

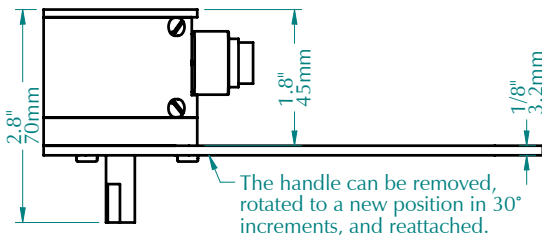
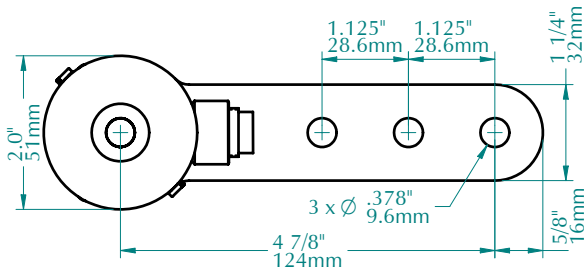
with optional MW-8 measuring wheel and 16mm connector

FEATURES

- Generates pulses for accurate linear measurement
- Heavy Duty construction
- Compact size
- Precision 8" or 20cm circumference measuring wheel
- 16mm or M12 connector, or attached cable
- "Anti-jitter" and other material handling features
- ESD, Short Circuit, Reverse Voltage protection
- Various mounting hardware kits are available
- Programmable model available - see Model R21-P
- Dual measuring wheels - see Model R22

DIMENSIONS

(shown with optional 16mm connector)



The handle can be removed, rotated to a new position in 30° increments, and reattached.



OVER 35 YEARS OF MATERIAL HANDLING AND INDUSTRIAL EXPERIENCE

602 E. North Street **630-365-7148**
 Elburn, IL 60119, USA Fax: 630-365-7149
www.photocraftencoders.com

SPECIFICATIONS

Mechanical

- Maximum Speed:** 6,000 rpm
Shaft Loading:
 — Radial: 40 lbs. / 18.1 kg
 — Axial: 30 lbs. / 13.6 kg
Bearing Life: 32 x 1,000,000/rpm = hours
Materials:
 — Case: Aluminum, anodized
 — Shaft: 303 Stainless steel
Weight: 12 oz. (340 grams)
Protection: IP50 (IP64 is available)

Electrical Connections

Single Ended Outputs:

Optional 6-pin	Optional M12 4-pin	Function	Wire Color
1	3	Common	Black
2	1	+vdc	Red
3	-	Output Z	Brown
4	4	Output A	White
5	2	Output B	Green
6	-	not used	-

6-pin connector is Amphenol T3402000 or equivalent
 M12 4-pin is Turck FS4.4/18.25 or equivalent

Differential Line Driver Outputs:

Optional 8-Pin Connector	Function	Wire Color
1	Output +A	White
2	Output +B	Green
3	Output +Z	Yellow
4	Supply voltage	Red
5	Common	Black
6	Output -A	Blue or Green
7	Output -B	Brown
8	Output -Z	Orange

8-pin connector is Amphenol T3506000 or equivalent

Standard cable length is 10 ft / 3 meters.
 Other lengths are available.

Electrical

- Supply Voltages:** (specify when ordering)
 5 VDC or 8-30 VDC
Current: 50 mA max (no load)
 100 mA max (line driver)
Pulse Rate: 0 - 30 kHz
Pulses per Revolution: (specify when ordering)
 1 to 1200 (call for values up to 4800)
Operating Temperature: 0° to 70° C
Output Circuit: (specify when ordering)
 Output voltage level is approximately the same as the input voltage level.
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 (also with optional 5vdc output level)

Output Waveshape:

Square wave outputs A and B are 50/50 duty cycle nominal. Output Z (index output) is approximately the width of one cycle on outputs A or B. Output A leads B by 90° for clockwise rotation viewed from end by handle.
 — Pulse symmetry: 180° ± 30%
 — Pulse interval jitter: 30% max
 — Quadrature: 90° ± 30% max
 — Phase jitter: 30% max

Anti-jitter: (single output models only)
 Increases the pulse hysteresis to 1/2 of a pulse width, eliminating the effects of mechanical vibration and possible false output pulses. For example a 10 pulse per revolution output has 18° hysteresis (i.e. 360° ÷ 10 × 1/2).

Accessories

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

MODEL NUMBER

R21									
Model Number									
Output Type: leave blank for single output on A, Q = quadrature outputs on A and B									
Index Output: leave blank for no index, Z = index output									
Pulses Per Revolution: a number from 1 to 1200 (call for information about higher values)									
Anti-jitter option: leave blank for no anti-jitter, AJ = anti-jitter option (single output models only)									
Supply Voltage: 5 or 8-30									
Output Circuit: leave blank for 7272 Push/Pull, C = 7273 open collector, D = 7272 line driver, DL = 7272 line driver with 5vdc output level									
Cable/Connector: leave blank for attached cable, S = 16mm connector, S3 = M12 connector									
Modification Number: optional modification or special feature ID. Call or see our website.									
Accessories: leave blank for no accessories. Call or see our website for more information.									

Example: R21-800/8-30DS MW8-10 - R21 with single output, 800 ppr, 8-30 vdc, 7272 differential line driver (+A/-A), 16mm connector (8-pin), Accessories: MW-8 wheel and 10' cable.