

## BRUSHLESS DC MOTORS | 38 - 130 mm 50 - 2900 W

### B SERIES IP65

We offer a broad range of high quality brushless dc motors in standard and customized configurations. Our customer-centric approach makes us the ideal supplier for your project, especially to instrument and apparatus builders. In addition, we offer immediate delivery, thanks to always having a high number of motors in stock.

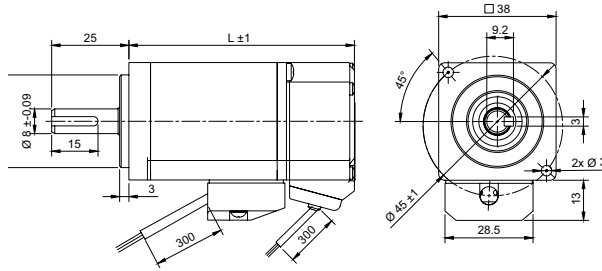
#### Customizations include:

- ✓ Customized harness
- ✓ Winding configuration
- ✓ Shaft configuration
- ✓ And more...

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MODEL	FRAME mm	LENGTH mm	VOLTAGE V	SPEED rpm	TORQUE Nm	POWER W	PAGE
B38	38	72   89	48	3000	0.16   0.32	50   100	<a href="#">1</a>
B60	60	79   99	48	3000	0.64   1.3	200   410	<a href="#">2</a>
B80	80	116   134	48	3000	2.4   3.2	750   1000	<a href="#">3</a>
B100	100	161   173	48	3000	3.2   4.8	1000   1500	<a href="#">4</a>
B100	100	137   159	220	3000	3.2   4.8	1000   1500	<a href="#">5</a>
B110	110	165   182	48	3000	3.8   6.4	1500   2000	<a href="#">6</a>
B110	110	151.5   168.5	220	3000	4.8   6.4	1500   2000	<a href="#">7</a>
B130	130	165   197.5	48	3000	9.5   14	2000   2900	<a href="#">8</a>

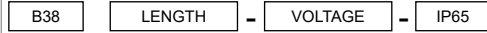
DRAWING (mm)



PHOTO



MODEL NO. DESIGNATION



Example: B3872-48-IP65

ACCESSORIES



● C = customizations are offered on demand even for smaller quantities. Typical customizations are indicated with a green dot at column end. Please contact us for any customization request.

BRUSHLESS DC MOTOR DATA	B3872-48-IP65	B3889-48-IP65	C
Nominal voltage	V	48	48
No load speed	rpm	6800	6800
No load current	A	0.6	0.42
Nominal speed	rpm	3000	3000
Nominal torque	Nm	0.16	0.32
Nominal current	A	2.1	4.2
Peak current	A	6.3	13
Peak torque	Nm	0.48	0.96
Efficiency	%	50	50
Nominal power	W	50	100
Terminal resistance <sup>1</sup>	Ω	2.3	0.95
Terminal inductance <sup>2</sup>	mH	1.5	0.7
Insulation resistance <sup>3</sup>	MΩ	100	100
Dielectric strength <sup>4</sup>	V	600	600
Back EMF	V/rpm	0.005	0.005
Torque constant	Nm/A	0.083	0.083
Rotor inertia	kgcm <sup>2</sup>	0.024	0.04
Bearing type	Ball bearing		
Axial play <sup>5</sup>	mm	0.08	
Radial play <sup>5</sup>	mm	0.02	
Max. dynamic axial load	N	59	
Max. radial load <sup>6</sup>	N	69	

NOTES

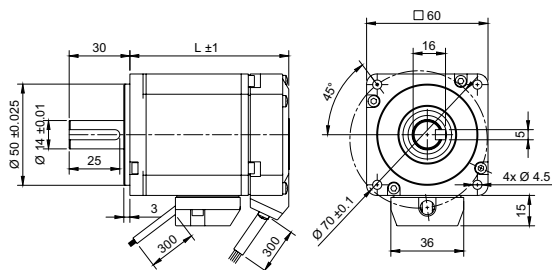
1. Measured at 20°C.
2. Measured at 1 kHz.
3. Measured at 500 V.
4. At a duration of 1 second.
5. Max. 4 N.
6. 13 mm from flange.
7. In storage, relative humidity less than 85%.

