

Connector:	GH1.25-F-8P	Pin definition(left to right):
Cable :	GH8P-M-28AWG-15cm	1.HW 2.HV 3.HU 4.GND 5.VCC 6.W 7.V 8.U

General Characteristics

Motor Configuration	Unit		Unit
Mechanical structure		outrunner	Ingress protection
Number of pole pairs		7	IP 54
Number of phases		3	Speed constant
Winding connection		star	KV
Total weight	g	52	Torque constant
Rotor inertia	uNm*s ²	0.75	mNm/A
			23
			Single phase resistance
			mOhm
			750
			DQ inductance
			uH
			100
			Friction
			uN*m*s
			0.5

Thermal Data

Thermal resistance housing -ambient	6.1K/W
Thermal resistance winding-housing	9.4K/W
Ambient temperature	-20 °C - 70 °C
Maximal winding temperature	120 °C

Sensoric

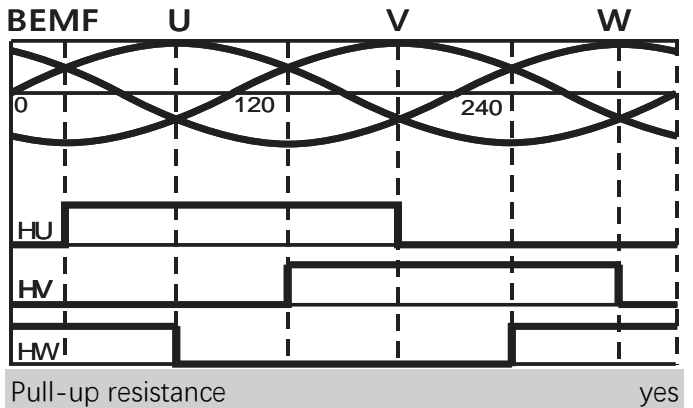
Sensor type	bipolar self-locking hall
Number of halls	3
Supply voltage	5V
Electrical angle	120 degrees

Nominal & Stall

	Unit		
Nominal voltage	V	12	24
No load speed	rpm	4300	8600
No load current	mA	150	260
Nominal speed	rpm	3300	7200
Nominal torque	mNm	33	45
Nominal current	A	1.3	1.7
Maximal power	W	15	45
Maximal efficiency		83%	84%
Stall torque	mNm	105	210
Stall current	A	4.5	8

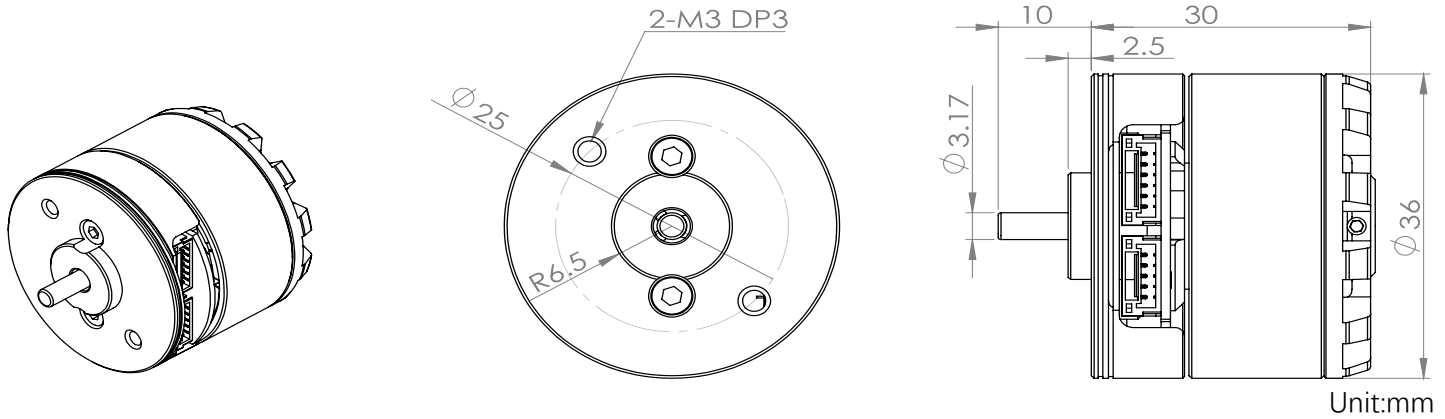
Hall sequence regards to back EMF

tested in CCW direction

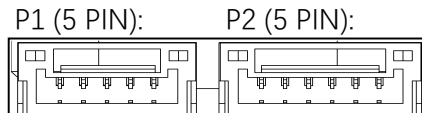


ATTENTION: Stall operation is not recommended, please do necessary protection to avoid irreparable damage.

