

Z4-RL

Rewind Tension Controller
for Load Cell Feedback



Z4-RL Rewind Tension Controller for Load Cell Input



The Z4-RL controller provides accurate, repeatable tension control on web rewind machinery. The rewind controller works with either a pneumatic clutch or motor controller.

Features & Benefits

ODVA Ethernet/IP Communication Option

Z4 Controllers are available with ODVA Certified Ethernet/IP Communication

Taper

Reduces web tension as the roll diameter increases, preventing roll telescoping and starring.

Web Break Detection

Triggers an alarm output should the controller detect a sudden change in tension, such as when the web breaks, minimizing waste and loss of productivity and protecting valuable machine components.

Variable Wrap Angle Technology

Eliminates need to isolate tension sensing roll.

Montalvo Progressive Gain

Ensures uniform control from core all the way to full roll every time. Combine with taper tension to build perfect rolls!

Hybrid Controller

Digitally controlled analog processing optimized to produce accurate, repeatable web tension.

Set It & Forget It Technology

Set-up and operation parameters reduce the need for constant monitoring.

7" Interface Display Screen (optional)

A high definition, crystal clear, and easy to navigate HMI blending form and function into one convenient package.

Multiple Mounting Options

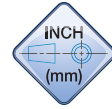
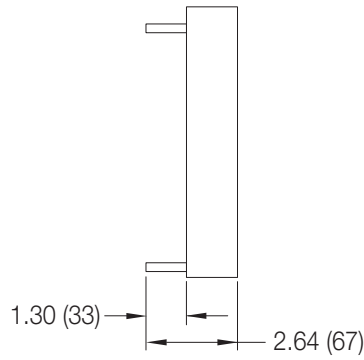
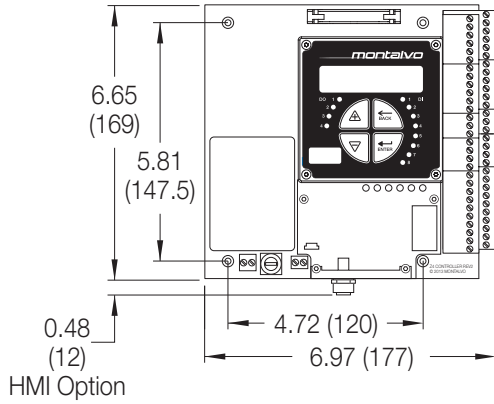
- Standalone circuit board
- Circuit board with remote HMI
- Circuit board and HMI in a dust proof, water resistant enclosure

Additional Z4 Controller Types

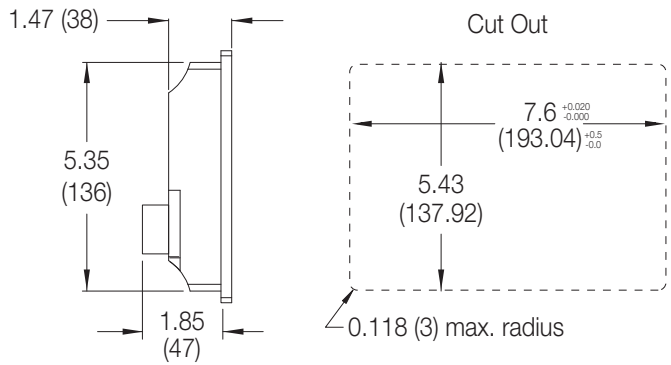
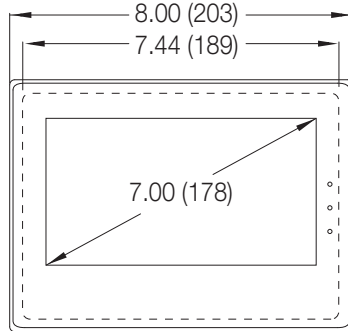
- ✓ Unwind/Load Cell
- ✓ NIP/Load Cell
- ✓ Dancer/Tension Indication
- ✓ Dancer

