

## MD500 AC Drive General-purpose Open Loop & Closed Loop

**NEW**

Wide operating voltage  
Three-phase 380 to 480 Vac  
0.4 to 450 kW



**NEW**

Operation in high  
ambient temperature  
 45°C<sub>avg</sub>

**NEW**

Built-in DC reactor  
(18.5 kW and above)

Enhanced  
reliability



### Features & Functions

- Open loop V/F & SVC control
- Closed loop FVC control
- Starting torque
  - 150% at 0.25 Hz for SVC
  - 180% at 0 Hz for FVC
- Communication options:
  - Modbus-RTU
  - Profibus-DP
  - CANopen
  - CANlink
- Automatic torque boost
- Slip compensation
- Simplified parameter for easy startup
- 4-independent S-ramps
- Flexible programmable I/O connection
- User programmable function
- Variable DC-injection braking
- Comprehensive trip diagnostic
- Output frequency 500 Hz
- Built-in dynamic braking unit



\*2 PC-Based  
Software  
simplified  
startup &  
backup

**NEW**

Through-hole mounting  
options (0.4 to 160 kW)

\*1 UL for 132 kW and above are coming soon.  
\*2 PC Comms kit hardware (optional).

General Specifications

Voltage Class		Three-phase 380 to 480 Vac										
Drive model: MD500TxxxGx-INT		0.4GB	0.7GB	1.1GB	1.5GB	2.2GB	3.0GB	3.7GB	5.5GB	7.5GB	11GB	15GB
Frame size		T1					T2		T3		T4	
Drive Input	Rated input voltage	Three-phase 380 to 480 Vac, -15% to +10%										
	Rated input current [A]	1.8	2.4	3.7	4.6	6.3	9.0	11.4	16.7	21.9	32.2	41.3
	Rated input frequency	50/60 Hz, ±5%										
Drive Output	Applicable motor [kW]	0.4	0.75	1.1	1.5	2.2	3.0	3.7	5.5	7.5	11	15
	Output current [A] <sup>1</sup>	1.5	2.1	3.1	3.8	5.1	7.2	9.0	13	17	25	32
	Default carrier frequency [kHz]	6	6	6	6	6	6	6	6	6	6	6
	Overload capacity	150% for 60 Sec										
	Max. output voltage	Three-phase 380 to 480 Vac (Proportional to input voltage)										
Max. output frequency	500 Hz											
Braking Resistor	Recommended power [kW]	0.08	0.14	0.22	0.3	0.44	0.6	0.74	1.1	1.5	2.2	3.0
	Recommended resistance [Ω]	1450	800	500	380	260	190	150	100	75	50	38
Braking unit		Built-in										
Enclosure		IP 20										

Voltage Class		Three-phase 380 to 480 Vac										
Drive model: MD500TxxxGx-INT		18.5GB	22GB	30GB	37GB	45GB	55GB	75GB	90G	110G	132G	160G
Frame size		T5		T6		T7		T8		T9		
Drive Input	Rated input voltage	Three-phase 380 to 480 Vac, -15% to +10%										
	Rated input current [A]	49.5	59	57	69	89	106	139	164	196	240	287
	Rated input frequency	50/60 Hz, ±5%										
Drive Output	Applicable motor [kW]	18.5	22	30	37	45	55	75	90	110	132	160
	Output current [A] <sup>1</sup>	37	45	60	75	91	112	150	176	210	253	304
	Default carrier frequency [kHz]	6	6	6	5	5	4	3	3	3	3	3
	Overload capacity	150% for 60 Sec										
	Max. output voltage	Three-phase 380 to 480 Vac (Proportional to input voltage)										
Max. output frequency	500 Hz											
Braking Resistor	Recommended power [kW]	4	4.5	6	7	9	11	15	18	22	26	32
	Recommended resistance [Ω]	32	27	20	16	13	10.5	7.7	6.4	5.3	4.4	3.6
Braking unit		Built-in					MDBUN-60-5T			MDBUN-90-5T		
Enclosure		IP 20										