OTHER BRUSHLESS DC MOTOR DATA	B3872-48-IP65	B3889-48-IP65	C
Number of pole pairs		10	
Number of phases		3	
Weight	kg	0.4	0.45
Operating temperature	°C	-20 to 50	
Storage temperature <sup>7</sup>	°C	-20 to 85	
Winding type	Star connection		
Motor insulation class	F		
IP rating	IP65		
Hall sensors and power harness length	mm	300	
Power harness	AWG20		
Hall sensors harness	AWG26		
Motor length	mm	72	89
Shaft length from flange	mm	25	
Shaft diameter	mm	8	
Service life	h	10000	
Manufacturing standard	ISO 9001:2015   ISO 14001   IATF 16949		

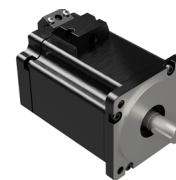
CABLE AND PIN CONFIGURATION

Wire	Definition	Color
U		Yellow
V	Power	Red
W		Black
HU		Blue
HV		Green
HW	Hall	White
Vcc		Red
GND		Black

## DRAWING (mm)



## PHOTO



## MODEL NO. DESIGNATION

B60    LENGTH    -    VOLTAGE    -    IP65

Example: B6079-48-IP65

## ACCESSORIES



● C = customizations are offered on demand even for smaller quantities. Typical customizations are indicated with a green dot at column end. Please contact us for any customization request.

BRUSHLESS DC MOTOR DATA	B6079-48-IP65	B6099-IP65	C	OTHER BRUSHLESS DC MOTOR DATA	B6079-48-IP65	B6099-IP65	C
Nominal voltage	V	48	48	Number of pole pairs		10	
No load speed	rpm	5000	5200	Number of phases		3	
No load current	A	0.6	1.3	Weight	kg	0.95	1.3
Nominal speed	rpm	3000	3000	Operating temperature	°C	-20 to 50	
Nominal torque	Nm	0.64	1.3	Storage temperature <sup>7</sup>	°C	-20 to 85	
Nominal current	A	6	13	Winding type		Star connection	
Peak current	A	18	39	Motor insulation class		F	
Peak torque	Nm	1.9	3.8	IP rating		IP65	
Efficiency	%	69	66	Hall sensors and power harness length	mm	300	
Nominal power	W	200	410	Power harness		AWG19	
Terminal resistance <sup>1</sup>	Ω	0.42	0.19	Hall sensors harness		AWG26	
Terminal inductance <sup>2</sup>	mH	0.65	0.38	Motor length	mm	79	99
Insulation resistance <sup>3</sup>	MΩ	100	100	Shaft length from flange	mm	30	
Dielectric strength <sup>4</sup>	V	600	600	Shaft diameter	mm	14	
Back EMF	V/rpm	0.007	0.007	Service life	h	10000	
Torque constant	Nm/A	0.11	0.11	Manufacturing standard		ISO 9001:2015   ISO 14001   IATF 16949	
Rotor inertia	kgcm <sup>2</sup>	0.2	0.39				
Bearing type		Ball bearing					
Axial play <sup>5</sup>	mm	0.08					
Radial play <sup>5</sup>	mm	0.02					
Max. dynamic axial load	N	98					
Max. radial load <sup>6</sup>	N	250					

