

3" Frame Brushless Servo Motors



Motor Data (Sine)

Motor Parameters		Units	891ASG****	891BSG****
Horsepower	Hp Rated	Hp	0.82	0.55
Kilowatts	KW Rated	KW	0.62	0.41
Max. Operating Speed	N Max	RPM	5000	3000
Speed @ Rated Torque	N Rated	RPM	4000	2400
*Continuous Rated Torque @ Rated Speed		IN-LBS[Nm]	13.0[1.47]	14.5[1.64]
*Continuous Stall Torque		IN-LBS[Nm]	16.0[1.81]	16.0[1.81]
Continuous Line Current		AMPS(RMS/φ)	2.7	1.3
Peak Torque	Tpk	IN-LBS[Nm]	58.8[6.64]	58.8[6.64]
Peak Current		AMPS(RMS/φ)	9.9	4.9
Max. Theoretical Accel.		RAD/SEC ²	95,610	95,610
Torque Sensitivity	Kt	IN-LBS/AMP(RMS/φ)[Nm/AMP(RMS/φ)]	5.9[.67]	11.9[1.34]
Back EMF (Line to Line)	±10%	Vrms/Krpm	37.6	752
D.C. Resistance (P-P)	±10%	OHMS	3.9	15.4
Inductance (P-P)	±10%	MILLIHENRIES	10.4	39.6
Rotor Inertia	Jm	IN-LBS-SEC ² [Kg-M ²]	.000615[.0000693]	.000615[.0000693]
Static Friction	Tf	IN-LBS[Nm]	0.4[0.05]	0.4[0.05]
Motor Weight		LBS[Kg]	7.8[3.5]	7.8[3.5]
Line Voltage		VAC	230	230

Motor Parameters		Units	892ASG****	892BSG****	893ASG****	893BSG****
Horsepower	Hp Rated	Hp	1.62	1.05	1.96	1.10
Kilowatts	KW Rated	KW	1.20	0.78	1.46	0.85
Max. Operating Speed	N Max	RPM	5000	3000	4100	2000
Speed @ Rated Torque	N Rated	RPM	4000	2400	3600	1500
*Continuous Rated Torque @ Rated Speed		IN-LBS[Nm]	25.5[2.9]	27.5[3.1]	34.4[3.8]	36.0[4.0]
*Continuous Stall Torque		IN-LBS[Nm]	30.0[3.4]	30.0[3.4]	39.0[4.4]	39.0[4.4]
Continuous Line Current		AMPS(RMS/φ)	5.2	2.6	4.5	2.1
Peak Torque	Tpk	IN-LBS[Nm]	105.0[11.9]	105.0[11.9]	137.0[15.5]	137.0[15.5]
Peak Current		AMPS(RMS/φ)	18.9	9.6	16.3	7.9
Max. Theoretical Accel.		RAD/SEC ²	105,954	105,954	100,000	100,000
Torque Sensitivity	Kt	IN-LBS/AMP(RMS/φ)[Nm/AMP(RMS/φ)]	5.8[.66]	11.6[1.31]	8.8[.99]	17.5[1.98]
Back EMF (Line to Line)	±10%	Vrms/Krpm	36.6	73.2	55.0	1100
D.C. Resistance (P-P)	±10%	OHMS	1.5	6.0	1.9	7.7
Inductance (P-P)	±10%	MILLIHENRIES	5.1	20.2	7.5	29.1
Rotor Inertia	Jm	IN-LBS-SEC ² [Kg-M ²]	.000991[.0001116]	.000991[.0001116]	.00137[.000154]	.00137[.000154]
Static Friction	Tf	IN-LBS[Nm]	0.5[0.06]	0.5[0.06]	0.6[0.07]	0.6[0.07]
Motor Weight		LBS[Kg]	10.4[4.7]	10.4[4.7]	14.0[6.0]	14.0[6.0]
Line Voltage		VAC	230	230	230	230

Brake Info:

Min. Holding Torque: 60IN-LBS
 Input Voltage: 24VDC
 Current: 2.2AMPS
 Inertia: .00015IN-LB-SEC²
 Weight Adder: 2.2LBS

*25° C Ambient with a maximum case temperature of 100° C on motor. Motor mounted on a 10" x 10" x 1/4" aluminum heatsink. Thermostat in stator windings will open if winding temperature exceeds 155° C. This allows +10% headroom in the continuous torque rating before thermostat opens.

