

INOVANCE

AC DRIVES



MD520 - Universal AC Drive

High Performance for Wide-Range Application



PRODUCT FEATURES

- Unified AC asynchronous and PM synchronous motor control
- Wide operating voltage and product range:
 - 3 ph 380-480 Vac: 0.4 to 500 kW
 - 3 ph 200-240 Vac: 0.4 to 75 kW
 - 1 ph 200-240 Vac: 0.4 to 2.2 kW
- STO SIL 3 PL e
- Built-in DC reactor (400 V: 18.5 kW and above; 200 V: 11 kW and above)
- Enhanced reliability: conformal coated PCBs compliant to 3S2 and 3C3 environments
- Complies to efficiency level IE2 as defined in IEC 61800-9-2
- Through-hole mounting options (0.4 to 160 kW)

MD520- FEATURES & FUNCTIONS

- Induction motor and PM synchronous motor control:
 - Open loop V/F (induction motors only) and SVC
 - Closed loop FVC
- Dual rated: heavy duty (overload: 150%/ 1 min) and normal duty (overload: 110%/ 1 min)
- Starting torque
 - 150% at 0.25 Hz for SVC
 - 180% at 0 Hz for FVC
- Communication options:
 - Modbus-RTU · CANlink
 - Modbus-TCP · PROFINET
 - PROFIBUS-DP · EtherCAT
 - CANopen · Ethernet/IP
- Category C2 compliance with external RFI filter. Ratings with built-in filter comply with Category C3*1
- Built-in dynamic braking unit, up to/including 75 kW (400 V) or 37kW (200 V)
- Bipolar analog input as standard (-10 to +10 V) PTC input as standard
- Flexible programmable I/Os
- User programmable logic
- Variable DC-injection braking
- Comprehensive trip diagnostics
- Output frequency: 599 Hz
- Application dedicated functions:
 - Master-slave function (torque, speed)
 - Textile wobble control
- Brake control logic
- 4 motor parameter sets
- Automatic torque boost
- PC-based software: simplified start up & backup*2
- Simplified parameters for easy start up
- 4 independent S-ramps

1 For detailed EMC compliance information, consult your local
 *2 USB to RS485 adapter required. MDKE-10 or SOP-20 keypads
 Inovance representative can be used for this purpose



NEW: built-in colour LED keypad

The clearest possible information display
 Displays multiple pieces of information simultaneously (e.g. drive status and operating information)
 The clearest possible information display

SPECIFICATIONS

Heavy duty ratings, 150% overload

Voltage class		Three phase 380 to 480 Vac										
Drive model: MD520-4TxxxB(S)-INT		0.4B(S)	0.7B(S)	1.1B(S)	1.5B(S)	2.2B(S)	3.0B(S)	3.7B(S)	5.5B(S)	7.5B(S)	11B(S)	15B(S)
Drive input	Frame size	T1*1					T2		T3		T4	
	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
	Power capacity [kVA]	2	2.8	4.1	5.0	6.7	9.5	12	17.5	22.8	33.4	42.8
	Rated input frequency	50/60 Hz \pm 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]*2	1.5	2.1	3.1	3.8	5.1	7.2	9.0	13.0	17.0	25.0	32.0
	Default carrier frequency [kHz]	6	6	6	6	6	6	6	6	6	6	6
	Overload capacity	150% for 60 s										
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)										
	Max. output frequency	599 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
	Minimum resistance [Ω]	96	96	96	96	64	64	32	32	32	24	24
Braking unit		Built-in										
Enclosure		IP 20										

Normal duty ratings, 110% overload

Normal duty ratings, 110% overload

Voltage class		Three phase 380 to 480 Vac										
Drive model: MD520-4TxxxB(S)-INT		0.4B(S)	0.7B(S)	1.1B(S)	1.5B(S)	2.2B(S)	3.0B(S)	3.7B(S)	5.5B(S)	7.5B(S)	11B(S)	15B(S)
Drive input	Frame size	T1*1					T2		T3		T4	
	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
	Power capacity [kVA]	2	2.8	4.1	5.0	6.7	9.5	12	17.5	22.8	33.4	42.8
	Rated input frequency	50/60 Hz \pm 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]*2	1.5	2.1	3.1	3.8	5.1	7.2	9.0	13.0	17.0	25.0	32.0
	Default carrier frequency [kHz]	6	6	6	6	6	6	6	6	6	6	6
	Overload capacity	110% for 60 s										
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)										
	Max. output frequency	599 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
	Minimum resistance [Ω]	96	96	96	96	64	64	32	32	32	24	24
Braking unit		Built-in										
Enclosure		IP 20										

- 1 0.75/1.5/2.2 kW are the preferred stocking ratings. To learn more, please get in touch with your local Inovance representative.
- 2 Rated output current at default carrier frequency.

SPECIFICATIONS

Heavy duty ratings, 150% overload

Voltage class		Three phase 380 to 480 Vac										
Drive model:MD520-4Txxx(B)(S)(-T)-INT*3		18.5 (B)(S)(-T)	22 (B)(S)(-T)	30 (B)(S)	37 (B)(S)	45 (B)(S)	55 (B)(S)	75 (B)(S)	90 (S)	110 (S)	132 (S)	160 (S)
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]	43.4	51.3	57	69	89	106	139	164	196	240	287
	Power capacity [kVA]	45	54	52	63	81	97	127	150	179	220	263
	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]*2	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 s										
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)										
Braking resistor	Max. output frequency	599 Hz										
	Recommended power [kW]	4.5	4.5	6	7	9	11	15	18	22	26	32
Braking resistor	Minimum resistance [Ω]	24	24	19.2	14.8	12.8	9.6	6.8	11.4x2*4	7.7 x2*4	7.7 x2*4	2.8 x2*4
	Braking unit	Built-in						MDBUN-60-5T x2	MDBUN-90-5T x2	MDBUN-200-5T x2		
Enclosure		IP 20										

Normal duty ratings, 110% overload

Voltage class		Three phase 380 to 480 Vac										
Drive model:MD520-4Txxx(B)(S)(-T)-INT*3		18.5 (B)(S)(-T)	22 (B)(S)(-T)	30 (B)(S)	37 (B)(S)	45 (B)(S)	55 (B)(S)	75 (B)(S)	90 (S)	110 (S)	132 (S)	160 (S)
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]	43.4	51.3	57	69	89	106	139	164	196	240	287
	Power capacity [kVA]	45	54	52	63	81	97	127	150	179	220	263
	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]*2	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 s										
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)										
Braking resistor	Max. output frequency	599 Hz										
	Recommended power [kW]	4.5	4.5	6	7	9	11	15	18	22	26	32
Braking resistor	Minimum resistance [Ω]	24	24	19.2	14.8	12.8	9.6	6.8	11.4x2*4	7.7 x2*4	7.7 x2*4	2.8 x2*4
	Braking unit	Built-in						MDBUN-60-5T x2	MDBUN-90-5T x2	MDBUN-200-5T x2		
Enclosure		IP 20										

- 2 Rated output current at default carrier frequency.
- 3 -T in the type code of 18.5B and 22B models indicates built-in DC reactor
- 4 Minimum value of the resistance for each braking unit.

SPECIFICATIONS

Heavy duty ratings, 150% overload

Voltage class		Three phase 380 to 480 Vac						
Drive model: MD520-4Txxx(S)-INT*5		200(S)	220(S)	250(S)	280(S)	315(S)	355(S)	400(S)
Drive input	Frame size	T10		T11		T12		
	Rated input voltage	Three phase 380 to 480 Vac -15% to +10%						
	Rated input current [A]	365	410	441	495	565	617	687
	Power capacity [kVA]	334	375	404	453	517	565	629
	Rated input frequency	50/60 Hz ±5%						
Drive output	Applicable motor [kW]	200	220	250	280	315	355	400
	Output current [A]*2 Default	377	426	465	520	585	650	725
	carrier frequency [kHz]	3	3	3	3	3	3	3
	Overload capacity	150% for 60 s						
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)						
Max. output frequency	599 Hz							
Braking resistor	Recommended power [kW]	42	54	60	69	78	87	87
	Minimum resistance [Ω]	2.8 x2*4	2.8 x2*4	2.8 x3*4	2.8 x3*4	2.8 x3*4	2.8 x3*4	2.8 x3*4
Braking unit		MDBUN-200-5T x2		MDBUN-200-5T x3				
Enclosure		IP 00						

Normal duty ratings, 110% overload

Voltage class		Three phase 380 to 480 Vac						
Drive model: MD520-4Txxx(S)-INT*5		200(S)	220(S)	250(S)	280(S)	315(S)	355(S)	400(S)
Drive input	Frame size	T10		T11		T12		
	Rated input voltage	Three phase 380 to 480 Vac -15% to +10%						
	Rated input current [A]	456	507	559	624	708	782	840
	Power capacity [kVA]	417	464	511	571	647	715	768
	Rated input frequency	50/60 Hz ±5%						
Drive output	Applicable motor [kW]	250	280	315	355	400	450	500
	Output current [A]*2 Default	4655	520	585	650	725	820	880
	carrier frequency [kHz]	3	3	3	3	3	3	3
	Overload capacity	110% for 60 s						
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)						
Max. output frequency	599 Hz							
Braking resistor	Recommended power [kW]	42	54	60	69	78	87	87
	Minimum resistance [Ω]	2.8 x2*4	2.8 x2*4	2.8 x3*4	2.8 x3*4	2.8 x3*4	2.8 x3*4	2.8 x3*4
Braking unit		MDBUN-200-5T x2		MDBUN-200-5T x3				
Enclosure		IP 00						

- 2 Rated output current at default carrier frequency.
- 4 Minimum value of the resistance for each braking unit.
- 5 For the standard AC drive, we recommend motor cable lengths to be <100 m. Where your installation exceeds 100 m, the “L” version is an option with a built-in AC output reactor (1% voltage drop) which can help to overcome the effects of long cable installations. To discuss your application, contact your local Inovance representative.

