

SteadyWeb™ 5 Automatic Digital Tension Controller



SteadyWeb™ 5 Panel Mount
(Analog tension meter display shown)



SteadyWeb™ 5 Enclosure Mount
(Bargraph tension display shown)

The SteadyWeb™ 5 combines feature-loaded closed-loop tension control with an intuitive user interface. Its output stability and versatility in managing web tension in the most challenging applications are unmatched.

Choose power input of 24 Vdc or 100-240 Vac.

The SteadyWeb™ 5 maintains a pre-selected tension setpoint by measuring web tension from tension transducers and sends a compensated signal to a tensioning device. The digital closed-loop PID control algorithm allows improved process consistency and productivity.

The graphic user interface is easy-to-use with minimal instruction and training time. Setup and configuration uses illustrated prompts and color graphics. The large front dial allows fast, easy scrolling through configuration values or adjustment to the tension setpoint.

FEATURES

- 4.3-inch graphic display.
- Menu scroll knob and soft keys for selection.
- Wall-mount full enclosure or open panel-mount
- Power inputs: 100-240Vac 60/50 Hz or 24 Vdc.
- Isolated 0-10Vdc control output.
- Storage and Recall for 32 setups.
- Auto-detection of transducer excitation (5V or 10V).
- Integrated diagnostic tools.

OPTIONS

- **24Vdc or 45Vdc Output (24,45)**. V version only.
- **4-20mA Current Output (420)**.
- **Bipolar 10 Volt Output (B10)**. -10V to +10V output. Used on bi-directional machines (ex: inspection machine), or in Line Speed Follow. D version only.
- **Metric Pneumatic Fittings (MPF)**. P Version only.
- **Reverse Output (RO)**. Increases output when tension exceeds setpoint, decreases when tension drops below setpoint.
- **230 Volt Power (230)**. V version only, for V-out module.
- **Remote Tension Amplifier (RTA)**. Tension signal is provided by an external device.
- **Speed Follow (SFD, SFP)**. Accepts line speed signal from either a DC tach or pulse tach.

The controller may be used in unwind, rewind or intermediate tension zones. Controller output modes are:

Drive output (D): 0-10Volt DC compensated output. Used to control AC or DC drives or other variable speed drive systems. This output is isolated from earth ground to make it more compatible with all drives.

Pneumatic output (P): Used to actuate any air-operated brake or clutch. The standard version includes a servo valve and pressure regulator installed in a separate enclosure.

High Voltage output (V): Uses Silicon Controlled Rectifiers (SCR's) to produce a standard variable voltage of up to 90Vdc to operate any electric brake or clutch, including eddy current clutches.

- Automatic and Manual control modes.
- Emergency Stop circuit.
- Ratio output up and down.
- Sample and hold output.
- Operator lock-out.
- Soft Start.
- Tension meter damping.

- **High & Low Tension Limit Switch (TLS)**. An open collector output actuates at a pre-set adjustable trip point. Used as a web break detector or high tension warning.
- **Tension on Relay (TOR)**. Provides a 250V, 5A interface. Not compatible with TLS function - only 1 relay per controller.
- **Taper Tension (TTD, TTF, TTDP, TTP)** Tapers tension as roll size increases. Signal supplied by follower roll, DC tachs or pulse tachs.

SPECIFICATIONS

Power input:

- DC: 24Vdc +/-10%, 6 amps typical, 2.2 amps internal fusing
 AC: (optional) 100-240 Vac +/-10%, 60/50Hz single phase
 2.2 Amps @ 115Vac typical, 1.2 Amps@230Vac typical, inrush current 40 A @ 230 Vac (cold start)

Control Output:

Version D:

- 0 to +/-10VDC OR 4-20mA (jumper selectable), both isolated from input power and transducer circuitry.
- 0 to +/-10VDC max loading is 5mA. This requires a 2000 Ohm or greater input resistance for equipment connected to this output.
- 4-20mA max loop resistance is 500 Ohms.

