

# M-Style Motor Comparison Chart

The information in this section has been superseded.  
Please see the information in the latest product catalog at:  
[www.animatics.com/support/moog-animatics-catalog.html](http://www.animatics.com/support/moog-animatics-catalog.html)

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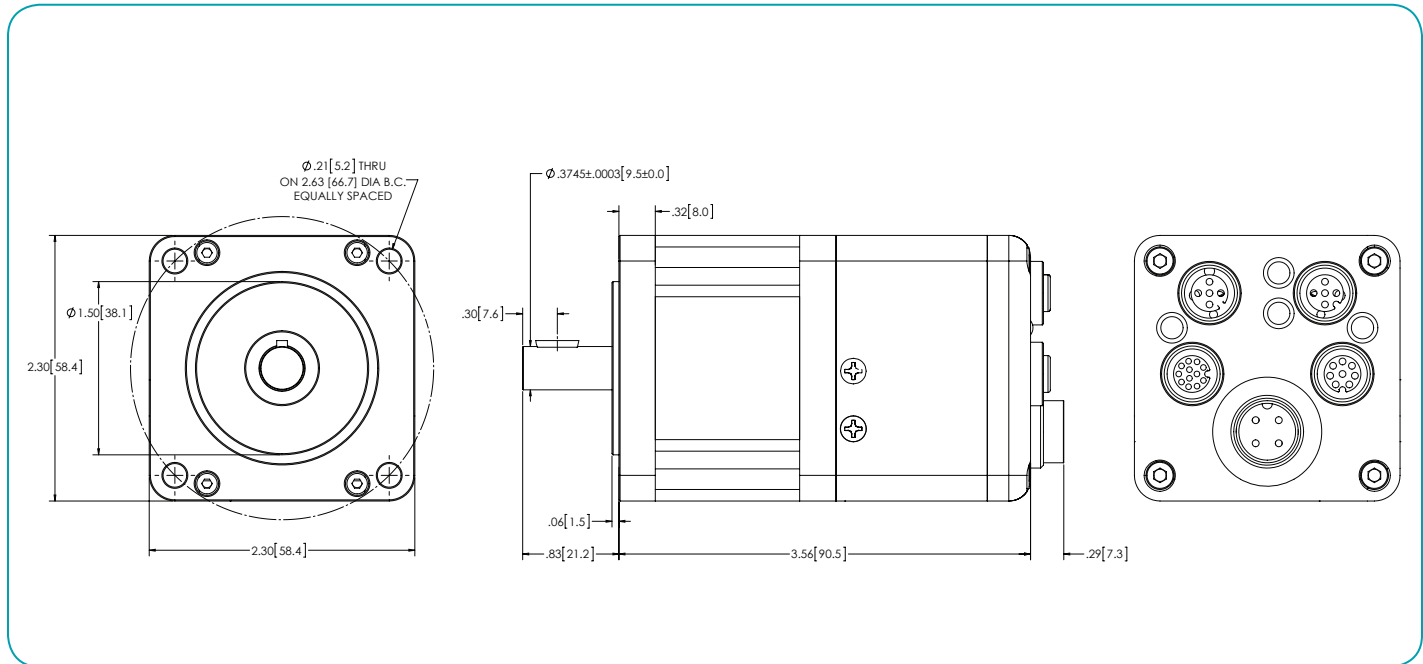
SmartMotor™ Series	SM23165MT
Continuous Torque @ 48V	4.25 in-lb
	68 oz-in
	0.48 N-m
Peak Torque	9.45 in-lb
	151 oz-in
	1.07 N-m
Nominal Continuous Power	189 Watt
No Load Speed	5,000 RPM
Max. Continuous Current* @ 3700 RPM	6.4 Amps
Peak Power @ 2800 RPM	255 Watts
Voltage Constant	9.6 V/kRPM
Inductance	2.01 mH
Encoder Resolution	4,000 Counts/Rev
Rotor Inertia	0.001 oz-in-sec <sup>2</sup>
	0.706 10 <sup>-5</sup> Kg-m <sup>2</sup>
Weight	1.5 lb
	0.68 kg
Shaft Diameter	0.375 in
	9.53 mm
Shaft, Radial Load	15 lb
	6.80 kg
Shaft, Axial Thrust Load	3 lb
	1.36 kg
DeviceNet Available	Firmware Option
PROFIBUS Available	
CANopen Available	Standard



Operating temperature range: 0°C–85°C  
 Storage temperature range: -10°C–85°C, noncondensing  
*IP rating depends on motor options. IP rating may affect motor performance.*  
**NOTE: Motor specifications are subject to changes without notice. Consult website and factory for latest data.**