SPECIFICATIONS

Heavy duty ratings, 150% overload

Voltage class		Three phase 200 - 240 Vac															
Drive model: MD520-2Txxx (B)(S)-INT		0.4 B(S)	0.7 B(S)	1.1 B(S)	1.5 B(S)	2.2 B(S)	3.7 B(S)	5.5 B(S)	7.5 B(S)	11 B(S)	15 B(S)	18.5 B(S)	22 B(S)	30 B(S)	37 B(S)	45 (S)	55 (S)
Frame size		T1				T2		T3	T4	T5	T6		T7		T8		
Drive input	Rated input voltage	Three phase 200 to 240 Vac -15% to +10%															
	Rated input current [A]	2.4	4.6	6.3	9	11.4	16.7	32.2	41.3	51.3	57	69	89	106	139	164	196
	Power capacity [kVA]	1.1	2.1	2.9	4.1	5.2	7.6	14.7	18.9	27	26.1	31.6	40.7	48.5	63.6	75	89.6
	Rated input frequency	50/60 Hz \pm 5%															
Drive output	Applicable motor [kW]	0.4	0.75	1.1	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
	Output current [A]*2 Default	2.1	3.8	5.1	7.2	9	13	25	32	45	60	75	91	112	150	176	210
	carrier frequency [kHz]	6	6	6	6	6	6	6	6	6	6	5	5	4	3	3	3
	Overload capacity	150% for 60 s															
	Max. output voltage	Three phase 200 to 240 Vac (proportional to input voltage)															
	Max. output frequency	599 Hz															
Braking resistor	Recommended power [kW]	0.09	0.16	0.25	0.34	0.5	0.8	1.3	1.7	2.3	3	3.9	4.6	5.5	6.8	5.0 x2	6.0 x2
	Minimum resistance [Ω]	48	48	32	32	16	16	12	12	12	9	7	6	5	4	5.5 x2*4	3.7 x2*4
Braking unit		Built-in													MDBUN-60-2T x2	MDBUN-90-2T x2	
Enclosure		IP 20															

Heavy duty ratings, 110% overload

Voltage class		Three phase 200 - 240 Vac															
Drive model: MD520-2Txxx (B)(S)-INT		0.4 B(S)	0.7 B(S)	1.1 B(S)	1.5 B(S)	2.2 B(S)	3.7 B(S)	5.5 B(S)	7.5 B(S)	11 B(S)	15 B(S)	18.5 B(S)	22 B(S)	30 B(S)	37 B(S)	45 (S)	55 (S)
Frame size		T1				T2		T3	T4	T5	T6		T7		T8		
Drive input	Rated input voltage	Three phase 200 to 240 Vac -15% to +10%															
	Rated input current [A]	3.7	6.4	9.1	11.3	15.9	22.4	39.7	44	65.8	71	86	111	143	167	198	239
	Power capacity [kVA]	1.7	2.9	4.2	5.2	7.3	10.2	18.2	20.1	30.1	32.5	39.3	50.8	65.4	76.4	90.5	109.3
	Rated input frequency	50/60 Hz ±5%															
Drive output	Applicable motor [kW]	0.75	1.1	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55	75
	Output current [A]*2 Default	3.1	5.1	7.2	9.0	13	17	32	37	60	75	91	112	150	176	210	253
	carrier frequency [kHz]	6	6	6	6	6	6	6	6	6	6	5	5	4	3	3	3
	Overload capacity	110% for 60 s															
	Max. output voltage	Three phase 200 to 240 Vac (proportional to input voltage)															
	Max. output frequency	599 Hz															
Braking resistor	Recommended power [kW]	0.09	0.16	0.25	0.34	0.5	0.8	1.3	1.7	2.3	3	3.9	4.6	5.5	6.8	5.0 x2	6.0 x2
	Minimum resistance [Ω]	48	48	32	32	16	16	12	12	12	9	7	6	5	4	5.5 x2*4	3.7 x2*4
Braking unit		Built-in														MDBUN-60-2T x2	MDBUN-90-2T x2
Enclosure		IP 20															

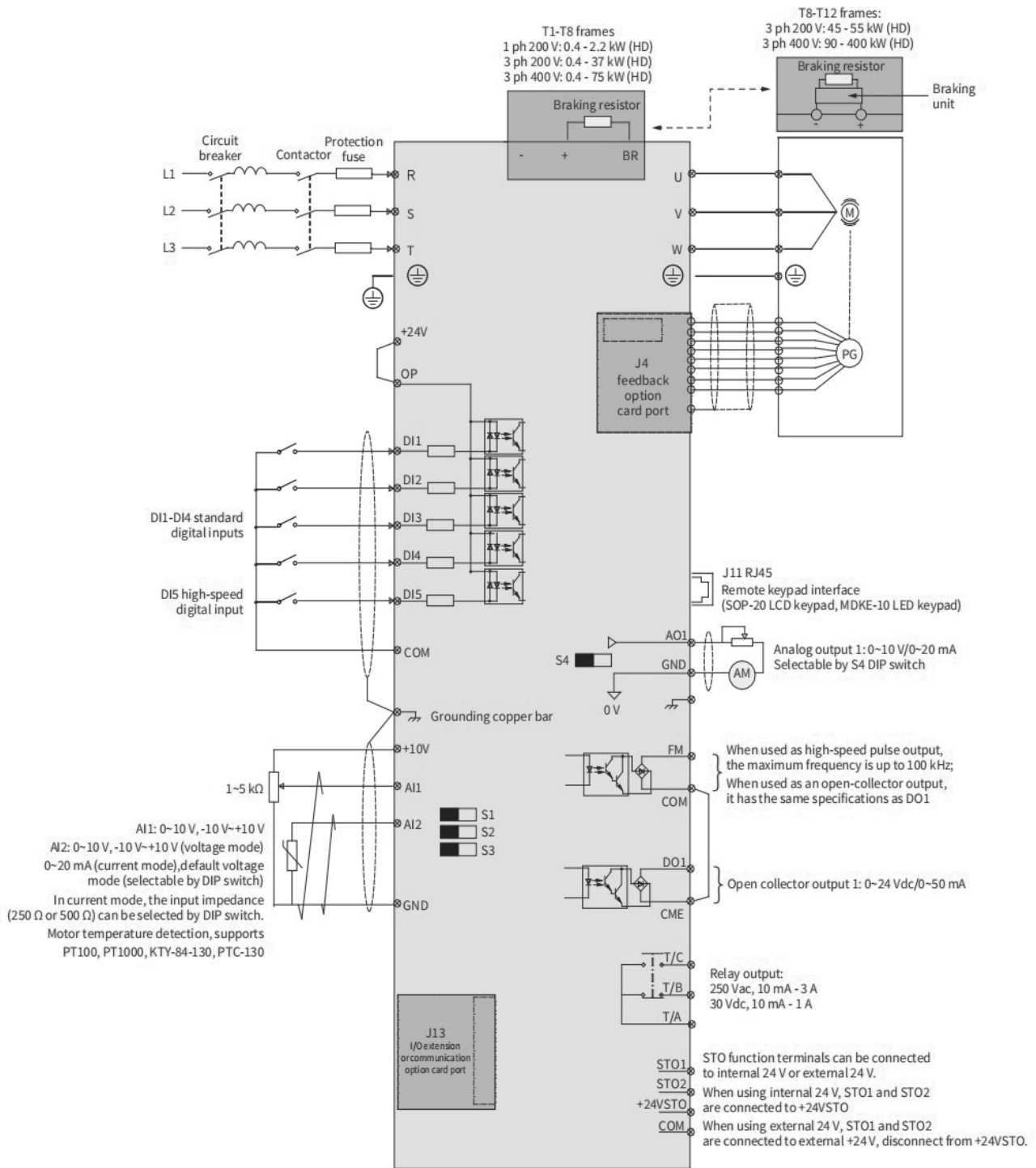
- 2 Rated output current at default carrier frequency.
- 4 Minimum value of the resistance for each braking unit.

