maxon IDX

Drive with positioning/speed controller

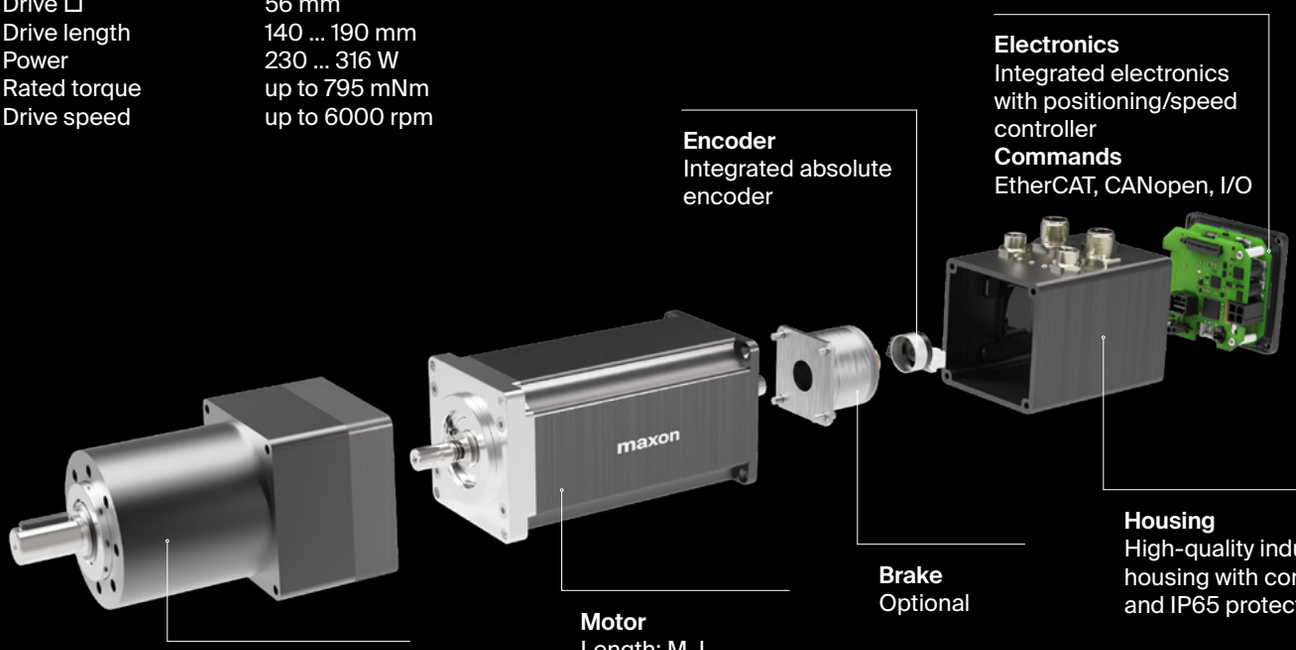
maxon IDX

Drive with positioning/speed controller

A maintenance-free positioning drive with proven components. The compact brushless EC-i motor combined with an EPOS4 positioning controller makes for a highly-dynamic, powerful drive package with field-oriented control (FOC), a high level of efficiency, and maintenance-free components in high-quality industrial housing.

Key data

Drive ☐	56 mm
Drive length	140 ... 190 mm
Power	230 ... 316 W
Rated torque	up to 795 mNm
Drive speed	up to 6000 rpm



Electronics
Integrated electronics with positioning/speed controller
Commands
EtherCAT, CANopen, I/O

Encoder
Integrated absolute encoder

Housing
High-quality industrial housing with connectors and IP65 protection class

Brake
Optional

Motor
Length: M, L
Winding: 24 V, 48 V
Flange: A-Flange, C-Flange

Gear
Stages: 1–3
Versions: Standard, Noise reduced, Ultra performance

- → High continuous torque
- → High power density
- → IP65-protected design
- → Ready for Industry 4.0
- → Easily configured online

