

AVAILABLE MODELS

Parameter	Unit	HRM-099-003	HRM-099-006
Rated Power	W	45	75
Rated Torque	Nm	3	6
Peak Torque	Nm	10	18
Rated Speed	rpm	130 ±10%	110 ±10%
Outer Diameter	mm	99	99
Thickness	mm	64	74
Overall Thickness	mm	117	125
Weight	g	780 ±20	1100 ±20
Reduction Ratio	:1	9.75	9.75
Rated Voltage	V	24	24

ARTUS

HUB GEAR MOTOR TECHNICAL SPECIFICATIONS

Hub gear motor series | Individual model data

ARTUS MODEL	HRM-099-003			PRODUCT	Hub Gear Motor	
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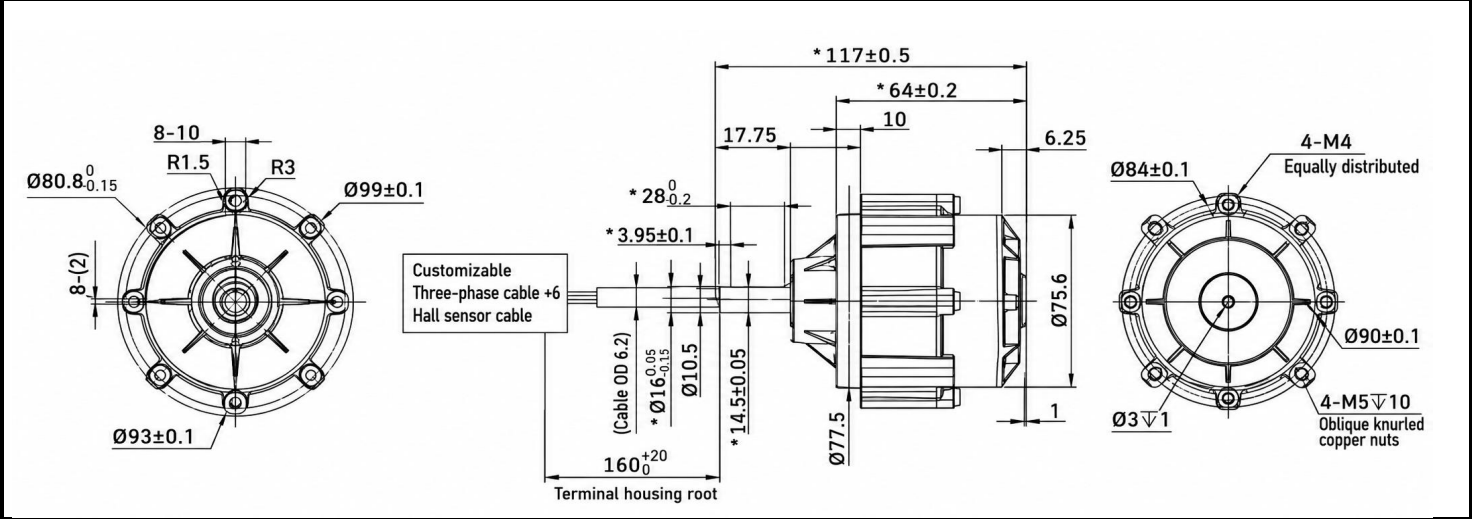
PERFORMANCE SPECIFICATION

Parameter	Unit	Specification	Parameter	Unit	Specification
Rated Power	W	45	No-load Speed	rpm	140 ±10%
Rated Speed	rpm	130 ±10%	Rated Torque	Nm	3
Peak Torque	Nm	10	Reduction Ratio	:1	9.75
Rated Voltage	V	24	Outer Diameter	mm	99
Thickness	mm	64	Waterproof Rating		IP67
Weight	g	780 ±20	Backlash		<1.5°

COMMON SPECIFICATIONS

Transmission Structure	Planetary structure	Housing Material	PA66
Gear Material	POM	Outer Diameter	99 mm
Thickness	64 mm	Overall Thickness	117 mm
Reduction Ratio	9.75:1	Rated Voltage	24 V
Rated Current	<3	Full Range Phase Current	15 A Max
Rated Bus Current	7.5 A Max	Locked-rotor Current	<8
Maximum Efficiency	>70%	Phase Damping	0.82 ±10%
Phase Inductance	0.75 ±8%	Hall Angle	120°
Motor Structure	18N20P	Insulation Class	Class B
Waterproof Rating	IP67	Backlash	<1.5°
Rated Motor Load	0.30 Nm	Weight	780 ±20

TECHNICAL DRAWING / INSTRUCTIONS



24 V Performance Test Data | Key measured points

Test ambient temperature: 22.5–22.6 °C. Charts show the four documented key test points; line segments only connect measured points and do not represent continuous sampled curves.



