

Automation Grade Brushless DC Servo Motors

AMETEK automation grade brushless DC servo motors are IP65 rated (with shaft seal) construction including wide range of torque and speeds in a compact design. The brushless construction for extended motor life, low cogging, smooth low speed operation and high torque density, all make these motors ideal for a multitude of applications.

AMETEK automation grade brushless DC servo motors are heavy duty motors representing a significant new solution for designers needing a low to medium inertia motor capable of medium speed operation. A wide range of standard products allows you to select the best brushless motor optimized for your specifications. These advanced high performance motors are offered in standard NEMA mounting.

X - Available Option		C - Consult Factory for Availability									
C Automation Grade Brushless DC Servo Motors				Available Motor Options							
				Encoders		Brakes		Cables			
				O	V	C	D	B5	B6	Power	Signal
Series	Diameter	Torque	RPM Max.								
AB23000	2.25-in. (57mm)	3.75 - 15 lb-in. (0.423 - 1.694 Nm)	6,000	X	X	X		X	X	X	X
AB34000	3.5-in. (90mm)	17 - 44 lb-in. (1.920 - 4.971 Nm)	6,000	X		X		X		X	X
AB48000	4.75-in. (120mm)	44 - 114 lb-in. (4.971 - 12.880 Nm)	3,000	X		X				C	X



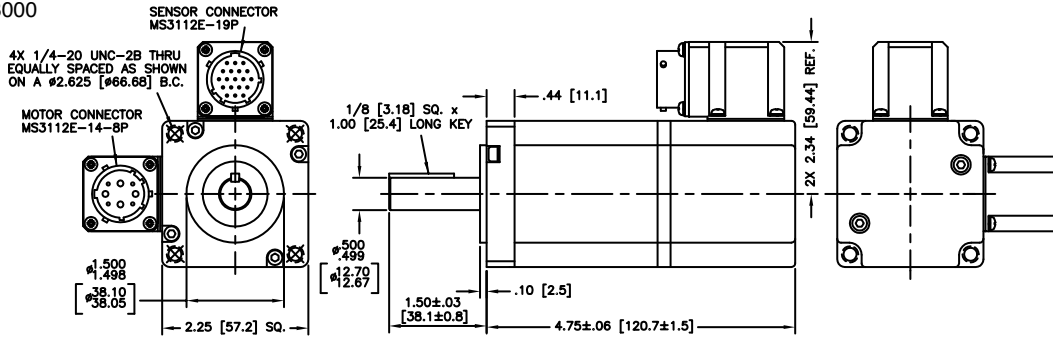
PITTMAN®

Automation Grade Brushless DC Servo Motors

AB23000 Series



AB23000



PIN	FUNCTION
1	PHASE R
2	PHASE S
3	PHASE T
4	CASE GROUND

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	+5 VDC
B	THERMOSTAT	M	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

Specification	Units	Part/Model Number
		AB23000
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in Nm	4.12 0.465
Speed @ Cont. Torque	RPM	6000
Current @ Cont. Torque	Amps (A)	4.42
Continuous Output Power	Watts (W)	215
Motor Constant	lb-in/sqrt W Nm/sqrt W	0.68 0.08
Torque Constant	lb-in/A Nm/A	1.006 0.114
Voltage Constant	V/krpm V/rad/s	11.90 0.114
Terminal Resistance	Ohms	2.16
Inductance	mH	1.81
Max. Speed	RPM	6000
Peak Current	Amps (A)	13.25
Peak Torque	lb-in Nm	11.37 1.285
Thermal Time Constant	min	10.00
Thermal Resistance	Celsius/W	1.65
Max. Winding Temperature	Celsius	125
Rotor Inertia	lb-in-sec ² kg-m ²	0.00014 1.58E-5
Weight	Lbs Kg	2.68 1.2

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Brakes
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

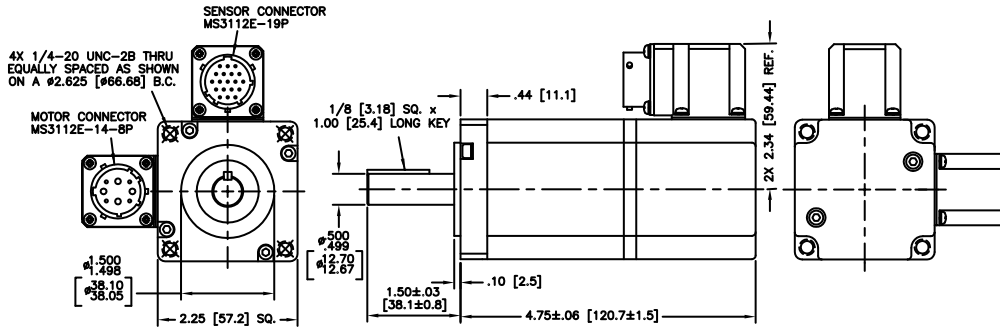
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www.pittman-motors.com

Automation Grade Brushless DC Servo Motors

AB23000 Series

AB23003



PIN	FUNCTION
1	PHASE R
2	PHASE S
3	PHASE T
4	CASE GROUND

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	+5 VDC
B	THERMOSTAT	M	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

Specification		Units	Part/Model Number
			AB23003
Supply Voltage	VDC		325
Continuous Stall Torque	lb-in		4.12
	Nm		0.465
Speed @ Cont. Torque	RPM		6000
Current @ Cont. Torque	Amps (A)		1.96
Continuous Output Power	Watts (W)		209
Motor Constant	lb-in/sqrt W		0.68
	Nm/sqrt W		0.08
Torque Constant	lb-in/A		2.070
	Nm/A		0.234
Voltage Constant	V/krpm		24.50
	V/rad/s		0.234
Terminal Resistance	Ohms		9.16
Inductance	mH		7.68
Max. Speed	RPM		6000
Peak Current	Amps (A)		5.89
Peak Torque	lb-in		11.30
	Nm		1.277
Thermal Time Constant	min		10.00
Thermal Resistance	Celsius/W		1.60
Max. Winding Temperature	Celsius		125
Rotor Inertia	lb-in-sec ²		0.00014
	kg-m ²		1.58E-5
Weight	Lbs		2.68
	Kg		1.2

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Brakes
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

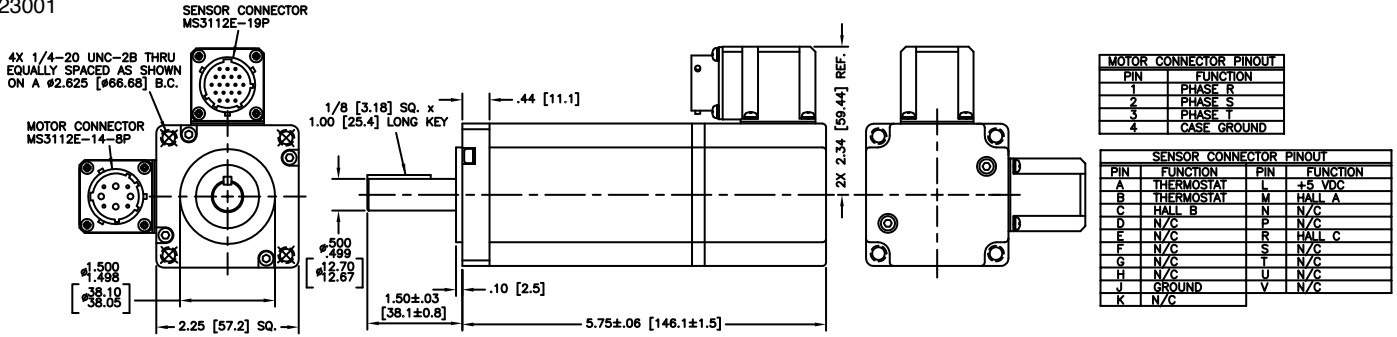
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Automation Grade Brushless DC Servo Motors

