

MODEL H-3301/3311/3342

DIGITAL SHAFT ENCODER SERIES

IEI Monitoring & Control Systems

Sales & Support:
(435) 755-0774
http://www.inmtn.com
info@inmtn.com

The **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 as part of a stream gauge station, hydrometeorological site, or flood warning system.

KEY FEATURES

H-3301/H-3311

- 200 counts per revolution (SDI-12 output)
- Threaded shaft compatible with older mechanical pulleys
- Accuracy is 0.3048 cm (0.01 ft)
- 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 0.0073152 cm (0.00024 ft) when using a 0.3048 m (1 ft) circumference pulley
- Max turns : ±32,768
- Zero backlash
- SDI-12 and 4-20mA output

H-3342/H-3311

YSI
a xylem brand

SPECIFICATIONS

PERFORMANCE		
Accuracy	H-3342	0.073 mm (0.00024 ft)
	H-3301/H-3311	3.048 mm (0.01 ft)
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: ±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	13.35 cm W (5.25 in)
	Base Plate	101.6 mm L x 177.8 mm W x 107.95 mm H (4 in L x 7.0 in W x 4.25 in H)
	Standard Shaft	450.85 mm L x 0.79375 mm Dia 24 threads per in x 19.05 mm (1.25 in L x 5/16 in Dia 24 threads per in x 0.75 in) *With setscrew flat
	Optional Smooth Shaft	450.85 mm L x 0.79375 mm Dia (1.75 in L x 5/16 in Dia)
Material	Housing	Anodized aluminum
Power Requirements	Voltage Input	10.0 to 30.0 volts DC
	Current H-3342	Standby: 150 µA typical Active: 40 mA typical
	Current H-3311/H-3301	Standby: 800 µA 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 (3.3 V, 160 mAh, 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: 76.2 m (250 ft)

4-20 mA Output Data Parameters	H-3342 Type	4-20 mA, optically isolated
	Loop Voltage	8.0 V min, 35 V max
	Resolution	4 µA (12-bit DAC)
Quadrature Output	H-3301 H-3311	Open drain 5.0 V 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 May, 2016 (D07-09 0516)	

H-3342/H-3311

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