Dimensions

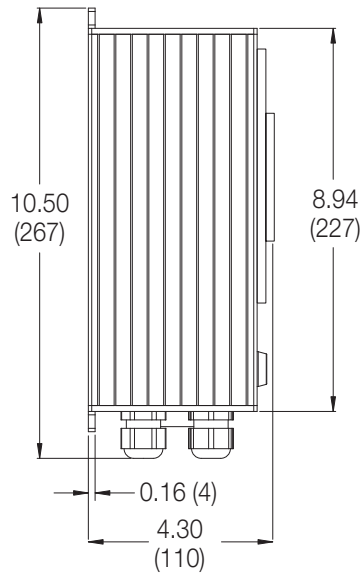
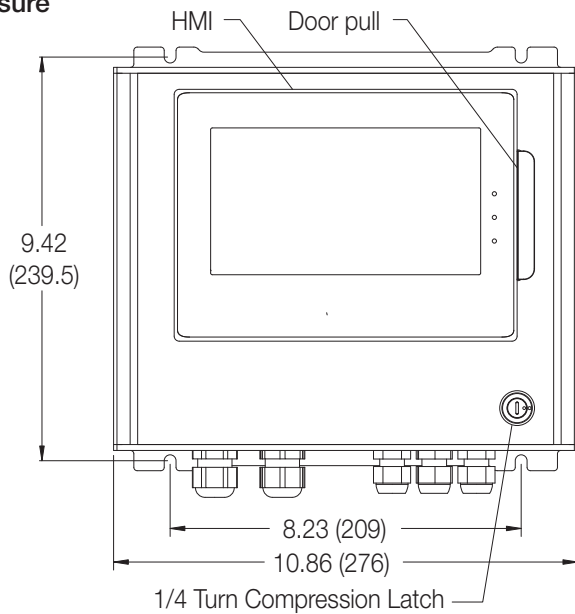
Circuit Board



HMI



Enclosure



How to Specify

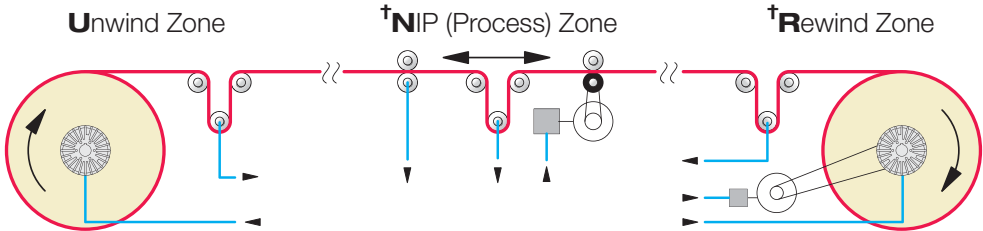
Series

Z4

Type

U, N, R

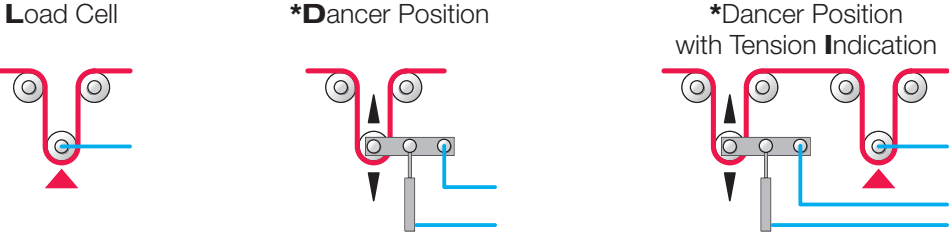
[†]**NIP** and **Rewind** type controllers work in conjunction with **Load Cell** Input only - see Input below.



Input

L, D, I

*Dancer Position Input (**D** and **I**) available for **Unwind** Zone controllers only - see Type above.



Supply

A, D 100-240 VAC 24 VDC

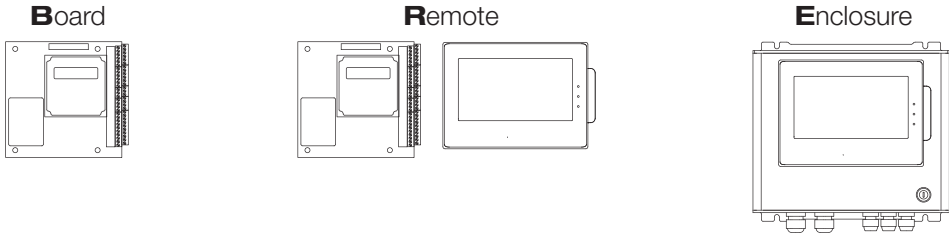
Communications (module option)

N, U, E None ****USB** (used for configuration only with PC) (HMI connector onboard) **E**thernet (USB and HMI connectors onboard)

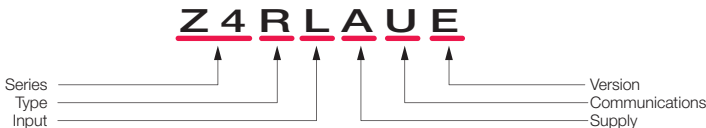
****USB** module is *standard* with **R**emote and **E**nclosure version controllers (*required* for connection to HMI).

