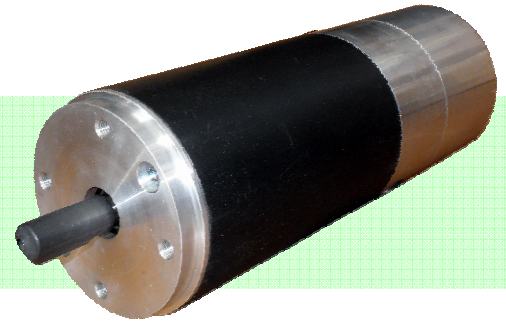


## Brushed DC Servo Motor

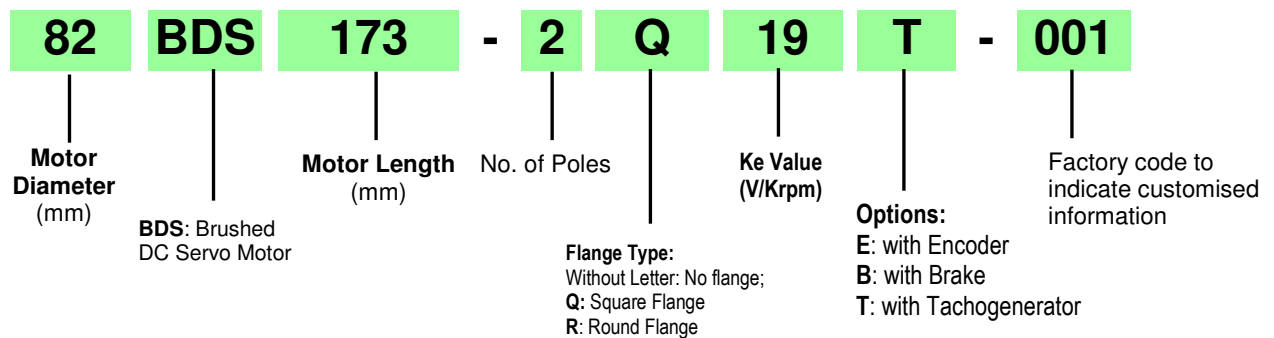


The BDS ranges of brushed DC Servomotors provide a high torque to inertia ratio, giving fast acceleration and rapid dynamic response. Their design features and construction contribute to smooth-running performance and extended service life. They are suitable for most servo and variable speed applications and are compatible with most available drives on the market.

The motors are ideally suited for heavy-duty power applications with their capability to achieve continuous torque in a compact size. Their design features and construction contribute to smooth performance and extended service life, these motors can perform reliably for applications in a wide range of industries, including medical/biotech, semiconductor, processing, machine tools, CMM machines, robotics & automation and more.

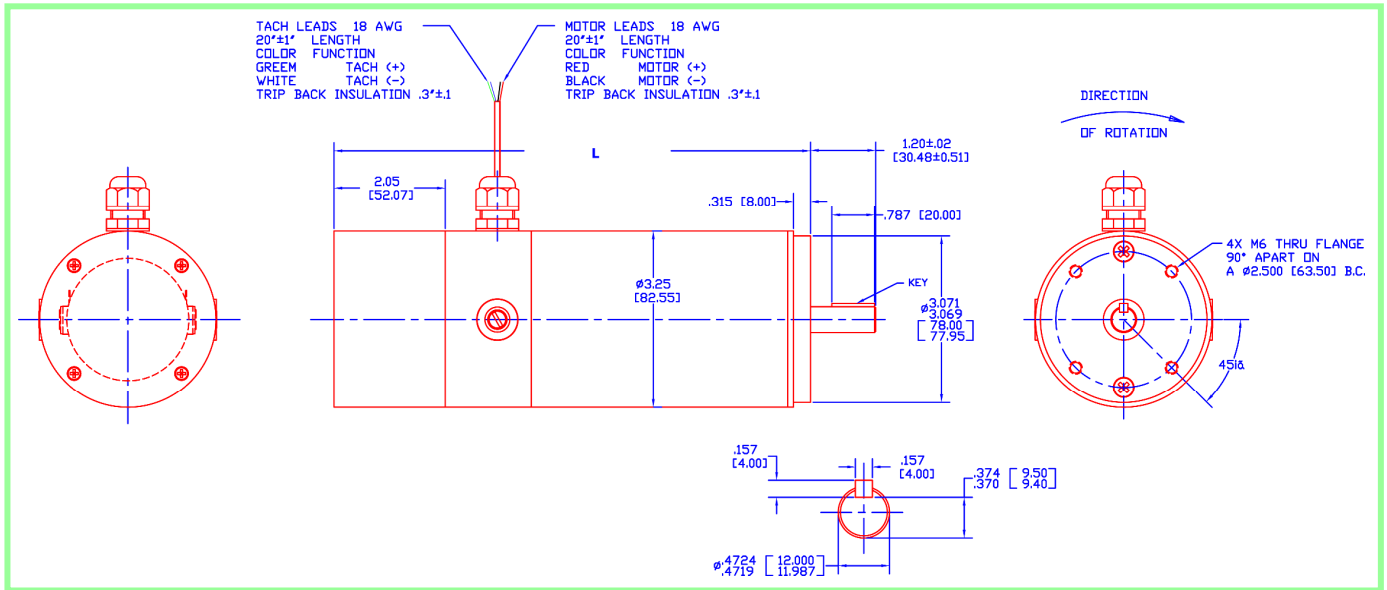
- ✚ **Frame size: Ø82mm & Ø102mm**
- ✚ **Power range: 100W ~ 800W**
- ✚ **Continuous stall torque: 0.5Nm (4.4 lb-in) ~ 3.5Nm (30.9 lb-in)**
- ✚ **Optional Tachogenerator and / or Encoder to provide speed and position feedback**
- ✚ **Optional holding brake**
- ✚ **Customised design on output shafts, flanges and wiring connections**
- ✚ **Compatible with MCP's extensive portfolio of gearboxes**