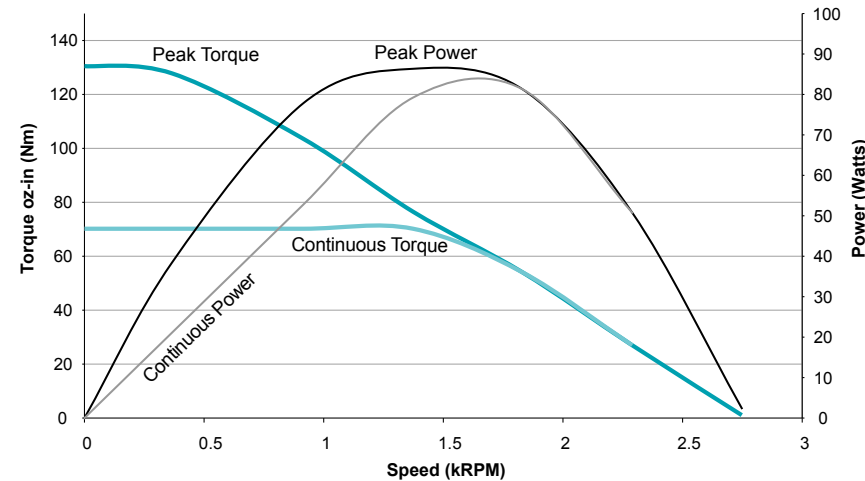
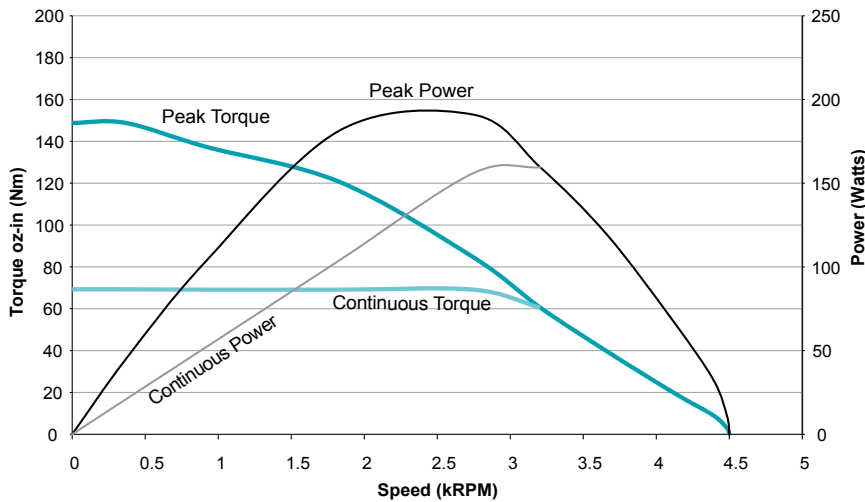
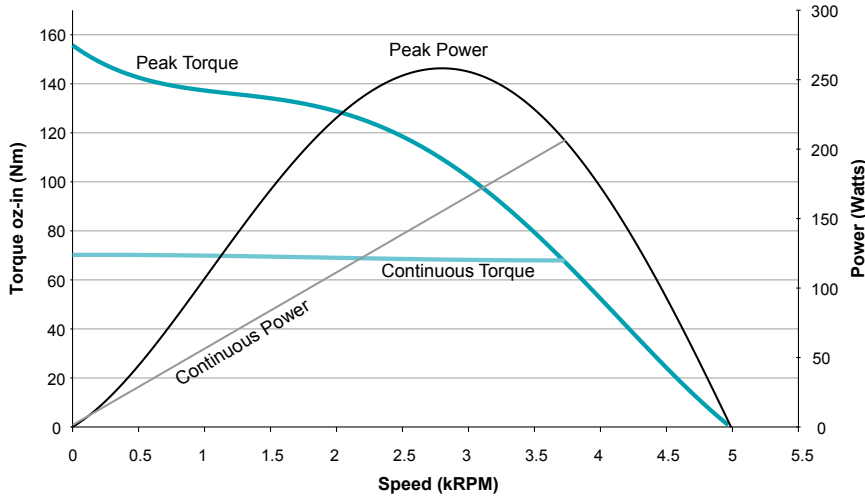


## Moog Animatics SmartMotor SM23165MT (No Options) CAD Drawing



**Drive Power and Control Power are Separate Inputs. Control Power is rated to a range of 18 to 32VDC max. Drive Power is from 18 to 48VDC max.**

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All torque curves based on 25°C ambient.

Motors were operated using MDE (Enhanced Drive Mode) Commutation.

For ambient temperatures above 25°C, Continuous Torque must be linearly derated to 0% at 85°C.

