



The Spyder-Plus is used to control the web tension or dancer positions in production machines.

The controller can be configured for an open-loop tension control with a diameter sensor, closed-loop tension control with load cells or for closed-loop dancer applications. The Spyder-Plus provides accurate, reliable control results by providing feedback to clutches and brakes, or interfacing directly with drives in unwind, rewind or point-to-point applications.

The Spyder-Plus is a simple, powerful, cost-effective tension controller that saves space in a control cabinet. The DIN rail mount simplifies installation and a user-friendly keypad and display makes it easy to learn and set up.

### Spyder-Plus-S1:

The special Version Spyder-Plus-S1 adds an input for diameter readout. By referencing the actual measured diameter on this new input now provides 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.

## TECHNICAL SPECIFICATIONS

### GENERAL:

#### Supply Power

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

#### Operating Temperature

0°C to 50°C

#### Dimensions

Mounting:

DIN Rail: 35 mm

WxHxD: 157x85.8x58.4 mm

#### Enclosure

IP20

#### Certifications

CE, UL

### INPUTS:

#### Load Cell

21 mV maximum across one or two parallel MAGPOWR load cells (350Ω)

#### Tension Setpoint, Manual Setpoint

0 to +10VDC, max.

0.25 mADC, or

1 k to 10kΩ Potentiometer

#### Dancer Position (for dancer mode)

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

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

0 to 10VDC

(optional for Spyder-Plus-S1 for load cell and dancer modes)

#### Digital inputs:

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

Switch closure or 5 VDC or 24VDC

active high/low logic, max 8mADC

### OUTPUTS:

#### Tension Meter

0 to 1 mADC or

0 to +10VDC analog

#### Torque/Speed (Control Output)

0 to +10VDC, max. 1 mADC

4 to 20mADC, max.500Ω

-10 to +10VDC, max. 1 mADC

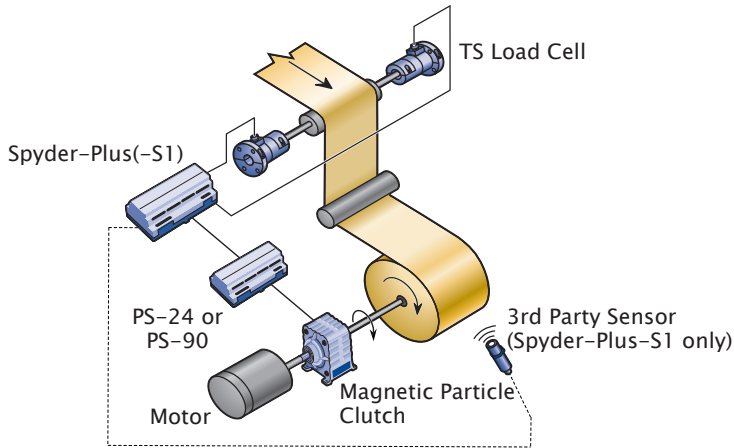
#### Communications

Modbus/TCP, HTTP Web Server Interface (HTML)

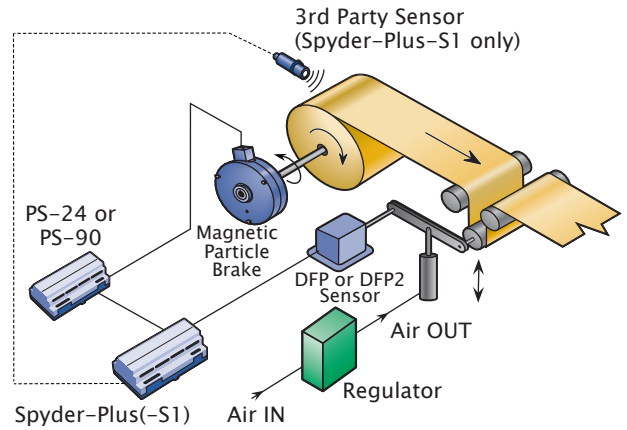
## KEY FEATURES

- Powerful tension control at an affordable price
- Open Loop with diameter sensor, Closed Loop Load Cell and Closed Loop Dancer control in one package
- Used to control magnetic particle or pneumatic clutches and brakes, or interface directly with drives
- Parameter access at keypad or via built in Modbus/TCP or web browser
- **Spyder-Plus-S1:** Additional diameter input for precise and adjustable taper tension, dancer gain compensation, advanced inertia compensation and hold level options

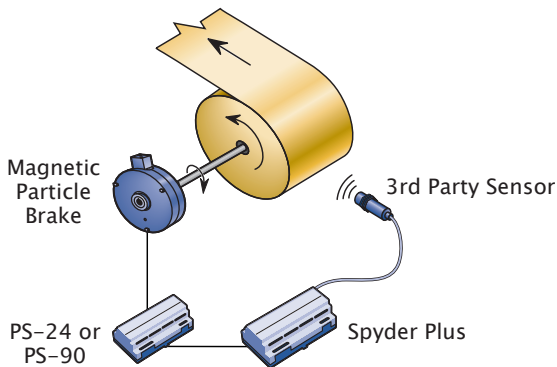
# SPYDER-PLUS & SPYDER-PLUS-S1



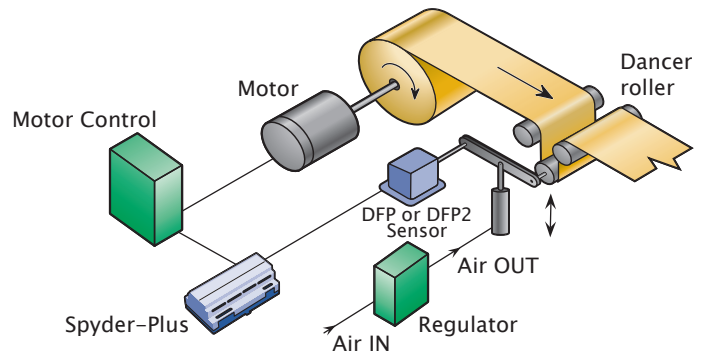
Closed-loop web tension control via load cells and torque device, option for diameter readout



Closed-loop dancer control with torque device, option for diameter readout



Open-loop web tension control with diameter and torque device



Closed-loop dancer control with drive in speed mode

Product features	Spyder-Plus	Spyder-Plus-S1
Embedded control option as open loop based on diameter input of 0 to 10 vdc signal	X	X
In open loop mode, basic inertia compensation features	X	X
Embedded control option as dancer mode	X	X
Embedded control option as load cell mode	X	X
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)		X
Advanced dancer hold level options based on actual diameter (compared to basic options)		X
Advanced dancer inertia compensation features based on actual diameter (compared to basic options)		X
Very accurate taper tension based on actual diameter in load cell mode		X



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