Model 755RG 38mm High Precision Servo or Square Flange Mount

Features
• Miniature Size (38mm Diameter)
• Up to 30,000 Cycles Per Revolution
• Servo or Square Flange
• 1 MHz Frequency Response Available
• Extended Temperature Operating Range Available

The Model 755RG Size Encoder is ideal for applications requiring a small, high precision, high performance encoder. Approximately 38mm in diameter and 38mm long, it will fit where many encoders cannot. Designed with all metal construction and shielded ball bearings, it will provide years of trouble-free use.

Common Applications
Robotics, Assembly Machines, Motor-Mounted Feedback, Phototypesetters, Printers & Digital Plotters, Elevator Controls, Medical Diagnostic Equipment

Model 755RG PPR Options
0001* 0005* 0010* 0020 0025* 0030* 0040* 0050* 0060
0100 0120 0125 0128* 0144* 0150* 0160* 0200 0240*
0250 0254* 0256* 0300 0333* 0360 0400 0500 0512
0600 0625* 0635 0720 0800 0900* 1000
1024 1200 1250a 1270 1440 1500 1800 2000 2048 2400*
2500 2540a 2880* 3000a 3600a 4000a 4096a 5000a 6000a 7200a
7500a 9000a 10,000a 10,240a 12,500a 14,400a 15,000a 18,000a 20,000a
20,480a 25,000a 30,000a

* Contact Customer Service for High Temperature Option.
a High Temperature Option (H) limited to 85º C maximum for these PPR options.

For specification assistance call Customer Service at +44 (0)1978 262100

NOTES:
1. Contact Customer Service for additional options.
2. 0º to 85º C for certain resolutions, see PPR Options.
3. Contact Customer Service for index gating options.
4. For non-standard cable lengths, please call our sales office.

Model 755RG Ordering Guide
Red type indicates price adder options. Not all configuration combinations may be available. Contact Customer Service for details.

Model 755RG 38mm High Precision Servo or Square Flange Mount
Model 755RG Specifications

Electrical
- Input Voltage: 4.75 to 28 VCC max for temperatures up to 70º C
- Input Current: 100 mA max with no output load
- Input Ripple: 100 mV peak-to-peak at 0 to 100 kHz
- Output Format: Incremental. Two square waves in quadrature with channel A leading B for clockwise shaft rotation, as viewed from the encoder mounting face. See Waveform Diagrams below.
- Output Types: Open Collector - 50 mA max per channel
- Index: Occurs once per revolution. The index for units >3000 PPR is 90º gated to Outputs A and B. See Waveform Diagrams below.
- Freq Response: Up to 1 MHz
- Noise Immunity: Tested to BS EN61000-4-2; IEC801-3; BS EN55022 (with European compliance option); BS EN61000-4-4; DDENV 50141; DDENV 50204; BS EN55022
- Symmetry: 1 to 6000 PPR: 180º (±18º) electrical output
- Min Edge Sep: 1 to 6000 PPR: 67.5º electrical at 100 kHz output
- Rise Time: Less than 1 microsecond
- Accuracy: Instrument and Quadrature Error: For 200 to 1999 PPR, 0.017º mechanical (1.0 arc minutes) from one cycle to any other cycle. For 2000 to 3000 PPR, 0.01º mechanical (0.6 arc minutes) from one cycle to any other cycle. Interpolation error (units > 3000 PPR only) within 0.005º mechanical. (Total Optical Encoder Error = Instrument + Quadrature + Interpolation)

Mechanical
- Max Shaft Speed: 7500 RPM. Higher shaft speeds may be achievable, contact Customer Service.
- Shaft Size: Up to 0.250” Diameter (See order code)
- User Shaft Tolerances: g6, Sliding fit for HT heat bore
- Radial Shaft Load: 2.25 Kg max
- Axial Shaft Load: 1.38 Kg max
- Starting Torque: 9.88 x 10⁻³ Nm typical
- Max Acceleration: 1 x 10⁵ rad/sec²
- Electrical Conn: 2M cable (foil and braided shield, 24 SWG conductors) 5 Pin, 6 Pin or 8 Pin connectors available - see Appendix data sheet for connector cover options

Housing: Black non-corrosive finish
Bearings: Precision ABEC ball bearings
Mounting: 3 x M3 on a 30mm PCD, 4 x M3 on a 30mm PCD, 3 x M3 on a 28mm PCD / Square Flange
Weight: 100gm typical

Environmental
- Operating Temp: 0º to 70º C for standard models
- Storage Temp: -25º to +85º C
- Humidity: 98% RH non-condensing
- Vibration: 10 g @ 58 to 500 Hz
- Shock: 50 g @ 11 ms duration
- Sealing: IP50 standard

Model 755RG Servo Mount (RG)

Model 755RG Mounting Flange Option (MA)

Waveform Diagrams

Wiring Table

See appendix Data Sheet for Connector Cover options.
755 Accessories
Cover & Connector Types / Flanges

755 Cover & 5 Pin Binder Connector

755 Cover & 6 Pin MS Connector

755 Cover & M12 EuroFast Connector

755 Cover & M10 Gland + 2M Cable

5E05

5E06

5E08

5SG2
755 Accessories
Cover & Connector Types / Flanges

755 MHH Flange (M-1)

755 Parvex Flange (M-9)

2 Holes Ø2.60
Counter-Bored 5.00 x 3.00 Deep on a Ø37.50 PCD

2 Holes Ø3.50
Counter-Sunk 1.75 Deep on a Ø37.50 PCD

755 Square Flange (M-A)

Ø3.80 THRU 3 x 90° on a Ø47.50 PCD

755 Special Covers & Connector Types

<table>
<thead>
<tr>
<th>Connector Code</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>SE05</td>
<td>5 Pin DIN (Binder)</td>
</tr>
<tr>
<td>SE06</td>
<td>6 Pin M3 (Crown)</td>
</tr>
<tr>
<td>SE08</td>
<td>8 Pin M12 (EuroFast)</td>
</tr>
<tr>
<td>SS02</td>
<td>M10 Gland &amp; 2M Cable</td>
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