

## Web Tension Transmitter

### FEATURES

- Ultra high speed 120 update-per-second, isolated 4–20 mA current output
- Compact, full function web tension indication/control
- DIN Rail mount capability
- 700,000 count resolution; eight millisecond sample rate
- Two (2) load cells per tension zone
- 8 open collector discrete setpoint outputs

### APPLICATIONS

- Paper machines
- Film/foil/filament converting
- Textile web measurement
- Roofing machines

### DESCRIPTION

PS-2010T Transmitters offer precision web tension measurement for applications that require a small, full function indicator/controller. Packaged much like a mini-PLC “brick”, units can be DIN rail mounted inside any existing cabinet. The standard RS-485 serial port interfaces easily with PLC/DCS systems using conventional ASCII or optional Modbus RTU protocol. A high speed, high resolution, isolated (16 bit) 4–20 mA analog output provides the perfect input for a brake/clutch motor controller.

Simple set-up and calibration is performed using the integral LCD display and keypad assembly. Digital calibration techniques eliminate the need for costly, cumbersome machine “strapping” in most applications



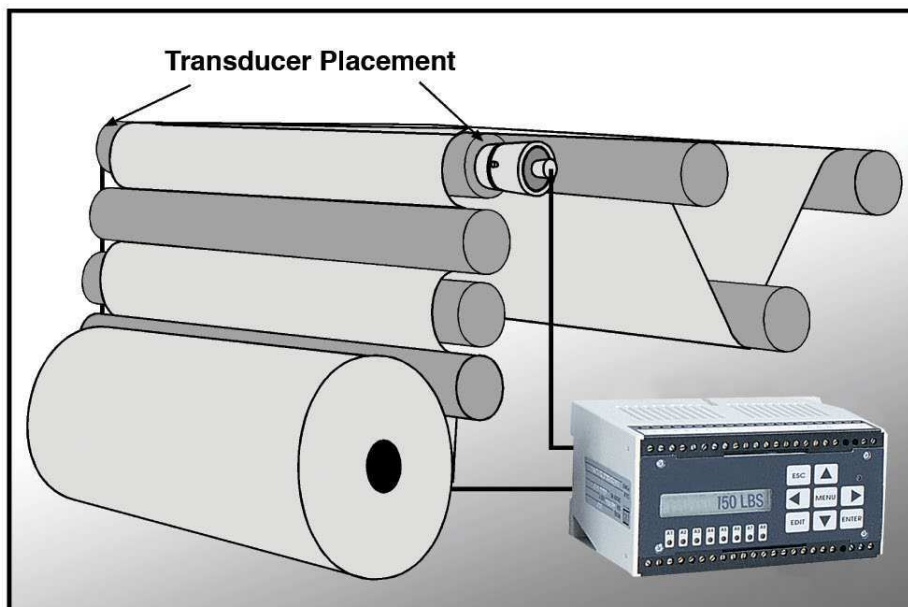
and greatly simplify the calibration of systems that do require loading. Standard units also include Dynamic Digital Filtering and eight setpoints.

Both the front panel display and the 16 bit analog output are updated every 8.3 ms (120 updates per second). This rate provides precise control for web applications running at 2000 ft per minute and faster.

Quick calibration and setup procedures save time, money, and even field service calls. On-line diagnostics continuously monitor system performance and alert service personnel to potential problems before they happen.

The 2010 offers a cost effective, reliable solution for the OEM and system integrator.

