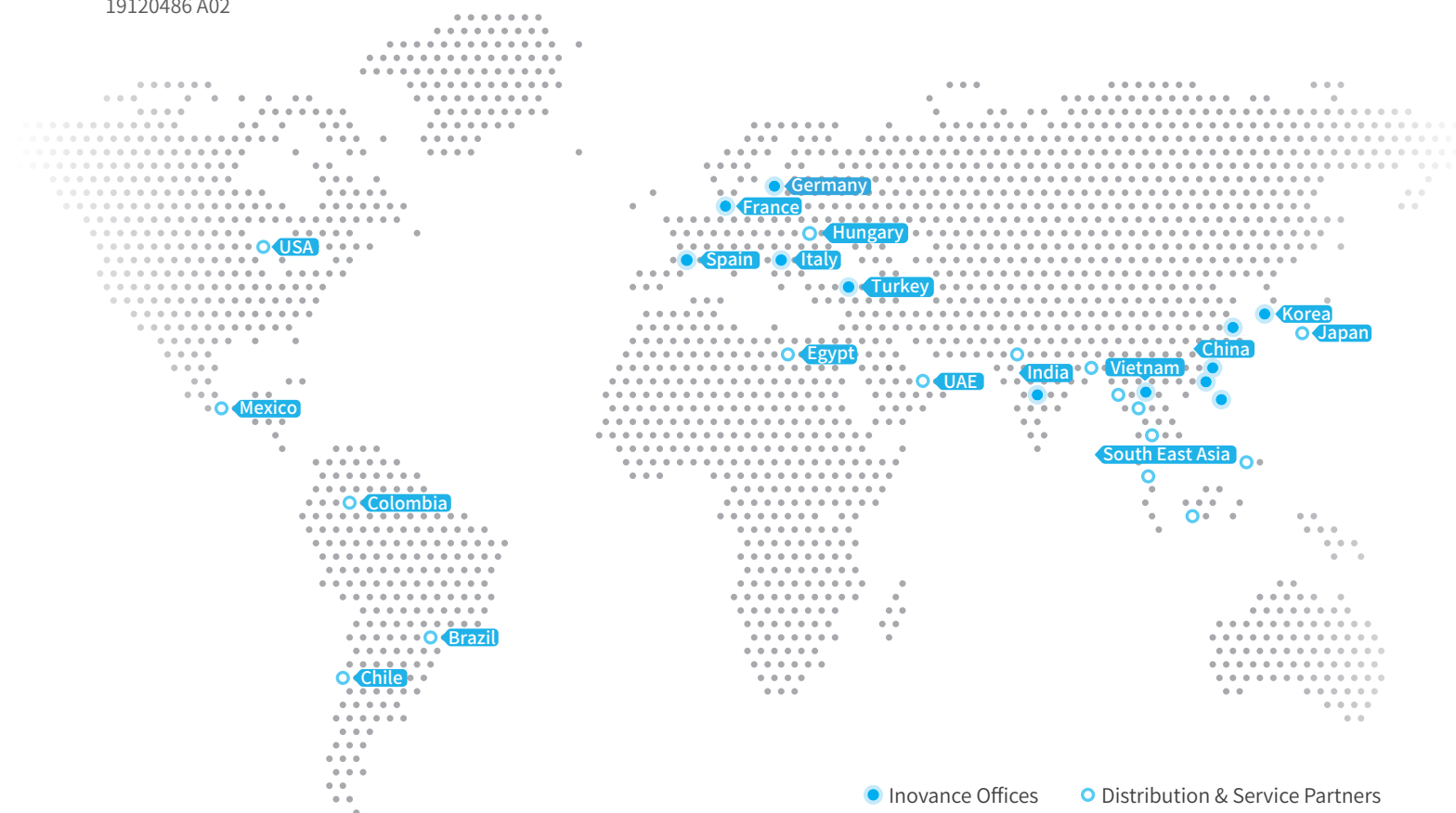




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Advancing industrial technology, for a better world

Europe

Germany-Stuttgart

+49 (0) 7144 8990
sales.de@inovance.eu

France-Bordeaux

+33 (0) 5594 01050
sales.fr@inovance.eu

Spain-Barcelona

+34 93 504 94 48
sales.es@inovance.eu

Italy-Milano

+39 (0) 2268 22318
sales.it@inovance.eu

Asia Pacific

India

Head Office Chennai | +91 (0) 44 4380 0201
Ahmedabad | +91 794003 4272
Mumbai | +91 22 4971 5883
New Delhi | +91 11 4165 4524

Sales Network
Kolkata, Bengaluru, Pune, Coimbatore, Hyderabad, Vadodara, Jaipur
info@inovance.ind.in

South Korea-Seoul

+82 (0)2 3489 8850
INOVANCEKR@inovance.eu

Turkey-Istanbul

+90 (216) 706 17 89
info@inovance.eu

China

Shenzhen Inovance Technology Co., Ltd.
Suzhou Inovance Technology Co. Ltd.

4000-300124
info@inovance.com
service@inovance.com

Hong Kong SAR (International Export Office)

+852 2751 6080
info@inovance.eu

Vietnam - Hanoi

+84 948118793

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INOVANCE

MD810 Series AC MultiDrives

For multi-sectional drives applications



Features & functions

- Open and closed loop control
- Single drive units: 1.5 to 355 kW
- For induction and permanent magnet synchronous motors
- Dual drive units: 1.5 to 18.5 kW



