

# TW810X

## DC INPUT TWO-WIRE TRANSMITTER

### FEATURES

- Provides DC Current Output Proportional to DC Input
- Fully Isolated Input / Output Available (TW8101)
- 2 mV or 10 microamps Minimum Input Span
- Unlimited\* Choice of Input Ranges
- Low-Drift Chopper-Stabilized Input
- NEMA-4X Splashproof and Corrosion Resistant
- 5 Year Warranty

### DESCRIPTION

The TW810X provides a DC output current proportional to a DC input signal. Optional isolation is also available in the transmitter. The transmitter is protected by a gasketed, NEMA-4X glass-filled polyester housing and operates from -40°C to +85°C. Optional conformal coating of the electronic components makes the TW810X extremely reliable and resistant to the corrosion, moisture and fungus associated with many industrial environments.

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.

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

### TYPICAL APPLICATIONS

Remote data acquisition. Voltage to current conversion and isolation. Elimination of ground loops and common mode signals.

### SPECIFICATIONS

#### INPUT RANGE

Voltage  
select any range from  
±250 V max  
(min span 2 mV)

Current  
±5 A max\*\*  
(min span 10 µA, internal shunt)

#### INPUT IMPEDANCE

Voltage  
1 megohm

Input Value	Input Shunt Value
1 mA	100 Ohm
10 mA	10 Ohm
20 mA	5 Ohm
4/20 mA	61.9 Ohm
100 mA	1 Ohm
1 A	0.1 Ohm
5 A	0.1 Ohm

#### OUTPUT RANGE

4/20 mA  
10/50 mA (Optional)

#### OUTPUT RIPPLE

(Peak-to-Peak)  
<0.1% of span

#### ISOLATION (Optional)

Breakdown Voltage  
>600 VAC rms  
Resistance  
>500 megohms

#### MAX LOAD RESISTANCE

= [(Vsupply - 12)/I out mA] kilohms

#### RESPONSE TIME

10 ms typical

#### ACCURACY

±0.05% of span

#### LINEARITY

±0.01% of span

#### COMMON MODE REJECTION

120 dB, DC to 60

#### OPERATING TEMPERATURE

-40°F to 185°F / -40°C to 85°C

#### TEMPERATURE STABILITY

±0.01% of span / °C max

#### POWER REQUIRED

12 to 48 VDC, polarity protected

#### SUPPLY VOLTAGE EFFECT

0.01% of span max

\* Within Specified Range Limits.

\*\* For input values greater than 1A rms select appropriate external shunt resistor and use with 0-500 mV input.

**ORDERING INFORMATION**

**MODEL**

- TW8100 - Non-Isolated
- TW8101 - Input/Output Isolated

**INPUT**

**Select Units**

- VDC  mADC

**Enter Input**

Zero Scale

Full Scale

**OUTPUT**

- 4/20 mADC
- 10/50 mADC

**OPTIONS**

- Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag number is typed on product label at no charge.

**Enter Tag Number(s)**

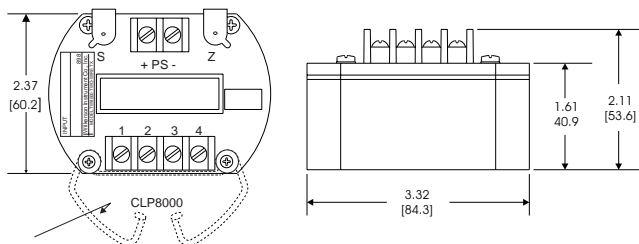
**ACCESSORIES**

**TW810X**

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

**DIMENSIONS**

Inches [mm]



**CONNECTIONS**

PIN PS +	Power Supply +
PIN PS -	Power Supply -
PIN 1	Input
PIN 2	Input
PIN 3	No Connection
PIN 4	Shield