### Part Number Configuration



## 82BDS SERIES- 135mm Length

### Dimensions (inch [mm])



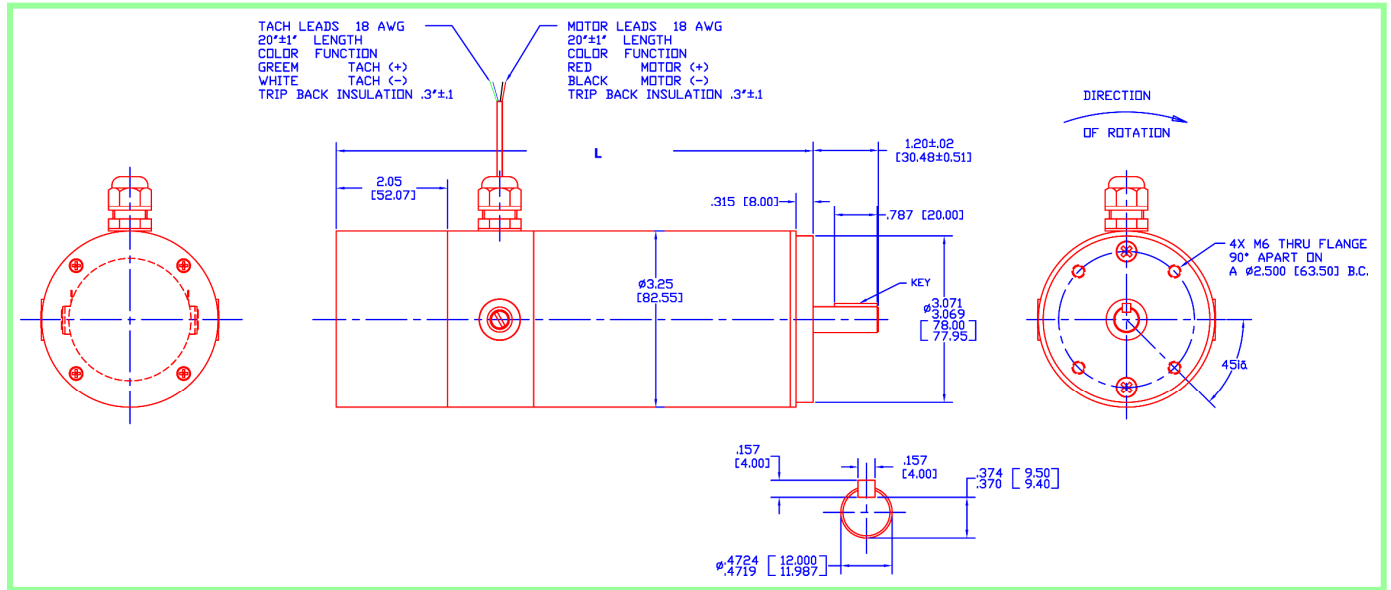
### Technical Specifications

PARAMETERS		MODEL		
		82BDS135-205	82BDS135-210	82BDS135-219
Rated Speed	rpm	3100	3000	3200
Rated Torque	Nm	0.35	0.35	0.35
Rated Voltage	V	16	30	60
Rated Current	A	9.0	4.6	2.1
Rated Power	W	115	102	110
Back EMF Constant (Ke)	V/krpm	5.0	10.0	19.0
Torque Constant (Kt)	Nm/A	0.05	0.09	0.18
	lb-in/A	0.44	0.80	1.59
Max. Voltage	V	25.0	50.0	95.0
Continuous Stall Torque	Nm	0.5	0.5	0.5
	lb-in	4.4	4.4	4.4
Continuous Stall Current	A	12.0	6.1	3.0
Peak Stall Torque	Nm	2.0	2.0	2.0
	lb-in	17.7	17.7	17.7
Peak Current	A	44.2	24.0	11.6
Max. Speed	rpm	5100	5000	5000
Resistance	Ohms	0.63	0.74	2.03
Inductance	mH	0.51	1.28	5.03
Motor length	mm	135	135	135
Tachogenerator	V/krpm	9.5	9.5	9.5
Motor Length with tacho 'L'	mm	178	178	178

\*\* Shafts, flange type and wirings can be customised to meet the customer's requirement.

## 82BDS SERIES- 147mm Length

Dimensions (inch [mm])



