TC-2010 Digital Tension Controller

TC-2010 receives the signal from Euntay LMS series Tension Detector, combining the computing function of 16bits CPU which could attain the performance of high speed and stability for webtension control, it is designed for the requirements of multi-motor proportional link control, high accurate and high stable tension control, and general rewinding and unwinding tension control.

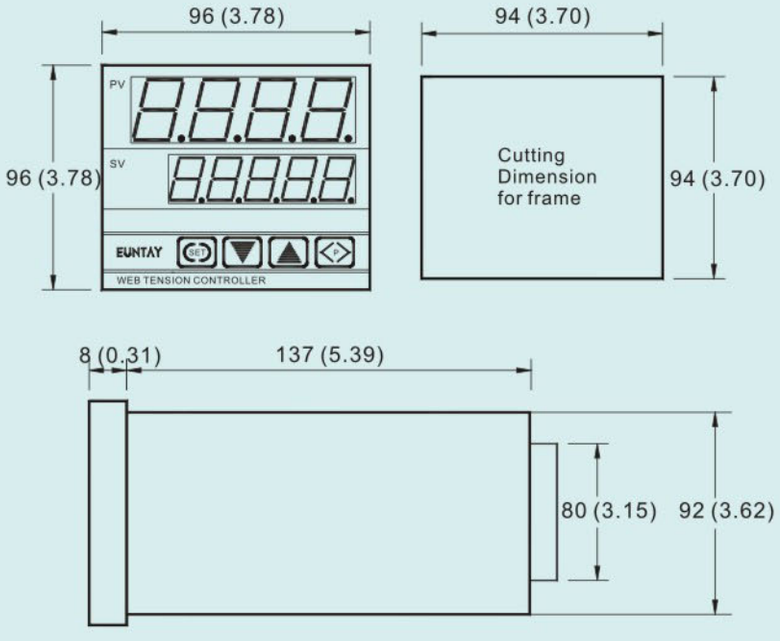
■ Characteristics:

1. It contains the function of digital type line speed proportional link control, which could hold the tension stable in the process of line speed from start, acceleration, and deceleration, to stop.
2. Multi-level P.I.D control could make the speed stable fast in the variation of speed.
3. LED phonemics display with large screen and high brightness, could indicate "Kg.M/min...." by the selection of "SRC" parameter.
4. The function of parameter can be indicated by symbols, which are the abbreviation of English strings, it is easy to operate without reading the instruction manual again.
5. The LED display can indicate RUN state, High Limit Point(HIP), Low Limit Point(LOP) and abnormal messages (ALM)
6. The terminal offers one set of encoder or pulse signal, which could be as the signal source of line speed.
7. The input signal of line speed also accepts the analog signal of DC 0-10V.
8. There are two sets of digital multi-function contact, which can be programmed for the compensation of acceleration or deceleration.
9. The terminal offers output signal of DC 0-10V as the display of real tension.
10. It contains communication function of RS-485, can connect to PLC, Human Interface, Industrial PC for control.
11. The output signal DC 0-10V of terminal could directly control Torque Controller, Current-Control Mode Vector Inverter, DC Motor Controller, Servo motor Drive.
12. It could work with Euntay LMS series tension detector, the range is 5kg - 400kg(50NM - 4000NM).

Specification

Model		TC-2010	
Rated Load		5 - 500kg	
Power Supply		AC220V 50/60HZ	
Surged Current		5A	
Power Consumption		20VA	
Environment	Ambient Temperature	$0^{\circ}C \sim 40^{\circ}C$	
	Ambient Humidity	Under 80%RH	
	Grounding	The third kind of grounding method (The Neutral Line of 3Φ4W of Power is connected with the case of device to "Earth")	
Weight		About 0.8kg	
Installation		Control Panel is set outside	
Contact Output	Low Limit Point or ERROR	Two sets of Output	
	High Limit Point	DC30V 0.2A / AC220V 0.2A	
Tension Detector Input		LMS-005 / LMS-015 / LMS-030 / LMS-050 / LMS-100 / LMS-200 /	
External Signal Input	Line Speed Signal	DC0 - 10V	Input Impedance 20KΩ
		0 - 18KHZ	
Contact Input	Acceleration Compensation	Input Impedance 20KΩ	
	Deceleration Compensation		
	Run Start		
Control Output	Tension Value Signal	DC0 - 10V / max.20mA	
	Speed Signal	DC0 - 10V / max.20mA	
Communication Interface		RS485	

