

LEGEND SERIES

SMARTMOTOR SM3430D, SM3440D, SM3450D



SM3430D
shown with
standard D-sub connector



SM3440D
shown with
standard D-sub connector



SM3450D
shown with
standard D-sub connector

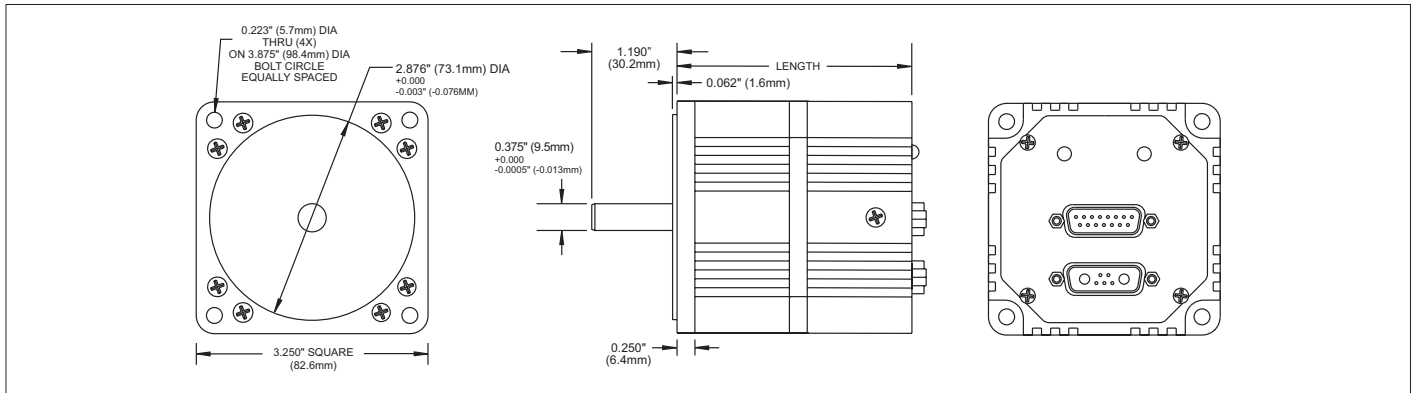
DESCRIPTION		UNITS	SM3430D	SM3440D	SM3450D
Power	Input	VDC	20 - 48 (max)	20 - 48 (max)	20 - 48 (max)
	Operating Temperature	°F (°C)	32 to 158 (0 to 70)	32 to 158 (0 to 70)	32 to 158 (0 to 70)
Environment	Enclosure Rating (approximate)		IP30	IP30	IP30
	Storage Temperature	°F (°C)	-4 to 185 (-20 to 85)	-4 to 185 (-20 to 85)	-4 to 185 (-20 to 85)
	Vibration (peak / continuous)	G	NA/7*	NA/7*	NA/7*
	Humidity (non-condensing)	%	0 to 80	0 to 80	0 to 80
	Performance	Peak Torque (Tp)	oz-in (N-m)	460 (3.25)	500 (3.53)
	Continuous Torque (Tc)	oz-in (N-m)	155 (1.09)	210 (1.48)	250 (1.77)
	No Load Speed	RPM	3850	3609	3398
	Nominal Power	HP (kW)	0.3 (0.22)	0.34 (0.25)	0.36 (0.27)
	Servo Update	Hz	4069	4069	4069
	PWM Frequency	kHz	33.3	33.3	33.3
	Encoder	Type	Incremental	VDC	VDC
		Resolution	ppr (post-quad)	4000	4000
	Memory	Volatile	kRAM	32	32
Non-volatile		kRAM	32	32	32
Motor	Commutation		6-step Trapezoidal	6-step Trapezoidal	6-step Trapezoidal
	Voltage Constant (Kv)	V/kRPM	12.10	12.90	13.70
	Torque Constant (Kt)	oz-in/Amp (N-m/Amp)	16.4 (0.12)	17.4 (0.12)	18.5 (0.13)
	Rotor Inertia (Jm)	oz-in-s ² (10 ⁻⁵ kg-m ²)	0.019 (13.43)	0.025 (17.67)	0.03 (21.20)
	Insulation		Class A	Class A	Class A
	Number of Poles (Np)		4	4	4
	Winding Resistance (R)	Ohms	0.9	0.6	0.6
	Input/Output	Number (Type)		7 (5VDC TTL)	7 (5VDC TTL)
Input	Digital		5VDC TTL sinking input	5VDC TTL sinking input	5VDC TTL sinking input
	Analog		sinking input, 10 bit	sinking input, 10 bit	sinking input, 10 bit
Output	Sourcing	mA	5	5	5
	Sinking	mA	10	10	10
	Encoder/Step & Direct Input Frequency	MHz	1	1	1
Communications	Primary	Type	RS232; Serial (ASCII)	RS232; Serial (ASCII)	RS232; Serial (ASCII)
		Speed	KBaud	2.4 to 38.4	2.4 to 38.4
	Secondary	Type	RS485; Serial (ASCII)	RS485; Serial (ASCII)	RS485; Serial (ASCII)
Physical	Radial Load	lbs (kg)	15 (6.8)	15 (6.8)	15 (6.8)
	Axial Thrust Load	lbs (kg)	3 (1.36)	3 (1.36)	3 (1.36)
	Width	in (mm)	3.25 (82.6)	3.25 (82.6)	3.25 (82.6)
	Length	in (mm)	4.8 (122)	5.4 (138)	6.1 (155)
	Weight (Wt)	lbs (kg)	4.5 (2.04)	5.5 (2.5)	6.5 (2.9)
	Shaft Diameter**	in (mm)	0.375 (9.5)	0.375 (9.5)	0.375 (9.5)
	Pilot Diameter**	in (mm)	2.876 (73.1)	2.876 (73.1)	2.876 (73.1)
	Bolt Circle Diameter**	in (mm)	3.875 (98.4)	3.875 (98.4)	3.875 (98.4)

