

ALL IN ONE CUSTOMIZABLE PANCAKE BRUSHLESS SERVOMOTOR



RH - HARMONIC - SERIES

INTEGRATED HARMONIC MODULE
INTEGRATED DESIGN, VIBRATION RESISTANCE

V1.1.2

Maximize the performance of your applications while saving space.



Exploration Robot



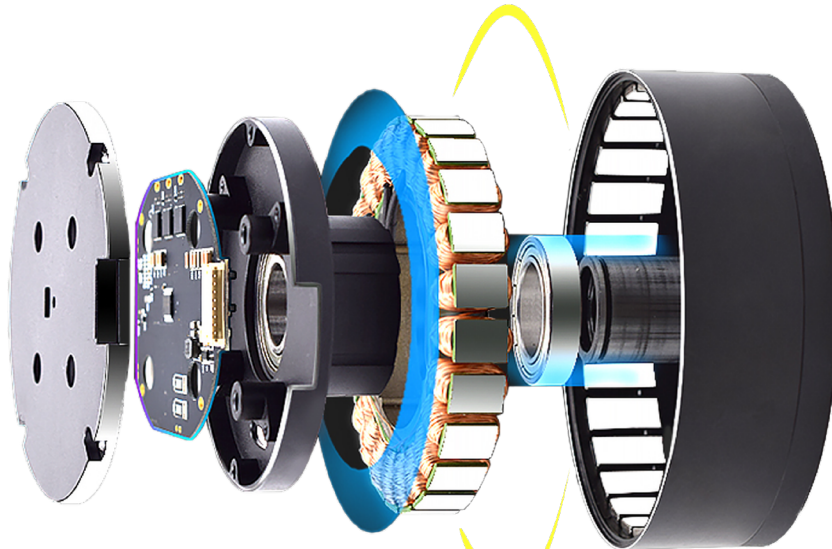
Robotic Arm



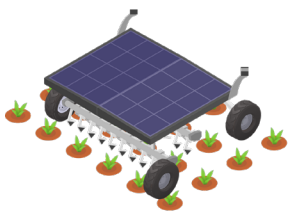
AGV



Quadruped Robot



Agricultural Robot



Drone



Exoskeleton Robot



Medical Robot



PRODUCT NAME RULES

EPS - RH - 17 - 100 - C - B

① ② ③ ④ ⑤ ⑥

- ① Brand Name E-Efficiency P-Precision S-Smart
- ② R-Harmony motor, S-H - Hollow Shaft
- ③ Harmony Reducer Model : 14/17/20/25/32
- ④ Gear Ratio : 50/100
- ⑤ Communication C : CANBUS, R : RS485, E : EtherCAT
- ⑥ Customizable Brakes : N : No Brake B : Brake

