

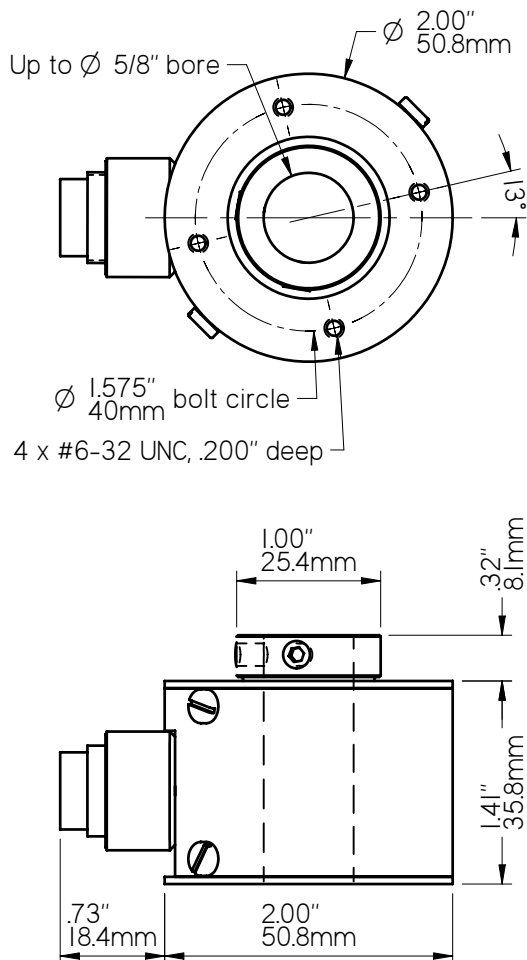
FEATURES

- Up to 5/8" or 16mm shaft bore diameter
- Heavy Duty bearings
- Unbreakable code disk
- Size 20 housing
- Short circuit and ESD protected
- Shaft model available - see Model R20
- Up to 720 pulses per revolution
- Attached cable or optional connector
- CE compliant and RoHS available
- Programmable model available - see Model HS20-P

* requires the use of a Photocraft or CE compliant cable

DIMENSIONS

(shown with optional connector, 5/8" shaft bore)

**SPECIFICATIONS****Mechanical**

Shaft Bore: Any up to 5/8", 16mm diameter

Maximum Speed: 6,000 rpm

Shaft Loading:

— Radial: 30 lbs. / 13.6 kg

— Axial: 20 lbs. / 9.1 kg

A flexible mounting bracket is recommended.

Bearing Life: 44 x 1,000,000/rpm = hours

Materials:

— Case: Aluminum, anodized

— Shaft: 303 Stainless steel

Weight: 6.5 - 8.5 oz. (185 - 240 grams)

Protection: IP51 (IP66 available)

Electrical Connections

Single Ended Outputs:

Optional 6-Pin	Optional M12 4-pin	Function	Wire Color
1	3	Common	Black
2	1	+vdc	Red
3		Output Z	Brown
4	4	Output A	White
5	2	Output B	Green
6		not used	-

6-pin connector is Amphenol T3402000 or equivalent
M12 4-pin is Turck FS4.4/18.25 or equivalent

Differential Line Driver Outputs:

Optional 8-Pin Connector*	Function	Wire Color
1	Output +A	White
2	Output +B	Green
3	Output +Z	Yellow
4	Supply voltage	Red
5	Common	Black
6	Output -A	Blue or Green
7	Output -B	Brown
8	Output -Z	Orange

* connector is Amphenol T3506000 or equivalent

Standard cable length is 10 ft / 3 meters.

Other lengths are available.

Electrical

Supply Voltages: (specify when ordering)

— 5 ± 5% VDC

— 5-26 VDC

— 8-30 VDC

Current: 50 mA max (no load)

100 mA max (line driver)

Pulse Rate: 0 - 30 kHz

Pulses per Revolution: 1 to 720

(specify when ordering)

Operating Temperature: 0° to 70° C

Output Circuit: (specify when ordering)

Single Ended:

— 7273 open collector

(30 VDC max, 50 mA max)

— 7272 Push-Pull

(50 mA max source or sink)

Differential Line Driver:

— 7272 differential line driver

(output level same as supply voltage)

— RS422 differential line driver

(with regulated 5vdc output level)

Output Waveshape:

Square wave outputs A and B are

50/50 duty cycle nominal. Output Z

(index output) is approximately the

width of one cycle on outputs A or B.

— Pulse symmetry: 180°±30%

— Pulse interval jitter: 30% max

— Quadrature: 90°±30% max

— Phase jitter: 30% max

Anti-jitter: (single output models only)

Increases the pulse hysteresis to 1/2 of a pulse

width, eliminating the effects of mechanical

vibration and the possible dither that results

in false output pulses. For example a 10

pulse per revolution output would have 18°

hysteresis (i.e. 360° ÷ 10 × 1/2).

Accessories

See our website or contact us for more

information about accessories.

MODEL NUMBER

HS20	Model Number	Shaft Bore: B - 3/8", .5 = 1/2", .625 = 5/8", M10 = 10mm, M12 = 12mm, M16 = 16mm others available	Output Type: leave blank for single output on A, Q = quadrature outputs on A and B	Index Output: leave blank for no index, Z = index output	Pulses Per Revolution: a number from 1 to 720	Anti-jitter option: leave blank for no anti-jitter, AJ = anti-jitter option (single output models only)	Supply Voltage: 5 = 5vdc, 5-26 = 5-26vdc 8-30 = 8-30vdc	Output Circuit: leave blank for 7272 Push/Pull, C = 7273 open collector, DH = 7272 line driver, DL = RS422 line driver	Cable/Connector: leave blank for attached 10' (3meter) cable, S = 6 or 8 pin connector, S3 = M12 4-pin connector	Modification Number: optional modification or special feature ID. Call or see our website.	Accessories: leave blank for no accessories. Call or see our website for more information.
------	--------------	---	--	--	---	---	---	--	--	--	--

Example: **HS20.5Q-720/8-30DHS** - 1/2" shaft bore, quadrature outputs, 720 ppr, 8-30 vdc, 7272 differential line driver output, optional side connector (8-pin)



PO Box 25135 813-886-4000
Tampa FL 33622-5135, USA 800-237-0946
tco.com • photocraftencoders.com