The DT-501X Panel Meter Tachometer with op-tional outputs is a multi-faceted instrument ide-ally designed for speed, rate or time monitoring applications when combined with a compatible process speed sensor. With its industry-leading 0.87" (22 mm) height display and compact body depth of only 3.6" (92 mm), the DT-501X allows mounting in tight panels or small en-closures. Added versatility is offered with its range of standard inputs which include NPN, contact and square or sine wave sig-nals produced from devices such as pulse generators, proximity sensors, photoelectric sensors, magnetic sensors, rotary encod-ers and NPN OC transistors. The DT-501X is fully scalable and possesses four selectable modes allowing it to measure various process speeds, rates and times: tachometer, flowmeter, process time span and elapsed time mode which displays the inverse to the input signal, common in oven conveyor applications. An add-ed teaching function auto-scales the control which simplifies the set-up by properly coordinating the display with the input of the sensor's signal. Analog, contact, or SSR outputs are available for additional automation control.

These enhanced features of the DT-501X Panel Meter makes them the perfect choice for speed, process rate or time applications such as machining operation timing, conveyor speed, motor out-put, volumetric flowrate, elapsed time of oven curing etc.

Features

- *Industry-leading 0.87" (22 mm) height, 6 digit, red LED display enables viewing from greater distances*
- *Integral sensor power source saves money by eliminating need to purchase a separate power supply*
- *Scalable programming gives user the flexibility to set up and monitor virtually any process*
- *Selectable update time allows operator to speed up/slow down display changes to facilitate process*
- *Test mode allows instant checking of correct operational performance of the display and keys*
- *Great versatility with multiple sensor input capability in one unit: NPN open collector, contact and square or sine wave sensor inputs.*
- *Teaching function auto-scales the display by inputting signal from sensor; saves time programming manually*
- *NEMA 4X (IP66) front cover protection keeps water out, permits usage in compatible plant wash-down operations*
- *Auto Zero function zeroes the display after the final signal initiates a preprogammed time countdown.*
- *Max. Min. automatically stored into memory; quickly retrieved via keypad*
- *1/8 DIN size with minimal depth of only 3.6" (92 mm) allows mounting in small enclosures*

DT-501X Specifications

Input Range	0.0067 Hz to 100 kHz in Tachometer, Flowmeter & Elapsed time modes; 10 ms to 3600 s in Time Span mode
Input Signal Characteristics	NPN open collector input: max. frequency 100 kHz / Contact input: max. frequency 20 Hz / Square wave input: max. frequency 30 kHz – Sine wave input (magnetic pickup): max. frequency 10 kHz
Display	Red 7 segment 6 digit LED, numeral height of 0.87" (22 mm); negative (-) sign available
Display Range	Tachometer/Flowmeter: 0 – 999999; with 10^{-1} to 10^{-5} decimal point position selection. Elapsed Time: 0:00:00 – 9:59:59 (hr., min., sec., base 60) ; or 0:00 to 999:99 (second: 1/100 sec, base 10 display). Process Time Span: 0:00:00 – 0:59:59 (hr., min., sec., base 60) or 0.00 – 999.99 sec. (second: 1/100 sec, base 10 display) with zero suppression function
Accuracy	Tachometer/ Flowmeter & Elapsed Time: ± 0.008 % ± 1 digit; Process Time Span: ± 0.1 % ± 1 digit
Display Update Time	0.2, 0.5, 1, 2, 5, 10, 15, 30, 60 sec. selectabel in Tachometer, Flowmeter & Elapsed Time modes
Auto Zero Time	Tachometer & Flowmeter Modes: 0.1 to 150 Seconds; Elapsed Time & Time Span Modes: 0.1 to 3600 Seconds
Optional Outputs	NPN; contact relay; analog output: (selectable) 0-1, 1-5, 0-10 VDC & 4-20 mA
Power Requirement	85 - 264 VAC (50/60 Hz) Optional (9 - 35 VDC also available)
Sensor Power Supply	12 VDC (100 mA)
Temperature Limits	32 - 113°F (0 - 45°C)
Humidity Limits	35 to 85% RH
Protection Class	Front Panel: NEMA 4X (IP66) ; Rear Terminal Block NEMA 1 (IP20)
Dimensions	3.8 x 1.9 x 3.6" (96 x 48 x 92 mm)
Product Weight	0.44 lb (200 g)
Package Weight	0.73 lb (330 g)
Approvals	RoHS
Warranty	1 year
Included Accessories	Waterproofing O'ring, engineering unit decal sheet

Ordering Details

DT-501XA	Panel meter tachometer, 85-264 VAC power
DT-501XA-CPT	Panel meter tachometer, 85-264 VAC power, relay output
DT-501XA-TRT	Panel meter tachometer, 85-264 VAC power, NPN output
DT-501XA-FVT	Panel meter tachometer, 85-264 VAC power, analog output terminal block connection
DT-501XA-FVC	Panel meter tachometer, 85-264 VAC power, analog output 36 pin connection
DT-501XA-CPT-FVC	Panel meter tachometer, 85-264 VAC power, relay output, analog output with 36 pin connection
DT-501XA-TRT-FVC	Panel meter tachometer, 85-264 VAC power, NPN output, analog output with 36 pin connection

NOTE: To change model from 85-264 VAC power supply to 9-35 VDC power supply, change XA to XD in model code.

Available Sensors

Rotary Encoder

Optical Contrast Sensor

Magnetic Sensor