

Pulse Tension Controller ZXM-32

For Placid Industries large series magnetic particle brakes & clutches -

MAINTAIN CONSTANT TENSION - The controller is used to maintain constant (or taper) tension when using a brake for producing unwind (payout) tension, or when using a clutch for rewind tension. By counting each roll revolution, and knowing the web material thickness, the controller outputs the DC electrical current needed to maintain desired tension. The controller can power the large 24 Volt clutches & brakes directly (up to 3 Amperes). Or, the 0-5 Volt DC signal output can control a suitable DC power supply. In Manual Mode, the output current is controlled by the knob / potentiometer in 1% steps.



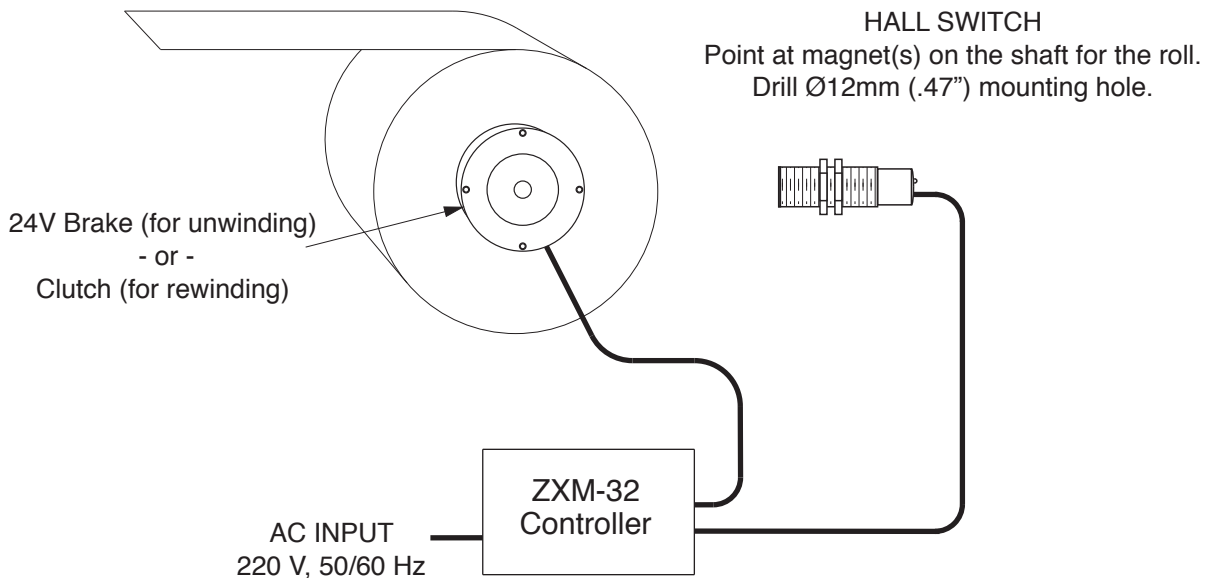
DIMENSIONS

Front Panel

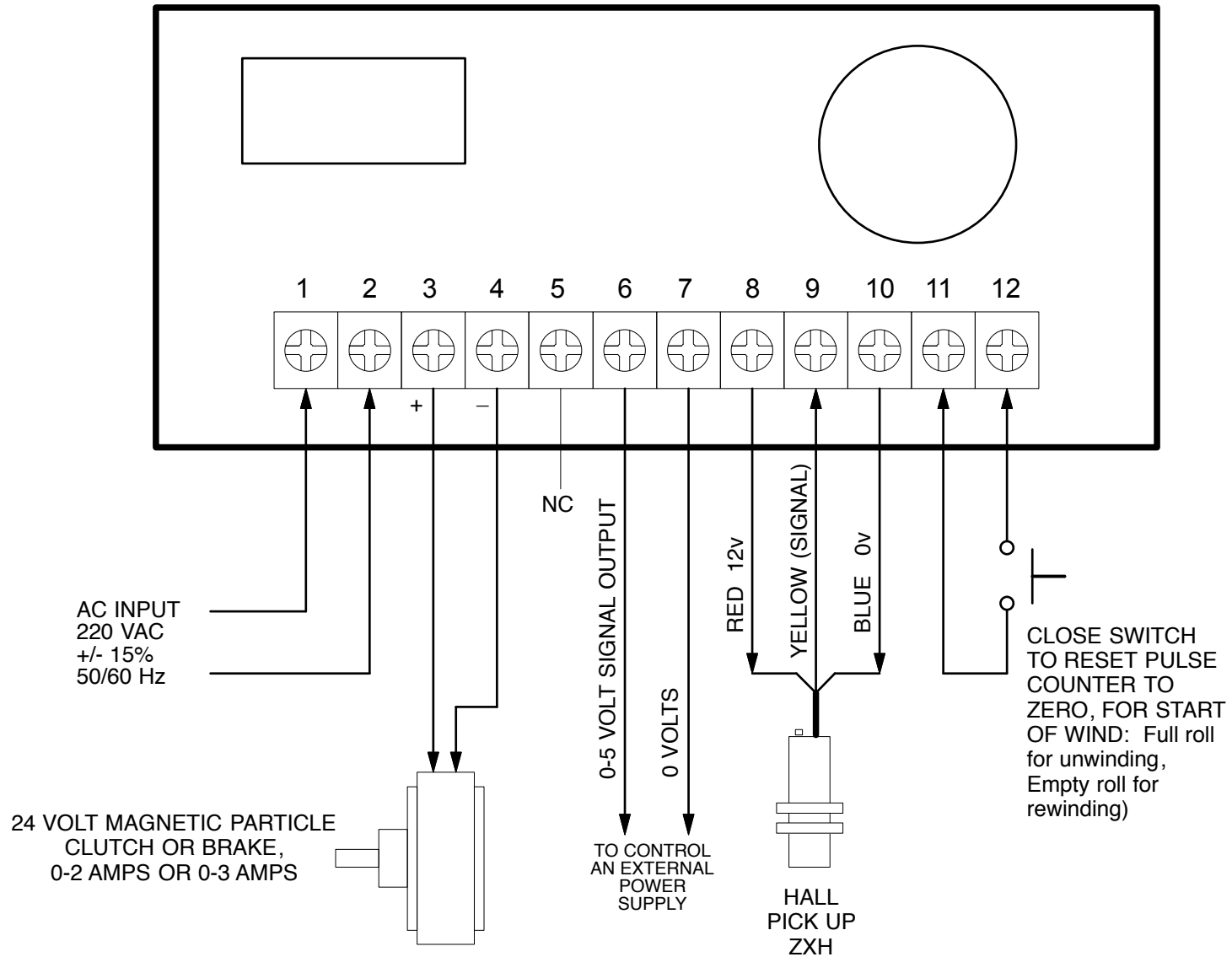
168 mm wide x 80 mm high
6.61" wide x 3.15" high (inches)