Heavy duty ratings, 150% overload

Voltage class		One phase 200 - 240 Vac							
Drive model: MD520-4TxxxB(S)-INT		0.4B(S)		0.7B(S)		1.5B(S)		2.2B(S)	
Frame size		T2							
Drive input	Rated input voltage	One phase 200 to 240 Vac -15% to +10%							
	Rated input current [A]	5.4		8.2		14		20	
	Power capacity [kVA]	1.4		2.2		3.7		6	
	Rated input frequency	50/60 Hz ±5%							
Drive output	Applicable motor [kW]	0.4		0.75		1.5		2.2	
	Output current [A]*2	2.3		4.0		7.0		9.6	
	Default carrier frequency [kHz]	6		6		6		6	
	Overload capacity	150% for 60 s							
	Max. output voltage	Three phase 200 to 240 Vac (proportional to input voltage)							
Braking resistor	Max. output frequency	599 Hz							
	Recommended power [kW]	0.08		0.08		0.1		0.1	
	Minimum resistance [Ω]	64		64		32		32	
Recommended power [kW]		Built-in							
Minimum resistance [Ω]		IP 20							

- 2 Rated output current at default carrier frequency.

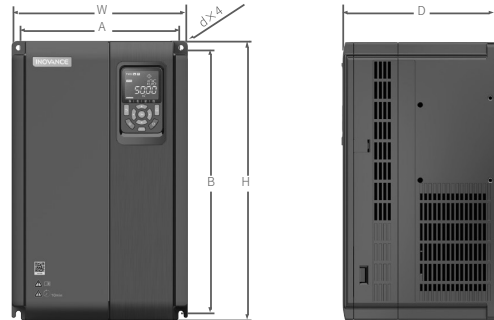
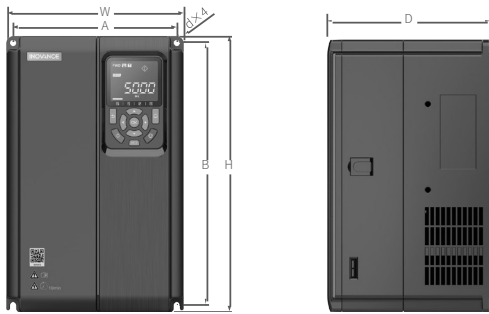
GENERAL WIRING DIAGRAM



DIMENSIONS

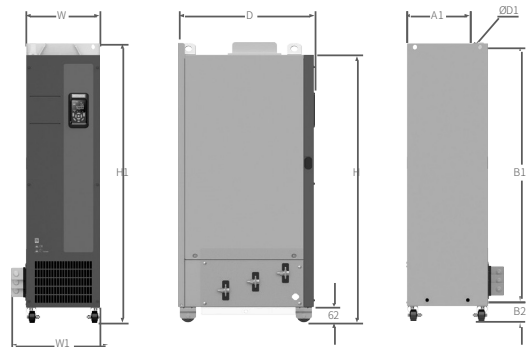
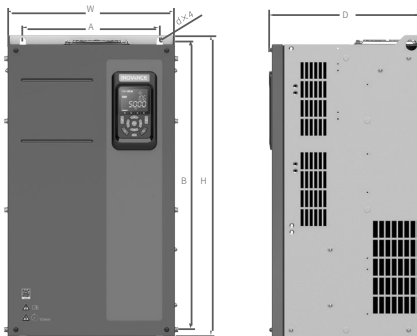
MD520-4T0.4B(S)-INT to MD520-4T15B(S)-INT
 MD520-2T0.4B(S)-INT to MD520-2T7.5B(S)-INT
 MD520-2S0.4B(S)-INT to MD520-2S2.2B(S)-INT

MD520-4T18.5B(S)-INT to MD520-4T37B(S)-INT
 MD520-2T11B(S)-INT to MD520-2T18.5B(S)-INT

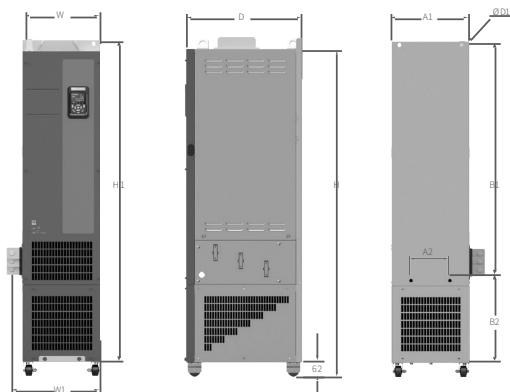


MD520-4T45B(S)-INT to MD520-4T160(S)-INT
 MD520-2T22B(S)-INT to MD520-2T55(S)-INT

MD520-4T200(S)-INT to MD520-4T400(S)-INT

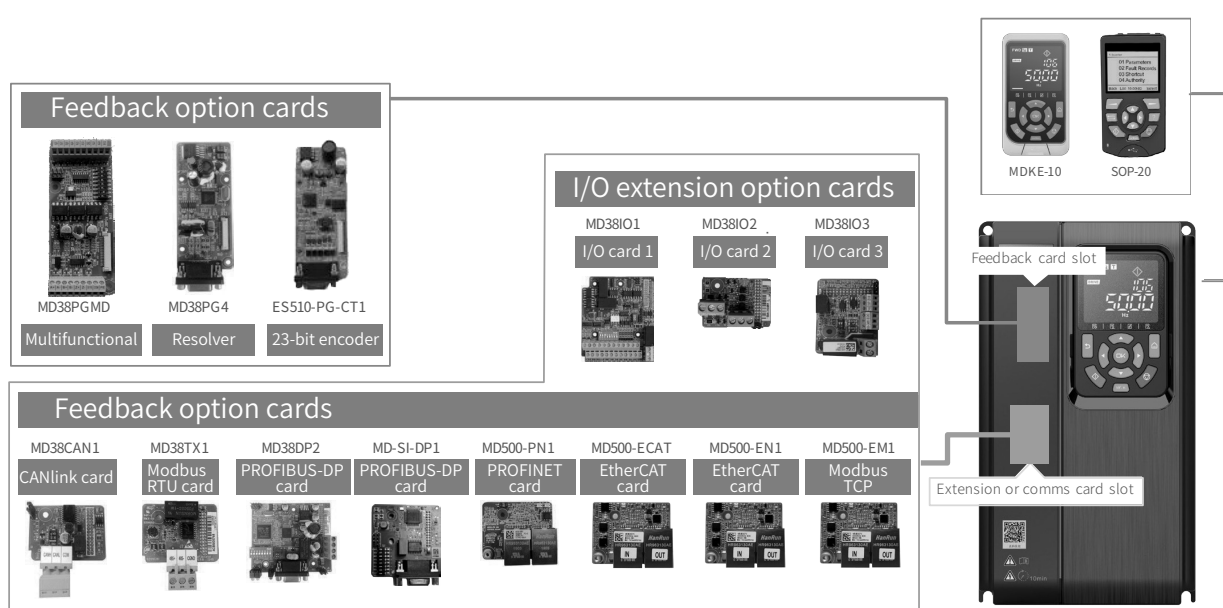


MD520-4T200(S)-L-INT to MD520-4T400(S)-L-INT



MD520 Model	Frame size	Dimensions (mm)										Mass (kg)
		A	A1	B	B1	H	H1	W	W1	D	D1	
MD520-4T1.1B(S)-INT, MD520-4T1.5B(S)-INT, MD520-4T2.2B(S)-INT, MD520-4T3.0B(S)-INT, MD520-2T0.4B(S)-INT, MD520-2T0.7B(S)-INT, MD520-2T1.1B(S)-INT, MD520-2T1.5B(S)-INT	T1	119	/	189	/	200	/	130	/	152	Ø5	1.6
MD520-4T3.7B(S)-INT, MD520-4T5.5B(S)-INT, MD520-2S0.4B(S)-INT to MD520-2S2.2B(S)-INT, MD520-2T2.2B(S)-INT, MD520-2T3.7B(S)-INT	T2	119	/	189	/	200	/	130	/	152	Ø5	2.0
MD520-4T15B(S)-INT, MD520-2T7.5B(S)-INT	T3	128	/	238		250	/	140	/	170	Ø6	3.3
MD520-4T18.5B(S)-INT, MD520-4T22B(S)-INT, MD520-2T11B(S)-INT	T4	166	/	266	/	280	/	180	/	170	Ø6	4.3
MD520-4T30B(S)-INT, MD520-4T37B(S)-INT	T5	195	/	335	/	350	/	210	/	192	Ø6	10
MD520-4T30B(S)-INT, MD520-4T37B(S)-INT, MD520-2T15B(S)-INT, MD520-2T18.5B(S)-INT	T6	230	/	380	/	400	/	250	/	220	Ø7	17.5
MD520-4T45B(S)-INT, MD520-4T55B(S)-INT, MD520-2T22B(S)-INT, MD520-2T30B(S)-INT	T7	245	/	523	/	525	524	300	/	275	Ø10	35
MD520-4T75B(S)-INT, MD520-4T90(S)-INT, MD520-4T110(S)-INT, MD520-2T37B(S)-INT, MD520-2T45(S)-INT, MD520-2T55(S)-INT	T8	270	/	560	/	554	580	388	/	315	Ø10	51.5
MD520-4T132(S)-INT, MD520-4T160(S)-INT	T9	320	/	890	/	874	915	400	/	320	Ø10	85
MD520-4T200(S)-INT, MD520-4T220(S)-INT, MD520-4T200(S)-L-INT, MD520-4T220(S)-L-INT	T10	240 240	150 150	1035 1035	86 424	1086 1424	1134 1472	300 300	360 360	500 500	Ø13 Ø13	110 160
MD520-4T250(S)-INT, MD520-4T280(S)-INT, MD520-4T250(S)-L-INT, MD520-4T280(S)-L-INT	T11	225 225	185 185	1175 1175	97 435	1248 1586	1248 1622	330 330	390 390	545 545	Ø13 Ø13	155 215
MD520-4T315(S)-INT, MD520-4T355(S)-INT, MD520-4T400(S)-INT, MD520-4T315(S)-L-INT, MD520-4T355(S)-L-INT, MD520-4T400(S)-L-INT	T12	240 240	200 200	1280 1280	101 432	1355 1683	1405 1733	340 340	400 400	545 545	Ø16 Ø16	185 245

