



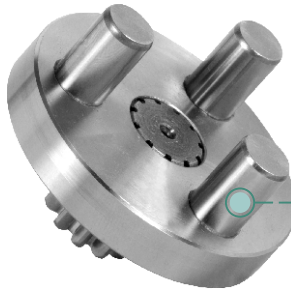
TRANSMISSION PLANETARY GEAR MOTOR

PLANETARY GEAR MOTOR

■ Adopt dual supporting structure for output shaft so that the max torque of gearbox is increased a lot.



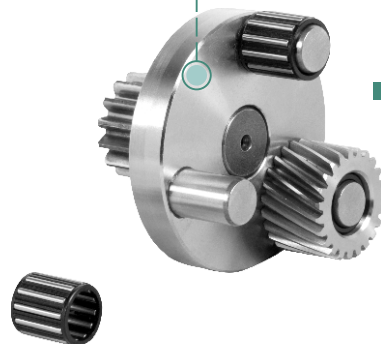
■ Sun wheel and planetary wheel are connected by spline which increase the max torque of gearbox and lengthen the life.



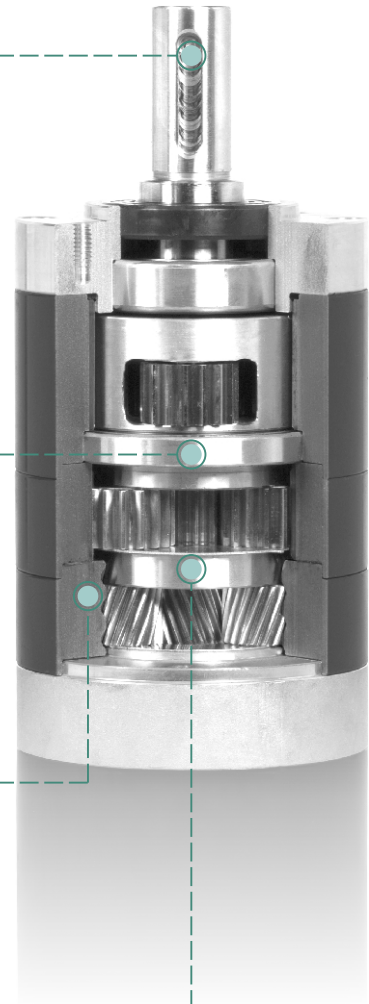
■ • We use helical gear at input stage which make the noise low and run smoothly in hi-gh speed.
• The inner gear ring is separated so that we can make more ratio and the de-sign is flexible.
• Gearbox and motor are located by a seam fix by screw in axial which increase the matching precision and reduce noise.



■ We use rolling pin holder inside planetary wheel. we use rolling pin grinding instead of sliding grinding so the life of gearbox is much longer.



■ Double supporting structure; Internal grinding on inner bore of planetary gears making the inner bore roundness less than 0.003mm; running by rolling instead of sliding; HRC60 gear surface precision-scraping; The adopting of all these technologies ensure the super quiet and steady operating and a long life time over 10000 hours.



TYPE AND MOTOR NUMBER

Motor

H 62 BLDPN 24 60 - 30S
 ① ② ③ ④ ⑤ ⑥

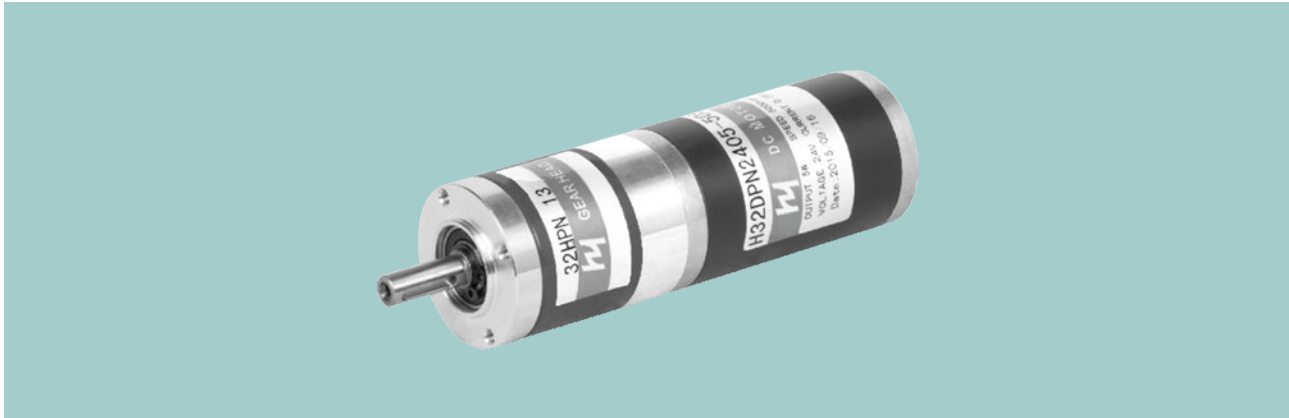
Motor Parameters	①	HY Logo
	②	Motor Outline Dimension: 22:Outer diameter Φ22mm 32:Outer diameter Φ32mm 42:Outer diameter Φ42mm 52:Outer diameter Φ52mm 62:Outer diameter Φ62mm 72:Outer diameter Φ72mm 82:Outer diameter Φ82mm 105:Outer diameter Φ105mm 120:Outer diameter Φ120mm
	③	Motor Type: BLDPN:BLDC motor , matched with planetary gearbox DPN:Brush DC motor , matched with planetary gearbox
	④	Rated Voltage For The Motor Using 12:12V 24:24V
	⑤	Rated Output Power For The Motor 40:40W 60:60W
	⑥	Rated Output Speed For The Motor 20S:2000RPM 30S:3000RPM

Reducer

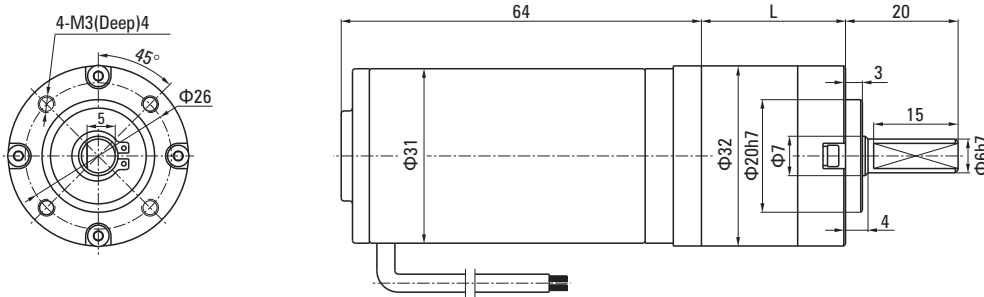
62 HPN 303
 ① ② ③

①	Motor Outline Dimension: 22:Gear box external diameter Φ22mm 32:Gear box external diameter Φ32mm 42:Gear box external diameter Φ42mm 52:Gear box external diameter Φ52mm 62:Gear box external diameter Φ62mm 72:Gear box external diameter Φ72mm 82:Gear box external diameter Φ82mm 105:Gear box external diameter Φ105mm 120:Gear box external diameter Φ120mm
②	Motor Outline Dimension: HPN:Gear box input shaft is helical gear
③	Gear Ratio: Reduction ratio:303:1

HPN Φ 32 BRUSH

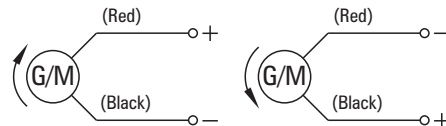


Outside Diameter 32 DC Brush Motor



Motor Type	Gearbox Model	Gear Ratio		Dimension(mm)
		Stage1	3.7~6.75	
H32DPN	32ZPN□	Stage2	14~46	35.9
		Stage3	51~308	46.2

Wiring Diagram



Blush DC Motor Technical Data

Motor Type	Voltage V	Power W	No-load Current A	No-load Speed RPM	Rated Current A	Rated Speed RPM	Rated Torque N.m	Motor Life H
H32DPN2410-40S	24	10	0.4	5000	0.7	4000	0.024	2000
H32DPN2415-50S	24	15	0.5	6000	1.1	5000	0.029	2000

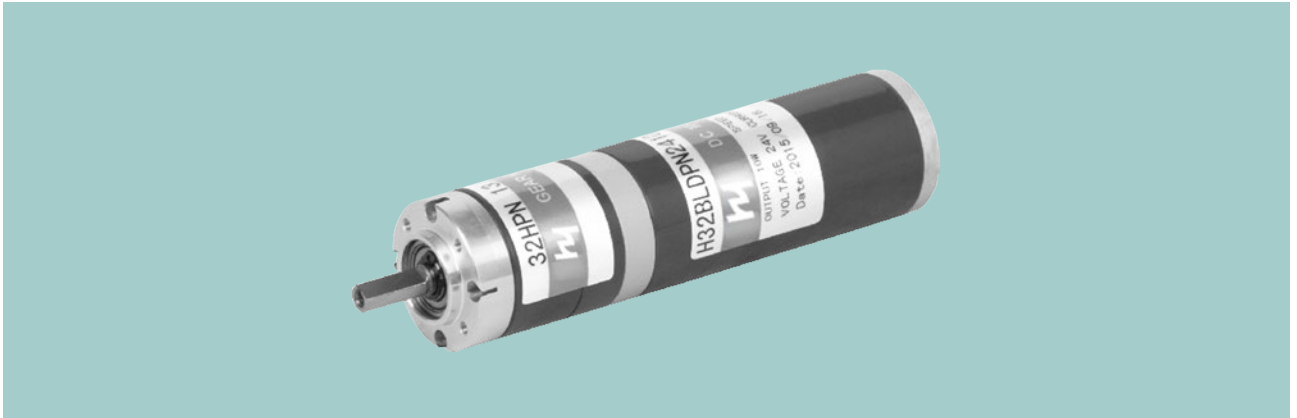
Blush DC Planetary Gear Motor Technical Data-H32DPN2410-40S