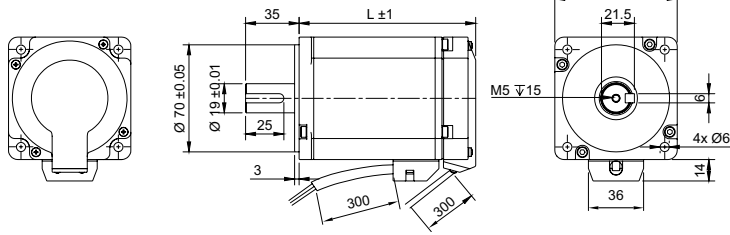
## CABLE AND PIN CONFIGURATION

Wire	Definition	Color
U		Yellow
V	Power	Red
W		Black
HU		Blue
HV		Green
HW	Hall	White
Vcc		Red
GND		Black

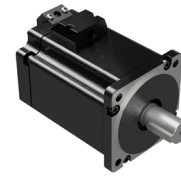
## NOTES

1. Measured at 20°C.
2. Measured at 1 kHz.
3. Measured at 500 V.
4. At a duration of 1 second.
5. Max. 4 N.
6. 13 mm from flange.
7. In storage, relative humidity less than 85%.

DRAWING (mm)



PHOTO



MODEL NO. DESIGNATION

B80 LENGTH - VOLTAGE - IP65

Example: B80116-48-IP65

ACCESSORIES



● C = customizations are offered on demand even for smaller quantities. Typical customizations are indicated with a green dot at column end. Please contact us for any customization request.

BRUSHLESS DC MOTOR DATA	B80116-48-IP65	B80134-48-IP65	C
Nominal voltage	V	48	48
No load speed	rpm	4000	4000
No load current	A	2	2
Nominal speed	rpm	3000	3000
Nominal torque	Nm	2.4	3.2
Nominal current	A	21	28
Peak current	A	63	84
Peak torque	Nm	7.2	9.5
Efficiency	%	74	74
Nominal power	W	750	1000
Terminal resistance <sup>1</sup>	Ω	0.086	0.06
Terminal inductance <sup>2</sup>	mH	0.28	0.21
Insulation resistance <sup>3</sup>	MΩ	100	100
Dielectric strength <sup>4</sup>	V	600	600
Back EMF	V/rpm	0.009	0.009
Torque constant	Nm/A	0.12	0.12
Rotor inertia	kgcm <sup>2</sup>	1.6	2.1
Bearing type		Ball bearing	
Axial play <sup>5</sup>	mm	0.08	
Radial play <sup>5</sup>	mm	0.02	
Max. dynamic axial load	N	150	
Max. radial load <sup>6</sup>	N	390	

NOTES

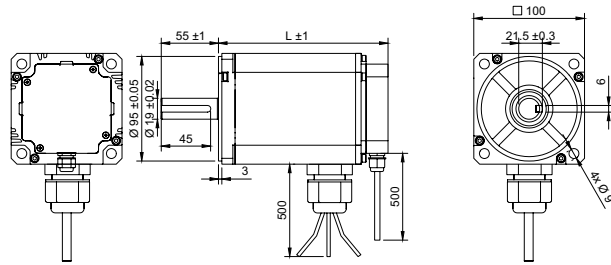
1. Measured at 20°C.
2. Measured at 1 kHz.
3. Measured at 500 V.
4. At a duration of 1 second.
5. Max. 4 N.
6. 20 mm from flange.
7. In storage, relative humidity less than 85%.

OTHER BRUSHLESS DC MOTOR DATA	B80116-48-IP65	B80134-48-IP65	C
Number of pole pairs		10	
Number of phases		3	
Weight	kg	2.5	3.2
Operating temperature	°C	-20 to 50	
Storage temperature <sup>7</sup>	°C	-20 to 85	
Winding type		Star connection	
Motor insulation class		B	
IP rating		IP65	
Hall sensors and power harness length	mm	300	
Power harness		AWG13	
Hall sensors harness		AWG26	
Motor length	mm	116	134
Shaft length from flange	mm	35	
Shaft diameter	mm	19	
Service life	h	10000	
Manufacturing standard		ISO 9001:2015   ISO 14001   IATF 16949	

CABLE AND PIN CONFIGURATION

Wire	Definition	Color
U		Yellow
V	Power	Red
W		Black
HU		Blue
HV		Green
HW	Hall	White
Vcc		Red
GND		Black

DRAWING (mm)



PHOTO



MODEL NO. DESIGNATION

B100    LENGTH    -    VOLTAGE    -    IP65

Example: B100161-48-IP65

ACCESSORIES



● C = customizations are offered on demand even for smaller quantities. Typical customizations are indicated with a green dot at column end. Please contact us for any customization request.