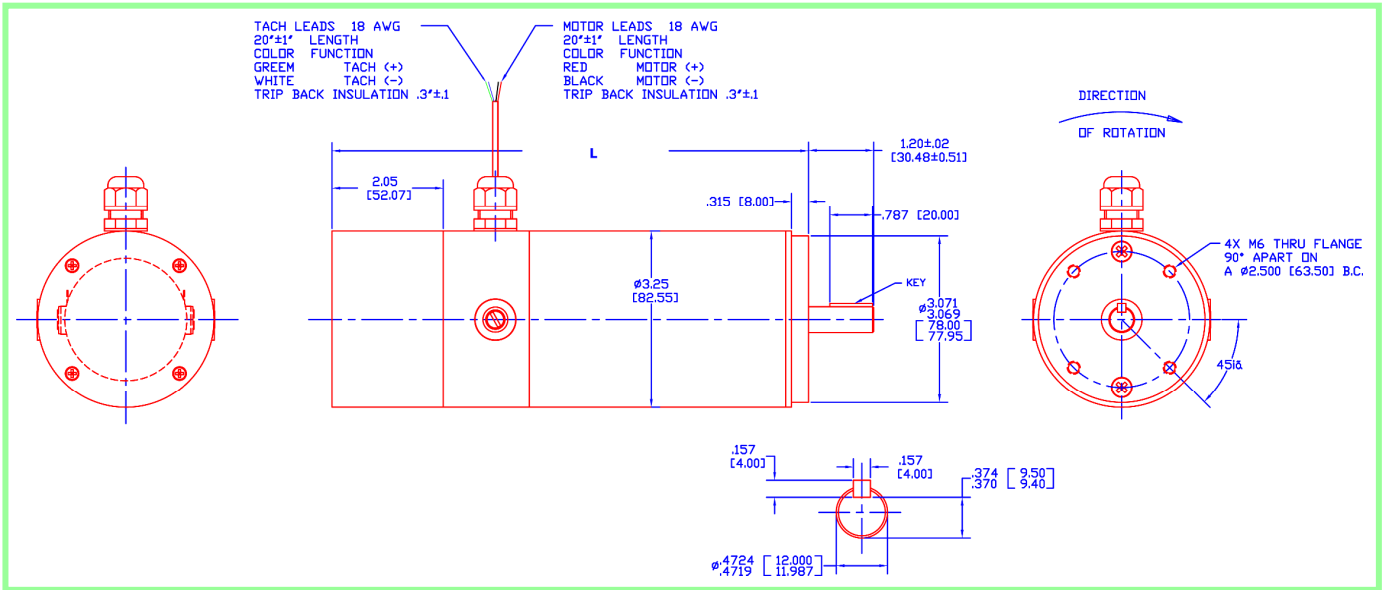
## Technical Specifications

PARAMETERS		MODEL		
		82BDS147-206	82BDS147-210	82BDS147-219
Rated Speed	rpm	3000	3000	3000
Rated Torque	Nm	0.50	0.55	0.50
Rated Voltage	V	18	30	57
Rated Current	A	9.6	7.1	2.9
Rated Power	W	156	175	157
Back EMF Constant (Ke)	V/krpm	6.0	10.0	19.0
Torque Constant (Kt)	Nm/A	0.06	0.08	0.18
	lb-in/A	0.53	0.71	1.59
Max. Voltage	V	30.0	54.0	95.0
Continuous Stall Torque	Nm	0.7	0.7	0.7
	lb-in	6.2	6.2	6.2
Continuous Stall Current	A	4.3	4.3	4.3
Peak Stall Torque	Nm	4.0	4.0	4.0
	lb-in	35.4	35.4	35.4
Peak Current	A	70.0	46.4	22.0
Max. Speed	rpm	5000	5400	5000
Resistance	Ohms	0.68	0.82	1.59
Inductance	mH	0.61	0.96	3.80
Motor length	mm	147	147	147
Tachogenerator	V/kprpm	9.5	9.5	9.5
Motor Length with tacho 'L'	mm	190	190	190

\*\* Shafts, flange type and wirings can be customised to meet the customer's requirement.

## 82BDS SERIES- 173mm Length

### Dimensions (inch [mm])



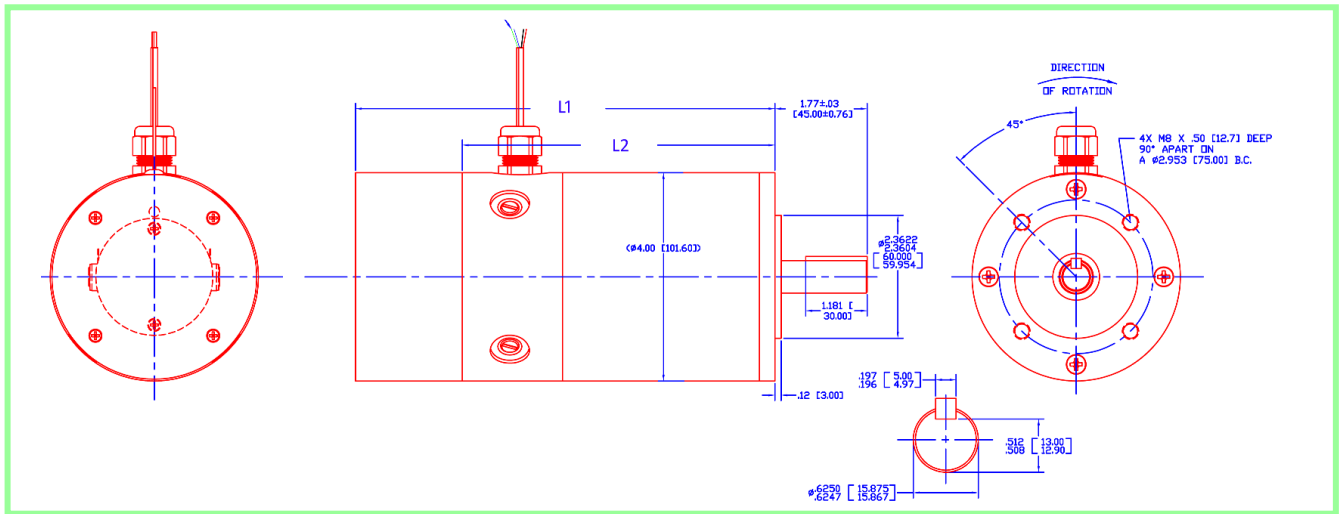
