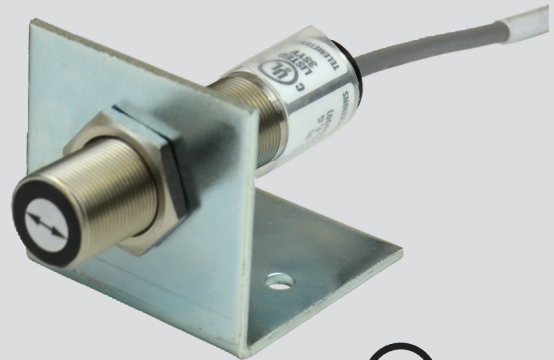


Features

- 2-wire, loop-powered 4-20 mA analog output
- No user calibration: works right out of the box
- Works with shaft-mounted pulser targets (disc/wrap)
- Rugged stainless steel M18x1 housing
- Reverse-wiring protected
- UL Listed, Intrinsically Safe (IS)
- Class I, Div I (C, D) Class II, Div I (E, F, G) when used with an IS barrier



Description

The patented ST420 detects passing magnets of a shaft-mounted pulser disc or wrap and outputs a smooth, continuous 4-20 mA analog signal in direct proportion to shaft rotation speed.

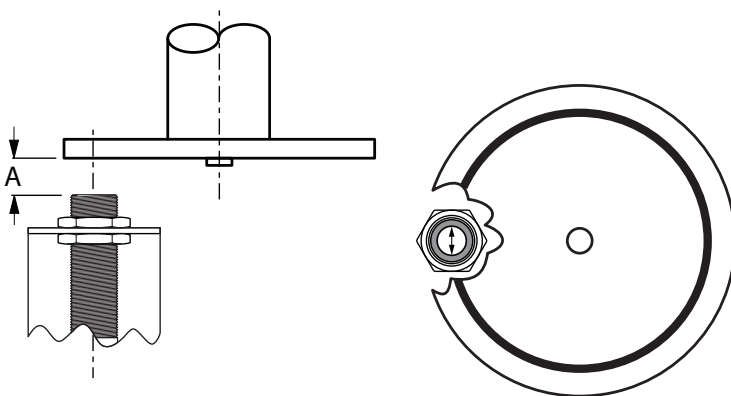
Custom speed and pulser PPR models are available upon request.

Applications

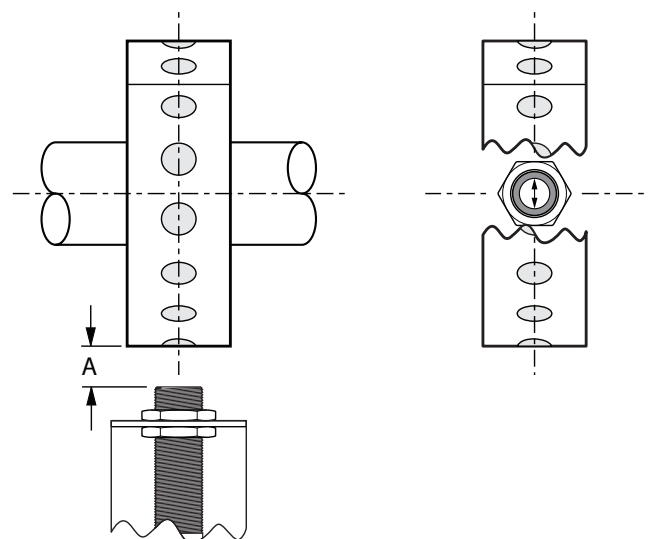
- Conveyors
- Motors
- Gearboxes
- Agitators
- Pumps
- Generators
- Turbines
- Fans
- Centrifuges
- Mixers
- Bearings
- Chemical Processing

ST420 Installation

Mount the pulser target (disc or wrap) to the shaft. Mount the ST420 with the arrow label aligned with the center path of the pulser target magnets as shown. Adjust the gap (A) to 1/4" (6.35 mm).



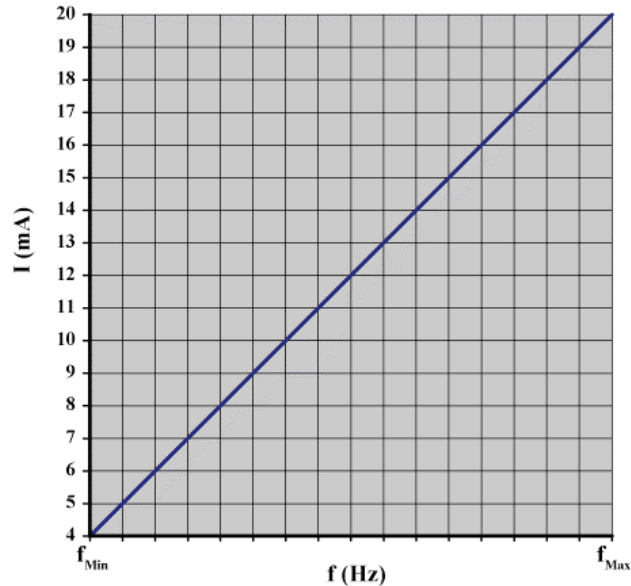
With Pulser Disc (shaft-end mount)



With Split Collar Pulser Wrap (around shaft)

ST420 Specifications

| | |
|-----------------------|--|
| Product | |
| Dimensions | 80 mm (3.15") long x 18 mm (0.71") diameter |
| Sensor Gap | 1/4" ± 1/8" |
| Vin (min → max) | 8-30 VDC (nominal loop-power: 24 VDC) |
| Operating Temperature | -20° C → +80° C (-4° F → +176° F) |
| Accuracy | Max error at 25° C ± 0.25% Max error over operating temperature ± 0.50% |
| Output Response Time | < 9 mS |
| Cable (24 AWG) | |
| Color Code | Brown (V+), Black (V-) |



Ordering

(All models come with a standard bracket for mounting.
Standard cable length is 10')

| Model | Part Number |
|---|-------------|
| ST420 low speed 0.2 - 200 RPM, 8 Pulses Per Revolution (PPR) | 800-001620 |
| ST420 high speed 0.2 - 2,000 RPM, 8 Pulses Per Revolution (PPR) | 800-001621 |
| Custom models may be built to order. Specify RPM _{min} → RPM _{max} and PPR (# pulser magnets) | Custom |

ST420 EZ Mounting Options

| Option | Part Number |
|---|-------------|
| EZ-18mm Mounting Bracket Assembly | 810-000042 |
| MM-1.25 Mounting Magnet (Must be used with EZ-18mm) | 810-000060 |



EZ-18mm Mounting Bracket Option



MM-1.25 Mounting Magnet Option
(must be used with EZ-18mm)

ST420 Standard 2-Piece System

These are the most popular system components.
Many other options are available.

| Option | Part Number |
|--|-------------------------|
| 258 Pulser Disc, Nylon, 4" Diameter, 8 Magnets | 700-000209 |
| Split Collar Pulser Wrap (PVC, Aluminum, Stainless Steel) | Custom (See website) |

Customization

If one of standard products does not meet your specifications, please do not hesitate to call one of our applications specialists. Many of our products can be customized to fit specific needs.

Additional Information

See the ST420 Shaft Speed Sensor Installation and Operating Manual for complete details and specifications.