Tension Output:

All Versions:

- 0 to +10VDC OR 0 to 1mA (jumper selectable).
- 0 to +10VDC and 0 to 1mA signal capable of over-range, -14% to 120% of full scale (-1.4VDC to 12VDC / -0.14mA to 1.2mA), to indicate over-range or error conditions.
- 0 to +10VDC max loading is 5mA. This requires a 2000 Ohm or greater input resistance for equipment connected to this output.
- 0 to 1mA meter output designed for 50 Ohm impedance meter

Tension Precision:

Max error of 1% over temperature range. 0.1% Typical

Enclosure:

Steel, powder resin painted, NEMA 1

Zero (Tare) Range:

95% of transducer rating, minimum

Weight:

- DC Panel Version: 1.6 lbs. (0.73 kg)
 AC Panel Version: 3.1 lbs. (1.41 kg)
 DC Enclosure Version: 5.1 lbs. (2.31 kg)
 AC Enclosure Version: 6.6 lbs. (2.99 kg)
 Pneumatic Module: 4.6 lbs. (2.09 kg)
 High Voltage Output Module: 2.9 lbs. (1.32 kg)

Transducer Signal Accepted:

500 mVdc per pair at rated load (1000 mV with XR option)

Mating Transducer Cable Connectors:

(2) Amphenol MS3106A-10SL-3S

Calibration Range:

50:1 max.

Temperature Range:

32° F to 104° F (0° C to 40° C)

System Accuracy:

within 1 - 3% typical

Output Range:

0-100% Max.

Manual Mode Output Range:

0-100% of rated output

Standard Tension Ranges:

0 - 1, 3, 5, 7, 10, 15, 20, 25, 35, 50, 75, 100, 125, 150, 200, 250, 300, 400, 500, 750, 1000, 1250, 1500, 2000, 2500, 3000, 4000, 5000

Taper Tension Range (option):

0-100%

Taper Tension by Rider Roll / Diameter Sensor:

0-10 Vdc input

Pneumatic Enclosure:

Input: 125 psi Max.

Output: 1 to 75 psi (0.07 to 5.17 bar)

Servo Valve Drive Signal: 4-20mA

Air Connections: In = 3/8" push fitting,

Out = 1/4" push fitting

ORDERING INFORMATION

You may order by description, or by matching the labeled digits with your choices.