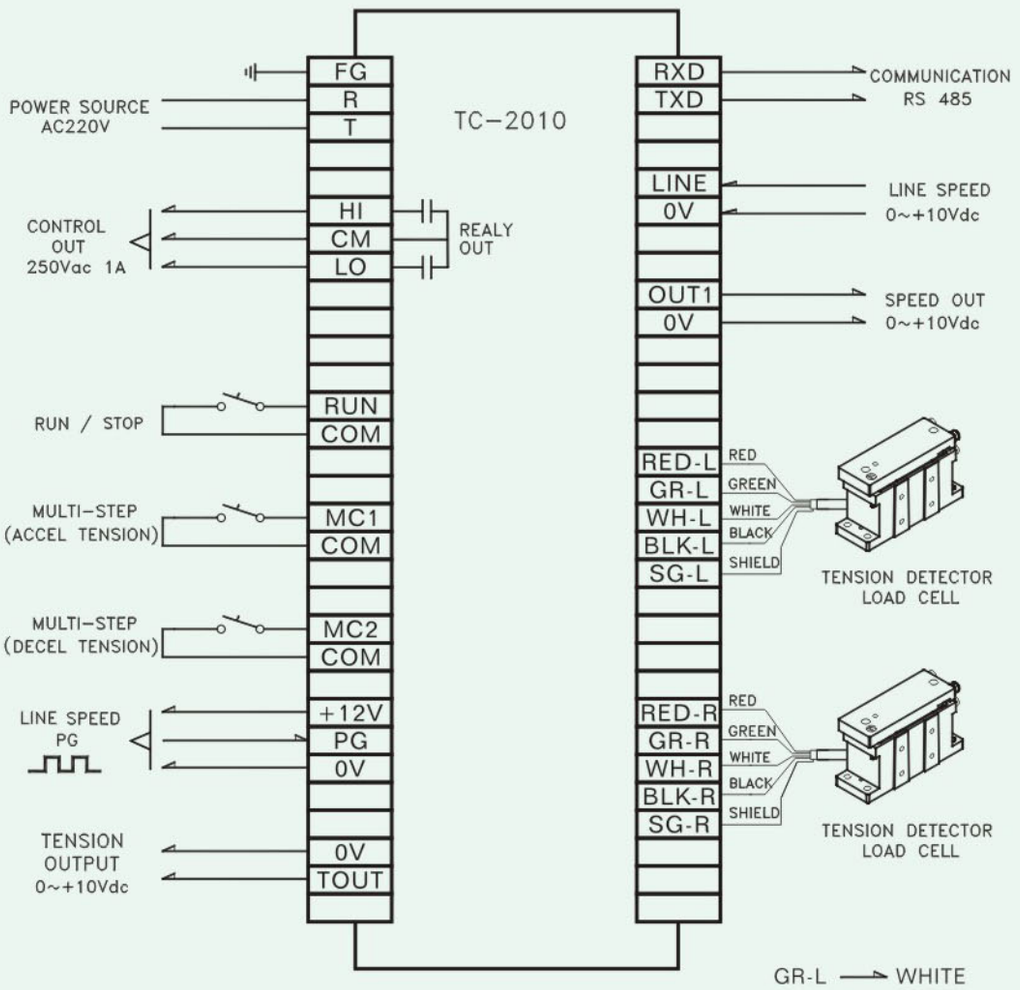
Dimension



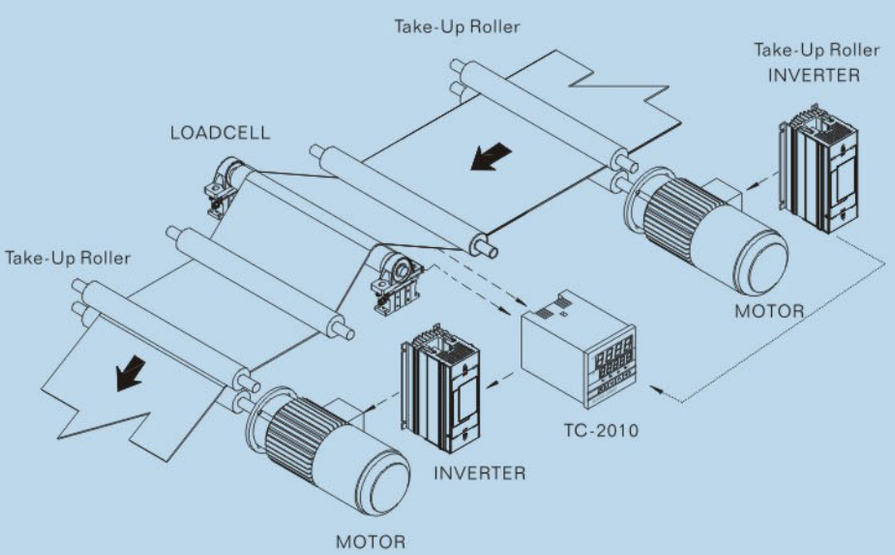
Unit: mm (Inch)

Wiring Diagram

TC-2010 TENSION CONTROL WIRING DIAGRAM



GR-L → WHITE
WH-L → GREEN
GR-R → WHITE
WH-R → GREEN

The above wiring method of load cell is for detecting"Compression"
If the load cell is used for detecting"TENSION"the wiring method
will be changed as follow.

Application Example