OPTION CARDS AND MOUNTING POSITION



ACCESSORIES LIST

Category	Model	Function description	Suitable for
External braking	MDBUN-60-5T	External braking unit, rated current 60 A, for supply input voltage 380 to 480 Vac AC drives.	T models: 90G
	MDBUN-90-5T	External braking unit, rated current 90 A, for supply input voltage 380 to 480 Vac AC drives.	T models: 110G - 132G
	MDBUN-200-5T	External braking unit, rated current 200 A, for supply input voltage 380 to 480 Vac AC drives.	T models: 160G - 450G
units	MDBUN-60-2T	External braking unit, rated current 60 A, for supply input voltage 200 to 240 Vac AC drives.	2T models: 45G
	MDBUN-90-2T	External braking unit, rated current 90 A, for supply input voltage 200 to 240 VAC AC drives.	2T models: 55G
	MDKE-10	Remote LED keypad. Can be used as USB to RS485 adapter for the connection to the PC. Includes MDCAB cable.	All
Keypads	SOP-20	Remote multi-language LCD keypad. For parameter programming and monitoring, data copy. Keypad can be used as USB to RS485 adapter for the connection to the PC. Includes MDCAB cable.	All
	MDCAB	3 meter connection cable for remote keypad.	All
	MDCAB-1.5	1.5 meter connection cable for remote keypad.	All
	CP600-BASE1	Panel mounting base (only) for SOP-20 keypad. IP20 rating.	All
	SOP20-MP-IP20	Panel mounting base for SOP-20 keypad, including adapting metal plate and PCB protection plate. IP20 rating.	All
	SOP20-MP-IP54	Panel mounting base for SOP-20 keypad, including PCB protection plate and rubber seals. IP54 rating.	All
I/O extension	MD580-AZJ1	Panel mounting base for MDKE-10. IP20 rating.	All
	MD38IO1	I/O extension card 1, provides: 5x DI, 1x AI, 1x relay output, 1x DO, 1x AO, Modbus-RTU and CANlink.	Frame sizes T4-T12
cards	MD38IO2	I/O extension card 2, provides 3x extra DI terminals.	All
	MD38IO3	I/O extension card 3, provides 3x DI, 1x relay output, Modbus-RTU interface.	All
	MD500-ECAT	EtherCAT option card.	All
	MD500-EN1	Ethernet option card.	All
	MD38CAN1	CANlink/CANopen option card.	All
Fieldbus	MD38TX1	Modbus-RTU option card.	All
cards	MD38DP2	PROFIBUS-DP option card.	Frame sizes T4-T12
	MD500-EM1	Modbus TCP option card.	All
	MD-SI-DP1	PROFIBUS-DP option card (designed for smaller frames).	All
	MD500-PN1	PROFINET option card.	All
	MD38PG4	Option card for resolver (10 kHz excitation) with DB9 connector.	All
PG cards	MD38PGMD	Multifunctional encoder option card, compatible with differential, open-collector and push-pull encoder types. Supports differential output and open-collector output.	All
	ES510-PG-CT1	23-bit encoder card.	All
	MD500-AZJ-A1T1	Through hole mounting bracket for frame T1.	Frame size T1
	MD500-AZJ-A1T2	Through hole mounting bracket for frame T2.	Frame size T2
	MD500-AZJ-A1T3	Through hole mounting bracket for frame T3.	Frame size T3
Mounting	MD500-AZJ-A1T4	Through hole mounting bracket for frame T4.	Frame size T4
brackets	MD500-AZJ-A1T5	Through hole mounting bracket for frame T5.	Frame size T5
	MD500-AZJ-A1T6	Through hole mounting bracket for frame T6.	Frame size T6
	MD500-AZJ-A1T7	Through hole mounting bracket for frame T7.	Frame size T7
	MD500-AZJ-A1T8	Through hole mounting bracket for frame T8.	Frame size T8
	MD500-AZJ-A1T9	Through hole mounting bracket for frame T9.	Frame size T9
Guide rails	MD500-AZJ-A1T10	Guide rails for inserting in/ extracting from the cabinet - frame sizes T10 to T12.	Frame size T10-T12

MD800 - Compact AC MultiDrive

Comprehensive Functionality in a Compact Footprint



- Modular design (from 1 to 8 drives)
- 1 ph 200 V and 3 ph 220V/400 V supply
- Drive ratings: 200 W to 7.5 kW
- STO SIL3
- Choice of fieldbus protocols available

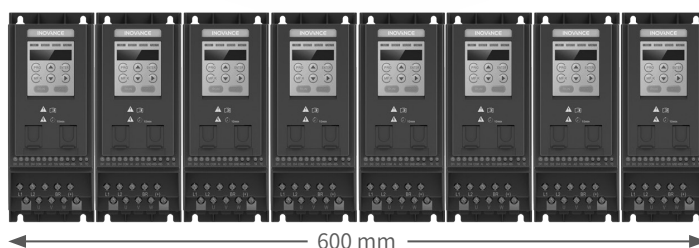


reddot award 2019
winner



DESIGNED FOR CABINET SPACE SAVING - REDUCED INSTALLATION COSTS

Eight Inovance MD200 drives, each module' s footprint is: W 75 mm x H 180 mm



Footprint reduction
-50%

15 kW rectifier (2 option slots) Dual 3.7 kW Dual 2.2 kW Dual 0.75 kW Dual 0.75 kW



MD800 – FEATURES & FUNCTIONS

Comprehensive functionality:

- Individual STO SIL 3 for each drive
- Suitable for open loop asynchronous & PM synchronous motors
- +24 VDC control backup supply
- IP40 rated
- Remote LCD keypad (optional)
- Commissioning PC software available
- Dual rated: heavy duty (HD, G rating): 150% overload; normal duty (ND, P rating): 110% overload

High level, flexible connectivity:

- Built-in I/Os: 4 DI, 4 DI/DO, 2 AI, 1 RO
- Standard onboard communications: USB commissioning port, CAN, RS485

CANopen

CANlink

Modbus
RTU

CANlink is an Inovance proprietary fieldbus

- Two expansion slots
 - I/O expansion cards
 - Fieldbus option cards:

EtherCAT

EtherNet/IP

PROFI
NET

Compact footprint for smaller cabinets

- Common height and depth: 182 mm x 160 mm
- Rectifier width: 99.5 mm
- Drive width: 49.5 mm

Reduced installation costs

- User-friendly pluggable connectors (spring type)
- Faster build time
- Reduced wiring
- User-friendly pluggable connectors (spring type)
- Fewer external components:
 - Common EMC filter (C2 compliant)
 - Input reactor
 - Fuses/MCCBs
 - Common built-in dynamic braking (variant)

