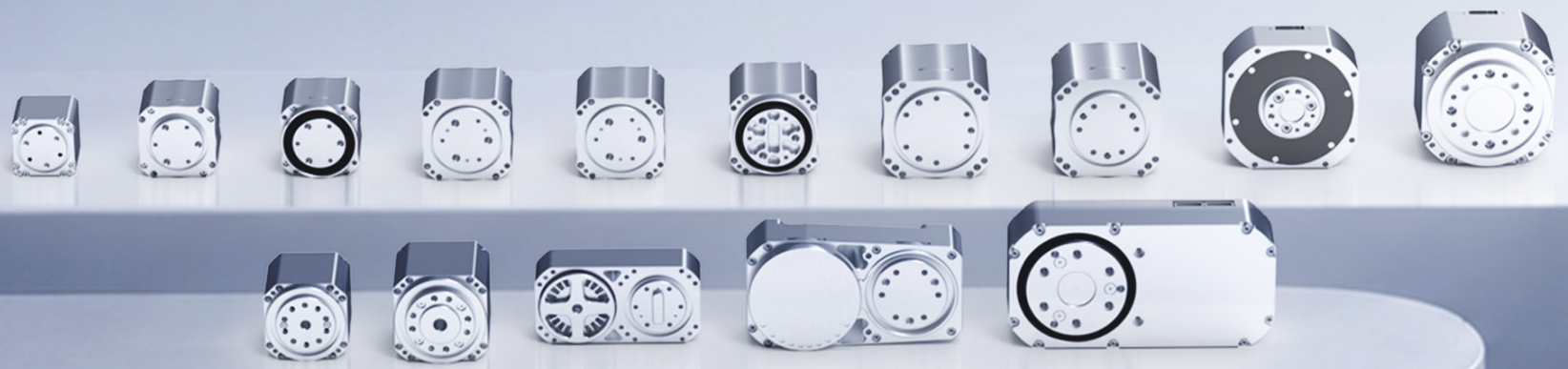
高擎 HIGH TORQUE

SERVO JOINT MODULE OF HIGH TORQUE

JOINT MODULE

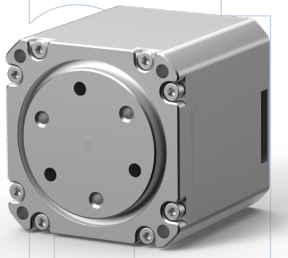
— PRODUCT MANUAL —



www.hightorque.cn GQJD2022 400-608-0891 service@hightorque.cn

Revision Date: 2026.11.16

Higher Torque



HTDW-3532-02-DNE

Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	35
Height (mm)	36.1
weight (g)	150

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	32	Locked-rotor torque(Nm)	3.9
Rated Voltage (V)	24	Rated RPM(RPM)	60
Rated Current (A)	0.3	No-load RPM(RPM)	390
Rated torque(Nm)	0.6	Rated Output Power(W)	4

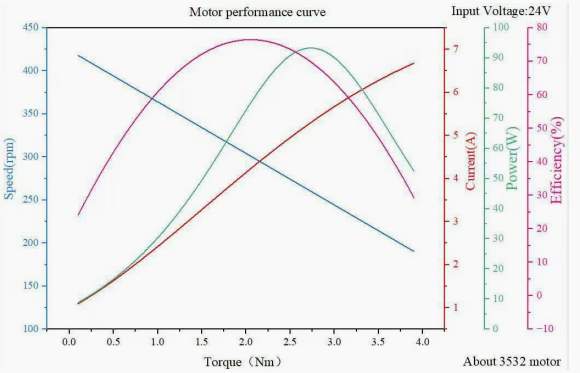
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	6.8	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

