

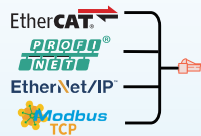
INOVANCE

MD630 General-Purpose Compact AC Drive

High Functionality & Flexibility



Harsh Environments



MD630N variant supports
4-in-One Fieldbus



Remote Commissioning



Open & closed loop motor
control supported



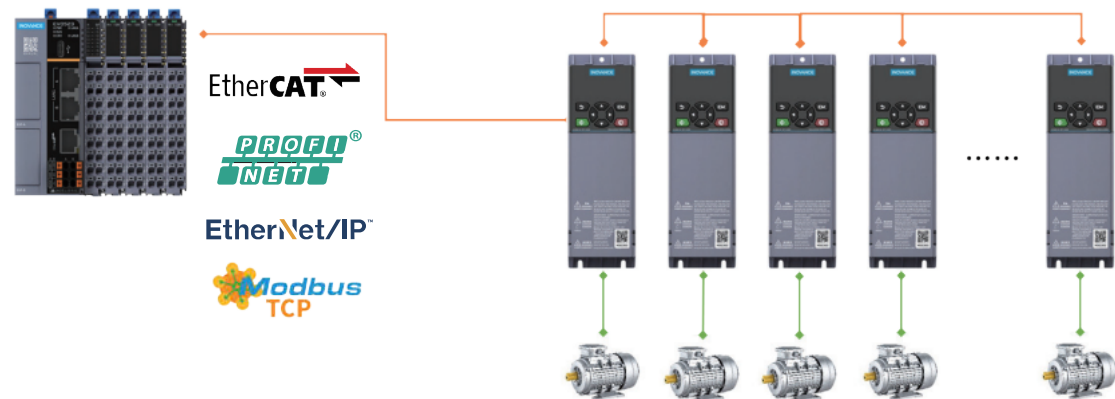
STO
SIL3
Safety Integrity Level



Features & Functions

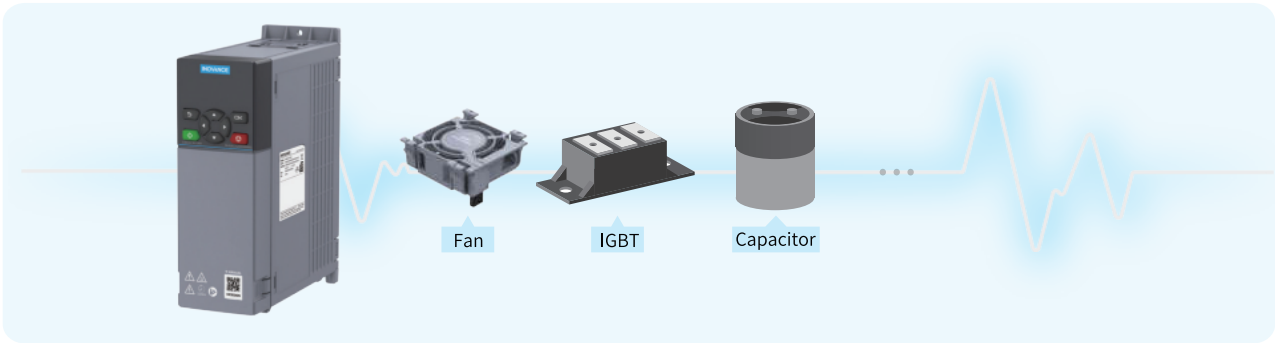
4-in-One Fieldbus Onboard

- The MD630N supports 4-in-one fieldbus: EtherCAT, PROFINET, EtherNet/IP and Modbus TCP.



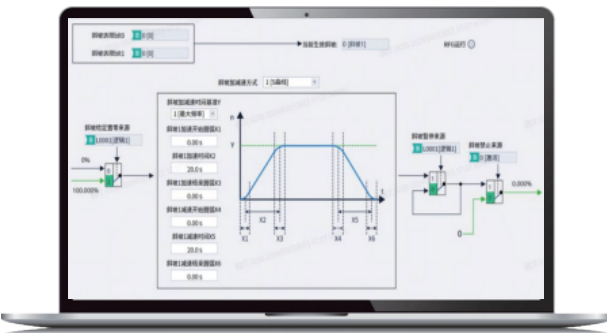
Life-time estimation for predictive maintenance

- Life-time prediction for the key components of the AC drive, such as fan, IGBT, capacitor.