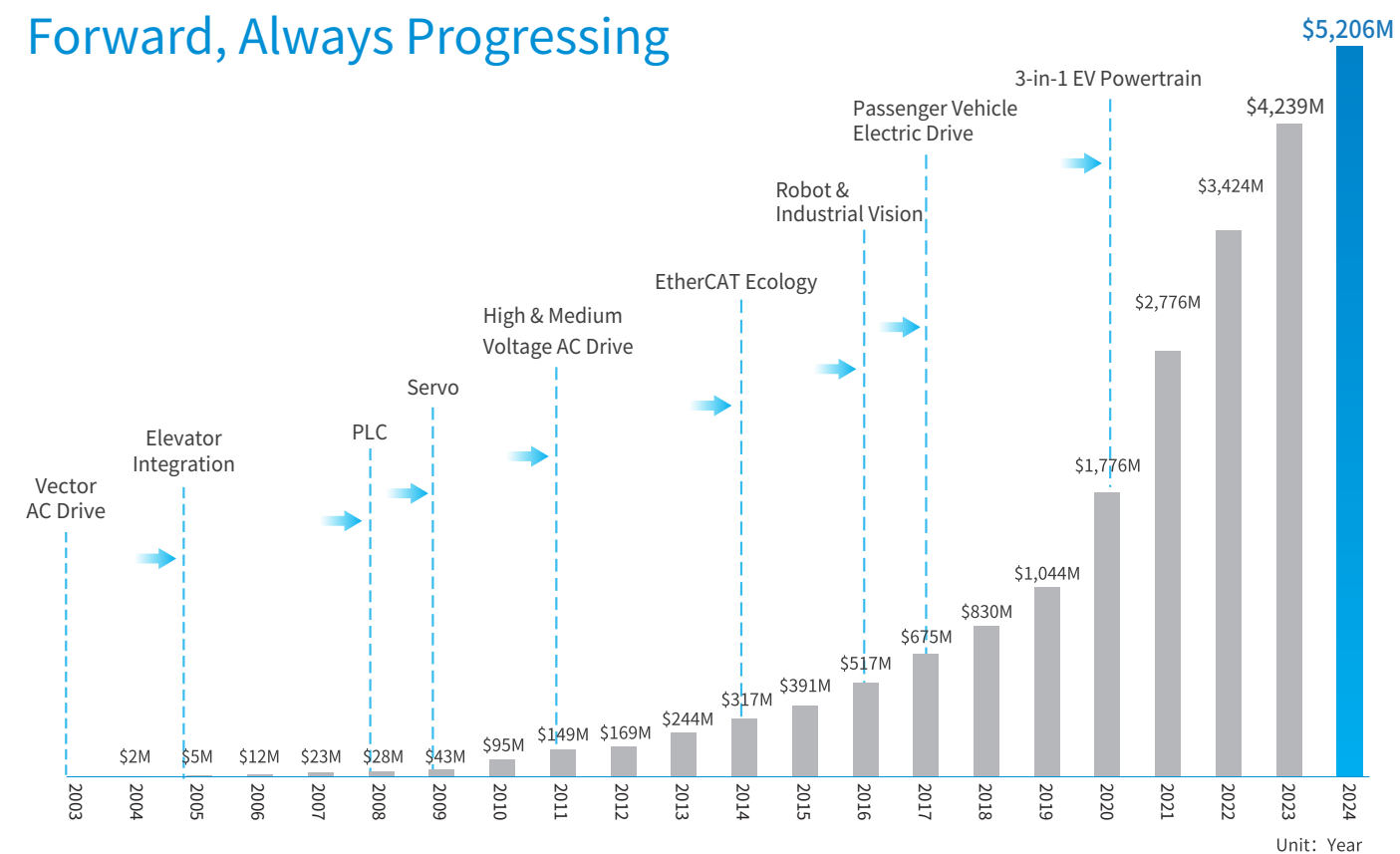


About Inovance

The Inovance Group, founded in 2003, is a rising star in the global industrial automation business and has revenues of \$4.2 in 2023. Inovance is headquartered in Shenzhen, China, and has built a global operation with offices and facilities in Germany, France, Italy, Spain, Turkey, India, and South Korea. Additionally, the company has a strong network of distribution partners around the world.

The company's flexible production techniques and expert understanding of all industry sectors - from plastics to printing to packaging to iron & steel production - have allowed it to establish globally leading industry-specific business units. Over the years, Inovance has built an engineering team with specialist expertise in industrial automation. This knowledge allows it to form strong partnerships with OEMs and end users, providing ongoing advice about how to get the most out of their automation solutions today, and how to stay prepared for the market and technology changes that are coming in future.

Forward, Always Progressing



2003

founded



IPO:2010

Shenzhen, China



30,000

employees



Global

network of offices and distributors



\$5.2+bn

revenues in 2024



5 R&D Centers

Shenzhen, Suzhou, Xi'an, Nanjing, Stuttgart (Germany)



2886 Patents and software copyrights

Invention 450 / Utility model 1443 / Industrial design 511 / Software copyright 482