Ratio	3.7	4.29	5.18	6.75	13.73	19.2	25	28.93	34.97	45.56	50.89	68.08	78.7
Output shaft speed r/min	1081	932	772	592	285	210	160	137	114	87	78	59	50
Allowable torque N.m	0.080	0.092	0.111	0.145	0.270	0.367	0.483	0.561	0.6777	0.890	0.889	1.185	1.3777
Reduction stage	1	1	1	1	2	2	2	2	2	2	3	3	3

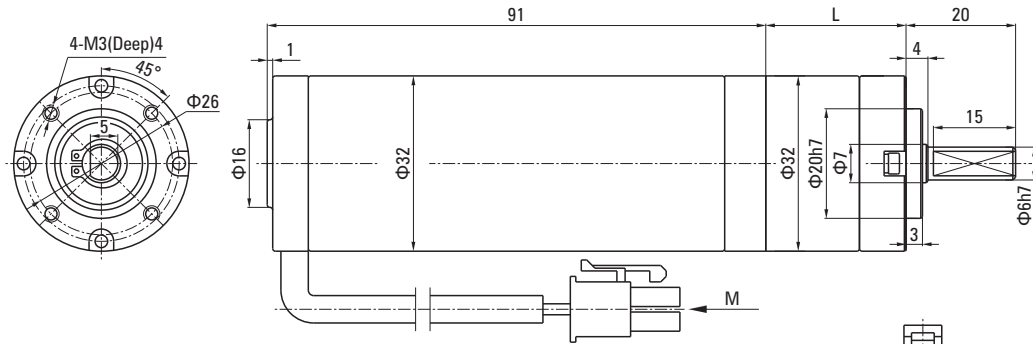
Ratio	92.7	99.5	115.1	129.6	149.9	168.85	195.28	236.1	307.54				
Output shaft speed r/min	43	40	35	31	26	23	20	17	13				
Allowable torque N.m	1.621	1.743	2.004	2.266	2.614	2.945	3.400	4.000	4.000				
Reduction stage	3	3	3	3	3	3	3	3	3				

HPN SERIES

HPN Φ 32 BRUSHLESS

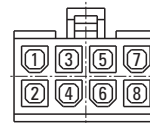


Outside Diameter 32 DC Brushless Motor



Motor Type	Gearbox Model	Gear Ratio	Dimension (mm)
H32BLDPN	32PN□	3.7~6.75	25.6
		13.73~45.56	35.9
		50.89~307.54	46.2

(View M)



1	2	3	4	5	6	7	8
U	V	W	GND	Hv	Hw	Hu	+Vcc

BLDC Motor Technical Data

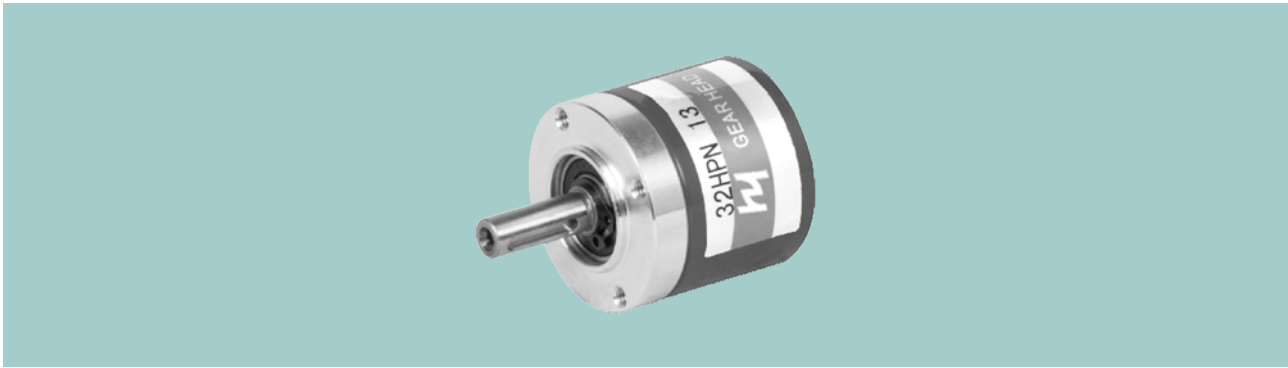
Motor Type	Voltage V	Rated Power W	Rated Current A	Rated Speed RPM	Rated Torque N.m	Grade Protection IP
H32BLDPN2420-40S	24	20	1.3	4000	0.048	20

BLDC Planetary Gear Motor Technical Data-H32BLDPN2420-40S

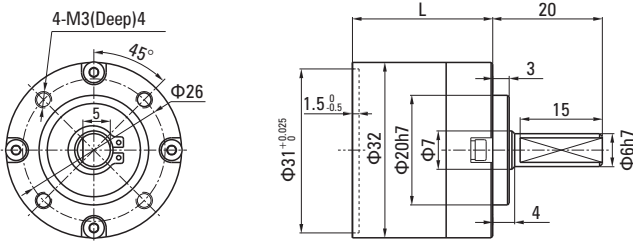
Ratio	3.7	4.29	5.18	6.75	13.73	19.2	25	28.93	34.97	45.56	50.89	68.08	78.7
Output shaft speed r/min	1081	932	772	593	291	208	160	138	114	88	79	59	51
Allowable torque N.m	0.16	0.092	0.22	0.29	0.53	0.74	0.97	1.12	1.35	1.76	1.77	2.37	2.74
Reduction stage	1	1	1	1	2	2	2	2	2	2	3	3	3

Ratio	92.7	99.5	115.1	129.6	149.9	168.85	195.28	236.1	307.54				
Output shaft speed r/min	43	40	35	31	27	24	20	17	13				
Allowable torque N.m	3.23	3.47	4.00	4.00	4.00	4.00	4.00	4.00	4.00				
Reduction stage	3	3	3	3	3	3	3	3	3				

HPN Φ 32



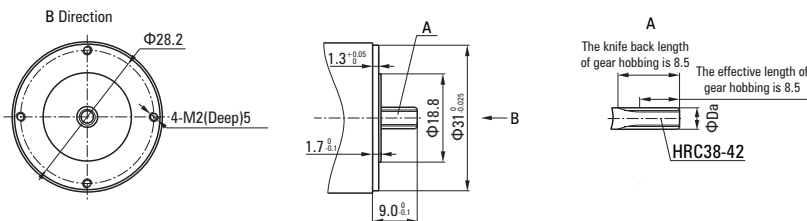
Outdiameter 32mm Planetary Gearbox



Gearbox Model	Gear Ratio		Dimension (mm)
	32ZPN□	Stage1	
	Stage2	14~46	35.9
	Stage3	51~308	46.2

Transmission Stage	Stage 1	Stage 2	Stage 3
Transmission efficiency	90%	81%	73%
Max radial load	140N	140N	140N
Max axial load	50N	50N	50N
Rated torque	1N.m	2.25N.m	4N.m
Instant beared torque	Two times of the rated torque		
Operating temperature	-10°C ~ +80°C		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	≤3000RPM		
Input and output direction	Same direction		
Noise	< 60dB(A) (L=1m, 3000rpm)		

