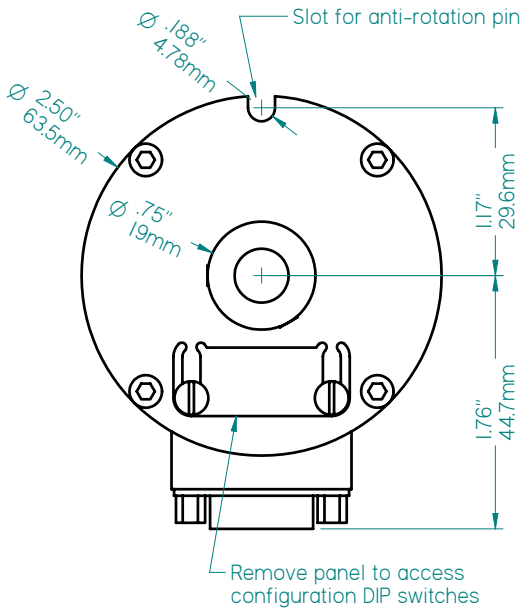
MODEL HS25-P64Q — Quadrature Programmable Hollow Shaft

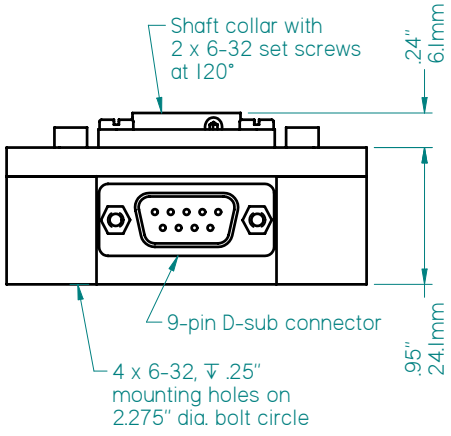
FEATURES

- **Up to 3/8" or 10mm shaft bore diameter**
- **DIP switch selectable pulses per revolution**
- **Quadrature (A and B) pulse outputs**
- **CE and RoHS compliant available**
- **ESD and short circuit protection**
- **5 vdc and 8 to 30 vdc supply voltages**
- **9-pin D-Sub or 4-pin M12 connector**
- **Non-programmable models available - see HS25**

DIMENSIONS

(shown with 3/8" shaft bore and 9-pin D-sub connector)



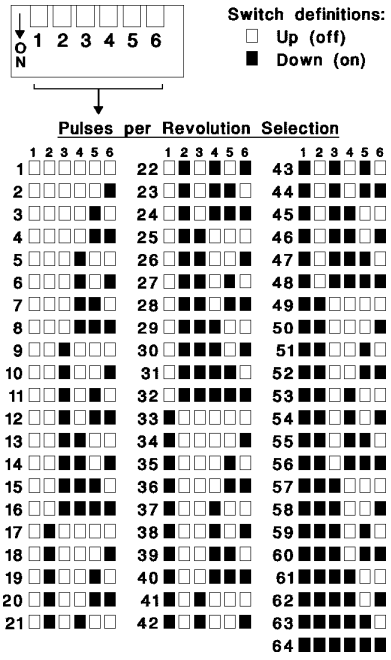


SPECIFICATIONS

Mechanical

Shaft Bore: Any up to 3/8", 10mm diameter
Maximum Speed: 2,000 rpm
Shaft Loading:
— Radial: 5.5 lbs. / 2.5 kg max.
— Axial: 2.2 lbs. / 1 kg max.
A flexible mounting bracket is required.
Bearing Life: 42 x 1,000,000/rpm = hours
*If the encoder is rigidly attached to the machine frame, the bearings **will** fail.*
Materials:
— Case: Aluminum, anodized
— Shaft: 303 Stainless steel
— Switch cover: ABS plastic
Weight: 5.5 oz. (156 grams)
Enclosure Rating: IP50

Configuration Switches



Electrical

Supply Voltages: (specify when ordering)
5 ± 5% VDC or 8-30 VDC
Current: 50 mA max (no load)
Pulse Rate: 0 - 30 kHz
Operating Temperature: 0° to 70° C
Output Circuit: (specify when ordering)
Output voltage level is approximately the same as the input voltage level.
Single Ended:
— 7273 open collector (30vdc/50mA max)
— 7272 Push/Pull (50mA max source/sink)
Differential Line Driver:
— 7272 line driver (output same as input volts)
— RS422 line driver (regulated 5vdc output)
Output Waveshape:
Square wave outputs A and B are 50/50 duty cycle nominal. A leads B by 90° for clockwise rotation when viewed from shaft collar end.
— Pulse symmetry: 180°±30%
— Pulse interval jitter: 30% max
— Quadrature: 90°±30% max
— Phase jitter: 30% max

Electrical Connections

Single Ended Outputs:

9-pin D-sub Pin No.	4-pin M12 Pin No.	Function	Wire Color
1	3	Common	Black
2	1	+vdc	Red
3	4	Output A	White
4	2	Output B	Green
5-9		not used	-

Differential Line Driver Outputs:

9-pin D-sub Pin No.	Function	Wire Color
1	Common	Black
2	+vdc	Red
3	Output +A	White
4	Output +B	Green
6	Output -A	Blue
7	Output -B	Brown
5, 8, 9	not used	-

MODEL NUMBER

HS25		—	P	64Q	/					
Model Number	**Shaft Bore:** **A**=5/16", **B**=3/8", **C**=1/4", **.188**=3/16", **M6**=6mm, **M8**=8mm, **M10**=10mm		**P**=Programmable model	**Program:** name of factory configured program.		**Supply Voltage:** **5**=5vdc, **8-30**=8 to 30 vdc	**Output Circuit:** leave blank for push/pull **C**=NPN open collector, **DH**= 7272 line driver **DL**=RS422 line driver	**Connector:** leave blank for 9-pin D-Sub, **S3**=4-pin M12 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: **HS25B-P64Q/8-30** - 3/8" shaft bore, programmable model factory configured with the 64Q program, 8-30 vdc, push/pull output, 9-pin D-Sub connector

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