Example: SW5P-U-E-H-100-RTA,TLS

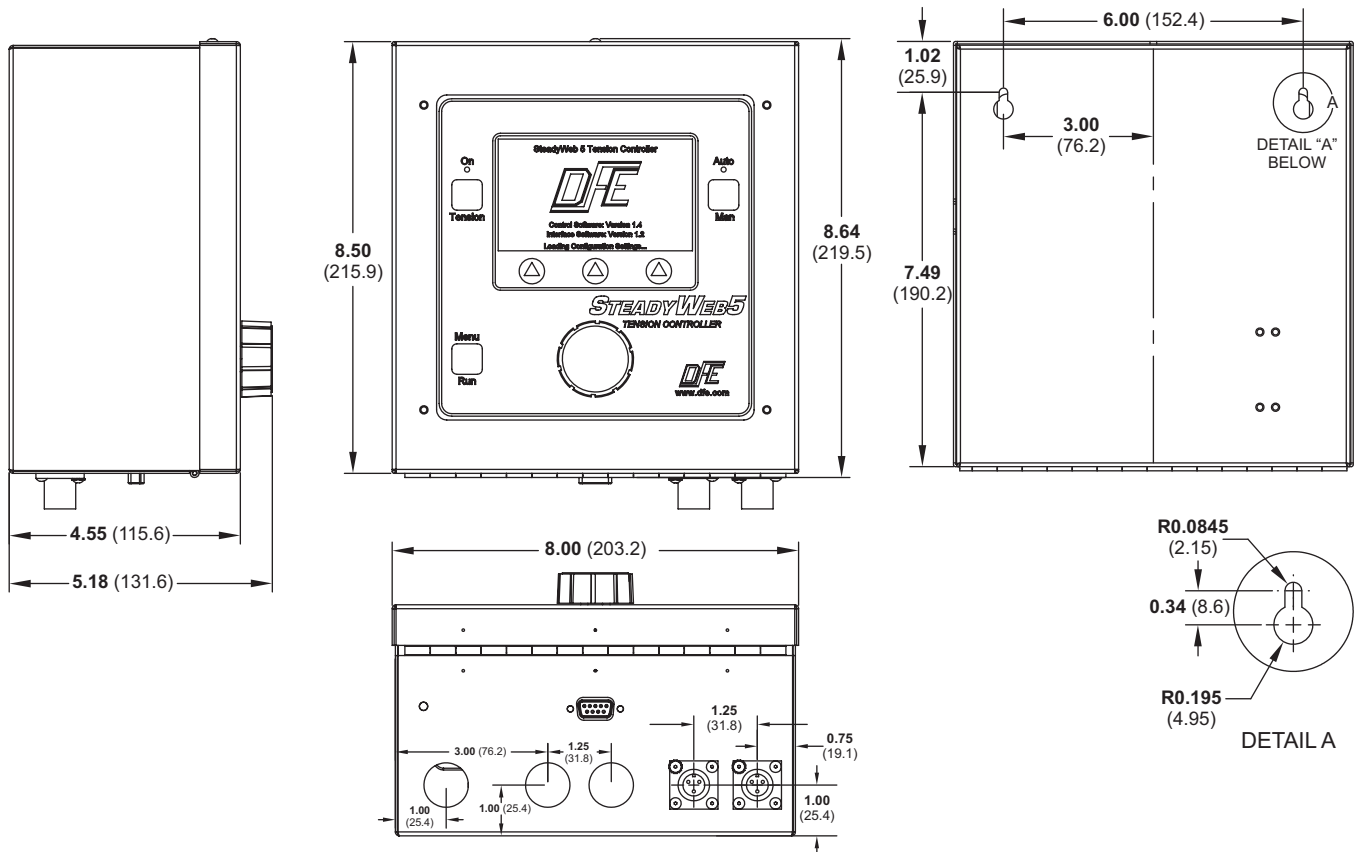
SW5X - X - X - X - XX - OPTIONS (Separated by commas)

OUTPUT	ZONE	PACKAGING	POWER	METER SCALE	OPTIONS
P = Pneumatic V = Electric D = Drive	U = Unwind R = Rewind I = Intermediate	E = Enclosure P = Panel only	H = High, 100-240 Vac L = Low, 24 Vdc	1 = 0-1 3 = 0-3 5 = 0-5 7 = 0-7 10 = 0-10 15 = 0-15 20 = 0-20 25 = 0-25 35 = 0-35 50 = 0-50 75 = 0-75 100 = 0-100 125 = 0-125 150 = 0-150 200 = 0-200 250 = 0-250 300 = 0-300 400 = 0-400 500 = 0-500 750 = 0-750 1000 = 0-1000 1250 = 0-1250 1500 = 0-1500 2000 = 0-2000 2500 = 0-2500 3000 = 0-3000 4000 = 0-4000 5000 = 0-5000	230 = 230 Volt Power Input (1,4) 24 = 24 Vdc Output (1,4) 420 = 4-20mA Output 45 = 45 Vdc Output (1) B10 = Bipolar 10V Output MPF = Metric Pneumatic Fittings (2) RO = Reverse Output RTA = Remote Tension Amplifier SFD = Speed Follow by DC Tach SFP = Speed Follow by Pulse Tach TLS = Tension Limit Switch (3) TOR = Tension On Relay (3) TTD = Taper Tension by DC Tachs TTF = Taper Tension by Diameter Follower TTDP = Taper Tension by DC/Pulse Tachs TTP = Taper Tension by Pulse Tachs Z = Special (SPR)

Notes: 1. V version only. 230 refers to power input of V module. 24 and 45 refer to output voltage. 2. P version only. 3. Select only ONE of TOR or TLS options. 4. 230Vac input not compatible with 24Vdc output,

DIMENSIONS OF ENCLOSURE VERSION

inches (mm)



DIMENSIONS OF PANEL VERSION

inches (mm)

