



# APPLICATION DATA

No. 8806E11

## E11 AUTOMATIC TURRET REWIND CONTROL SYSTEM

### DESCRIPTION

The E11 is a complete turret rewind control system that includes an automatic tension controller of advanced design, a core speed matching circuit and flying-splice sequencing circuits, complete with push-buttons and switches.

Web tension is measured by DFE tension transducers and displayed on a large meter which is calibrated to read actual total web tension. To adjust tension, turn the tension set knob until the desired value is displayed on the meter. The controller will automatically maintain this tension regardless of changes in web speed or roll diameter. A Manual output adjustment circuit is also provided. A tracking circuit allows bumpless switching between Auto and Manual.

Automatic control of flying splice operations is provided by a speed regulator which matches the surface speed of the core to the web speed, and a logic circuit which sequences turret rotation and knife operation and transfers automatic tension control to the new core. The machine operator need only press one button to make a flying splice.

The enclosure is heavy steel with a hinged cover. All operator devices are mounted on a thick aluminum legend plate on the cover. If the enclosure is not needed, the controller can be supplied as a pre-wired and tested unit with the legend plate connected to the electronics panel by a wire harness.



### BENEFITS

- One-Button splicing.
- A complete turret rewind control system in one package.
- Automatic control of flying splices.
- Automatic control of web tension. No manual adjustments needed.
- Actual web tension is displayed on meter. No guesswork.
- Easy to operate. No skill or training needed.
- Improves control of web. Allows higher speed.
- Simple to install and fast to start up.
- Eliminates troublesome dancer rolls.
- Wide tension control range without need for recalibration.
- Reduces web breakage, stretching and registration problems.

# DOVER FLEXO ELECTRONICS, INC.

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# APPLICATIONS

The E11 is used on any machine having a continuous web process, such as printing presses, coaters, laminators, slitters, sheeters, label presses, extruders, metallizers, and inspection machines.

Typical web materials include paper, plastic films, foils, rubber, laminates, wallpaper, linoleum, textiles, non-wovens, tapes, filaments, ribbons, and wire.

The E11 will automatically control rewind tension by operating electric friction clutches, magnetic particle clutches, eddy current clutches, or other types of electric clutches.

The E11 will reduce or eliminate tension related problems such as web breakage, stretching or looseness, misregistration, repeat length variation, wrinkling, curling, and coating thickness variation. It will also help reduce waste during starts, stops, and splicing, and will help produce consistent product quality.

## STANDARD FEATURES

- NEMA 12, 13 steel enclosure, 14x16x8, with all operator devices in cover. Wall mounted.
- MS connectors for transducer cables.
- 3/8" hole for AC power wiring.
- Removable circuit cards with terminal strips that unplug.
- Operator devices include: 6" analog tension indicating meter, AUTO mode tension setting knob, lighted pushbutton for AC Power ON, lighted pushbutton for Tension ON, rotary switch for AUTO/MANUAL mode selection, output adjustment knob and output voltmeter for MANUAL mode, clutch ON/OFF buttons, splice START/STOP buttons.
- 120 volt 60Hz AC power input.
- 0-100 millivolt DC output, proportional to tension.
- Choice of standard meter scales: 0-1, 5, 10, 25, 50, 100, 150, 250, 500, 1000.
- Automatic and Manual modes of operation.
- Sample & Hold output circuit with ratio adjustments (multiply and divide) for flying splice operation.
- Maximum and Minimum output adjustments.
- Taper tension circuit (requires rider roll pot. E374B, and switch, at extra cost).
- Emergency stop circuit.

- Bumpless switching between MANUAL and AUTO.
- Output voltmeter.
- Transient voltage protection.
- Positive relay disconnect for AC power and Tension OFF.
- Used with any DFE tension transducers.
- Core speed matching circuit.
- Splicing sequence circuit.

## SPECIFICATIONS

- Power input ..... 120 volts 60Hz @ 4 amp
- Power connection ..... 3/8" hole for conduit connector
- Output voltage range .... 0-90 volts DC @ 3 amp (optional) 0-45 volts DC @ 5 amp
- Transducer power supply ..... 5 volts DC, regulated
- Transducer signal ..... 500 millivolts DC per pair at rated load
- Transducer cable mating connector ..... Amphenol MS3106A-10SL-3S
- Zero range ..... 95% of the load rating of 1 transducer, minimum
- Calibration range ..... 25:1
- Temperature range ..... 0 to 40° C
- Maximum output adjustment range ..... 0 to 100%
- Minimum output adjustment range ..... 0 to 20% of maximum
- Taper tension range ..... 0 to 50%
- Tension meter ..... Heavy duty, 2%, taut band, with solvent proof front
- System accuracy ..... 1% to 3% typical
- Manual output range ..... 0 to 100% of rated output voltage
- Weight ..... 40 lbs.
- Output multiplier range ..... 10:1
- Output divider range ..... 1:10

# OPTIONS

No.	Description
CC	E11 less enclosure and operator devices.
H6	E11 less enclosure, but with 6' long wire harness to legend plate, with all operator devices installed and wired.
ATM	Auxiliary tension meter for remote mounting.
RME	Auxiliary or remote tension meter in 6"x8"x4" enclosure.
DM	Digital meter: 3½ digit, red LED ½" high (includes 5V power supply).
420M	4-20 milliamp DC output, proportional to tension.
020M	0-20 milliamp DC output, proportional to tension.
10V	0-10 volt DC adjustable output, proportional to tension. Range = 0-3.5 to 0-13.
DC	Dual calibration (includes dual meter scale and switch).
NMS	Non-standard meter scale (single or dual range, specify scale).
220	220 volt 50Hz AC power input.
5V	Extra 5 volt DC power supply (used with digital meter).
APC	Attached power cord, Type SJ, 3 conductor, 5' long.
TLS	Low and high tension detectors with two separate SPDT relay outputs.
RS	Remote tension on/off switching.
TT	Taper tension, by diameter computer, using two 50 volt DC tachometers.
TTS	Taper tension on/off switch (included in option TT).
45V	45 volt DC output @ 5 amp
RTA	Remote tension amplifier (no tension amplifier in E11). Used with DFE intrinsically safe tension indicator /interface.
	Consult factory for special requirements.