AB23000 Series



AB23001



		Part/Model Number
Specification	Units	AB23001
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in Nm	7.30 0.825
Speed @ Cont. Torque	RPM	6000
Current @ Cont. Torque	Amps (A)	5.30
Continuous Output Power	Watts (W)	300
Motor Constant	lb-in/sqrt W Nm/sqrt W	1.16 0.13
Torque Constant	lb-in/A Nm/A	1.656 0.187
Voltage Constant	V/krpm V/rad/s	19.6 0.187
Terminal Resistance	Ohms	2.04
Inductance	mH	2.10
Max. Speed	RPM	6000
Peak Current	Amps (A)	15.90
Peak Torque	lb-in Nm	22.65 2.559
Thermal Time Constant	min	10.00
Thermal Resistance	Celsius/W	1.25
Max. Winding Temperature	Celsius	125
Rotor Inertia	lb-in-sec ² kg-m ²	2.56E-4 2.89E-5
Weight	Lbs Kg	3.54 1.6

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features	Complementary Products
<ul style="list-style-type: none"> Medium to High Ke to Accomodate Various Bus Voltages Hall Sensor Feedback (120° elec.) IP65 Rated High Voltage Rating High Torque to Weight Ratio 	<ul style="list-style-type: none"> Encoders Brakes Cables

Notes

- Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
- Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

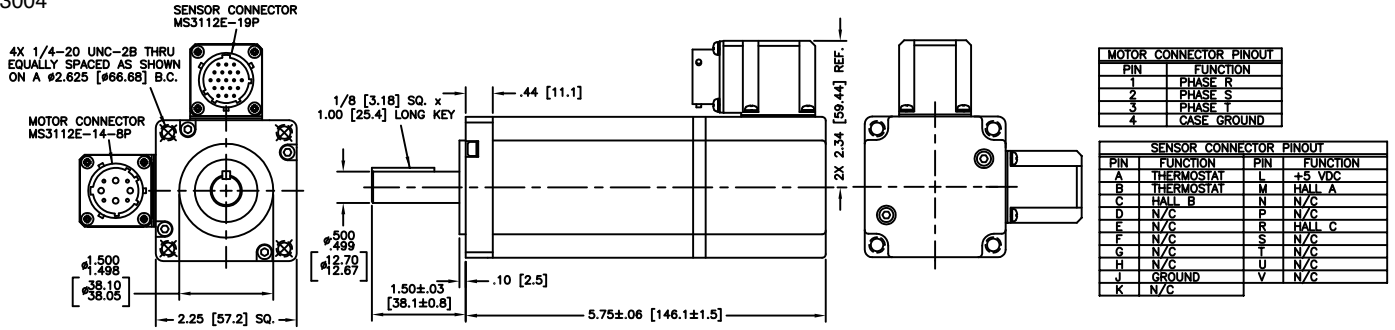
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Automation Grade Brushless DC Servo Motors

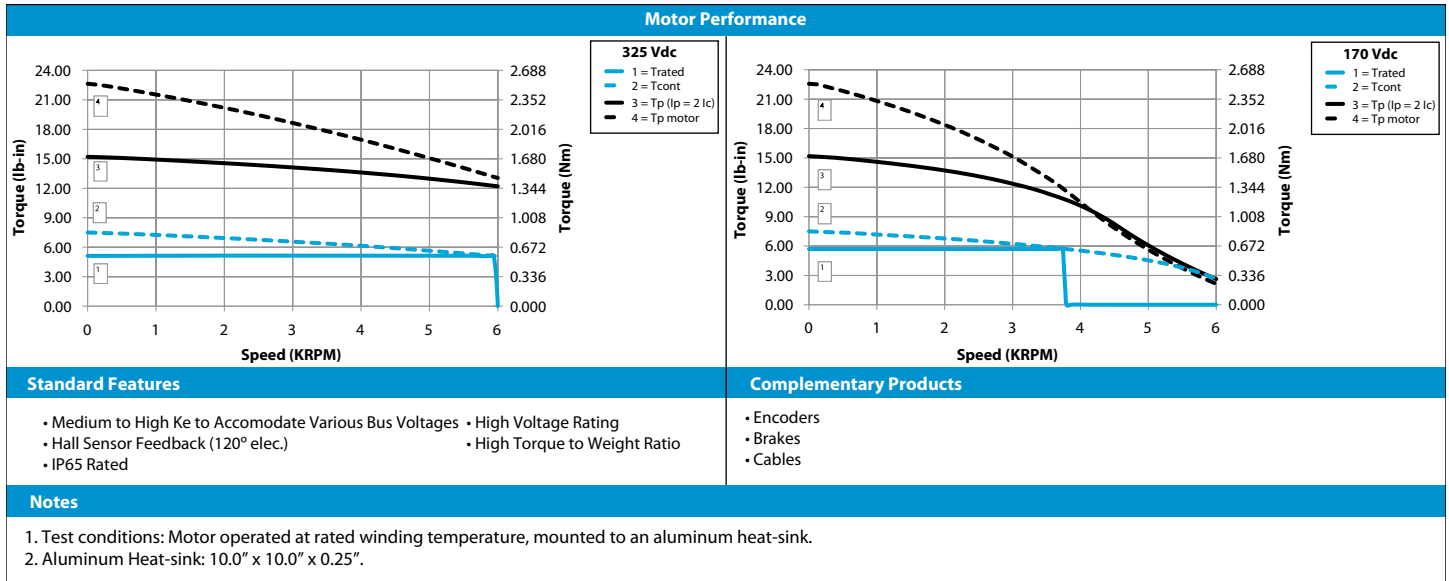
AB23000 Series

AB23004

PITTMAN®



Specification		Units	Part/Model Number
			AB23004
Supply Voltage	VDC		325
Continuous Stall Torque	lb-in		7.30
	Nm		0.825
Speed @ Cont. Torque	RPM		6000
Current @ Cont. Torque	Amps (A)		4.37
Continuous Output Power	Watts (W)		299.42
Motor Constant	lb-in/sqrt W		1.14
	Nm/sqrt W		0.13
Torque Constant	lb-in/A		2.011
	Nm/A		0.227
Voltage Constant	V/krpm		23.80
	V/rad/s		0.227
Terminal Resistance	Ohms		3.10
Inductance	mH		3.09
Max. Speed	RPM		6000
Peak Current	Amps (A)		13.10
Peak Torque	lb-in		22.64
	Nm		2.558
Thermal Time Constant	min		10.00
Thermal Resistance	Celsius/W		1.21
Max. Winding Temperature	Celsius		125
Rotor Inertia	lb-in-sec ²		2.56E-4
	kg-m ²		2.89E-5
Weight	Lbs		3.54
	Kg		1.6



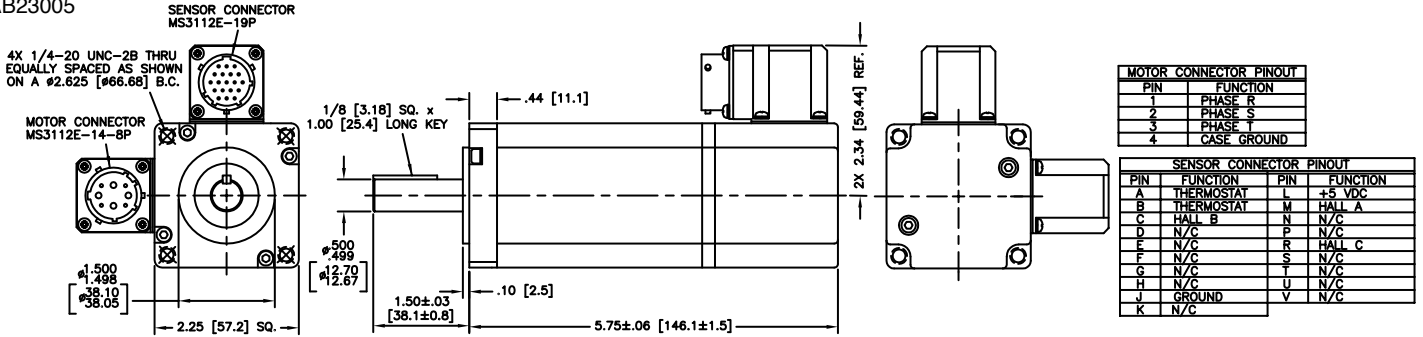
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Automation Grade Brushless DC Servo Motors