Version

B, R, E



ORDER CODE EXAMPLE:

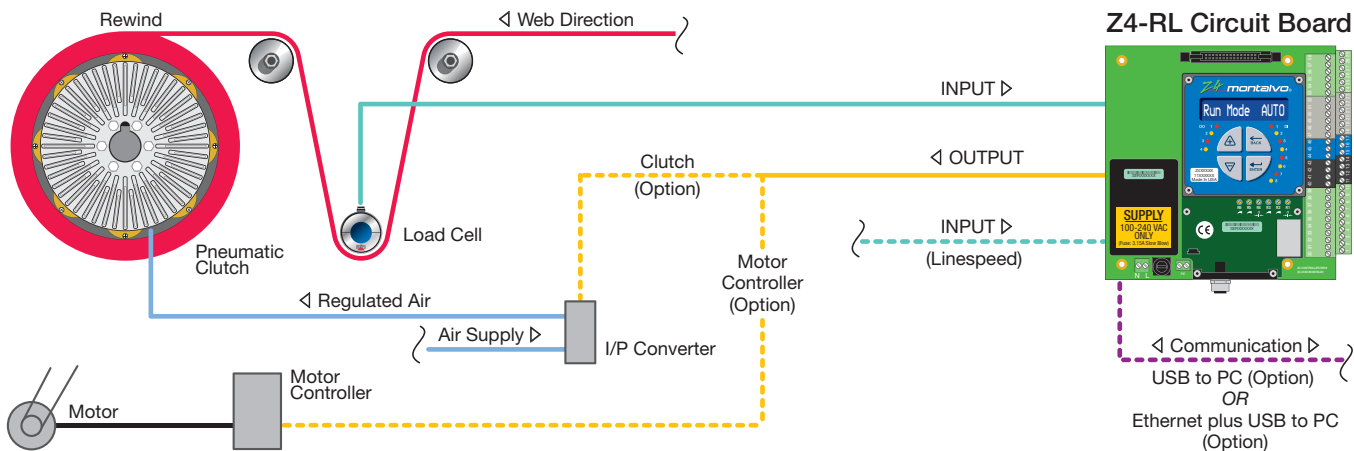


Z4 series-**R**ewind type-**L**oad cell input-**VAC** supply-**U**SB communications-**E**nclosure version

Z4-RL

Rewind Tension Controller for Load Cell Input

How It Works



Specifications

Electrical

Supply Voltage	
Standard	100 -240 VAC ±10% (IEC-60204-1) 47 to 63 Hz
Fuse	3.15A Slow Blow
Option (factory configured)	24VDC
Fuse	1.0A Slow Blow
Overvoltage Category	II (IEC 664)
Test Voltage	3.75 kV in 1 min. primary to secondary
Max Power Consumption AC Version	25VA typ. (50VA max.)
Max Power Consumption DC Version	12VA typ. (25VA max.)
Noise Immunity	EN 50082-2 industrial
Noise Emission	EN 50081-1
Load Cell Supply	±2.5V ±5%
Load Cell Input	0 to ±250mV
Load Cell Input (optional)	0 to 10V
Zero Range (tare)	50% of load cell rating
Calibration Range	11 to 480
Regulator Outputs	0 to 10V (max. load -5mA)
	4 to 20mA / 0 to 20mA (RL = 0 to 1000Ω)
Meter Outputs	0 to 100µA (RO = 100kΩ)
	0 to 10V (max. load -5mA)
Analog Input Voltage	0 to 10V (RI = 1000Ω)
Digital Input Voltage	15 to 30V (RI = 10kΩ)
Digital Output Voltage	24V ±15% (max. load 100mA)
	Total load 4 outputs 350mA
Standards	Designed to meet UL 508 and EN 60204

Environmental

Temperature Range	Operating	Circuit Board	32 to 122°F (0 to 50°C)
		HMI	32 to 113°F (0 to 45°C)
		Enclosure Version	32 to 113°F (0 to 45°C)
Storage		Circuit Board	14 to 176°F (-10 to 80°C)
		HMI	14 to 140°F (-10 to 60°C)
		Enclosure Version	14 to 140°F (-10 to 60°C)
Degree of Protection		Circuit Board	IP10
		HMI	IP65
		Enclosure Version	IP54
Certification			CE

Functions

Auto Setpoint	Standard
Manual / Auto	Standard
Manual Setpoint	Standard
Tension Off / On	Standard
Splice	Configurable
Taper	Configurable
Dual Calibration	Configurable
Variable Wrap Angle Technology	Configurable

Communications

USB (used to configure controller from PC)	Optional (with B oard only controller)
	Standard (with R and E controller versions)
Ethernet I/P (includes USB)	Optional (B , R and E controller versions)

EtherNet/IP
ODVA

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Technical details subject to change without notice. Z4RL-US-04 © Montalvo