# INNOVATION INFORMATION SHEET
## Cable Reel with Length Counter and Sensor Suite

**Cable Reel with Length/Distance Measuring Capability Compatible with Any Vehicle CAN Protocol (CAN 2.0/FD)**

Get a live readout of exactly how much cable is out. An onboard encoder measures payout, and the reel transmits length data over a simple two-wire CAN connection for easy tie-in to vehicle displays and controls.
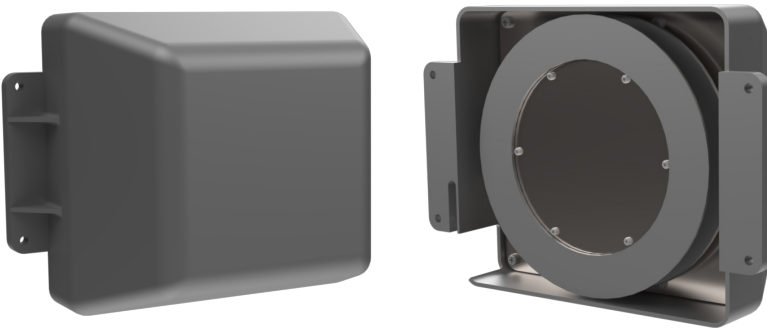


This reel gives operators an instant, accurate readout of cable length, reducing guesswork and increasing operator awareness. A simple two-wire CAN connection ties into the network you already have for quick installs. Real-time feedback helps prevent over-pulls and snags, and the length data feeds your existing display, PLC, or telematics with no extra gauges. You can also log payout and rewind for job tickets and QA, and standard CAN support makes it easy to roll out across a fleet.

Our software is 100% custom-fitted to your application, aligning with your workflows, data structures, and integration for clean deployment and predictable results.

The system combines rugged construction with digital precision to modernize measurement. It drops into existing CAN networks with minimal changes while adding richer data for better control.

A shaft-mounted rotary encoder tracks extension and retraction with long life and far less drift than potentiometers, outputting clean digital CAN messages that improve signal integrity.

When combined with an inclinometer, the system can also broadcast inclination data over the same CAN bus, providing positional awareness for equipment operations.

The customizable housing allows installation in virtually any orientation and stands up to tough conditions. A 6-circuit, 10 A slip ring provides clean signal transmission or power to the implement.

**What is CAN (Controller Area Network)?**
CAN is a two-wire, noise-resistant data bus used on vehicles and mobile equipment. It lets sensors, controllers, and displays share short messages on the same twisted pair with built-in error checking and priority handling. On this reel, the encoder's cable payout/rewind length is published as CAN messages, so your machine can read it in real time with minimal wiring.

**Precision Measurement System**
The cable reel system utilizes encoders instead of traditional sensors to detect cable extension and retraction, providing highly accurate length measurement and position feedback.

**Plug-and-Play CAN Compatibility**
Engineered to work with all standard CAN protocols including CAN 2.0A, CAN 2.0B, and CANFD. Onboard electronics convert encoder signals into standardized CAN message formats with configurable IDs and priorities.

**Enhanced Safety Features**
Supports redundant encoder configurations for fail-safe operation and compliance with safety standards such as EN13849, for high-risk industrial environments.

**Ideal Applications**
- Telescopic boom cranes requiring precise extension measurement
- Cable laying vehicles monitoring deployment length
- Rescue and firefighting trucks with extendable equipment
- Electric utility vehicles managing cable payout
- Construction equipment with variable-length components