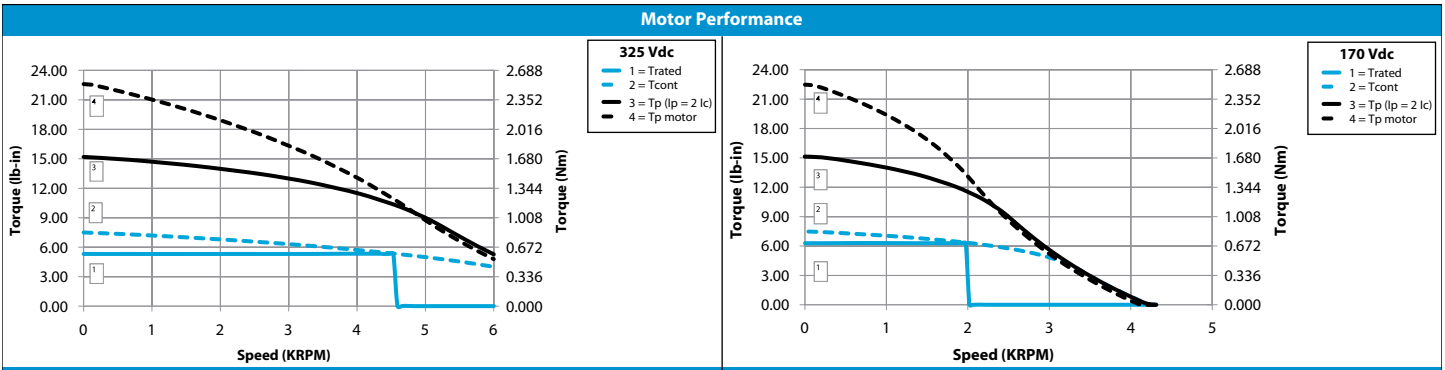
AB23000 Series



AB23005



		Part/Model Number
Specification	Units	AB23005
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in Nm	7.38 0.834
Speed @ Cont. Torque	RPM	6000
Current @ Cont. Torque	Amps (A)	2.44
Continuous Output Power	Watts (W)	283.17
Motor Constant	lb-in/sqrt W Nm/sqrt W	1.17 0.13
Torque Constant	lb-in/A Nm/A	3.313 0.374
Voltage Constant	V/krpm V/rad/s	39.20 0.374
Terminal Resistance	Ohms	8.01
Inductance	mH	8.40
Max. Speed	RPM	6000
Peak Current	Amps (A)	7.33
Peak Torque	lb-in Nm	22.50 2.542
Thermal Time Constant	min	10.00
Thermal Resistance	Celsius/W	1.58
Max. Winding Temperature	Celsius	125
Rotor Inertia	lb-in-sec ² kg-m ²	2.56E-4 2.89E-5
Weight	Lbs Kg	3.10 1.4



Standard Features	Complementary Products
<ul style="list-style-type: none"> Medium to High Ke to Accomodate Various Bus Voltages Hall Sensor Feedback (120° elec.) IP65 Rated High Voltage Rating High Torque to Weight Ratio 	<ul style="list-style-type: none"> Encoders Brakes Cables

Notes

- Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
- Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

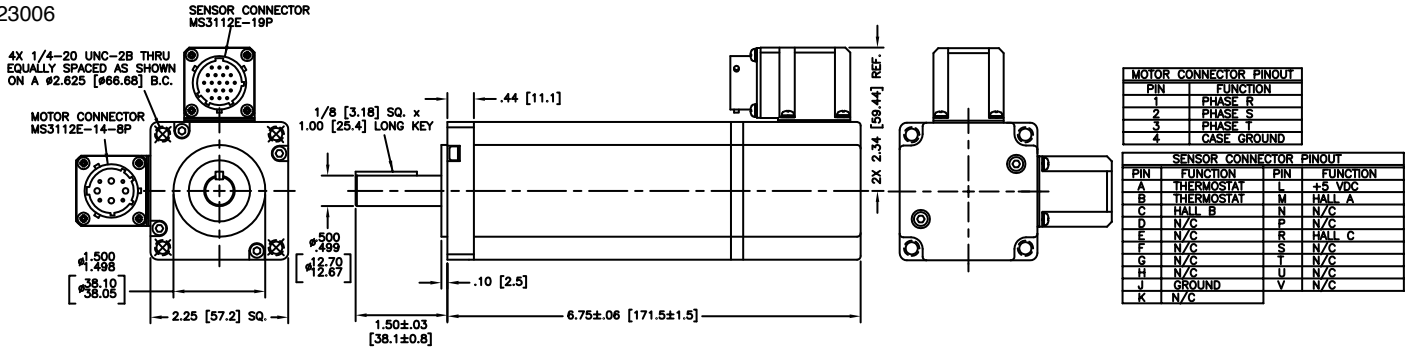
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Automation Grade Brushless DC Servo Motors

AB23000 Series



AB23006



		Part/Model Number
Specification	Units	AB23006
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in	11.21
	Nm	1.267
Speed @ Cont. Torque	RPM	6000
Current @ Cont. Torque	Amps (A)	4.62
Continuous Output Power	Watts (W)	608.12
Motor Constant	lb-in/sqrt W	1.43
	Nm/sqrt W	0.16
Torque Constant	lb-in/A	2.839
	Nm/A	0.321
Voltage Constant	V/krpm	33.60
	V/rad/s	0.321
Terminal Resistance	Ohms	3.94
Inductance	mH	3.85
Max. Speed	RPM	6000
Peak Current	Amps (A)	13.85
Peak Torque	lb-in	33.88
	Nm	3.828
Thermal Time Constant	min	10.00
Thermal Resistance	Celsius/W	0.86
Max. Winding Temperature	Celsius	125
Rotor Inertia	lb-in-sec ²	3.69E-4
	kg-m ²	4.17E-5
Weight	Lbs	4.54
	Kg	2.1

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Brakes
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

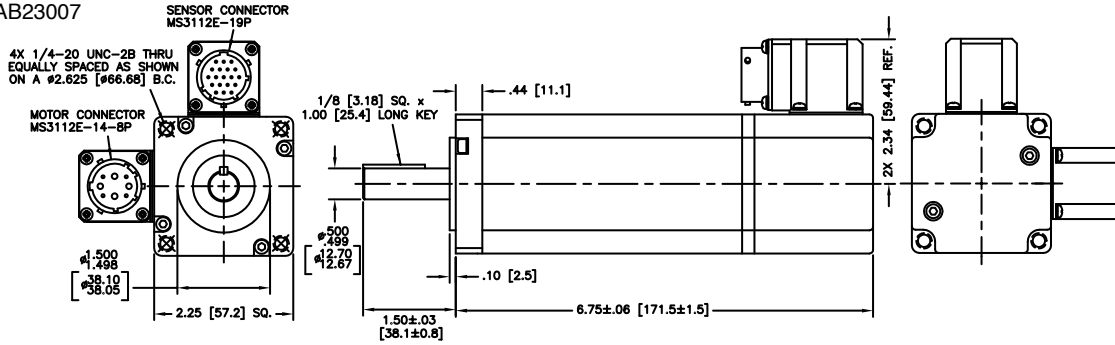
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Automation Grade Brushless DC Servo Motors

AB23000 Series



AB23007



MOTOR CONNECTOR PINOUT	
PIN	FUNCTION
1	PHASE R
2	PHASE S
3	PHASE T
4	CASE GROUND

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	+5 VDC
B	THERMOSTAT	M	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