BRUSHLESS DC MOTOR DATA	B100161-48-IP65	B100173-48-IP65	C
Nominal voltage	V	48	48
No load speed	rpm	4000	4000
No load current	A	0.8	1
Nominal speed	rpm	3000	3000
Nominal torque	Nm	3.2	4.8
Nominal current	A	30	45
Peak current	A	65	130
Peak torque	Nm	7	14
Efficiency	%	69	69
Nominal power	W	1000	1500
Terminal resistance <sup>1</sup>	Ω	0.04	0.06
Terminal inductance <sup>2</sup>	mH	0.33	0.23
Insulation resistance <sup>3</sup>	MΩ	100	100
Dielectric strength <sup>4</sup>	V	600	600
Back EMF	V/rpm	0.008	0.008
Torque constant	Nm/A	0.11	0.11
Rotor inertia	kgcm <sup>2</sup>	1.3	1.8
Bearing type		Ball bearing	
Axial play <sup>5</sup>	mm	0.08	
Radial play <sup>5</sup>	mm	0.02	
Max. dynamic axial load	N	200	
Max. radial load <sup>6</sup>	N	490	

NOTES

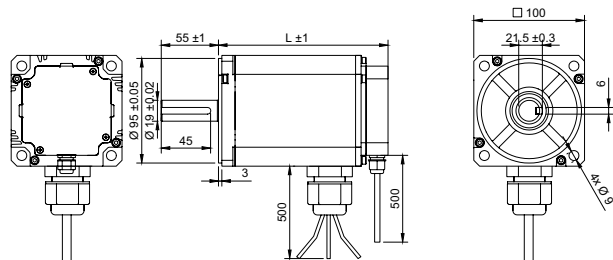
1. Measured at 20°C.
2. Measured at 1 kHz.
3. Measured at 500 V.
4. At a duration of 1 second.
5. Max. 4 N.
6. 20 mm from flange.
7. In storage, relative humidity less than 85%.

OTHER BRUSHLESS DC MOTOR DATA	B100161-48-IP65	B100173-48-IP65	C
Number of pole pairs		10	
Number of phases		3	
Weight	kg	3.7	4.7
Operating temperature	°C	-20 to 50	
Storage temperature <sup>7</sup>	°C	-20 to 85	
Winding type		Star connection	
Motor insulation class		B	
IP rating		IP65	
Hall sensors and power harness length	mm	500	
Power harness		AWG10	
Hall sensors harness		AWG22	
Motor length	mm	161	173
Shaft length from flange	mm	55	
Shaft diameter	mm	19	
Service life	h	10000	
Manufacturing standard		ISO 9001:2015   ISO 14001   IATF 16949	

CABLE AND PIN CONFIGURATION

Wire	Definition	Color
U		Yellow
V	Power	Red
W		Black
H1	Hall	Blue
H2		Green
H3		White
Vcc		Red
GND		Black

DRAWING (mm)