5538 R&D Employees

Account for 23% of total employees



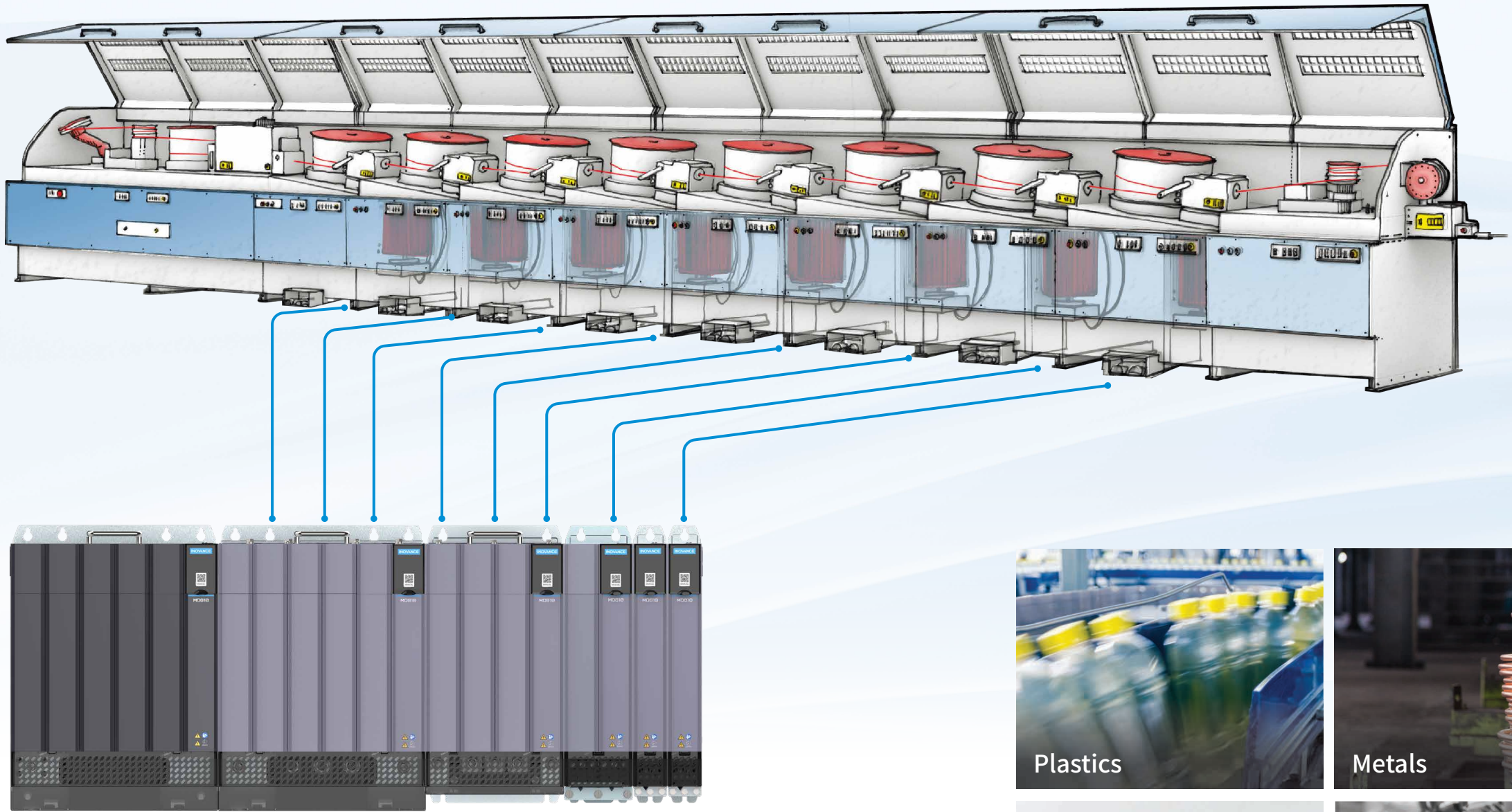
USD 442+ Million

Account for 8.5% of revenue 2024

Features and functions

■ Designed for sectional applications

MD810 is a modular, scalable, easy-to-use product designed for industrial applications requiring complex multidrive systems.



- ✓ Reduced installation costs
- ✓ Energy saving
- ✓ Functional safety - STO SIL3
- ✓ Easy & flexible integration
- ✓ Multiple control modes
- ✓ Advanced functionality
- ✓ Easy commissioning & maintenance
- ✓ Designed to be durable

Combined with a common rectifier, MD810 forms a multidrive system for complex sectional machines, such as wire drawing, metal processing, calender, textile and chemical fiber machinery.

MD810 offers a modular design and a common frame size, making it scalable and easy to use.

For machines requiring multi-axes servo control, MD810 was designed to work seamlessly with the IS810 servo drive, which matches the common frame size.

Peer-to-Peer functionality is included on the drive as standard and includes speed/ position control, load sharing, droop control, and tension control.



Plastics



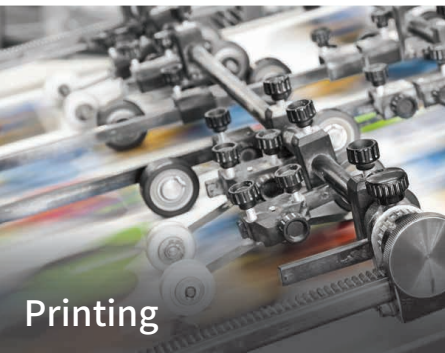
Metals



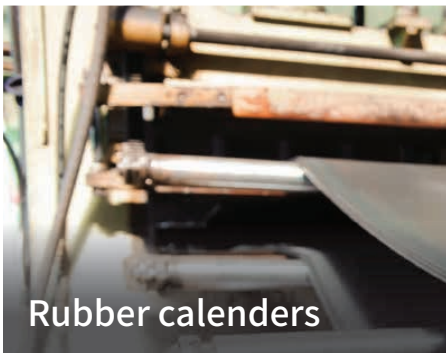
Textiles



Paper



Printing



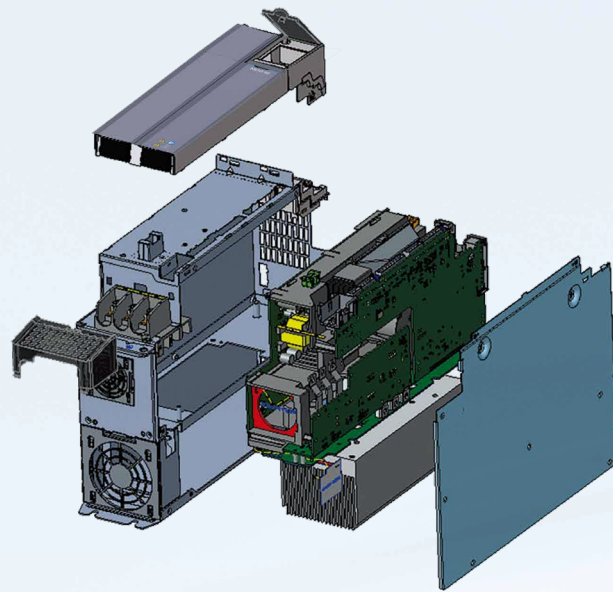
Rubber calenders

Features and functions

Energy savings

- Common DC bus configuration allows sharing of regenerated energy
- Centralized braking design enables braking energy to be reused

Durability in harsh environments



MD810 is designed to perform in the harshest of industrial environments

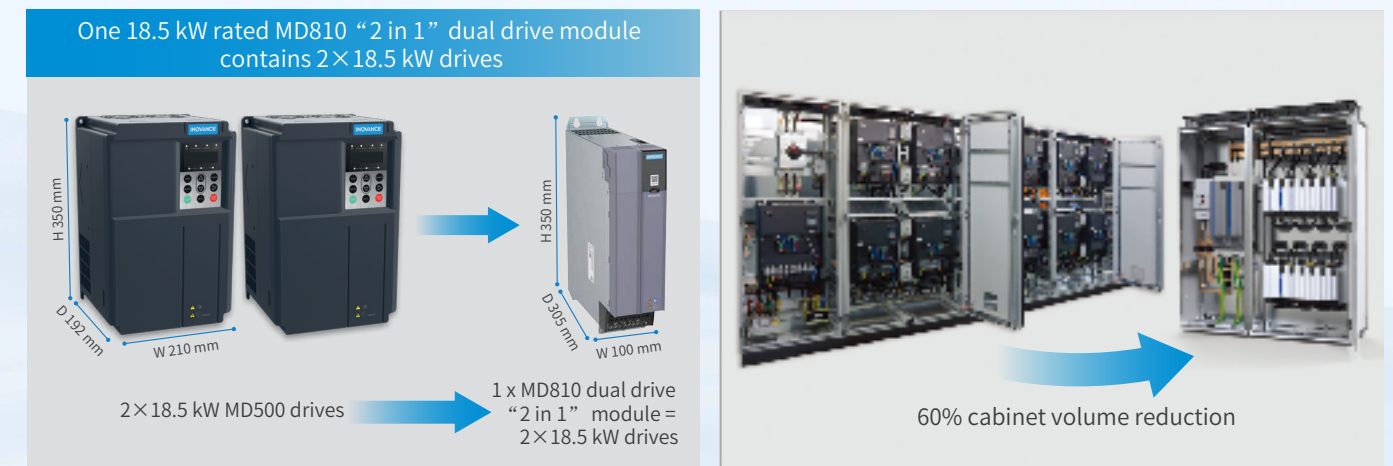
- Class 3C2 & 3S2 conformal coating
- Separate cooling channel for heatsink prevents dust contamination of internal PCBs
- Applicable ambient temperature range
 - Operation: -10 - 50° C
 - Storage: -25 - 70° C
- Humidity range of 5%-95% (60% in case of corrosive gas)
- Cost-effective, built-in DC reactors for smooth current flow and reduced harmonic distortion
- Overload: 150% (for 60 s); 178% (for 2 s)