Specification		Units	Part/Model Number
			AB23007
Supply Voltage	VDC		325
Continuous Stall Torque	lb-in		10.58
	Nm		1.195
Speed @ Cont. Torque	RPM		3800
Current @ Cont. Torque	Amps (A)		2.64
Continuous Output Power	Watts (W)		377
Motor Constant	lb-in/sqrt W		1.35
	Nm/sqrt W		0.15
Torque Constant	lb-in/A		4.969
	Nm/A		0.561
Voltage Constant	V/krpm		58.80
	V/rad/s		0.561
Terminal Resistance	Ohms		13.50
Inductance	mH		11.79
Max. Speed	RPM		6000
Peak Current	Amps (A)		7.92
Peak Torque	lb-in		33.79
	Nm		3.818
Thermal Time Constant	min		10.00
Thermal Resistance	Celsius/W		0.76
Max. Winding Temperature	Celsius		125
Rotor Inertia	lb-in-sec ²		3.69E-4
	kg-m ²		4.17E-5
Weight	Lbs		4.54
	Kg		2.1

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (lp = 2lc)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (lp = 2lc)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Brakes
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

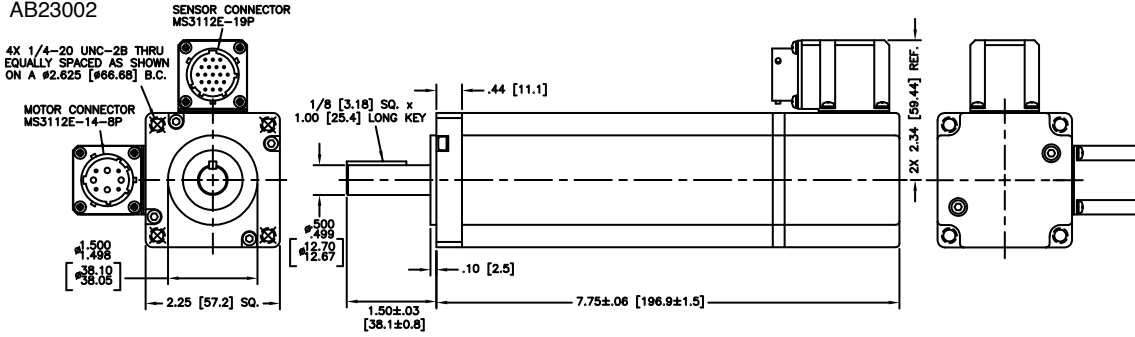
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Automation Grade Brushless DC Servo Motors

AB23000 Series



AB23002



PIN	FUNCTION
1	PHASE R
2	PHASE S
3	PHASE T
4	CASE GROUND

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	-5 VDC
B	THERMOSTAT	N	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

		Part/Model Number
Specification	Units	AB23002
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in Nm	15.03 1.698
Speed @ Cont. Torque	RPM	6000
Current @ Cont. Torque	Amps (A)	10.67
Continuous Output Power	Watts (W)	683.00
Motor Constant	lb-in/sqrt W Nm/sqrt W	1.91 0.22
Torque Constant	lb-in/A Nm/A	1.699 0.192
Voltage Constant	V/krpm V/rad/s	20.10 0.192
Terminal Resistance	Ohms	0.80
Inductance	mH	1.20
Max. Speed	RPM	6000
Peak Current	Amps (A)	32.02
Peak Torque	lb-in Nm	47.04 5.315
Thermal Time Constant	min	10.00
Thermal Resistance	Celsius/W	0.79
Max. Winding Temperature	Celsius	125
Rotor Inertia	lb-in-sec ² kg-m ²	.0005 5.65E-5
Weight	Lbs Kg	5.38 2.4

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (lp = 2 lc)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (lp = 2 lc)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

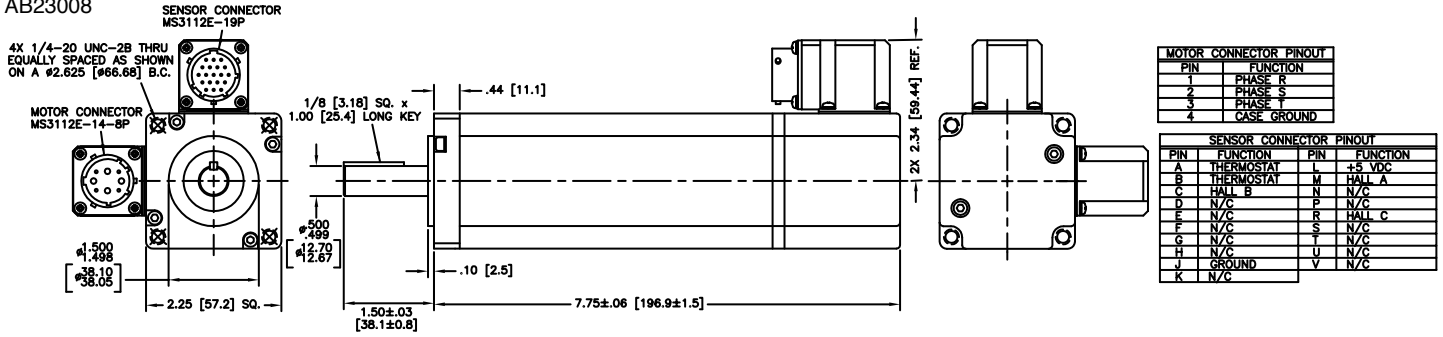
- Encoders
- Brakes
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

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AB23008



Specification	Units	Part/Model Number
		AB23008
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in	14.79
	Nm	1.671
Speed @ Cont. Torque	RPM	5000
Current @ Cont. Torque	Amps (A)	4.40
Continuous Output Power	Watts (W)	577.71
Motor Constant	lb-in/sqrt W	1.82
	Nm/sqrt W	0.21
Torque Constant	lb-in/A	4.023
	Nm/A	0.455
Voltage Constant	V/krpm	47.60
	V/rad/s	0.455
Terminal Resistance	Ohms	4.87
Inductance	mH	7.07
Max. Speed	RPM	6000
Peak Current	Amps (A)	13.20
Peak Torque	lb-in	46.89
	Nm	5.298
Thermal Time Constant	min	10.00
Thermal Resistance	Celsius/W	0.76
Max. Winding Temperature	Celsius	125
Rotor Inertia	lb-in-sec ²	.0005
	kg-m ²	5.65E-5
Weight	Lbs	5.38
	Kg	2.4

Motor Performance

325 Vdc

Legend: 1 = Trated, 2 = Tcont, 3 = Tp (Ip = 2 Ic), 4 = Tp motor

170 Vdc

Legend: 1 = Trated, 2 = Tcont, 3 = Tp (Ip = 2 Ic), 4 = Tp motor

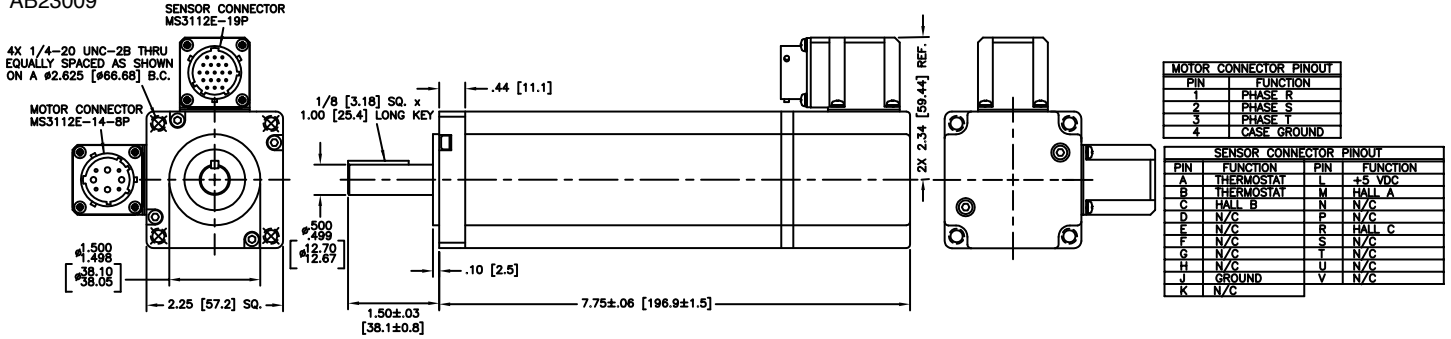
Standard Features	Complementary Products
<ul style="list-style-type: none"> Medium to High Ke to Accomodate Various Bus Voltages Hall Sensor Feedback (120° elec.) IP65 Rated High Voltage Rating High Torque to Weight Ratio 	<ul style="list-style-type: none"> Encoders Brakes Cables