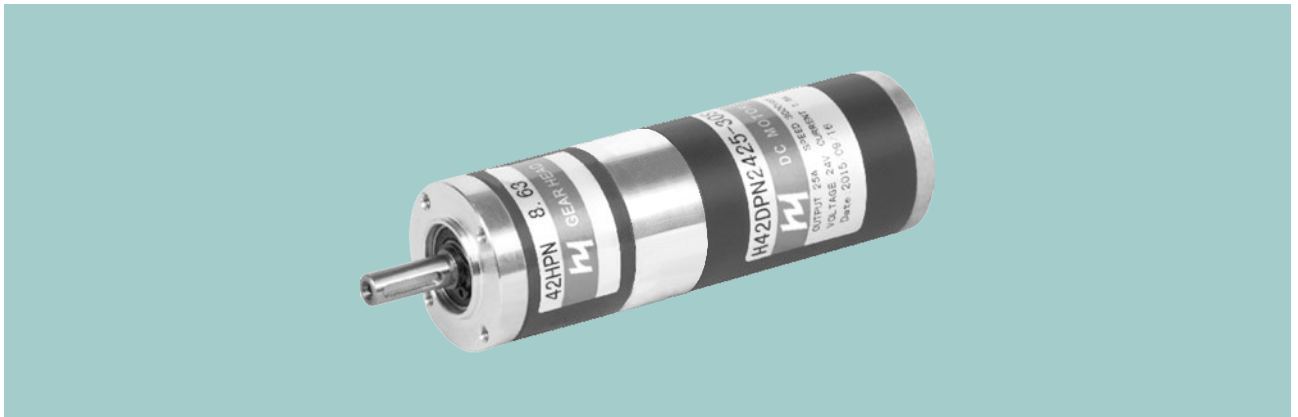
Motor Matching Scheme



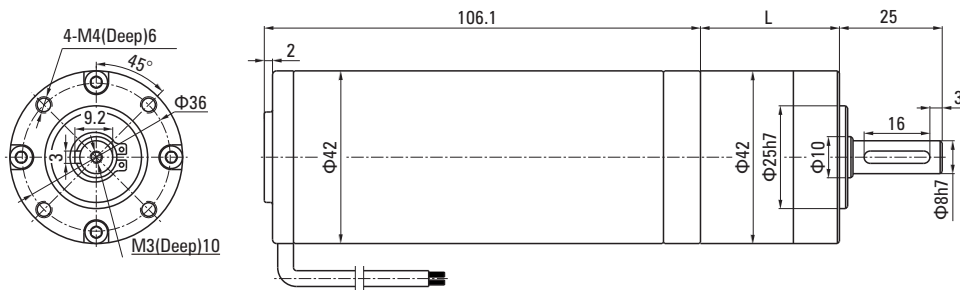
Da	One stage of gear ratio	Second stage of gear ratio	Third stage of gear ratio	
Φ8.02 ^{-0.05} / _{-0.08}	3.7	13.73	50.89	-
Φ7.05 ^{-0.05} / _{-0.08}	4.29	-	68.08	-
		-	78.7	-
Φ5.82 ^{-0.05} / _{-0.08}	5.18	19.2	99.5	-
		-	115.1	-
Φ4.57 ^{-0.05} / _{-0.08}	6.75	25	92.7	168.85
		28.93	129.6	195.28
		34.97	149.9	236.1
		45.56	-	307.54

HPN SERIES

HPN Φ 42 BRUSH

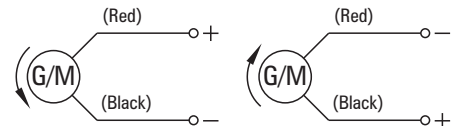


Outside Diameter 42 DC Brush Motor



Motor Type	Gearbox Model	Gear Ratio	Dimension (mm)
H42DPN	42PN□	3.65~8.63	33.8
		13.53~58.22	47.4
		67.08~392.98	61.0

Wiring Diagram



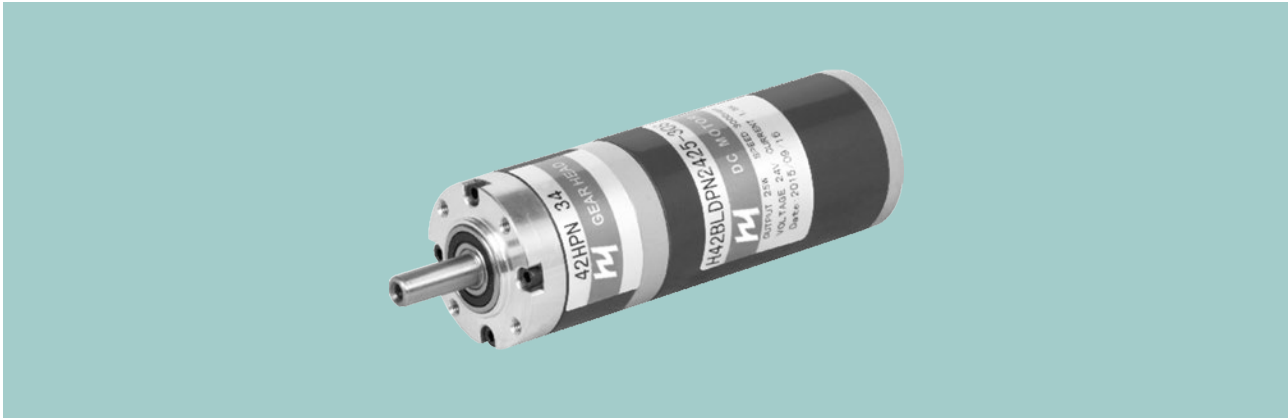
Blush DC Motor Technical Data

Motor Type	Voltage V	Rated Power W	No-load Current A	No-load Speed RPM	Rated Current A	Rated Speed RPM	Rated Torque N.m	Motor Life H
H42DPN2425-30S	24	25	0.6	3500	1.6	3000	0.080	600

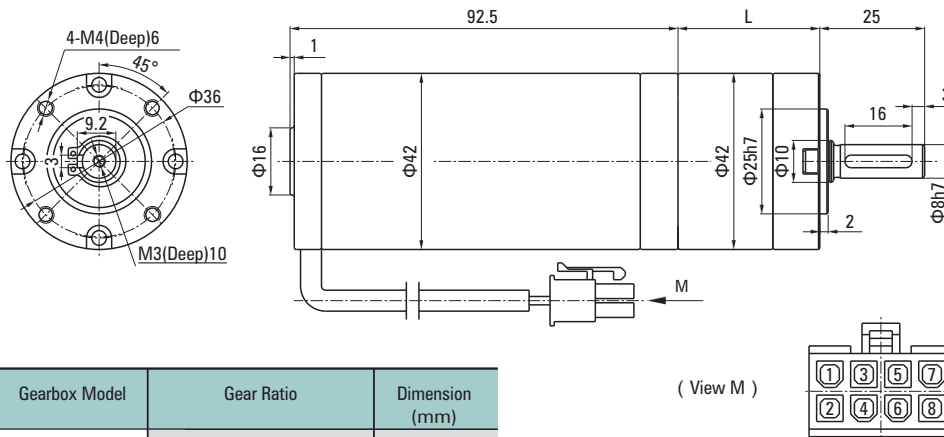
Blush DC Planetary Gear Motor Technical Data-H42DPN2425-30S

Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	89	67	52	45	37
Allowable torque(N.m)	0.26	0.39	0.47	0.62	0.88	1.23	1.60	1.82	2.20	2.90	3.77	2.75	4.74
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3
Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	24	21	18	16	13	9.9	7.6			
Allowable torque(N.m)	5.34	6.01	6.95	7.46	8.49	9.67	11.19	13.53	15.00	15.00			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN $\Phi 42$ BRUSHLESS



Outside Diameter 42 DC Brushless Motor



Motor Type	Gearbox Model	Gear Ratio	Dimension (mm)
H42BLDPN	42PN□	3.65~8.63	33.8
		13.53~58.22	47.4
		67.08~392.98	61.0

(View M)

1	2	3	4	5	6	7	8
U	V	W	GND	Hv	Hw	Hu	+Vcc

BLDC Motor Technical Data

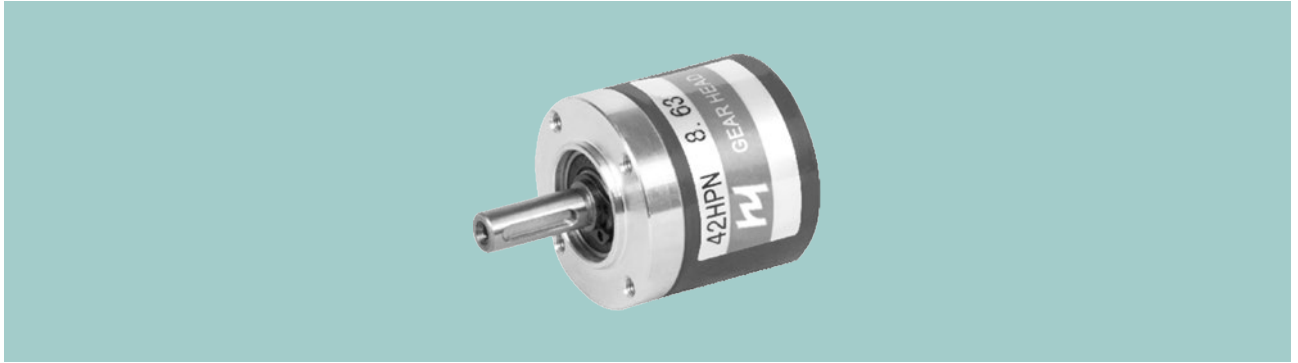
Motor Type	Voltage	Rated Power	Rated Current	Rated Speed	Rated Torque	Grade Protection IP
	V	W	A	RPM	N.m	
H42BLDPN2440-30S	24	40	2.4	3000	0.127	20

BLDC Planetary Gear Motor Technical Data-H42BLDPN2440-30S

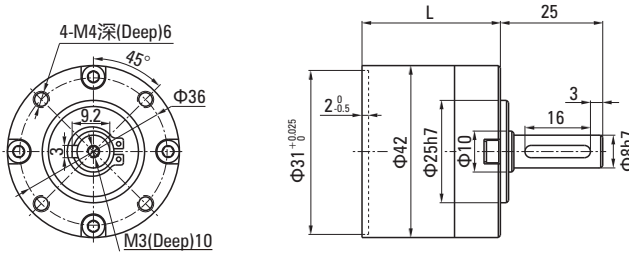
Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	88	67	52	45	37
Allowable torque(N.m)	0.42	0.61	0.75	0.99	1.40	1.95	2.54	2.89	3.50	4.61	6.00	6.24	7.54
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3

Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	23	21	18	16	13	10	8			
Allowable torque(N.m)	8.49	9.55	11.06	11.87	13.51	15.0	15.0	15.0	15.0	15.0			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN $\Phi 42$



Outdiameter 42mm Planetary Gearbox

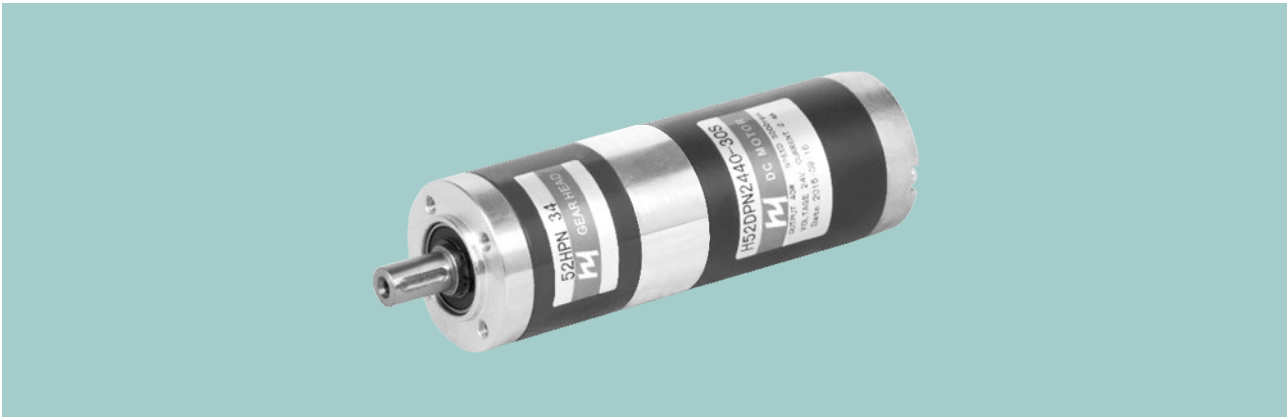


Gearbox Model	Gear Ratio		Dimension (mm)
	42ZPN□	Stage1	
	Stage2	14~58	47.4
	Stage3	67~393	61.0

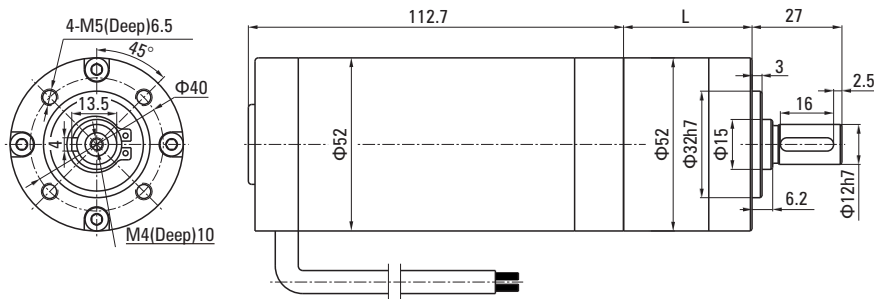
Transmission Stage	Stage 1	Stage 2	Stage 3
Transmission efficiency	90%	81%	73%
Max radial load	300N	300N	300N
Max axial load	110N	110N	110N
Rated torque	3N.m	7.5N.m	15N.m
Instant beared torque	Two times of the rated torque		
Operating temperature	-10°C ~ +80°C		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	≤3000RPM		
Input and output direction	Same direction		
Noise	< 60dB(A) (L=1m, 3000rpm)		

Motor Matching Scheme				
	Da	One stage of gear ratio	Second stage of gear ratio	Third stage of gear ratio
	$\Phi 7.12^{+0.05/-0.08}$	5.36	-	102.88
			-	118.98
	$\Phi 5.78^{+0.05/-0.08}$	6.55	28.05	145.36
			33.92	-
	$\Phi 4.56^{+0.05/-0.08}$	8.63	44.69	165.64
			58.22	191.56
		-	231.61	
		-	301.68	
		-	392.98	
	$\Phi 10.73^{+0.05/-0.08}$	3.65	13.53	67.08
			18.92	81.11
			24.65	91.36
			-	127.74

HPN Φ 52 BRUSH

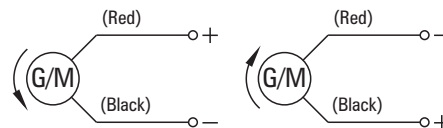


Outside Diameter 52 DC Brush Motor



Motor Type	Gearbox Model	Gear Ratio	Dimension (mm)
H52DPN	52PN□	3.65~8.63	38.6
		13.53~58.22	54.2
		67.08~392.98	69.8

Wiring Diagram



BLDC Motor Technical Data

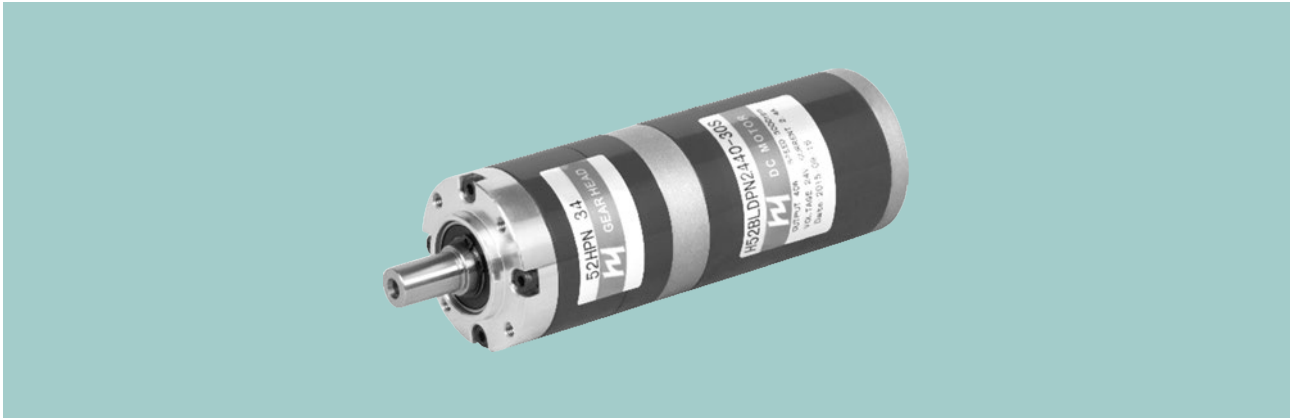
Motor Type	Voltage V	Rated Power W	No-load Current A	No-load Speed RPM	Rated Current A	Rated Speed RPM	Rated Torque N.m	Motor Life H
H52DPN2440-30S	24	40	1.0	3500	2.5	3000	0.127	2000
H52DPN2460-30S	24	60	1.2	3600	4.0	3000	0.191	2000

Blush DC Planetary Gear Motor Technical Data-H52DPN2440-30S

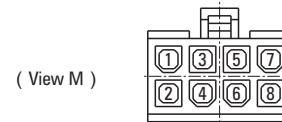
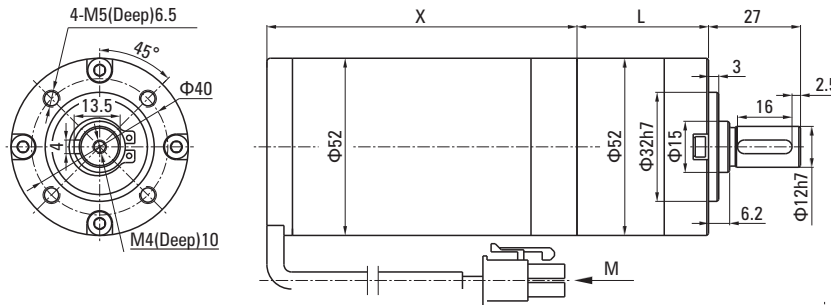
Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	89	67	52	45	37
Allowable torque(N.m)	0.42	0.61	0.75	0.99	1.39	1.95	2.54	2.89	3.49	4.60	5.99	6.22	7.52
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3
Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	24	21	18	16	13	9.9	7.6			
Allowable torque(N.m)	8.47	9.54	11.03	11.84	13.48	15.36	17.76	21.47	25.00	25.00			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN SERIES

HPN Φ 52 BRUSHLESS



Outside Diameter 52 DC Brushless Motor



1	2	3	4	5	6	7	8
U	V	W	GND	Hv	Hw	Hu	+Vcc

Motor Type	Dimension	Gearbox Model	Gear Ratio	Dimension (mm)
H52BLDPN2440-30S	91	52PN□	3.65~8.63	38.6
H52BLDPN2460-30S	110		13.53~58.22	54.2
			67.08~392.98	69.8