Easy maintenance

- Common sizes for each power segment enables fewer inventory components to be stored in customer warehouses
- DC soft charge unit enables drive to be independently powered on or off
- Built in redundancy: if one rectifier fails, the system can continue operation with reduced capacity (reduced speed and/or load)
- PLC/HMI/drive software configured through the same network for simple maintenance and lower maintenance costs
- Software integrates all steps for commissioning, diagnostics & maintenance

Reduced cabinet size

- Improved power efficiency results in a smaller cabinet due to reduced rectifier capacity and reduced braking units
- Through-hole mounting further reduces cabinet size/volume
- Compact “2 in 1” dual drive unit available for ratings from 1.5 to 18.5 kW



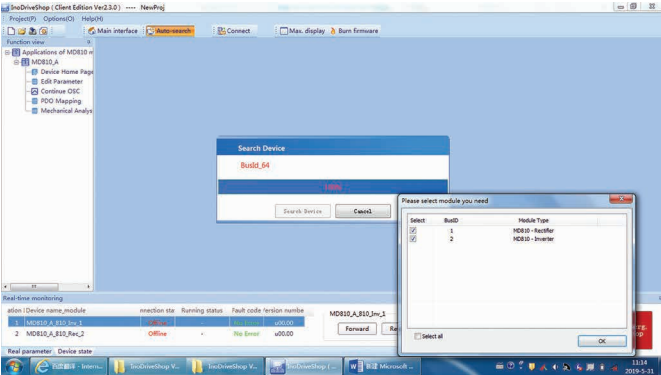
Fast, easy installation and commissioning

- Simple, plug & play unit installation
 - DC bus connection accessible from the front for easy unit installation
 - Safe Torque Off (STO) function eliminates need for output contactors
 - Fewer specialist workers required for installation
 - Rapid unit replacement when needed
- One-click network connection with InoDriveShop
- Optimized wiring and commissioning
 - One PLC connection cable
 - One group of input power cables
 - One remote keypad with one cable connects to multiple drives
- Fewer external components: built-in mini bus bars and common DC bus configuration enables elimination of external supply components (individual protections, braking units and resistors)
- Compatible with open communication fieldbuses like PROFINET, PROFIBUS DP and CANopen

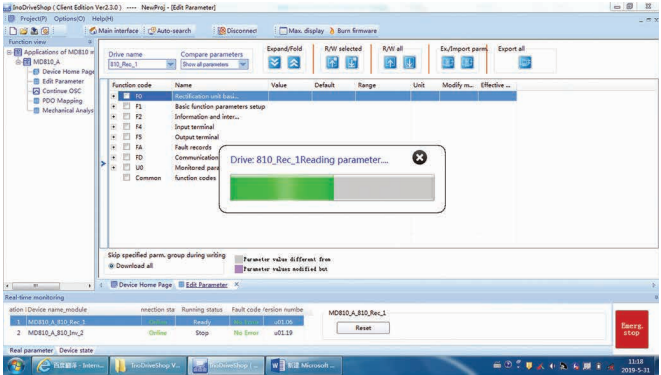
PC software tools, InoDriveShop

InoDriveShop is Inovance’s PC-based software offering. It is based on a familiar Windows™ interface. InoDriveShop can upload and download drive parameters, and features a variety of other functions, such as a real-time oscilloscope.

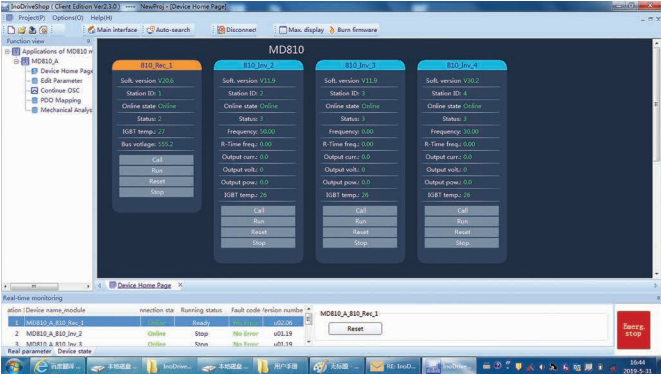
One key unit scanning



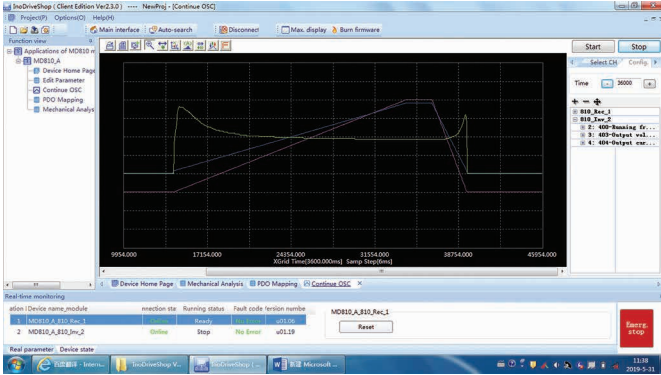
Parameter uploading/downloading in batches



Visualisation of units’ status



Multi-drive, multi channel oscilloscope



Commissioning record

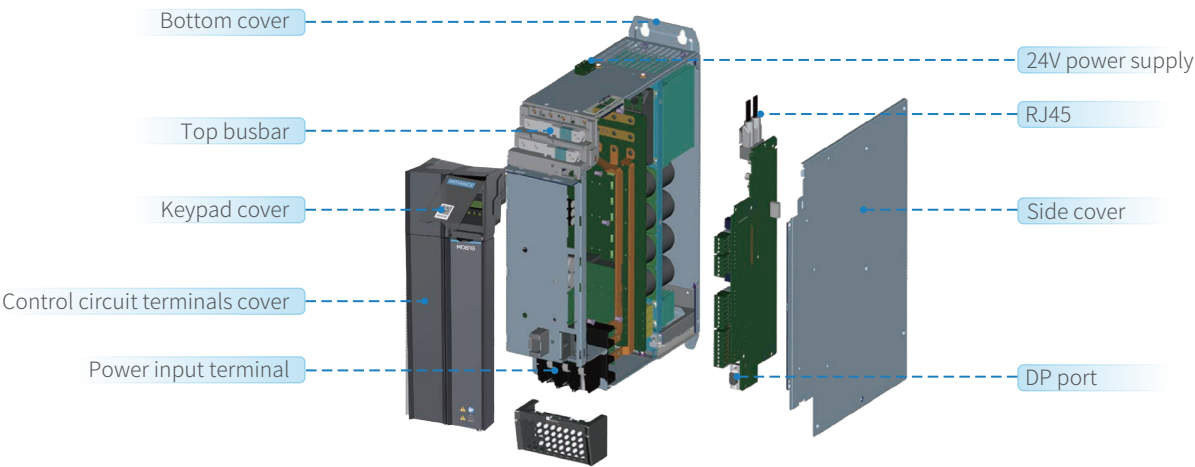
	1	2	3
1			
2	Commissioned by: Tester		
3	Contact info.:	www.inovance.com.cn	
4	Customer name:	User	
5	Remarks:	First testing	
6			
7	Device info.:	MD810 Testing Platform	
8	Module info.:	MD810_A_810_Inv_1 MD810_A_810_Rec_2	
9			
10	Time:	Record type	Module device
11	2019-5-31 11:41	Initial record	Information