Mechanical Notes:

1. Axial Load: 25 LBS. Max.
2. Radial Load: 40 LBS. Max. @ 1" from face
3. Motor sealed to IP65

Motor Data (Trap)

Motor Parameters		Units	891ATG****	891BTG****
Horsepower	Hp Rated	Hp	0.82	0.55
Kilowatts	KW Rated	KW	0.62	0.41
Max. Operating Speed	N Max	RPM	5000	3000
Speed @ Rated Torque	N Rated	RPM	4000	2400
*Continuous Rated Torque @ Rated Speed		IN-LBS[Nm]	13.0[1.47]	14.5[1.64]
*Continuous Stall Torque		IN-LBS[Nm]	16.0[1.81]	16.0[1.81]
Continuous Line Current		AMPS	3.8	1.9
Peak Torque	Tpk	IN-LBS[Nm]	58.8[6.64]	58.8[6.64]
Peak Current		AMPS	14.0	7.0
Max. Theoretical Accel.		RAD/SEC ²	95,610	95,610
Torque Sensitivity	Kt	IN-LBS/AMP[Nm/AMP]	4.2[0.48]	8.4[0.96]
Back EMF (Line to Line)		Vrms/Krpm	37.6	75.2
D.C.Resistance (P-P)		OHMS	3.9	15.4
Inductance (P-P)		MILLIHENRIES	10.4	39.6
Rotor Inertia		Jm	.000615[.0000693]	.000615[.0000693]
Static Friction		Tf	0.4[0.05]	0.4[0.05]
Motor Weight		LBS[Kg]	7.8[3.5]	7.8[3.5]
Line Voltage		VAC	230	230

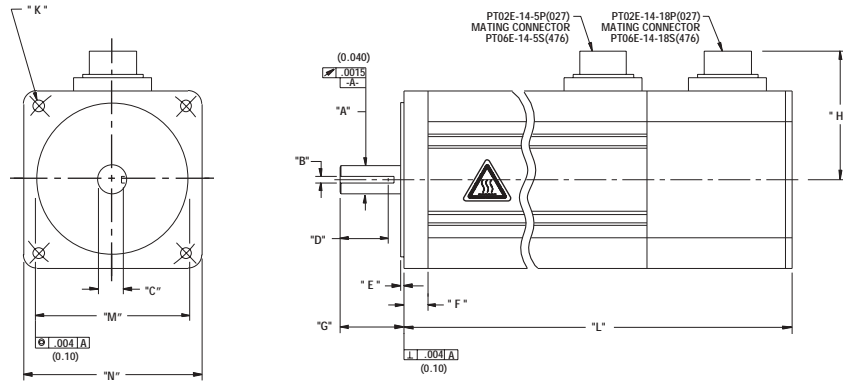
Motor Parameters		Units	892ATG****	892BTG****	893ATG****	893BTG****
Horsepower	Hp Rated	Hp	1.62	1.05	1.96	1.10
Kilowatts	KW Rated	KW	1.20	0.78	1.46	0.85
Max. Operating Speed	N Max	RPM	5000	3000	4100	2000
Speed @ Rated Torque	N Rated	RPM	4000	2400	3600	1500
*Continuous Rated Torque @ Rated Speed		IN-LBS[Nm]	25.5[2.9]	27.5[3.1]	34.4[3.8]	36.0[4.0]
*Continuous Stall Torque		IN-LBS[Nm]	30.0[3.4]	30.0[3.4]	39.0[4.4]	39.0[4.4]
Continuous Line Current		AMPS	7.3	3.7	6.3	3.0
Peak Torque	Tpk	IN-LBS[Nm]	105.0[11.9]	105.0[11.9]	137.0[15.5]	137.0[15.5]
Peak Current		AMPS	26.8	13.6	23.1	11.1
Max. Theoretical Accel.		RAD/SEC ²	105,954	105,954	100,000	100,000
Torque Sensitivity	Kt	IN-LBS/AMP[Nm/AMP]	4.1[0.47]	8.2[0.94]	6.2[0.7]	12.4[1.4]
Back EMF (Line to Line)		Vrms/Krpm	36.6	73.2	55.0	110.0
D.C.Resistance (P-P)		OHMS	1.5	6.0	1.9	7.7
Inductance (P-P)		MILLIHENRIES	5.1	20.2	7.5	29.1
Rotor Inertia		Jm	.000991[.0001116]	.000991[.0001116]	.00137[.000154]	.00137[.000154]
Static Friction		Tf	0.5[0.06]	0.5[0.06]	0.6[0.07]	0.6[0.07]
Motor Weight		LBS[Kg]	10.4[4.7]	10.4[4.7]	14.0[6.0]	14.0[6.0]
Line Voltage		VAC	230	230	230	230