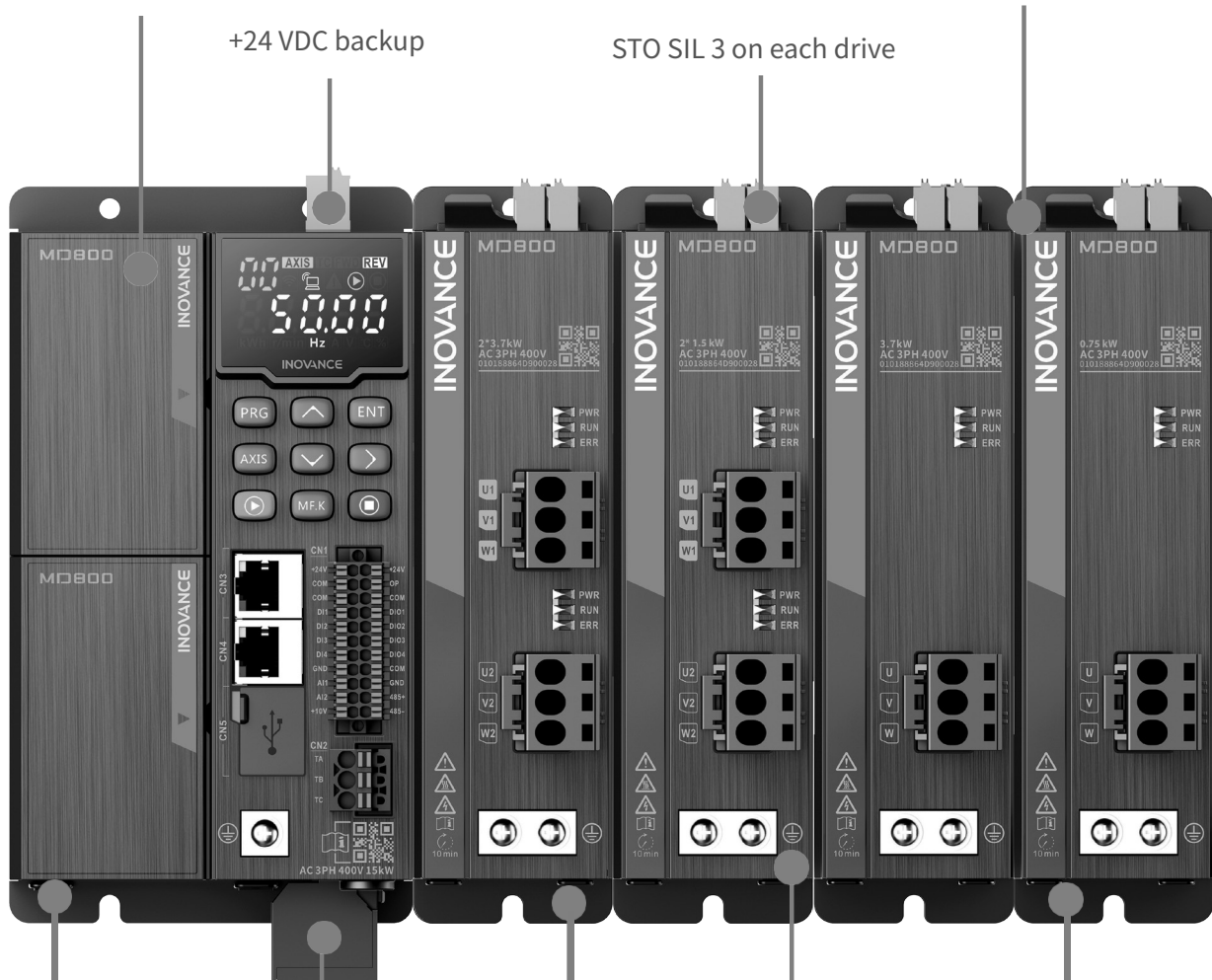
Designed for durability:

- High level conformal coating (3C3 & 3S2)
- Operating temp range: -20 to +60° C (de-rating > 50° C)
- Operating altitude: up to 4,000 m (de-rating > 1,000 m)
- Separate cooling channel for heatsink

size: W 300 mm x H 182 mm

Two option slots

Reduced running costs via energy saving common DC bus



+24 VDC backup

STO SIL 3 on each drive

Mains input terminal and optional dynamic braking terminals

Cable support bracket for EMC screen grounding (optional accessory)

Common DC bus rectifier -
 400 V (HD): 3.7 - 15 kW
 400 V (ND): 5.5 - 18.5 kW
 200 V (HD): 2.2 - 3.7 kW
 200 V (ND): 3 - 4.4 kW

Dual drive modules -
 400 V (HD): 0.4 - 3.7 kW
 400 V (ND): 0.75 - 5.5 kW
 200 V (HD): 0.2 - 2.2 kW
 200 V (ND): 0.4 - 3.7 kW

Single drive modules -
 400 V (HD): 0.4 - 7.5 kW
 400 V (ND): 0.75 - 11 kW
 200 V (HD): 0.2 - 2.2 kW
 200 V (ND): 0.4 - 3.7 kW

ACCESSORIES

Model	Description
IO-M1	I/O expansion card: 8 DI, 8 DO, 2 AI
IO-R1	Relay expansion card: 8 relays with normally open contact
IO-R2	Relay expansion card: 4 relays with changeover contact
SI-PN1	PROFINET communication card
SI-ECAT1	EtherCAT communication card
SI-EN	Ethernet IP communication card
SOP-20	Remote LCD keypad (inc. 3 m cable)
MD800-PBJ100M-W1	Rectifier unit cable support bracket
MD800-PBJ50M-W1	Single or dual drive unit cable support bracket
MD800-AZB1	Mounting plate for easy assembly of an MD800 set in the electrical panel

· 3 ph 400 V input reactors available on request (3% impedance) For more information, please contact our local offices.

SINGLE DRIVE UNITS

Power (kW)		Model	Output AC current (A)		STO function
HD	ND		HD	ND	
400 V, DC supply voltage: 510-720 VDC					
0.4	0.75	MD800-1-4T1R8	1.8	2.1	No
0.75	1.5	MD800-1-4T3R4	3.4	4.6	
1.5	2.2	MD800-1-4T4R8	4.8	5.4	
2.2	3.7	MD800-1-4T5R5	5.5	9	
3.7	5.5	MD800-1-4T9R5	9.5	13	
5.5	7.5	MD800-1-4T13	13	17	
7.5	11	MD800-1-4T17	17	21	
0.4	0.75	MD800-1-4T1R8S	1.8	2.1	Yes
0.75	1.5	MD800-1-4T3R4S	3.4	4.6	
1.5	2.2	MD800-1-4T4R8S	4.8	5.4	
2.2	3.7	MD800-1-4T5R5S	5.5	9	
3.7	5.5	MD800-1-4T9R5S	9.5	13	
5.5	7.5	MD800-1-4T13S	13	17	
7.5	11	MD800-1-4T17S	17	21	
200 V, DC supply voltage: 270-360 VDC					
0.2	0.4	MD800-1-2T1R7	1.7	1.9	No
0.4	0.75	MD800-1-2T3	3	3.5	
0.75	1.5	MD800-1-2T5	5	8	
1.5	2.2	MD800-1-2T8	8	9.6	
2.2	3.7	MD800-1-2T11	11	17.6	
0.2	0.4	MD800-1-2T1R7S	1.7	1.9	Yes
0.4	0.75	MD800-1-2T3S	3	3.5	
0.75	1.5	MD800-1-2T5S	5	8	
1.5	2.2	MD800-1-2T8S	8	9.6	
2.2	3.7	MD800-1-2T11S	11	17.6	
3.7	5.5	MD800-1-2T17S	17	21	

DUAL DRIVE UNITS

Power (kW)		Model	Output AC current (A)		STO function
HD	ND		HD	ND	
400 V, DC supply voltage: 510-720 VDC					
0.4	0.75	MD800-2-4T1R8	1.8	2.1	No
0.75	1.5	MD800-2-4T3R4	3.4	4.6	
1.5	2.2	MD800-2-4T4R8	4.8	5.4	
2.2	3.7	MD800-2-4T5R5	5.5	9	
3.7	5.5	MD800-2-4T9R5	9.5	13	
0.4	0.75	MD800-2-4T1R8S	1.8	2.1	Yes
0.75	1.5	MD800-2-4T3R4S	3.4	4.6	
1.5	2.2	MD800-2-4T4R8S	4.8	5.4	
2.2	3.7	MD800-2-4T5R5S	5.5	9	
3.7	5.5	MD800-2-4T9R5S	9.5	13	
200 V, DC supply voltage: 270-360 VDC					
0.2	0.4	MD800-2-2T1R7	1.7	1.9	No
0.4	0.75	MD800-2-2T3	3	3.5	
0.75	1.5	MD800-2-2T5	5	8	
1.5	2.2	MD800-2-2T8	8	9.6	
2.2	3.7	MD800-2-2T11	11	17.6	
0.2	0.4	MD800-2-2T1R7S	1.7	1.9	Yes
0.4	0.75	MD800-2-2T3S	3	3.5	
0.75	1.5	MD800-2-2T5S	5	8	
1.5	2.2	MD800-2-2T8S	8	9.6	
2.2	3.7	MD800-2-2T11S	11	17.6	

RECTIFIER UNITS

Power (kW)		Model	Built-in dynamic braking
HD	ND		
3 ph 400 VAC input			
3.7	5.5	MD800-0-4T12	No
7.5	11	MD800-0-4T22	
15	18.5	MD800-0-4T41	
3.7	5.5	MD800-0-4T12B	Yes
7.5	11	MD800-0-4T22B	
15	18.5	MD800-0-4T41B	
1 ph 200 VAC input			
2.2	3	MD800-0-2S24	No
3.7	4.4	MD800-0-2S40	
2.2	3	MD800-0-2S24B	Yes
3.7	4.4	MD800-0-2S40B	
3 ph 220 VAC input			
7.5	11	MD800-0-2T41B	Yes