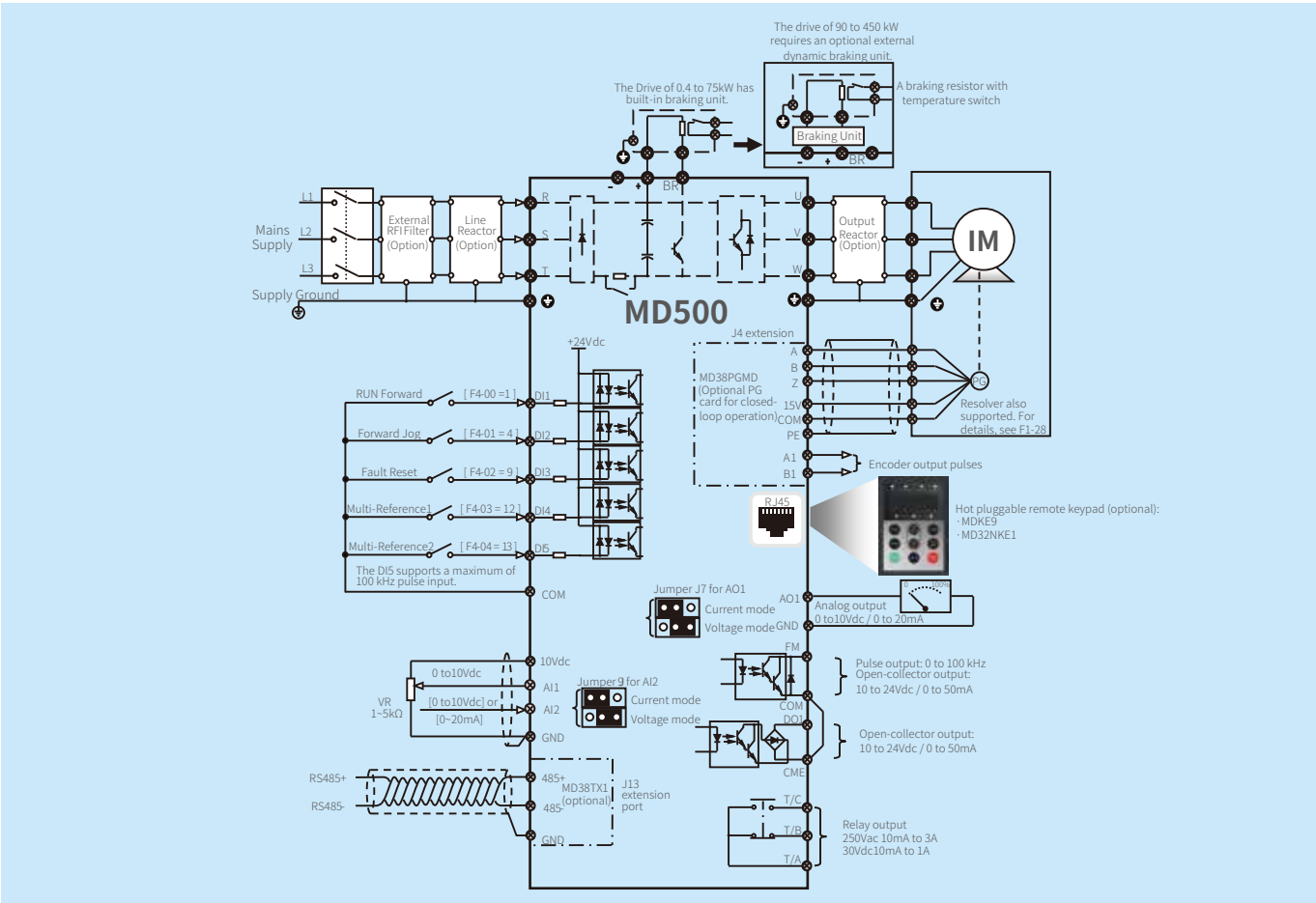
Voltage Class		Three-phase 380 to 480 Vac							
Drive model: MD500TxxxG (-L) <sup>2</sup> -INT		200G (-L)	220G (-L)	250G (-L)	280G (-L)	315G (-L)	355G (-L)	400G (-L)	450G (-L)
Frame size		T10			T11		T12		
Drive Input	Rated input voltage	Three-phase 380 to 480 Vac, -15% to +10%							
	Rated input current [A]	365	410	441	495	565	617	687	782
	Power capacity [kVA]	334	375	404	453	517	565	629	716
	Rated input frequency	50/60 Hz, ±5%							
Drive Output	Applicable motor [kW]	200	220	250	280	315	355	400	450
	Output current [A] <sup>1</sup>	377	426	465	520	585	650	725	820
	Default carrier frequency [kHz]	3	3	3	3	3	3	3	3
	Overload capacity	150% for 60 Sec							130% for 60 Sec
	Max. output voltage	Three-phase 380 to 480 Vac (Proportional to input voltage)							
	Max. output frequency	500 Hz							
Braking Resistor	Recommended power [kW]	38	42	48	54	60	69	78	87
	Recommended resistance [Ω]	2.9	2.7	2.3	2.1	1.9	1.7	1.5	1.3
Braking unit		MDBU-200-C x2				MDBU-200-C x3			
Enclosure		IP 00							

Notes:

\*1 Default carrier switching frequency at rated output current.