Brake Info:

Min. Holding Torque: 60IN-LBS
 Input Voltage: 24VDC
 Current : 2.2AMPS
 Inertia: .00015IN-LB-SEC²
 Weight Adder: 2.2LBS

*25° C Ambient with a maximum case temperature of 100° C on motor. Motor mounted on a 10" x 10" x 1/4" aluminum heatsink. Thermostat in stator windings will open if winding temperature exceeds 155° C. This allows +10% headroom in the continuous torque rating before thermostat opens.

- Mechanical Notes:
1. Axial Load: 25 LBS. Max.
 2. Radial Load: 40 LBS. Max. @ 1" from face
 3. Motor sealed to IP65



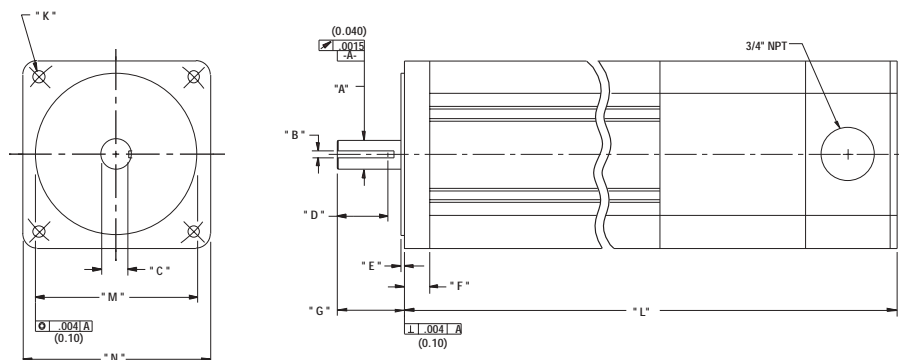
3" (89) English and Metric Connectorized Termination-Option 1 Motors

Model	"A"	"B"	"C"	"D"	"E"	"F"	"G"
MPM891****6***	\varnothing .4997 (12.692) .4993 (12.682)	.1265 (3.213) .1250 (3.175)	.420 (10.67)	.90 (22.9)Min	.06 (1.6)	.44 (11.2)	1.20 (30.5) 1.16 (29.5)
MPM891****7***	\varnothing 14.000 (.5512) 13.985 (.5508)	5.08 (.200) 5.00 (.197)	10.90 (.429)	20.0 (.79)Min	3.0 (.12)	11.2 (.44)	30.5 (1.20) 29.5 (1.16)
MPM892****6***	\varnothing .4997 (12.692) .4993 (12.682)	.1265 (3.213) .1250 (3.175)	.420 (10.67)	.90 (22.9)Min	.06 (1.6)	.44 (11.2)	1.20 (30.5) 1.16 (29.5)
MPM892****7***	\varnothing 14.000 (.5512) 13.985 (.5508)	5.08 (.200) 5.00 (.197)	10.90 (.429)	20.0 (.79)Min	3.0 (.12)	11.2 (.44)	30.5 (1.20) 29.5 (1.16)
MPM893****6***	\varnothing .4997 (12.692) .4993 (12.682)	.1265 (3.213) .1250 (3.175)	.420 (10.67)	.90 (22.9)Min	.06 (1.6)	.44 (11.2)	1.20 (30.5) 1.16 (29.5)
MPM893****7***	\varnothing 14.000 (.5512) 13.985 (.5508)	5.08 (.200) 5.00 (.197)	10.90 (.429)	20.0 (.79)Min	3.0 (.12)	11.2 (.44)	30.5 (1.20) 29.5 (1.16)