EMC FILTERS

Category	Filter model	Matched rectifier model
EMC filters (To achieve C2 level)	FIL800-4T-045	MD800-0-4T12*
		MD800-0-4T22*
		MD800-0-4T41*
	FIL800-2S-045	MD800-0-2S24*
		MD800-0-2S40*

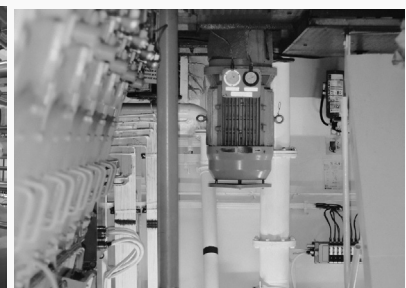
MD290 - Universal AC Drive

For Fan & Pump Application



FEATURES & FUNCTIONS

- Open loop control
- Communication options :
Modbus-RTU
PROFIBUS-DP
Canopen
CANLink
PROFINET
- Rotational speed tracking startup
- Intelligent energy conservation
- PID control function
- Multi-point voltage and magnetic flux setting
- Long service life
- Independent air duct design to resist all kinds of harsh polluted environment



SPECIFICATIONS

Single-phase 200–240 V

Voltage class		Single-phase 200–240 VAC				
Drive model: MD290-2SxxxB-INT		0.4GB	0.7GB	1.5GB	2.2GB	3.0GB
Input	Rated input voltage	Single-phase 200–240 VAC -15% to +10%				
	Rated input current [A]	5.4	8.2	14	23	27
	Power capacity [kVA]	1.4	2.2	3.7	6	7.2
	Rated input frequency	50/60 Hz ±5%				
Output	Applicable motor [kW]	0.4	0.75	1.5	2.2	3
	Output current [A]*2	2.3	4	7	9.6	12
	Max. output voltage Max.	Single-phase 200–240 VAC(proportional to input voltage)				
Braking resistor	Recommended power [kW]	0.043	0.065	0.097	0.121	0.152

Three phase 200V~240V P type

Voltage class		Three phase 200 to 240 Vac								
Drive model: MD290-2TxxxB-INT		0.7P	1.1P	1.5P	2.2P	3.7P	5.5P	7.5P	11P	15P
Input	Rated input voltage	Three phase 200 to 240 Vac -15% to +10%								
	Rated input current [A]	3.7	6.4	9.1	11.3	15.9	22.4	39.7	44	65.8
	Power capacity [kVA]	1.7	2.9	4.2	5.2	7.3	10.2	18.2	20.1	30.1
	Rated input frequency	50/60 Hz ±5%								
Output	Applicable motor [kW]	0.75	1.1	1.5	2.2	3.7	5.5	7.5	11	15
	Output current [A]*2	3.1	5.1	7.2	9	13	17	32	37	60
	Max. output voltage	Three phase 200 to 240 Vac (proportional to input voltage)								
Braking resistor	Recommended power [kW]	0.06	0.088	0.112	0.14	0.207	0.273	0.491	0.561	0.76

Voltage class		Three phase 200 to 240 Vac								
Drive model: MD290-2Txxx(B)-INT		15P-T	18.5P	22P	30P	37P	45P	55P	75P	
Input	Rated input voltage	Three phase 200 to 240 Vac -15% to +10%								
	Rated input current [A]	65.8	71	86	111	143	167	198	239	
	Power capacity [kVA]	30.1	32.5	39.3	50.8	65.4	76.4	90.5	109.3	
	Rated input frequency	50/60 Hz ±5%								
Output	Applicable motor [kW]	15	18.5	22	30	37	45	55	75	
	Output current [A]*2	60	75	91	112	150	176	210	253	
	Max. output voltage	Three phase 200 to 240 Vac (proportional to input voltage)								
Braking resistor	Recommended power [kW]	0.76	0.85	1.04	1.22	1.61	1.91	2.22	2.67	

Three phase 200V~240V G type

Voltage class		Three phase 200 to 240 Vac					
Drive model: MD290-2TxxxB-INT		0.4G	0.7G	1.1G	1.5G	2.2G	3.7G
Input	Rated input voltage	Three phase 200 to 240 Vac -15% to +10%					
	Rated input current [A]	2.4	4.6	6.3	9	11.4	16.7
	Power capacity [kVA]	1.1	2.1	2.9	4.1	5.2	7.6
	Rated input frequency	50/60 Hz \pm 5%					
Output	Applicable motor [kW]	0.4	0.75	1.1	1.5	2.2	3.7
	Output current [A]*2	2.1	3.8	5.1	7.2	9	13
	Max. output voltage	Three phase 200 to 240 Vac (proportional to input voltage)					
Braking resistor	Recommended power [kW]	0.046	0.068	0.081	0.109	0.138	0.201

Voltage class		Three phase 200 to 240 Vac					
Drive model: MD290-2TxxxB-INT		5.5G	7.5G	11G	11G-T	15G	18.5G
Input	Rated input voltage	Three phase 200 to 240 Vac -15% to +10%					
	Rated input current [A]	32.2	41.3	59	51.3	57	69
	Power capacity [kVA]	14.7	18.9	27	27	26.1	31.6
	Rated input frequency	50/60 Hz \pm 5%					
Output	Applicable motor [kW]	5.5	7.5	11	11	15	18.5
	Output current [A]*2	25	32	45	45	60	75
	Max. output voltage	Three phase 200 to 240 Vac (proportional to input voltage)					
Braking resistor	Recommended power [kW]	0.355	0.454	0.551	0.551	0.694	0.815

Voltage class		Three phase 200 to 240 Vac				
Drive model: MD290-2Txxx(B)-INT		22G	30G	37G	45G	55G
Input	Rated input voltage	Three phase 200 to 240 Vac -15% to +10%				
	Rated input current [A]	89	106	139	164	196
	Power capacity [kVA]	40.7	48.5	63.6	75	89.6
	Rated input frequency	50/60 Hz \pm 5%				
Output	Applicable motor [kW]	22	30	37	45	55
	Output current [A]*2	91	112	150	176	210
	Max. output voltage	Three phase 200 to 240 Vac (proportional to input voltage)				
Braking resistor	Recommended power [kW]	1.01	1.21	1.57	1.81	2.14

Three phase 380V~480V G type

Voltage class		Three phase 380 to 480 Vac					
Drive model: MD290-2Txxx(B)-INT		0.4G	0.7G	1.1G	1.5G	2.2G	3.0G
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
	Power capacity [kVA]	2	2.8	4.1	5	6.7	9.5
	Rated input frequency	50/60 Hz \pm 5%					
Output	Applicable motor [kW]	0.4	0.75	1.1	1.5	2.2	3
	Applicable motor[HP]	0.5	1	1.5	2	3	4
	Output current [A]*2	1.5	2.1	3.1	3.8	5.1	7.2
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)					
Braking resistor	Recommended power [kW]	0.039	0.046	0.057	0.068	0.081	0.109

Voltage class		Three phase 380 to 480 Vac					
Drive model: MD290-2Txxx(B)-INT		3.7G	5.5G	7.5G	11G	15G	18.5G
Input	Rated input voltage	Three phase 380 to 480 Vac -15% to +10%					
	Rated input current [A]	11.4	16.7	21.9	32.2	41.3	49.5
	Power capacity [kVA]	12	17.5	22.8	33.4	42.8	45
	Rated input frequency	50/60 Hz \pm 5%					
Output	Applicable motor [kW]	3.7	5.5	7.5	11	15	18.5
	Applicable motor[HP]	5	7.5	10	15	20	-
	Output current [A]*2	9	13	17	25	32	37
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)					
Braking resistor	Recommended power [kW]	0.138	0.201	0.24	0.355	0.454	0.478

Voltage class		Three phase 380 to 480 Vac					
Drive model: MD290-2Txxx(B)-INT		18.5G-T	22G	22G-T	30G	37G	45G
Input	Rated input voltage	Three phase 380 to 480 Vac -15% to +10%					
	Rated input current [A]	43.4	59	51.3	57	69	89
	Power capacity [kVA]	45	54	54	52	63	81
	Rated input frequency	50/60 Hz \pm 5%					
Output	Applicable motor [kW]	18.5	22	22	30	37	45
	Applicable motor[HP]	-	-	-	-	-	-
	Output current [A]*2	37	45	45	60	75	91
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)					
Braking resistor	Recommended power [kW]	0.478	0.551	0.551	0.694	0.815	1.01

