

Mill-Duty Housed Resolver (Series R25)

The Harowe R25 heavy duty brushless resolvers are designed for reliability in adverse operating conditions. Resolvers are the better choice over encoders for applications that involve very high temperature, vibration and shock and/or dirty environments. R25s will quickly recover their cost by eliminating frequent downtime caused by less robust transducers. You can trust the R25 to operate reliably 24 hours a day, 365 days a year in the worst industrial environments.

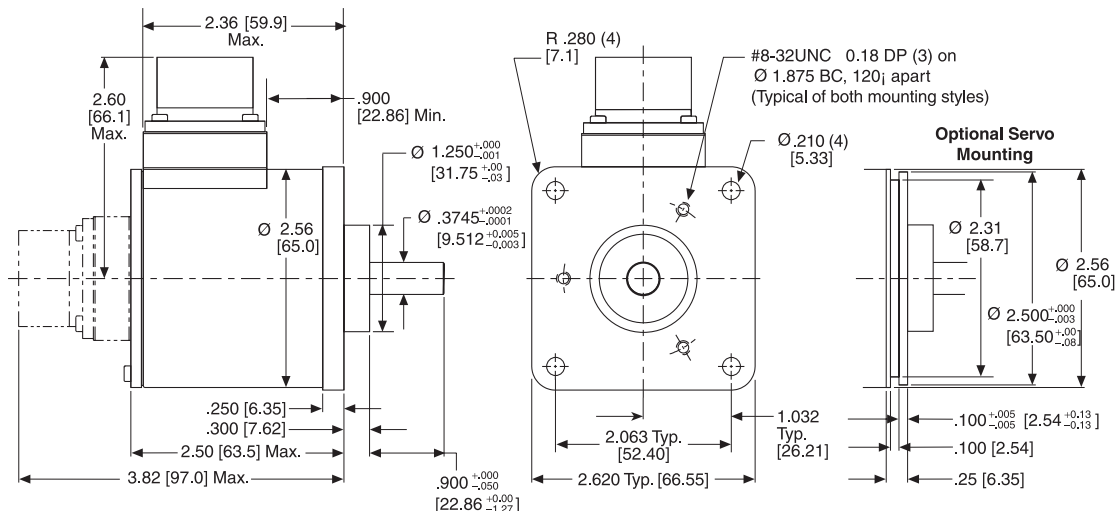
Unlike similar duplex-bearing packages, the R25 uses a front-and-rear bearing arrangement. This provides from two to three times the radial load bearing capacity and up to ten times the L10 life of a package with duplex bearings. The increase in load bearing capacity applies equally to static, dynamic, and shock loading.

- Rugged housing with IP-65 protection rating
- Ideal for high temperatures, high shock environments
- Standard MS-style connectors
- Flange- and servo-mount styles
- Shielded, spaced-support bearings provide up to 10X the life of duplex bearings
- Excellent noise immunity
- Standard +125°C continuous duty operating rating
- Corrosion resistant finishes
- Accuracy grades from +/- 2 to 20 arcmin
- Withstands shock to 200g, vibration to 40g



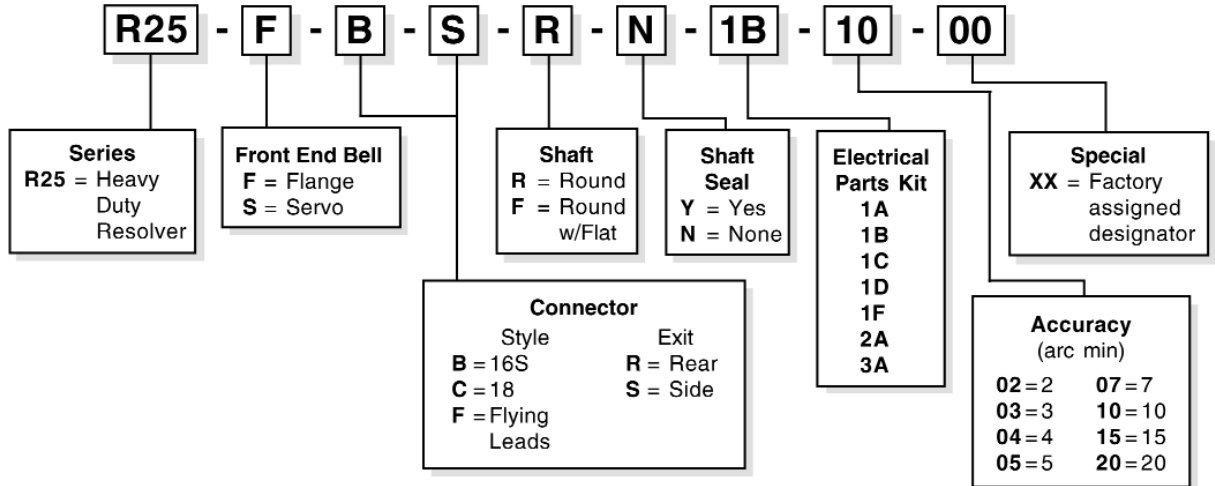
Elec. Kit	Speed (No. of Poles)	Xformer Ratio (V in/V out)	Input Voltage (Vrms)	Max. Curr. Input (mA)	Ref. Freq. (Hz)	Phase Shift (min)	Pri. Wndg.
1A	1 (2)	0.500	5.3	3	4000	-3	Stator
1B	1 (2)	0.500	4.0	25	5000	-6	Rotor
1C	1 (2)	0.470	4.25	55	7000	+4 ±3	Rotor
1D	1 (2)	0.500	7.0	25	2500	+6	Rotor
1E	1 (2)	0.950	7.0	12	5000	-3	Rotor
1F	1 (2)	1.000	2.0	10	5000	-8	Rotor
2A	2 (4)	0.250	8.0	20	4000	+5.5 ±3	Rotor
3A	3 (6)	0.470	4.25	55	7000	+5 ±3	Rotor