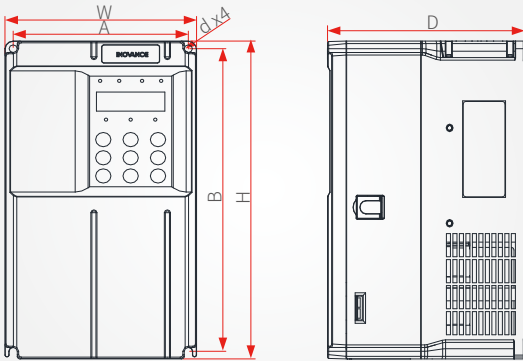
\*2 For the standard AC Drive, we recommend motor cable lengths to be <100m. Where your installation exceeds 100m, the "L" version is an option with inbuilt AC Output Reactor (1%) which can help to overcome the effects of long cable installation. To discuss your application, contact Inovance Technology and or the Authorised Distributors.

## General Wiring Diagram

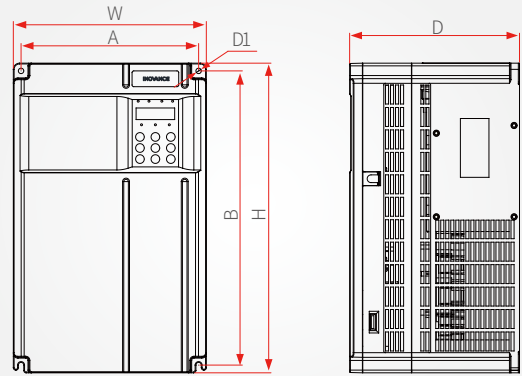


## Dimensions

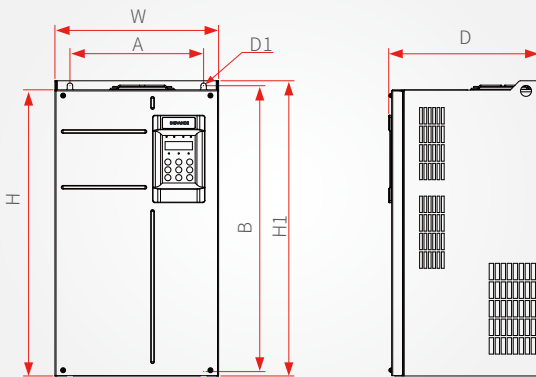
MD500T0.4GB-INT to MD500T15GB-INT



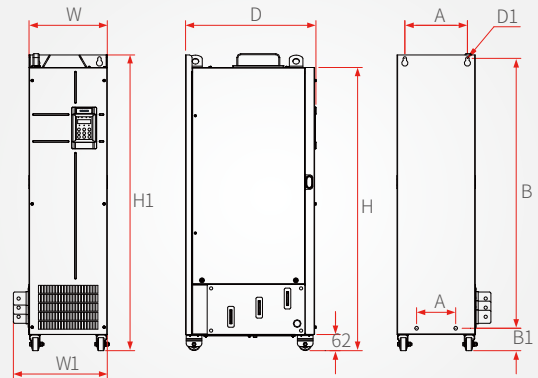
MD500T18.5GB-INT to MD500T37GB-INT



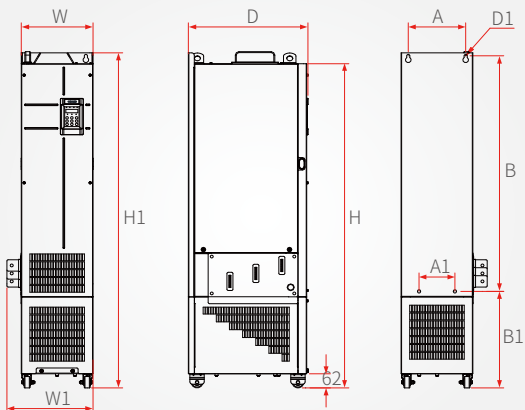
MD500T45GB-INT to MD500T160G-INT



MD500T200G-INT to MD500T450G-INT

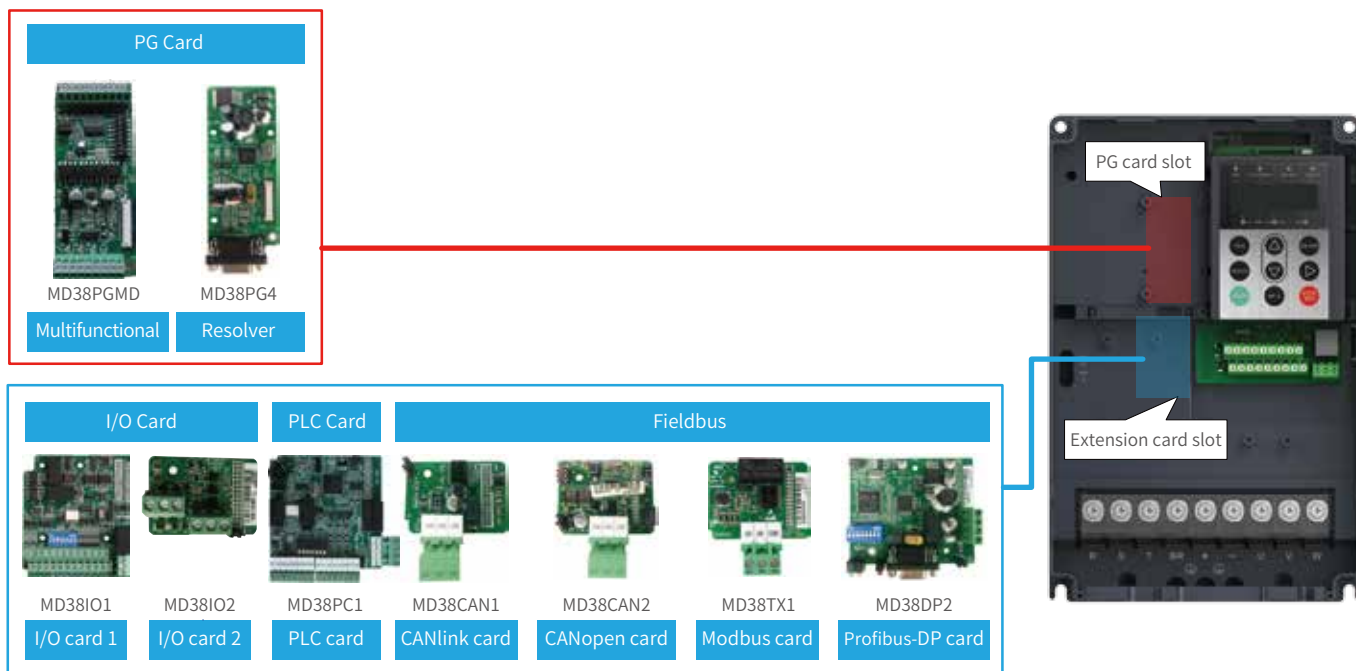


MD500T200G-L-INT to MD500T450G-L-INT



MD500 Model	Frame size	Dimensions (mm)										Weight (kg)
		A	A1	B	B1	H	H1	W	W1	D	D1	
MD500T0.4GB-INT, MD500T0.7GB-INT, MD500T1.1GB-INT MD500T1.5GB-INT, MD500T2.2GB-INT, MD500T3.0GB-INT	T1	119	/	189	/	200	/	130	/	152	Ø5	1.6
MD500T3.7GB-INT, MD500T5.5GB-INT	T2	119	/	189	/	200	/	130	/	162	Ø5	2.0
