

# TW850X

## FREQUENCY INPUT TWO-WIRE TRANSMITTER

### FEATURES

- Provides DC Output Proportional to Frequency Input
- Fully Isolated Input/Output Available
- 30 mV to 500 V Peak Input Sensitivity
- Three Threshold Ranges
- Pullup Resistor
- Unlimited\* Choice of Input Ranges
- Low-Drift Copper-Stabilized Input
- NEMA-4X Splashproof and Corrosion Resistant
- 5 Year Warranty

### DESCRIPTION

The TW850X provides a DC output current proportional to a frequency input signal with an optional display in a "hockey puck" case. Optional isolation is also available for the transmitter. The transmitter is protected by a gasketed, NEMA-4X glass-filled polyester housing and operates from -40°C to +85°C. The chopper-stabilized input amplifier provides accurate, low-drift operation.

All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning.

The output ZERO and SPAN controls are accessible through the top of the housing.

Optional conformal coating of the electronic components makes the TW850X extremely reliable and resistant

to the corrosion, moisture and fungus associated with many industrial environments. A built-in pullup resistor is provided to permit use with contact-closure or open-collector inputs.

Terminations are made to screw terminal connectors on the top of the case.

### TYPICAL APPLICATIONS

Remote motor, conveyor speed, data acquisition, isolation.

### SPECIFICATIONS

#### INPUT RANGE

select any range from 0 to 5 kHz  
min to 0 to 10 Hz

#### INPUT SENSITIVITY (Peak-to-Peak)

any voltage from 30 mV to 500 V

#### MAX DC OFFSET

High Range  
±250 VDC  
Low and Medium Range  
±30 VDC

#### INPUT IMPEDANCE

High and Medium Range  
100 kilohms  
Low Range  
10K ohms  
Built-In Pullup Resistor  
10K ohms  
Open-Circuit Voltage  
6.5 VDC

#### OUTPUT RANGE

4/20 mA (10/50 mA optional)

#### ISOLATION (Optional)

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

#### MAX LOAD RESISTANCE

$R_L \text{ max} = (V \text{ supply} - 12) / I \text{ out max}$

#### RESPONSE TIME (Range Dependant)

≤ 1.5 sec

#### ACCURACY

±0.1% of span

#### LINEARITY

±0.1% of span

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

0.1% of span

#### LINEARITY

±0.5% of span

#### OPERATING TEMPERATURE

Display  
14°F to 140°F/-10°C to 60°C  
W/O Display  
-40°F to 185°F/-40°C to 85°C

#### TEMPERATURE STABILITY

±0.01% of span/°C max

#### POWER

12 to 48 VDC

#### SUPPLY VOLTAGE EFFECT

0.01% of span max, 12 TO 48 VDC

\* Within specified range limits.

**ORDERING INFORMATION**

**INPUT**

**Select Units**

Hz     KHz

**Enter Input**

Zero Scale

Full Scale

**OUTPUT**

Non-Isolated (TW8500)  
 Isolated (TW8501)

**OPTIONS**

Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag number is typed on product label at no charge.

**Enter Tag Number(s)**

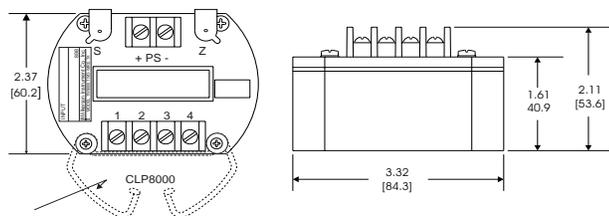
**ACCESSORIES**

**TW850X**

DMP8500	Mounting Plate, DIN-Rail & Surface (SC5000 & TW8000)	QTY _____
DR1	DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter)	QTY _____
HKB-HFC	Killark Explosion-Proof Housing, no Window (TW8000)	QTY _____
HKB-HKGL	Killark Explosion-Proof Housing with Window (TW8000)	QTY _____

**DIMENSIONS**

Inches [mm]



**CONNECTIONS**

PIN PS +    Power Supply +  
 PIN PS -    Power Supply -

INPUT CONNECTION		
Input Amplitude	Connect Input to Terminals:	Jumper:
Low: 30 mV to 5V pk-pk 10 mV to 1.7 V rms sine	3 and 4	none
Med: 300 mV to 50V pk-pk 100 mV to 17 V rms sine	2 and 4	none
High: 3 V to 500V pk-pk 1 V to 170 V rms sine	2 and 4	3 and 4
Contact Closure or Open Collector	2 (+) and 4 (-)	1 to 2