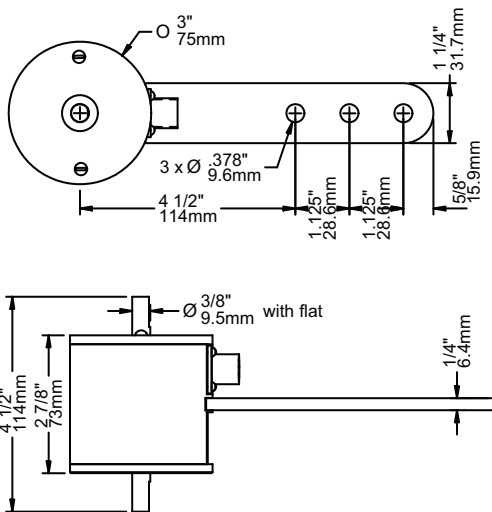


The BlueCoder model RBH is an optical incremental encoder that use the benefits of blue LED light. It is housed in a 3" diameter x 2-3/8 long ultra rugged enclosure with an integral mounting arm, compatible with a variety of mounting accessories for installation either above or below a moving web or conveyor. When used with the MW-1 (12.00" circumference) or MW-30 (30.00cm circumference) measuring wheel it can accurately track the web or conveyor to within ±.007" or ±.016cm per revolution. Solid construction and heavy duty bearings make this encoder a great choice for long-term operation in continuous duty applications.

- 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:
 Radial - 25 lbs. / 11.3 kg
 Axial - 10 lbs. / 4.5 kg
Note: A flexible shaft coupling is recommended to increase bearing life.
Bearing Life: 70 x 1,000,000/rpm = hours
Materials: Case - Aluminum, anodized
 Shaft - 303 Stainless steel
Weight: 1.34 lbs. / .6 kg
Sealing: IP50

Electrical Connections

Single Ended Outputs:

Connector		4-pin	Function	Wire Color
3-pin	A/1	3	Common	Black
	B/2	1	+vdc	Red
--	C/3	--	Output Z	Brown/Green
	D/4	4	Output A	White
--	E/5	2	Output B	Green
--	F/6	--	no connection	

3-pin is C-5015 style 97-3102A-10SL-3P or equivalent
 6-pin is C-5015 style 97-3102A-14S-6P or equivalent; or
 16mm Amphenol T3402000 or equivalent
 4-pin is 12mm Turck FS4.4/14.5 or equivalent

Differential Line Driver Outputs:

Connector		8-pin	10-pin	Function	Wire Color
A	5	F	Common		Black
B	4	D	+vdc		Red
C	1	A	Output A		White
D	6	H	Output A̅		Blue/Green
E	2	B	Output B		Green
F	7	I	Output B̅		Brown
--	3	C	Output Z		Yellow/Green
--	8	J	Output Z̅		Orange/Brown
--	--	G	Case Gnd		Purple

6-pin is C-5015 style 97-3102A-14S-6P or equivalent
 8-pin is 16mm Amphenol T3506000 or equivalent
 10-pin is C-5015 style 97-3102E-18-1P or equivalent
 see M226 modification drawing for additional details

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:
 Standard - MS style 3-pin or 6-pin connector
 M131 Modification - 12mm 4-pin connector
 M198 Modification - 16mm 6-pin or 8-pin connector
 M226 Modification - MS style 10-pin connector

Accessories

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

MODEL NUMBER

Build Encoder

RBH	Output Type	—	CPR	Output Circuit	Modification Number	Measuring Wheel
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RBH

Output Type:
 blank = single pulse A output,
 Q = quad. outputs on A & B
 QZ = quad. 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

Modification Number:
 Standard = MS style 3-pin or 6-pin connector
 M131 = 12mm 4-pin connector
 M198 = 16mm 6-pin or 8-pin connector
 M226 = MS style 10-pin connector

Measuring Wheel:
 MW1 = 12" circumference
 MW1R = 12" circumference with replaceable o-ring
 MW1W = 12" circumference
 MW30 = 30cm circumference
 MW30R = 30cm circumference with replaceable o-ring
 MW30W = 30cm circumference 25mm wide

Example: RBHQ-10240DH MW10 - quadrature outputs, 1024 cpr, differential line driver output, 10" measuring wheel