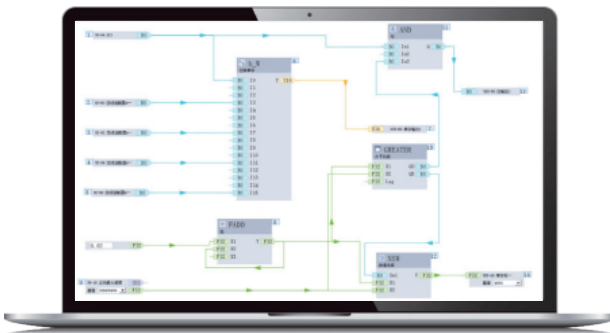


INOVANCE's new commissioning software platform iFA Drive

- New software platform common for AC Drives and Servo Drives.



Easy to commission with graphical interface



User friendly with functional block diagrams

Design for reliable and stable operation

- Advanced functionality cooling fan**
Auto-speed regulation based on actual temperature, without the need of additional settings (the cooling fan starts automatically when the drive is in operation or the heatsink temperature is above 40°C). An alarm will be triggered when the fan stops rotating unexpectedly. MD630 can estimate fan life, operate the fan in forward and reverse rotation to clean the air duct, preventing fan blockage and drive shutdown in dusty environments.
- Built-in EMC filter**
Ensure stable operation, for application with high EMC requirements.
- Up to 60°C operating ambient temperature**
Maximum operating ambient temperature 60°C, with derating above 50°C.
- Various accessories for harsh environments**
 - Junction box protection kit, for preventing ingress of dust
 - Cable shield bracket, enhance electromagnetic compatibility
 - Vibration damping mounting support, increase vibration resistance

Designed for compact installation

- MD630 AC Drive supports side-by-side installation.
- Taking the 1.5kW model as an example:
When installing the MD630 drives side-by-side*, the volume is reduced by 34%, and the footprint is reduced by 41%, compared with MD520 drive.
- * Note: When installing side-by-side, drive's output current should be de-rated above 40°C ambient temperature.



Features & Functions

MD630N - Ethernet communication model

MD630S - serial communication model

Control Interfaces

- +24 VDC auxiliary control supply
- I/Os: 2x DI, 2x AI, 1x DO, 1x RO
- 1x Ethernet port: EtherCAT, PROFINET and EtherNet/IP Modbus TCP communication



Common Features

Human-machine interface

- Easy to read colour LED keypad (5-bit digital display)
- USB Type-C commissioning port
- 1×RS485 commissioning port (for PC or external keypad connection)

Control functions

- Induction, PM synchronous and synchronous reluctance motor in open loop and closed loop

Interface expansion

- 1x Option card slot (motor feedback interface, I/O expansion)

Complete functionality

- STO SIL 3 PL e
- Built-in braking transistor

Environmental features

- IP20 rating
- Operating ambient temperature: -20 to +60°C
- Built-in EMC filter (C3 for 10 m)



Control Interfaces

- I/Os: 7x DI, 2x AI, 1x DO, 1x RO, 1x AO, 1x PO
- 1x RS485 serial port: Modbus RTU protocol

Ordering code

MD630 S - 4T 2R1 B S - INT

① ② ③ ④ ⑤ ⑥ ⑦

① Product category: MD630 Series AC Drive	④ Rated output current* 1R5: 1.5A 2R1: 2.1A 3R8: 3.8A ... 9R0: 9.0A ... 045: 45A	⑤ Braking unit B: with braking unit
② Model type: S: Serial communication N: Ethernet communication		⑥ Version: S: with STO function
③ Voltage class 4T: three-phase 380V to 480V		⑦ Variant: INT: International variant

* Note: the value indicates the rated output current for heavy duty, with two digits and the letter R that represents the decimal point, or with three digits.