Model	"H"	"K"	"L"	"L" w/ Brake	"M"	"N"
MPM891****6***	2.5 (64.0)Max	\varnothing 2.23 (5.66)THRU (4)EQ SPD AS SHOWN ON \varnothing 3.875 (98.43)B.C.	7.24 (183.9)Max	8.74 (222.0) Max	\varnothing 2.877 (73.08) 2.873 (72.97)	\square 3.31 (84.1)
MPM891****7***	64.0 (2.5)Max	\varnothing 7.00 (.276)THRU (4)EQ SPD AS SHOWN ON \varnothing 100.00 (3.937)B.C.	183.9 (7.24)Max	222.0 (8.74) Max	\varnothing 80.00 (3.150) 79.98 (3.149)	\square 89.0 (3.50)
MPM892****6***	2.5 (64.0)Max	\varnothing 2.23 (5.66)THRU (4)EQ SPD AS SHOWN ON \varnothing 3.875 (98.43)B.C.	8.74 (222.0)Max	10.24 (260.1) Max	\varnothing 2.877 (73.08) 2.873 (72.97)	\square 3.31 (84.1)
MPM892****7***	64.0 (2.5)Max	\varnothing 7.00 (.276)THRU (4)EQ SPD AS SHOWN ON \varnothing 100.00 (3.937)B.C.	222.0 (8.74)Max	260.1 (10.24) Max	\varnothing 80.00 (3.150) 79.98 (3.149)	\square 89.0 (3.50)
MPM893****6***	2.5 (64.0)Max	\varnothing 2.23 (5.66)THRU (4)EQ SPD AS SHOWN ON \varnothing 3.875 (98.43)B.C.	10.24 (260.1)Max	11.74 (298.2) Max	\varnothing 2.877 (73.08) 2.873 (72.97)	\square 3.31 (84.1)
MPM893****7***	64.0 (2.5)Max	\varnothing 7.00 (.276)THRU (4)EQ SPD AS SHOWN ON \varnothing 100.00 (3.937)B.C.	260.1 (10.24)Max	298.2 (11.74) Max	\varnothing 80.00 (3.150) 79.98 (3.149)	\square 89.0 (3.50)

English = 6 (NEMA 34) Units: in (mm)
 Metric = 7 Units: mm (in)

For Mechanical Dimensions on Termination Option 2 Consult Factory.



3" (89)English and Metric NPT Termination-Option 3 Motors

Model	"A"	"B"	"C"	"D"	"E"	"F"	"G"
MPM891***6***	∅ .4997 (12.692) .4993 (12.682)	.1265 (3.213) .1250 (3.175)	.420 (10.67)	.90(22.9) Min	.06(1.6)	.44(11.2)	1.20(30.5) 1.16(29.5)
MPM891***7***	∅ 14.000 (.5512) 13.985 (.5508)	5.08 (.200) 5.00 (.197)	10.90 (.429)	20.0(.79) Min	3.0 (.12)	11.2(.44)	30.5(1.20) 29.5(1.16)
MPM892***6***	∅ .4997 (12.692) .4993 (12.682)	.1265 (3.213) .1250 (3.175)	.420 (10.67)	.90(22.9) Min	.06(1.6)	.44(11.2)	1.20(30.5) 1.16(29.5)
MPM892***7***	∅ 14.000 (.5512) 13.985 (.5508)	5.08 (.200) 5.00 (.197)	10.90 (.429)	20.0(.79) Min	3.0 (.12)	11.2(.44)	30.5(1.20) 29.5(1.16)
MPM893***6***	∅ .4997 (12.692) .4993 (12.682)	.1265 (3.213) .1250 (3.175)	.420 (10.67)	.90(22.9) Min	.06(1.6)	.44(11.2)	1.20(30.5) 1.16(29.5)
MPM893***7***	∅ 14.000 (.5512) 13.985 (.5508)	5.08 (.200) 5.00 (.197)	10.90 (.429)	20.0(.79) Min	3.0 (.12)	11.2(.44)	30.5(1.20) 29.5(1.16)

3" Motor with Resolver Feedback

Option 1

Motor Connector 270-00026 (PT02E-14-5P(027))