Voltage class		Three phase 380 to 480 Vac					
Drive model: MD290-2Txxx(B)-INT		55G	75G	90G	110G	132G	160G
Input	Rated input voltage	Three phase 380 to 480 Vac -15% to +10%					
	Rated input current [A]	106	139	164	196	240	287
	Power capacity [kVA]	97	127	150	179	220	263
	Rated input frequency	50/60 Hz \pm 5%					
Output	Applicable motor [kW]	55	75	90	110	132	160
	Applicable motor[HP]	-	-	-	-	-	-
	Output current [A]*2	112	150	176	210	253	304
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)					
Braking resistor	Recommended power [kW]	1.21	1.57	1.81	2.14	2.85	3.56

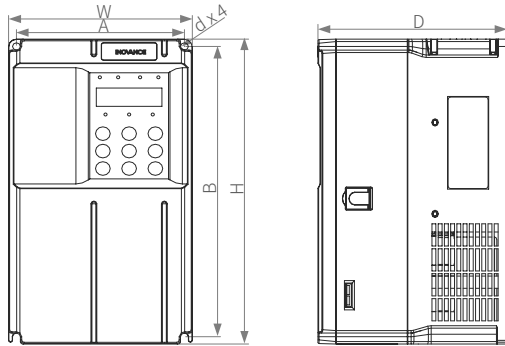
Three phase 380V~480V P type

Voltage class		Three phase 380 to 480 Vac					
Drive model: MD290-2Txxx(B)-INT		0.7P	1.1P	1.5P	2.2P	3.0P	3.7P
Input	Rated input voltage	Three phase 380 to 480 Vac -15% to +10%					
	Rated input current [A]	2.5	3.7	4.6	6.4	9.1	11.3
	Power capacity [kVA]	2.3	3.4	4.2	5.9	8.3	10.4
	Rated input frequency	50/60 Hz \pm 5%					
Output	Applicable motor [kW]	0.75	1.1	1.5	2.2	3.0	3.7
	Applicable motor[HP]	1	1.5	2	3	4	5
	Output current [A]*2	2.1	3.1	3.8	5.1	7.2	9.0
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)					
Braking resistor	Recommended power [kW]	0.048	0.06	0.068	0.088	0.112	0.14

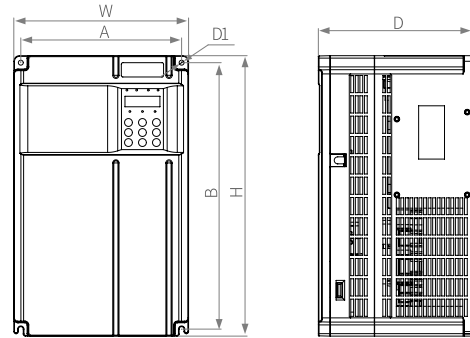
Voltage class		Three phase 380 to 480 Vac					
Drive model: MD290-2Txxx(B)-INT		5.5P	7.5P	11P	15P	18.5P	22P
Input	Rated input voltage	Three phase 380 to 480 Vac -15% to +10%					
	Rated input current [A]	15.9	22.4	32.9	39.7	44	59
	Power capacity [kVA]	15.5	20.5	30.2	38.2	44.4	54
	Rated input frequency	50/60 Hz \pm 5%					
Output	Applicable motor [kW]	5.5	7.5	11	15	18.5	22
	Applicable motor[HP]	7.5	10	15	20	25	-
	Output current [A]*2	13	17	25	32	37	45
	Max. output voltage	Three phase 380 to 480 Vac (proportional to input voltage)					
Braking resistor	Recommended power [kW]	0.207	0.273	0.388	0.491	0.561	0.616

DIMENSIONS

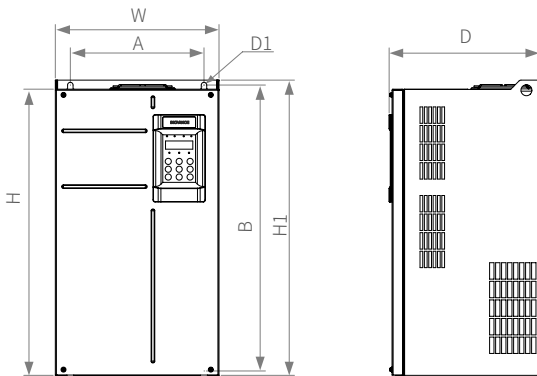
MD290T0.4G/0.7PB-INT to MD290T18G/18.5PB-INT
 MD290-2T0.4G/0.7PB-INT to MD290-2T7.5G/11PB-INT



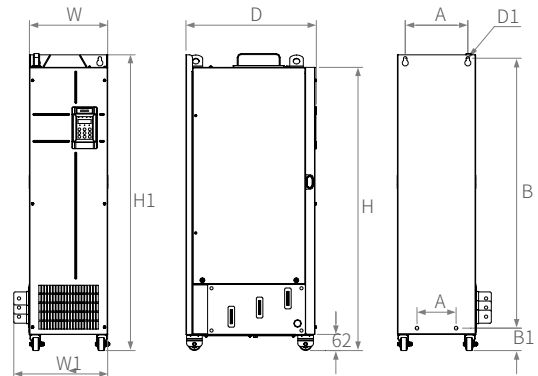
MD290T18.5G/22P(B)-INT to MD290T37G/45P(B)-INT
 MD290-2T11G/15P(B)-INT to MD290-2T18.5G/22P(B)-INT



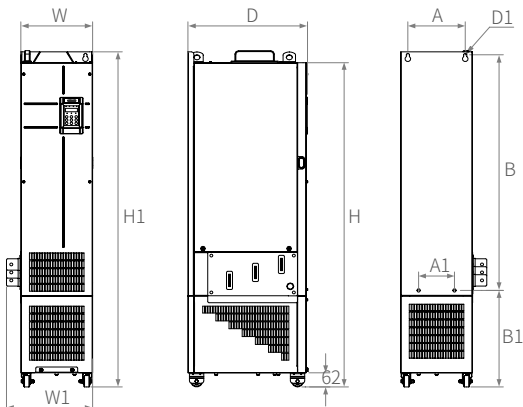
MD290T45G/55P(B)-INT to MD290T160G/200P-INT
 MD290-2T22G/30P(B)-INT to MD290-2T55G/75P-INT



MD290T200G-INT to MD290T450G-INT
 MD290-2T220P-INT to MD290T500P-INT



MD290T200G-L-INT to MD290T450G-L-INT
 MD290-220P-L-INT to MD290T500P-L-INT



MD290 model	Frame size	Dimensions(mm)										Mass (kg)
		A	A1	B	B1	H	H1	W	W1	D	D1	
MD290T0.4G/0.7PB-INT, MD290T0.7G/1.1PBINT MD290T11G/1.5PB-INT, MD290T1.5G/2.2PB-INT MD290T2.2G/3.0PB-NT, MD290T3.0G/3.7PB-INT MD290-2T0.4G/0.7PB-INT, MD290-2T0.7G/1.1PB-INT MD290-2T11G/1.5PB-INT, MD290-2T1.5G/2.2PB-INT	T1	119	/	189	/	200	/	130	/	152	φ5	1.6
MD290T3.7G/5.5PB-INT, MD290T5.5G/7.5PB-INT MD290-2T2.2G/3.7PB-INT, MD290-2T3.7G/5.5PB-INT	T2	119	/	189	/	200	/	130	/	162	φ5	2.0
MD290T7.5G/11PB-INT,MD290T11G/15PB-INT MD290-2T5.5G/7.5PB-INT	T3	128	/	238	/	250	/	140	/	170	φ6	3.3
MD290T15G/18.5PB-NT, MD290-2T7.5G/11PB-INT	T4	166	/	266	/	280	/	180	/	170	φ6	4.3
MD290T18.5G/22P(B)INT, MD290T22G/30P(B)-NT MD290-2T11G/15P(B)-NT	T5	195	/	335	/	350	/	210	/	192	φ6	10
MD290T30G/37P(B)-INT, MD290T37G/45P(B)-INT MD290-2T15G/18.5P(B)-INT, MD290-2T18.5G/22P(B)-INT	T6	230	/	380	/	400	/	250	/	220	φ7	17.5
MD290T45G/55P(B)-INT, MD290T55G/75P(B)-INT MD290-2T22G/30P(B)-INT, MD290-2T30G/37P(B)-INT	T7	245	/	523	/	525	542	300	/	275	φ10	35
MD290T75G/90P(B)-INT, MD290T90G/110PNT MD290T110G/132PINT, MD290-2T37G/45P(B)-INT MD290-2T45G/55P-NT, MD290-2T55G/75P-INT	T8	270	/	560	/	554	580	338	/	315	φ10	51.5
MD290T132G/160P-INT, MD290T160G/200P-INT	T9	320	/	890	/	874	915	400	/	320	φ10	85
MD290T200G-INT, MD290T220P-INT MD290T220G-INT, MD290T250P-INT MD290T280PINT	T10	240	150	1035	86	1086	1134	300	360	500	φ13	110
MD290T200G-L-INT, MD290T220P-L-INT MD290T220G-L-INT, MD290T250P-L-INT MD290T280P-L-INT		240	150	1035	424	1424	1472	300	360	500	φ13	160
MD290T250G-NT, MD290T280G-INT, MD290T315P-NT	T11	225	185	1175	97	1248	1284	330	390	545	φ13	155
MD290T250G-LINT, MD290T280G-L-INT MD290T315PLINT, MD290T355P-LINT MD290T315GINT, MD290T355G-NT		225	185	1175	435	1586	1622	330	390	545	φ13	215
MD290T315GINT, MD290T355G-NT, MD290T400PINT MD290T400G-INT, MD290T450P-NT, MD290T450G-INT, MD290T500P-INT	T12	200	200	1280	101	1355	1405	340	400	545	φ16	185
MD290T315G-L-INT, MD290T355G-L-INT MD290T400P-L-INT, MD290T400G-L-INT MD290T450P-L-INT, MD290T450G-L-INT MD290T500P-L-INT		200	200	1280	432	1683	1733	340	400	545	φ16	245