MD500T7.5GB-INT, MD500T11GB-INT	T3	128	/	238	/	250	/	140	/	170	Ø6	3.3
MD500T15GB-INT	T4	166	/	266	/	280	/	180	/	170	Ø6	4.3
MD500T18.5GB-INT, MD500T22GB-INT	T5	195	/	335	/	350	/	210	/	192	Ø6	9.1
MD500T30GB-INT, MD500T37GB-INT	T6	230	/	380	/	400	/	250	/	220	Ø7	17.5
MD500T45GB-INT, MD500T55GB-INT	T7	245	/	523	/	525	542	300	/	275	Ø10	35
MD500T75GB-INT, MD500T90G-INT, MD500T110G-INT	T8	270	/	560	/	554	580	338	/	315	Ø10	51.5
MD500T132G-INT, MD500T160G-INT	T9	320	/	890	/	874	915	400	/	320	Ø10	85
MD500T200G-INT, MD500T220G-INT	T10	240	150	1,035	86	1,086	1,134	300	360	500	Ø13	110
MD500T200G-L-INT, MD500T220G-L-INT		240	150	1,035	424	1,424	1,472	300	360	500	Ø13	160
MD500T250G-INT, MD500T280G-INT	T11	225	185	1,175	97	1,248	1,284	330	390	545	Ø13	155
MD500T250G-L-INT, MD500T280G-L-INT		225	185	1,175	435	1,586	1,622	330	390	545	Ø13	215
MD500T315G-INT, MD500T355G-INT, MD500T400G-INT, MD500T450G-INT	T12	240	200	1,280	101	1,355	1,405	340	400	545	Ø16	185
MD500T315G-L-INT, MD500T355G-L-INT, MD500T400G-L-INT, MD500T450G-L-INT		240	200	1,280	432	1,683	1,733	340	400	545	Ø16	245

