

Description:

The **H5S** single-ended optical encoder is 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. This design also allows for an optional rear shaft extension. The mounting plate comes with 2 mounting holes for screws #6 or smaller.

The mating connector has 5 pins, is polarized and latches into the encoder. Depressing the latch tab allows the connector to be unplugged.

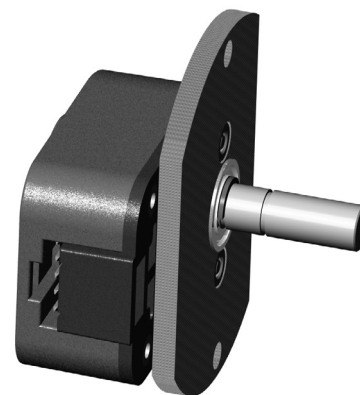
Mating connector assemblies are available from US Digital stock as shown below. Custom cables are also readily available (see the **Cables & Connectors** data sheet).

Features:

- Small size
- Low cost
- Positive finger-latching polarized connector
- 2-channel quadrature, TTL squarewave outputs
- 3rd channel index option
- Tracks from 0 to 100,000 cycles/sec
- Heavy duty ball bearings track up to 10,000 RPM
- -40 to +100°C operating temperature
- Single +5VDC supply
- US Digital warrants its products against defects in materials and workmanship for two years. See complete warranty for details.

Mechanical Specifications:

Shaft Speed	10,000 RPM max. continuous
Acceleration	10,000 rad/sec ²
Shaft Torque	0.05 in. oz. max.
Shaft Loading	2 lbs. max.
Bearing Life	(90/P) ³ - life in millions of revs. where P = radial load in pounds.
Weight	1.75 oz.
Shaft Runout	.0006 T.I.R. max.
Moment of Inertia	.0001 oz. in. s ²
Vibration	20 g. 5 to 2KHz



Phase Relationship:

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).

Electrical Specifications:

For complete details see the **EM1 & HEDS** data sheet.

Compatible Cables & Connectors:

10-pin Finger-latching:

Part Number	Description
CON-FC5-22*	Connector
CA-3133-6FT	Connector on one end with 4 12" wires
CA-3132-6FT	Connector on one end with 5 12" wires
CA-3131-6FT	Connector on one end of a 6' shielded round cable
CA-3620-6FT	Connectors on both ends of a 6' shielded round cable

* 22 AWG is standard. 24, 26 and 28 AWG are also available.

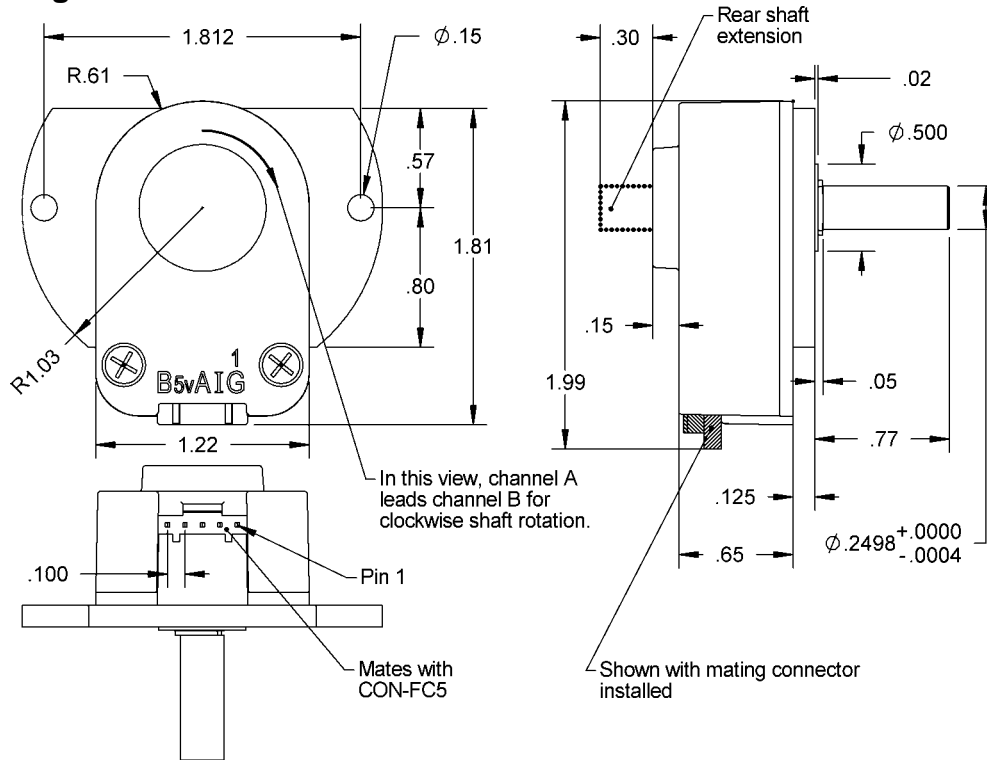
Attention:

- Specify cable length when ordering.
- Custom cable lengths are available. See the **Cables & Connectors** data sheet for more information.

Pin-out:

Pin	Description
1	Ground
2	Index
3	A channel
4	+5VDC power
5	B channel

Mechanical Drawing:



Ordering Information:

H5S - -

CPR:

32***
50
96
100
110**
120**
192
200
250
256
360
400
500
540**
720***
900***
1000
1016**
1024
1250***

Options: (specify in order shown)

I = Index (3rd channel).
E = Rear shaft extension.

Notes:

* Index / resolutions ≥ 1000 CPR.
** Index option not available.
*** 32, 720, 900, 1250 CPR only available with index.

H5S Price:

\$57.00 / 1
\$53.00 / 10
\$49.00 / 50
\$47.00 / 100
\$46.00 / 500
\$43.00 / 1K

Index/HiRes*:

\$65.55 / 1
\$60.95 / 10
\$56.35 / 50
\$54.05 / 100
\$52.90 / 500
\$49.45 / 1K

Cost Modifiers:

➤ Add \$2 for E-option.

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All information subject to change without notice.