

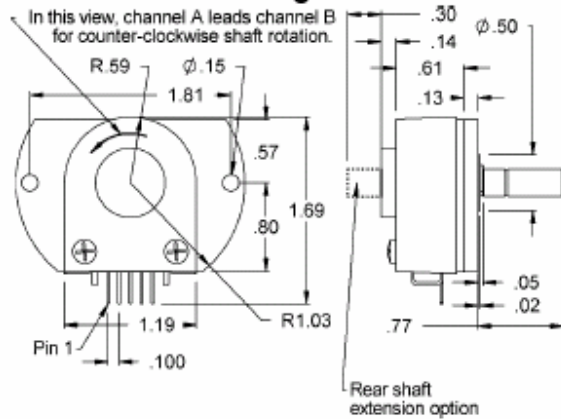
# H1 / H3

## Ball Bearing Optical Shaft Encoders

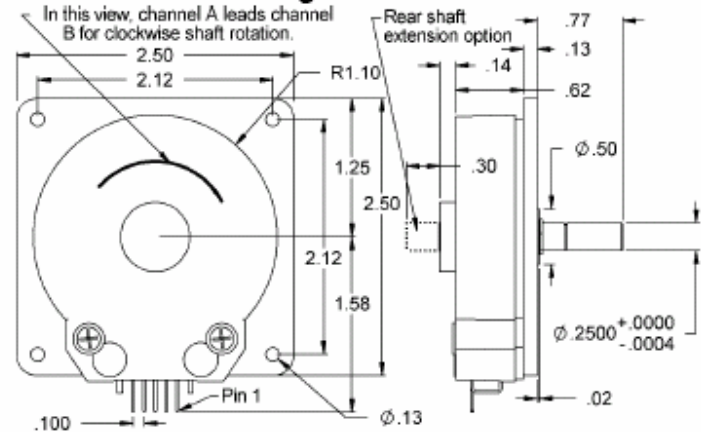
### Description:

These ball bearing optical incremental encoders are fully assembled with a shaft, two 1/4" ID by 1/2" OD heavy duty ball bearings, and a mounting plate. This design tolerates increased radial and axial loads and allows for an optional rear shaft extension. The H1 mounting plate comes with 2 mounting holes for screws #8 or smaller. The H3 mounting plate comes with 4 mounting holes for screws #4 or smaller.

### H1 Mechanical Drawing:



### H3 Mechanical Drawing:



### Mechanical Specifications:

Shaft Speed	10,000 RPM max. continuous
Acceleration	10,000 rad/sec <sup>2</sup>
Shaft Torque	0.05 in. oz. max.
Shaft Loading	2 lbs. max.
Bearing Life	(90/P) <sup>3</sup> = Life in millions of revs. P = Radial load in pounds.
Weight	3.2 oz.
Shaft Runout	.0008 T.I.R. max.
Moment of Inertia	.0001 oz. in. s <sup>2</sup>
Vibration	20 g. 5 to 2KHz

### Electrical Specifications:

For complete details see the EM1 / HEDS data sheet.

### Phase Relationship:

H1: A leads B in a clockwise shaft rotation, and B leads A in counterclockwise shaft rotation viewed from the shaft side of the encoder (see the EM1 & HEDS data sheet).  
 H3: B leads A in a clockwise shaft rotation, and A leads B in counterclockwise shaft rotation viewed from the shaft side of the encoder (see the EM1 & HEDS data sheet).

### Ordering Information:

H  —  —

<b>Series:</b> H1 H3	<b>CPR:</b> H1    H3 32**** 64**** 50    1000 96    1024 100    1800**** 110*** 2000 120*** 2048 192    2500**** 200 250 268 360 400 500 512 540*** 720**** 900**** 1000 1018**** 1024 1250****	<b>Options:</b> (specify in order shown) I = Index (3rd channel). E = Rear shaft extension. HS = Sealed housing that is safe to use with dust and fluids.
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**Notes:**  
 \* Index / resolutions >= 1000 CPR.  
 \*\* Index / resolutions >= 2000 CPR.  
 \*\*\* Index option not available.  
 \*\*\*\* 32, 64, 720, 900, 1250, 1800, 2000 CPR only available with index.