



MODEL H-3301/3311/3342

DIGITAL SHAFT ENCODER SERIES

The WaterLOG® models **H-3301/3311/3342** make up the **Digital Shaft Encoder** series. Measure water level by monitoring the position of a float and pulley, with a magnetic sensor to minimize static sensitivity. This series is user friendly and compatible with most data loggers. Easily read the built-in LCD display included in the H-3311 and H-3342 models.

APPLICATIONS

Accurately measure water level in a stilling well.

KEY FEATURES

H-3301/H-3311

- 200 counts per revolution (SDI-12 output)
- Threaded shaft compatible with older mechanical pulleys
- Accuracy is 0.01 ft. (.3048 cm)
- SDI-12 address and stage offset programmed using adjustment knob
- Precision dual bearing with low temperature lubricant
- SDI-12 and quadrature outputs

H-3342

- Non-contact absolute optical encoder preserves correct position even if the power is lost.
- 65,536 counts per revolution
- Accuracy is 0.00024 ft. (.0073152 cm) when using a 1 ft. (.3048 m) circumference pulley
- Max turns : $\pm 32,768$
- Zero backlash
- SDI-12 and 4-20mA output



H-3342/H-3311



a xylem brand

SPECIFICATIONS

PERFORMANCE		
Accuracy	H-3342	.00024 ft. (.073 mm)
	H-3301/H-3311	.01 ft (3.048 mm)
Resolution	H-3342	65,563 (16-bit) counts/rev
	H-3301/H-3311	200 counts/rev (SDI-12) 100 counts/rev (quadrature)
Rotation	H-3342	Max Turns: $\pm 32,768$ rev Max Speed: 15 rev/sec
	H-3301/H-3311	Max Turns: Unlimited Max Speed: 20 rev/sec
General	Display H-3342/H-3311	6 Character Display
	Offset Adjust	SDI-12 or front panel adjust
MECHANICAL / POWER		
Size	Main Unit	5.25 in W (13.35 cm)
	Base Plate	4. in. L x 7.0 in. W x 4.25 in. H (101.6mm L x 177.8 mm W x 107.95 mm H)
	Standard Shaft	1.25 in. L x 5/16 in. Dia 24 threads per in. x 0.75 in. (450.85 mm L x 0.79375 mm Dia 24 threads per in. x 19.05 mm) *With setscrew flat
	Optional Smooth Shaft	1.75 in. L x 5/16 in. Dia (450.85 mm L x 0.79375 mm Dia)
Material	Housing	Anodized aluminum
Power Requirements	Voltage Input	9.6 to 16.0 volts DC
	Current H-3342	Standby: 150 μ A typical Active: 40mA typical
	Current H-3311/H-3301	Standby: 800 μ A typical Active: Less than 2.0 mA
Connector	Cable	Amphenol MS3106A14S-6S 6-pin female military connector
	Bearing	Double ball bearing with external seal
General	H-3342 Turn Count Battery	Type: CR-1/3N (3.3V, 160mAh, lithium) Lifetime: 10 years
	Transient Protection	5.0 V Transguard
	Starting Torque	0.15 oz-in typical, 0.50 oz-in max over temperature
COMMUNICATION		
SDI-12 Output Data Parameters	Baud Rate	1200
	Output Voltage Levels	High level: 3.5 volts (Min) Low level: 0.8 volts (Max) Maximum Cable Length: 250 ft. (76.2 m)

4-20 mA Output Data Parameters	H-3342 Type	4-20mA, optically isolated
	Loop Voltage	8.0V min, 35V max
	Resolution	4 μ A (12-bit DAC)
Quadrature Output	H-3301 H-3311	Open drain 5.0V transguard
ENVIRONMENTAL		
General	Operating Temperature	-40° to 60° C
	Storage Temperature	-50° to 70° C
	Humidity	0 to 100%
MISCELLANEOUS		
Warranty	The WaterLOG® shaft encoders H-3301, H-3311, H-3341, H-3342 are warranted against defects in materials and workmanship for two years from date of shipment.	
Note	Specifications subject to change without prior notice due to on going commitment to product testing and improvement. LR June, 2015 (D07-04 0615)	



H-3342/H-3311