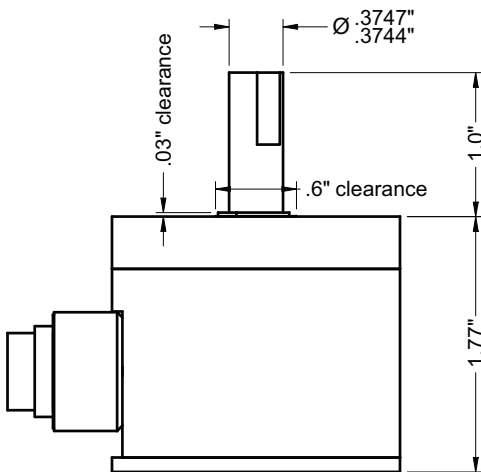
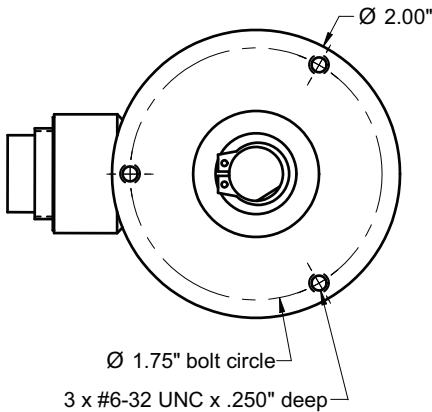


The BlueCoder model RB20 is an optical incremental encoder that use the benefits of blue LED light. It is housed in a 2" diameter x 1-3/4" long enclosure that can be face mounted using three 6-32 x .25" deep mounting holes on a 1.75" diameter bolt circle. Electrical connection is through a 16mm circular connector or an attached cable.

- High-Definition blue-light phased array technology
- Compensated blue-light source
- Wide operating voltage 4.5Vdc - 30Vdc
- High resolution up 10,000 CPR
- Unbreakable code disk
- Low-Lag Time. Excellent for motor regulation
- Shaft size from 0.250" to 0.375" & 4mm to 8mm
- Servo ring and face mount options
- IP65 environmental seal

DIMENSIONS

(Shown with 16mm Din connector)



SPECIFICATIONS

Mechanical

Maximum Speed: 6,000 rpm
Shaft Loading:
 Radial - 50 lbs. for life of 4.1 x 10⁹ revolutions
 Axial - 50 lbs. for life of 4.1 x 10⁹ revolutions
Note: A flexible shaft coupling is recommended to increase bearing life.
Bearing Life: 32 x 1,000,000/rpm = hours
Materials: Case - Aluminum, anodized
 Shaft - 303 Stainless steel
Weight: 10 oz. (285 grams)
Sealing: P65

Electrical Connections

Single Ended Outputs:

16mm Din 6-pin	M12 4-pin	Function	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:

16mm Din 8-Pin	Function	Color
1	Output A	White
2	Output B	Green
3	Output Z	Yellow
4	Supply voltage	Red
5	Common	Black
6	Output A̅	Blue or Green
7	Output B̅	Brown
8	Output Z̅	Orange

8-pin connector is Amphenol T3506000 or equivalent

Electrical

Supply Voltages: 4.5 Vdc to 30 Vdc
 (6.0 Vdc to 30 Vdc for RS422 differential line driver)
Current: 65 mA max exclusive of load
 Short circuit and ESD protected
Operating Temperature: 0° to 70° C
Pulse Symmetry: 180°±36° @ maxRPM
Quadrature Phase Error: 90°±36° @ maxRPM
Phase jitter: 27°
Maximum Frequency: up to 1.4 Mhz
Noise Immunity: Tested to EN61000-6-2
Output Type: (specify when ordering)

- Two channel quadrature square waves (A,B)
 - optional index (Z).
 - optional complimentary outputs (-A,-B,-Z).
- Note: Output A leads B by 90° for clockwise rotation when viewed from shaft end.*

Counts per Revolution: (specify when ordering)
 360, 720, 1000, 1024, 1200, 1250, 1440, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 4800, 5000, 6000, 7200, 8000, 8192, 10000

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)
- Connections:** (specify when ordering)
- Attached 10ft cable
 - 16mm 6/8-pin Din connector
 - M12 4-pin connector

Accessories

See our website or contact us for more information about cables, flexible couplings, and measuring wheels.

MODEL NUMBER

Build Encoder

RB20	Shaft	Output Type	—	CPR	Output Circuit	Connector
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RB20

Shaft Diameter:

- blank = 3/8"
- A = 5/16"
- C = 1/4"
- .187 = .187"
- M4 = 4mm
- M6 = 6mm
- M8 = 8mm

Output Type:

- blank = single output on A,
- Q = quadrature outputs on A & B
- QZ = quadrature outputs on A & B with Z outputs

Counts Per Revolution:

- Choose one number:
- 360, 720, 1000, 1024, 1200, 1250, 1440, 1500, 1800, 2000, 2048, 2400, 2500, 3000, 3600, 4000, 4096, 4800, 5000, 6000, 7200, 8000, 8192, 10000

Output Circuit:

- blank = 7272 push/pull
- C = NPN open collector open circuit
- DH = Differential line driver - output level same as input level
- DL = RS422 line driver with 5vdc output level

Cable/Connector:

- blank = attached 10ft. shielded cable
- S = 16mm 6/8-pin Din connector
- S3 = 4-pin M12 connector

Example: RB20Q-10240DHS - 3/8" shaft, quadrature outputs, 1024 ppr, differential line driver output, 16mm connector (8-pin)

