

HS20-P144AJ Series 20 Programmable Hollow Shaft Encoder

DESCRIPTION

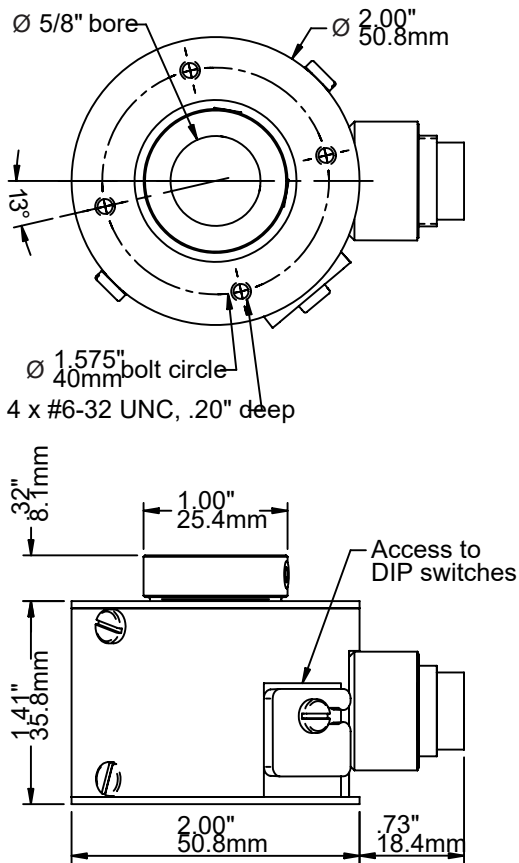
The HS20-P144AJ hollow shaft encoder fits onto an existing shaft and converts shaft rotation into square wave output pulses to provide an accurate and reliable means of digitizing position, rate, or length of travel. The number of pulses per each revolution of the shaft is determined by setting configuration switches. Flexible mounting brackets are available to secure the encoder without rigidly mounting it to the machine frame.

FEATURES

- Up to 5/8" or 16mm shaft bore diameter
- Selectable Pulses/Revolution (up to 144pr)
- ESD / Short Circuit / Reverse Voltage Protected
- Exclusive "Anti-jitter" Circuit for Conveyor Applications

DIMENSIONS

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



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SPECIFICATIONS

Mechanical

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

Shaft Loading:

- Radial: 30 lbs. / 13.6 kg
- Axial: 20 lbs. / 9.1 kg

A flexible mounting bracket is recommended.

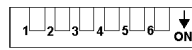
Bearing Life: 44 x 1,000,000/rpm = hours

Materials:

- Case: Aluminum, anodized
- Shaft: 303 Stainless steel
- Switch access door: plastic

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

Configuration Switches



Not Used

Pulses per Revolution						Selection										
2	3	4	5	6		8	9	12	16	18		24	36	48	72	144
1	□	□	□	□	□	8	■	■	■	■	■	24	■	■	■	■
2	□	□	□	□	□	9	□	□	□	□	□	36	■	■	■	■
3	■	□	□	□	□	12	■	■	■	■	■	48	■	■	■	■
4	■	■	□	□	□	16	□	□	□	□	□	72	■	■	■	■
6	□	□	□	□	□	18	■	■	■	■	■	144	■	■	■	■

Switch definitions: □ Up (off), ■ Down (on).

Outputs

Pulses per Revolution Output: Selectable by setting configuration switches 2 to 6.

Output is "low" when initially powered.

Anti-jitter feature: Increases pulse output hysteresis to 1/2 of a pulse width eliminating the effects of mechanical vibration and the possible dither that results in false output pulses.

Electrical

Supply Voltages (+vdc): (specify when ordering)
 5 ± 5%Vdc or 8 to 30Vdc

Supply Current: 50 ma max (no load)
 100 ma max (line driver)

Output Circuit: (specify when ordering)

Single Ended:

- 7273 open collector (30Vdc 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)

Operating Temperature: 0° to 70°C

Maximum Operating Speed: 2,500 rpm

Electrical Connections

Single Ended Outputs:

6-Pin	Function	Color
1	Common	Black
2	+vdc	Red
4	Output A	White
3, 5, 6	not used	-

6-pin connector is Amphenol T3402000 or equivalent

Single Ended Outputs: M12 4-pin

#-pin	Function	Color
1	Supply voltage	Red / Brown
2	Output B	Green / White
3	Common	Black / Blue
4	Output A	White / Black

M12 4-pin is Turck FS4.4/18.25 or equivalent

Differential Line Driver Outputs:

8-Pin	Function	Color
1	Output +A	White
4	+vdc	Red
5	Common	Black
6	Output -A	Green
2, 3, 7, 8	not used	-

8-pin connector is Amphenol T3506000 or equivalent

Accessories Call or see our website for more information about Cables and Flexible Mounting Brackets.

MODEL NUMBER

HS20	P144AJ				
Model Number					
Shaft Bore: B = 3/8", .5 = 1/2", .625 = 5/8", M10 = 10mm, M12 = 12mm, M16 = 16mm other sizes available - consult factory	Program Name Call or see our website for information about other available programs for this encoder model.	Supply Voltage: 5 = 5vdc, 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: HS20.5-P144AJ/8-30 - 1/2" shaft bore, P144AJ program, 8-30Vdc, push/pull output, attached 10' cable