



## Description

### SUMMARY

Complete and versatile, SHARK-TX is the only 1/4 DIN and DIN rail mountable two wire transmitter on the market that allows the user to select one of four measuring parameters.

### FOUR MEASURING PARAMETERS

Select the parameter you wish to measure from the easy-to-use LCD menu on the front cover. Choose Conductivity, pH, ORP or Flow.

### COMPLETE - NO EXTRA CARDS OR OPTIONS REQUIRED

Each SHARK-TX comes complete. There are no extra costs associated with buying boards for different applications.

### TWO MOUNTING OPTIONS

SHARK-TX comes complete with a universal mounting kit for surface, panel and pipe-mount applications. The NEMA 4X 1/4 DIN enclosure is perfect for stand-alone or panel-mount operation.

SHARK-TXP is NEMA 4X for front panel mounting and comes complete with DIN rail mounting hardware for mounting in a control panel.

### DISPLAY

2-line, 16-character LCD on the front panel.

### ANALOG OUTPUTS

The SHARK-TX provides an isolated and fully scalable 4-20 mA output.

### RELAYS WITH CYCLE TIMERS

The instrument also provides control of external devices using its two independent control relays. A third relay is preset to act as an alarm relay, but can be used as a process control relay. It has both high and low on setpoints with adjustable off setpoints. Factory set for bidirectional control, both control relays can be set for either a rising or falling process, with easily programmed on setpoints and off setpoints. Each control relay has a built-in independent cycle timer, with field-set on and off times. This feature enables tighter control of batch processes by eliminating chemical overshoot.

### ENCLOSURE

SHARKTX is packaged in a rugged NEMA 4X polycarbonate enclosure making it ideally suited for heavy-duty applications such as industrial wastewater neutralization, municipal water and wastewater, pulp and paper, and process control. The SHARKTXP enclosure is also polycarbonate with a NEMA 4X front panel, and DIN rail mounting hardware on the back.

## Features

- pH, ORP, Conductivity & Flow parameters available
- 24 VDC / 24 VDC Loop
- Easy to read 2 X 16 character LCD display
- Quick and easy to calibrate
- Single 4-20mA output with range expandability
- 1/4 DIN size, NEMA 4X polycarbonate housing
- Shark-TX: Universal mounting hardware provided for surface, panel and pipe mounting
- Shark-TXP: Panel or DIN rail mounting hardware provided

## Applications

- Process Control
- Industrial and Municipal
- Water Treatment
- Industrial and Municipal
- Waste Treatment and Neutralization
- Fume Scrubbers
- Suitable for the Plating, Circuit Board Manufacturing, Food and Beverage, Chemical Processing, Pulp & Paper, Mining, Nuclear Energy and Pharmaceutical Industries

