



# DIS875 AND DIS975

## FREQUENCY INPUT PROCESS INDICATORS

### FEATURES

- Provides 3½ Digit or 4½ Digit Display
- Display Calibrated in Engineering Units (rpm, fps, ips, mps, etc.) Proportional to Frequency Input
- Fully Isolated Output and/or 0, 1, or 2 Alarms
- 50 mV to 100 V Peak Input Sensitivity
- Selectable Sensitivity for Low Noise Level Rejection
- Frequency Limit 60 kHz
- 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 DIS875 and DIS975 provide a display, optional isolated DC output voltage or current proportional to a frequency 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 it 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.

The wide range input sensitivity allows the DIS to be driven from low level magnetic pickups as well as logic level signals. A choice of three input

sensitivities allows the user to trade off sensitivity versus noise rejection. A built-in pullup resistor is connected to a spare input terminal to permit use with contact closure or open-collector inputs.

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:

Flow, speed of motors, conveyors, etc., indication, control, HI/LO alarm.

### SPECIFICATIONS

#### INPUT RANGE

Select any range from 0 to 10 Hz min to 0 to 60 kHz max

#### INPUT SENSITIVITY

Any voltage from 15 mV to 250 V rms

#### INPUT IMPEDANCE

100 kilohms or greater

#### PULLUP RESISTOR

10 kilohms to 6.5 VDC

#### 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  
1/8 HP max at 120/240 VAC

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

<0.1% of span

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

#### ISOLATION

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

#### ACCURACY

±0.1% of span

#### LINEARITY

±0.1% of span

#### COMMON MODE REJECTION

120 dB, DC to 60 Hz

#### DISPLAY

Update 3/sec

#### DISPLAY (875)

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 (975)

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

#### OPERATING TEMPERATURE

14°F to 140°F / -10°C to 60°C

#### TEMPERATURE STABILITY

±0.02% of span/°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**

- Hz     KHz

**Enter Input**

Full Scale

**OUTPUT (Option TX)**

**Analog Output**

- Yes     No

**Select Units**

- VDC     mADC

**Enter Output**

Zero Scale

Full Scale

**Select Output Logic**

- Normal Acting
- Reverse Acting

**ALARM (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 - Input Level**

Setpoint 1

Setpoint 2

**DISPLAY**

**Enter Display**

Zero Scale

Full Scale

**Select Display Logic**

- Normal Acting
- Reverse Acting

**OPTIONS**

- Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag Number is typed on product label at no charge.

**Enter Tag Number(s)**

**ACCESSORIES**

**DIS875 AND 975**

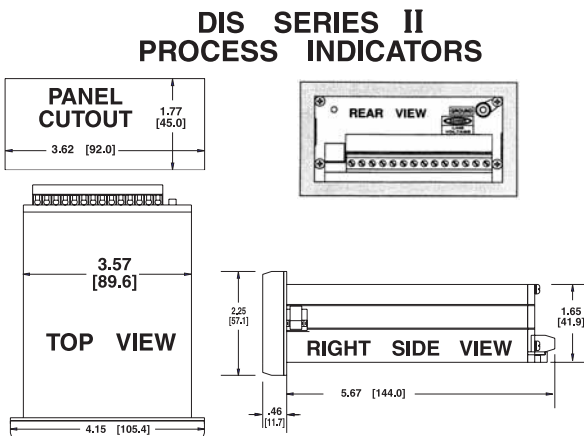
No accessories available at this time.

**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**

- |       |                   |        |             |
|-------|-------------------|--------|-------------|
| PIN 1 | Output -          | PIN 8  | Alarm 1 C   |
| PIN 2 | Output +          | PIN 9  | Alarm 1 NO  |
| PIN 3 | Pullup Resistor A | PIN 10 | Alarm 2 NC  |
| PIN 4 | Input B +         | PIN 11 | Alarm 2 C   |
| PIN 5 | Input C -         | PIN 12 | Alarm 2 NO  |
| PIN 6 | Input Common      | PIN 13 | Power AC L1 |
| PIN 7 | Alarm 1 NC        | PIN 14 | Power AC L2 |

| Recommended Input Amplitude                      | Threshold Sensitivity | Connect Input To Terminals | Jumper             |
|--|-----------------------|----------------------------|--------------------|
| Low: 25mV to 1V peak<br>15mV to 0.7V rms sine    | 15mV                  | C and COM                  | NONE               |
| Med: 250 mV to 10V peak<br>150mV to 7V rms sine  | 150mV                 | B and COM                  | NONE               |
| High: 2.5mV to 10V peak<br>1.5V to 250V rms sine | 1.5V                  | B and COM                  | C to COM           |
| Contact Closure or Open-Collector                | 1.5V                  | B(+) and COM(-)            | A to B<br>C to COM |



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