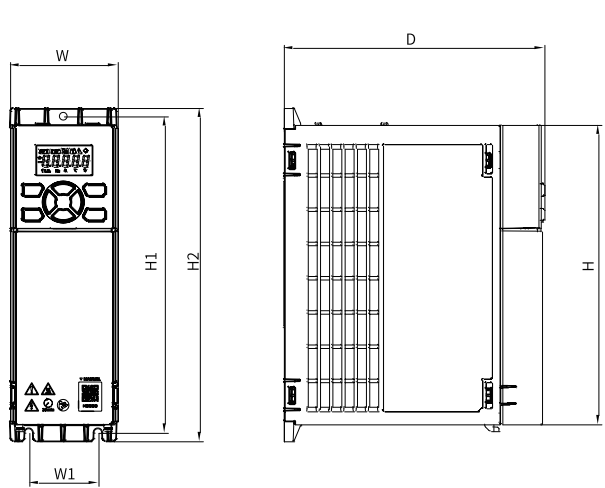
Accessories

Frame size	Description	Model
T1-T5	Multifunctional IO expansion card for MD6X0	MD-IO-M1
T1-T5	Digital encoder expansion card for MD6X0 ^[1]	MD-PG-AU1
T1-T5	Resolver expansion card for MD6X0	MD-PG-R1
T1-T5	SinCos encoder expansion card for MD6X0	MD-PG-S1
T1-T2	DIN rail mounting bracket for MD630 frames T1 and T2	MD630-AZJ-A4T1
T4	Mounting bracket for MD630 frame T4	MD630-AZJ-A1T4
T5	Mounting bracket for MD630 frame T5	MD630-AZJ-A1T5
T1-T3	Vibration damping mounting support for MD630 frames T1-T3	MD630-AZJ-A2T1
T4-T5	Vibration damping mounting support for MD630 frames T4 & T5	MD630-AZJ-A2T4
T1-T2	Junction box protection kit for MD630 frames T1 and T2	MD630-JXH-A5T1
T3	Junction box protection kit for MD630 frame T3	MD630-JXH-A5T3
T4	Junction box protection kit for MD630 frame T4	MD630-JXH-A5T4
T5	Junction box protection kit for MD630 frame T5	MD630-JXH-A5T5
T1-T2	Shield bracket for MD630 frames T1 & T2	MD630-AZJ-A3T1
T3	Shield bracket for MD630 frame T3	MD630-AZJ-A3T3
T4	Shield bracket for MD630 frame T4	MD630-AZJ-A3T4
T5	Shield bracket for MD630 frame T5	MD630-AZJ-A3T5

Note: [1] Including ABZ incremental encoder,INOVANCE 23 bit encoder, SSI encoder, ENDAT encoder, BISS encoder.