PHOTO

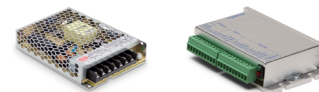


MODEL NO. DESIGNATION

B100 LENGTH - VOLTAGE - IP65

Example: B100137-220-IP65

ACCESSORIES



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BRUSHLESS DC MOTOR DATA	B100137-220-IP65	B100159-220-IP65	C
Nominal voltage <sup>1</sup>	V	220	220
No load speed	rpm	5000	5000
No load current	A	0.8	0.8
Nominal speed	rpm	3000	3000
Nominal torque	Nm	3.2	4.8
Nominal current	A	5	7.5
Peak current	A	11	17
Peak torque	Nm	7	11
Efficiency	%	91	91
Nominal power	W	1000	1500
Terminal resistance <sup>2</sup>	Ω	0.82	0.54
Terminal inductance <sup>3</sup>	mH	7.4	5.2
Insulation resistance <sup>4</sup>	MΩ	100	100
Dielectric strength <sup>5</sup>	V	1800	1800
Back EMF	V/rpm	0.038	0.038
Torque constant	Nm/A	0.63	0.63
Rotor inertia	kgcm <sup>2</sup>	1.3	1.8
Bearing type	Ball bearing		
Axial play <sup>6</sup>	mm	0.08	
Radial play <sup>6</sup>	mm	0.02	
Max. dynamic axial load	N	200	
Max. radial load <sup>7</sup>	N	490	

NOTES

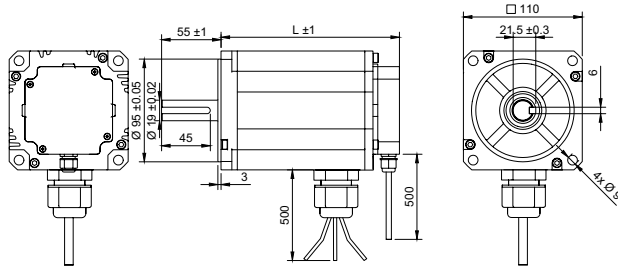
- Frequency 50 Hz.
- Measured at 20°C.
- Measured at 1 kHz.
- Measured at 500 V.
- At a duration of 1 second.
- Max. 4 N.
- 20 mm from flange.
- In storage, relative humidity less than 85%.

OTHER BRUSHLESS DC MOTOR DATA	B100137-220-IP65	B100159-220-IP65	C
Number of pole pairs	10		
Number of phases	3		
Weight	kg	3.7	4.7
Operating temperature	°C	-20 to 50	
Storage temperature <sup>8</sup>	°C	-20 to 85	
Winding type	Star connection		
Motor insulation class	B		
IP rating	IP65		
Hall sensors and power harness length	mm	500	
Power harness	AWG8		
Hall sensors harness			
Motor length	mm	137	159
Shaft length from flange	mm	55	
Shaft diameter	mm	19	
Service life	h	10000	
Manufacturing standard	ISO 9001:2015   ISO 14001   IATF 16949		

CABLE AND PIN CONFIGURATION

Wire	Definition	Color
U		Yellow
V	Power	Red
W		Black
H1		Blue
H2		Green
H3	Hall	White
Vcc		Red
GND		Black

DRAWING (mm)



PHOTO



MODEL NO. DESIGNATION

B110 LENGTH - VOLTAGE - IP65

Example: B110165-48-IP65

ACCESSORIES



C = customizations are offered on demand even for smaller quantities. Typical customizations are indicated with a green dot at column end. Please contact us for any customization request.

BRUSHLESS DC MOTOR DATA	B110165-48-IP65	B110182-48-IP65	C
Nominal voltage	V	48	48
No load speed	rpm	4000	4200
No load current	A	1	1
Nominal speed	rpm	3000	3000
Nominal torque	Nm	4.8	6.4
Nominal current	A	45	58
Peak current	A	130	170
Peak torque	Nm	14	19
Efficiency	%	69	72
Nominal power	W	1500	2000
Terminal resistance <sup>1</sup>	Ω	0.022	0.017
Terminal inductance <sup>2</sup>	mH	0.29	0.2
Insulation resistance <sup>3</sup>	MΩ	100	100
Dielectric strength <sup>4</sup>	V	600	600
Back EMF	V/rpm	0.008	0.008
Torque constant	Nm/A	0.11	0.11
Rotor inertia	kgcm <sup>2</sup>	3.1	4.1
Bearing type	Ball bearing		
Axial play <sup>5</sup>	mm	0.08	
Radial play <sup>5</sup>	mm	0.02	
Max. dynamic axial load	N	320	
Max. radial load <sup>6</sup>	N	630	

