DSCT

Isolated DIN-rail Mount 2-wire Transmitters



Instrument Class® Performance

"Best In Class" accuracy, linearity, stability, and noise specifications. Outstanding protection and isolation performance for input, output and power connections. Capable of operating on the widest of loop supply power and over the broadest operating temperature range!

DESCRIPTION

Dataforth's DSCT series of loop-powered 2-wire transmitters consists of seven family groups with a total of 48 transmitter models that interface to a wide variety of voltage, current, temperature and position measuring devices. As one of Dataforth's *Instrument Class* products, the DSCT family provides superior specifications such as ±0.03% accuracy, 5-pole filtering, 1500Vrms continuous isolation, low output noise, and much more.

The DSCT 2-wire transmitter conditions and sends analog signals from sensors located in the "field" to monitoring and control equipment, usually computers, located thousands of feet away in central control areas. The DSCT accepts a wide range of inputs, including millivolt, volt, milliamp, thermocouple, RTD, potentiometer, and slide wire. It operates on power from a 2-wire signal loop and modulates the supply current to represent the input signal within a 4-20mA range.

Two-wire transmission loops are a very economical method for connecting sensors to distant control rooms. Since the DSCT operates from the signal loop current, no additional expensive power and wiring are required. Only low-cost, twisted-pair wiring is needed.

FEATURES

- ±0.03% Accuracy (typ)
- ±0.01% Linearity
- 1500Vrms Transformer Isolation and 240Vrms Field-side Protection
- ANSI/IEEE C37.90.1 Transient Protection
- Wide Loop Supply Voltage, 10.8V to 60V
- 5-pole Low-pass Filtering
- Up to 160dB CMR
- 85dB NMR at 60Hz, 80dB at 50Hz
- Protected Against Reverse Connection of Loop Voltage
- –40°C to +80°C Operating Temperature
- Mounts on DIN-rail EN 50022, 35x7.5 or 35x15
- CSA C/US Certified (Class I, Division 2, Groups A, B, C, D)
- CE Compliant
- Manufactured per RoHS III Directive 2015/863

BENEFITS

- Easy to Use
- Low-cost Solution
- Does Not Require External Power
- High Reliability in Hazardous Area
- Simple Field Wiring

APPLICATIONS

- Data Acquisition
- Test and Measurement
- Control Systems

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

©1984-2024 Dataforth Corporation, All Rights Reserved ISO9001:2015-Registered QMS

DSCT Selection Guide

ANALOG VOLTAGE INPUT TRANSMITTERS

MODEL	INPUT RANGE	MODEL	INPUT RANGE
DSCT30-01	±10mV	DSCT31-01	±1V
DSCT30-02	±50mV	DSCT31-02	±5V
DSCT30-03	±100mV	DSCT31-03	±10V
DSCT30-04	0 - 10mV	DSCT31-04	0 - 1V
DSCT30-05	0 - 50mV	DSCT31-05	0 - 5V
DSCT30-06	0 - 100mV	DSCT31-06	0 - 10V
		DSCT31-07	±20V
		DSCT31-08	0 - 20V

ANALOG CURRENT INPUT TRANSMITTERS

MODEL	INPUT RANGE
DSCT32-01	4-20mA
DSCT32-02	0-20mA

LINEARIZED 2- OR 3-WIRE RTD-INPUT TRANSMITTERS

MODEL	TYPE**	INPUT RANGE
DSCT34-01	100ΩPt	–100°C to +100°C (–148°F to +212°F)
DSCT34-02	100ΩPt	0°C to +100°C (+32°F to +212°F)
DSCT34-03	100ΩPt	0°C to +200°C (+32°F to +392°F)
DSCT34-04	100ΩPt	0°C to +600°C (+32°F to +1112°F)
DSCT34-05	100ΩPt	0°C to +400°C (+32°F to +752°F)
DSCT34N-01	120ΩNi	0°C to +300°C (+32°F to +572°F)