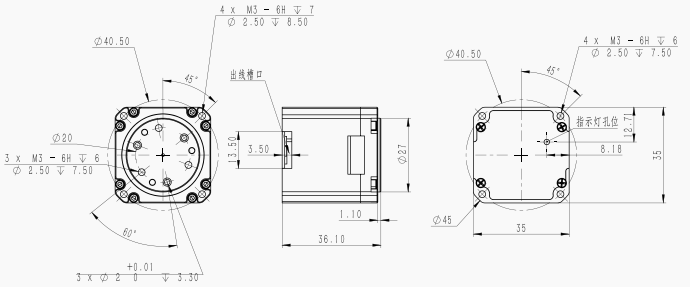
Motor parameters

Torque constant(Nm/A)	0.125	Polar logarithm	7

TN curve



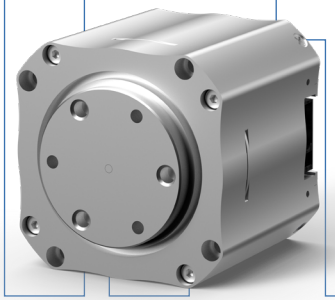
Product Installation Dimension Drawing



高擎 HIGH TORQUE

HTDW-4530-02-DNE

Planetary Joint Module



Product Parameters

Basic parameters

length and width (mm)	44
Height (mm)	43.4
weight (g)	237

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Motor parameters

Torque constant(Nm/A)	0.272	Polar logarithm	14

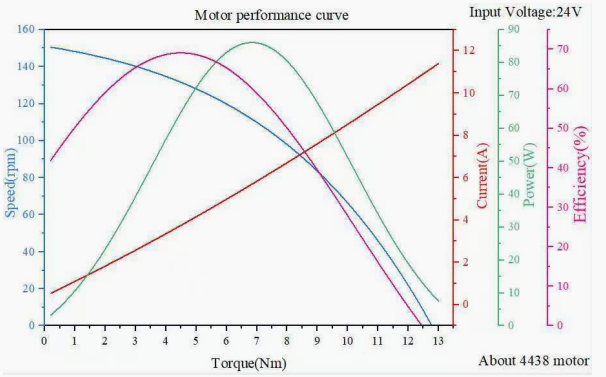
Module Performance Parameters

Reduction ratio	30	Locked-rotor torque(Nm)	13
Rated Voltage (V)	24	Rated RPM(RPM)	40
Rated Current (A)	0.65	No-load RPM(RPM)	155
Rated torque(Nm)	2	Rated Output Power(W)	8.5

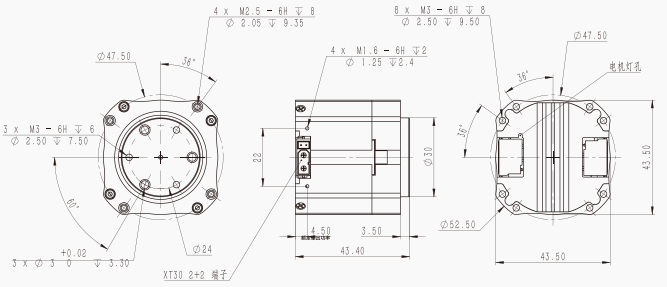
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	12	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

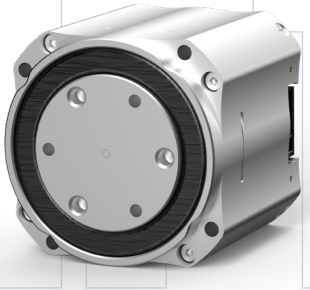
TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTDW-4530-02-CNE

Cross Roller Bearing Version
Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	44
Height (mm)	44.9
weight (g)	237

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	30	Locked-rotor torque(Nm)	13
Rated Voltage (V)	24	Rated RPM(RPM)	40
Rated Current (A)	0.65	No-load RPM(RPM)	155
Rated torque(Nm)	2	Rated Output Power(W)	8.5

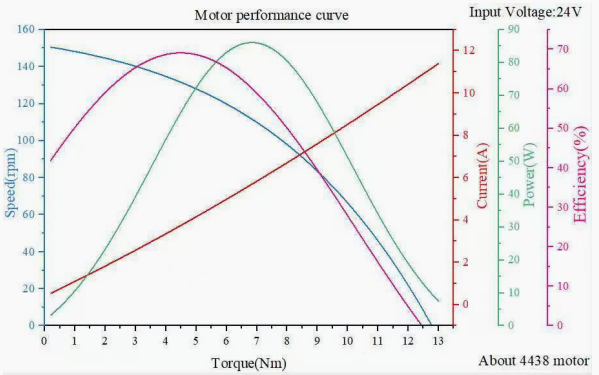
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	12	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

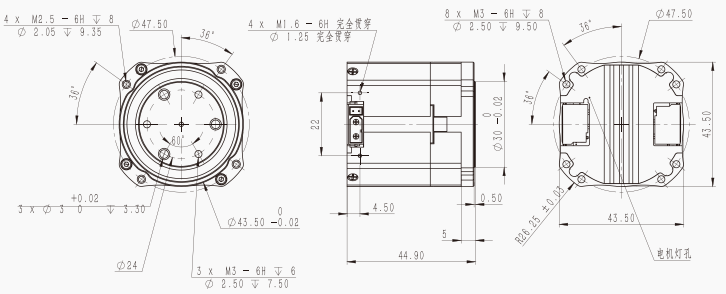
Motor parameters

Torque constant(Nm/A)	0.272	Polar logarithm	14

TN curve

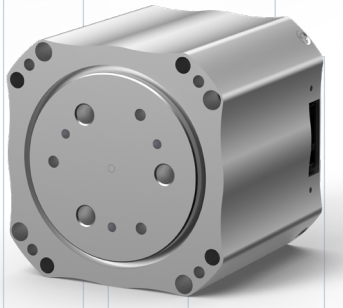


Product Installation Dimension Drawing



高擎 HIGH TORQUE

High Torque



HTDW-5022-02-DNE

Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	50
Height (mm)	47.4
weight (g)	322

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	22	Locked-rotor torque(Nm)	13
Rated Voltage (V)	24	Rated RPM(RPM)	82
Rated Current (A)	2	No-load RPM(RPM)	123
Rated torque(Nm)	3.5	Rated Output Power(W)	30