### CONFIGURATION

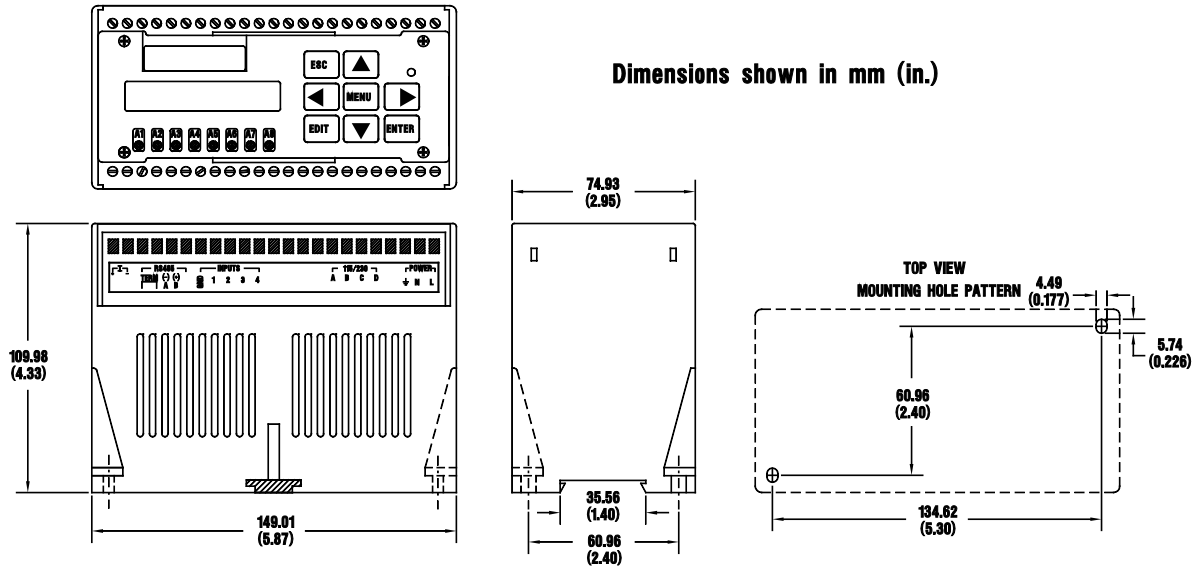


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SPECIFICATIONS		PARAMETER	VALUE
<b>PERFORMANCE</b>		<b>Resolution</b>	1,048,576 total counts
<b>Displayed Resolution</b>			700,000 counts
<b>Conversion Speed</b>			8.3 to 133 ms (5-selections) (7.5 to 120 updates/s)
<b>Displayed Sensitivity</b>			0.05 $\mu$ V per count
<b>Noise</b>			0.4 $\mu$ V per count (min. filt setting)
<b>Full Scale Range</b>			$\pm$ 3.5 mV/V
<b>Bipolar Direction</b>			$\pm$ 100% full scale
<b>Input Impedance</b>			10 m $\Omega$ min.
<b>Excitation Voltage</b>			10 VDC @ 240 mA
<b>Linearity</b>			$\pm$ 0.003% full scale
<b>Step Response</b>			one conversion
<b>TRANSDUCER SUPPLY</b>			
<b>Excitation</b>			10 VDC
<b>Gage Resistance</b>			350 $\Omega$
<b>Gage Type</b>			foil (2–3 mV/V), full bridge
<b>Number of Load Cells</b>			two (2) cells per tension zone
<b>ENVIRONMENT</b>			
<b>Operating Temperature</b>			–10 to 50°C (15 to 122°F)
<b>Storage Temperature</b>			–25 to 80°C (–10 to 175°F)
<b>Temp Coefficient Zero</b>			$\pm$ 2 ppm/°C
<b>Temp Coefficient Span</b>			$\pm$ 7 ppm/°C
<b>Operating Humidity</b>			95% RH non-condensing
<b>ELECTRICAL</b>			
<b>Voltage (AC)</b>			117/230 VAC $\pm$ 15% @ 50/60 Hz
<b>Voltage (DC)</b>			24 VDC @ 1 A
<b>Power</b>			12 W typical, 18 W max.
<b>DISPLAY</b>			
<b>Type</b>			single line LCD
<b>Active Digits</b>			16 digit alpha numeric .24 in high
<b>Display Units</b>			PLI, LB, KG, N, N/M
<b>ANALOG OUTPUT; 16 BIT D-A</b>			
<b>Current</b>			4–20 mA – 500 $\Omega$ max.
<b>PARAMETER</b>	<b>VALUE</b>	<b>PARAMETER</b>	<b>VALUE</b>
<b>COMMUNICATIONS</b>		<b>Serial RS485/422</b>	
		full or half duplex ASCII protocol 7 or 8 data bits – selectable odd, even or no parity –selectable Baud Rates 300, 600, 1200, 2400, 4800, 9600, or 19200	
<b>SPECIAL INTERFACE (OPTIONAL)</b>		<b>Modbus RTU</b>	
		Slave	
<b>REMOTE INPUTS – 4</b>		<b>Type</b>	
		TTL or dry contact closure	
		<b>Functions</b>	
		total tension, zero and print	
		<b>Low</b>	
		0.0 to 0.4 VDC	
		<b>High</b>	
		4.0 to 24 VDC	
<b>SET POINT OUTPUTS – 8</b>		<b>Type</b>	
		open collector (current sinking)	
		<b>Operating Voltage</b>	
		5–35 VDC	
		<b>ON Voltage</b>	
		1.2 VDC @ 35 mA 0.8 VDC @ 1 mA	
		<b>OFF State Leakage</b>	
		0.04 A @ 35 VDC	
		<b>Power</b>	
		external supply required	
<b>APPROVALS</b>		<b>CSA</b>	
		Class I, Div. 2; Groups A, B, C, (when mounted in a CSA certified enclosure)	
<b>ENCLOSURE MOUNTING DIMENSIONS</b>		<b>Standard Unit</b>	
		5.8×3.0×4.3 in L×W×D DIN rail or wall mount weight approx 3 lb	
		<b>Single Unit NEMA 4X Enclosure</b>	
		11.73×9.85×6.13 in L×W×D with single DIN rail mounting strip	
		<b>Double Unit NEMA 4X Enclosure</b>	
		13.7×11.8×6.5 in L×W×D with two DIN rail mounting strips	
<b>MATERIALS</b>		<b>Enclosure (standard)</b>	
		polycarbonate	

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**OUTLINE DIMENSIONS**



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