Ordering code

Power Supply Unit

MD810 - 20M 4T 45 G 0 0 0 W -INT

① AC drive series	⑥ Optional functional component 0: without built-in brake 1: with built-in brake (22 & 45 kW models only)	⑧ Optional features 0: no optional features
② Module type 20M: rectifier	⑦ Optional communication component 0: Built-in RS485 and CAN 1: Built-in PROFIBUS-DP or PROFIBUS bridge, and CAN 2: Built-in PROFINET bridge and CAN (unavailable for 355 kW models)	⑨ Cooling method and structure None: Air cooling, booksize unit (available for 22-160 kW models) Air cooling, vertical tower unit (available for 355 kW models) Air cooling, vertical tower unit (available for 355 kW models)
③ Voltage supply 4T: 380V~480V		
④ Rectifier (rated power) 22: 22 kW 45: 45 kW 110: 110 kW 160: 160 kW 355: 355 kW		
⑤ Model G: general model		⑩ Version: INT: International variant



Power Supply Unit Mode	Rated power (kW)	Power capacity (kVA)	Input AC current (A)	Output DC current (A)	Braking resistance		
					Initial braking voltage DC(V)	Recommended power (kW)	Recommended resistance (Ω)
3ph 380V~480V, 50Hz/60Hz (47Hz~63Hz)							
MD810-20M4T22GXXX-INT	22	45	49	56	760	4	≥ 32
MD810-20M4T45GXXX-INT	45	81	89	107	760	9	≥ 13
MD810-20M4T110GXXX-INT	110	179	196	240	-	-	-
MD810-20M4T160GXXX(W)-INT	160	267	292	358	-	-	-
MD810-20M4T355GXXX-INT	355	566	619	759	-	-	-

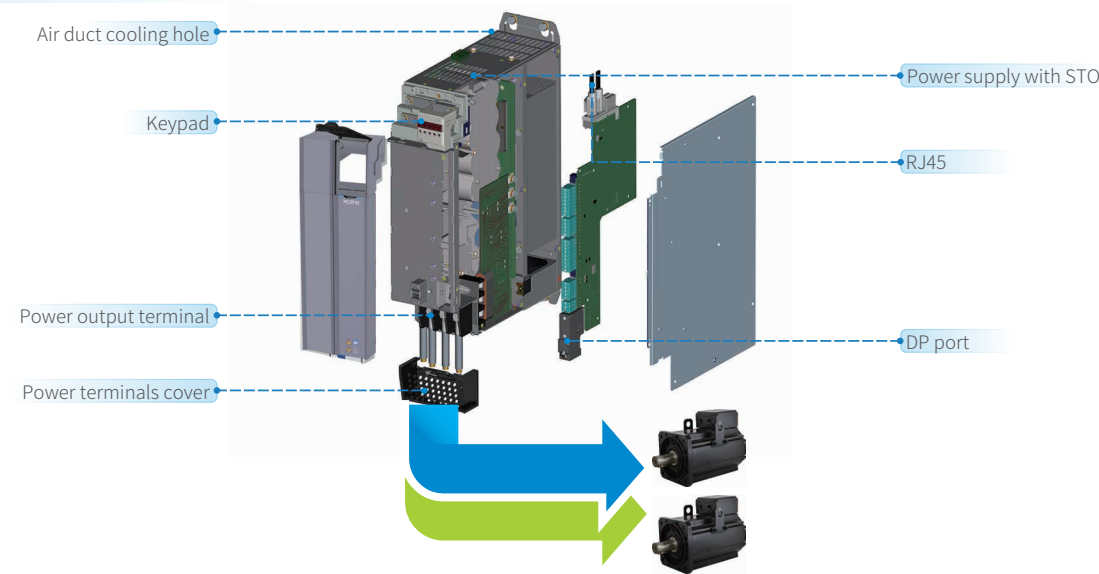
PROFIBUS DP communication settings can also be checked and configured

■ Drive Unit

MD810 - 50M 4T D 45 G 0 0 0 W -INT

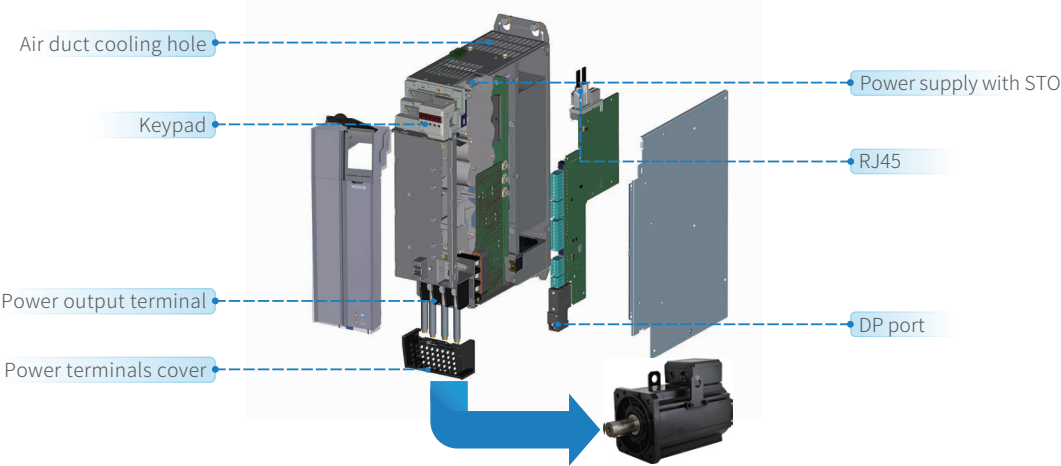
① AC drive series	⑦ Optional functional component 2: Built-in ABZ encoder terminal 3: Built-in 23-bit encoder terminal 4: Built-in ABZ encoder terminal; Built-in resolver encoder terminal, supporting the resolver encoder and incremental frequency division output 5: Built-in ABZ encoder terminal; Built-in multi-encoder terminal, supporting 5V differential ABZ, 23-bit, sin-cos, and SSI encoders and incremental frequency division output	⑨ Optional Function Expansion Module 0: None 1: Built-in STO (available for 1.5kW~160kW models)
② Module type 50M: Drive		⑩ Cooling Method and Structure None: Air cooling, booksize unit (available for 1.5kW~160kW models) H: Air cooling, vertical tower unit (available for 200kW~355kW models) W: Water cooling, booksize unit, available for 11kW~37kW models (single-axis) and 7.5kW~18.5kW models (dual-axis)
③ Voltage supply 4T: 380V~480V	⑧ Optional Communication Module 0: Built-in RS485 and CAN 1: Built-in PROFIBUS DP and CAN 3: Built-in EtherCAT (available for1.5kW~160kW models) and CAN	⑪ Version: INT: International variant
④ Axis type None: Single-axis D: Dual-axis		
⑤ Power rating (kW) 1.5: 1.5 kW ... : ... 355: 355 kW		
⑥ Model G: General model		