Performance spec based on 48VDC battery

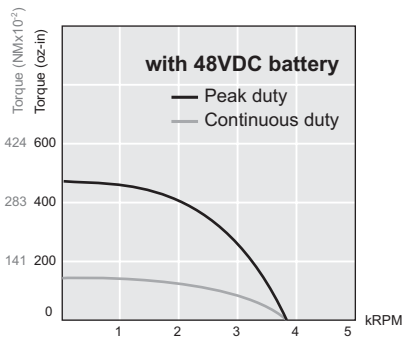
Notes: * tested at RMS acceleration for 20 minutes, ** check tolerance in drawings

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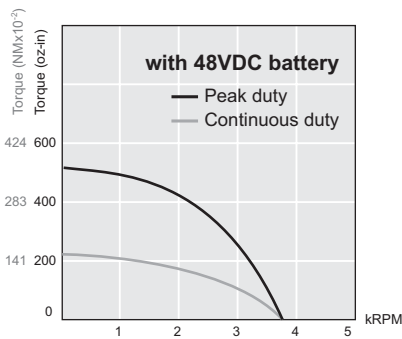
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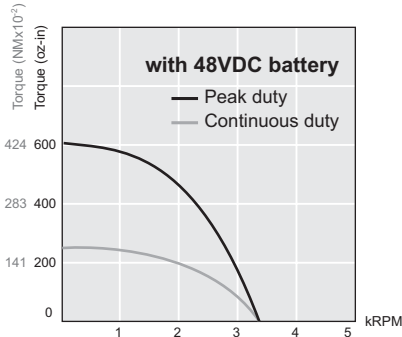
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SMARTMOTOR SM3450D



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 48 VDC battery supply at an ambient temperature of 27°C (80.6°F).
4. Connector kits and cable options found on pp. 52 and 59.