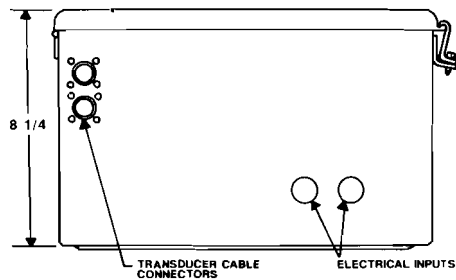
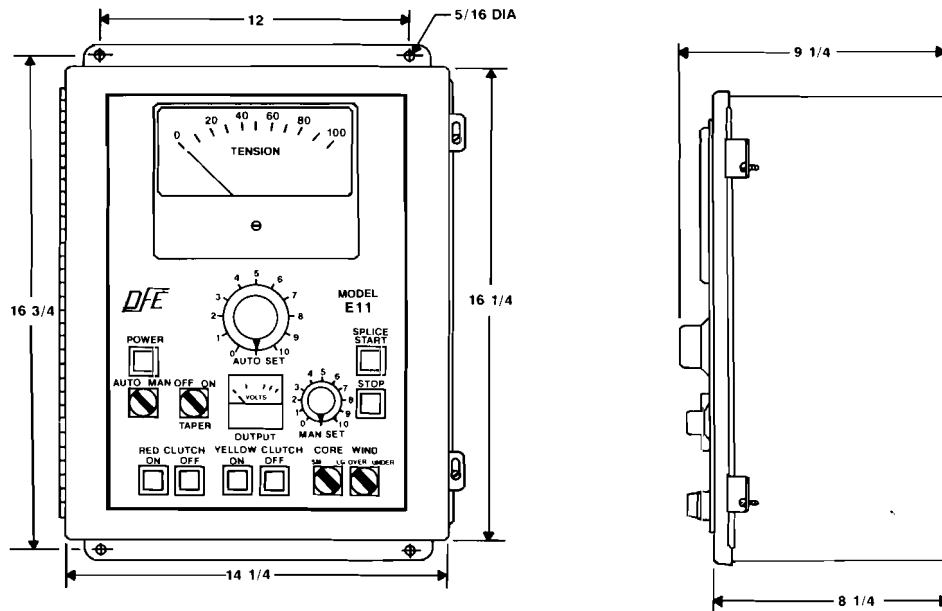
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**TO ORDER:** Specify model, option numbers, and meter scale. Example: E11-H6, TLS, 0-50.

# DIMENSIONS

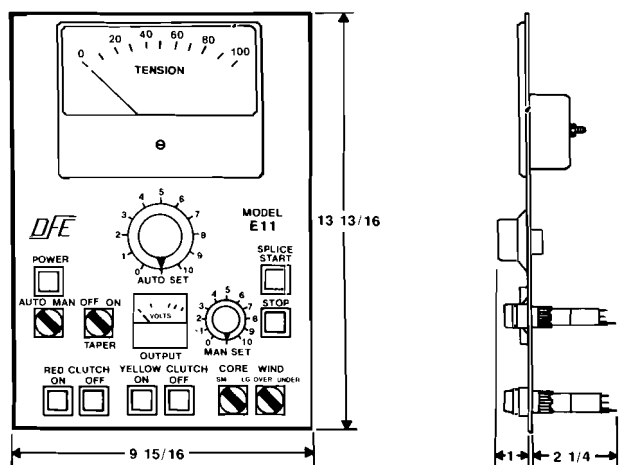
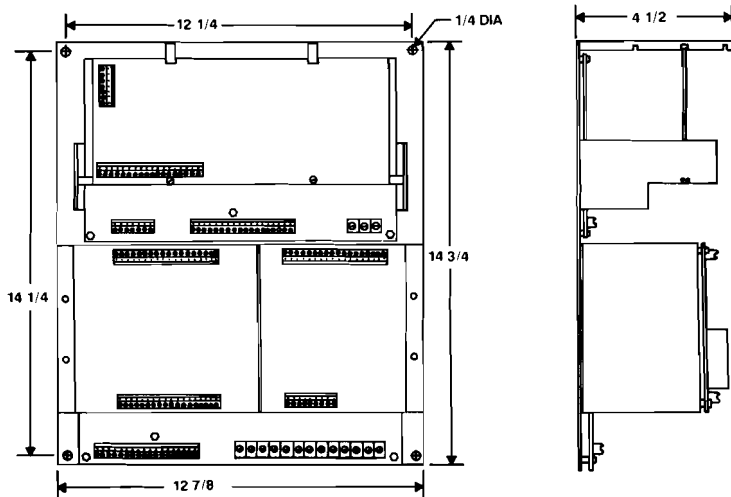
(Expressed in inches)

## ENCLOSURE



## PANEL

## LEGEND PLATE



**DOVER FLEXO ELECTRONICS MANUFACTURES:** Tension Transducers, Tension Indicators, Rewind Tension Controllers, Unwind Tension Controllers, D.C. Motor Tension Controllers, Pneumatic Tension Controllers, and Electric Tension Controllers.