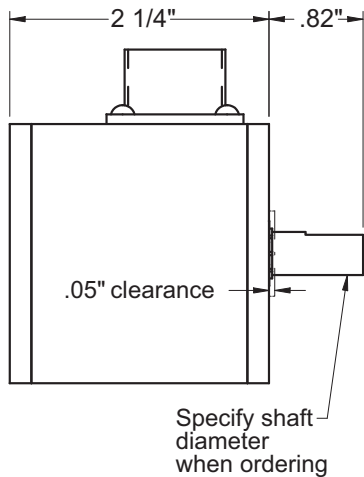
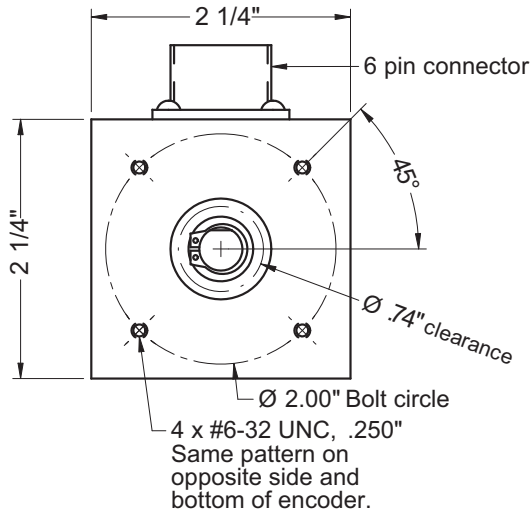


The BlueCoder model RBS is an optical incremental encoder that use the benefits of blue LED light. It is housed in a 2.25" cubed ultra rugged enclosure. Available shaft diameters: 1/4", 5/16", 3/8", and 1/2". Multiple face mounting options are available. The MS circular electrical connector is either 6-pin or 10-pin depending on model.

- Heavy duty bearings
- 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
- IP50 environmental seal

**DIMENSIONS**



**SPECIFICATIONS**

**Mechanical**

Maximum Speed: 6,000 rpm

Shaft Loading:

Shaft Diameter	Radial Lbs (kg)	Axial Lbs(kg)	Factor (BL)
1/4, 5/16, 3/8"	25 (11.3)	15 (6.8)	36
1/2"	45 (20.4)	35 (15.9)	37

Note: A flexible shaft coupling is recommended to increase bearing life.

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

Materials: Case - 1/4" Aluminum, anodized  
Shaft - 303 Stainless steel

Weight: 13 oz. (370 grams)

Sealing: IP50

**Electrical Connections**

Single Ended Outputs:

6-Pin Connector	Function	Wire Color
A	Common	Black
B	+Vdc	Red
C	Output Z	Brown
D	Output A	White
E	Output B	Green
F	not used	-

Differential Line Driver Outputs:

6-Pin Connector	10-pin	Function	Color
A	F	Common	Black
B	D	+Vdc	Red
C	A	Output A	White
D	H	Output $\bar{A}$	Blue
E	B	Output B	Green
F	I	Output $\bar{B}$	Brown
-	C	Output Z	Yellow
-	J	Output Z	Orange

**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 (5 Vdc output level)

Connection:

- 6-pin, 10-pin MS

**Accessories**

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

**MODEL NUMBER**

**Build Encoder**

RBS	Shaft	Output Type	—	CPR	Output Circuit
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RBS \_\_\_\_\_ — \_\_\_\_\_

Shaft Diameter:

- A = 5/16"
- B = 3/8"
- C = 1/4"
- .5 = 1/2"

Call for others

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

Example: RBLQ-10240DH - 3/8" shaft, quadrature outputs, 1024 ppr, differential line driver output

