DIS878 AND DIS978
STRAIN GAUGE (BRIDGE) INPUT PROCESS INDICATORS

FEATURES
- Provides 3½ Digit or 4½ Digit Display
- Display Calibrated in Engineering Units (psi, kg, klb, etc.)
- Proportional to a Strain Gauge Bridge Input
- 0.5 mV/V to 1 V/V Input Span
- Fully Isolated Output and/or 0, 1, or 2 Alarms (Optional)
- Alarm Setpoints Adjustable without Disturbing Transmitter Output
- Fail-Safe Alarm Operation
- LED Alarm Status Indicator
- Adjustable Deadband
- Unlimited* Choice of Input / Output Ranges
- Fits Standard 1/8 DIN Cutout
- Rated NEMA-4, Splashproof when Properly Installed
- 5 Year Warranty

DESCRIPTION
The DIS878 and DIS978 provide a display, optional isolated DC output voltage or current proportional to the output of a strain gauge bridge, and optional alarm setpoints. All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning. The unit has a well regulated excitation voltage for the strain gauge and a high quality differential preamplifier to condition the low level output from the bridge. The digital display utilizes an auto-zero dual-slope integrating A/D converter for accuracy and stability. All controls are accessible by removing a gasketed front access panel. The display controls are wide ranging so that they can be calibrated to display engineering units. Decimal point selection is made with a switch, also accessible from the front. A complete set of engineering unit labels is sent with each DIS. Once the display has been adjusted to read the correct engineering units, the alarm setpoints can be adjusted without test equipment and without disturbing the output voltage or current. Either setpoint may be displayed by use of the SP CAL switch. Each setpoint has a red LED to indicate alarm status. The alarms have adjustable deadbands. Terminations are made to a screw terminal connector on the rear of the case.

TYPICAL APPLICATIONS
Weight and pressure indication, control, monitoring, data acquisition and warning.

SPECIFICATIONS

<table>
<thead>
<tr>
<th>INPUT SPAN</th>
<th>0.5 mV/V to 1 V/V</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT IMPEDANCE</td>
<td>200 kilohms</td>
</tr>
<tr>
<td>OPTION SA, DA SETPOINT</td>
<td>each alarm 0 to 100% of span</td>
</tr>
<tr>
<td>DEADBAND</td>
<td>0.25% to 100% of span</td>
</tr>
<tr>
<td>RELAY CONTACTS (spdt)</td>
<td>Resistive Load 5 A max, 150 W max, 240 VAC max, 30 VDC max Inductive Load ½ HP max at 120/240 VAC</td>
</tr>
<tr>
<td>OPTION TX OUTPUT RANGE</td>
<td>Voltage select any range between ±10 V, 10 mA max load (min span 0.2 V) Current select any range from 0 to 20 mA max, &gt;24 V compliance (1200 ohms max at 20 mA)</td>
</tr>
<tr>
<td>OUTPUT RIPPLE (Peak-to-Peak)</td>
<td>&lt;0.1% of span</td>
</tr>
<tr>
<td>ISOLATION</td>
<td>Output / Input &gt;500 megohms Breakdown Voltage &gt;600 VAC rms</td>
</tr>
<tr>
<td>EXCITATION</td>
<td>fixed 10 V, 40 mA max load</td>
</tr>
<tr>
<td>EXCITATION STABILITY</td>
<td>±0.005% / °C</td>
</tr>
<tr>
<td>RESPONSE TIME</td>
<td>&gt;500 ms</td>
</tr>
<tr>
<td>ACCURACY</td>
<td>±0.1% of span</td>
</tr>
<tr>
<td>LINEARITY</td>
<td>Display ±0.01% of span Output ±0.025% of span</td>
</tr>
<tr>
<td>DISPLAY (878)</td>
<td>Digit Size .56” LED, 3½ digits, ±19999 Decimal Point ±1.9.9.9 Control Range Zero ±19999</td>
</tr>
<tr>
<td>DISPLAY (978)</td>
<td>Digit Size .56” LED, 4½ digits, ±19999 Decimal Point ±1.9.9.9.9 Control Range Zero ±19999</td>
</tr>
<tr>
<td>POWER</td>
<td>115 VAC ±10%, 50 or 60 Hz 230 VAC ±10%, 50 or 60 Hz (4 W max)</td>
</tr>
</tbody>
</table>

* Within Specified Range Limits.
DIS878 AND DIS978

ORDERING INFORMATION

POWER
☐ 115 VAC, 50/60 Hz Power
☐ 230 VAC, 50/60 Hz Power

INPUT
Select Units
☐ mV/V ☐ mV
Enter Input

☐ Zero Scale
☐ Full Scale
Enter Excitation Voltage

☐ Excitation

OUTPUT (Option TX)
Analog Output
☐ Yes ☐ No
Select Units
☐ VDC ☐ mADC
Enter Output

☐ Zero Scale
☐ Full Scale

Select Output Logic
☐ Normal Acting
☐ Reverse Acting

ALARMS (Option SA, DA)
Alarm Output
☐ Yes ☐ No
Alarm Selection - Quantity
☐ Single (SA) ☐ Dual (DA)
Alarm Action
Alarm 1
☐ High ☐ Low
Alarm 2
☐ High ☐ Low
Alarm Logic
☐ Normal - De-Energize on Alarm
☐ Reverse - Energize on Alarm
Enter Setpoint

☐ Setpoint 1
☐ Setpoint 2

DISPLAY
Select Digits
☐ 3.5 Digits (DIS878)
☐ 4.5 Digits (DIS978)

OPTIONS
☐ Conformal Coating

TAGS
Specify Tag Number
Tag number is typed on product label at no charge.
Enter Tag Number(s)

ACCESSORIES

DIS878 AND DIS978
No accessories available at this time.

MOUNTING
The DIS is designed to be mounted from the front of the panel through a standard horizontal 3.62 x 1.77 inches (1/8 DIN) cutout. Two mounting cam-screws allow the securing of the DIS to the panel from the front.

DIMENSIONS

Inches [mm]

CONNECTIONS

| TERM 1 | Output - |
| TERM 2 | Output + |
| TERM 3 | Excitation + |
| TERM 4 | Excitation - |
| TERM 5 | Input + |
| TERM 6 | Input - |
| TERM 7 | Alarm 1 NC |
| TERM 8 | Alarm 1 C |
| TERM 9 | Alarm 1 NO |
| TERM 10 | Alarm 2 NC |
| TERM 11 | Alarm 2 C |
| TERM 12 | Alarm 2 NO |
| TERM 13 | Power AC L1 |
| TERM 14 | Power AC L2 |