BLDC Motor Technical Data

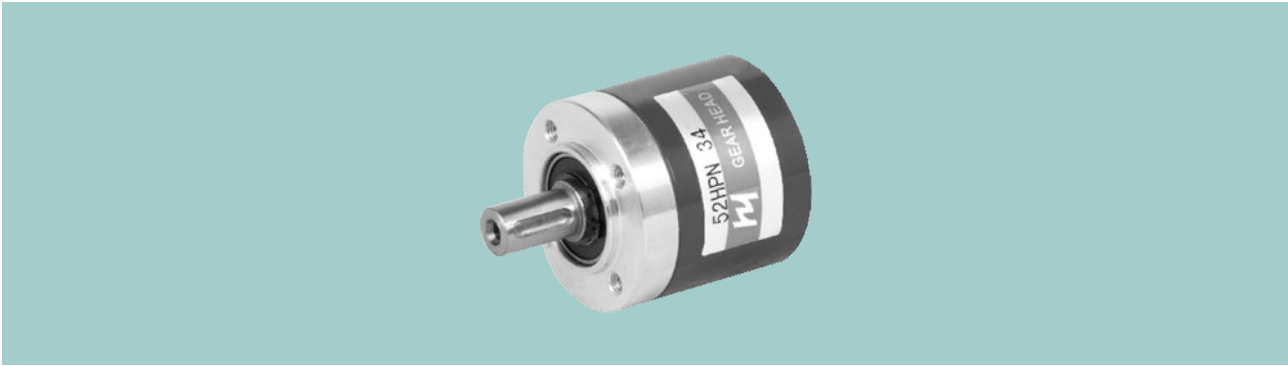
Motor Type	Voltage V	Rated Power W	Rated Current A	Rated Speed RPM	Rated Torque N.m	Grade Protection IP
H52BLDPN2440-30S	24	40	2.4	3000	0.127	20
H52BLDPN2460-30S	24	60	3.8	3000	0.191	20

BLDC Planetary Gear Motor Technical Data-H52BLDPN2440-30S

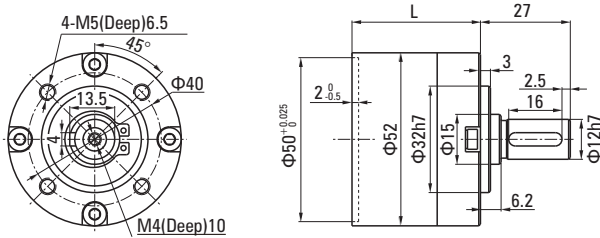
Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	88	67	52	45	37
Allowable torque(N.m)	0.42	0.61	0.75	0.99	1.40	1.95	2.54	2.89	3.50	4.61	6.00	6.24	7.54
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3

Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	23	21	18	16	13	10	8			
Allowable torque(N.m)	8.49	9.55	11.06	11.87	13.51	15.40	17.81	21.53	25	25			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN $\Phi 52$



Outdiameter 52mm Planetary Gearbox

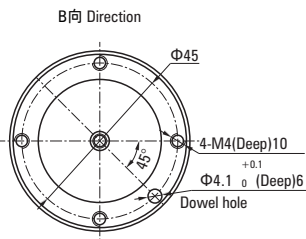


Gearbox Model	Gear Ratio		Dimension (mm)
	52ZPN□	Stage1	
Stage2		14~58	54.2
Stage3		67~393	69.8

Transmission Stage	Stage 1	Stage 2	Stage 3
Transmission efficiency	90%	81%	73%
Max radial load	450N	450N	450N
Max axial load	150N	150N	150N
Rated torque	4N.m	12N.m	25N.m
Instant beared torque	Two times of the rated torque		
Operating temperature	-10°C ~ +80°C		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	≤3000RPM		
Input and output direction	Same direction		
Noise	< 60dB(A) (L=1m, 3000rpm)		

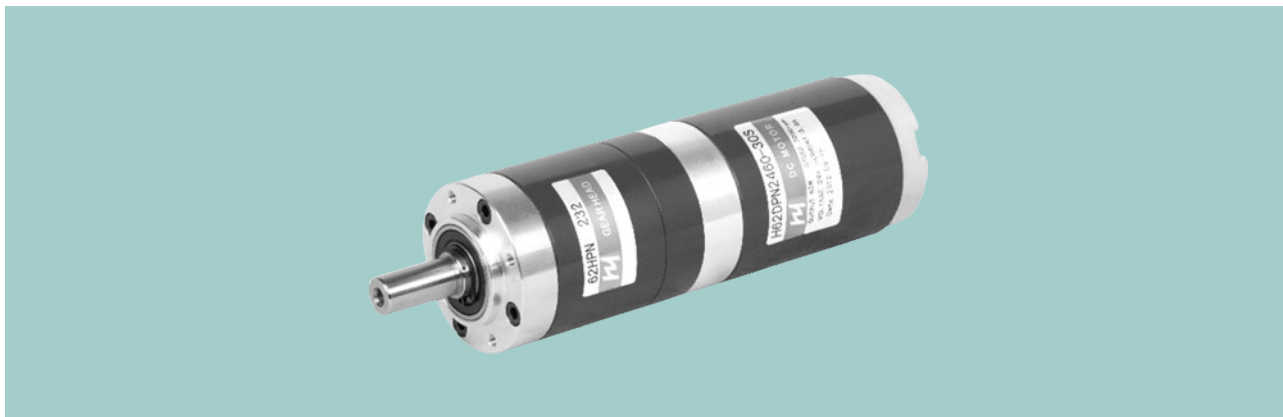
Motor Matching Scheme

Motor Matching Scheme	Da	One stage of gear ratio	Second stage of gear ratio	Third stage of gear ratio
<p>Φ8.88^{-0.05/-0.08}</p>	5.36	-	102.88	118.98
<p>Φ7.23^{-0.05/-0.08}</p>	6.55	28.05	145.36	-
<p>Φ5.73^{-0.05/-0.08}</p>	8.63	44.69	165.64	-
		58.22	191.56	-
		-	231.61	301.68
		-	392.98	-
<p>Φ13.42^{-0.05/-0.08}</p>	3.65	13.53	67.08	-
		18.92	81.11	-
		24.65	91.36	-
		-	127.74	-

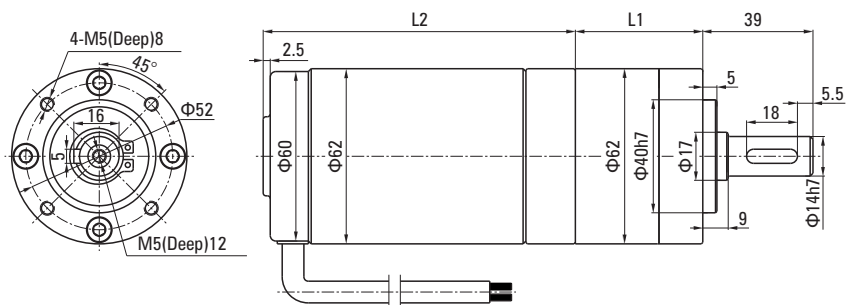


HPN SERIES

HPN Φ 62 BRUSH

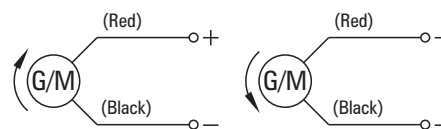


Outside Diameter 62 DC Brush Motor



Motor Type	Gearbox Model	Gear Ratio	Dimension (mm)
H62DPN	62PN□	3.65~8.63	45.1
		13.53~58.22	62.7
		67.08~392.98	80.3

Wiring Diagram



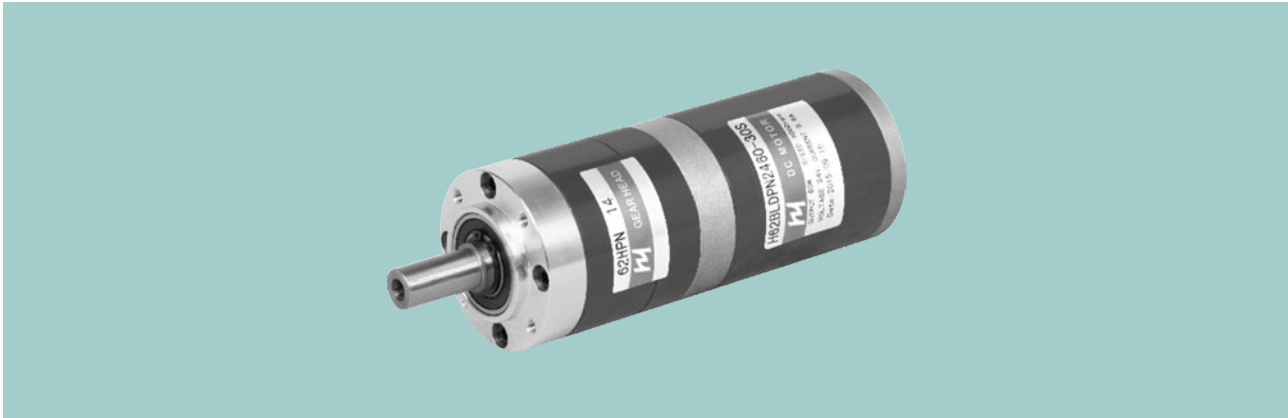
Blush DC Motor Technical Data

Motor Type	Voltage V	Rated Power W	No-load Current A	No-load Speed RPM	Rated Current A	Rated Speed RPM	Rated Torque N.m	Motor Life H	L_2 Dimension mm
H62DPN2440-30S	24	40	1.2	3500	2.5	3000	0.127	2000	110.5
H62DPN2460-30S	24	60	1.2	3500	3.5	3000	0.191	2000	121.5
H62DPN2490-30S	24	90	1.5	3700	5.5	3000	0.287	2000	133.5