MD200 AC Drive

Open loop, general purpose, compact drive

Features & Functions

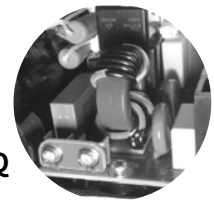
- Open loop V/F & Sensorless Vector Control
- Starting torque 150% at 3 Hz in SVC mode
- Modbus RTU or CANlink¹
- Automatic torque boost
- Slip compensation
- Easy startup with simplified parameters
- 2 Independent S-ramps
- Flexible programmable I/Os
- Variable DC injection braking
- Comprehensive diagnostics
- Output frequency: 500 Hz
- Built-in dynamic braking unit

NEW

Wide operating voltage
 Single-phase 200 to 240 Vac
 0.4 to 2.2 kW
 Three-phase 380 to 480 Vac
 0.4 to 3.7 kW



E467465
IND.CONT.EQ



NEW

Internal EMC filter (Category C3)²

Complies with EN61800-3
 Category C2
 2nd Environment
 (with external EMC filter)

NEW

PM motor control¹

Operation in high ambient
 temperatures 50°C
 Please note: If operating above 40 °C,
 derating is required

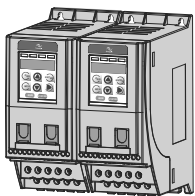
Enhanced reliability and
 protection against humidity and
 dust pollution with class 2 conformal
 coating (resistant to 3C3 and 3S2
 environments).

Onboard comms
 Modbus RTU
 (optional CANlink⁴)

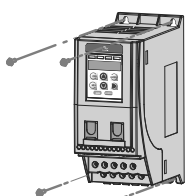
PC-Based
 software:
 simplified
 start up &
 backup³

NEW

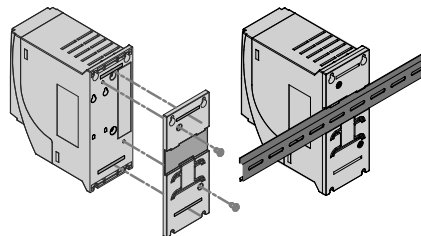
Flexible installation modes



Side-by-Side



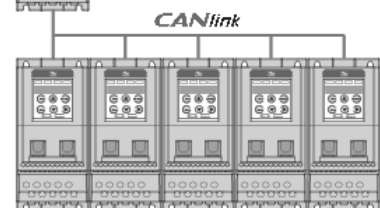
Wall Mounted



DIN rail mounted



CANlink speed sync.



Notes:

- *1 Special versions. Contact your local Inovance Representative.
- *2 Only single phase supply models.
- *3 PC comms kit is required (optional accessory).
- *4 CANlink is Inovance's proprietary serial comms.

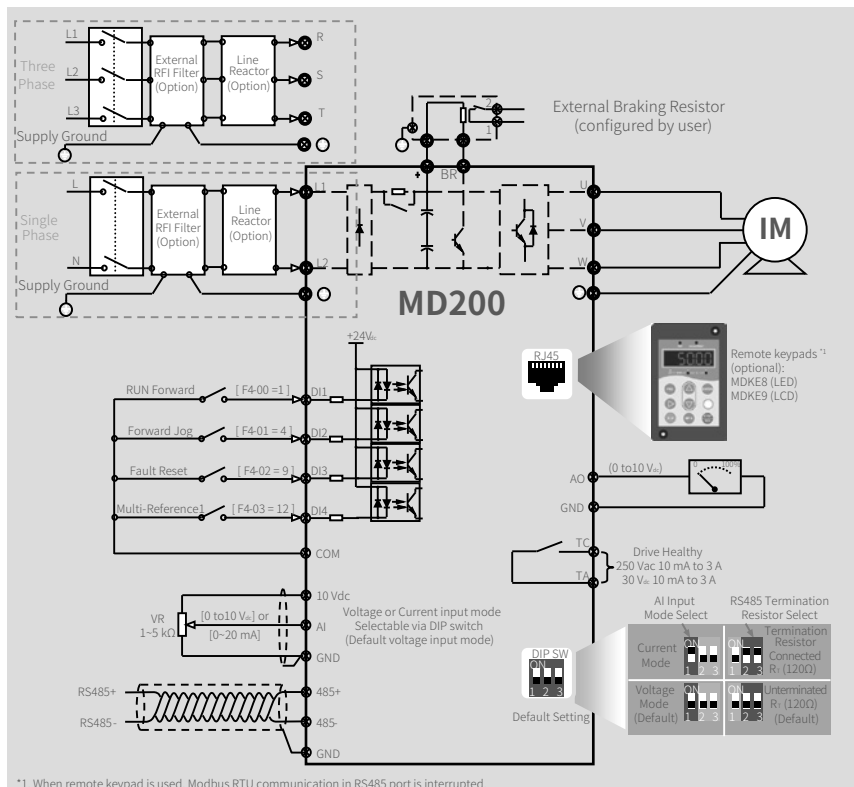
General Specifications

Voltage Class		Single-phase 220 Vac				Three-phase 400 Vac					
Drive Model: MD200xxxB-INT		S0.4B	S0.75B	S1.5B	S2.2B	T0.4B	T0.75B	T1.5B	T2.2B	T3.7B	
Dimensions	Height Width Depth	[H1]: 180 mm [W]: 75 mm [D]: 145 mm				[H1]: 180 mm [W]: 75 mm [D]: 145 mm					
Drive Input	Rated input voltage	Single-phase 200 to 240 Vac -15% to +10%				Three-phase 380 to 480 Vac -15% to +10%					
	Rated input current [A]	6.5	11.0	18.0	27.0	2.6	4.5	5.5	6.5	11	
	Power capacity [kVA]	1.7	3.0	4.8	7.1	1	1.5	3.0	4.0	5.9	
	Rated input frequency	50/60 Hz ±5% (47.5 to 63 Hz)									
Drive Output	Applicable motor	[kW]	0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	3.7
		[HP]	0.5	1	2	3	0.5	1	2	3	5
	Output Current [A] ^{*5}	2.6	4.6	8	11	1.8	3.4	4.8	5.5	9.5	
	Overload Capacity	150% for 60 s & 180% for 3 s									
	Max. output voltage	200 to 240 Vac (proportional to input voltage)				380 to 480 Vac (proportional to input voltage)					
Max. output frequency	500 Hz										
Braking Resistor	Recommended power [W]	80	80	100	100	150	150	250	300	400	
	Minimum resistance [Ω]	>47.1	>47.1	>31.4	>31.4	>64.3	>64.3	>64.3	>64.3	>64.3	
Enclosure ^{*6}		IP20									

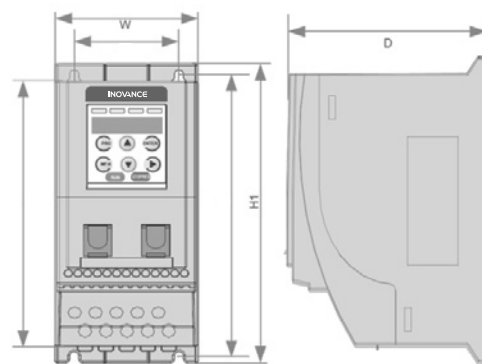
*5 Rated output current at a carrier frequency of 6 kHz.

*6 All units are fan cooled.

General Connection Diagram



Dimensions



Remote Keypads (optional)



Model: MDKE9
Dimensions: 123 H x 72 W x 26.4 D (mm)
IP Rating: IP20
Matching cable model:
 MDCAB 3.0 m (included)



Model: MDKE8 (LED type)
Dimensions: 116 H x 76 W x 40 D (mm)
IP Rating: IP20
Matching cable model:
 MDCAB 3.0 m (included)
 Potentiometer (single turn)

INOVANCE



บริษัท นานตีอินเตอร์เทรด จำกัด
NANDEE INTER-TRADE CO., LTD.

314, 316, 318, 320, 322 ซอยจันทน์ 32 ถนนจันทน์ แขวงทุ่งวัดดอน เขตสาทร กทม. 10120

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