*In case specific shaft, connector, or any other features need to be customized, please visit www.damoto.tech and contact us.



Signal Connector (P1):	GH1.25-F-5P
Signal Cable :	GH5P-M-28AWG-15cm
Phase connector (P2)	GH1.25-F-6P
Cable :	GH6P-M-28AWG-15cm



Pin definition(left to right):

P1: 1.HW 2.HV 3.HU 4.VCC 5.GND **P2:** 1.W 2.W 3.V 4.V 5.U 6.U

General Characteristics

Motor Configuration	Unit		Unit
Mechanical structure		outrunner	Ingress protection IP 54
Number of pole pairs		7	Speed constant KV 150
Number of phases		3	Torque constant mNm/A 52
Winding connection		star	Single phase resistance Ohm 2
Total weight	g	90	DQ inductance uH 400
Rotor inertia	uNm*s ²	1.2	Friction uN*m*s 0.5

Thermal Data

Thermal resistance housing -ambient	5.4K/W
Thermal resistance winding-housing	7.9K/W
Ambient temperature	-20 °C - 70 °C
Maximal winding temperature	120 °C

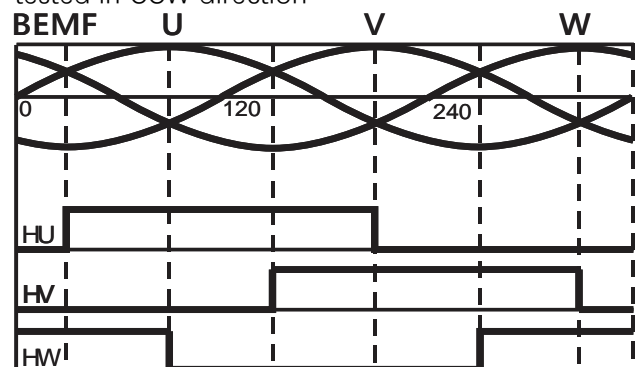
Sensoric

Sensor type	bipolar self-locking hall
Number of halls	3
Supply voltage	5V
Electrical angle	120 degrees

Nominal & Stall	Unit		
Nominal voltage	V	12	24
No load speed	rpm	1800	3600
No load current	mA	110	120
Nominal speed	rpm	1150	2400
Nominal torque	mNm	47	77
Nominal current	A	0.9	1.4
Maximal power	W	6.2	22
Maximal efficiency		63%	70%
Stall torque	mNm	120	180
Stall current	A	2.2	3.5

Hall sequence regards to back EMF

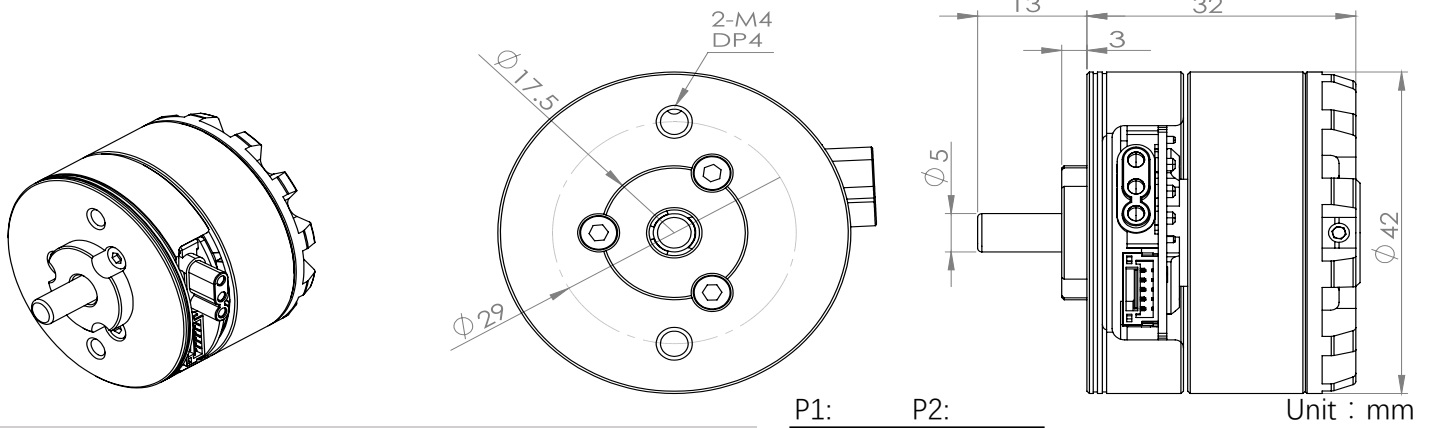
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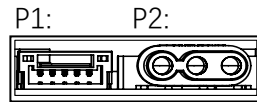
Pull-up resistance	yes
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Signal connector (P1):	GH1.25-F-5P
Signal cable :	GH5P-M-28AWG-15cm
Phase connector (P2) :	AMASS MR30PW-F
Phase cable:	MR30-M-20AWG-15cm