Dual-axis model



Drive unit model	Rated power (kW)	Input DC current (A)	Output AC current (A)	Applicable Motor	
				(kW)	(HP)
537V DC~679V DC (operating range: 350V DC~800V DC); output voltage: 0V AC~480V AC					
MD810-50M4TD1.5GXXX-INT	1.5	10	3.8	1.5	2
MD810-50M4TD2.2GXXX-INT	2.2	14	5.1	2.2	3
MD810-50M4TD3.7GXXX-INT	3.7	24	9	3.7	5
MD810-50M4TD5.5GXXX-INT	5.5	34	13	5.5	7.5
MD810-50M4TD7.5GXXX(W)-INT	7.5	44	17	7.5	10
MD810-50M4TD11GXXX(W)-INT	11	62	25	11	15
MD810-50M4TD15GXXX(W)-INT	15	80	32	15	20
MD810-50M4TD18.5GXXX(W)-INT	18.5	92	37	18.5	25

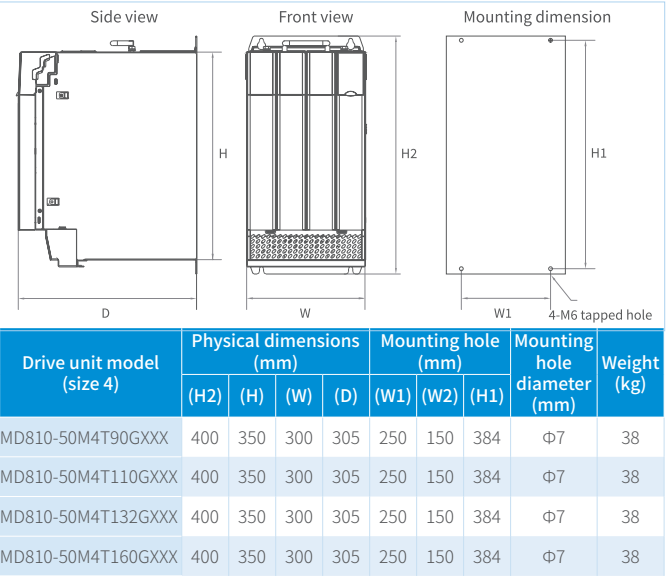
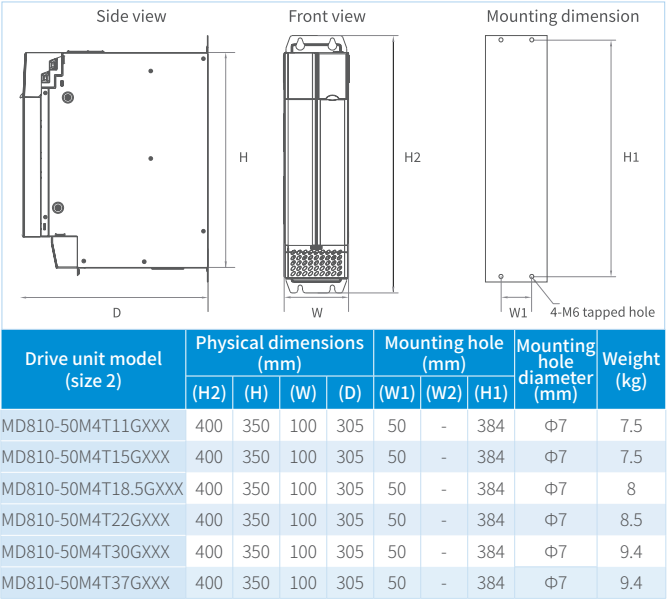
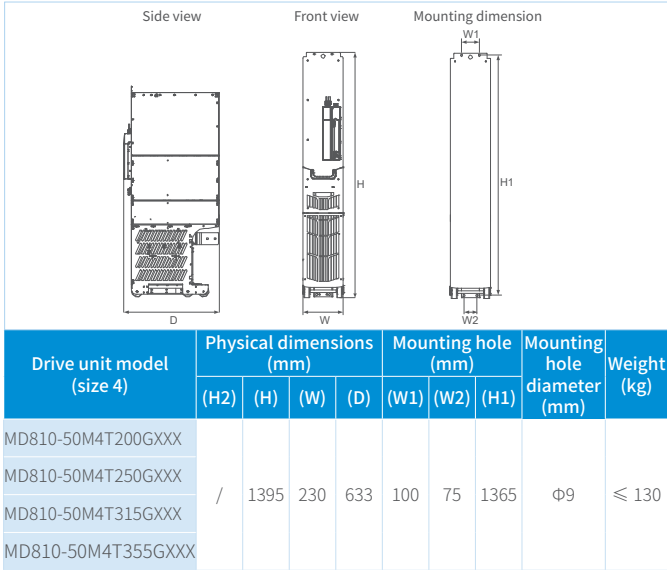
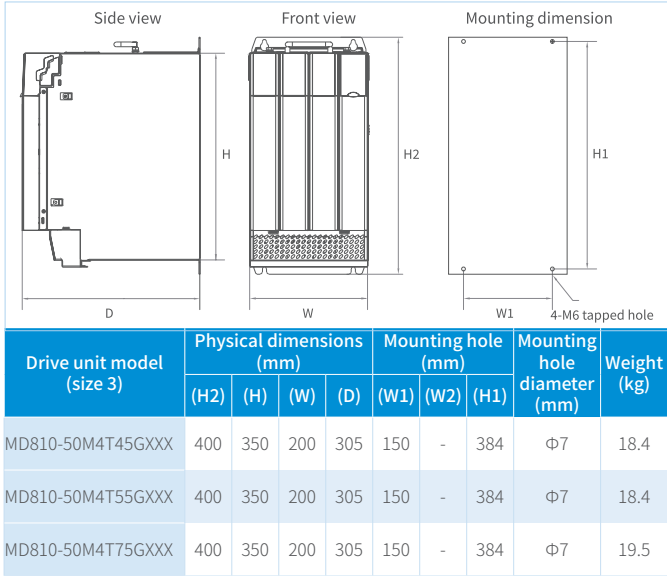
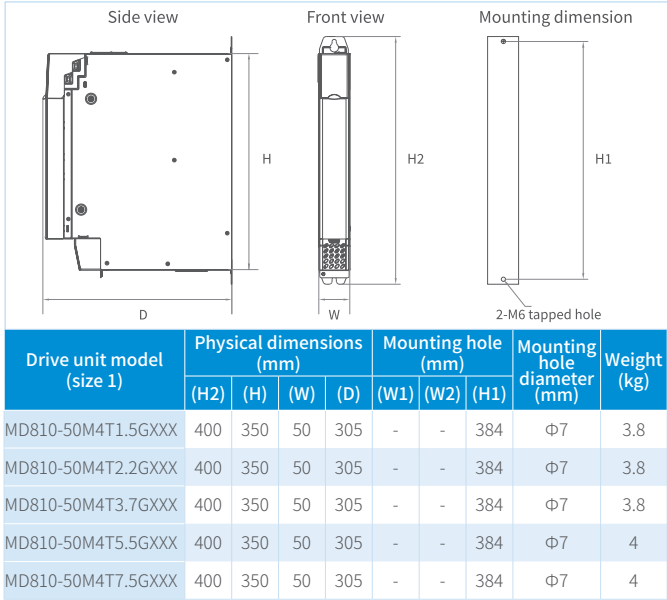
Single-axis model