NOTES

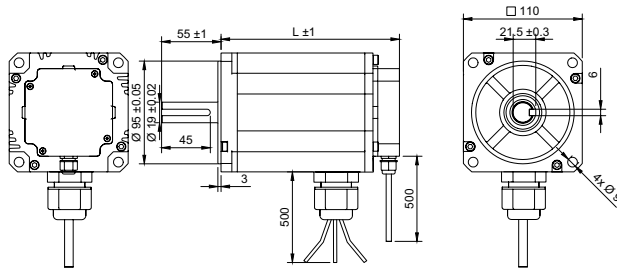
1. Measured at 20°C.
2. Measured at 1 kHz.
3. Measured at 500 V.
4. At a duration of 1 second.
5. Max. 4 N.
6. 20 mm from flange.
7. In storage, relative humidity less than 85%.

OTHER BRUSHLESS DC MOTOR DATA	B110165-48-IP65	B110182-48-IP65	C
Number of pole pairs		10	
Number of phases		3	
Weight	kg	5	6.7
Operating temperature	°C	-20 to 50	
Storage temperature <sup>7</sup>	°C	-20 to 85	
Winding type	Star connection		
Motor insulation class	B		
IP rating	IP65		
Hall sensors and power harness length	mm	500	
Power harness	AWG10		
Hall sensors harness	AWG22		
Motor length	mm	165	182
Shaft length from flange	mm	55	
Shaft diameter	mm	19	
Service life	h	10000	
Manufacturing standard	ISO 9001:2015   ISO 14001   IATF 16949		

CABLE AND PIN CONFIGURATION

Wire	Definition	Color
U		Yellow
V	Power	Red
W		Black
H1	Hall	Blue
H2		Green
H3		White
Vcc		Red
GND		Black

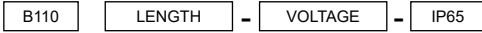
DRAWING (mm)



PHOTO



MODEL NO. DESIGNATION



Example: B110152-48-IP65

ACCESSORIES



C = customizations are offered on demand even for smaller quantities. Typical customizations are indicated with a green dot at column end. Please contact us for any customization request.

BRUSHLESS DC MOTOR DATA	B110152-220-IP65	B110169-220-IP65	C
Nominal voltage <sup>1</sup>	V	220	220
No load speed	rpm	5000	5000
No load current	A	0.8	0.8
Nominal speed	rpm	3000	3000
Nominal torque	Nm	4.8	6.4
Nominal current	A	9.4	10
Peak current	A	28	30
Peak torque	Nm	14	19
Efficiency	%	73	0
Nominal power	W	1500	2000
Terminal resistance <sup>2</sup>	Ω	0.36	0
Terminal inductance <sup>3</sup>	mH	5.6	5
Insulation resistance <sup>4</sup>	MΩ	100	100
Dielectric strength <sup>5</sup>	V	1800	1800
Back EMF	V/rpm	0.038	0
Torque constant	Nm/A	0.51	0.63
Rotor inertia	kgcm <sup>2</sup>	3.1	4.1
Bearing type		Ball bearing	
Axial play <sup>6</sup>	mm	0.08	
Radial play <sup>6</sup>	mm	0.02	
Max. dynamic axial load	N	320	
Max. radial load <sup>7</sup>	N	630	

NOTES

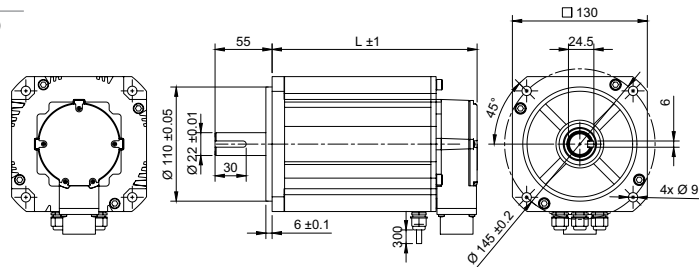
- Frequency 50 Hz.
- Measured at 20°C.
- Measured at 1 kHz.
- Measured at 500 V.
- At a duration of 1 second.
- Max. 4 N.
- 20 mm from flange.
- In storage, relative humidity less than 85%.