Measured key-point data

Test point	Speed (rpm)	Torque (Nm)	Output power (W)	Voltage (V)	Input current (A)	Input power (W)	Efficiency
No-load	166.810	0.0000	0.000	24.019	0.3345	8.034	0.00%
Maximum efficiency	139.900	3.1068	45.511	23.980	2.5398	60.904	74.73%
Maximum output power	82.741	10.5890	91.745	23.981	7.4025	177.520	51.68%
Maximum torque	48.589	14.2140	72.318	23.981	10.4040	249.510	28.98%

ARTUS MODEL	HRM-099-006			PRODUCT	Hub Gear Motor	
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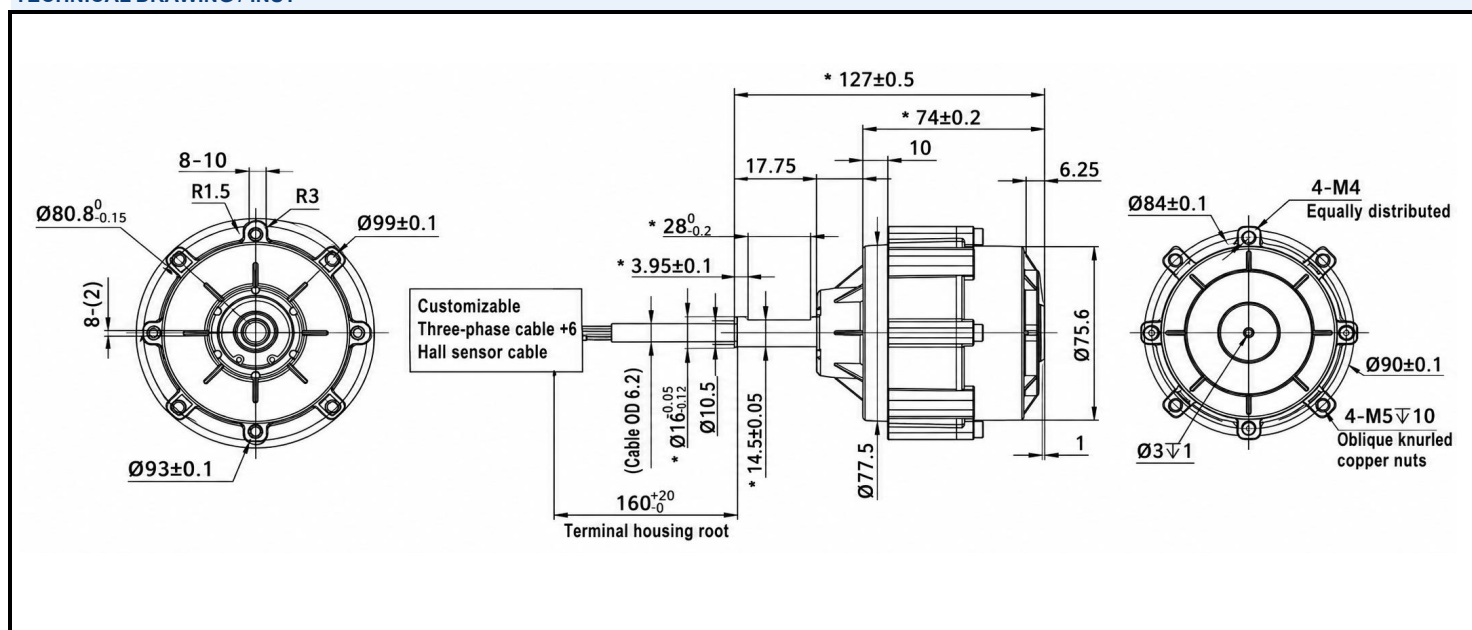
PERFORMANCE SPECIFICATIONS

Parameter	Unit	Specification	Parameter	Unit	Specification
Rated Power	W	75	No-load Speed	rpm	130 ±10%
Rated Speed	rpm	110 ±10%	Rated Torque	Nm	6
Peak Torque	Nm	18	Reduction Ratio	:1	9.75
Rated Voltage	V	24	Outer Diameter	mm	99
Thickness	mm	74	Waterproof Rating		IP67
Weight	g	1100 ±20	Backlash		<1.5°

COMMON SPECIFICATIONS

Transmission Structure	Planetary structure	Housing Material	PA66
Gear Material	SMF4030	Outer Diameter	99 mm
Thickness	74 mm	Overall Thickness	125 mm
Reduction Ratio	9.75:1	Rated Voltage	24 V
Rated Current	<4.5	Full Range Phase Current	15 A Max
Rated Bus Current	7.5 A Max	Locked-rotor Current	<8
Maximum Efficiency	>70%	Phase Damping	0.57 ±10%
Phase Inductance	0.57 ±10%	Hall Angle	120°
Motor Structure	18N20P	Insulation Class	Class B
Waterproof Rating	IP67	Backlash	<1.5°
Rated Motor Load	0.65 Nm	Weight	1100 ±20

TECHNICAL DRAWING / INS1



24 V Performance Test Data | Key measured points

Test ambient temperature: 22.5–22.6 °C. Charts show the four documented key test points; line segments only connect measured points and do not represent continuous sampled curves.



Measured key-point data

Test point	Speed (rpm)	Torque (Nm)	Output power (W)	Voltage (V)	Input current (A)	Input power (W)	Efficiency
No-load	145.350	0.0000	0.000	24.029	0.5375	12.915	0.00%
Maximum efficiency	121.170	5.9085	74.967	23.999	4.1393	99.339	75.47%
Maximum output power	70.029	19.5250	143.170	23.998	11.9750	287.370	49.82%
Maximum torque	25.443	28.5440	76.047	23.997	18.3640	440.680	17.26%