# SHARK TX/P pH, ORP, Conductivity, Flow Transmitter

## Technical Data

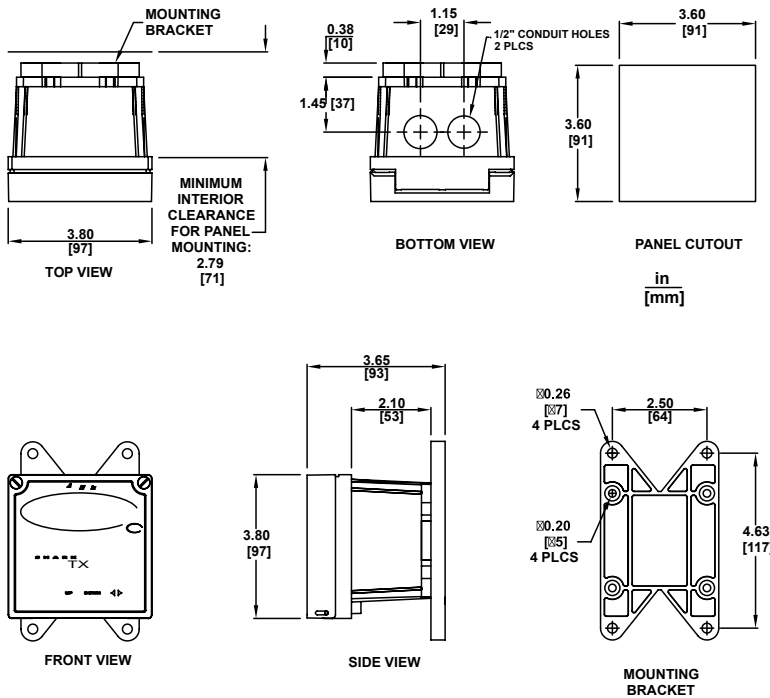
	pH	ORP	Conductivity	Flow																			
<b>Display</b>	Front Panel: 4 x 7 segment 1/2" LED display, 1 LED indicator On-line, 7 LED Bar Graph. Inside Panel: 2 x 16 alpha-numeric LCD display																						
<b>Measuring Range</b>	pH: 0.01 to 14.00 Temp: 0 to 100°C or 32° to 212°F	ORP: -1999 to +1999mV (Dependent on sensor) Temp: 0 to 100°C or 32° to +212°F	<table border="1"> <tr> <td>MΩ/ cm<sup>3</sup></td> <td>0 to 19.9</td> <td>0.01</td> </tr> <tr> <td rowspan="3">μS/ cm<sup>3</sup></td> <td>0 to 2.00</td> <td>0.01</td> </tr> <tr> <td>0 to 20.0</td> <td>0.1</td> </tr> <tr> <td>0 to 200</td> <td>0.1</td> </tr> <tr> <td rowspan="2">mS/ cm<sup>3</sup></td> <td>0 to 2000</td> <td>1.0</td> </tr> <tr> <td>0 to 20</td> <td>10</td> </tr> <tr> <td></td> <td></td> <td>0 to 200</td> <td>50</td> </tr> </table>	MΩ/ cm <sup>3</sup>	0 to 19.9	0.01	μS/ cm <sup>3</sup>	0 to 2.00	0.01	0 to 20.0	0.1	0 to 200	0.1	mS/ cm <sup>3</sup>	0 to 2000	1.0	0 to 20	10			0 to 200	50	Flow: 0 to 9999 with selectable flow rate units Volume: 0 to 9999 with Auto Range Flow rate units: Gallons (GP), Cubic Feet (CF), Liters (LP), Cubic Meters (CM), custom by entering factor related to Gallons. Time units: Seconds (S), Minutes (M), Hours (H)
MΩ/ cm <sup>3</sup>	0 to 19.9	0.01																					
μS/ cm <sup>3</sup>	0 to 2.00	0.01																					
	0 to 20.0	0.1																					
	0 to 200	0.1																					
mS/ cm <sup>3</sup>	0 to 2000	1.0																					
	0 to 20	10																					
		0 to 200	50																				
<b>Temperature Compensation</b>	Automatic or Manual 0 to 100°C (32° to +212°F)	Not required	Automatic or Manual User selectable temperature compensation slope 0.0 to 10.0% / °C. 0 to 100°C (32° to 212°F)	Not required																			
<b>Temperature Unit</b>	°C or °F			Not required																			
<b>Temperature Sensor</b>	User selectable: 300Ω NTC Thermistor, 3000Ω NTC Thermistor or Pt. 1000 RTD																						
<b>Calibration modes</b>	Auto-Calibration, Manual Calibration, Temperature Display	Manual Calibration Temperature Calibration	Dry Calibration Sample Calibration Temperature Calibration	K factor input																			
<b>Ambient Conditions</b>	Temperature: -20°C to +60°C or -4°F to +140°F Humidity: 0 to 90% RH (non-condensing)																						
<b>Sensor to Transmitter Distance</b>	Differential Sensor: 3000 ft Combination Sensor: 10 ft		300 ft	2000 ft																			
<b>Analog Output</b>	4 to 20 mA Isolated Output, Range expand 0 to 100% of full scale (min segment 10% of full scale), max. load 800Ω																						
<b>Memory Back-up</b>	All user settings are retained indefinitely in memory (EEPROM)																						
<b>Mechanical</b>	SHARKTX Enclosure: NEMA 4X, 1/4 DIN, polycarbonate enclosure with two 1/2" conduit holes SHARKTXP Enclosure: NEMA 4X front panel, 1/4 DIN, polycarbonate SHARKTX Mounting: Universal Mounting kit for surface, pipe and panel mount included SHARKTXP Mounting: Panel and DIN rail mount included																						
<b>Sensor Input</b>	Probe: -600 to +600 mV Temp. Sensor: 0 to 9999 Ω	Probe: -1999 to +1999 mV Temp. Sensor: 0 to 9999 Ω	Cell: 0 to 9999 Ω Temp. Sensor: 0 to 9999 Ω	Paddle: 0 to 2000 Hz																			
<b>Invalid Entries</b>	Invalid entries cannot be stored																						
<b>Manual Test Mode</b>	Process value can be simulated with arrow keys to verify correct setup of outputs																						
<b>Output Hold</b>	4 to 20 mA output is placed on hold when the transmitter is in Menu mode																						
<b>Calibration Data</b>	Recall data from last calibration, calibration mode, 1st&2nd accepted buffer value and probe mV output, calibration temperature, calibration slope, and probe efficiency		Recall data from last calibration, calibration buffer accepted value and cell resistance, calibration temperature.	Recall store K factor.																			
<b>Auto Return</b>	User selectable auto return if the transmitter is left in menu mode for more than 10 min.																						
<b>Display Damping</b>	User can select rate at which SHARK updates display. Enables display damping of unstable process																						
<b>Net Weight</b>	SHARK-TX: 0.71 lbs (0.32 kg) SHARK-TXP: 0.25 lbs (0.12 kg)																						