OTHER BRUSHLESS DC MOTOR DATA	B110152-220-IP65	B110169-220-IP65	C
Number of pole pairs		10	
Number of phases		3	
Weight	kg	5	6.7
Operating temperature	°C	-20 to 50	
Storage temperature <sup>8</sup>	°C	-20 to 85	
Winding type		Star connection	
Motor insulation class		B	
IP rating		IP65	
Hall sensors and power harness length	mm	500	
Power harness		AWG8	
Hall sensors harness			
Motor length	mm	151.5	168.5
Shaft length from flange	mm	55	
Shaft diameter	mm	19	
Service life	h	10000	
Manufacturing standard		ISO 9001:2015   ISO 14001   IATF 16949	

CABLE AND PIN CONFIGURATION

Wire	Definition	Color
U		Yellow
V	Power	Red
W		Black
H1		Blue
H2		Green
H3	Hall	White
Vcc		Red
GND		Black

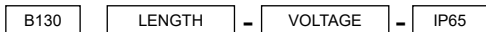
DRAWING (mm)



PHOTO



MODEL NO. DESIGNATION



Example: B130165-48-IP65

ACCESSORIES



● C = customizations are offered on demand even for smaller quantities. Typical customizations are indicated with a green dot at column end. Please contact us for any customization request.

BRUSHLESS DC MOTOR DATA	B130165-48-IP65	B130198-48-IP65	C
Nominal voltage	V	48	48
No load speed	rpm	2800	2900
No load current	A	5.3	7.9
Nominal speed	rpm	2000	2000
Nominal torque	Nm	9.6	14
Nominal current	A	53	79
Peak current	A	160	240
Peak torque	Nm	29	43
Efficiency	%	79	76
Nominal power	W	2000	2900
Terminal resistance <sup>1</sup>	Ω	0.03	0.019
Terminal inductance <sup>2</sup>	mH	0.13	0.1
Insulation resistance <sup>3</sup>	MΩ	100	100
Dielectric strength <sup>4</sup>	V	600	600
Back EMF	V/rpm	0.012	0.012
Torque constant	Nm/A	0.2	0.2
Rotor inertia	kgcm <sup>2</sup>	14	20
Bearing type		Ball bearing	
Axial play <sup>5</sup>	mm	0.02	
Radial play <sup>5</sup>	mm	0.08	
Max. dynamic axial load	N	490	
Max. radial load <sup>6</sup>	N	200	

NOTES

1. Measured at 20°C.
2. Measured at 1 kHz.
3. Measured at 500 V.
4. At a duration of 1 second.
5. Max. 4 N.
6. 20 mm from flange.
7. In storage, relative humidity less than 85%.

OTHER BRUSHLESS DC MOTOR DATA	B130165-48-IP65	B130198-48-IP65	C
Number of pole pairs		10	
Number of phases		3	
Weight	kg	7.5	13
Operating temperature	°C	-20 to 50	
Storage temperature <sup>7</sup>	°C	-20 to 85	
Winding type		Star connection	
Motor insulation class		F	
IP rating		IP65	
Hall sensors and power harness length	mm	300	
Power harness		AWG8	
Hall sensors harness			
Motor length	mm	165	197.5
Shaft length from flange	mm	55	
Shaft diameter	mm	22	
Service life	h	10000	
Manufacturing standard		ISO 9001:2015   ISO 14001   IATF 16949	

CABLE AND PIN CONFIGURATION

Wire	Definition	Color
U		Yellow
V	Power	Red
W		Black
H1	Hall	Blue
H2		Green
H3		White
Vcc		Red
GND		Black