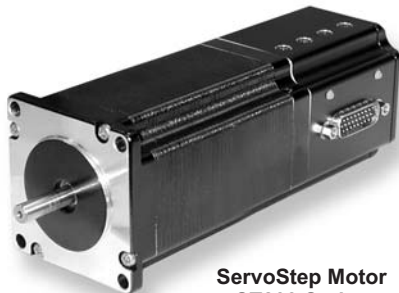


# SERVOSTEP SMARTMOTOR ST233 AND ST234



ServoStep Motor  
ST233 Series



ServoStep Motor  
ST234 Series

DESCRIPTION		UNITS	ST233	ST234	
<b>Power</b>	Input	VDC	20 - 80 (max)	20 - 80 (max)	
	Operating Temperature	°F (°C)	32 to 185 (0 to 85)	32 to 185 (0 to 85)	
<b>Environment</b>	Enclosure Rating (approximate)		IP40	IP40	
	Storage Temperature	°F (°C)	-4 to 185 (-20 to 85)	-4 to 185 (-20 to 85)	
	Humidity (non-condensing)	%	0 to 80	0 to 80	
	Peak Torque (Tp)	oz-in (N-m)	268 (1.90)	332 (2.35)	
<b>Performance</b>	Continuous Torque (Tc)	oz-in (N-m)	195 (1.38)	307 (2.17)	
	No Load Speed	RPM	1700	1600	
	Nominal Power	HP (kW)	0.10 (0.07)	0.12 (0.08)	
	Servo Update	Hz	4069	4069	
	PWM Frequency	kHz	33.3	33.3	
	Encoder	Type	Incremental	VDC	VDC
		Resolution	ppr (post-quad)	8000	8000
	Memory	Volatile	kRAM	32	32
		Non-volatile	kRAM	28	28
	<b>Motor</b>	Commutation		6-step Trapezoidal	6-step Trapezoidal
Torque Constant (Kt)		oz-in/Amp (N-m/Amp)	NA	NA	
Rotor Inertia (Jm)		oz-in-s <sup>2</sup> (10 <sup>-5</sup> kg-m <sup>2</sup> )	0.0067 (4.76)	0.0088 (6.22)	
Insulation			Class B	Class B	
Number of Poles (Np)			NA	NA	
Winding Resistance (R)		Ohms	1.4	1.5	
<b>Input/Output</b>		Number (Type)		10 (5VDC TTL)	10 (5VDC TTL)
	Input	Digital	5VDC TTL sinking input	5VDC TTL sinking input	
		Analog	Sinking input, 10 bit	Sinking input, 10 bit	
	Output	Sourcing	mA	5	5
		Sinking	mA	10	10
	Encoder/Step & Direct Input Frequency	MHz	1	1	
<b>Communications</b>	Type		RS485; Serial (ASCII)	RS485; Serial (ASCII)	
	Speed	KBaud	2.4 to 38.4	2.4 to 38.4	
<b>Physical</b>	Radial Load	lbs (kg)	15 (6.8)	15 (6.8)	
	Axial Thrust Load	lbs (kg)	13 (5.9)	13 (5.9)	
	Width	in (mm)	2.25 (57.2)	2.25 (57.2)	
	Length	in (mm)	5.4 (137)	6.7 (170)	
	Weight (Wt)	lbs (kg)	2.8 (1.25)	4.0 (1.80)	
	Shaft Diameter**	in (mm)	0.25 (6.4)	0.25 (6.4)	
	Pilot Diameter**	in (mm)	1.501 (38.1)	1.501 (38.1)	
	Bolt Circle Diameter**	in (mm)	2.630 (66.8)	2.630 (66.8)	