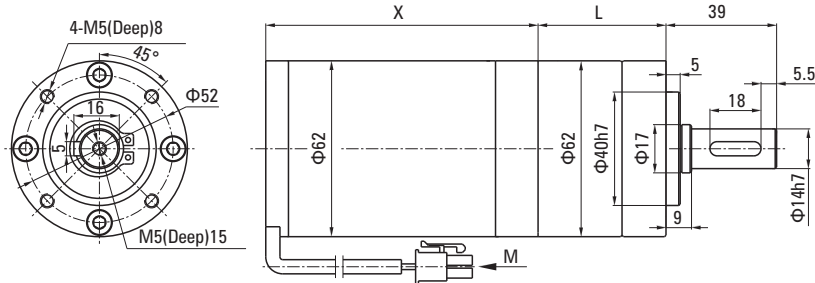
Blush DC Planetary Gear Motor Technical Data-H62DPN2460-30S

Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	89	67	52	45	37
Allowable torque(N.m)	0.63	0.92	1.13	1.48	2.09	2.93	3.81	4.34	5.25	6.91	9.01	9.35	11.31
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3
Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	24	21	18	16	13	9.9	7.6			
Allowable torque(N.m)	12.74	14.34	16.58	17.81	20.27	23.10	26.71	32.29	42.06	50.00			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

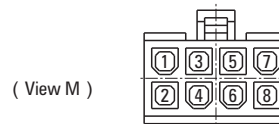
HPN Φ 62 BRUSHLESS



Outside Diameter 62 DC Brushless Motor



Motor Type	X (mm) Dimension	Gearbox Model	Gear Ratio	L(mm) Dimension
H62BLDPN2460-30S	96	62PN□	3.65~8.63	45.1
H62BLDPN2490-30S	113		13.53~58.22	62.7
			67.08~392.98	80.3



1	2	3	4	5	6	7	8
U	V	W	GND	Hv	Hw	Hu	+Vcc

BLDC Motor Technical Data

Motor Type	Voltage V	Rated Power W	Rated Current A	Rated Speed RPM	Rated Torque N.m	Grade Protection IP
H62BLDPN2460-30S	24	60	3.4	3000	0.191	20
H62BLDPN2490-30S	24	90	5.4	3000	0.287	20

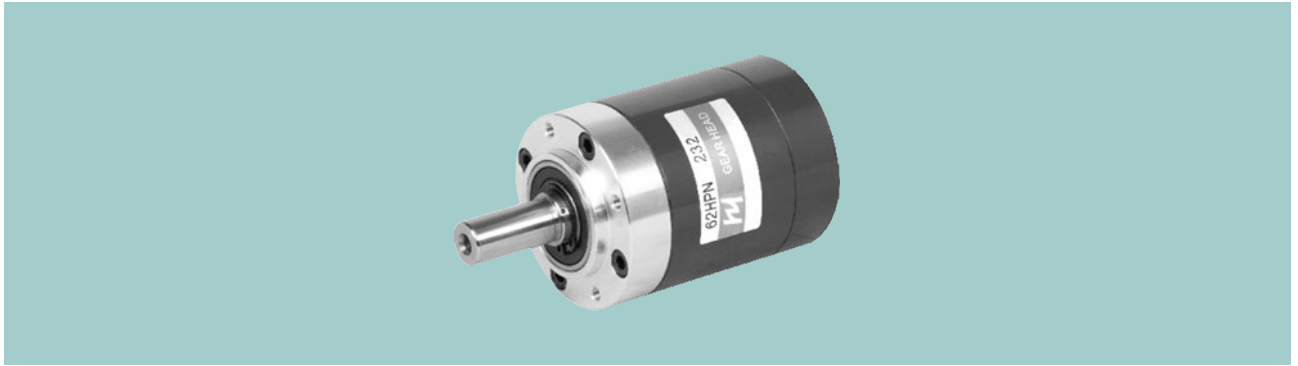
BLDC Planetary Gear Motor Technical Data-H62BLDPN2460-30S

Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	88	67	52	45	37
Allowable torque(N.m)	0.63	0.92	1.13	1.48	2.09	2.93	3.81	4.34	5.25	6.91	9.01	9.35	11.31
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3

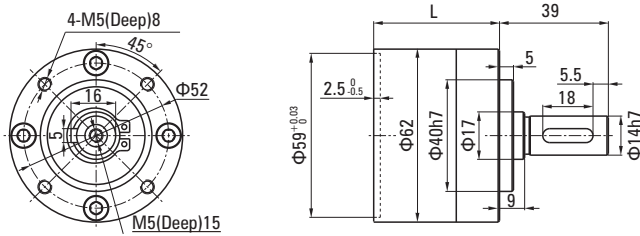
Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	23	21	18	16	13	10	8			
Allowable torque(N.m)	12.74	14.34	16.59	17.81	20.27	23.10	26.71	32.29	42.06	45.00			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN SERIES

HPN Φ62



Outdiameter 62mm Planetary Gearbox

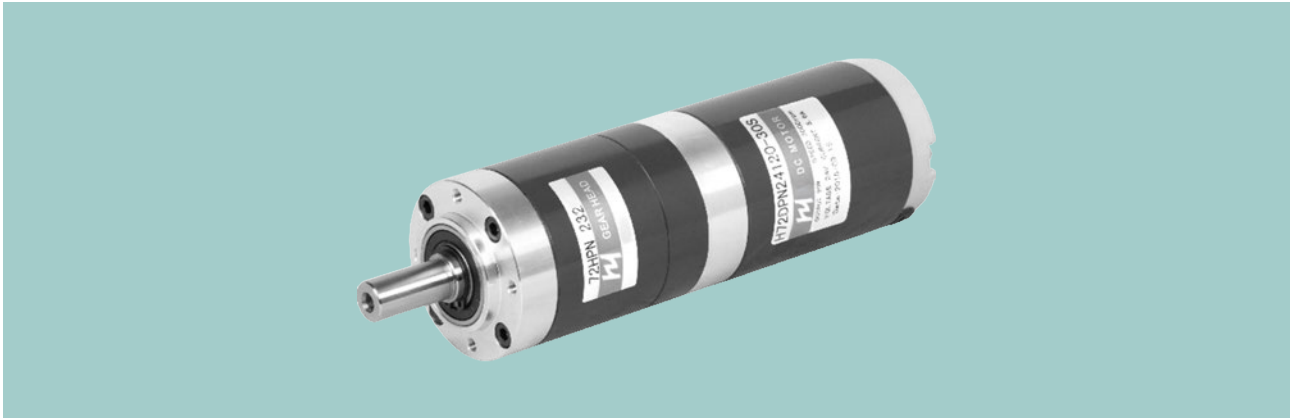


Gearbox Model	Gear Ratio		L(mm) Dimension
	62ZPN□	Stage1	
	Stage2	14~58	62.7
	Stage3	67~393	80.3

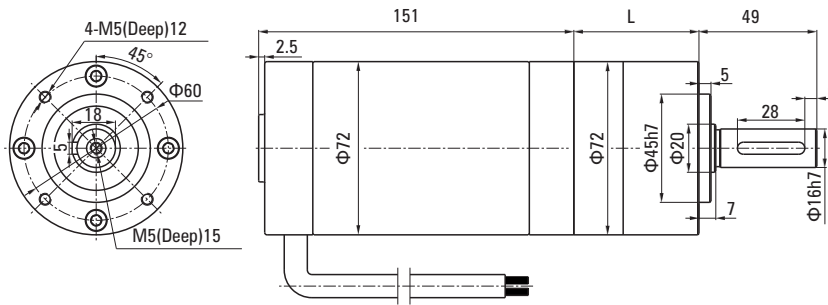
Transmission Stage	Stage 1	Stage 2	Stage 3
Transmission efficiency	90%	81%	73%
Max radial load	520N	520N	520N
Max axial load	150N	150N	150N
Rated torque	8N.m	25N.m	50N.m
Instant beared torque	Two times of the rated torque		
Operating temperature	-10°C ~ +80°C		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	≤3000RPM		
Input and output direction	Same direction		
Noise	< 60dB(A) (L=1m, 3000rpm)		

Motor Matching Scheme				
	Da	One stage of gear ratio	Second stage of gear ratio	Third stage of gear ratio
	Φ10.66 ^{+0.05} _{-0.08}	5.36	-	102.88
				118.98
	Φ8.69 ^{-0.05} _{-0.08}	6.55	28.05	145.36
			33.92	-
	Φ6.82 ^{-0.05} _{-0.08}	8.63	44.69	165.64
			58.22	191.56
		-	231.61	
		-	301.68	
		-	392.98	
	Φ16.11 ^{-0.05} _{-0.08}	3.65	13.53	67.08
			18.92	81.11
			24.65	91.36
			-	127.74

HPN Φ 72 BRUSH

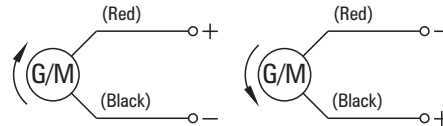


Outside Diameter 72 DC Brush Motor



Motor Type	Gearbox Model	Gear Ratio	L(mm) Dimension
H72DPN	72PN□	3.65~8.63	52.00
		13.53~58.22	72.15
		67.08~392.98	92.30