SmartMotor™ Series	SM34165MT	
Continuous Torque @ 48V	12.58	in-lb
	201	oz-in
	1.42	N-m
Peak Torque	34.88	in-lb
	558	oz-in
	3.94	N-m
Nominal Continuous Power	472	Watt
No Load Speed	4,900	RPM
Max. Continuous Current* @ 4500 RPM	13	Amps
Peak Power @ 3300 RPM	1,120	Watts
Voltage Constant	9.8	V/kRPM
Inductance	0.315	mH
Encoder Resolution	8,000	Counts/Rev
Rotor Inertia	0.0142	oz-in-sec <sup>2</sup>
	10.031	10 <sup>-5</sup> Kg-m <sup>2</sup>
Weight	6.0	lb
	2.72	kg
Shaft Diameter	0.500	in
	12.70	mm
Shaft, Radial Load	30	lb
	13.61	kg
Shaft, Axial Thrust Load	3	lb
	1.36	kg
DeviceNet Available	Firmware Option	
PROFIBUS Available		
CANopen Available	Standard	



Operating temperature range: 0°C–85°C

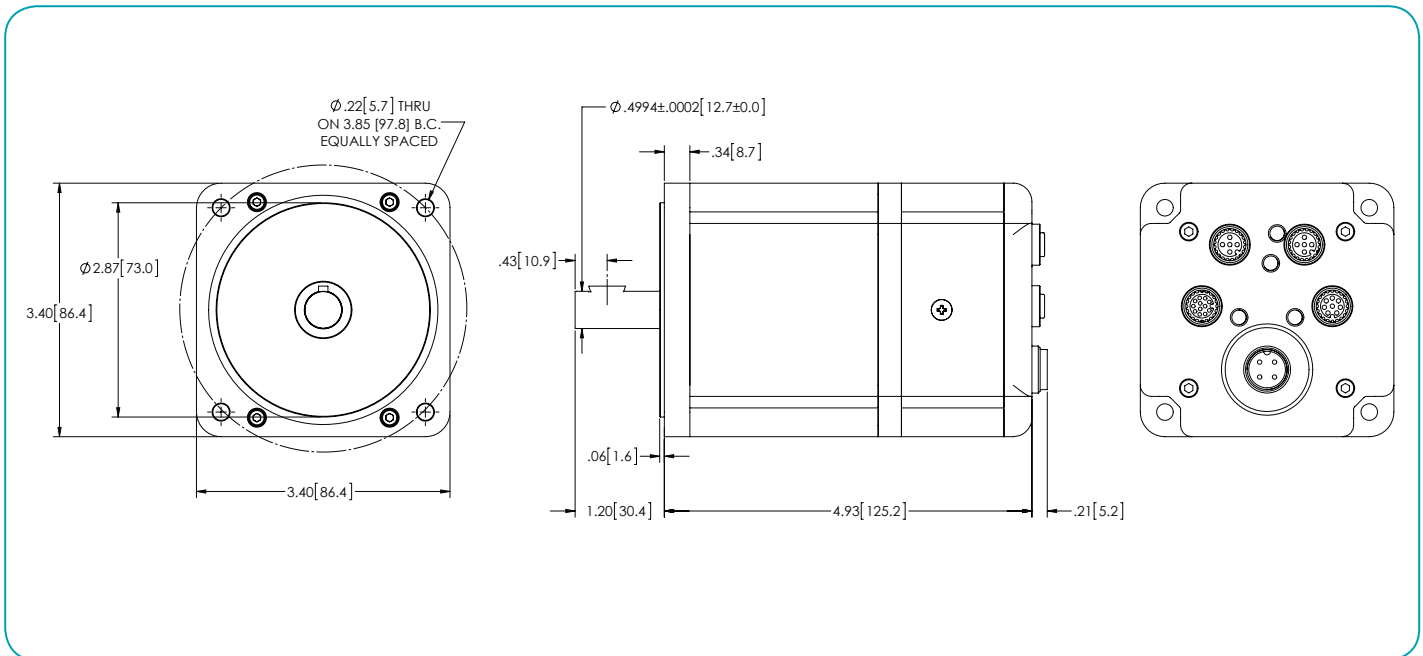
Storage temperature range: -10°C–85°C, noncondensing