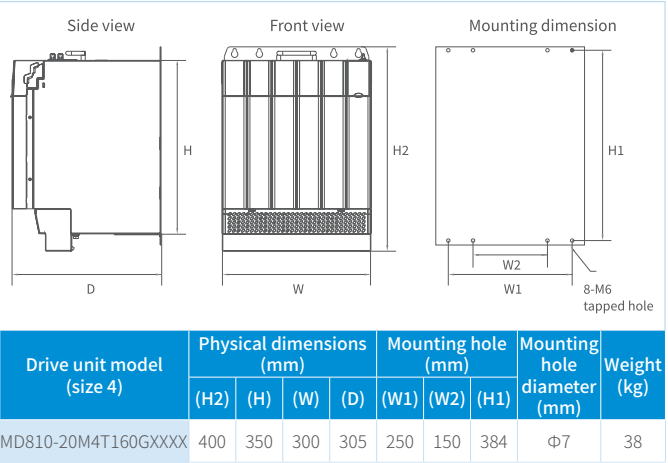
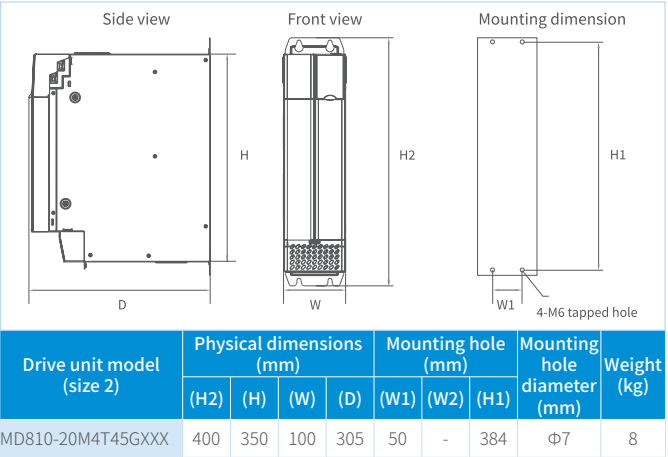
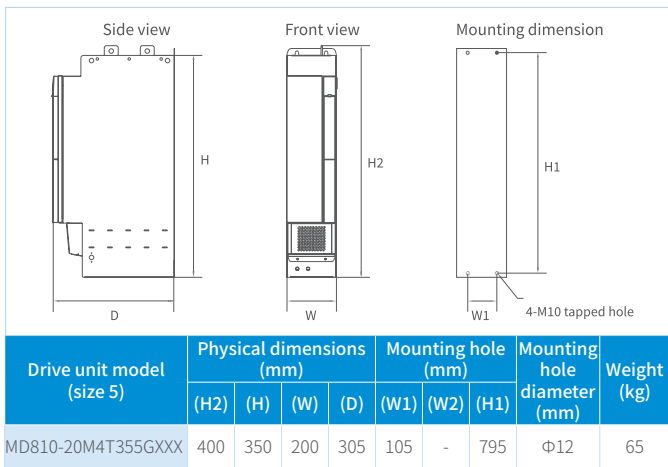
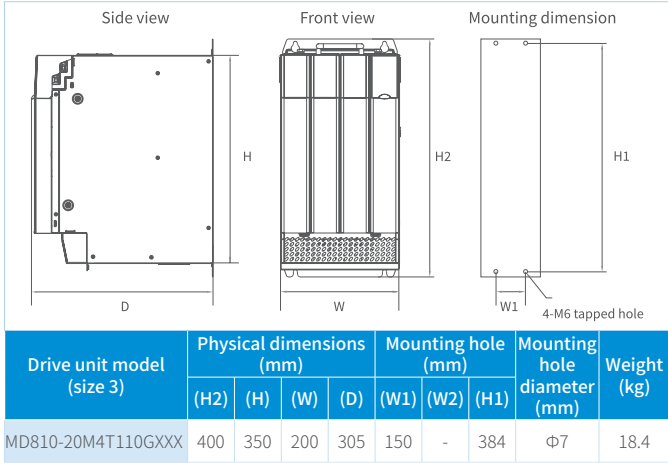
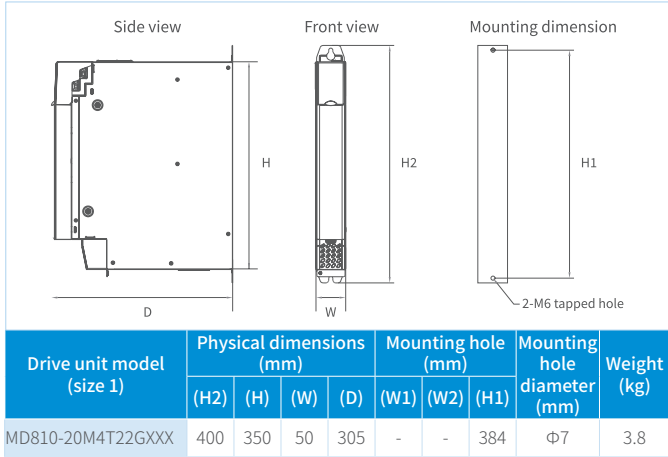
Drive unit model	Rated power (kW)	Input DC current (A)	Output AC current (A)	Applicable Motor	
				(kW)	(HP)
537V DC~679V DC (operating range: 350V DC~800V DC); output voltage: 0V AC~480V AC					
MD810-50M4T1.5GXXX-INT	1.5	4.9	3.8	1.5	2
MD810-50M4T2.2GXXX-INT	2.2	7	5.1	2.2	3
MD810-50M4T3.7GXXX-INT	3.7	12	9	3.7	5
MD810-50M4T5.5GXXX-INT	5.5	17	13	5.5	7.5
MD810-50M4T7.5GXXX-INT	7.5	22	17	7.5	10
MD810-50M4T11GXXX(W)-INT	11	31	25	11	15
MD810-50M4T15GXXX(W)-INT	15	40	32	15	20
MD810-50M4T18.5GXXX(W)-INT	18.5	46	37	18.5	25
MD810-50M4T22GXXX(W)-INT	22	55	45	22	30
MD810-50M4T30GXXX(W)-INT	30	73	60	30	40
MD810-50M4T37GXXX(W)-INT	37	90	75	37	50
MD810-50M4T45GXXX-INT	45	105	91	45	60
MD810-50M4T55GXXX-INT	55	129	112	55	70
MD810-50M4T75GXXX-INT	75	172	150	75	100
MD810-50M4T90GXXX-INT	90	205	184	90	125
MD810-50M4T110GXXX-INT	110	245	224	110	150
MD810-50M4T132GXXX-INT	132	290	262	132	180
MD810-50M4T160GXXX-INT	160	335	304	160	220
MD810-50M4T200GXXXH-INT	200	420	377	200	270
MD810-50M4T250GXXXH-INT	250	515	465	250	330
MD810-50M4T315GXXXH-INT	315	650	585	315	420
MD810-50M4T355GXXXH-INT	355	725	650	355	475