Pin definition(left to right):

P1: 1.HW 2.HV 3.HU 4.VCC 5.GND **P2:** 1.W 2.V 3.U

General Characteristics

Motor Configuration	Unit		Unit	
Mechanical structure		outrunner	Ingress protection	IP 54
Number of pole pairs		7	Speed constant	KV 125
Number of phases		3	Torque constant	mNm/A 68
Winding connection		star	Single phase resistance	Ohm 1.75
Total weight	g	130	DQ inductance	uH 450
Rotor inertia	uNm*s ²	1.8	Friction	uN*m*s 0.5

Thermal Data

Thermal resistance housing -ambient	4.8K/W
Thermal resistance winding-housing	7.1K/W
Ambient temperature	-20 °C - 70 °C
Maximal winding temperature	120 °C

Sensoric

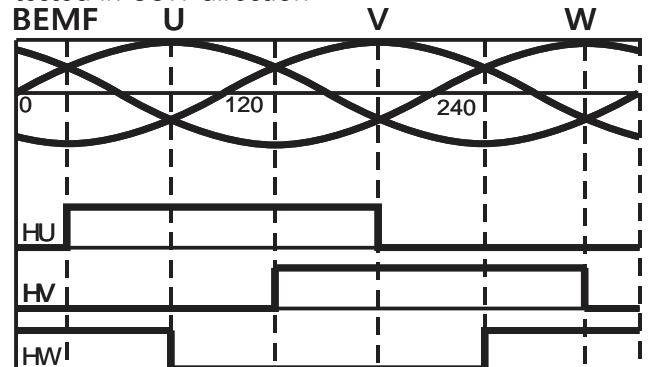
Sensor type	bipolar self-locking hall
Number of halls	3
Supply voltage	5V
Electrical angle	120 degrees

Nominal & Stall

	Unit		
Nominal voltage	V	12	24
No load speed	rpm	1500	3000
No load current	mA	90	150
Nominal speed	rpm	1100	2100
Nominal torque	mNm	54	117
Nominal current	A	0.8	1.6
Maximal power	W	8	30
Maximal efficiency		80%	82%
Stall torque	mNm	300	320
Stall current	A	3.5	4.5