*IP rating depends on motor options. IP rating may affect motor performance.*

**NOTE: Motor specifications are subject to changes without notice. Consult website and factory for latest data.**

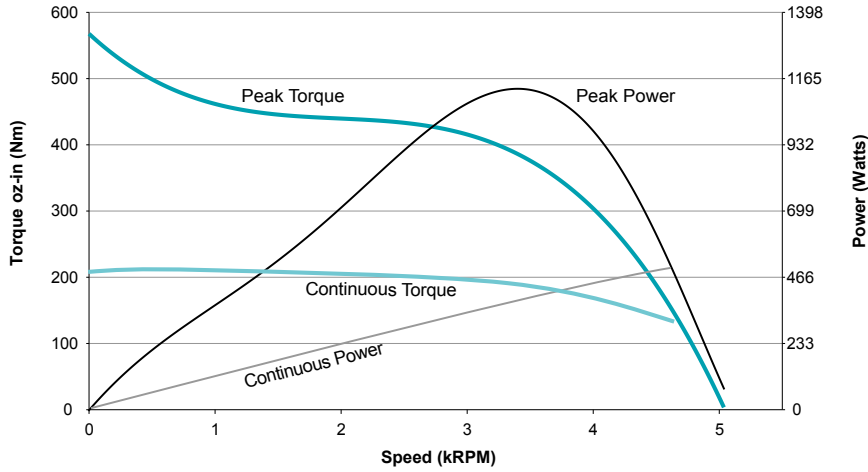


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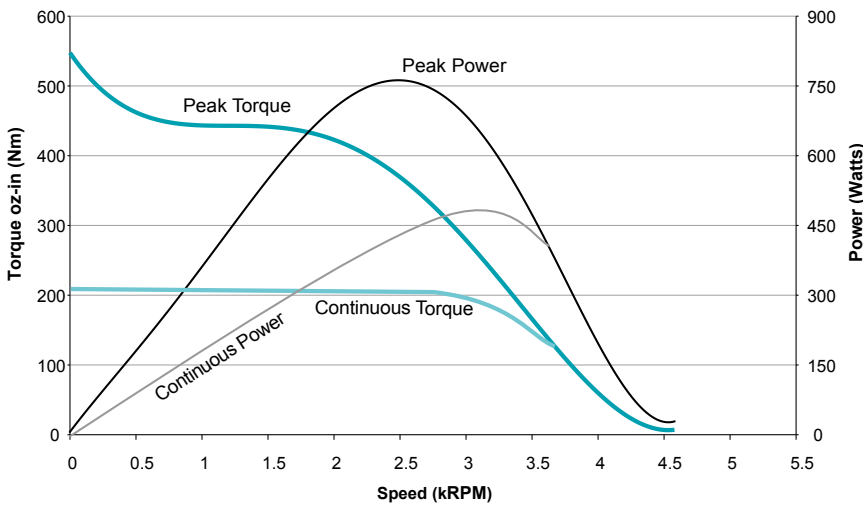


**Drive Power and Control Power are Separate Inputs. Control Power is rated to a maximum range of 18 to 32VDC. Drive Power is from 18 to 48VDC max.**

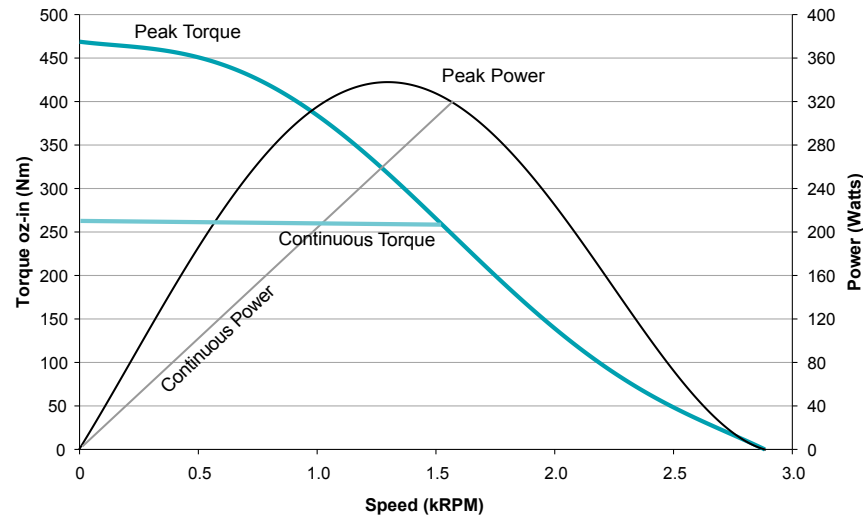
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**SM34165MT MDE Mode**  
**at 48 VDC**  
**at rise to 85°C**  
**with PFC1500W-48V**



**SM34165MT MDE Mode**  
**at 42 VDC**  
**at rise to 85°C**  
**with PS42V20A**



**SM34165MT MDE Mode**  
**at 24 VDC**  
**at rise to 85°C**  
**with PS24V8AG-110**

All torque curves based on 25°C ambient.  
 Motors were operated using MDE (Enhanced Drive Mode) Commutation.  
 For ambient temperatures above 25°C, Continuous Torque must be linearly derated to 0% at 85°C.