

# DIS873 AND DIS973

## RTD INPUT PROCESS INDICATORS



### FEATURES

- Provides 3½ Digit or 4½ Digit Display
- Display Calibrated in Engineering Units (°C, °F, °K, etc.) Proportional to an RTD Input
- 3-Wire or 2-Wire, 10 ohms to 2000 ohms RTDs
- Linearized for Platinum RTDs
- Fully Isolated Output and/or 0, 1, or 2 Alarms
- 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 DIS873 and DIS973 provide a display, optional isolated DC output voltage or current proportional to an RTD input signal, 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 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 an 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

Temperature indication, control, monitoring, data acquisition and warning for HVAC, pumps, motors, etc.

### SPECIFICATIONS

#### RTD INPUT

3-Wire or 2-Wire,  
10 ohms to 2000 ohms

#### INPUT RANGE

select any range within RTD limit [min span 25°F/14°C (100°F/55°C with 10 ohms RTD)]

#### OPTIONS 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  
1/8 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 (min span 1 mA)

#### EXCITATION CURRENT

10 ohms	10 mA
100 ohms	5 mA
1000 ohms	0.5 mA
2000 ohms	0.2 mA

#### OUTPUT RIPPLE (Peak-to-Peak)

<0.1% of span

#### ISOLATION

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

#### RESPONSE TIME (Range Dependent)

≤100 ms

#### OPEN SENSOR OUTPUT

≥ full scale

#### ACCURACY

±0.1% of span

#### LINEARITY

(Pt RTD, output vs temp)  
±0.05% of span  
(temp ≥32°F /0°C)  
±0.15% of span  
(temp <32°F/0°C)  
(others, output vs res)  
±0.01% (display)  
±0.05% (transmitter output)

#### COMMON MODE REJECTION

120 dB, DC to 60 Hz

#### DISPLAY (873)

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 (973)

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

#### OPERATING TEMPERATURE

14°F to 140°F/-10°C to 60°C

#### TEMPERATURE STABILITY

±0.02% of span or 0.025°C/°C,  
whichever is greater

#### POWER

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

- Deg C  Deg F

**Enter Input**

Zero Scale

Full Scale

**Select Sensor**

- 100 ohm Pt., .00385 Alpha
- 100 ohm Pt., .00392 Alpha
- 100 ohm Pt., .00375 Alpha
- 1000 ohm Pt., .00385 Alpha
- 1000 ohm Pt., .00392 Alpha
- 10 ohm Cu.
- Other - Specify in "Notes"

**Open Sensor Response**

- Upscale  Downscale

**OUTPUT (Option TX)**

**Analog Output**

- Yes  No

**Select Units**

- VDC  mADC

**Enter Output**

Zero Scale

Full Scale

**Select Output Logic**

- Normal Acting  Reverse Acting

**DISPLAY**

**Select Digits**

- 3.5 Digits (DIS873)
- 4.5 Digits (DIS973)

**Enter Display**

Zero Scale

Full Scale

**Select Display Logic**

- Normal Acting
- Reverse Acting

**ALARMS (Options 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 Input Level**

Setpoint 1

Setpoint 2

**OPTIONS**

- Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag number is typed on product label at no charge.

**Enter Tag Number(s)**

**ACCESSORIES**

**DIS873 AND DIS973**

No accessories available at this time.

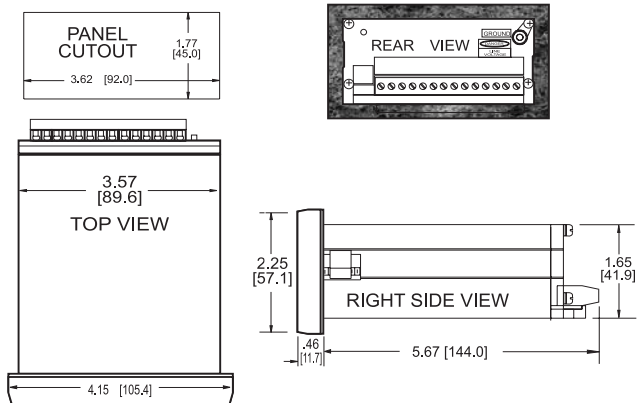
**MOUNTING**

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 - (Optional)
- TERM 2 Output + (Optional)
- TERM 4 RTD Input +
- TERM 5 RTD Input -
- TERM 6 RTD Lead Compensation
- TERM 7 Alarm 1 NC (Optional)
- TERM 8 Alarm 1 C (Optional)
- TERM 9 Alarm 1 NO (Optional)
- TERM 10 Alarm 2 NC (Optional)
- TERM 11 Alarm 2 C (Optional)
- TERM 12 Alarm 2 NO (Optional)
- TERM 13 Power AC L1
- TERM 14 Power AC L2



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