Notes

- Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
- Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

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AB23009



		Part/Model Number
Specification	Units	AB23009
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in Nm	14.89 1.682
Speed @ Cont. Torque	RPM	2900
Current @ Cont. Torque	Amps (A)	2.78
Continuous Output Power	Watts (W)	407.17
Motor Constant	lb-in/sqrt W Nm/sqrt W	1.90 0.21
Torque Constant	lb-in/A Nm/A	6.625 0.749
Voltage Constant	V/krpm V/rad/s	78.40 0.749
Terminal Resistance	Ohms	12.12
Inductance	mH	17.85
Max. Speed	RPM	6000
No-Load Speed	RPM	6000
Peak Current	Amps (A)	8.33
Peak Torque	lb-in Nm	46.71 5.278
Thermal Time Constant	min	10.00
Thermal Resistance	Celsius/W	0.77
Max. Winding Temperature	Celsius	125
Rotor Inertia	lb-in-sec ² kg-m ²	.0005 5.65E-5
Weight	Lbs Kg	5.38 2.4

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Brakes
- Cables

Notes

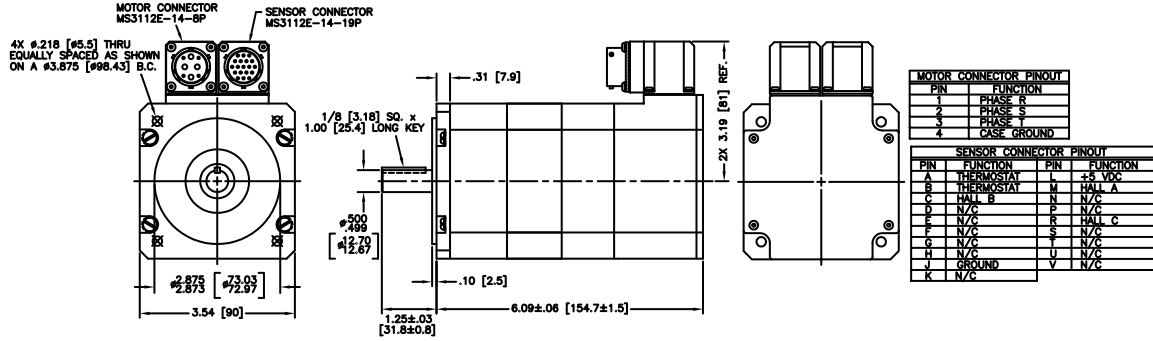
1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 10.0" x 10.0" x 0.25".

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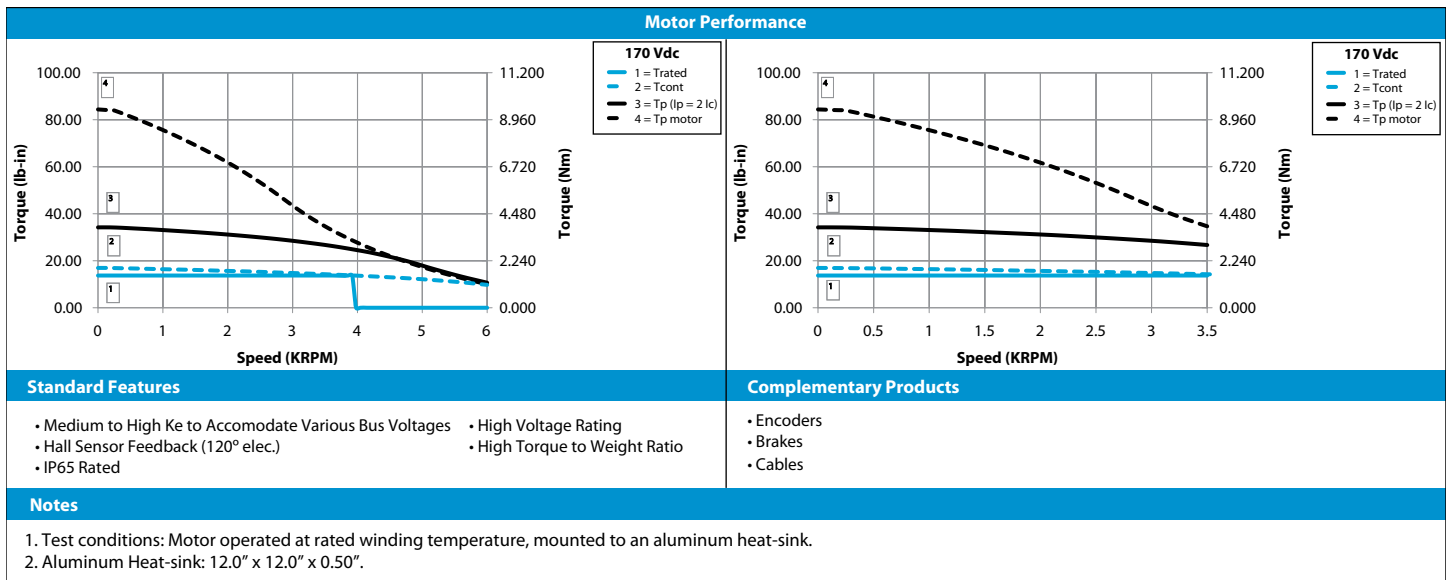
Automation Grade Brushless DC Servo Motors

AB34000 Series

AB34000



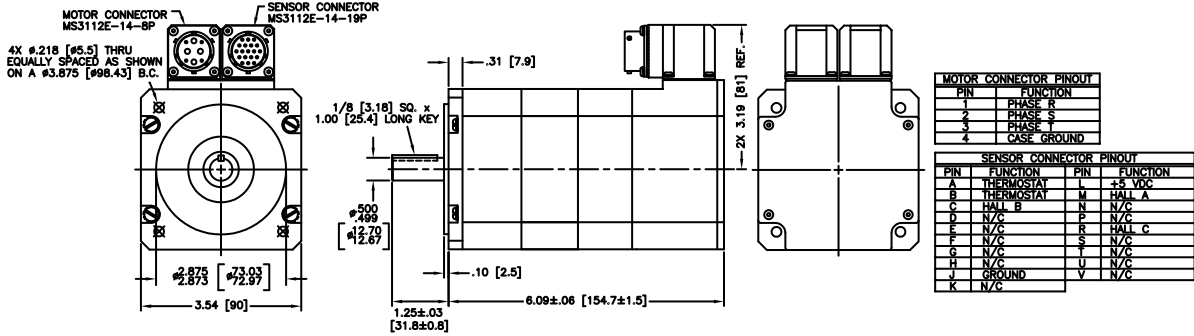
Specification	Units	Part/Model Number
		AB34000
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in Nm	16.57 1.872
Speed @ Cont. Torque	RPM	6000
Current @ Cont. Torque	Amps (A)	11.05
Continuous Output Power	Watts (W)	974.25
Motor Constant	lb-in/sqrt W Nm/sqrt W	1.60 0.18
Torque Constant	lb-in/A Nm/A	1.69 0.191
Voltage Constant	V/krpm V/rad/s	20.00 0.191
Terminal Resistance	Ohms	1.12
Inductance	mH	2.60
Max. Speed	RPM	6000
Peak Current	Amps (A)	55.27
Peak Torque	lb-in Nm	85.45 9.655
Thermal Time Constant	min	0.00
Thermal Resistance	Celsius/W	0.63
Max. Winding Temperature	Celsius	155
Rotor Inertia	lb-in-sec ² kg-m ²	.001 1.13E-4
Weight	Lbs Kg	7.86 3.6



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AB34003



Specification	Units	Part/Model Number	
		AB34003	
Supply Voltage	VDC	325	
Continuous Stall Torque	lb-in	16.35	
	Nm	1.847	
Speed @ Cont. Torque	RPM	3500	
Current @ Cont. Torque	Amps (A)	4.30	
Continuous Output Power	Watts (W)	560.57	
Motor Constant	lb-in/sqrt W	1.69	
	Nm/sqrt W	0.19	
Torque Constant	lb-in/A	4.395	
	Nm/A	0.497	
Voltage Constant	V/krpm	52.00	
	V/rad/s	0.497	
Terminal Resistance	Ohms	6.77	
Inductance	mH	17.35	
Max. Speed	RPM	6000	
Peak Current	Amps (A)	21.48	
Peak Torque	lb-in	83.76	
	Nm	9.464	
Thermal Time Constant	min	0.00	
Thermal Resistance	Celsius/W	0.64	
Max. Winding Temperature	Celsius	155	
Rotor Inertia	lb-in-sec ²	.001	
	kg-m ²	1.13E-4	
Weight	Lbs	7.86	
	Kg	3.6	

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Brakes
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 12.0" x 12.0" x 0.50".

