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
<table>
<thead>
<tr>
<th>Input</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Milliamp</td>
<td>±0.005 mA</td>
</tr>
<tr>
<td>DC Millivolt</td>
<td>±0.008 mV</td>
</tr>
<tr>
<td>DC Volt</td>
<td>±0.003 V</td>
</tr>
<tr>
<td>Resistance 2 - or 3 - wire</td>
<td>±0.12 Ohms</td>
</tr>
</tbody>
</table>

Electrical Characteristics
Analog accuracy: Digital accuracy ± 4µA
Output: 2-wire, 4 to 20 mA
Output resolution: Analog ±0.1 µA; Digital ±0.0001 mV, full 850 V isolation or peak AC
Reverse polarity protection: 42 Vdc applied with either polarity
Common mode rejection: 120 dB

Temperature Characteristics
Ambient temperature range: -40°F to +167°F (-40°C to +75°C)
Ambient storage range: -58°F to +185°F (-50°C to +85°C)

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.

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):
Vs(m) = (12) + (Rload in Kohm) x (23 mA); For digital operation
R load = 250 Ohms minimum
Supply voltage effect: < ±0.0005% of span per volt

Ambient temperature stability: Self-correcting over the operating temperature range.
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Ordering Guide

<table>
<thead>
<tr>
<th>Model</th>
<th>Code</th>
<th>Options</th>
<th>Description</th>
<th>Code</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>SC170</td>
<td>LD - 2</td>
<td>Local display</td>
<td></td>
<td></td>
<td>2' stainless steel pipe mount bracket</td>
</tr>
<tr>
<td></td>
<td>KB - 2</td>
<td>Keyboard</td>
<td>integral keyboard</td>
<td></td>
<td>DIN - KIT</td>
</tr>
<tr>
<td></td>
<td>XP - HDC2 - L</td>
<td>Explosion proof, NEMA 7, NEMA 4X housing</td>
<td></td>
<td></td>
<td>SS - TAG</td>
</tr>
<tr>
<td></td>
<td>XP - HDGC2 - L</td>
<td>Explosion proof, NEMA 7, NEMA 4X housing with glass window</td>
<td></td>
<td></td>
<td>PS - TAG</td>
</tr>
<tr>
<td></td>
<td>4X - HDG</td>
<td>Heavy-duty, NEMA 4X housing with window</td>
<td></td>
<td></td>
<td>PS - 2412</td>
</tr>
<tr>
<td></td>
<td>4X - LDG</td>
<td>Light-duty, NEMA 4X housing with window</td>
<td></td>
<td></td>
<td>PS2405</td>
</tr>
</tbody>
</table>

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