Series Name

EPS-RH

Motor simplified Name

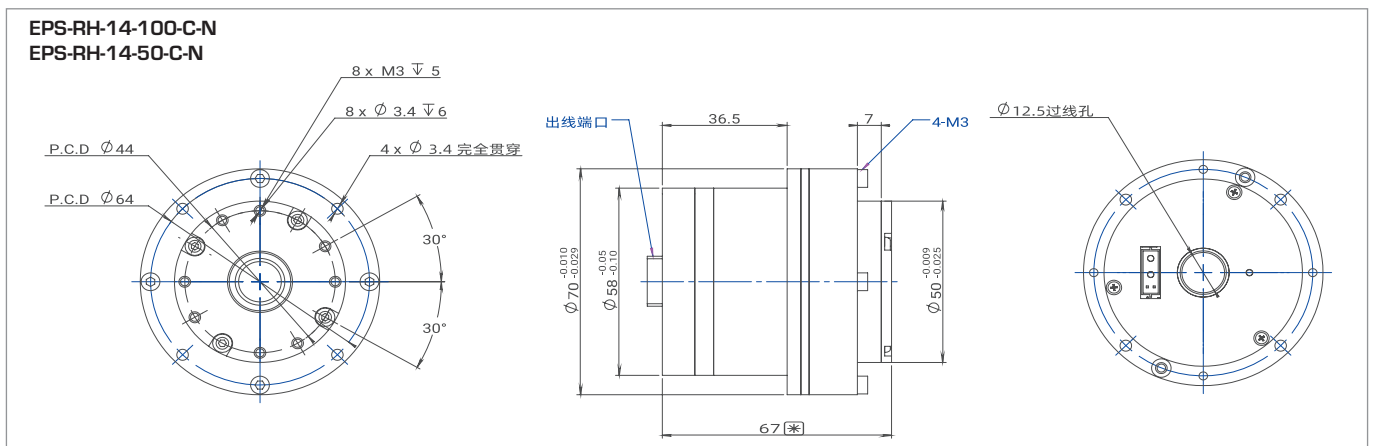
RH-14



○ Single Encoder

Actuator Full Name	Product Code	With Brake / Without Brake
EPS-RH-14-100-R-N	1103011000220100	N (without brake)
EPS-RH-14-100-C-N	1103011000120100	N (without brake)
EPS-RH-14-50-R-N	1103010500220100	N (without brake)
EPS-RH-14-50-C-N	1103010500120100	N (without brake)

○ Installation Drawing



○ Product Parameters

Item Name		Units	RH-14	
Reducer Type		-	Harmonic reducer	
Gear Ratio		-	1:50	1:100
Peak Torque (Start & stop)		N.m	18	28
Rated Torque		N.m	7	11
Peak Speed		R/Min	60	30
Rated Speed		R/Min	50	25
Peak Current		A	3,5	3,5
Rated Current		A	1,5	1,5
Rated Voltage		V	48	48
Motor Rated Power		W	100	100
Line to line resistance		ohms@20°C	0,9	0,9
Line to line inductance		mH	0,4	0,4
Back EMF		Vrms/KRPM	5,6	5,6
Single Direction Accuracy Arc Sec		Arc Sec	40	30
Repetitive Positioning Accuracy		Arc Sec	15	10
Encoder Type		Rev	ABS-17bit	ABS-17bit
Hollow Shaft Diameter	N (without brake)	mm	12,5	12,5
	B (with brake)	mm	/	/
Inertia	N (without brake)	Kg.m ²	0,02	0,04
	B (with brake)	Kg.m ²	/	/
Weight	N (without brake)	kg	0,71	0,71
	B (with brake)	kg	/	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor

Series Name

EPS-RH

Motor simplified Name

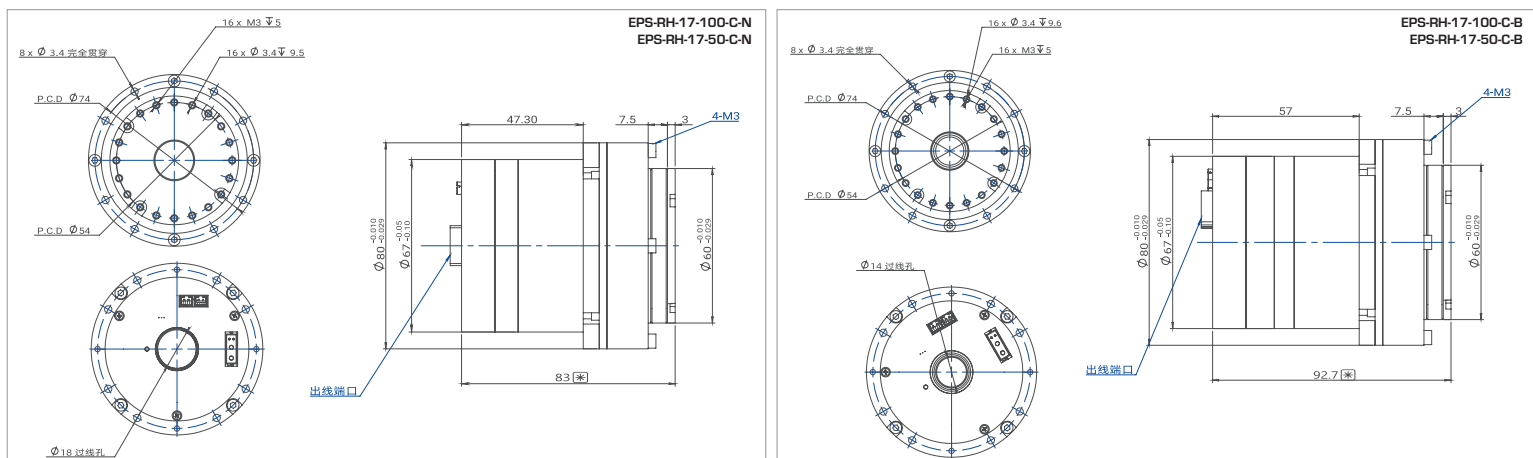
RH-17



Single Encoder

Actuator Full Name	Product Code	With Brake / Without Brake
EPS-RH-17-100-C-B	1103021000121100	B (with brake)
EPS-RH-17-100-C-N	1103021000120100	N (without brake)
EPS-RH-17-50-C-B	1103020500121100	B (with brake)
EPS-RH-17-50-C-N	1103020500120100	N (without brake)

Installation Drawing



Product Parameters

Item Name		Units	RH-17	
Reducer Type		-	Harmonic reducer	
Gear Ratio		-	1:50	1:100
Peak Torque (Start & stop)		N.m	34	54
Rated Torque		N.m	23	35
Peak Speed		R/Min	60	30
Rated Speed		R/Min	50	25
Peak Current		A	6,3	6,3
Rated Current		A	3,5	3,5
Rated Voltage		V	48	48
Motor Rated Power		W	180	180
Line to line resistance		ohms@20°C	0,77	0,77
Line to line inductance		mH	0,38	0,38
Back EMF		Vrms/KRPM	7,30	7,30
Single Direction Accuracy Arc Sec		Arc Sec	40	30
Repetitive Positioning Accuracy		Arc Sec	15	10
Encoder Type		Rev	ABS-17bit	ABS-17bit
Hollow Shaft Diameter	N (without brake)	mm	18	18
	B (with brake)	mm	14	14
Inertia	N (without brake)	Kg.m ²	0,05	0,10
	B (with brake)	Kg.m ²	0,07	0,12
Weight	N (without brake)	kg	1,10	1,10
	B (with brake)	kg	1,25	1,25