### Technical Specifications

PARAMETERS		MODEL			
		82BDS173-208	82BDS173-212	82BDS173-221	82BDS173-226
Rated Speed	rpm	3000	3000	3000	3000
Rated Torque	Nm	1.00	1.00	1.00	1.00
Rated Voltage	V	24	36	63	78
Rated Current	A	13.8	9.4	5.3	4.5
Rated Power	W	331	320	320	314
Back EMF Constant (Ke)	V/krpm	8.0	12.0	21.0	26.0
Torque Constant (Kt)	Nm/A	0.08	0.12	0.20	0.24
	lb-in/A	0.71	1.06	1.77	2.12
Max. Voltage	V	48.0	60.0	105.0	122.0
Continuous Stall Torque	Nm	1.2	1.2	1.2	1.2
	lb-in	10.6	10.6	10.6	10.6
Continuous Stall Current	A	16.4	11.1	6.2	5.3
Peak Stall Torque	Nm	8.0	8.0	8.0	8.0
	lb-in	70.8	70.8	70.8	70.8
Peak Current	A	103.0	70.0	39.6	33.1
Max. Speed	rpm	6000	5000	5000	4700
Resistance	Ohms	0.73	0.90	1.53	2.15
Inductance	mH	0.77	1.22	3.10	4.90
Motor length	mm	173	173	173	173
Tachogenerator	V/krpm	9.5	9.5	9.5	9.5
Motor Length with tacho 'L'	mm	216	216	216	216

\*\* Shafts, flange type and wirings can be customised to meet the customer's requirement.

