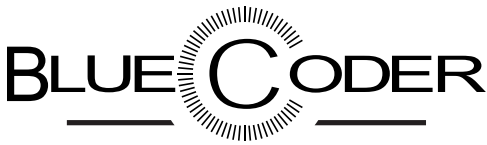


MODEL R14

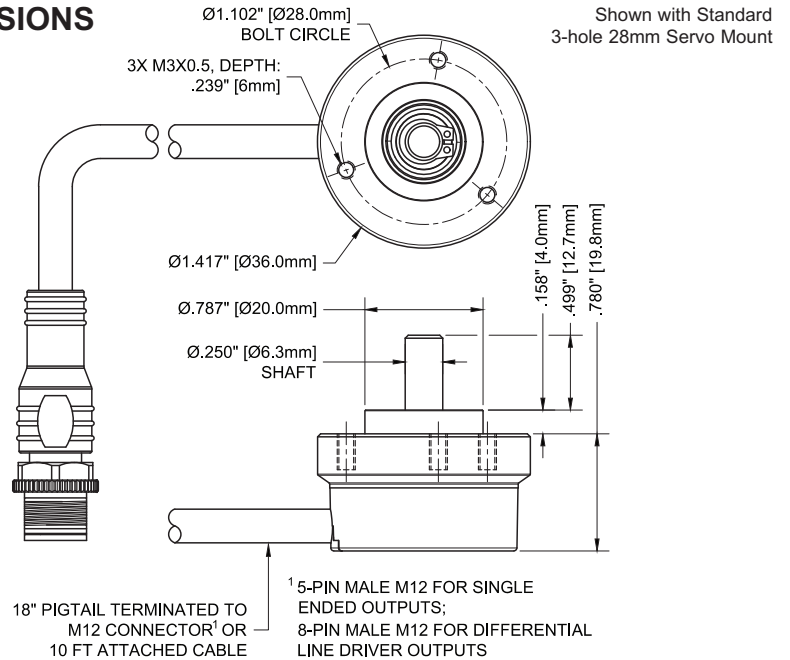
BlueCoder Size 14 Shaft Encoder



The BlueCoder model R14 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
- 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

DIMENSIONS



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): 2.5 oz. (70 grams)

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

Environmental Protection: IP54

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, flanges, shaft couplings, flex brackets, etc.

MODEL NUMBER

Build Encoder	Output Type	—	CPR	Output Circuit	Connector
R14	Integrated Mounting	Shaft	—	—	—

R14

Integrated Mounting

blank = 3-hole 28mm Servo Mount

X1 = 4-hole 1.1" Servo Mount

Shaft

C = 1/4in

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.)

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

Example: R14CQ-1200S - R14 with 1/4" shaft, quadrature output, 1200 CPR, 5-pin M12 pigtail.



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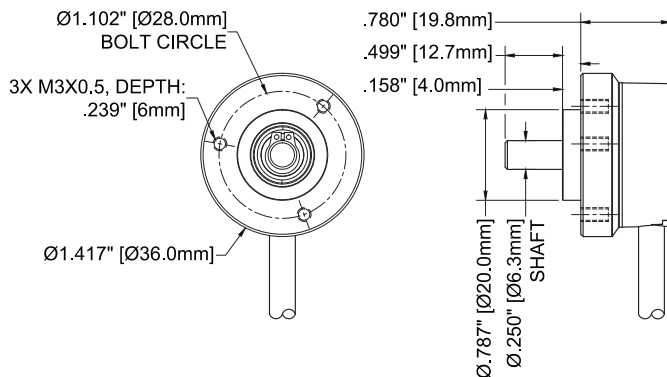
070-0710, Rev 1

MODEL R14

Mounting Options

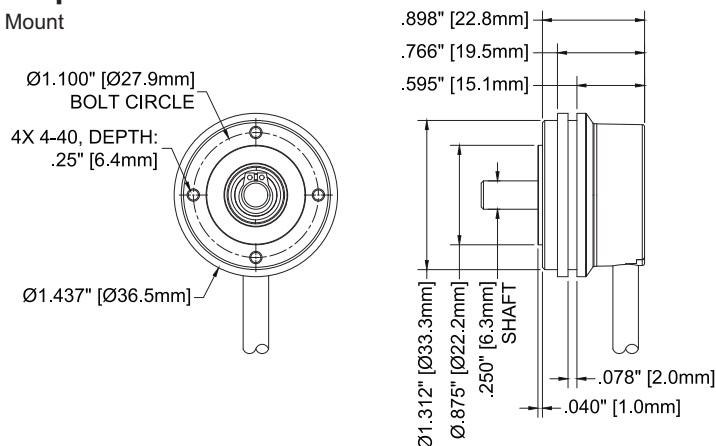
R14 with Standard Mount

Standard – 3-hole 28mm Servo Mount



R14 with Mount Option X1

X1 – 4-hole 1.1" Servo Mount



Accessories

Tether



MB-FB14
flexible mounting tether

External Flange



MB-FL9
square flange adapter

M12 5-pin Cables

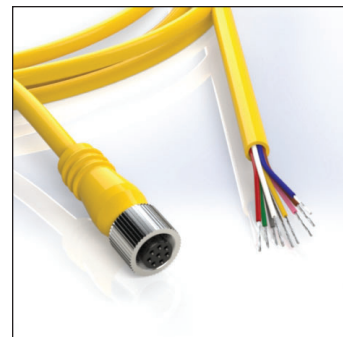


M12E.5-5-6
6ft (1.8m) cable

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

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