AK60-6 V1.1 KV140, Φ79*39.5mm

PRODUCT DRAWING
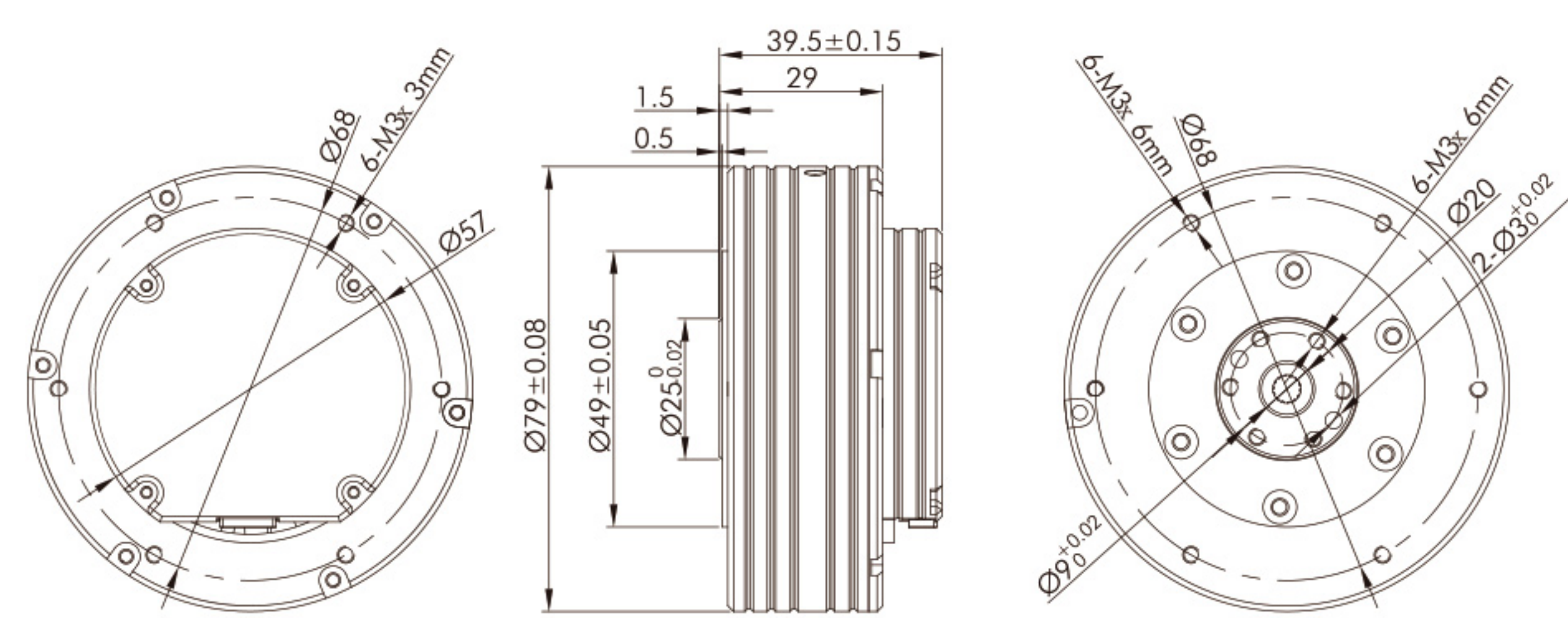
ANALYTICAL GRAPH OF MOTOR OPERATION