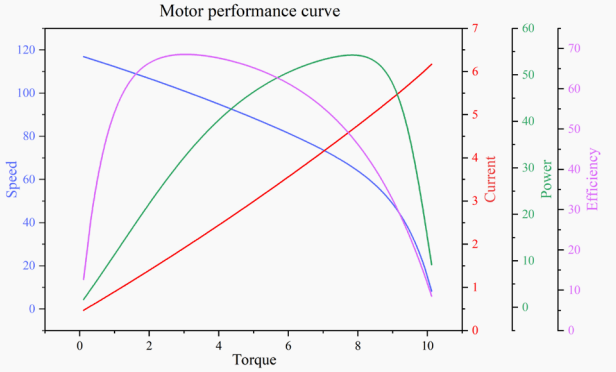
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	10	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

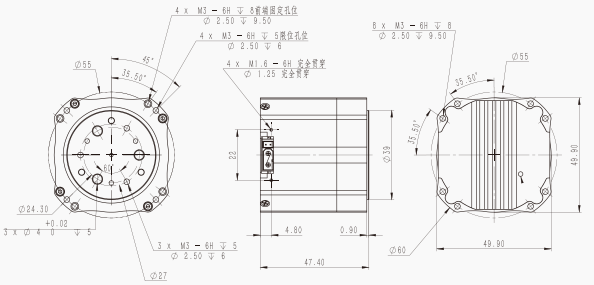
Motor parameters

Torque constant(Nm/A)	0.54	Polar logarithm	14

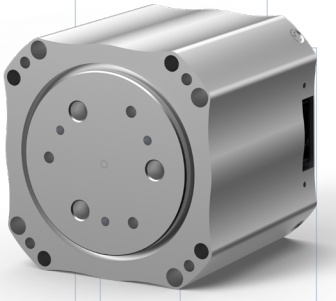
TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTDW-5036-02-DNE

Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	50
Height (mm)	47.4
weight (g)	323

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	36	Locked-rotor torque(Nm)	28
Rated Voltage (V)	24	Rated RPM(RPM)	50
Rated Current (A)	2	No-load RPM(RPM)	80
Rated torque(Nm)	6	Rated Output Power(W)	30

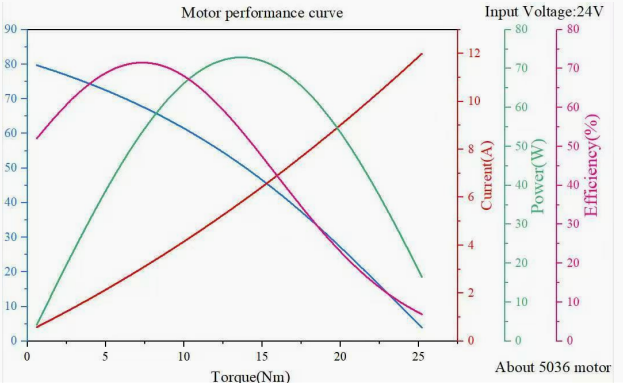
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	13.3	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

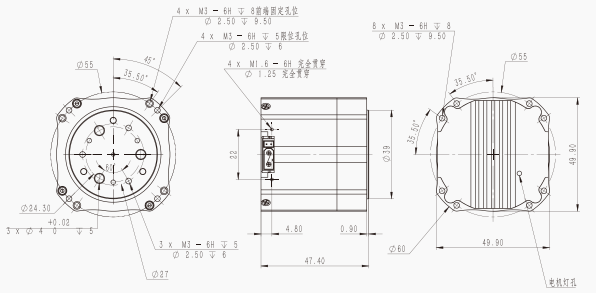
Motor parameters

Torque constant(Nm/A)	0.54	Polar logarithm	14

TN curve

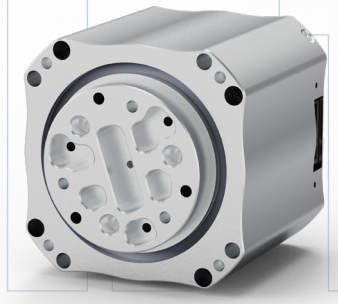


Product Installation Dimension Drawing



高擎 HIGH TORQUE

High Torque



HTDW-5036-02-CNE

Cross Roller Bearing Version
Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	50
Height (mm)	52.4
weight (g)	345

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	36	Locked-rotor torque(Nm)	28
Rated Voltage (V)	24	Rated RPM(RPM)	50
Rated Current (A)	2	No-load RPM(RPM)	80
Rated torque(Nm)	6	Rated Output Power(W)	30