Pin	Function
A	ϕR
B	ϕS
C	ϕT
D	PE GND
E	-

Resolver Connector 270-00024(PT02E-14-18R(027))

Pin	Function
U	THERM
N	THERM
H	SIN
G	COS GND
S	COS
F	SIN GND
R	REF GND
E	REF
D	RES SHLD
P	GND
A	-
B	-
C	-
J	-
K	-
L	-
M	-
T	-

*** Option 1 with brake**

Motor Brake Connector 270-00032 (PT02E-16-8P(027))

Pin	Function
A	ϕR
B	ϕS
C	ϕT
D	PE GND
E	BRK SHLD
F	BRK (+)
G	BRK (-)
H	-

Option 2

Motor Connector 270-00256(BEGA089NN000009000)

Pin	Function
1	ϕR (U1)
2	PE GND
3	ϕT (W1)
4	ϕS (V1)
*A	BRK (+)
*B	BRK (-)
C	THERM
D	THERM

*USE ONLY WITH BRAKE OPTION

Resolver Connector 270-00257(AEGA052NN0000013000)

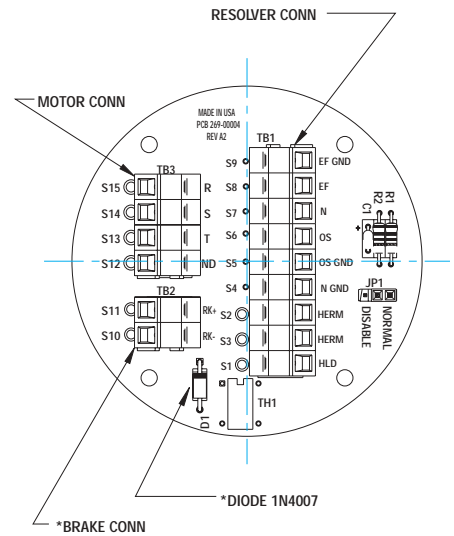
Pin	Function
1	-
2	REF (R1)
3	REF GND (R2)
4	COS GND (S1)
5	COS (S3)
6	SIN (S2)
7	SIN GND (S4)
8	-
9	-
10	-
11	-
12	-

Option 3

Connection Chart (NPT) Resolver

Terminal	Function
R	ϕR
S	ϕS
T	ϕT
GND	PE GND
*S11	BRK (+)
*S10	BRK (-)
S9	REF GND
S8	REF
S7	SIN
S6	COS
S5	COS GND
S4	SIN GND
S3	THERM
S2	THERM
S1	RES SHLD

*USE ONLY WITH BRAKE OPTION



3" Motor with Encoder Feedback

Option 1

Motor Connector 270-00026 (PT02E-14-5P(027))

Pin	Function
A	ϕ R
B	ϕ S
C	ϕ T
D	PE GND
E	-

Encoder Connector 270-00024 (PT02E-14-18P(027))

Pin	Function
T	GND
K	+5VDC
B	CH A
C	CH A\
N	CH B
P	CH B\
M	CH Z
U	CH Z\
E	CH U
R	CH U\
F	CH V
S	CH V\
G	CH W
H	CH W\
D	GND/CABLE
A	THERM
L	THERM
J	GND

Option 1 with brake

Motor Brake Connector 270-00032 (PT02E-16-8P(027))

Pin	Function
A	ϕ R
B	ϕ S
C	ϕ T
D	PE GND
E	BRK SHLD
F	BRK (+)
G	BRK (-)
H	-

Option 3-Consult Factory

Option 2

Motor Brake Connector 270-00256 (BEGA089NN00000013000)

Pin	Function
1	ϕ R (U1)
2	PE GND
3	ϕ T (W1)
4	ϕ S (V1)
*A	BRK (+)
*B	BRK (-)
C	THERM
D	THERM

*USE ONLY WITH BRAKE OPTION

Encoder Connector 270-00257 (AEGA052NN00000013000)

Pin	Function
1	GND (0V)
2	CH A\ (A)
3	CH A (A\)
4	CH B (B)
5	CH B\ (B\)
6	CH Z (Z)
7	CH Z\ (Z\)
8	+5V (+5V)
9	-
10	CH U (RLGU)
11	CH V (RLGV)
12	CH W (RLGW)