## 102BDS SERIES- 143mm Length

Dimensions (inch [mm])



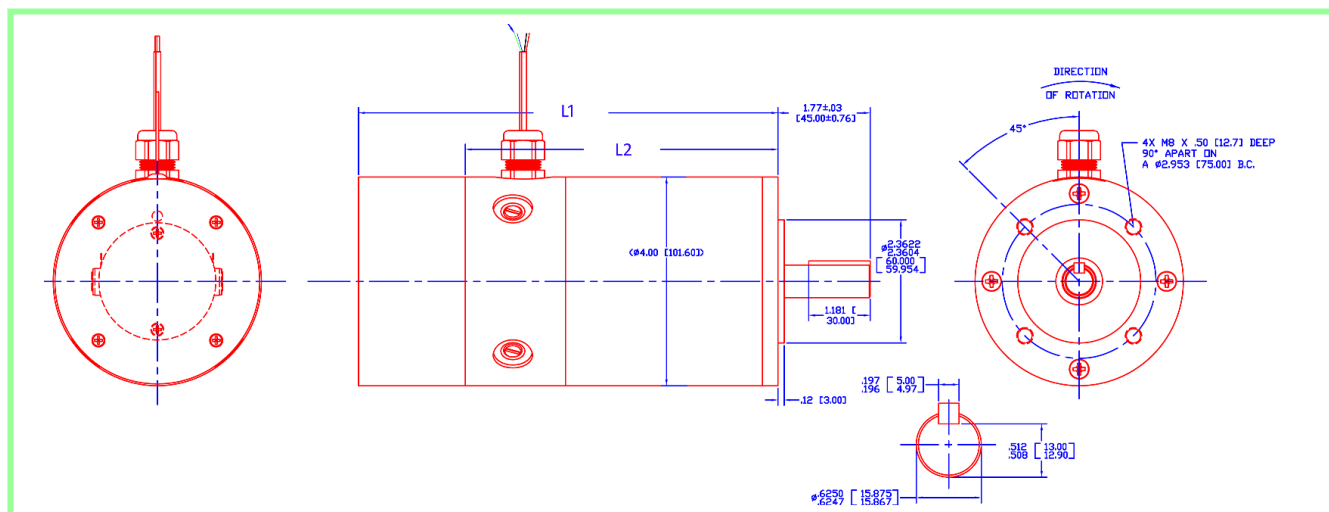
## Technical Specifications

PARAMETERS		MODEL			
		102BDS143-419	102BDS143-426	102BDS143-432	102BDS143-448
Rated Speed	rpm	3000	3000	3000	2100
Rated Torque	Nm	0.9	0.85	1	0.75
Rated Voltage	V	57	78	96	101
Rated Current	A	6.1	4.0	3.8	2.0
Rated Power	W	280	272	313	170
Back EMF Constant (Ke)	V/krpm	19.0	26.0	32.0	48.0
Torque Constant (Kt)	Nm/A lb-in/A	0.18 1.6	0.25 2.2	0.31 2.7	0.46 4.1
Max. Voltage	V	80.0	104.0	128.0	140.0
Continuous Stall Torque	Nm lb-in	1.2 10.6	1.2 10.6	1.2 10.6	1.2 10.6
Continuous Stall Current	A	7.7	5.4	4.5	3.0
Peak Stall Torque	Nm lb-in	6.0 53.1	6.0 53.1	6.0 53.1	6.0 53.1
Peak Current	A	34	25.0	20.2	13.4
Max. Speed	rpm	4180	4000	4000	2900
Resistance	Ohms	0.76	2.10	1.5	2.96
Inductance	mH	1.37	2.17	2.93	7.31
Motor length 'L2'	mm	143	143	143	143
Tachogenerator	V/krpm	9.5	9.5	9.5	9.5
Motor Length with tacho 'L1'	mm	186	186	186	186

\*\* Shafts, flange type and wirings can be customised to meet the customer's requirement.

