kΩ	0-600Ω >2kΩ
Power Supply	Loop Power	19.2-30VDC	19.2-30VDC	19.2-30VDC	19.2-30VDC	19.2-30VDC	Univ AC/DC Pwr
Dimensions (h x w x d)	2.4 x 0.7 x 2.7 in	3.67 x 0.24 x 4.04 in	2.7 x 0.7 x 4.5 in				
Operating Temp Range	-25°C to +80°C	-20°C to +65°C	-25°C to +55°C				

### Accessory

Model	Description
DSCP70	Power supply connection module for DIN rail power bus