Hall sequence regards to back EMF

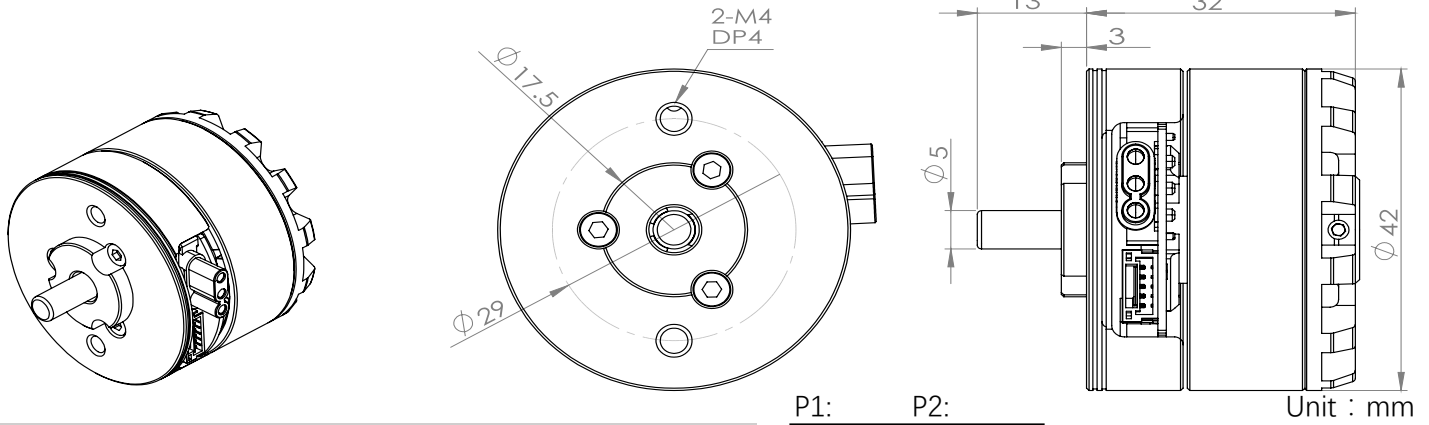
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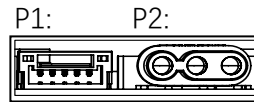
Pull-up resistance	yes
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Signal connector (P1):	GH1.25-F-5P
Signal cable :	GH5P-M-28AWG-15cm
Phase connector (P2) :	AMASS MR30PW-F
Phase cable:	MR30-M-20AWG-15cm



Pin definition(left to right):

P1: 1.HW 2.HV 3.HU 4.VCC 5.GND **P2:** 1.W 2.V 3.U

General Characteristics

Motor Configuration	Unit		Unit	
Mechanical structure		outrunner	Ingress protection	IP 54
Number of pole pairs		7	Speed constant	KV 200
Number of phases		3	Torque constant	mNm/A 45
Winding connection		star	Single phase resistance	mOhm 580
Total weight	g	130	DQ inductance	uH 120
Rotor inertia	uNm*s ²	1.8	Friction	uN*m*s 0.5

Thermal Data

Thermal resistance housing -ambient	4.8K/W
Thermal resistance winding-housing	7.1K/W
Ambient temperature	-20 °C - 70 °C
Maximal winding temperature	120 °C

Sensoric

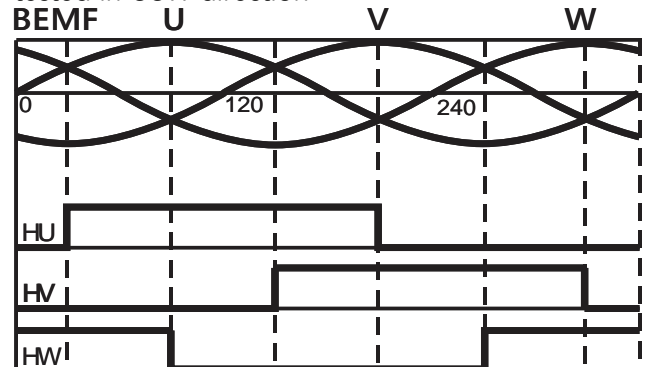
Sensor type	bipolar self-locking hall
Number of halls	3
Supply voltage	5V
Electrical angle	120 degrees

Nominal & Stall

	Unit		
Nominal voltage	V	12	24
No load speed	rpm	2400	4800
No load current	mA	180	270
Nominal speed	rpm	1500	3400
Nominal torque	mNm	100	180
Nominal current	A	2.2	3.7
Maximal power	W	18	70
Maximal efficiency		80%	85%
Stall torque	mNm	300	400
Stall current	A	6.5	9