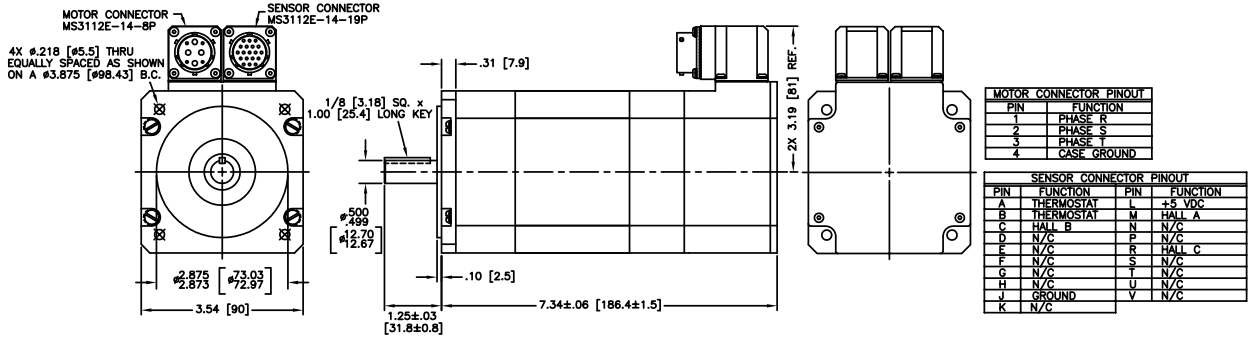
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Automation Grade Brushless DC Servo Motors

AB34000 Series



AB34001



Specification	Units	Part/Model Number	AB34001
Supply Voltage	VDC		325
Continuous Stall Torque	lb-in Nm		30.00 3.39
Speed @ Cont. Torque	RPM		6000
Current @ Cont. Torque	Amps (A)		12.84
Continuous Output Power	Watts (W)		986
Motor Constant	lb-in/sqrt W Nm/sqrt W		2.80 0.32
Torque Constant	lb-in/A Nm/A		2.535 0.286
Voltage Constant	V/krpm V/rad/s		30.00 0.286
Terminal Resistance	Ohms		0.82
Inductance	mH		2.63
Max. Speed	RPM		6000
No-Load Speed	RPM		6000
Peak Current	Amps (A)		64.18
Peak Torque	lb-in Nm		150.53 17.008
Thermal Time Constant	min		0.00
Thermal Resistance	Celsius/W		0.64
Max. Winding Temperature	Celsius		155
Rotor Inertia	lb-in-sec ² kg-m ²		1.81E-3 2.05E-4
Weight	Lbs Kg		11.00 5

Motor Performance

325 Vdc

Legend:
 1 = Trated
 2 = Tcont
 3 = Tp (Ip = 2 Ic)
 4 = Tp motor

170 Vdc

Legend:
 1 = Trated
 2 = Tcont
 3 = Tp (Ip = 2 Ic)
 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

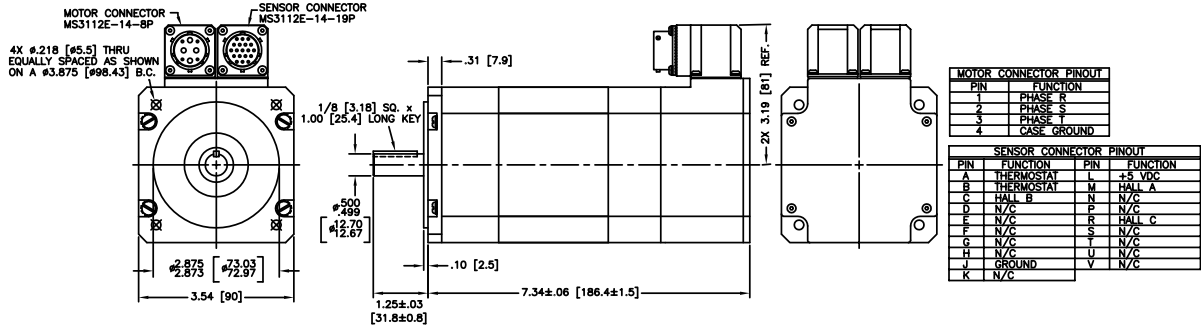
- Encoders
- Brakes
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 12.0" x 12.0" x 0.50".

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Specification	Units	Part/Model Number
		AB34004
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in	30.00
	Nm	3.39
Speed @ Cont. Torque	RPM	3700
Current @ Cont. Torque	Amps (A)	7.71
Continuous Output Power	Watts (W)	894
Motor Constant	lb-in/sqrt W	2.93
	Nm/sqrt W	0.33
Torque Constant	lb-in/A	4.282
	Nm/A	0.484
Voltage Constant	V/krpm	50.67
	V/rad/s	0.484
Terminal Resistance	Ohms	2.14
Inductance	mH	7.32
Max. Speed	RPM	6000
Peak Current	Amps (A)	38.57
Peak Torque	lb-in	149.24
	Nm	16.862
Thermal Time Constant	min	0.00
Thermal Resistance	Celsius/W	0.66
Max. Winding Temperature	Celsius	155
Rotor Inertia	lb-in-sec ²	.0018
	kg-m ²	2.03E-4
Weight	Lbs	11.00
	Kg	5

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Brakes
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 12.0" x 12.0" x 0.50".

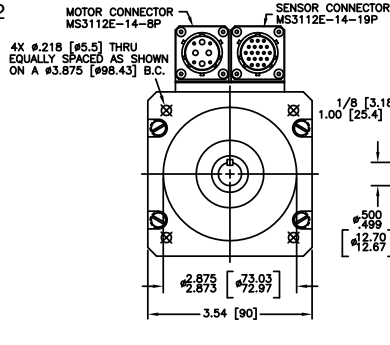
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Automation Grade Brushless DC Servo Motors

AB34000 Series



AB34002



MOTOR CONNECTOR PINOUT	PIN	FUNCTION
1	PHASE R	
2	PHASE Y	
3	PHASE B	
4	CASE GROUND	

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	+5 VDC
B	THERMOSTAT	M	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

Specification	Units	Part/Model Number
		AB34002
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in	44.00
	Nm	4.971
Speed @ Cont. Torque	RPM	4900
Current @ Cont. Torque	Amps (A)	16.13
Continuous Output Power	Watts (W)	1197
Motor Constant	lb-in/sqrt W	3.99
	Nm/sqrt W	0.45
Torque Constant	lb-in/A	2.958
	Nm/A	0.334
Voltage Constant	V/krpm	35.00
	V/rad/s	0.334
Terminal Resistance	Ohms	0.55
Inductance	mH	2.18
Max. Speed	RPM	6000
Peak Current	Amps (A)	80.65
Peak Torque	lb-in	220.62
	Nm	24.927
Thermal Time Constant	min	0.00
Thermal Resistance	Celsius/W	0.60
Max. Winding Temperature	Celsius	155
Rotor Inertia	lb-in-sec ²	.00262
	kg-m ²	2.96E-4
Weight	Lbs	14.22
	Kg	6.5

