

The BlueCoder model RW is an optical incremental encoder that utilizes the benefits of blue LED light. The intergated tortion spring adjusts the measuring wheel force applied against surface. Electrical connection is through a M12 connector or an attached cable.

- Compact size
- East to install and adjust
- Generates pulses for accurate linear measurement
- Precision 6in circumference measuring wheel
- High-Definition reflective blue-light phased array technology for increased accuracy over life-time
- Compensated blue-light source for ultra stable operation over wide temperature variance range
- Wide operating voltage 4.75Vdc - 30Vdc
- High resolution up 4800 CPR
- Unbreakable code disk
- ESD, Short Circuit, Reverse Voltage protection

SPECIFICATIONS

Mechanical

Maximum Speed: 6,000 RPM

Shaft Loading: 5lb (2.25kg) axial and radial

Bearing Life: 290 x 1,000,000/rpm = hours

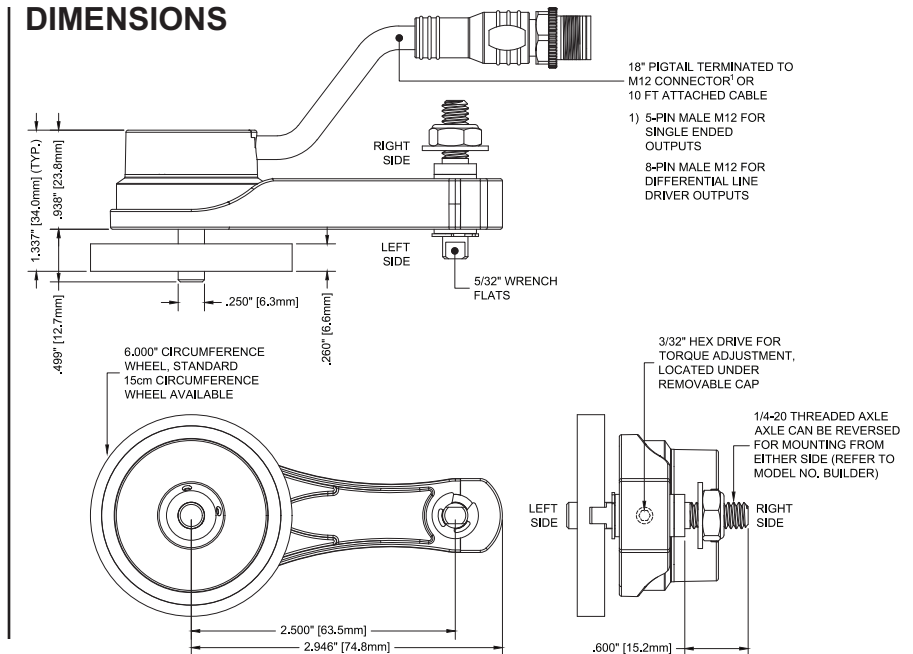
Weight (with pigtail): 4.3 oz. (120 grams)

Materials: Base: Aluminum; Shaft: 303 stainless steel; Housing/Handle: PA66 nylon

Environmental Protection: IP54

See Reverse side for
Installaion instructions

DIMENSIONS



Electrical Connections

Single Ended Outputs: 5-pin M12

#-pin	Function	Cable Wire Color	M12 Pigtail Wire Color
1	Supply voltage	Red	Brown
2	Output B	Green	White
3	Common	Black	Blue
4	Output A	White	Black
5	Output Z	Brown	Gray

Differential Line Driver Outputs: 8-pin M12

#-pin	Function	Cable Wire Color	M12 Pigtail Wire Color
1	Output +A	White	White
2	Supply Voltage	Red	Brown
3	Output -A	Blue	Green
4	Output B	Green	Yellow
5	Output -B	Brown	Gray
6	Output +Z	Yellow	Pink
7	Common	Black	Blue
8	Output -Z	Orange	Red

Electrical

Supply Voltages: 4.75 Vdc to 30 Vdc

Current: 40mA max exclusive of load
Short circuit and ESD protected

Operating Temperature: 0° to 70°C

Quadrature Phase Error:
CPR 90°± 22° @ 100kHz output

Minimum Edge Separation:
CPR 68° @ 100kHz output

Maximum Frequency: up to 480 Khz

Noise Immunity: Tested to EN61000-6-2

Output Type: (specify when ordering)

- Single channel (A)
- Quadrature (A,B)
- Quadrature with index (A,B,Z)

Note: Output A leads B by 90° for clockwise rotation when viewed from shaft clamp face.