Wiring Diagram



Blush DC Motor Technical Data

Motor Type	Voltage V	Rated Power W	No-load Current A	No-load Speed RPM	Rated Current A	Rated Speed RPM	Rated Torque N.m	Motor Life H
H72DPN1260-30S	12	60	2.0	3500	7.2	3000	0.191	2000
H72DPN2490-30S	24	90	2.0	3400	5.5	3000	0.287	2000
H72DPN24120-30S	24	120	2.0	3500	7.2	3000	0.382	2000

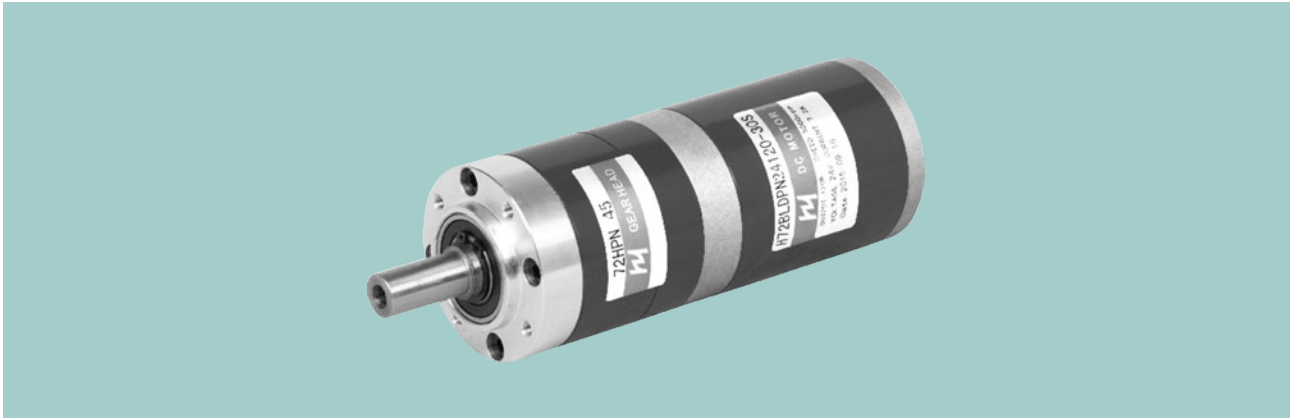
Blush DC Planetary Gear Motor Technical Data-H72DPN2490-30S

Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	89	67	52	45	37
Allowable torque(N.m)	0.94	1.38	1.69	2.23	3.15	4.40	5.73	6.52	7.89	10.39	13.53	14.05	16.99
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3

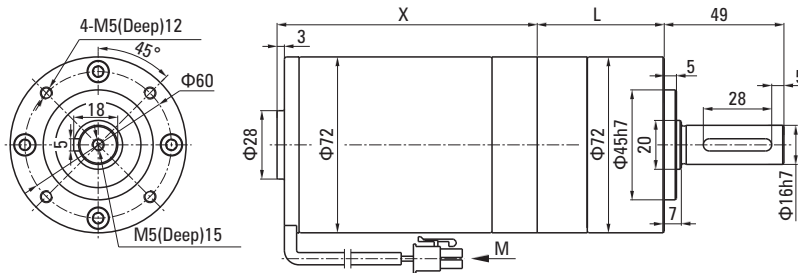
Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	24	21	18	16	13	9.9	7.6			
Allowable torque(N.m)	19.14	21.55	24.93	26.76	30.45	34.70	40.13	48.52	63.20	82.33			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN SERIES

HPN Φ 72 BRUSHLESS

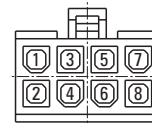


Outside Diameter 72 DC Brushless Motor



Motor Type	X(mm) Dimension	Gearbox Model	Gear Ratio	L(mm) Dimension
H72BLDPN24120-30S	106.5	72PN□	3.65~8.63	52.0
H72BLDPN24150-30S	129.5		13.53~58.22	72.15
			67.08~392.98	92.3

(View M)



1	2	3	4	5	6	7	8
U	V	W	GND	Hv	Hw	Hu	+Vcc

BLDC Motor Technical Data

Motor Type	Voltage	Rated Power	Rated Current	Rated Speed	Rated Torque	Grade Protection
	V	W	A	RPM	N.m	IP
H72BLDPN24120-30S	24	120	6.6	3000	0.382	20
H72BLDPN24150-30S	24	150	8.5	3000	0.478	20

BLDC Planetary Gear Motor Technical Data-H72BLDPN24120-30S

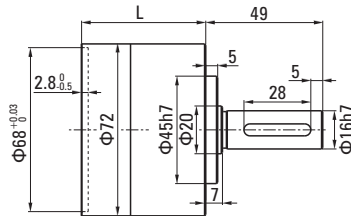
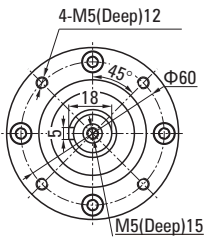
Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	88	67	52	45	37
Allowable torque(N.m)	1.25	1.84	2.25	2.97	4.19	5.85	7.63	8.68	10.50	13.83	18.01	18.71	22.62
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3

Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	23	21	18	16	13	10	8			
Allowable torque(N.m)	25.48	28.69	33.18	35.62	40.50	46.19	53.42	64.59	84.00	84.00			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN Φ 72



Outdiameter 72mm Planetary Gearbox



Gearbox Model	Gear Ratio		L(mm) Dimension
	72ZPN□	Stage1	
	Stage2	14~58	72.15
	Stage3	67~393	92.30

Transmission Stage	Stage 1	Stage 2	Stage 3
Transmission efficiency	90%	81%	73%
Max radial load	760N	760N	760N
Max axial load	160N	160N	160N
Rated torque	14N.m	42N.m	84N.m
Instant beared torque	Two times of the rated torque		
Operating temperature	-10°C ~ +80°C		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	≤3000RPM		
Input and output direction	Same direction		
Noise	< 60dB(A) (L=1m, 3000rpm)		

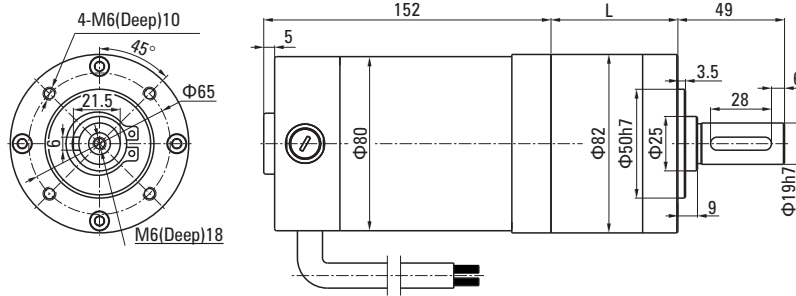
Motor Matching Scheme						
		Da	One stage of gear ratio	Second stage of gear ratio	Third stage of gear ratio	
		Φ12.47 ^{-0.05/-0.08}	5.36	-	102.88	
		Φ10.27 ^{-0.05/-0.08}	6.55	28.05	145.36	
			Φ7.99 ^{-0.05/-0.08}	8.63	44.69	165.64
					58.22	191.56
					-	231.61
					-	301.68
		Φ18.68 ^{-0.05/-0.08}	3.65	13.53	67.08	
				18.92	81.11	
				24.65	91.36	
				-	127.74	

HPN SERIES

HPN Φ 82 BRUSH



Outside Diameter 82 DC Brush Motor



Motor Type	Gearbox Model	Gear Ratio	L(mm) Dimension
H82DPN	82PN□	3.65~8.63	63.70
		13.53~58.22	80.50
		67.08~392.98	103.2

Wiring Diagram



Blush DC Motor Technical Data

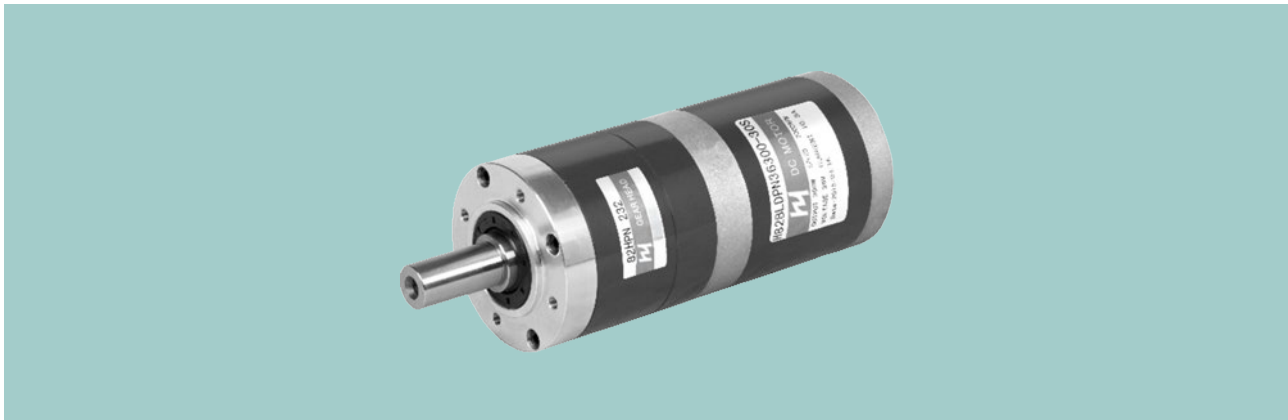
Motor Type	Voltage V	Rated Power W	No-load Current A	No-load Speed RPM	Rated Current A	Rated Speed RPM	Rated Torque N.m	Motor Life H
H82DPN1290-30S	12	90	2.5	3500	10.5	3000	0.287	2000
H82DPN24120-30S	24	120	2.0	3400	7.20	3000	0.382	2000
H82DPN48180-30S	48	180	1.5	3400	5.50	3000	0.573	2000