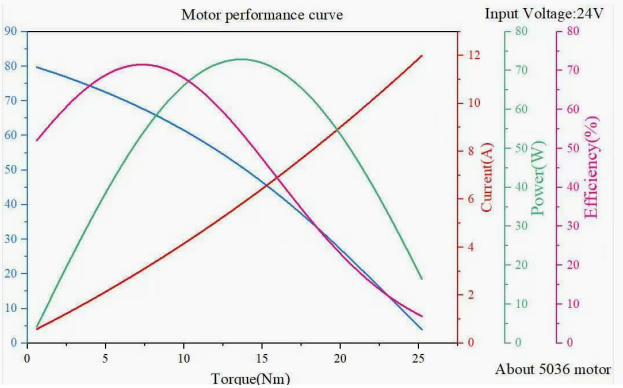
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	13.3	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

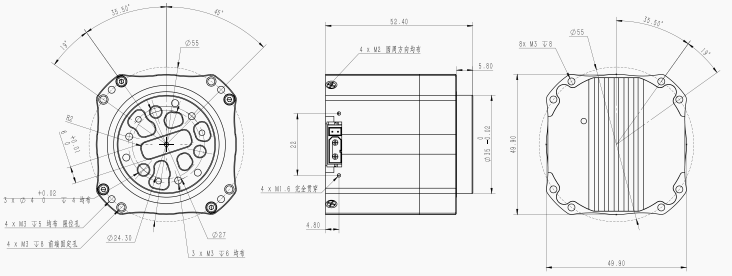
Motor parameters

Torque constant(Nm/A)	0.54	Polar logarithm	14

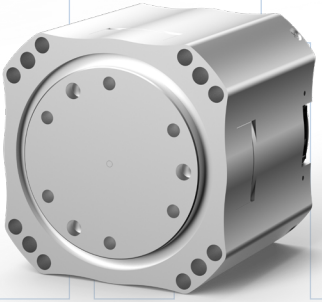
TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTDW-6036-02-DNE

Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	60
Height (mm)	56
weight (g)	565

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	36	Locked-rotor torque(Nm)	48
Rated Voltage (V)	24	Rated RPM(RPM)	60
Rated Current (A)	3.5	No-load RPM(RPM)	80
Rated torque(Nm)	10	Rated Output Power(W)	52

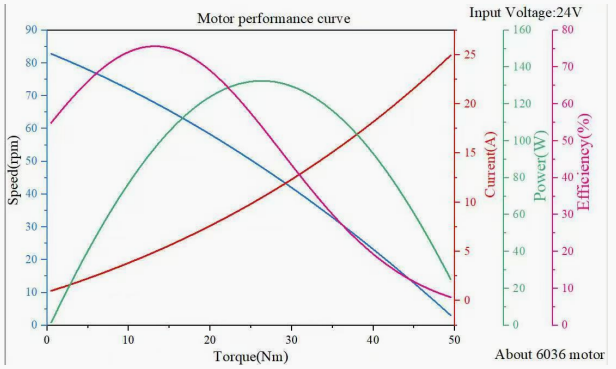
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	23	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

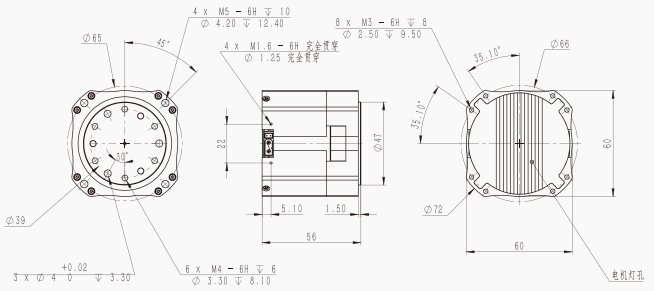
Motor parameters

Torque constant(Nm/A)	0.531	Polar logarithm	14

TN curve

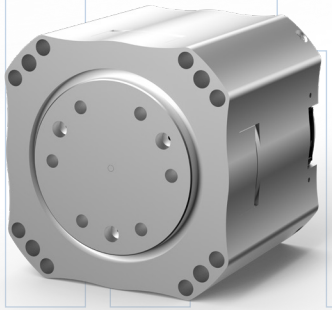


Product Installation Dimension Drawing



高擎 HIGH TORQUE

High Torque



HTDW-6036-02-CNE

Cross Roller Bearing Version
Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	60
Height (mm)	56
weight (g)	570

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	36	Locked-rotor torque(Nm)	48
Rated Voltage (V)	24	Rated RPM(RPM)	60
Rated Current (A)	3.5	No-load RPM(RPM)	80
Rated torque(Nm)	10	Rated Output Power(W)	52

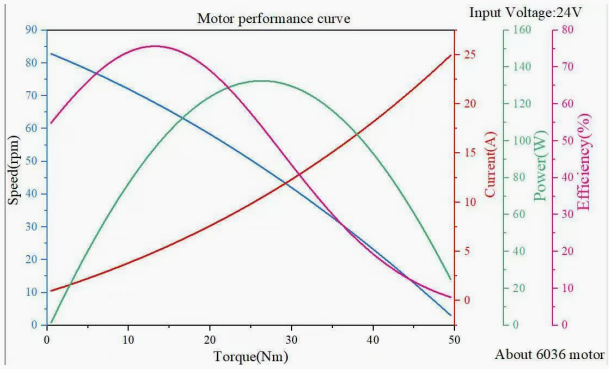
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	23	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