Counts per Revolution (CPR): (specify when ordering)

240, 250, 256, 300, 480, 500, 512, 600, 960, 1000, 1024, 1200, 1920, 2000, 2048, 2400, 3840, 4000, 4096, 4800
(consult factory for other CPRs: 320, 400, etc.).

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)

Connections: (specify when ordering)

- Attached 10ft (3m) cable
(consult factory for other cable lengths)
- M12 Male 5-pin or 8-pin connector

Accessories

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

Build Encoder MODEL NUMBER

RW	Pivot Shaft	Output Type	—	CPR	Output Circuit	Connector	Measuring Wheel
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RW

Pivot Shaft

blank = right side

L = left side

Output Type:

blank = single output on A

Q = quad. outputs on A & B

QZ = quad. outputs on A & B with Z outputs

Counts per Revolution (CPR):

(specify when ordering)

Examples:

240, 250, 256, 300, 480, 500, 512, 600, 960, 1000, 1024, 1200, 1920, 2000, 2048, 2400, 3840, 4000, 4096, 4800

(consult factory for other CPRs: 320, 400, etc.)

Example: **RWQ-1200S MW6** - RW with right side pivot shaft, quadrature output, 1200 CPR, 5-pin M12 pigtail, with 6in circumference measuring wheel.

Output Circuit:

blank = 7272 push/pull

C = NPN open collector

D = Differential line driver

Cable/Connector:

blank = attached 10ft (3m) shielded cable

S = 5-pin M12 (single ended)