Dimensions

Single drive units



Rectifier units



Dimensions

Dual drive units

Side view

Front view

Mounting dimension

Drive unit model (size 1)	Physical dimensions (mm)				Mounting hole (mm)			Mounting hole diameter (mm)	Weight (kg)
	(H2)	(H)	(W)	(D)	(W1)	(W2)	(H1)		
MD810-50M4T1.5GXXX	400	350	50	305	-	-	384	Φ7	3.8
MD810-50M4T2.2GXXX	400	350	50	305	-	-	384	Φ7	3.8
MD810-50M4T3.7GXXX	400	350	50	305	-	-	384	Φ7	3.8
MD810-50M4T5.5GXXX	400	350	50	305	-	-	384	Φ7	4
MD810-50M4T7.5GXXX	400	350	50	305	-	-	384	Φ7	4

Side view

Front view

Mounting dimension

Drive unit model (size 2)	Physical dimensions (mm)				Mounting hole (mm)			Mounting hole diameter (mm)	Weight (kg)
	(H2)	(H)	(W)	(D)	(W1)	(W2)	(H1)		
MD810-50M4T11GXXX	400	350	100	305	50	-	384	Φ7	7.5
MD810-50M4T15GXXX	400	350	100	305	50	-	384	Φ7	7.5
MD810-50M4T18.5GXXX	400	350	100	305	50	-	384	Φ7	8
MD810-50M4T22GXXX	400	350	100	305	50	-	384	Φ7	8.5
MD810-50M4T30GXXX	400	350	100	305	50	-	384	Φ7	9.4
MD810-50M4T37GXXX	400	350	100	305	50	-	384	Φ7	9.4

Accessories

Applicable model	MD810 accessory	
	Type code	Description
Size 1 (W: 50 mm)	MD810-AZJ50M-W1	Through-hole mounting brackets for PSU and Drives
Size 2 (W: 100 mm)	MD810-AZJ50M-W2	
Size 3 (W: 200 mm)	MD810-AZJ50M-W3	
Size 4 (W: 300 mm)	MD810-AZJ50M-W4	
Size 1 (W: 50 mm)	MD810-PBJ50M-W1	Cable support bracket for PSU and Drives
Size 2 (W: 100 mm)	MD810-PBJ50M-W2	
Size 3 (W: 200 mm)	MD810-PBJ50M-W3	
Size 4 (W: 300 mm)	MD810-PBJ50M-W4	
Size 1 (W: 50 mm)	MD810-DLB-W1	Air guide plate for PSU and Drives
Size 2 (W: 100 mm)	MD810-DLB-W2	
Size 3 (W: 200 mm)	MD810-DLB-W3	
Size 4 (W: 300 mm)	MD810-DLB-W4	
PSU (sizes 1-2). Drives (size 1)	MD810-CON1	Additional DC bus terminals for PSU and Drives
PSU (sizes 3-4). Drives (sizes 2-4)	MD810-CON2	
Size 1 (W: 50 mm)	C45590-GNCN-C2500024	Communication (Modbus-RTU, CANopen) cable (RJ45 connectors) between units
Size 2 (W: 100 mm)	C45590-GNCN-C2500025	
Size 3 (W: 200 mm)	C45590-GNCN-C2500035	
Size 4 (W: 300 mm)	C45590-GNCN-C2500055	
Size 5 (355 kW PSU)	C45590-GNCN-C2500080	Soft-charging unit for drive units (single: 1.5-7.5 kW; dual: 1.5-5.5 kW).
Single: 1.5-7.5 kW. Dual: 1.5-5.5 kW	INOV-SU-30	
Single: 11-22 kW. Dual: 7.5-11 kW	INOV-SU-60	
Single: 30-37 kW. Dual: 15-18.5 kW	INOV-SU-100	
Single: 45-75 kW	INOV-SU-170	
Single: 90-160 kW	-	Soft-charging unit is not available.
All	SOP-20-810	Remote LCD keypad (including 3 m cable)
All	C45590-GNCN-C25003	Remote LCD keypad spare cable (3 m)
All	SOP-20-MP-IP20	LCD keypad mounting base for installation on cabinet door

DC soft charge unit

Soft-charging unit for drive units is optional, which can be used for the entire MD810 system to achieve independent power-up and down requirements of the drive unit under the premise of rectifying without interruption.

W 50mm×H 160mm×D 195mm

W 100mm×H 160mm×D 195mm

W 200mm×H 160mm×D 195mm

WARNING

- The drive unit has a built-in fuse, which prohibits independent power-on without buffering, otherwise power-on will cause damage to the drive unit.

