

OEM SERIES

SMARTMOTOR SM2315D AND SM3416D



SM2315D
shown with
standard D-sub connector



SM2315D-PB
shown with Profibus option
standard firmware



SM3416D
shown with
standard D-sub connector

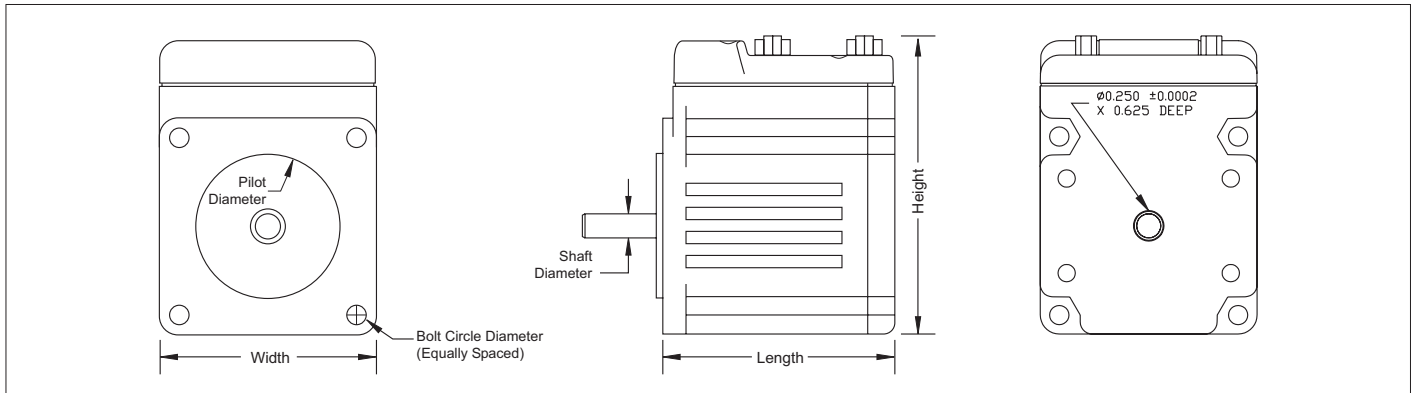
DESCRIPTION		UNITS	SM2315D	SM3416D	
Power	Input	VDC	20 - 48 (max)	20 - 48 (max)	
Environment	Operating Temperature	°F (°C)	32 to 158 (0 to 70)	32 to 158 (0 to 70)	
	Enclosure Rating (approximate)		IP30	IP30	
	Storage Temperature	°F (°C)	-4 to 185 (-20 to 85)	-4 to 185 (-20 to 85)	
	Vibration (peak / continuous)	G	NA/9*	NA/NA	
	Humidity (non-condensing)	%	0 to 80	0 to 80	
Performance	Peak Torque (Tp)	oz-in (N-m)	43 (0.30)	150 (1.06)	
	Continuous Torque (Tc)	oz-in (N-m)	27 (0.19)	125 (0.88)	
	No Load Speed	RPM	9000	2600	
	Nominal Power	HP (kW)	0.18 (0.13)	0.24 (0.18)	
	Servo Update	Hz	4069	4069	
	PWM Frequency	kHz	33.3	33.3	
	Encoder	Type	Incremental	VDC	VDC
		Resolution	ppr (post-quad)	2000	4000
	Memory	Volatile	kRAM	32	32
		Non-volatile	kRAM	32	32
Motor	Commutation		6-step Trapezoidal	6-step Trapezoidal	
	Voltage Constant (Kv)	V/kRPM	4.45	15.50	
	Torque Constant (Kt)	oz-in/Amp (N-m/Amp)	4.2 (0.03)	20.3 (0.14)	
	Rotor Inertia (Jm)	oz-in-s ² (10 ⁻⁵ kg-m ²)	0.00099 (0.70)	0.0140 (9.89)	
	Insulation		Class A	Class B	
	Number of Poles (Np)		8	8	
	Winding Resistance (R)	Ohms	1	0.6	
Input/Output	Number (Type)		7 (5VDC TTL)	7 (5VDC TTL)	
	Input	Digital	+5V TTL sinking input	+5V 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		
Communications	Primary	Type	RS232; Serial (ASCII)	RS232; Serial (ASCII)	
		Speed	KBaud	2.4 to 38.4	2.4 to 38.4
	Secondary	Type	N/A	RS485; Serial (ASCII)	
Physical	Radial Load	lbs (kg)	7 (3.18)	15 (6.80)	
	Axial Thrust Load	lbs (kg)	3 (1.36)	3 (1.36)	
	Width	in (mm)	2.25 (57.2)	3.40 (86.4)	
	Length	in (mm)	2.30 (58)	3.8 (91)	
	Weight (Wt)	lbs (kg)	1.0 (0.45)	5.0 (2.27)	
	Shaft Diameter**	in (mm)	0.25 (6.4)	0.375 (9.5)	
	Pilot Diameter**	in (mm)	1.498 (38)	2.876 (73.1)	
	Bolt Circle Diameter**	in (mm)	2.625 (66.7)	3.875 (98.4)	

Performance spec based on PS42V20A-OF

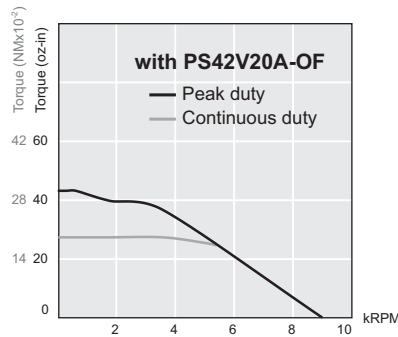
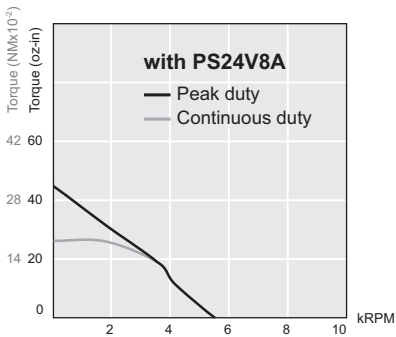
Notes: * tested at RMS acceleration for 20 minutes, ** check tolerance in drawings

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SMARTMOTOR SM2315D



Notes:

1. 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.
2. Torque vs. Speed curve data is derived under dynamometer testing using a PS24V8A and PS42V20A power supply at an ambient temperature of 27°C (80.6°F).
3. Connector kits and cable options found on pp. 52, 59.
4. External encoder input is not available on SM2315D (including Mode Follow and Mode CAM).
5. RS485 communication is not available through ports E and F on SM2315D.
6. Additional long term EEPROM variable data storage memory is optional on SM2315D.
7. Provisions for double shaft extension are standard; without the provision bore (back plate) is optional.

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