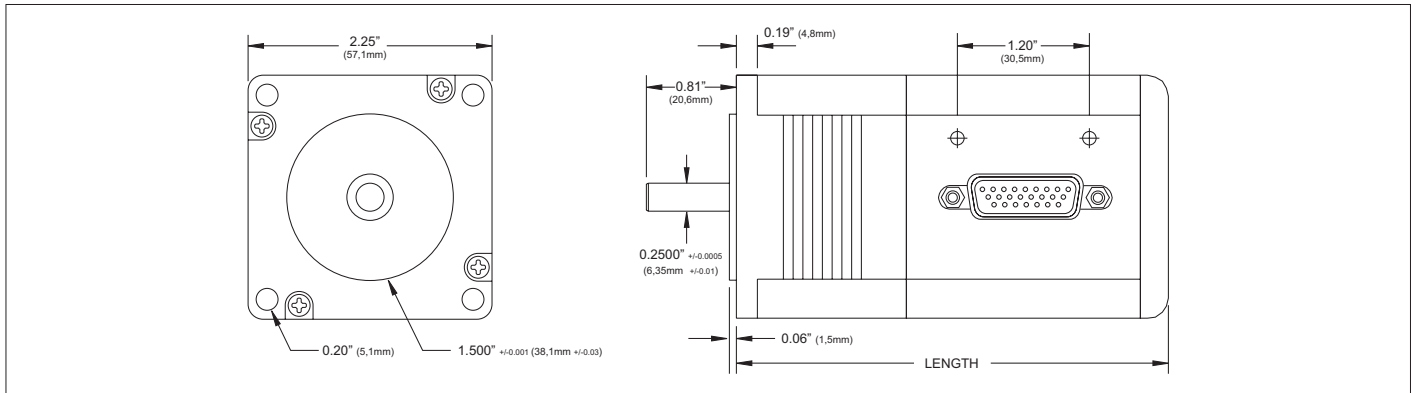
Performance spec based on PS75V6A-OF

Note: \*\* check tolerance in drawings

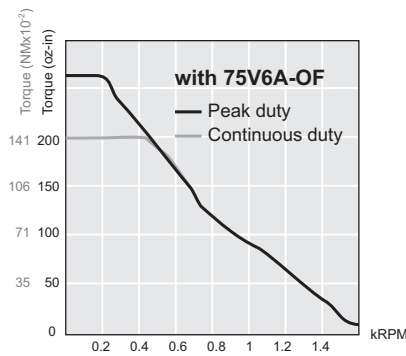
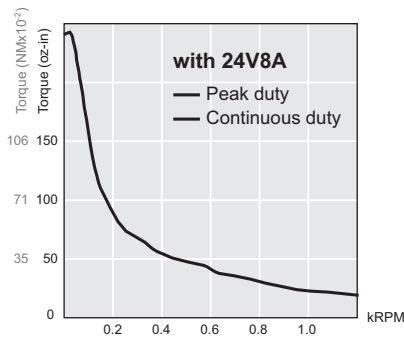
# SERVOSTEP

## SMARTMOTOR ST233 AND ST234

SERVOSTEP



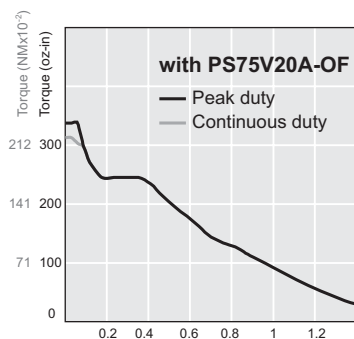
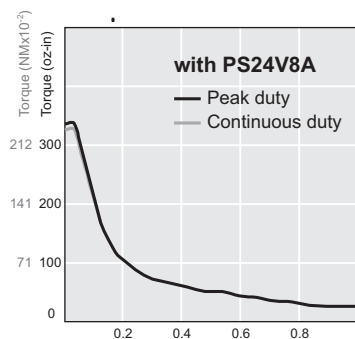
### SMARTMOTOR ST233



#### Notes:

1. Custom windings are available on select SmartMotors. These special windings allow SmartMotors to achieve higher speeds or greater torque. Please consult factory for specific details.
2. Custom shaft lengths and diameters are available on select SmartMotors. Flats and keyways are common options found on motor shafts. SmartMotors can be purchased with various versions of these shaft modifications. Please consult factory for available shaft options.
3. Torque vs. Speed curve data is derived under dynamometer testing using a PS75V6A-OF power supply at an ambient temperature of 27°C (80.6°F).
4. Connector kits and cable options found on pp. 68 and 69.

### SMARTMOTOR ST234



SmartMotors  
 ST233 and ST234  
 are CE marked

26 Pin, High Density  
 D-Sub I/O Connector