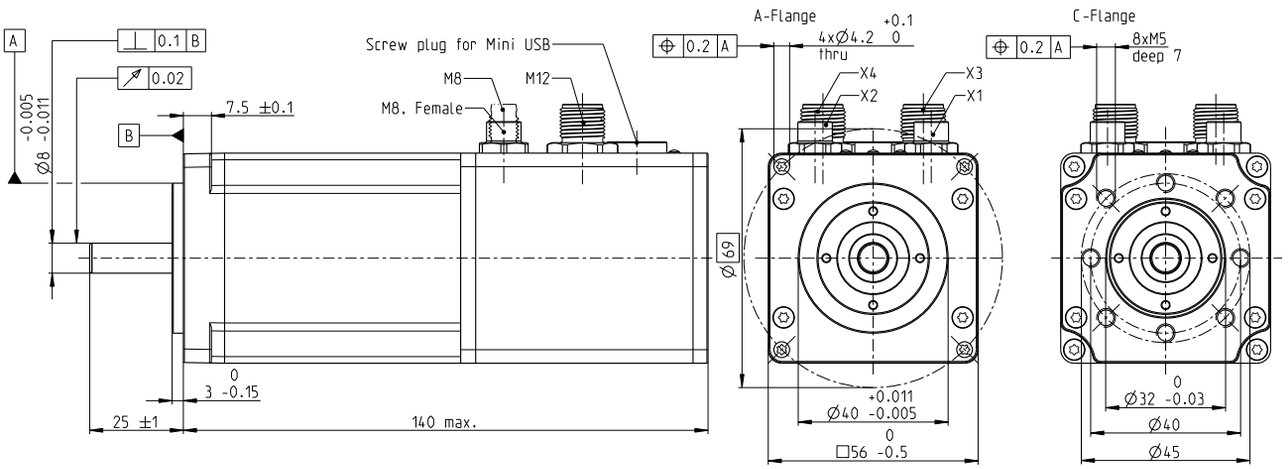
shop.maxongroup.com

IDX 56 M with integrated electronics

Drive with Positioning/Speed Controller

EtherCAT
CANopen
I/O

Key Data: 230/256 W, 516 mNm, 6000 rpm



M 1:2

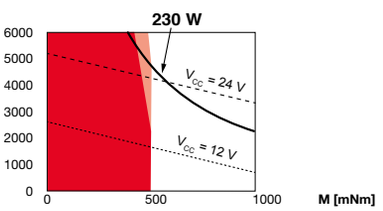
	Drive data (provisional)			
1_	Nominal power supply voltage	V	24	48
2_	Nominal speed	rpm	4477	4500
3_	Nominal torque at 25°C (max. continuous torque)	mNm	433	516
4_	Nominal torque at 40°C (max. continuous torque)	mNm	376	458
5_	Nominal supply current at 25°C	A	10.0	5.8
6_	Nominal supply current at 40°C	A	8.7	5.2
7_	Maximum speed at nominal voltage	rpm	5227	6000
8_	Maximum permissible drive speed	rpm	6000	6000
9_	Maximum torque (short-time)	mNm	948	1498
10_	Maximum supply current (short-time)	A	24	24
11_	Rotor inertia of the drive	gcm²	170	170
12_	Nominal supply voltage + V_{CC}	V	12..48	12..48
13_	Run-up time to maximum speed	ms	11.3	7.1

	Thermal data		
14_	Thermal resistance housing-ambient	K/W	2.47
15_	Thermal resistance winding-housing	K/W	1.16
16_	Thermal time constant winding	s	18.9
17_	Thermal time constant drive	s	1320
18_	Ambient temperature	°C	-30...+85
	Mechanical data		
19_	Axial play	mm	0.14
	Preload	N	16
	Direction of force		Pull
20_	Radial play		preloaded
21_	Max. axial load (dynamic)	N	12
22_	Max. force for press fits (static)	N	150
23_	Max. radial load [mm from flange]	N	110 [12.5]
	Other specifications		
24_	Weight of the drive	g	1070
25_	Typical noise level [rpm]	dBA	54 [4000]
	Encoder: Steps per turn		4096

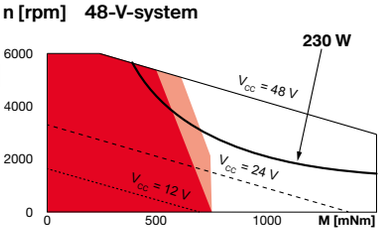
Supply	M12, male, 5 poles, L-coded
I/O's	M12, male, 12 poles, A-coded
CANopen Input	M8, male, 5 poles, B-coded
CANopen Output	M8, female, 5 poles, B-coded
EtherCAT Input	M8, female, 4 poles, A-coded
EtherCAT Output	M8, female, 4 poles, A-coded

Operating Range

n [rpm] 24-V-system



n [rpm] 48-V-system



- Continuous operation
- Continuous operation with reduced thermal resistance R_{th2} 50%
- Short term operation