Specifications & Dimensions

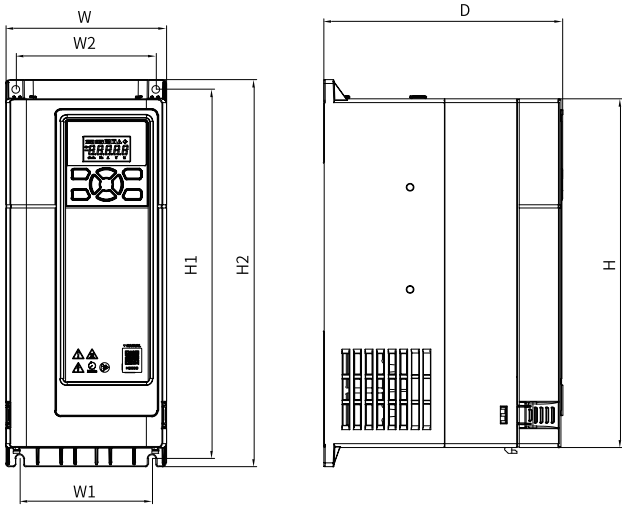
T1~T3 frames



Front view

Side view

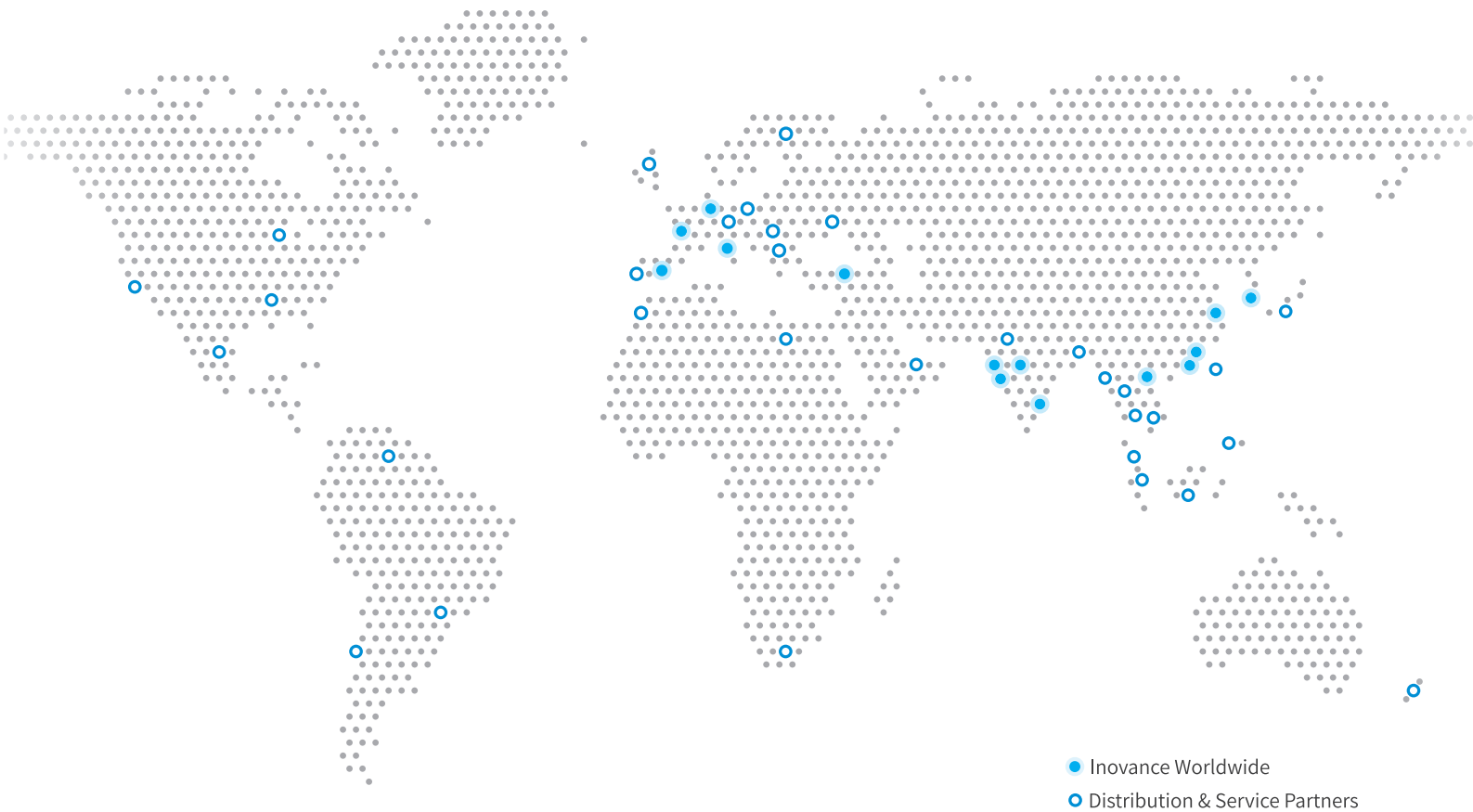
T4~T5 frames



Front view

Side view

MD630S-4T □□□ BS-INT		1R5	2R1	3R8	5R1	7R2	9R0	013	017	025	032	037	045
MD630N-4T □□□ BS-INT		1R5	2R1	3R8	5R1	7R2	9R0	013	017	025	032	037	045
Supply Voltage		3 phase 400 VAC (380~480V, -15%~10%), 50Hz/60Hz (±5%)											
Rated power(kW)	Heavy duty	0.37	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11.0	15.0	18.5	22.0
	Normal duty	0.75	1.5	2.2	3.0	4.0	5.5	7.5	11.0	15.0	18.5	22.0	30.0
Rated input current (A)	Heavy duty	1.7	2.4	4.6	6.3	8.9	11.4	16.8	22.0	32.4	41.6	48.7	58.5
	Normal duty	2.4	4.6	6.4	9.0	11.4	17.0	22.7	33.4	42.1	49.1	60.1	71.6
Rated output current(A)	Heavy duty	1.5	2.1	3.8	5.1	7.2	9.0	13.0	17.0	25.0	32.0	37.0	45.0
	Normal duty	2.1	3.8	5.1	7.2	9.0	13.0	17.0	25.0	32.0	37.0	45.0	60.0
Frame		T1			T2			T3		T4		T5	
W × H2 × D (mm)		70 × 217 × 169.5			75 × 217 × 169.5			90 × 262 × 190		125 × 303 × 186		165 × 330 × 200	
Mass (kg)		1.25			1.36			2.08		4.01		5.94	
Minimum braking resistance (Ohm)		96	96	96	64	64	32	32	32	24	24	24	24
RFI filter (category C2)		FN 3287-10-44	FN 3287-10-44	FN 3287-10-44	FN 3287-10-44	FN 3287-10-44	FN 3287-16-44	FN 3287-25-33	FN 3287-40-33	FN 3287-50-33	FN 3287-50-33	FN 3287-63-53	FN 3287-80-53
Grounding shield bracket	Part no.	01040316			01040316			01040318		01040310		01040309	
	Model	MD630-AZJ-A3T1			MD630-AZJ-A3T1			MD630-AZJ-A3T3		MD630-AZJ-A3T4		MD630-AZJ-A3T5	



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