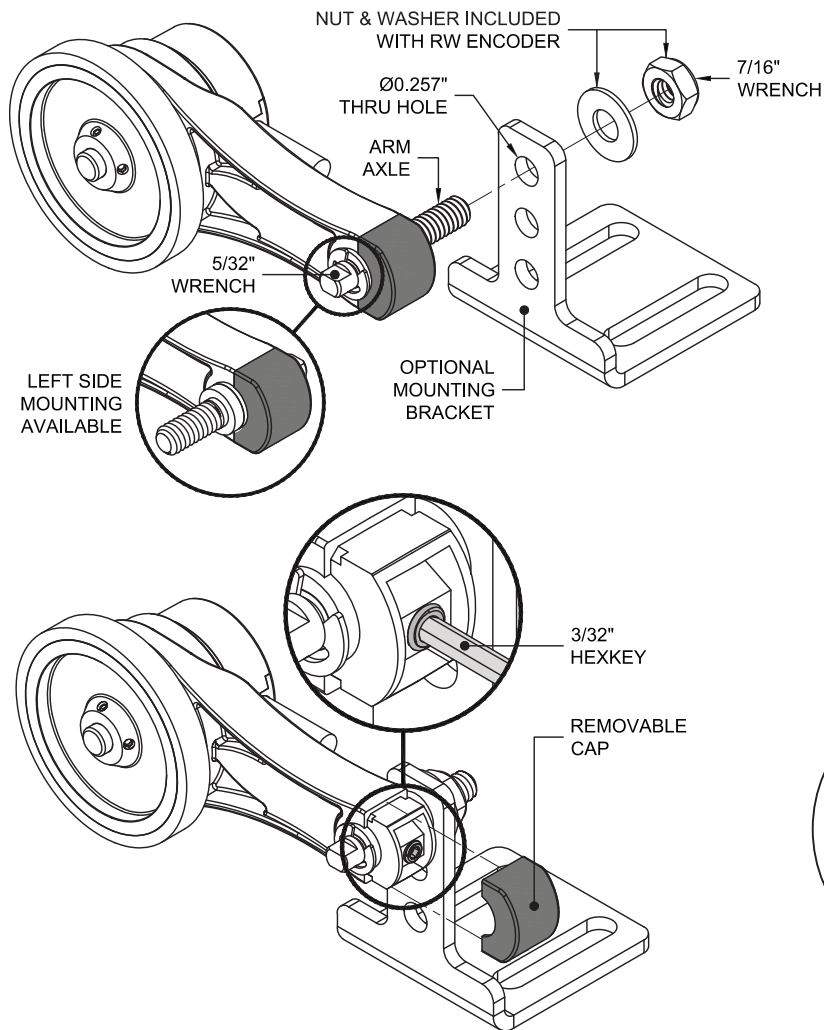
or 8-pin M12 (differential) connector

Measuring Wheel:

MW6 = 6in circumference

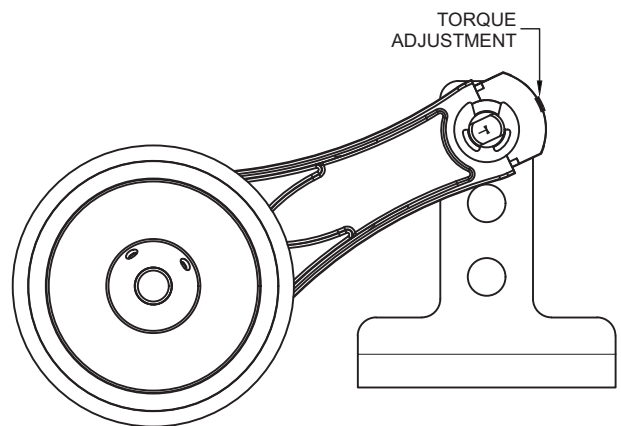
MW6K = 6in circumference Knurled

MW20 = 20cm circumference



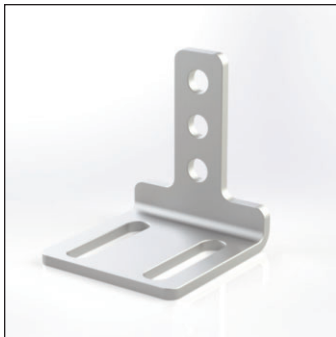
INSTALLATION

1. INSERT ARM AXLE INTO PREFERRED Ø0.257" THRUHOLE
2. FASTEN USING WASHER & 1/4-20 HEX NUT (PROVIDED W/ RW ENCODER)
3. REMOVE CAP FROM ARM TO ACCESS SET SCREW
4. INSERT 3/32" HEXKEY AND APPLY UPWARD PRESSURE TO PRE-TENTION SPRING, THEN LOCK INTO PLACE.
5. REATTACH CAP TO ARM



Accessories

Mounting Options



MB-RWB
bracket, rigid, RW encoder

Replacement Wheels



MW-6S-C
6in circumference

MW-6KS-C
6in circumference Knurled

MW-20S-C
20cm circumference

M12 5-pin Cables

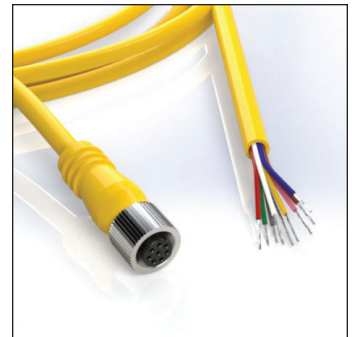


M12E.5-5-6
6ft (1.8m) cable

M12E.5-5-15
15ft (4.5m) cable

M12E.5-5-25
25ft (7.6m) cable

M12 8-pin Cables



M12E.8-8-2M
6.5ft (2m) cable

M12E.8-8-8M
26ft (8m) cable

Visit www.ttco.com/encoders/ for full Accessories list