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Brakes
- Cables

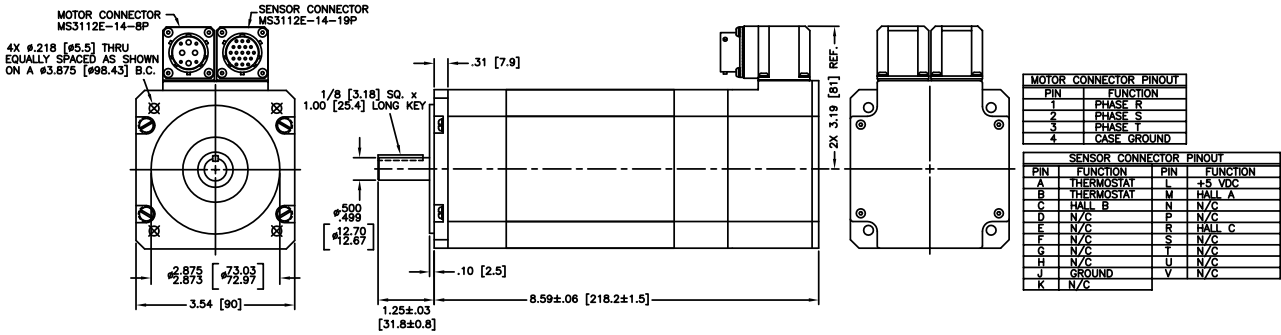
Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 12.0" x 12.0" x 0.50".

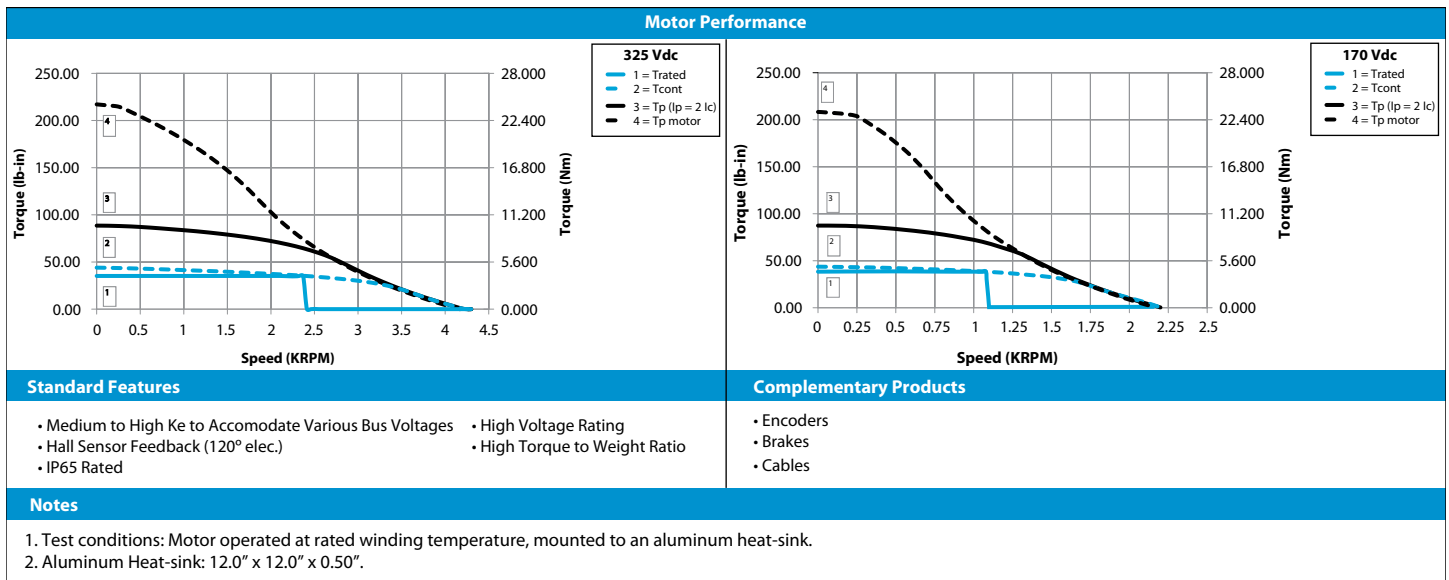
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AB34005

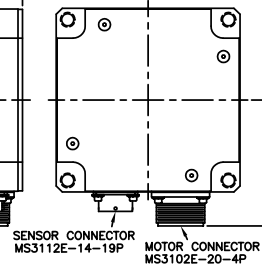
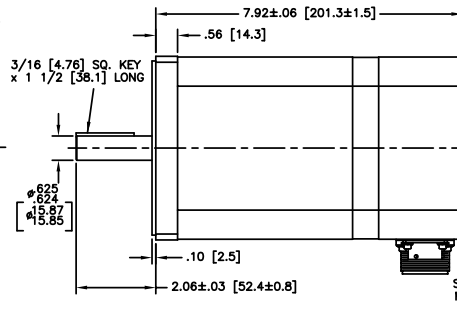
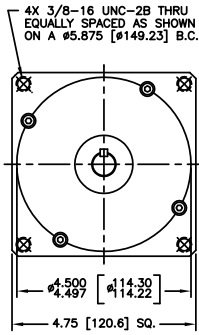


		Part/Model Number
Specification	Units	AB34005
Supply Voltage	VDC	325
Continuous Stall Torque	lb-in	44.00
	Nm	4.971
Speed @ Cont. Torque	RPM	2500
Current @ Cont. Torque	Amps (A)	7.55
Continuous Output Power	Watts (W)	966
Motor Constant	lb-in/sqrt W	3.95
	Nm/sqrt W	0.45
Torque Constant	lb-in/A	6.423
	Nm/A	0.726
Voltage Constant	V/krpm	76.00
	V/rad/s	0.726
Terminal Resistance	Ohms	2.64
Inductance	mH	10.04
Max. Speed	RPM	6000
Peak Current	Amps (A)	37.75
Peak Torque	lb-in	217.14
	Nm	24.534
Thermal Time Constant	min	0.00
Thermal Resistance	Celsius/W	0.57
Max. Winding Temperature	Celsius	155
Rotor Inertia	lb-in-sec ²	.00262
	kg-m ²	2.96E-4
Weight	Lbs	14.22
	Kg	6.5



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AB48000



MOTOR CONNECTOR PINOUT	
PIN	FUNCTION
A	PHASE R
B	PHASE S
C	PHASE T
D	CASE GROUND

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	+5 VDC
B	THERMOSTAT	M	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

Specification		Units	Part/Model Number
			AB48000
Supply Voltage	VDC		325
Continuous Stall Torque	lb-in		43.13
	Nm		4.873
Speed @ Cont. Torque	RPM		3000
Current @ Cont. Torque	Amps (A)		15.43
Continuous Output Power	Watts (W)		1254.67
Motor Constant	lb-in/sqrt W		4.76
	Nm/sqrt W		0.54
Torque Constant	lb-in/A		3.296
	Nm/A		0.372
Voltage Constant	V/krpm		39.00
	V/rad/s		0.372
Terminal Resistance	Ohms		0.48
Inductance	mH		2.41
Max. Speed	RPM		3000
Peak Current	Amps (A)		46.30
Peak Torque	lb-in		131.78
	Nm		14.889
Thermal Time Constant	min		0.00
Thermal Resistance	Celsius/W		0.66
Max. Winding Temperature	Celsius		125
Rotor Inertia	lb-in-sec ²		.0034
	kg-m ²		3.84E-4
Weight	Lbs		16.58
	Kg		7.5

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 18.0" x 18.0" x 0.50".