Inertia	0.0040 oz-in-sec ²
Friction	2 oz-in (5 oz-in w/shaft seal)
Shaft Load (max.)	40 lb (axial), 60 lb (radial)
Shaft	#416 S/S
Material	
Play (max.)	Radial: .0015 in @ 1 lb load; End: .005 in @ 5 lb load
Bearing	2 x 10 ⁸ revs at rated shaft loading
Life	



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Mill-Duty Housed Series R25 Model Numbering



Connector and Cable Accessories

MS3106-style connectors and cable assemblies are offered to mate with Harowe heavy-duty R25 resolver packages.

Cables are low capacitance type (13 pF/ft) with individually shielded twisted pairs. They are available in one foot incremental lengths as standard, and custom lengths by special order.

Pin outs match the R25 and are consistent with industry standards for size 25 resolver packages.

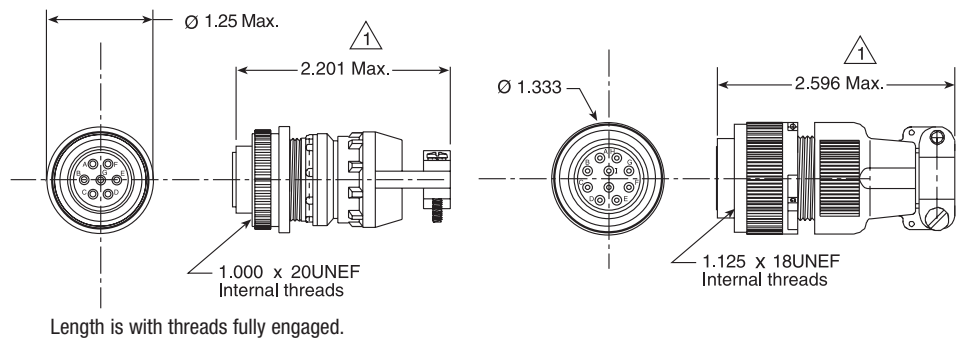
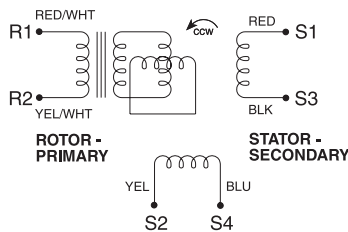
MS3106F-16S-1S Connector

Pin	Signal	Cable Lead Color
A	R1 (Rotor Hi)	White
B	R2 (Rotor Lo)	Black w/White
C	S1 (Cos Hi)	Green
D	S3 (Cos Lo)	Black w/Green
E	S4 (Sin Lo)	Blue
F	S2 (Sin Hi)	Black w/Blue
G	Open	

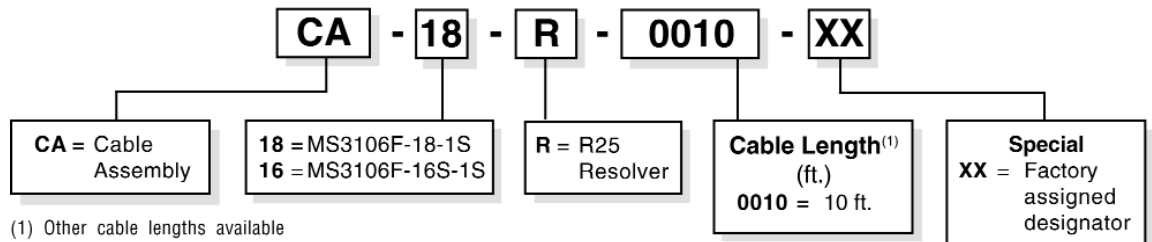
MS3106F-18-1S Connector

Pin	Signal	Cable Lead Color
A	R1 (Rotor Hi)	White
H	R2 (Rotor Lo)	Black w/White
B	S1 (Cos Hi)	Green
I	S3 (Cos Lo)	Black w/Green
C	S4 (Sin Lo)	Blue
J	S2 (Sin Hi)	Black w/Blue
G	Open	

R25 Basic Schematic



Use of Harowe mating connectors and low capacitance cable is recommended (or equivalent such as Belden 8163 cable with twisted-pairs for R1/R2, S1/S3 and S2/S4).



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