maxon Modular System Details on catalog page 34

maxon gear	Stages [opt.]
364_GPX 52 A/UP	1–3
364_GPX 52 LN	1–3

maxon sensor
integrated

maxon motor control
integrated

maxon brake
538_AB 34

Configuration

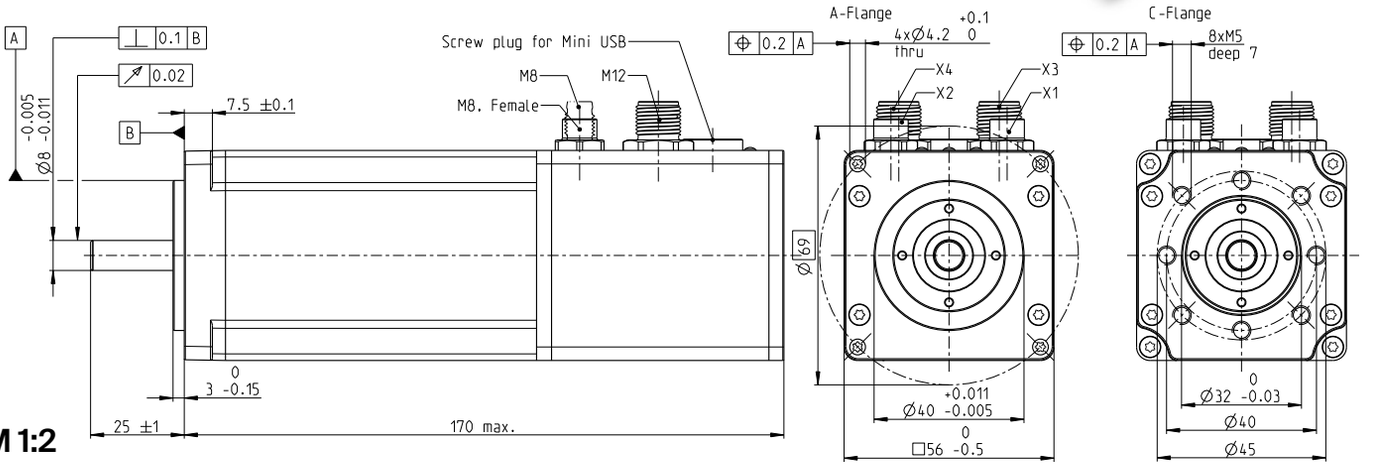
Flange front: A-Flange/C-Flange
Interface with Positioning/Speed Controller: CANopen / EtherCAT
Interface with Speed Controller: I/O

IDX 56 L with integrated electronics

Drive with Positioning/Speed Controller

EtherCAT
CANopen
I/O

Key Data: 280/316 W, 795 mNm, 6000 rpm



M 1:2

Drive data (provisional)				
1_ Nominal power supply voltage	V	24	48
2_ Nominal speed	rpm	2724	3500
3_ Nominal torque at 25°C (max. continuous torque)	mNm	795	779
4_ Nominal torque at 40°C (max. continuous torque)	mNm	690	690
5_ Nominal supply current at 25°C	A	11.4	6.7
6_ Nominal supply current at 40°C	A	9.9	6.0
7_ Maximum speed at nominal voltage	rpm	3110	4925
8_ Maximum permissible drive speed	rpm	6000	5000
9_ Maximum torque (short-time)	mNm	1589	2006
10_ Maximum supply current (short-time)	A	24	24
11_ Rotor inertia of the drive	gcm²	265	265
12_ Nominal supply voltage + V_{CC}	V	12..48	12..48
13_ Run-up time to maximum speed	ms	10.5	6.9

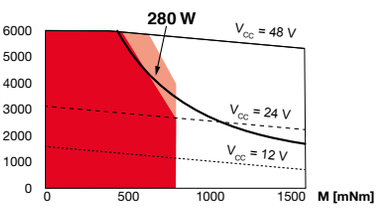
Thermal data		
14_ Thermal resistance housing-ambient	K/W	2.01
15_ Thermal resistance winding-housing	K/W	0.76
16_ Thermal time constant winding	s	20.1
17_ Thermal time constant drive	s	1450
18_ Ambient temperature	°C	-30...+85
Mechanical data		
19_ Axial play	mm	0.14
Preload	N	16
Direction of force		Pull
20_ Radial play		preloaded
21_ Max. axial load (dynamic)	N	12
22_ Max. force for press fits (static)	N	150
23_ Max. radial load [mm from flange]	N	110 [12.5]

Other specifications		
24_ Weight of the drive	g	1445
25_ Typical noise level [rpm]	dBA	58 [4000]
Encoder: Steps per turn		4096

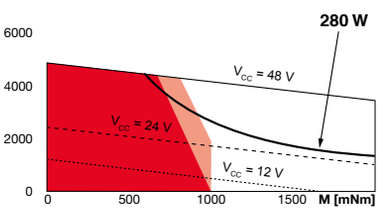
Supply	M12, male, 5 poles, L-coded
I/O's	M12, male, 12 poles, A-coded
CANopen Input	M8, male, 5 poles, B-coded
CANopen Output	M8, female, 5 poles, B-coded
EtherCAT Input	M8, female, 4 poles, A-coded
EtherCAT Output	M8, female, 4 poles, A-coded

Operating Range

n [rpm] 24-V-system



n [rpm] 48-V-system



Continuous operation
Continuous operation with reduced thermal resistance R_{th2} 50%
Short term operation

maxon Modular System

Details on catalog page 34

maxon gear	Stages [opt.]	maxon sensor	maxon motor control
364_GPX 52 A/UP	1–3	integrated	integrated
364_GPX 52 LN	1–3		

Configuration

Flange front: A-Flange/C-Flange
Interface with Positioning/Speed Controller: CANopen / EtherCAT
Interface with Speed Controller: I/O