

34 | H25 Absolute Optical Encoder

Electrical Specifications

Code: 12 or 13 bits NB or GC; excess gray and BCD available

Counts Per Shaft Turn: 4096 or 8192

Count Transition Accuracy: $\pm 1/2$ bit maximum

Supply Voltage: 5 – 28 VDC

Current Requirements: 120 mA typical

Output Formats: Parallel: Gray Code, Natural Binary and Binary Coded Decimal; Serial: Serial Synchronous Interface (SSI) compatible; Analog: 4-20 mA, 0-10V

Output Device: (see note 5)

7272: Line Driver, 5 – 28 VDC, $V_{out} = V_{in}$

7272: Line Driver, 5 – 28 VDC, $V_{out} = 5$ volts (special feature)

7273: Open Collector, accepts 5 – 28 VDC

SSI: See page 40

Protection Level: Reverse, overvoltage and output short circuit protection (7272 only)

Frequency Response: 100kHz (1200 RPM for 12-bits, 600 RPM for 13-bits)

Output Termination Pinouts: See table page 41

Mechanical & Environmental Specs

Reference the H25 Incremental Encoder, pages 16-17

Connector

MS3112E14-19P, 19-pin connector on encoder body, mates to MS3116F14-19S (or equivalent)

NOTES & TABLES: All notes and tables referred to in the text can be found on pages 50 and 51.



Long considered the industry standard for shafted incremental encoders, the Model H25 is now available in an absolute version up to 13 Bits of resolution. It incorporates many of the great standard features of the incremental version, including: EMI shielding, 40-lb ABEC 7 bearings, matched thermal coefficients on critical components, and custom optics. This encoder features a 12 or 13 Bit absolute parallel gray code output, a selection line for count direction, and an output latch as standard. Output is standard gray code with options for natural binary or SSI compatible signals. Signals can be provided in either a single-ended multi-voltage line driver (TTL compatible when provided with 5 volts) or as an open-collector style of output. Typical applications include dam gate control, cranes, telescopes, tool changers, and robotics.

Certifications



EN 55011 and EN 61000-6-2

See Regulatory Information on pages 47–49 for further certification details.

Figure 1 Gray Code

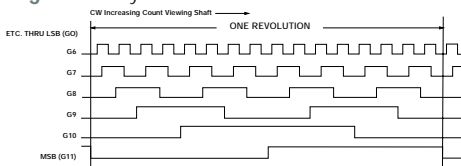
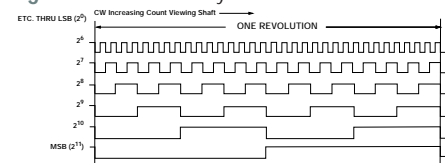
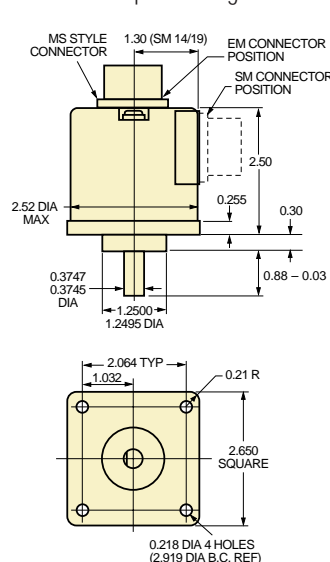


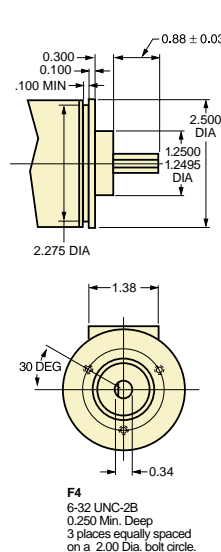
Figure 2 Natural Binary



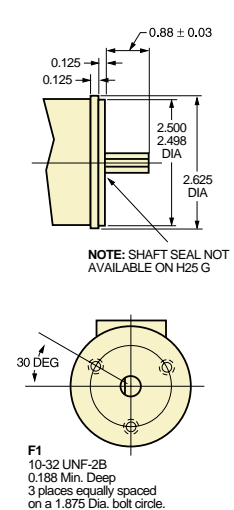
H25D - Square Flange



H25E - 2.50 Servo Mount



H25G - 2.62 Dia Servo Mount



TOLERANCES: .XX = ± 0.01 , .XXX = ± 0.005

H25 Absolute Encoder Ordering Options

FOR ASSISTANCE CALL 800-350-2727

Use this diagram, working from left to right to construct your model number (example: H25E-F4-SS-12GC-7272-CW-SM14/19).

All notes and tables referred to can be found on pages 50-51.

H25	—		—		—		—		—		—		—		—	
TYPE: Heavy Duty 2.5 inch Dia.		FACE MOUNTS: F1 F4 See note 1		SHAFT SEAL CONFIGURATION: SS = Shaft Seal See note 2		CODE TYPE: GC = Gray Code NB = Natural Binary BCD = Binary Coded Decimal X = Excess gray code		DIRECTION CONTROL: CW = Clockwise increasing count CCW = Counter clockwise increasing count		OUTPUT TERMINATION LOCATION: E = End S = Side		TERMINATION TYPE: M14/19 = 19 pin connector CS = Cable with gland seal Cable length specified in inches (i.e. C18 = Pigtail 18" long) See page 41		SPECIAL FEATURES: S = Special features specified on purchase order (consult factory) See note 6		
HOUSING: D = Square Flange E = 2.5 inch dia. servo mount G = 2.62 inch dia. servo mount See dimensions				NUMBER OF BITS: 12 = 12-Bits, 4096 counts per turn 13 = 13 Bits, 8192 counts per turn (Excess gray codes and BCD available—consult factory)		OUTPUT IC TYPE: A1 = 4-20mA; A2 = 0-10V 7272 = Line Driver 7273 = Open Collector S3 = Serial Synchronous Interface See note 5 and page 40 for SSI										

EXPRESS ENCODERS® Items highlighted with EXPRESS ENCODERS are standard Express Encoders and ship in one to three days.