

SDI-12 Shaft Encoder

56-0540-400-DTR



Overview

Measures stage (level) of rivers, streams, reservoirs, & other bodies of water

- ▶ Groundwater monitoring
- ▶ Gate position indicator
- ▶ Compatible with SDI-12 Data Loggers

Features

- ▶ Revolves one rotation of the 5/16 in. input shaft into 400 increments
- ▶ Low power (less than 2.5mA from a 12VDC supply @ 2.5 rev/sec)
- ▶ Uses solid state, low power optical sensor technology Low starting torque (less than 0.25 ounce/inch)
- ▶ Surge protected
- ▶ Externally accessible, internal back-up battery. Can use standard AA battery.
- ▶ Accepts commands and returns data in the industry standard SDI-12 format, allowing it to interface with dataloggers that have SDI-12 communications ports such as the Xpert Datalogger
- ▶ User selectable resolution.
- ▶ User specified scaling (Does not require specific circumference wheel).
- ▶ User selectable direction for increasing counts (CW or CCW).
- ▶ 32 bit resolution counter.
- ▶ Range limited by SDI-12 to 7 digits. With 2 decimal place resolution, +99999.99. With 3 decimal place resolution, +9999.999.
- ▶ Programmable rate of change tracking. Factory default 2.5 rev/sec.
- ▶ Built-in 2 line by 8 character LCD display with backlight
- ▶ Internal back-up battery voltage readable via SDI-12
- ▶ Excessive shaft speed indicated on display.
- ▶ Display turned on by depressing "DISPLAY" button
- ▶ Display is continuously update with current value.
- ▶ Communications interfaces: SDI-12, SDI-12 protocol over RS-485, RS-232
- ▶ Double bearing design to support up to 10 lbs on the shaft.



SPECIFICATIONS

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<i>Specifications subject to change without notice</i>	
Input Voltage	7 to 16 VDC over voltage and reverse voltage protected
Power Consumption	< 3.5 mA @ 12 VDC and 2.5 rev/sec
Starting Torque	< 0.25 inch-ounce
Shaft Diameter	5/16 in. with both threads & a flat
Rotation Resolution	400 count per revolution
Counter Resolution	32 bit
Reported Resolution	User Selectable Range 7 decimal digits (examples: ±99999.99 or ±9999.999)
Display	2 line, 8 character/line w/ backlight Backup AA Battery, 1.5V or 3.6V accepted
Bearing Supports	Double bearing arrangement supports up to 10 lb. shaft load
Supported Wheels	User specified wheel size No required circumference
Support Units	User specified
Rotation Speed	User specified - default 2.5 rev/s
Maximum Rotation Speed	5 rev/s
Temperature Range	-40°C to +60°C (Display viewable -20°C to +60°C)
Communication Interfaces	SDI-12, RS-232, SDI-12 protocol over RS-485 (on -DT unit)
SDI-12 Support	V1.3 - will work with V1.0, V1.1, V1.2, and V1.3 dataloggers
DIMENSIONS	
Height	5 inches (12.7 cm.)
Width	6.74 inches (17.12 cm.)
Length	6.2 inches (15.75 cm.)
Weight	2.7 lbs. (1.3 Kg.)

ORDERING

56-0540-400-DTR	Ruggedized SDI 12 Shaft Encoder, 400 count resolution with display and terminal strip
ACCESSORIES	
5100-0560	Tape, perforated steel (inches)
5100-0502	Float wheel, perforated tape, for 5/16 in. shaft, 1 ft./revolution (nylon insert)
5100-0530-1	Float, 6 inch copper
5100-0530-2	Float, 6 inch PVC
5100-0550	Counterweight, 8 ounces 5100-0620-1 End hook set