Enclosure

157 wide x 69 high x 146 mm deep
6.18" wide x 2.72" high x 5.75" deep



ZXM-32 REAR PANEL



ZXM-32 Tension Controller

FRONT PANEL

BUTTONS & KNOB	
SET	For entering the mode to set parameters
ENT	For saving new parameter value & exit parameter setting mode
Up Arrow	For increasing data value, such as parameter value or counter value
Down Arrow	For decreasing data value, such as parameter value or counter value
EXP.	Toggles between 0 output and normal output current
PRE.	Sets counter & output current to 'Start of Roll' condition. Press when starting to wind or unwind a new roll, for correct starting tension.
ADJUST TENSION	Knob - In constant tension winding mode: Turn knob to increase or decrease tension at any time while winding. In manual mode, controls output current in 1% steps. (19 mA in 0-2 Amp mode, 28 mA in 0-3 Amp mode.)
DISPLAYS	
MEASURE PULSE P	In PARAMETER SETTING MODE: displays the Parameter number.
	In MANUAL Mode: displays the COUNT (0-999) which is proportional to the output current.
	In WIND Mode: Displays the COUNT, that is proportional to the output current.
OUTPUT CURRENT A	IN PARAMETER SETTING Mode: displays the Parameter value
	In MANUAL Mode: displays the COUNT (0-999) which is proportional to the output current or output current, depending on Parameter 12
	In WIND Mode: Displays the output current.

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ZXM-32 Parameters

Parameter Number	Parameter Value	Name	Explanation	To Set
1	0-999	Vary for web thickness	In wind / unwind mode, # of Hall switch pulses, before current is changed. Thinner webs require higher P1 value.	Press 'SET'. The 'MEASURE PULSE' display will show the parameter number 1. The 'OUTPUT CURRENT' display will show the value of that parameter. Press the 'SET' button again to view parameter 2. Press the Up or Down arrow keys to change the parameter value. Press 'ENT' to save the parameter value & exit parameter setting mode.
2	0-999	In wind mode, output current limit	The output current won't increment above this current in wind mode.	
3	0-999	Output current after 'PRE.' button is pressed	'PRE.' (preset) button sets output current to starting roll condition	Press 'SET' once, to view Parameter 1. Then press & hold 'SET' for about 5 seconds, until Parameter 3 is displayed. Press the Up or Down arrow keys to change the value. Press 'ENT' to save the new value & exit parameter setting mode.
10	0	Manual mode, front panel pot	Output current is controlled by the potentiometer on front panel	Press & hold 'SET' button for 5 seconds, then release. Press 'SET' button again, to step thru Parameters 10, 11, 12 & repeat. Press the UP or DOWN arrow keys to change the parameter value. Press 'ENT' to save the new value. Wait approx. 10 seconds, to automatically exit SYSTEM PARAMETER SETTING MODE.
	1			
	2	Wind mode	Output current increases with pulse count, for rewind	
3	Unwind mode	Output current decreases with pulse count, for payout (unwinding)		
11	2	Max output current	2 Amperes. Output current increases in ~1% (20 mA) steps	
	3		3 Amperes. Output current increases in ~1% (29 mA) steps. Set to 3 Amps when 0-5v output controls an external power supply.	
12	0	Output current displayed	Right LED displays output current	
	1	Count displayed	Right LED displays count that is proportional to output current	