

DESCRIPTION

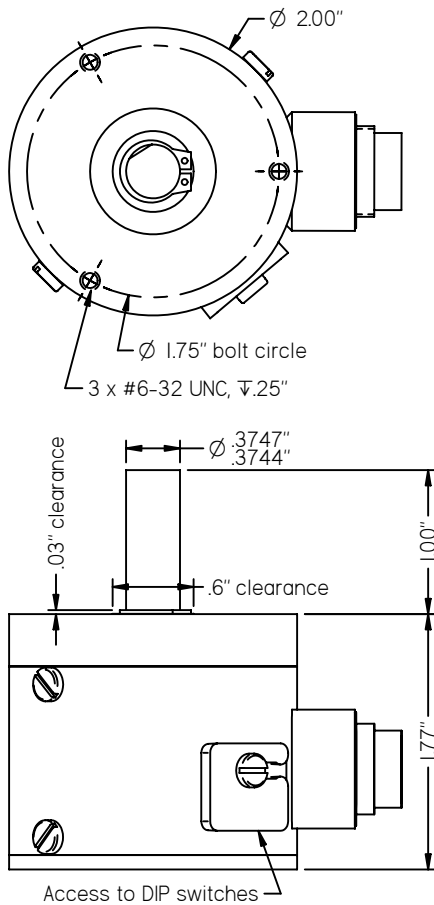
The R20-P240Q shaft encoder converts shaft rotation into A and B square wave output pulses to provide an accurate and reliable means of digitizing position, rate, or length of travel. The number of pulses per each revolution of the shaft are selectable by setting configuration switches. The R20 is intended to be shaft coupled using a flexible shaft coupling or other means to resolve shaft to shaft misalignment.

FEATURES

- Selectable Pulses/Revolution (up to 120ppr)
- ESD / Short Circuit / Reverse Voltage Protected
- Quadrature Outputs (A and B outputs)
- Up to 3/8" shaft diameter, optional double ended
- Attached cable, or 16mm or M12 connector

DIMENSIONS

(shown with 16mm connector, 3/8" diameter shaft)



SPECIFICATIONS

Mechanical

Shaft Loading:

- Radial: 40 lbs. / 18.1 kg
- Axial: 30 lbs. / 13.6 kg

A flexible coupling is recommended.

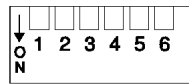
Bearing Life: 32 x 1,000,000/rpm = hours

Materials:

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

Weight: 10 oz. (285 grams)

Configuration Switches



Pulses per Revolution Selection

1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1	□	□	□	□	□	6	■	■	□	□	□	24	□	■	■	■	□
2	■	□	□	□	□	8	■	■	■	□	□	30	□	■	■	■	■
3	■	■	□	□	□	10	□	□	■	□	□	40	■	■	■	■	□
3½	■	■	■	□	□	12	■	□	□	□	□	60	■	■	■	■	■
4	□	■	□	□	□	15	■	■	■	■	□	120	□	□	□	□	□
5	■	■	■	■	□	20	■	■	■	■	■						

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

Outputs

Quadrature Outputs: Selectable by setting configuration switches 1 to 6.

Two outputs, A and B, have the selected pulses per revolution determined by the configuration switch settings. A leads B by 90° for clockwise rotation viewed from the shaft end. Both outputs are high when power is initially applied.

Accessories (call or see our website)

Adapters, Cables, Flexible Couplings, Measuring Wheels, Mounting Brackets

Electrical

Supply Voltages (+vdc): (specify when ordering)

5 ± 5% vdc or 8 to 30 vdc

Supply Current: 50 ma max (no load)

100 ma max (line driver)

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)

Operating Temperature: 0° to 70° C

Maximum Operating Speed: 2,500 rpm

Electrical Connections

Single Ended Outputs:

Optional 6-Pin	Optional M12 4-pin	Wire Function	Wire Color
1	3	Common	Black
2	1	+vdc	Red
4	4	Output A	White
5	2	Output B	Green
3, 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	Function	Wire Color
1	Output +A	White
2	Output +B	Green
4	+vdc	Red
5	Common	Black
6	Output -A	Blue
7	Output -B	Brown
3, 8	not used	-

8-pin connector is Amphenol T3506000 or equivalent

MODEL NUMBER

R20	P240Q				
Model Number	Program Name	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 cable, S=6 or 8 pin 16mm connector, S3=M12 connector	Modification Number: optional modification or special feature ID. Call or see our website.
Shaft Bore: leave blank for 3/8", A = 5/16", C = 1/4", M8 = 8mm	Call or see our website for information about other available programs for this encoder model.				Accessories: optional accessories (call or see our website).

Example: R20C-P240Q/8-30 - 1/4" shaft diameter, P240Q program, 8-30vdc, push/pull output, attached 10' cable



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