## 102BDS SERIES- 155mm Length

### Dimensions (inch [mm])



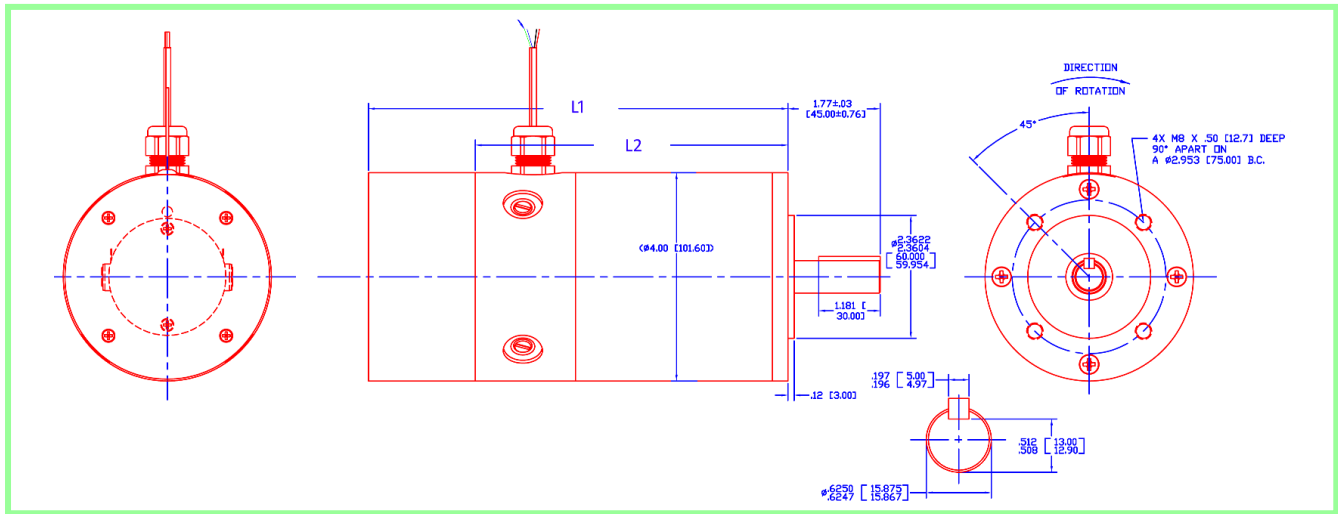
## Technical Specifications

PARAMETERS		MODEL			
		102BDS155-423	102BDS155-437	102BDS155-446	102BDS155-458
Rated Speed	rpm	3000	2500	2500	2000
Rated Torque	Nm	1.1	0.9	1.1	1.3
Rated Voltage	V	69	93	115	116
Rated Current	A	5.9	3.3	3.2	3
Rated Power	W	340	237	280	274
Back EMF Constant (Ke)	V/krpm	23.0	37.0	46.0	58.0
Torque Constant (Kt)	Nm/A	0.21	0.35	0.44	0.55
	lb-in/A	1.9	3.1	3.9	4.9
Max. Voltage	V	92	140	140	140
Continuous Stall Torque	Nm	1.6	1.6	1.6	1.6
	lb-in	14.2	14.2	14.2	14.2
Continuous Stall Current	A	8.2	5.3	4.4	3.5
Peak Stall Torque	Nm	7.5	7.5	7.5	7.5
	lb-in	66.4	66.4	66.4	66.4
Peak Current	A	35.1	22.1	17.8	14.1
Max. Speed	rpm	4000	3800	3000	2400
Resistance	Ohms	0.8	1.5	2.3	3.5
Inductance	mH	1.42	3.55	5.61	8.86
Motor length ‘L2’	mm	155	155	155	155
Tachogenerator	V/kprpm	9.5	9.5	9.5	9.5
Motor Length with tachometer ‘L1’	mm	204	204	204	204

**\*\* Shafts, flange type and wirings can be customised to meet the customer's requirement.**

## 102BDS SERIES- 168mm Length

Dimensions (inch [mm])