Hall sequence regards to back EMF

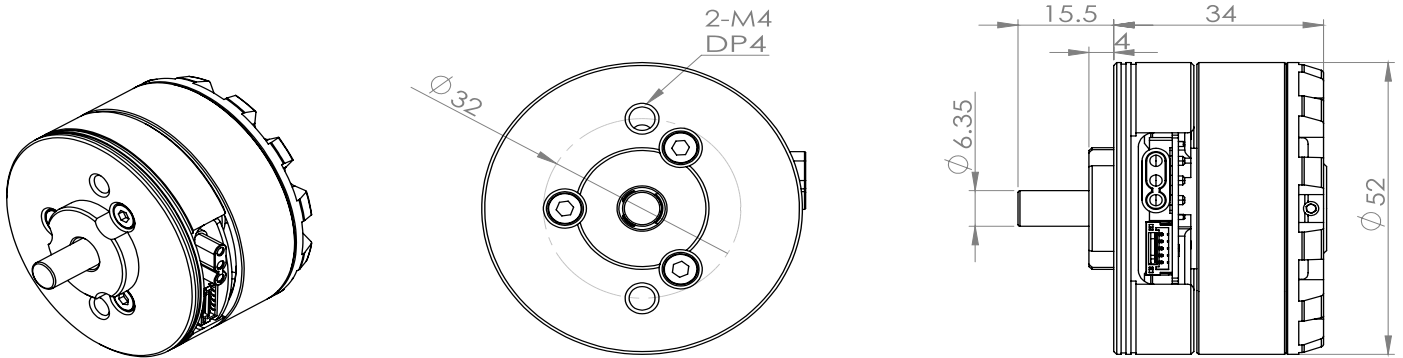
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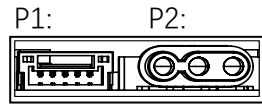
Pull-up resistance	yes
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Signal connector (P1):	GH1.25-F-5P
Signal cable :	GH5P-M-28AWG-15cm
Phase connector (P2) :	AMASS MR30PW-F
Phase cable:	MR30-M-20AWG-15cm



Unit : mm

Pin definition(left to right):

P1: 1.HW 2.HV 3.HU 4.VCC 5.GND **P2:** 1.W 2.V 3.U

General Characteristics

Motor Configuration	Unit		Unit	
Mechanical structure		outrunner	Ingress protection	IP 54
Number of pole pairs		7	Speed constant	KV 200
Number of phases		3	Torque constant	mNm/A 65
Winding connection		star	Single phase resistance	mOhm 320
Total weight	g	220	DQ inductance	uH 110
Rotor inertia	uNm*s ²	6.5	Friction	uN*m*s 0.5

Thermal Data

Thermal resistance housing -ambient	4.2K/W
Thermal resistance winding-housing	6.5K/W
Ambient temperature	-20 °C - 60 °C
Maximal winding temperature	120 °C

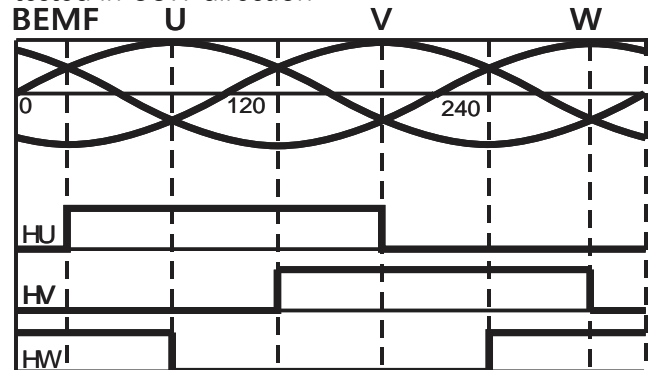
Sensoric

Sensor type	bipolar self-locking hall
Number of halls	3
Supply voltage	5V
Electrical angle	120 degrees

Nominal & Stall	Unit	
Nominal voltage	V	24
No load speed	rpm	4860
No load current	mA	340
Nominal speed	rpm	3500
Nominal torque	mNm	370
Nominal current	A	6.8
Maximal power	W	160
Maximal efficiency		85%
Stall torque	mNm	700
Stall current	A	13