Blush DC Planetary Gear Motor Technical Data-H82DPN24120-30S

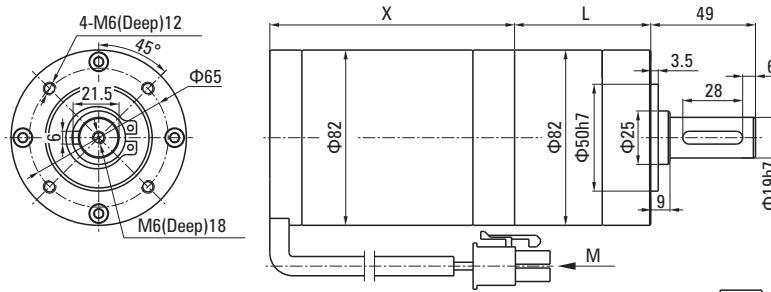
Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	89	67	52	45	37
Allowable torque(N.m)	1.30	1.80	2.30	3.00	4.20	5.90	7.60	8.70	10.5	13.8	18.0	18.7	22.6
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3

Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	24	21	18	16	13	9.9	7.6			
Allowable torque(N.m)	25.5	28.7	33.2	35.6	40.5	46.2	53.4	64.6	84.0	84.0			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN Φ 82 BRUSHLESS

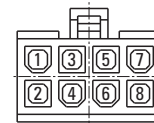


Outside Diameter 82 DC Brushless Motor



Motor Type	X(mm) Dimension	Gearbox Model	Gear Ratio	L(mm) Dimension
H82BLDPN24200-30S	114.5	82PN□	3.65~8.63	63.70
H82BLDPN24300-30S	136.5		13.53~58.22	80.50
			67.08~392.98	103.2

(View M)



1	2	3	4	5	6	7	8
U	V	W	GND	Hv	Hw	Hu	+Vcc

BLDC Motor Technical Data

Motor Type	Voltage V	Rated Power W	Rated Current A	Rated Speed RPM	Rated Torque N.m	Grade Protection IP
H82BLDPN24200-30S	24	200	12	3000	0.637	20
H82BLDPN24300-30S	24	300	18	3000	0.955	20

BLDC Planetary Gear Motor Technical Data-H82BLDPN24200-30S

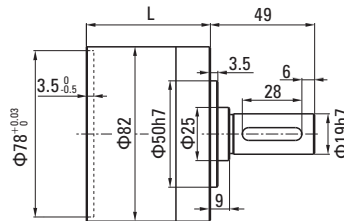
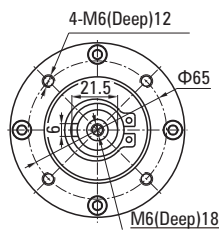
Ratio	3.65	5.36	6.55	8.63	13.53	18.92	24.65	28.05	33.92	44.69	58.22	67.08	81.11
Output shaft speed(r/min)	822	560	458	348	222	159	122	107	88	67	52	45	37
Allowable torque(N.m)	2.09	3.07	3.75	4.94	6.98	9.76	12.71	14.47	17.49	23.05	30.02	31.18	37.70
Reduction stage	1	1	1	1	2	2	2	2	2	2	2	3	3

Ratio	91.36	102.88	118.98	127.74	145.36	165.64	191.56	231.61	301.68	392.98			
Output shaft speed(r/min)	33	29	25	23	21	18	16	13	10	8			
Allowable torque(N.m)	42.46	47.82	55.30	59.37	67.56	76.98	89.03	107.64	120.0	120.0			
Reduction stage	3	3	3	3	3	3	3	3	3	3			

HPN Φ82



Outdiameter 82mm Planetary Gearbox

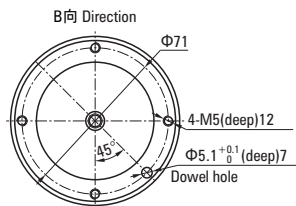


Gearbox Model	Gear Ratio		L(mm) Dimension
	82ZPN□	Stage1	
	Stage2	14~58	80.50
	Stage3	67~393	103.2

Transmission Stage	Stage 1	Stage 2	Stage 3
Transmission efficiency	90%	81%	73%
Max radial load	1000N	1000N	1000N
Max axial load	200N	200N	200N
Rated torque	20N.m	60N.m	120N.m
Instant beared torque	Two times of the rated torque		
Operating temperature	-10°C ~ +80°C		
Lubrication type	Lifetime lubrication		
Mounting type	Any		
Recommend input speed	≤3000RPM		
Input and output direction	Same direction		
Noise	< 60dB(A) (L=1m, 3000rpm)		

Motor Matching Scheme

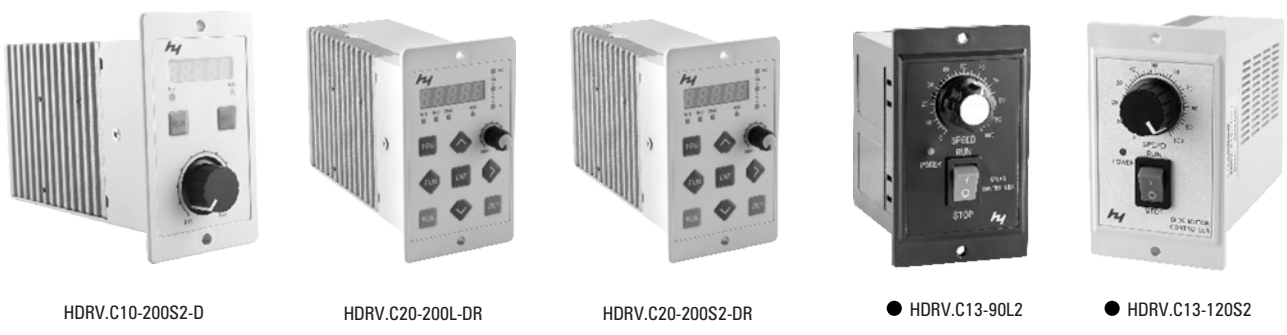
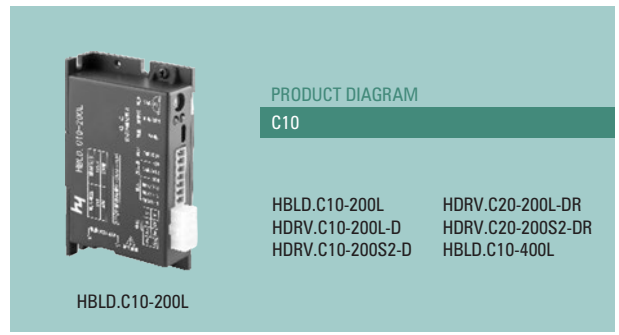
	Da	One stage of gear ratio	Second stage of gear ratio	Third stage of gear ratio
	Φ14.25 ^{+0.05} _{-0.08}	5.36	-	102.88
	Φ11.55 ^{+0.05} _{-0.08}	6.55	28.05	145.36
	Φ9.12 ^{+0.05} _{-0.08}	8.63	44.69	165.64
			58.22	191.56
			-	231.61
			-	301.68
	Φ21.45 ^{+0.05} _{-0.08}	3.65	13.53	67.08
			18.92	81.11
			24.65	91.36
			-	127.74



C10 SERIES BRUSHLESS DRIVERS

H
 BLD
 •
 C10
 —
 120
 L/H/S2
 D/X

①	Company	H: HENGYAO	
②	Type	BLD: Motor driver	
		DRV: Driver and related products	
③	Version	C10: C10、 C13 Series	
④	Power	120	200
		120W	200W
⑤	Voltage	L: DC24V~48V Low voltage	L2: DC24V Low voltage
		H/S2: High voltage AC220V/50Hz	
⑥	Feature	D: With display	
		X: With extended function	



Features of C10 series brushless motor driver

- Digital display: 4-digit digital tube display: running status, set speed, running speed, fault indication.
- Stable speed operation: adopt speed closed-loop control (control accuracy $\pm 0.5\%$).
 - Input and output: 2 groups of NPN type digital input interfaces (forward and reverse); 1 group of open-drain digital output interfaces (fault output).
- Speed setting: Set the running speed through the panel knob, which is convenient and quick.
- Perfect fault detection and protection functions: 1. Various fault detections such as undervoltage, overvoltage, overcurrent, overload, locked rotor, short circuit, phase loss, overtemperature, etc.; 2. After the failure occurs, the drive carries out corresponding protection actions according to the type of failure; 3. The fault information can be displayed through the digital tube.
- Extended functions include: expansion of 3 sets of NPN digital input interfaces, 1 set of analog quantity interfaces, and 1 set of 485 communication control interfaces.



TRANSMISSION PLANETARY GEAR MOTOR CATALOGUE

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