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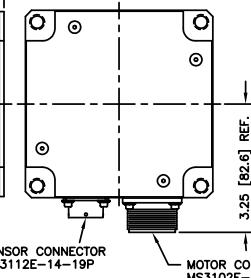
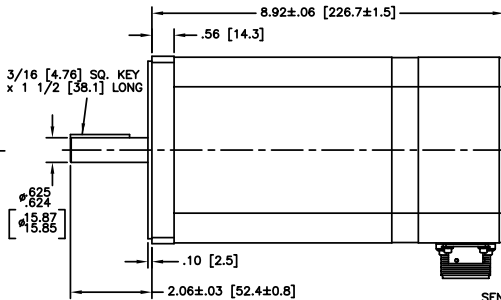
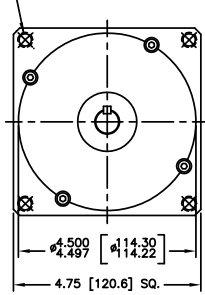
Automation Grade Brushless DC Servo Motors

AB48000 Series



AB48001

4X 3/8-16 UNC-2B THRU
EQUALLY SPACED AS SHOWN
ON A Ø5.875 [Ø149.23] B.C.



MOTOR CONNECTOR PINOUT	
PIN	FUNCTION
A	PHASE R
B	PHASE S
C	PHASE T
D	CASE GROUND

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	+5 VDC
B	THERMOSTAT	M	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

Specification		Units	Part/Model Number	AB48001
Supply Voltage	VDC			325
Continuous Stall Torque	lb-in			74.17
	Nm			8.38
Speed @ Cont. Torque	RPM			3000
Current @ Cont. Torque	Amps (A)			14.67
Continuous Output Power	Watts (W)			2059.22
Motor Constant	lb-in/sqrt W			6.59
	Nm/sqrt W			0.74
Torque Constant	lb-in/A			4.563
	Nm/A			0.516
Voltage Constant	V/krpm			54.00
	V/rad/s			0.516
Terminal Resistance	Ohms			.48
Inductance	mH			2.85
Max. Speed	RPM			3000
Peak Current	Amps (A)			44.00
Peak Torque	lb-in			186.00
	Nm			21.015
Thermal Time Constant	min			0.00
Thermal Resistance	Celsius/W			.52
Max. Winding Temperature	Celsius			125
Rotor Inertia	lb-in-sec ²			.005
	kg-m ²			5.65E-4
Weight	Lbs			22.00
	Kg			10

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoder
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 18.0" x 18.0" x 0.50".

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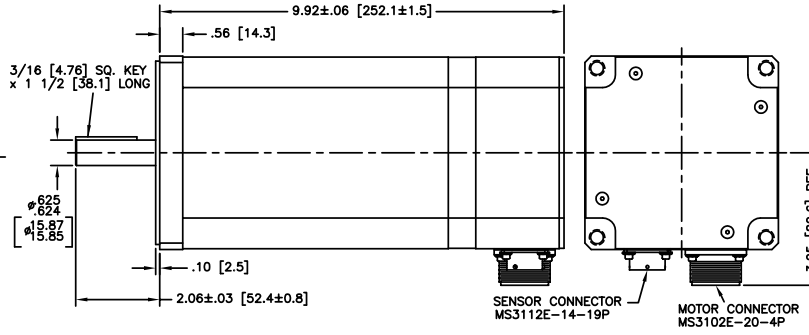
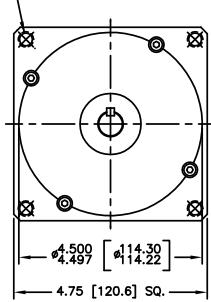
Automation Grade Brushless DC Servo Motors

AB48000 Series



AB48002

4X 3/8-16 UNC-2B THRU
EQUALLY SPACED AS SHOWN
ON A Ø5.875 [Ø149.23] B.C.



MOTOR CONNECTOR PINOUT	
PIN	FUNCTION
A	PHASE R
B	PHASE S
C	PHASE T
D	CASE GROUND

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	+5 VDC
B	THERMOSTAT	M	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

Specification		Units	Part/Model Number
			AB48002
Supply Voltage	VDC		325
Continuous Stall Torque	lb-in		92.37
	Nm		10.436
Speed @ Cont. Torque	RPM		3000
Current @ Cont. Torque	Amps (A)		15
Continuous Output Power	Watts (W)		1260
Motor Constant	lb-in/sqrt W		8.28
	Nm/sqrt W		0.94
Torque Constant	lb-in/A		6.085
	Nm/A		0.688
Voltage Constant	V/krpm		72.00
	V/rad/s		0.688
Terminal Resistance	Ohms		.54
Inductance	mH		3.64
Max. Speed	RPM		3000
Peak Current	Amps (A)		45.49
Peak Torque	lb-in		238.62
	Nm		26.96
Thermal Time Constant	min		0.00
Thermal Resistance	Celsius/W		.58
Max. Winding Temperature	Celsius		125
Rotor Inertia	lb-in-sec ²		.007
	kg-m ²		7.91E-4
Weight	Lbs		25.20
	Kg		11.4

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Cables

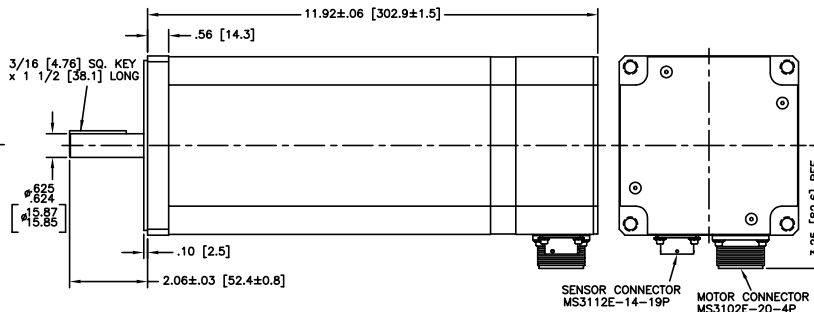
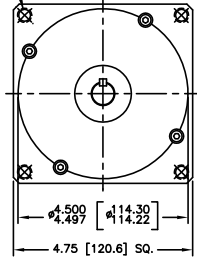
Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 18.0" x 18.0" x 0.50".

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AB48003

4X 3/8-16 UNC-2B THRU
EQUALLY SPACED AS SHOWN
ON A Ø5.875 [Ø149.23] B.C.



MOTOR CONNECTOR PINOUT	
PIN	FUNCTION
A	PHASE R
B	PHASE S
C	PHASE T
D	CASE GROUND

SENSOR CONNECTOR PINOUT			
PIN	FUNCTION	PIN	FUNCTION
A	THERMOSTAT	L	+5 VDC
B	THERMOSTAT	M	HALL A
C	HALL B	N	N/C
D	N/C	P	N/C
E	N/C	R	HALL C
F	N/C	S	N/C
G	N/C	T	N/C
H	N/C	U	N/C
J	GROUND	V	N/C
K	N/C		

Specification		Units	Part/Model Number
			AB48003
Supply Voltage	VDC		325
Continuous Stall Torque	lb-in		133.37
	Nm		15.069
Speed @ Cont. Torque	RPM		2100
Current @ Cont. Torque	Amps (A)		14.39
Continuous Output Power	Watts (W)		2535.89
Motor Constant	lb-in/sqrt W		10.76
	Nm/sqrt W		1.22
Torque Constant	lb-in/A		9.127
	Nm/A		1.031
Voltage Constant	V/krpm		108.00
	V/rad/s		1.031
Terminal Resistance	Ohms		.72
Inductance	mH		5.23
Max. Speed	RPM		3000
Peak Current	Amps (A)		43.18
Peak Torque	lb-in		338.65
	Nm		38.262
Thermal Time Constant	min		0.00
Thermal Resistance	Celsius/W		.48
Max. Winding Temperature	Celsius		125
Rotor Inertia	lb-in-sec ²		.01
	kg-m ²		0.00113
Weight	Lbs		33.68
	Kg		15.3

Motor Performance

325 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

170 Vdc

- 1 = Trated
- 2 = Tcont
- 3 = Tp (Ip = 2 Ic)
- 4 = Tp motor

Standard Features

- Medium to High Ke to Accomodate Various Bus Voltages
- Hall Sensor Feedback (120° elec.)
- IP65 Rated
- High Voltage Rating
- High Torque to Weight Ratio

Complementary Products

- Encoders
- Cables

Notes

1. Test conditions: Motor operated at rated winding temperature, mounted to an aluminum heat-sink.
2. Aluminum Heat-sink: 18.0" x 18.0" x 0.50".

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