Hall sequence regards to back EMF

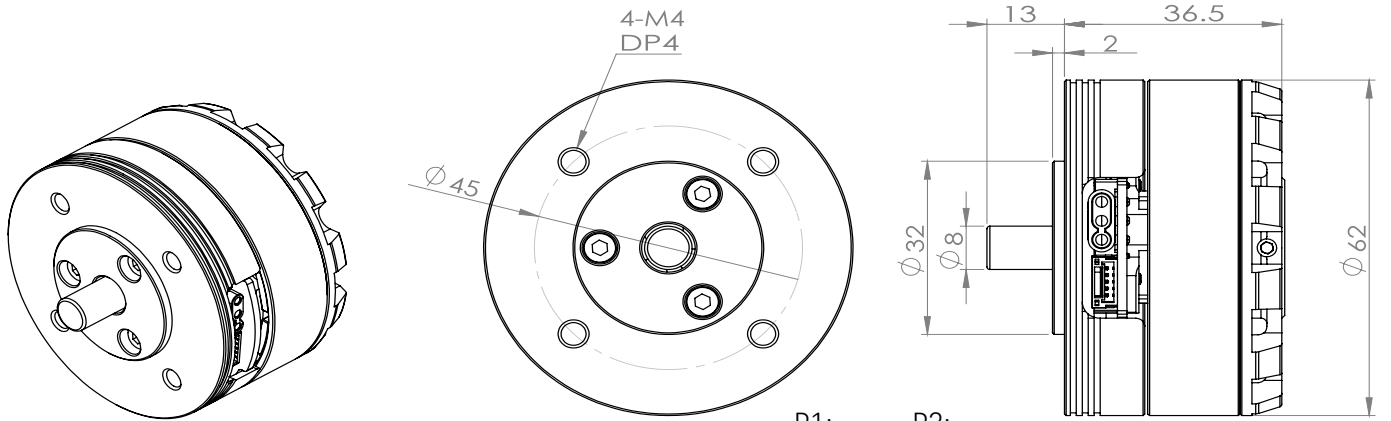
tested in CCW direction



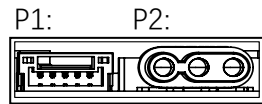
Pull-up resistance yes

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Signal connector: GH1.25-F-5P
Signal cable : GH5P-M-28AWG-15cm
Phase connector : MR30PW-F
Phase cable: MR30-M-18AWG-15cm



Pin definition(left to right):

P1: 1.HW 2.HV 3.HU 4.5V 5.GND **P2:** 1.W 2.V 3.U

Unit : mm

General Characteristics

Motor Configuration	Unit		Unit	
Mechanical structure		outrunner	Ingress protection	IP 54
Number of pole pairs		7	Speed constant	KV 200
Number of phases		3	Torque constant	mNm/A 44
Winding connection		star	Single phase resistance	mOhm 200
Total weight	g	300	DQ inductance	mH 1
Rotor inertia	$\mu\text{Nm}\cdot\text{s}^2$	8.2	Friction	$\mu\text{N}\cdot\text{m}\cdot\text{s}$ 0.6

Thermal Data

Thermal resistance housing -ambient	3.8K/W
Thermal resistance winding-housing	5.2K/W
Ambient temperature	-20 °C - 60 °C
Maximal winding temperature	120 °C

Sensoric

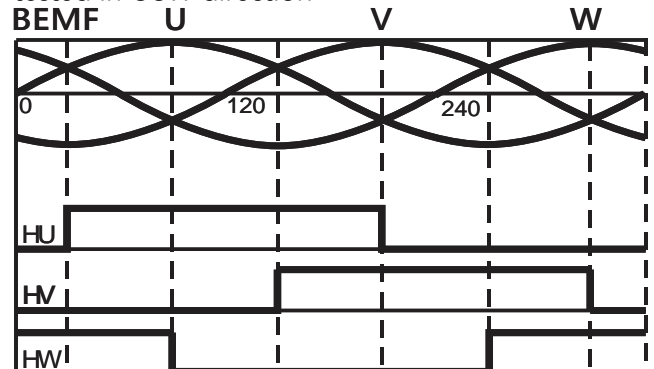
Sensor type	bipolar self-locking hall
Number of halls	3
Supply voltage	5V
Electrical angle	120 degrees

Nominal & Stall

	Unit		
Nominal voltage	V	24	48
No load speed	rpm	4800	9600
No load current	mA	550	700
Nominal speed	rpm	3600	7200
Nominal torque	mNm	500	1000
Nominal current	A	1.2	2.4
Maximal power	W	400	1500
Maximal efficiency		82%	85%
Stall torque	Nm	1.2	2.3
Stall current	A	22	45

Hall sequence regards to back EMF

tested in CCW direction



Pull-up resistance yes

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