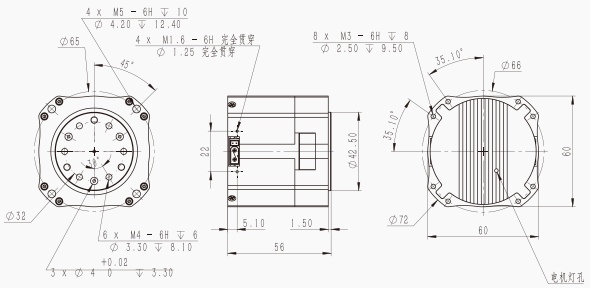
Motor parameters

Torque constant(Nm/A)	0.531	Polar logarithm	14

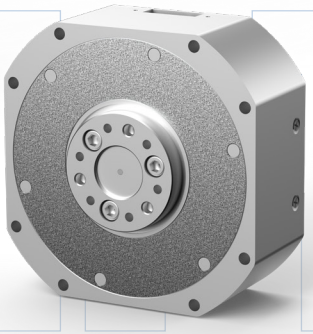
TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTPW-7507-02-DNE

Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	75
Height (mm)	35
weight (g)	390

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	7	Locked-rotor torque(Nm)	15
Rated Voltage (V)	24	Rated RPM(RPM)	250
Rated Current (A)	6	No-load RPM(RPM)	275
Rated torque(Nm)	3.5	Rated Output Power(W)	92

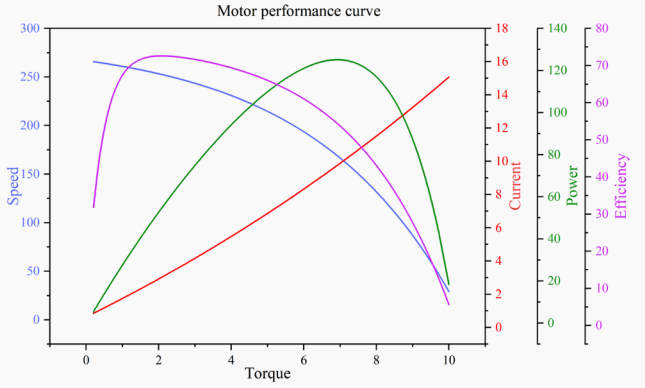
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	20	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

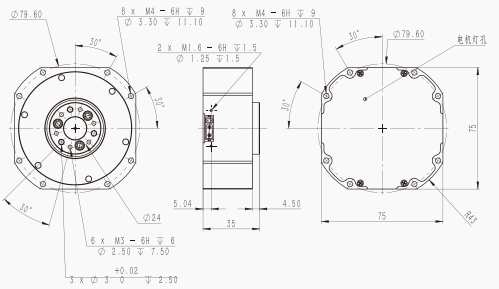
Motor parameters

Torque constant(Nm/A)	0.602	Polar logarithm	14

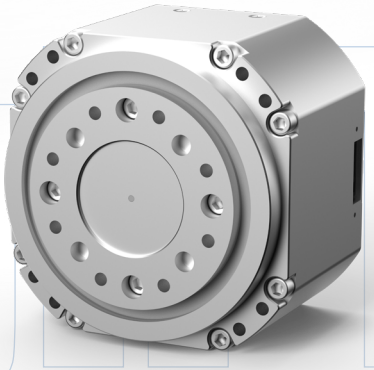
TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTDW-7535-02-CNE

Cross Roller Bearing Version
Planetary Joint Module

Product Parameters

Basic parameters

length and width (mm)	75
Height (mm)	56
weight (g)	850

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Motor parameters

Torque constant(Nm/A)	0.602	Polar logarithm	14

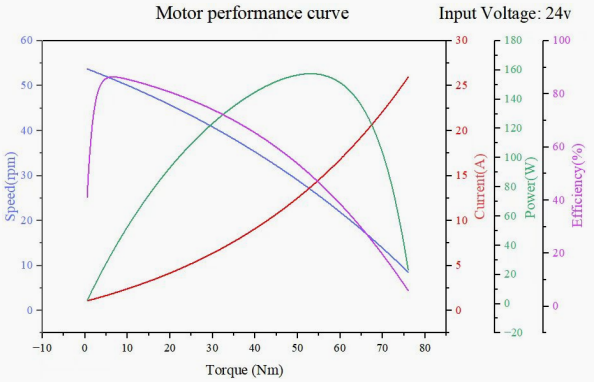
Module Performance Parameters

Reduction ratio	35	Locked-rotor torque(Nm)	76
Rated Voltage (V)	24	Rated RPM(RPM)	45
Rated Current (A)	5.5	No-load RPM(RPM)	55
Rated torque(Nm)	20	Rated Output Power(W)	94

