

SDI-12 Shaft Encoder

56-0540-400-DTR



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: 399999.99 or 39999.999) |
| 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 |
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| 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 |