



The new Spyder Plus S1 tension controller has all the existing features of the Spyder Plus controller, while adding an additional input for roll diameter. This input allows for additional powerful features normally reserved for our highest end controllers.

By referencing the actual measured diameter on this new input, this DIN rail mounted low-cost controller now includes very precise taper tension, hold level change options and inertia compensation options in load cell and dancer modes. In addition, gain compensation in dancer mode allows for a stable dancer from full roll to core, regardless of roll-build ratio.

Like the Spyder Plus, the Spyder Plus S1 is a controller that can be configured as an open loop, closed loop load cell or closed loop dancer modes, providing accurate, reliable control by providing feedback to clutches and brakes, or interfacing directly with drives in unwind, rewind or point-to-point applications.

Built in Modbus TCP communications provide the ability to easily interface and share data with an existing PLC, remote PC, HMI or web browser, allowing for remote set point adjustment to further improve efficiency, especially when multiple controls are used in the same process.



GENERAL SPECIFICATIONS

Product Name

Spyder Plus S1

Load Cell Input

21 mV maximum across one 350 Ω sensor or two 350 Ω sensors in parallel

Tension Setpoint, Manual Setpoint

0 VDC to +10 VDC, 0.25 mADC max, or 1k to 10k Ω potentiometer

E-Stop, Run/Stop, Tension Off, Auto/Manual

Switch closure or 5 VDC or 24 VDC active high/low logic, 8 mADC max

Dancer Position (for dancer mode)

1k to 10k potentiometer, or a 0 to 10 VDC signal

3rd party Ultrasonic, Laser or other sensor for diameter input

0 to 10 VDC
Required for Open Loop mode, optional for Load Cell and Dancer modes

Tension Meter

0 to 1 mADC or 0 to +10 VDC analog

Torque/Speed (Main Output)

0 to +10 VDC, 1 mADC max
4 to 20 mADC, 500 max
-10 to +10 VDC, 1 mADC max

Communications

Modbus/TCP, HTTP Web Server Interface

Web Browser File Format

html

Supply Power

24 vdc, +/-10%, 250 mA, 6VA

Enclosure

IP20

Operating Temperature

0°C to 50°C (32°F to 122 °F)

Storage Temperature

-30°C to 80°C (-22°F to 176 °F)

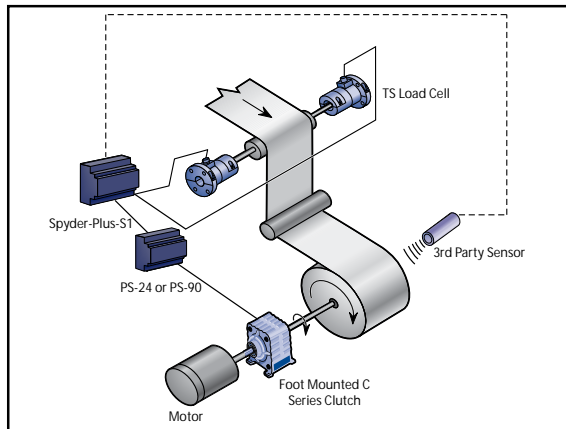
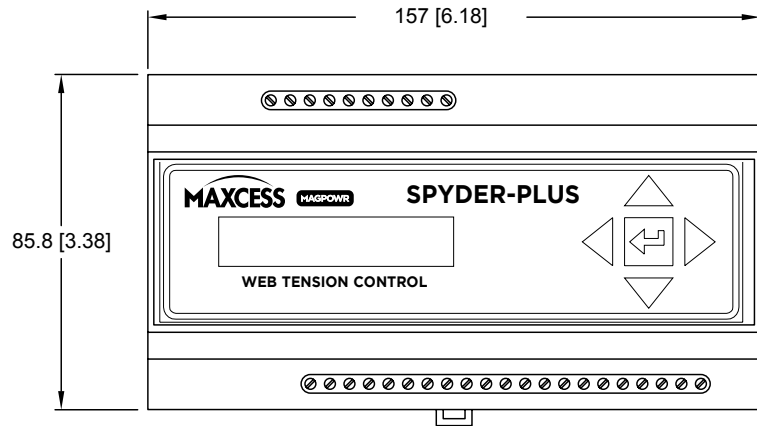
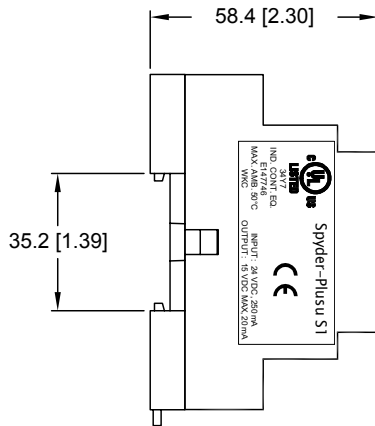
Certifications

CE
UL

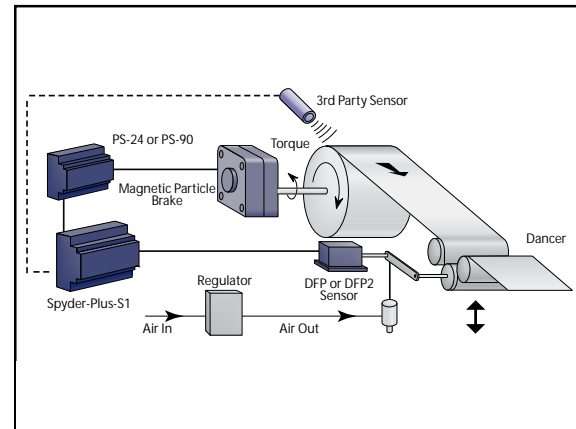
KEY FEATURES

- Powerful tension control at an affordable price
- Open Loop, Closed Loop Load Cell and Closed Loop Dancer control in one package
- Diameter input for precise and adjustable taper tension, dancer gain compensation, advanced inertia compensation and hold level options
- Parameter access at keypad or via built in Modbus/TCP or web browser
- Used to control magnetic particle or pneumatic clutches and brakes, or interface directly with drives

SPYDER PLUS S1



Load Cell Rewind With Taper



Dancer Unwind With Gain Compensation

PRODUCT FEATURES	SPYDER-PLUS	SPYDER-PLUS-S1
Powered with 24 VDC	✓	✓
DIN rail mounted	✓	✓
Output available of 0 to 10 VDC, 4 to 20 mADC, -10 to +10 VDC	✓	✓
Embedded control option as open loop based on diameter input of 0 to 10 vdc signal	✓	✓
In open loop mode, basic inertia compensation features	✓	✓
Embedded control option as dancer mode	✓	✓
Has input to accept 0 to 10 VDC signal of actual roll diameter for dancer and load cell modes to allow several advanced capabilities		✓
Gain compensation in Dancer Mode based on actual diameter for gain compensated dancer to ensure stable dancer even with large roll build ratios (torque or speed device)		✓
Advanced dancer hold level options based on actual diameter (compared to basic options)		✓
Advanced dancer inertia compensation features based on actual diameter (compared to basic options)		✓
Embedded control option as load cell mode	✓	✓
Only accepts 0 to 21 mVDC load cell signals (MAGPOWER load cells)	✓	✓
Very accurate taper tension based on actual diameter in load cell mode		✓
Advanced load cell mode hold level options based on actual diameter (compared to basic options)		✓
Advanced load cell mode inertia compensation features based on actual diameter (compared to basic options)		✓



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