POTENTIOMETER-INPUT TRANSMITTERS

MODEL	INPUT RANGE
DSCT36-01	0 to 100Ω
DSCT36-02	0 to 500Ω
DSCT36-03	0 to 1kΩ
DSCT36-04	0 to 10kΩ

THERMOCOUPLE-INPUT TRANSMITTERS

MODEL	TYPE‡	INPUT RANGE
DSCT37J-01	J	–100°C to +760°C (–148°F to +1400°F)
DSCT37K-02	K	–100°C to +1350°C (–148°F to +2462°F)
DSCT37T-03	T	–100°C to +400°C (–148°F to +752°F)
DSCT37E-04	E	0°C to +900°C (+32°F to +1652°F)
DSCT37R-05	R	0°C to +1750°C (+32°F to +3182°F)
DSCT37S-06	S	0°C to +1750°C (+32°F to +3182°F)
DSCT37B-07	B	0°C to +1800°C (+32°F to +3272°F)
DSCT37N-08	N	–100°C to +1300°C (–148°F to +2372°F)

LINEARIZED THERMOCOUPLE-INPUT TRANSMITTERS

MODEL	TYPE‡	INPUT RANGE
DSCT47J-01	J	0°C to +760°C (+32°F to +1400°F)
DSCT47J-02	J	–100°C to +300°C (–148°F to +572°F)
DSCT47J-03	J	0°C to +500°C (+32°F to +932°F)
DSCT47K-04	K	0°C to +1000°C (+32°F to +1832°F)
DSCT47K-05	K	0°C to +500°C (+32°F to +932°F)
DSCT47K-13	K	–100°C to +1350°C (–148°F to +2462°F)
DSCT47K-14	K	0°C to +1200°C (+32°F to +2192°F)
DSCT47T-06	T	–100°C to +400°C (–148°F to +752°F)
DSCT47T-07	T	0°C to +200°C (+32°F to +392°F)
DSCT47E-08	E	0°C to +1000°C (+32°F to +1832°F)
DSCT47R-09	R	+500°C to +1750°C (+932°F to +3182°F)
DSCT47S-10	S	+500°C to +1750°C (+932°F to +3182°F)
DSCT47B-11	B	+500°C to +1800°C (+932°F to +3272°F)
DSCT47N-15	N	–100°C to +1300°C (–148°F to +2372°F)

ACCESSORIES

MODEL	DESCRIPTION
SCMXRAIL1-XX	DIN EN50022-35x7.5 (Slotted Steel), Length -XX Meters
SCMXRAIL3-XX	DIN EN50022-35x15 (Slotted Steel), Length -XX Meters

POWER SUPPLIES

PWR-PS5R7W	Power Supply, 24V, 0.3A, 100-240VAC Input
PWR-PS5R15W	Power Supply, 24V, 0.65A, 100-240VAC Input

‡THERMOCOUPLE ALLOY COMBINATIONS

Type	Material
J	Iron vs. Copper-Nickel
K	Nickel-Chromium vs. Nickel-Aluminum
T	Copper vs. Copper-Nickel
E	Nickel-Chromium vs. Copper-Nickel
R	Platinum-13% Rhodium vs. Platinum
S	Platinum-10% Rhodium vs. Platinum
B	Platinum-30% Rhodium vs. Platinum-6% Rhodium
C	Tungsten-5% Rhenium vs. Tungsten-26% Rhenium
N	Nickel-14.2% Chromium-1.4% Silicon vs. Nickel-4.4% Silicon- 0.1% Magnesium

**RTD STANDARDS

Type	Alpha Coefficient	DIN	JIS
100Ω Pt 120Ω Ni	0.00385 0.00672	DIN 43760	JIS C 1604-1989

LRI Distribuída no Brasil pela LRI | vendas@lri.com.br | 51 2129-3000

©1984-2024 Dataforth Corporation, All Rights Reserved ISO9001:2015-Registered QMS