



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 ½ 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 engineer-

ing 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

INPUT SPAN

0.5 mV/V to 1 V/V

INPUT IMPEDANCE

200 kilohms

OPTION SA, DA SETPOINT

each alarm 0 to 100% of span

DEADBAND

0.25% to 100% of span

RELAY CONTACTS (spdt)

Resistive Load
5 A max, 150 W max, 240 VAC max, 30 VDC max
Inductive Load
½ HP max at 120/240 VAC

OPTION TX OUTPUT RANGE

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, >24 V compliance (1200 ohms max at 20 mA)

OUTPUT RIPPLE(Peak-to-Peak)

<0.1% of span

ISOLATION

Output / Input
>500 megohms
Breakdown Voltage
>600 VAC rms

EXCITATION

fixed 10 V, 40 mA max load

EXCITATION STABILITY

±0.005% / °C

RESPONSE TIME

≥500 ms

ACCURACY

±0.1% of span

LINEARITY

Display
±0.01% of span
Output
±0.025% of span

DISPLAY (878)

Digit Size
.56" LED, 3½ digits, ±1999
Decimal Point
±1.9.9.9
Control Range
Zero
±1999

Span

min span 10/max span 2000

DISPLAY (978)

Digit Size
.56" LED, 4½ digits, ±19999
Decimal Point
±1.9.9.9.9
Control Range
Zero
±19999
Span
min span 100/max span 20000

DISPLAY

Update
3/sec

COMMON MODE REJECTION

120 dB, DC to 60 Hz

OPERATING TEMPERATURE

14°F to 140°F/-10°C to 60°C

TEMPERATURE STABILITY

±(0.02% of span + 1.3 μV)/°C max

POWER

115 VAC ±10%, 50 or 60 Hz
230 VAC ±10%, 50 or 60 Hz
(4 W max)

* Within Specified Range Limits.

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)

Enter Display

Zero Zcale

Full Scale

Select Display Logic

- Normal Acting
- Reverse Acting

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.

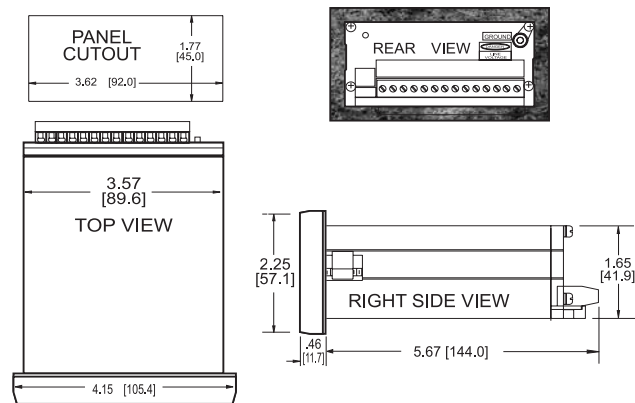
MOUNTING

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]

**DIS SERIES II
PROCESS INDICATORS**



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 |