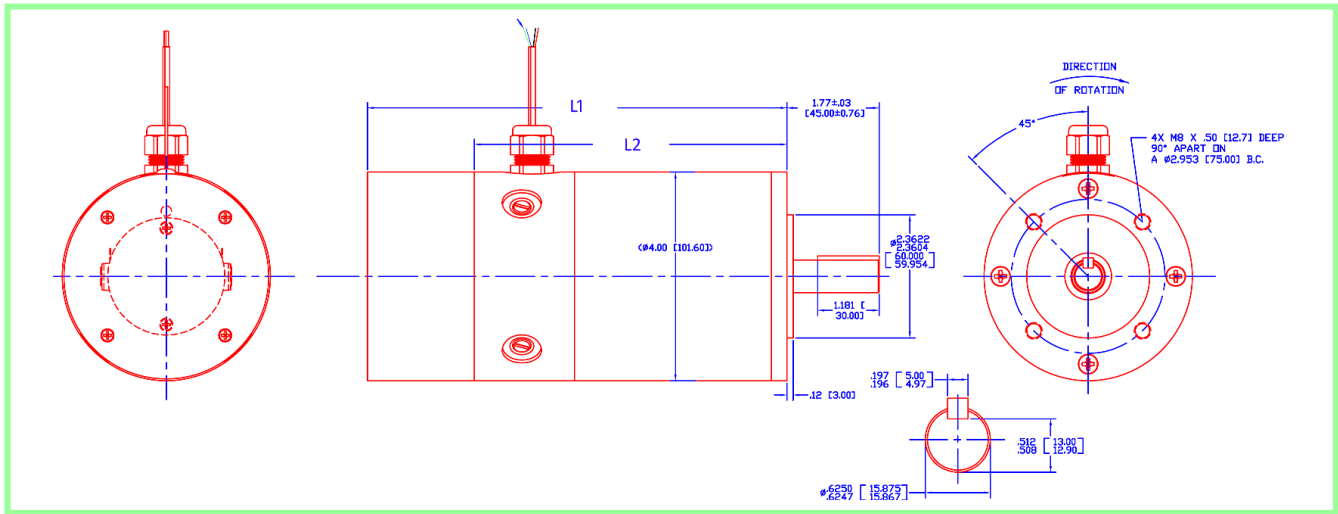
## Technical Specifications

PARAMETERS		MODEL			
		102BDS168-423	102BDS168-435	102BDS168-443	102BDS168-468
Rated Speed	rpm	3000	3000	2500	1500
Rated Torque	Nm	1.5	1.2	1.8	1.8
Rated Voltage	V	69	105	108	102
Rated Current	A	7.9	4.7	4.9	3.1
Rated Power	W	470	370	377	280
Back EMF Constant (Ke)	V/krpm	23.0	35.0	43.0	68.0
Torque Constant (Kt)	Nm/A	0.21	0.34	0.41	0.66
	lb-in/A	1.9	3.0	3.6	5.8
Max. Voltage	V	90	140	140	145
Continuous Stall Torque	Nm	2.1	2.1	2.1	2.1
	lb-in	18.6	18.6	18.6	18.6
Continuous Stall Current	A	10.7	6.9	5.7	3.5
Peak Stall Torque	Nm	10	10	10	10
	lb-in	88.5	88.5	88.5	88.5
Peak Current	A	47.5	30.3	24.9	15.6
Max. Speed	rpm	4000	4000	3250	2100
Resistance	Ohms	0.5	0.63	1.6	3
Inductance	mH	1	2.5	4	9.48
Motor length 'L2'	mm	168	168	168	168
Tachogenerator	V/krpm	9.5	9.5	9.5	9.5
Motor Length with tacho 'L1'	mm	211	211	211	211

\*\* Shafts, flange type and wirings can be customised to meet the customer's requirement.

## 102BDS SERIES- 194mm Length

Dimensions (inch [mm])