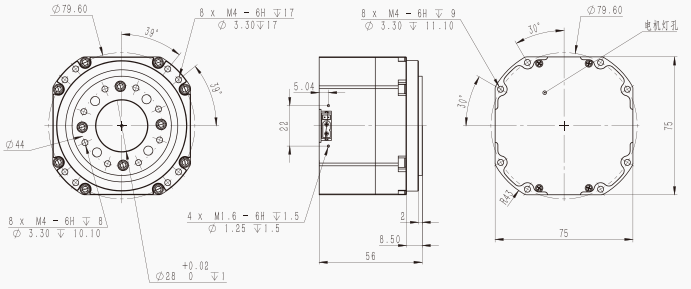
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	28	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	45
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

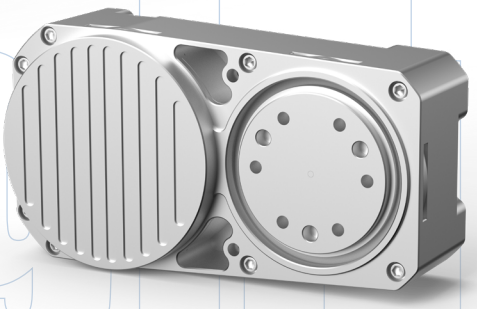
TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTPU-6035-04-CNE

Ultra-Thin Series Joint Module

Product Parameters

Basic parameters

length and width (mm)	115X61.9
Height (mm)	37
weight (g)	558

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	35	Locked-rotor torque(Nm)	36
Rated Voltage (V)	24	Rated RPM(RPM)	50
Rated Current (A)	3	No-load RPM(RPM)	60
Rated torque(Nm)	10	Rated Output Power(W)	52

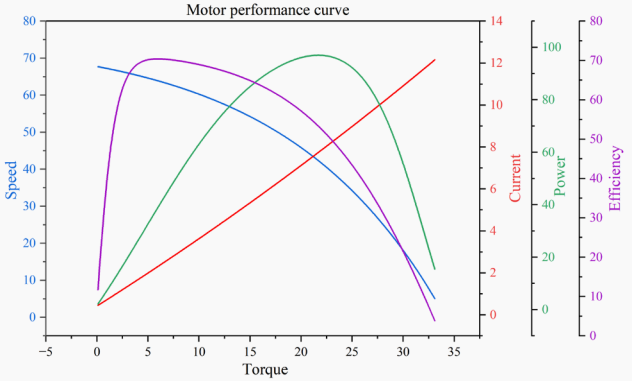
Electrical Performance Parameters of the Module

Voltage Range(V)	12-50.4	Communication	CANFD/CAN
Peak current(A)	15	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	140
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

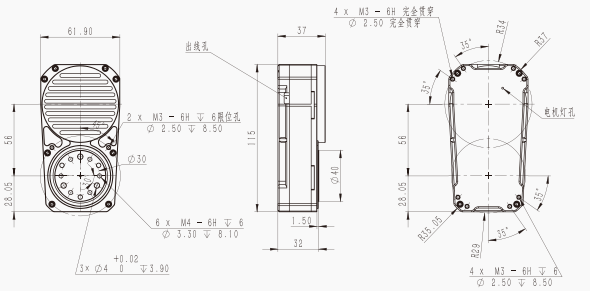
Motor parameters

Torque constant(Nm/A)	0.531	Polar logarithm	14

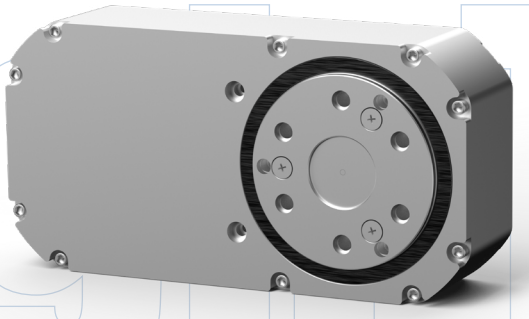
TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTPU-7033-04-CNE

Ultra-Thin Series Joint Module

Product Parameters

Basic parameters

length and width (mm)	140.5X71.5
Height (mm)	36.9
weight (g)	808

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	33	Locked-rotor torque(Nm)	50
Rated Voltage (V)	24	Rated RPM(RPM)	40
Rated Current (A)	4.8	No-load RPM(RPM)	48
Rated torque(Nm)	20	Rated Output Power(W)	84

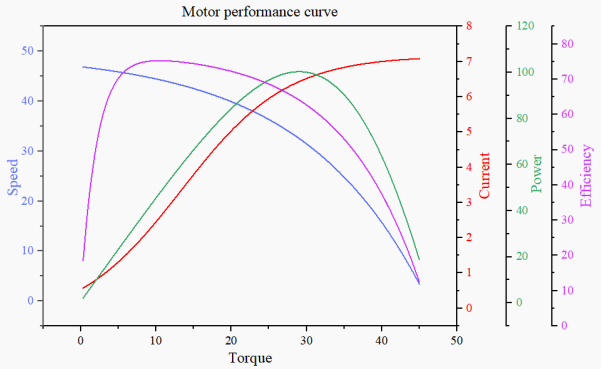
Electrical Performance Parameters of the Module

