

MEDIUM SPEED BRUSHLESS SERVO MOTORS Ø80



24V

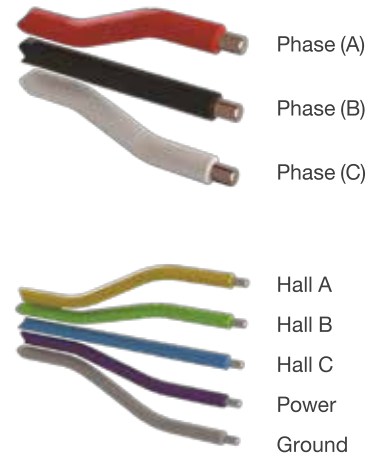
ESRV80S1K3A1-24

36V

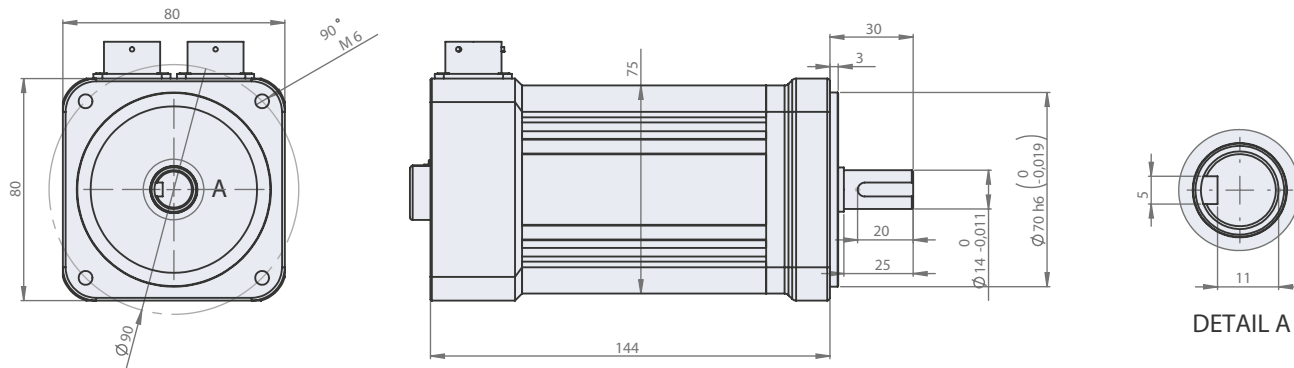
ESRV80S1K3A1-36

48V

ESRV80S1K3A1-48



Dimensional Drawing



Modular System

Product Adaptations

- Other dimensions
- Without housing
- Without hall sensors
- With temperture sensor
- Connector options recording to customer needs

Basic Motor Parameters

		ESRV80S1K3A1-24	ESRV80S1K3A1-36	ESRV80S1K3A1-48
Nominal Speed	RPM	2950	3184	2888
Nominal Power	W	500	500	500
Maximum Continuous Torque	Nm	1.61	1.49	1.65
Nominal Current	A	19.90	13.16	10.16
No-Load Speed	RPM	3483	3732	3480
Efficiency	%	90	90	90
Stall Torque	Nm	14.91	14.52	13.37
Stall Current	A	374	252	148

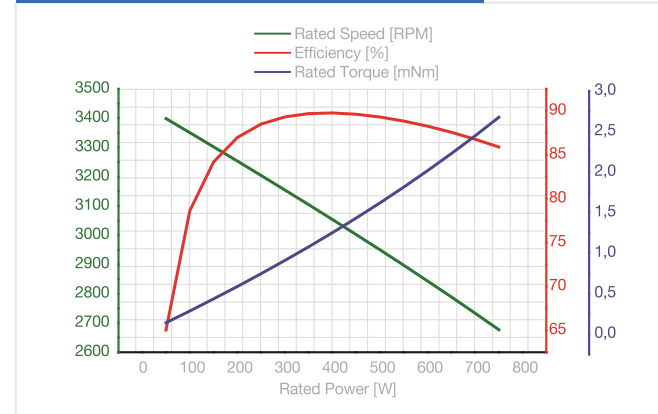
Electrical Characteristics

		ESRV80S1K3A1-24	ESRV80S1K3A1-36	ESRV80S1K3A1-48
Number of Phases		3	3	3
Number of Poles		4	4	4
Operating Temperature	°C	-55 >> +85	-55 >> +85	-55 >> +85
Phase-to-Phase Resistance	mΩ	63.92 ± 10%	142.32 ± 10%	322.32 ± 10%
Phase-to-Phase Inductance	mH	0.278 ± 10%	0.546 ± 10%	1.11 ± 10%
Rated-Torque Constant	mNm/A	0.069 ± 10%	0.096 ± 10%	0.14 ± 10%
Back -EMF Constant	Vs/rad	0.066 ± 10%	0.092 ± 10%	0.13 ± 10%
Dielectric Strength at 1000V	MΩ	500 (min.)	500 (min.)	500 (min.)

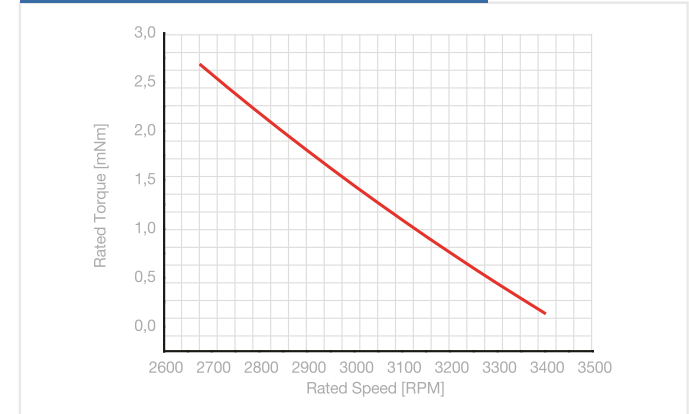
Physical Characteristics

		ESRV80S1K3A1-24	ESRV80S1K3A1-36	ESRV80S1K3A1-48
Service Life	h	20000	20000	20000
Weight	g	2.4 ± 10%	2.4 ± 10%	2.4 ± 10%
Length	mm	144 (max.)	144 (max.)	144 (max.)
Outer Diameter	mm	80 x 80	80 x 80	80 x 80
Shaft Diameter	mm	14	14	14
Bearing		NSK Ball Bearing	NSK Ball Bearing	NSK Ball Bearing

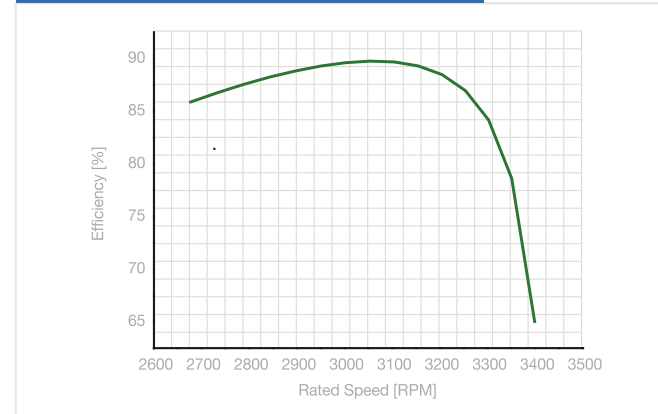
Performance Chart @48V



Torque – Speed Chart @48V



Efficiency – Speed Chart @48V



Power – Speed Chart @48V

