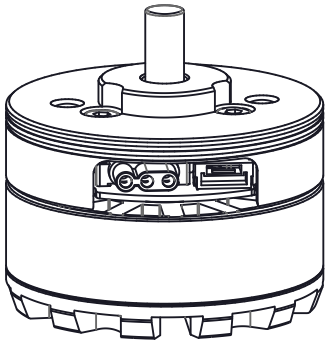
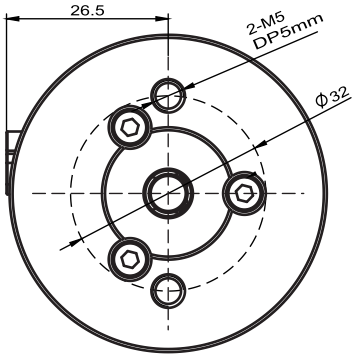
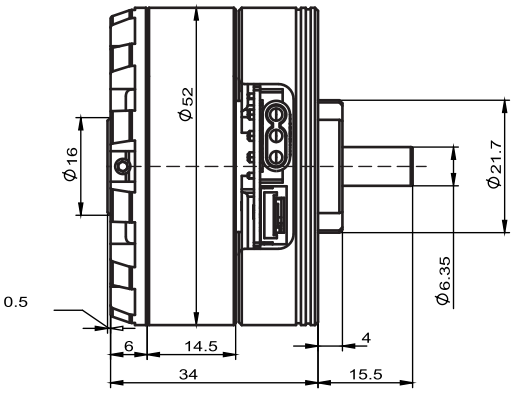
DAMOTO
MOTION MATTERS

MX420K150H







General Characteristics:

Motor Configuration

Mechanical Structure		outrunner			
Number of pole pairs		7	Speed constant	Vms/krpm	5.14
Number of phases		3	Torque constant	mN/A	65
Winding connection		star	Phase resistance	mOhm	410
Total weight	gram	220	DQ inductance	uH	200
Rotor inertia	$uNm*s^2$	6.5	Friction	uN*m*s	0.5

Thermal Data

Thermal resistance housing-ambient	4.5K/W
Thermal resistance winding-housing	6.8K/W
Ambient temperature	-40~100 °C
Max. winding temperature	120 °C

Sensoric

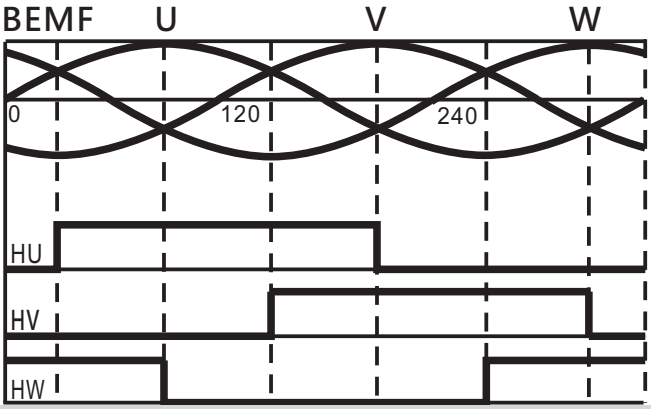
Sensor type	bipolar self-locking hall
Number of halls	3
Supply voltage	5V
Electrical angle	120 degrees

Nominal & Stall

Nominal voltage	V	24
No load speed	rpm	3600
Noload current	mA	225
Nominal speed	rpm	2550
Nominal torque	mNm	280
Nominal current	A	4.34
Nominal power	W	74
Efficiency(Max./Nominal)	85% / 72%	
Stall torque	mNm	670
Stall current	A	11.5

Hall sequence regards to back EMF:

Tested in CCW direction



Wire configuration (Left -Right):

U	V	W	H3	H2	H1	5V	GND
1	2	3	4	5	6	7	8

Pull-up resistance	10k Ohm