HEAVY DUTY

SERIES RF25

NorthStar™ brand

Heavy Duty Resolver

Key Features

- Flange Mount Rugged Housing Immune to Oil, Salt, Water & Dust
- Spaced Bearings for up to 10x the Life of Traditional Duplex Bearings
- Withstands 200g Shock and 40g Vibration
- Shaft Seal Standard

SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

MECHANICAL
Bearing Life: $2 \times 10^8$ Revs at rated shaft load
Shaft Size: 3/8" SS
Shaft Material: 416 SS
Max Radial Shaft Load: 60 lbs.
Max Axial Shaft Load: 40 lbs.
Max Continuous Speed: 20,000 RPM
Moment of Inertia: .004 oz-in-sec$^2$
Mounting Type: Square Flange
Connector: 10pin MS3112E-18-11P
Weight: 1.6 lbs.

ELECTRICAL
Sensing Method: Resolver, Sine/Cosine; 1X speed
Excitation: 26VAC rms, 2.4kHz
Input Current: 22ma max.
Null Voltage: 25mv max.
Electrical Error: 10 Arc min. spread
Transformation Ratio: 0.454 ±5%
Phase Shift: 6 degrees nominal
Dielectric Strength: 500VAC to case, 250VAC phase-to-phase
Mating Connector: 10 pin MS3116F-18-11S

ELECTRICAL CONNECTIONS

<table>
<thead>
<tr>
<th>Signal</th>
<th>Pin</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>R1 – Rotor Hi</td>
<td>A</td>
<td>Red w/White</td>
</tr>
<tr>
<td>R2 – Rotor Hi</td>
<td>B</td>
<td>Yellow w/White</td>
</tr>
<tr>
<td>S1 – Cos Hi</td>
<td>D</td>
<td>Red</td>
</tr>
<tr>
<td>S3 – Cos Lo</td>
<td>F</td>
<td>Black</td>
</tr>
<tr>
<td>S2 – Sin Lo</td>
<td>G</td>
<td>Blue</td>
</tr>
<tr>
<td>S4 – Sin Hi</td>
<td>E</td>
<td>Yellow</td>
</tr>
</tbody>
</table>

SCHEMATIC

Operating Temperature: –55 to +125°C
Storage Temperature: –55 to +125°C
Shock: 200G at 11 milliseconds time duration. Half sine waveform per Mil-S-81963
Vibration: 40G at .06 inch double amplitude at 10-2000 Hz per Mil-S-81963
Humidity: to 98% without condensation
Enclosure: Immune to oil, salt, water and dust

Worldwide Brands: NorthStar™ • Acuro™ • Dynapar™ • Hengstler™ • Harowe™

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Ordering Information
To order, complete the model number with code numbers from the table below:

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<tbody>
<tr>
<td>RF25</td>
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</tbody>
</table>

RF25
Heavy Duty
Flange Mount
Resolver

1
R Round
F Round with Flat
W Round with Two Flats @ 90 Degrees

B MS3202E-16S-1P
C MS3202E-18-1P
F Flying Leads
G MS3112E-10-6P
L MS3112-18-11P
P PT02E-14-19P
R Rear Exit
S Side Exit

DIMENSIONS inches [mm]

CONNECTOR LOCATION

<table>
<thead>
<tr>
<th>Connector Code</th>
<th>Connector Type</th>
<th>Side Location</th>
<th>Rear Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>7 Pin Screw Type</td>
<td>2.51 inch</td>
<td>3.74 inch</td>
</tr>
<tr>
<td>C</td>
<td>10 Pin Screw Type</td>
<td>2.90 inch</td>
<td>4.12 inch</td>
</tr>
<tr>
<td>G</td>
<td>6 Pin Twist &amp; Lock</td>
<td>2.32 inch</td>
<td>3.54 inch</td>
</tr>
<tr>
<td>L</td>
<td>11 Pin Twist &amp; Lock</td>
<td>2.29 inch</td>
<td>3.55 inch</td>
</tr>
<tr>
<td>P</td>
<td>19 Pin Twist &amp; Lock</td>
<td>2.40 inch</td>
<td>3.62 inch</td>
</tr>
</tbody>
</table>

Note: Dimensions are dependent on Connector type - Shown with MS3112E-18-11P