## Technical Specifications

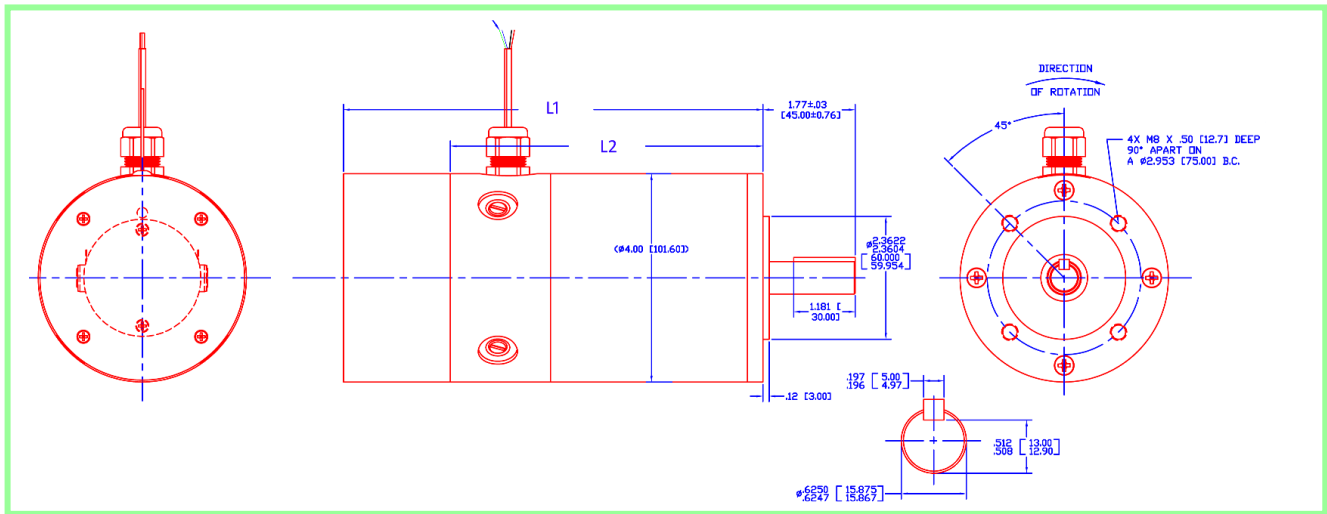
PARAMETERS		MODEL			
		102BDS194-424	102BDS194-435	102BDS194-445	102BDS194-456
Rated Speed	rpm	3000	3000	2000	2000
Rated Torque	Nm	1.9	1.7	2	2
Rated Voltage	V	72	105	90	112
Rated Current	A	9.4	5.8	5.3	4.2
Rated Power	W	594	533	420	420
Back EMF Constant (Ke)	V/krpm	24.0	35.0	44.0	56.0
Torque Constant (Kt)	Nm/A	0.22	0.34	0.43	0.53
	lb-in/A	2.0	3.0	3.8	4.7
Max. Voltage	V	95	140	135	140
Continuous Stall Torque	Nm	3	3	3	3
	lb-in	26.6	26.6	26.6	26.6
Continuous Stall Current	A	14.3	9.6	7.7	6.1
Peak Stall Torque	Nm	14	14	14	14
	lb-in	123.9	123.9	123.9	123.9
Peak Current	A	63.3	42.2	33.4	26.7
Max. Speed	rpm	4000	3700	3000	2500
Resistance	Ohms	0.57	1.2	1.5	1.8
Inductance	mH	0.9	2.05	3.25	5
Motor length 'L2'	mm	194	194	194	194
Tachogenerator	V/kprpm	9.5	9.5	9.5	9.5
Motor Length with tacho 'L1'	mm	237	237	237	237

\*\* Shafts, flange type and wirings can be customised to meet the customer's requirement.



## 102BDS SERIES- 219mm Length

Dimensions (inch [mm])



## Technical Specifications

PARAMETERS		MODEL			
		102BDS219-428	102BDS219-434	102BDS219-442	102BDS219-466
Rated Speed	rpm	3000	3000	2500	1700
Rated Torque	Nm	1.9	2.5	2	2
Rated Voltage	V	84	102	105	112
Rated Current	A	7.7	8.4	5.6	3.7
Rated Power	W	600	800	526	360
Back EMF Constant (Ke)	V/krpm	28.0	34.0	42.0	66.0
Torque Constant (Kt)	Nm/A	0.27	0.32	0.40	0.63
	lb-in/A	2.4	2.8	3.5	5.6
Max. Voltage	V	110	130	126	140
Continuous Stall Torque	Nm	3.2	3.5	3.5	3.5
	lb-in	28.3	30.9	30.9	30.9
Continuous Stall Current	A	12.6	11.5	9.4	6.1
Peak Stall Torque	Nm	18	18	18	18
	lb-in	159.3	159.3	159.3	159.3
Peak Current	A	67.7	56.6	45.9	29.1
Max. Speed	rpm	4000	3800	3000	2100
Resistance	Ohms	0.8	0.95	1.15	2.36
Inductance	mH	1.03	1.63	2.4	6.4
Motor length 'L2'	mm	219	219	219	219
Tachogenerator	V/kprpm	9.5	9.5	9.5	9.5
Motor Length with tachometer 'L1'	mm	262	262	262	262

\*\* Shafts, flange type and wirings can be customised to meet the customer's requirement.