## Extension Cards and Mounting Position



## Accessories List

Category	Model	Function description	Suitable for	Part No.
Braking unit	MDBU-200-C	External braking unit, rating 200 A for braking current, for input 380 to 480 Vac AC Drive	200 to 450 kW	To be advised
	MDBUN-60-5T	External braking unit, rating 60 A for braking current, for input 380 to 480 Vac AC Drive	90 to 110 kW	To be advised
	MDBUN-90-5T	External braking unit, rating 90 A for braking current, for input 380 to 480 Vac AC Drive	132 to 160 kW	To be advised
Keypad	MD32NKE1	Remote LED keypad.	All	01013061
	MDKE9	Remote LCD Keypad. For parameter programming and monitoring, data copy (for various MD series, replacement of MDKE7)	All	01040037
	MDCAB	3-meter connecting cable for remote keypad.	All	01013008
	MDCAB-1.5	1.5-meter connecting cable for remote keypad.	All	15048471
I/O card	MD38IO1	I/O extension card 1, provides terminals: 5x DI, 1x AI, 1x relay output, 1x DO, 1x AO, Modbus-RTU and CANlink.	15 to 450 kW	01013098
	MD38IO2	I/O extension card 2, provides 3x extra DI terminals.	All	01013103
PLC card	MD38PC1	PLC card, completely compatible with the Inovance PLC.	15 to 450 kW	01013104
Fieldbus	MD38CAN1	CANlink communication card( Inovance proprietary serial comms)	All	01013100
	MD38CAN2	CANopen communication card	All	01013102
	MD38TX1	Modbus-RTU communication card	All	01013112
	MD38DP2	Profibus-DP communication card ( Modbus gateway)	15 to 450 kW	01013144
PG card	MD38PG4	Resolver interface card with DB9 interface, for using with a resolver that has an excitation frequency of 10 kHz.	All	01013081
	MD38PGMD	Multifunctional encoder card, Compatible of differential input, open-collector input, push-pull input Supports differential output and open-collector output	All	01013147
Mounting bracket	MD500-AZJ-A1T1	Through-hole Mounting Bracket for Frame size 1.	0.4 to 3.0 kW	01040072
	MD500-AZJ-A1T2	Through-hole Mounting Bracket for Frame size 2.	3.7 to 5.5 kW	01040073
	MD500-AZJ-A1T3	Through-hole Mounting Bracket for Frame size 3.	7.5 to 11 kW	01040074
	MD500-AZJ-A1T4	Through-hole Mounting Bracket for Frame size 4.	15 kW	01040075
	MD500-AZJ-A1T5	Through-hole Mounting Bracket for Frame size 5.	18.5 to 22 kW	01040001
	MD500-AZJ-A1T6	Through-hole Mounting Bracket for Frame size 6.	30 to 37 kW	01040002
	MD500-AZJ-A1T7	Through-hole Mounting Bracket for Frame size 7.	45 to 55 kW	01040003
	MD500-AZJ-A1T8	Through-hole Mounting Bracket for Frame size 8.	75 to 110 kW	01040004
	MD500-AZJ-A1T9	Through-hole Mounting Bracket for Frame size 9.	132 to 160 kW	01040005
	MD500-AZJ-A3T10	Assemble the guide rail for frame size T10 to T12.	200 to 450 kW	01040009

For more information, please contact our local offices.

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