AK60-6 Kv140@24VDC
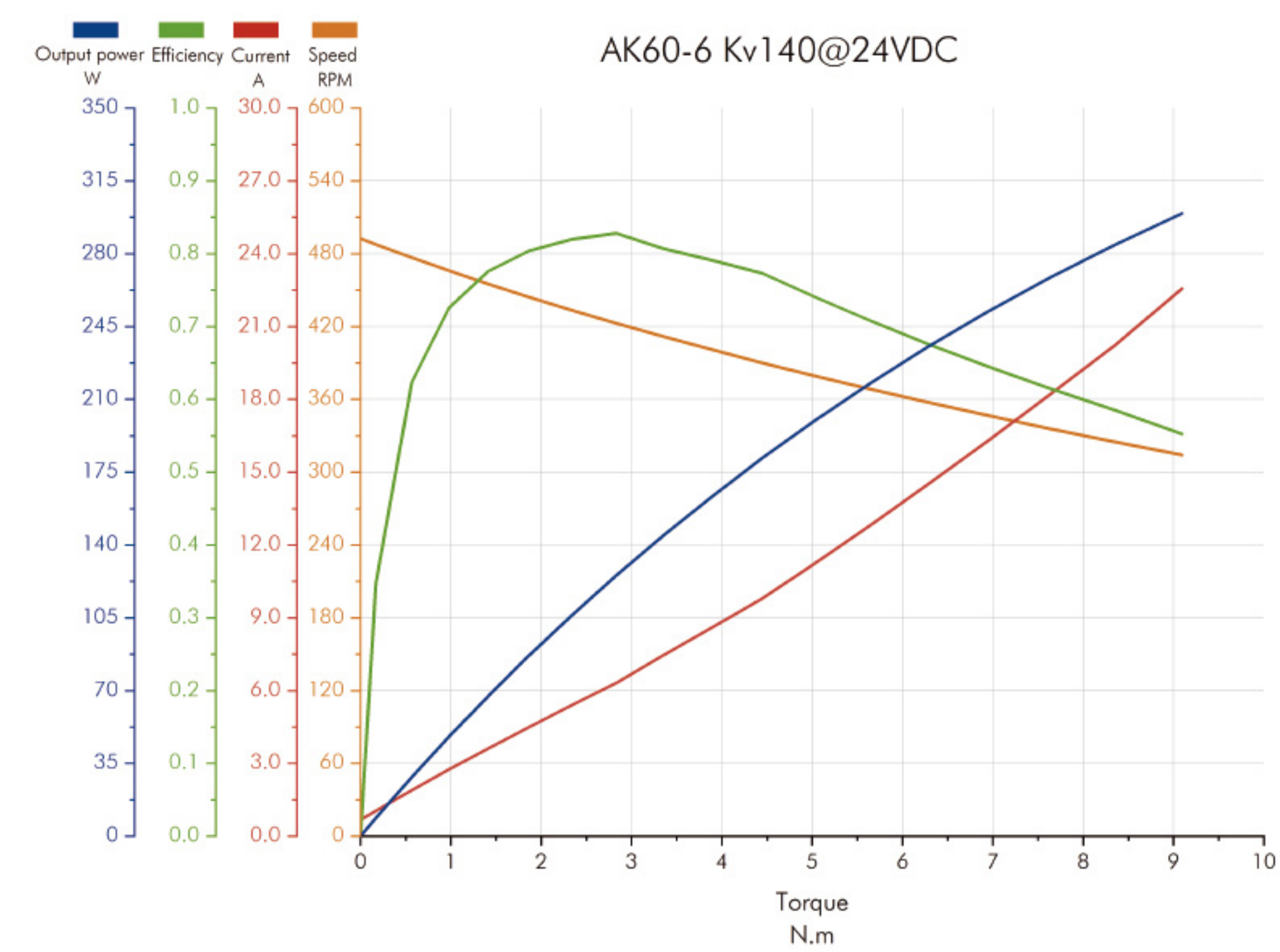
SPECIFICATIONS

Application	Legged Robot,Exoskeleton,AGV	Pole pairs	14
Driving way	FOC	Reduction ratio	6:1
Operation ambient temperature	-20℃~50℃	Back drive(Nm)	0.2
Winding type	Delta	Backlash (°)	0.55
Insulation class	C	Temperature sensor	NTC MF51B 103F3950
Insulation High-voltage	500V 5mA/2s	Noise dB 65CM away the motor (Environment 45dB@1200rpm)	60
Insulation resistance	500V10MΩ	Basic load rating (dyn. C_r) N	3150
Phase	3	Basic load ratings (stat. C_{0r}) N	4500

ELECTRIC PARAMETERS

Rated voltage (V)	24	Ke (V/krpm)	7.5
Rated torque (Nm)	3	Phase to Phase resistance (mΩ)	202
Rated speed (rpm)	420	Phase to Phase inductance (μH)	138
Rated current (ADC)	6.5	Inertia (gcm²)	243.5
Peak torque (Nm)	9	Km (Nm/√W)	0.17
Peak current (ADC)	22.7	Mechanical time constant (ms)	0.81
Kv (rpm/V)	140	Electrical time constant (ms)	0.68
Kt (Nm/A)	0.078	Weight (g)	368
		Maximum torque weight ratio (Nm/kg)	24.46

CONNECTOR（WITH DRIVER）

CAN connector	A1257WR-S-4P	Inner ring encoder resolution	14bit
UART connector	A1257WR-S-3P	Outer ring encoder type	-
Power connector	XT30PW-M	Outer ring encoder resolution	-
Inner loop encoder type	Magnetic encoder	Number of encoder	1