

DYNISCO MODEL SC170

Programmable Signal Conditioner

Description

The Dynisco SC170 programmable signal conditioner is unique, offering unmatched accuracy, stability, versatility, and isolation compared to similar modestly priced units. One model accommodates DC milliamp, volt, millivolt, potentiometer, or resistance inputs. Designed to withstand the harshest industrial environments, SC170 is completely sealed in a nickel - plated corrosion resistant housing. The unit may also be mounted in explosion - proof housing.

Installation, setup, and operation are extremely easy to perform. Zero and full - scale values are independent of each other and have no interaction. An optional local indicator (LCD) can be added at any time by simply plugging in the displays. One SC170 signal conditioner on the shelf can back up the needs of an entire facility. The exceptional versatility of the SC170 not only lets you configure your signal conditioners exactly the way you want them, but also dramatically reduces back - up stock and spare parts.



Features

- Automatic self - calibration
- Fast, simple setup
- Accuracy to 0.05%
- Microprocessor performance
- Milliamp, volt, millivolt, potentiometer or resistance input
- Isolation to 850 volts
- Normal or reverse acting
- Automatic self - diagnostics
- Hardened to EMI/RFI interference
- Two year calibration warranty

Benefits

- Repeatable and higher accuracy
- Easy to use
- Improved performance
- State of the art technology
- One model to stock
- High voltage isolation
- Reverse polarity protection
- Easy to service
- Immunity to electromagnetic interference
- Lower life-cycle costs

Specifications

Performance Characteristics

Input:	DC Milliamp	-5.0 to +60.0 mA
	DC Millivolt	-15.0 to +160.0 mV
	DC Volt	-0.5 to +5.0 V
	Potentiometer 3 - wire	0.0 to 1.0 Kohms
Accuracy:	Resistance 2 - or 3 - wire	0.0 to 1.0 Kohms
	Milliamp	±0.005 mA
	Millivolt	±0.008 mV
	Volt	±0.003 V
	Resistance	±0.12 Ohms

Weight: 12 oz.

Packaging: The SC170 is packaged in a rugged, nickel plated, aluminum enclosure suitable for mounting on a flat surface. The metal enclosure is totally sealed against moisture and provides excellent immunity to the effect of electromagnetic interference (EMI/RFI). For hazardous environments, the SC170 will fit within an available explosion proof housing

Automatic diagnostics: Every 3 seconds, the SC170 signal conditioner performs self - checks for zero, span, each open resistance sensor lead, signal over range condition, and signal conditioner malfunction

Electrical Characteristics

Analog accuracy: Digital accuracy ± 4µA

Output: 2 - wire, 4 to 20 mA

Output resolution: Analog 2.1 µA; Digital 0.01, 0.0001 mV, full 850 V isolation or peak AC

Reverse polarity protection: 42 Vdc applied with either polarity

Common mode rejection: 120 dB

Failsafe: Analog, user settable to 21 mA, 3.9 mA, or OFF digital, message OFF

Power and load:

Supply voltage (no load resistance): 12 to 42 Vdc

Supply voltage (with load resistance):

$V_{supply} = (12) + (R_{load \text{ in Kohm}}) \times (23 \text{ mA})$; For digital operation
R load = 250 Ohms minimum

Supply voltage effect: < ±0.0005% of span per volt

Temperature Characteristics

Ambient temperature range: -40°F to +167°F (-40°C to +75°C)

Ambient storage range: -58°F to +185°F (-40°C to +85°C)

Ambient temperature stability: Self - correcting over the operating temperature range

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Physical Dimensions

Model SC170
2-Wire Signal Conditioner

Model XP-HDC2-L
Optional Explosion-Proof Housing

Connection Diagram

Optional 2" Pipe Mount Bracket

Model SC170

Ordering Guide

Model	Options		Accessories	
	Code	Description	Code	Description
SC170	LD - 2	Local display	PB - 2	2" stainless steel pipe mount bracket
	KB - 2	Keyboard	DIN - KIT	DIN rail mounting
		integral keyboard	SS - TAG	Stainless steel tag
	XP - HDC2 - L	Explosion proof, NEMA 7, NEMA 4X housing	PS - TAG	Plastic tag
	XP - HDGC2 - L	Explosion proof, NEMA 7, NEMA 4X housing with glass window	PS - 2412	Power supply, 115/230 Vac to 24/28 Vdc regulated 1.2/0.8A
	4X - HDG	Heavy - duty, NEMA 4X housing with window	PS2405	AC adapter, 115 Vac to 24 Vdc, 0.5A, plug-in
	4X - LDG	Light - duty, NEMA 4X housing with window		

- Ordering Example: SC170 - LD - 2 - XP - HDC2 - L - PB2 - PS - 2405