# SHARK TX/P pH, ORP, Conductivity, Flow Transmitter

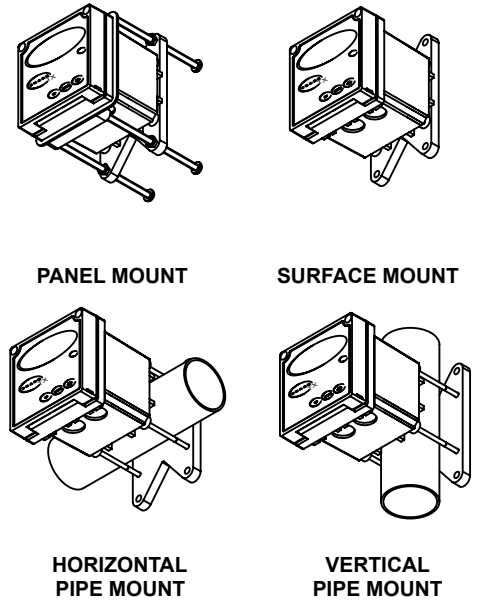
## Dimensions and Mounting Configurations

### SHARK-TX

Universal Mount, NEMA 4X Enclosure, 4-20 mA Loop + 24 VDC Power

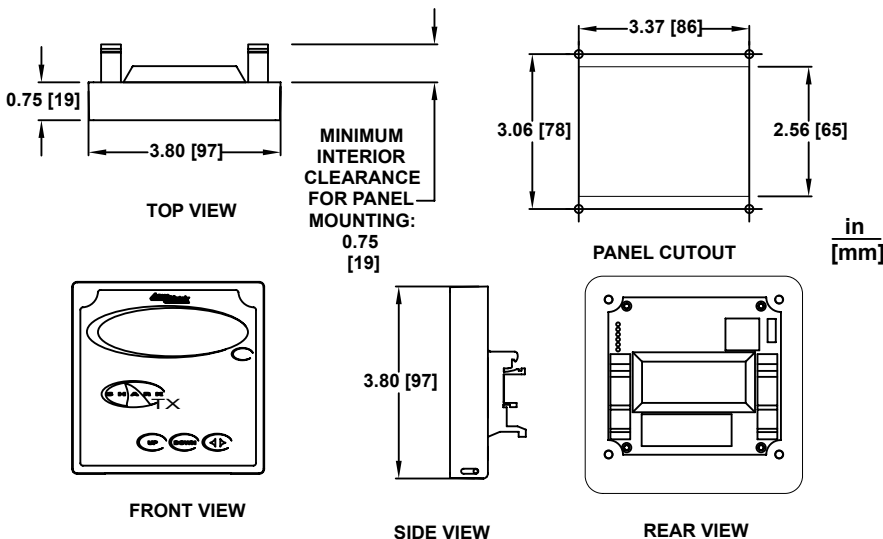


### Mounting Configurations

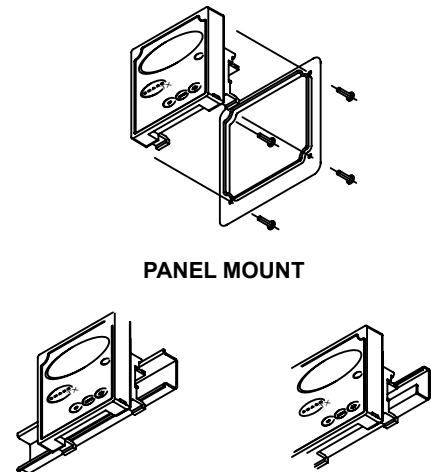


### SHARK-TX

Panel Mount and DIN Rail Mount, NEMA 4X Front Panel, 4-20 mA Loop + 24 VDC Power



### Mounting Configurations



### Ordering Information

SHARK	Multi-parameter Controller / Analyzer	
	120	120 Vac, 50/60 Hz Power (standard)
	240	240 Vac, 50/60 Hz Power
SHARK -	_____	

TS35 DIN RAIL MOUNT TS32 DIN RAIL MOUNT

# Ordering Information

## SHARK-TX

Universal Mount, NEMA 4X Enclosure, 4-20 Loop + 24 VDC Power



## SHARK-TXP

Panel Mount and DIN Rail Mount, NEMA 4X Front Panel, 4-20 Loop + 24 VDC Power