Voltage Range(V)	12-50.4	Communication	CANFD/CAN
Peak current(A)	20	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	140
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	3K

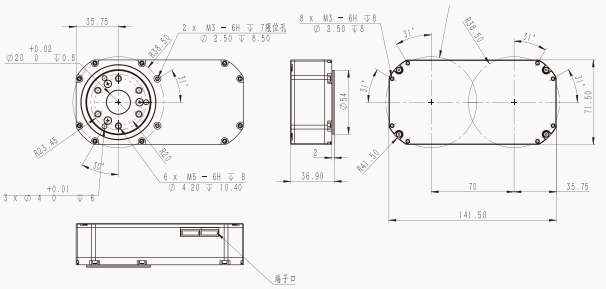
Motor parameters

Torque constant(Nm/A)	0.59	Polar logarithm	14

TN curve

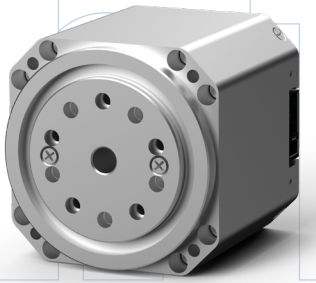


Product Installation Dimension Drawing



高擎 HIGH TORQUE

High Torque



HTCP-4531-06-CYC

Hollow Joint Module

Product Parameters

Basic parameters

length and width (mm)	44
Height (mm)	44.9
weight (g)	237

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	31	Locked-rotor torque(Nm)	10
Rated Voltage (V)	24	Rated RPM(RPM)	40
Rated Current (A)	0.7	No-load RPM(RPM)	160
Rated torque(Nm)	2	Rated Output Power(W)	8.5

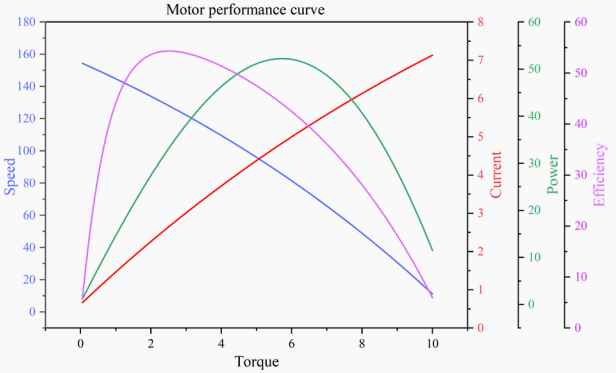
Electrical Performance Parameters of the Module

Voltage Range(V)	12-50.4	Communication	CANFD/CAN
Peak current(A)	10	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	140
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	3K

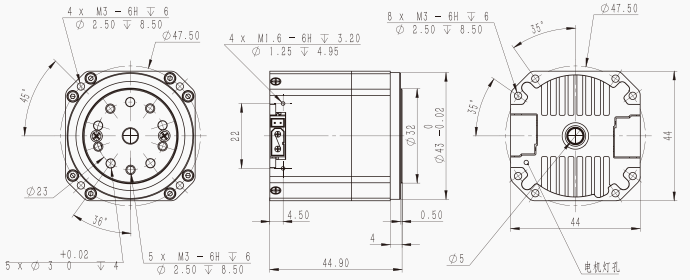
Motor parameters

Torque constant(Nm/A)	0.272	Polar logarithm	14

TN curve

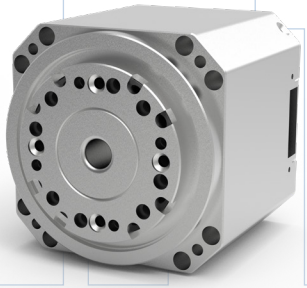


Product Installation Dimension Drawing



高擎 HIGH TORQUE

High Torque



HTCP-5031-06-CYC

Hollow Joint Module

Product Parameters

Basic parameters

length and width (mm)	50
Height (mm)	53
weight (g)	385

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	31	Locked-rotor torque(Nm)	16
Rated Voltage (V)	24	Rated RPM(RPM)	50
Rated Current (A)	2	No-load RPM(RPM)	103
Rated torque(Nm)	4	Rated Output Power(W)	21

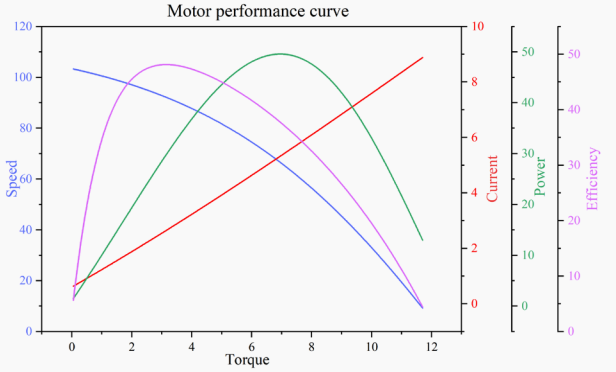
Electrical Performance Parameters of the Module