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor

Series Name

EPS-RH

Motor simplified Name

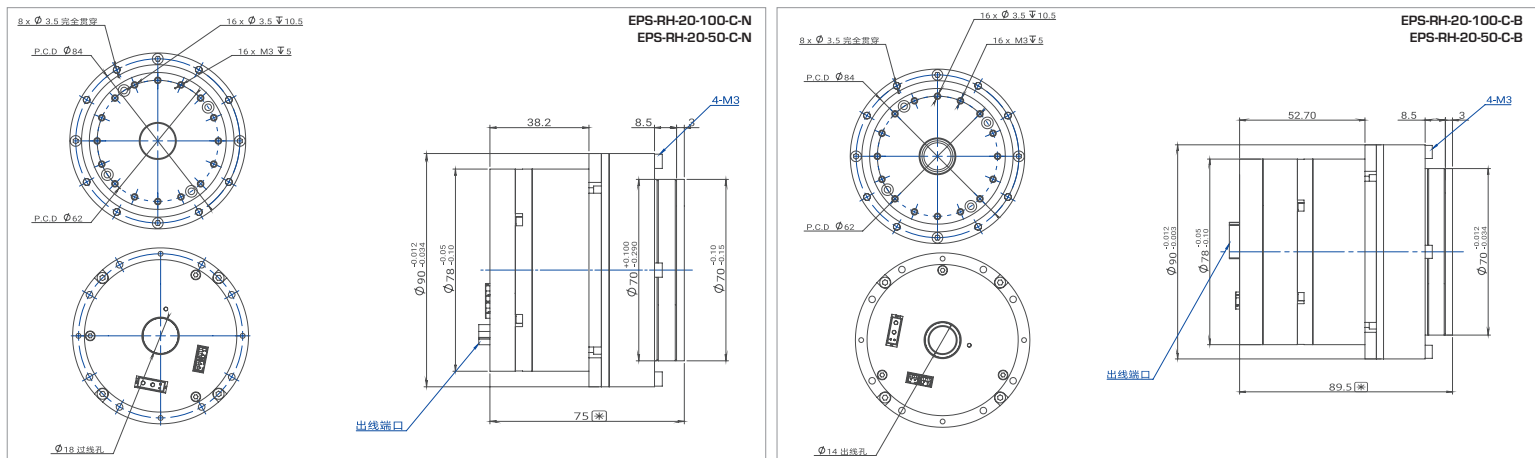
RH-20



Single Encoder

Actuator Full Name	Product Code	With Brake / Without Brake
EPS-RH-20-100-C-B	1103031000121100	B (with brake)
EPS-RH-20-100-C-N	1103031000120100	N (without brake)
EPS-RH-20-50-C-B	1103030500121100	B (with brake)
EPS-RH-20-50-C-N	1103030500120100	N (without brake)

Installation Drawing



Product Parameters

Item Name		Units	RH-20	
Reducer Type		-	Harmonic reducer	
Gear Ratio		-	1:50	1:100
Peak Torque (Start & stop)		N.m	56	80
Rated Torque		N.m	34	50
Peak Speed		R/Min	60	30
Rated Speed		R/Min	50	25
Peak Current		A	9,0	9,0
Rated Current		A	5,0	5,0
Rated Voltage		V	48	48
Motor Rated Power		W	250	250
Line to line resistance		ohms@20°C	0,38	0,38
Line to line inductance		mH	0,33	0,33
Back EMF		Vrms/KRPM	7,00	7,00
Single Direction Accuracy Arc Sec		Arc Sec	40	30
Repetitive Positioning Accuracy		Arc Sec	15	10
Encoder Type		Rev	ABS-17bit	ABS-17bit
Hollow Shaft Diameter	N (without brake)	mm	18	18
	B (with brake)	mm	14	14
Inertia	N (without brake)	Kg.m ²	0,07	0,14
	B (with brake)	Kg.m ²	0,08	0,16
Weight	N (without brake)	kg	1,45	1,45
	B (with brake)	kg	1,60	1,60

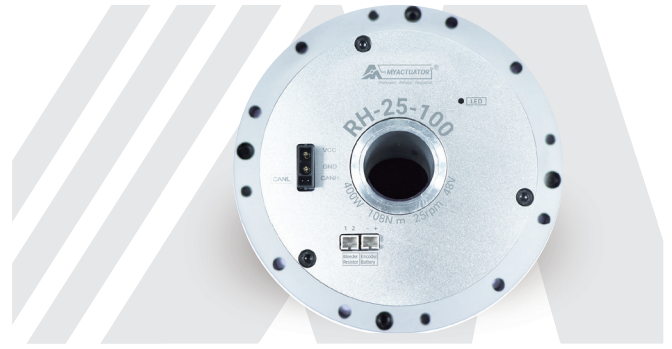
* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor

Series Name

EPS-RH

Motor simplified Name

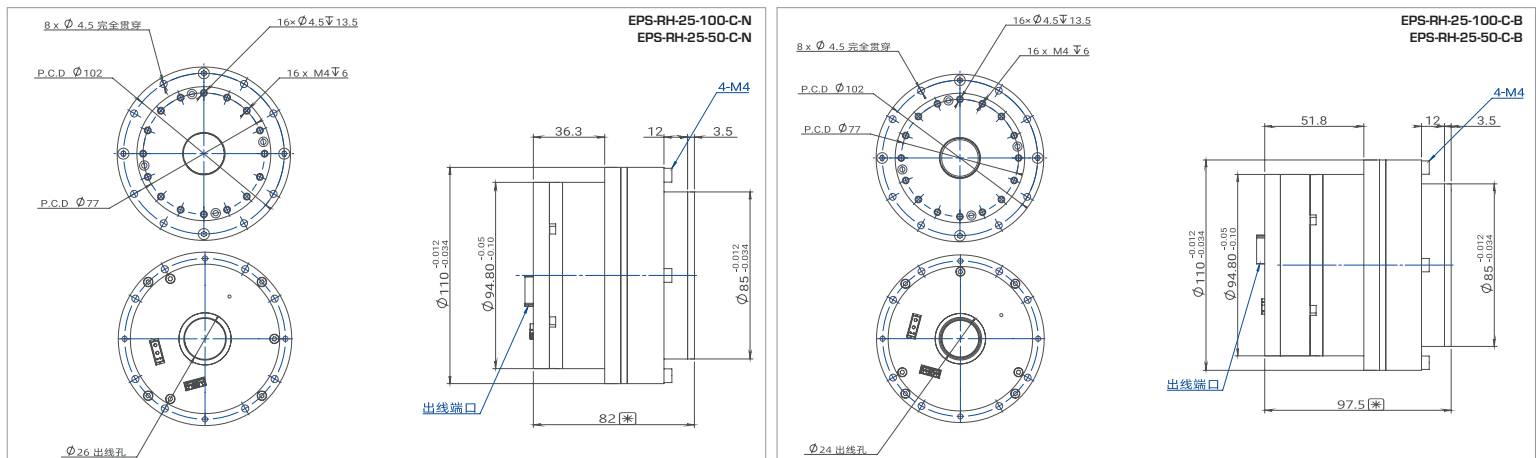
RH-25



Single Encoder

Actuator Full Name	Product Code	With Brake / Without Brake
EPS-RH-25-100-C-B	1103041000121100	B (with brake)
EPS-RH-25-100-C-N	1103041000021100	N (without brake)
EPS-RH-25-50-C-B	1103040500121100	B (with brake)
EPS-RH-25-50-C-N	1103040500021100	N (without brake)

Installation Drawing



Product Parameters

Item Name		Units	RH-25	
Reducer Type		-	Harmonic reducer	
Gear Ratio		-	1:50	1:100
Peak Torque (Start & stop)		N.m	98	157
Rated Torque		N.m	55	108
Peak Speed		R/Min	45	30
Rated Speed		R/Min	40	25
Peak Current		A	14,0	14,0
Rated Current		A	6,8	6,8
Rated Voltage		V	48	48
Motor Rated Power		W	400	400
Line to line resistance		ohms@20°C	0,23	0,23
Line to line inductance		mH	0,30	0,30
Back EMF		Vrms/KRPM	9,80	9,80
Single Direction Accuracy Arc Sec		Arc Sec	40	30
Repetitive Positioning Accuracy		Arc Sec	15	10
Encoder Type		Rev	ABS-17bit	ABS-17bit
Hollow Shaft Diameter	N (without brake)	mm	26	26
	B (with brake)	mm	24	24
Inertia	N (without brake)	Kg.m ²	0,17	0,35
	B (with brake)	Kg.m ²	0,21	0,44
Weight	N (without brake)	kg	2,30	2,30
	B (with brake)	kg	2,82	2,82

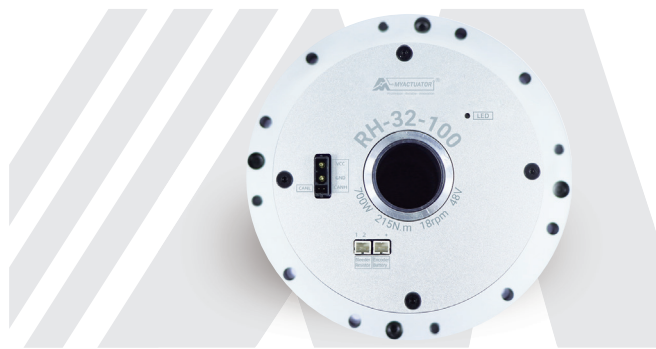
* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor

Series Name

EPS-RH

Motor simplified Name

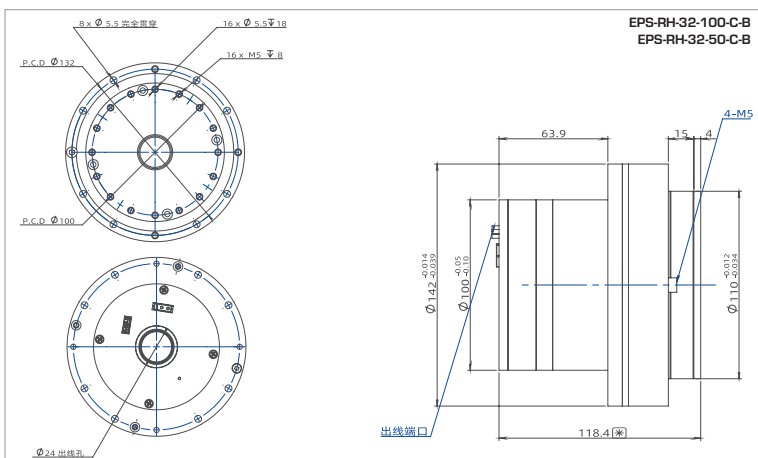
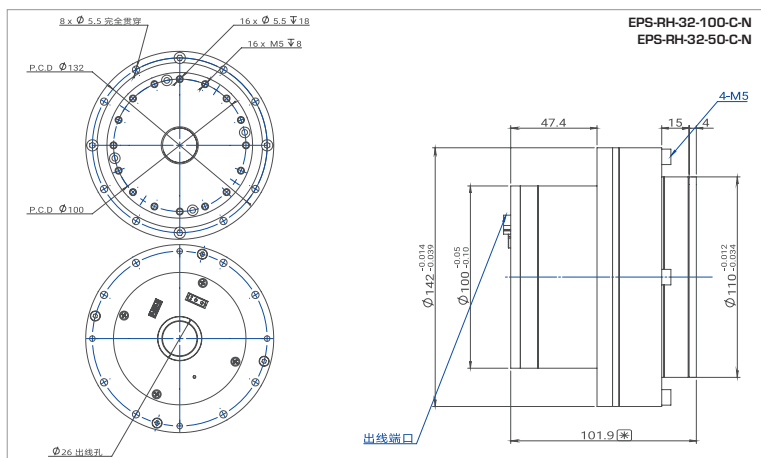
RH-32



○ Single Encoder

Actuator Full Name	Product Code	With Brake / Without Brake
EPS-RH-32-100-C-B	1103051000121100	B (with brake)
EPS-RH-32-100-C-N	1103051000021100	N (without brake)
EPS-RH-32-50-C-B	1103050500121100	B (with brake)
EPS-RH-32-50-C-N	1103050500021100	N (without brake)

○ Installation Drawing



○ Product Parameters

Item Name		Units	RH-32	
Reducer Type		-	Harmonic reducer	
Gear Ratio		-	1:50	1:100
Peak Torque (Start & stop)		N.m	216	330
Rated Torque		N.m	105	215
Peak Speed		R/Min	40	20
Rated Speed		R/Min	35	18
Peak Current		A	25,0	25,0
Rated Current		A	11,5	11,5
Rated Voltage		V	48	48
Motor Rated Power		W	700	700
Line to line resistance		ohms@20°C	0,09	0,09
Line to line inductance		mH	0,13	0,13
Back EMF		Vrms/KRPM	8,30	8,30
Single Direction Accuracy Arc Sec		Arc Sec	40	30
Repetitive Positioning Accuracy		Arc Sec	15	10
Encoder Type		Rev	ABS-17bit	ABS-17bit
Hollow Shaft Diameter	N (without brake)	mm	26	26
	B (with brake)	mm	24	24
Inertia	N (without brake)	Kg.m ²	0,53	1,10
	B (with brake)	Kg.m ²	0,58	1,21
Weight	N (without brake)	kg	4,30	4,30
	B (with brake)	kg	4,70	4,70

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor



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