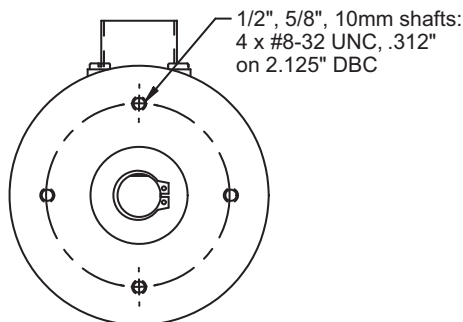
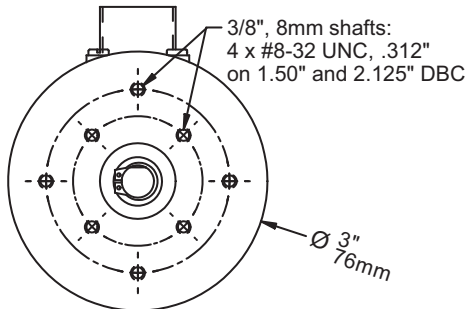
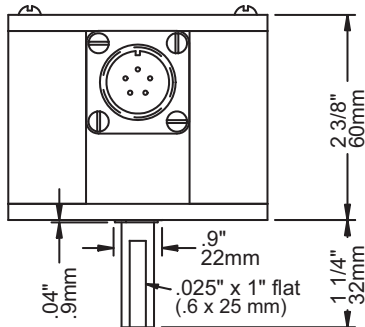


The BlueCoder model RBL is an optical incremental encoder that use the benefits of blue LED light. It is housed in a 3" diameter x 2-3/8 long ultra rugged enclosure. Multiple face mounting options are available. The MS circular electrical connector is either 5-pin, 6-pin or 10-pin depending on model.

- Heavy duty bearings
- High-Definition blue-light phased array technology
- Compensated blue-light source
- Wide operating voltage 4.5Vdc - 30Vdc
- High resolution up to 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) |
|----------------|-----------------|---------------|-------------|
| 3/8" / 8mm | 40 (18.1) | 30 (13.6) | 32 |
| 1/2" / 10mm | 45 (20.4) | 35 (15.9) | 37 |
| 5/8" | 50 (22.7) | 40 (18.1) | 41 |

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

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

Materials: Case - Aluminum, anodized
Shaft - 303 Stainless steel

Weight: 10 oz. (285 grams)

Sealing: IP50

Electrical Connections

Single Ended Outputs:

| 5-Pin Connector | Function | Wire Color |
|-----------------|----------|------------|
| A | +Vdc | Red |
| B | Common | Black |
| C | Output A | White |
| D | Output B | Green |
| E | Output Z | Brown |

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 A̅ | Blue |
| E | B | Output B | Green |
| F | I | Output B̅ | Brown |
| - | C | Output Z | Yellow |
| - | J | Output Z̅ | 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:

• 5-pin,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

| RBL | Shaft | Output Type | - | CPR | Output Circuit |
|-----|-------|-------------|---|-----|----------------|
|-----|-------|-------------|---|-----|----------------|

RBL _____ - _____

Shaft Diameter:

blank = 3/8"

.5 = 1/2"

.625 = 5/8"

M8 = 8mm

M10 = 10mm

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