Voltage Range(V)	12-50.4	Communication	CANFD/CAN
Peak current(A)	10	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	140
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	3K

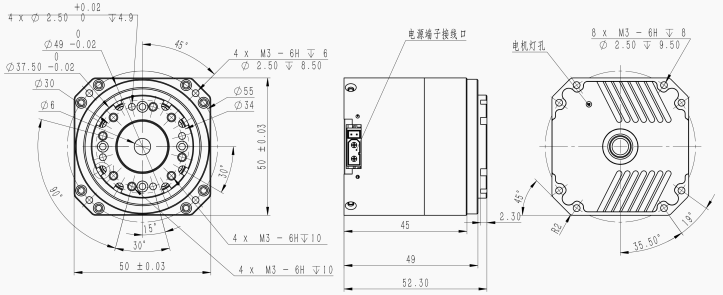
Motor parameters

Torque constant(Nm/A)	0.54	Polar logarithm	14

TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTDW-102020-03-CYC

Hollow Joint Module

Product Parameters

Basic parameters

length and width (mm)	102
Height (mm)	64
weight (g)	1380

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<15

Module Performance Parameters

Reduction ratio	20	Locked-rotor torque(Nm)	100
Rated Voltage (V)	48	Rated RPM(RPM)	161
Rated Current (A)	13	No-load RPM(RPM)	182
Rated torque(Nm)	30	Rated Output Power(W)	505

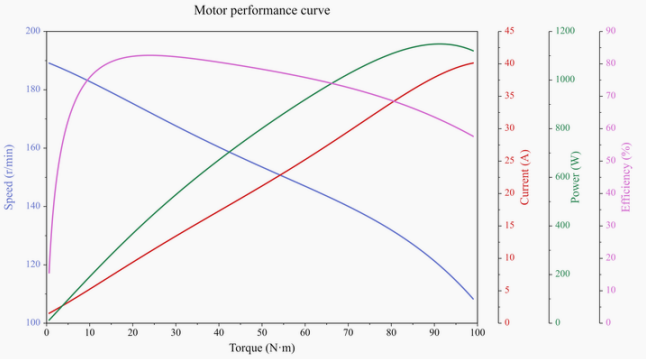
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	40	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	140
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

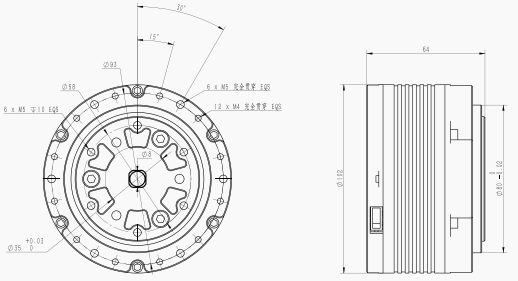
Motor parameters

Torque constant(Nm/A)	2.308	Polar logarithm	21

TN curve



Product Installation Dimension Drawing



高擎 HIGH TORQUE



HTCW-120023-06-CYC

Hollow Joint Module

Product Parameters

Basic parameters

length and width (mm)	116
Height (mm)	63.2
weight (g)	1850

Reducer Characteristics

Backlash(Arcmin)	<10
Repeat Positioning Accuracy(Arcmin)	<12
Absolute positioning accuracy(Arcmin)	<10

Module Performance Parameters

Reduction ratio	23	Locked-rotor torque(Nm)	190
Rated Voltage (V)	48	Rated RPM(RPM)	45
Rated Current (A)	6.7	No-load RPM(RPM)	145
Rated torque(Nm)	45	Rated Output Power(W)	212

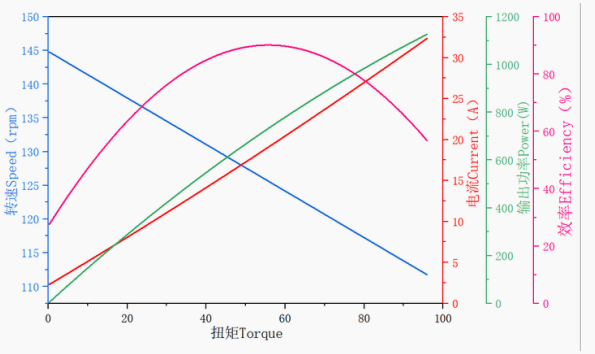
Electrical Performance Parameters of the Module

Voltage Range(V)	12-60	Communication	CANFD/CAN
Peak current(A)	60	control accuracy(Nm/A)	±5%
Speed control accuracy(Nm/A)	±5%	Response time(us)	140
High-speedend encoder resolution(bit)	14	Low-speedend encoder resolution(bit)	14
Baud rate(Mbps)	5	Control frequency(Hz)	5K

Motor parameters

Torque constant(Nm/A)	6.716	Polar logarithm	21

TN curve



Product Installation Dimension Drawing

