

H15S

Servo Mount Encoder

Description:

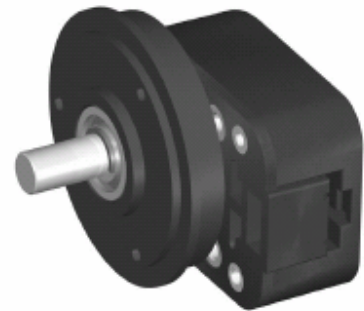
The H15S single-ended optical encoder is a non-contacting rotary to digital position feedback device designed for applications requiring a size 15 servo mount. The H15S design features two rugged radial ball bearings and a standard 1/4" diameter shaft which may be coupled to the application shaft using one of US Digital's flexible couplings (see the FC data sheet).

The H15S may be mounted and held in position by either attaching to the 4-40 machine screw holes in the base or by using the attached servo ring and separate servo cleats (see Accessories on the next page). The servo ring is made of black anodized aluminum while the servo cleats are made of stainless steel.

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 stock as shown below. Custom cables are also readily available (see the Cables & Connectors data sheet).

Features:

- > Industry standard size 15 mounting
- > 32 to 1250 cycles per revolution (CPR)
- > 128 to 5000 pulses per revolution (PPR)
- > Positive finger-latching connector
- > Low cost
- > 2-channel quadrature, TTL squarewave outputs
- > 3rd channel index option
- > 100KHz frequency cycle response
- > 400KHz frequency quadrature response
- > -40 to 100°C operating temperature



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	2.1 oz.
Shaft Runout	.0005 T.I.R. max.
Moment of Inertia	8.1x10 ⁻⁶ 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:

Finger-latching:	
5-pin	Description
CON-FC5-22*	Connector
CA-3133-1FT	Connector on one end with 4 12" wires
CA-3132-1FT	Connector on one end with 5 12" wires
CA-3131-8FT	Connector on one end of a 8' shielded round cable
CA-3620-8FT	Connectors on both ends of a 8' 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.

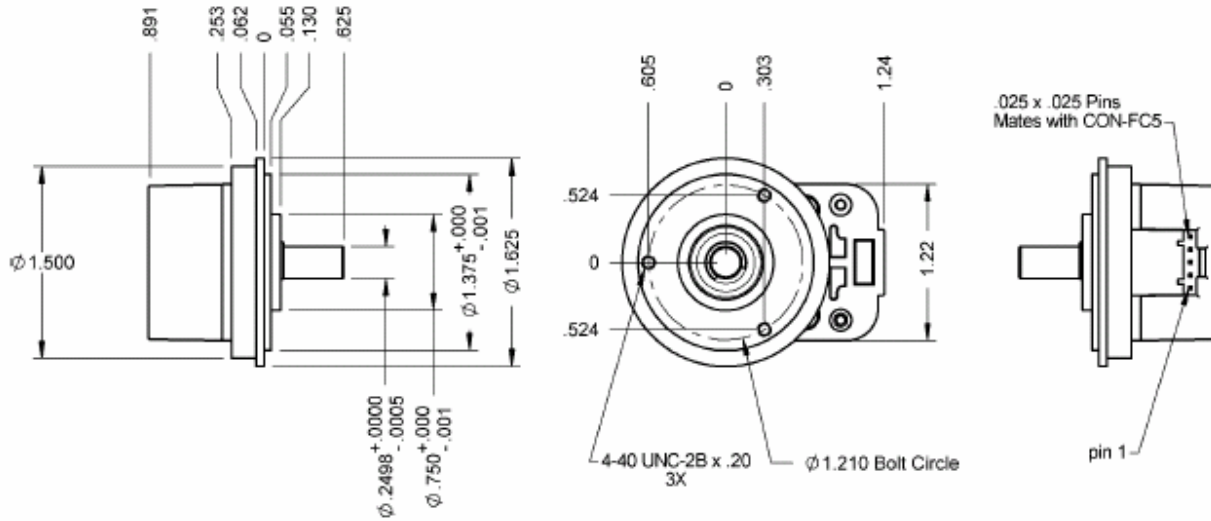
Encoder Pin-out:

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

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Mechanical Drawing:



CLEAT-KIT:

Includes: 3 cleats and 3 screws.

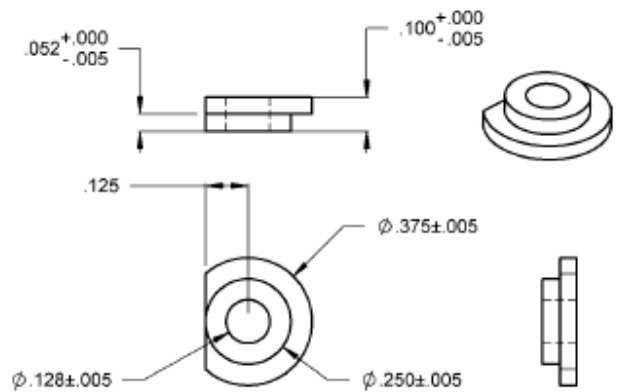
Cleat Description: Stainless steel servo cleats are used for the mounting of the H15S encoder by means of its servo style mounting. Mounting holes should be arrayed at 120° on a 1.90" bolt circle.

Screw Description: 4-40 x 1/4" stainless steel phillips pan-head screws.

> To order cleats individually, specify CLEAT-5889.

> To order screws individually, specify SCREW-290.

CLEAT-KIT
Price
\$5.00



Ordering Information:

H15S -

- CPR:
32***
50
96
100
110**
120**
192
200
250
258
360
400
500
540**
720***
900***
1000
1016**
1024
1250***

Options: (specify in order shown)
I = Index (3rd channel).

Notes:
* Index / resolutions >= 1000 CPR.
** Index option not available.
*** 32, 720, 900, 1250 CPR only available with index.