

R20-P64Q

Series 20 Programmable Shaft Encoder

DESCRIPTION

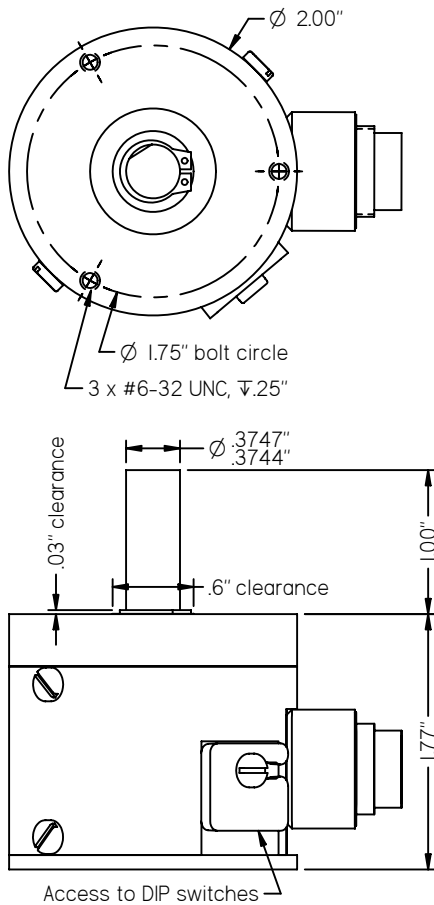
The R20-P64Q shaft encoder converts shaft rotation into A and B square wave output pulses to provide an accurate and reliable means of digitizing position, rate, or length of travel. The number of pulses per each revolution of the shaft are selectable by setting configuration switches. The R20 is intended to be shaft coupled using a flexible shaft coupling or other means to resolve shaft to shaft misalignment.

FEATURES

- Selectable Pulses/Revolution (1 to 64 ppr)
- 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)



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HOTOCRAFT INC

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 Elburn, IL 60119, USA Fax: 630-365-7149
www.photocraftencoders.com

SPECIFICATIONS

Mechanical

Shaft Loading:

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

A flexible coupling is recommended.

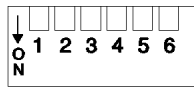
Bearing Life: 32 x 1,000,000/rpm = hours

Materials:

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

Weight: 10 oz. (285 grams)

Configuration Switches



Switch definitions:

- Up (off)
- Down (on)

Pulses per Revolution Selection

1	2	3	4	5	6	1	2	3	4	5	6	1	2	3	4	5	6
1	□	□	□	□	□	22	□	■	□	□	□	43	□	□	□	□	
2	□	□	□	□	■	23	□	□	□	□	■	44	□	□	□	□	
3	□	□	□	□	□	24	□	□	□	□	□	45	□	□	□	□	
4	□	□	□	□	□	25	□	□	□	□	□	46	□	□	□	□	
5	□	□	□	□	□	26	□	□	□	□	□	47	□	□	□	□	
6	□	□	□	□	□	27	□	□	□	□	□	48	□	□	□	□	
7	□	□	□	□	□	28	□	□	□	□	□	49	□	□	□	□	
8	□	□	□	□	□	29	□	□	□	□	□	50	□	□	□	□	
9	□	□	□	□	□	30	□	□	□	□	□	51	□	□	□	□	
10	□	□	□	□	□	31	□	□	□	□	□	52	□	□	□	□	
11	□	□	□	□	□	32	□	□	□	□	□	53	□	□	□	□	
12	□	□	□	□	□	33	□	□	□	□	□	54	□	□	□	□	
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14	□	□	□	□	□	35	□	□	□	□	□	56	□	□	□	□	
15	□	□	□	□	□	36	□	□	□	□	□	57	□	□	□	□	
16	□	□	□	□	□	37	□	□	□	□	□	58	□	□	□	□	
17	□	□	□	□	□	38	□	□	□	□	□	59	□	□	□	□	
18	□	□	□	□	□	39	□	□	□	□	□	60	□	□	□	□	
19	□	□	□	□	□	40	□	□	□	□	□	61	□	□	□	□	
20	□	□	□	□	□	41	□	□	□	□	□	62	□	□	□	□	
21	□	□	□	□	□	42	□	□	□	□	□	63	□	□	□	□	
												64	□	□	□	□	

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)

- Output voltage level is approximately the same as the input voltage level
- 7273 open collector (30 VDC max, 50 mA max)
- 7272 Push-Pull (50 mA max source or sink)
- 7272 differential line driver (also with optional 5vdc output level)

Operating Temperature: 0° to 70° C

Maximum Operating Speed: 2,500 rpm

Outputs

Quadrature Outputs: A and B outputs have the selected pulses per revolution by setting the configuration switches. A leads B by 90° for clockwise rotation viewed from shaft end.

Electrical Connections

Open Collector and Push/Pull Outputs:

Optional Connectors		Wire
6-Pin	M12 4-pin	Function 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	P64Q				
Model Number	leave blank for 3/8", A = 5/16", C = 1/4", M8 = 8mm	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, D=7272 line driver, DL=7272 line driver with 5vdc output level
				Cable/Connector:	leave blank for attached cable, S=6 or 8 pin 16mm, S3=M12 connector
				Modification Number:	optional modification or special feature ID. Call or see our website.
				Accessories:	optional accessories (call or see our website).

Example: R20-P64Q/8-30DS - 3/8" shaft diameter, P64Q program, 8-30vdc, 7272 differential line driver output, 16mm connector (8 pin)