

MD290 AC Drive

High Performance General Purpose
Open Loop

Features & Functions

- Open loop V/f
- Communication:
 - Modbus-RTU
 - CANlink
 - PROFIBUS-DP
 - CANopen
- Automatic torque boost
- Slip compensation
- Simplified parameter for easy start up
- 4-independent S-ramps
- Flexible programmable I/O connection
- User programmable function
- Variable DC-injection braking
- Comprehensive trip diagnostics
- Output frequency 500Hz

NEW

Wide operating voltage
Three Phases 380-480Vac
18.5 ~ 500kW

CE



NEW
 UL US
 LISTED
 E467465

IND.CONT.EQ.

Operation in high
ambient temperature
 45°C_{avn}

NEW

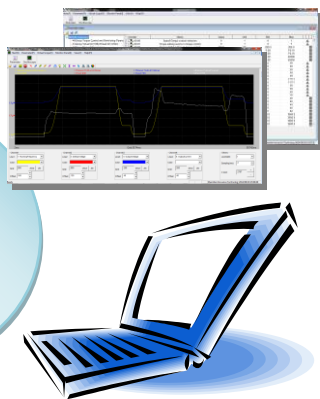
AC output reactor
for long motor
cable



NEW

Enhanced reliability
Protection against
humidity and
pollution dust

PC-Based
Software
simplified
start up &
backup



PC tool kit hardware (optional)

Built-in DC reactor
EN61800-3 Category C2
2nd Environment
(With external filter)

General Specifications

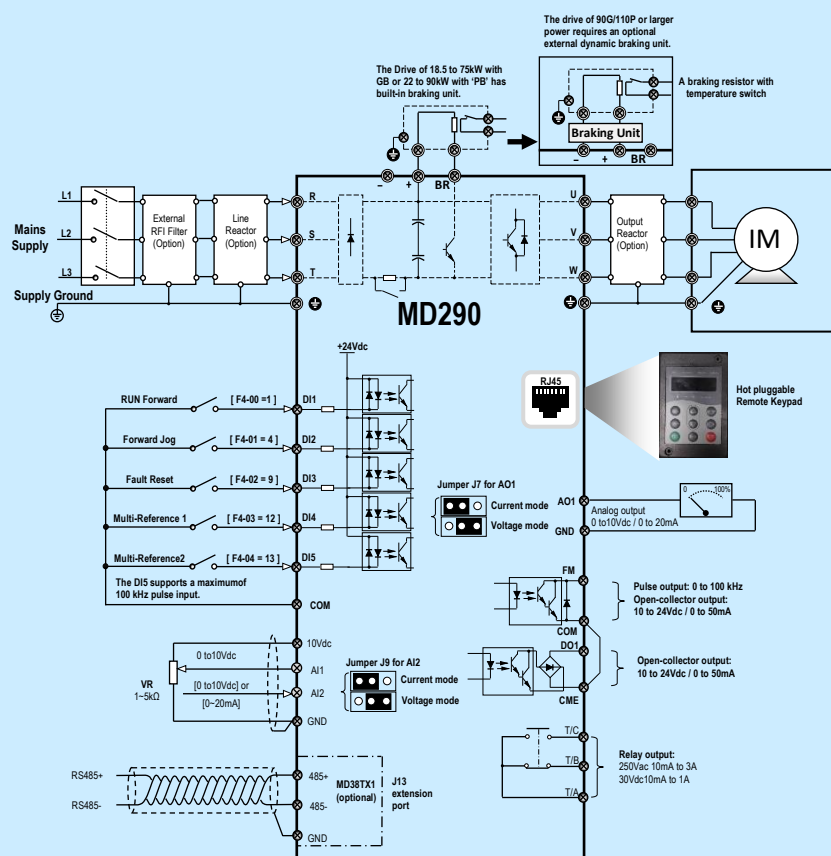
Voltage class		Three Phase 380- 480Vac										
Drive model: MD290TxxG/xxP-INT		18.5G/22P	22G/30P	30G/37P	37G/45P	45G/55P	55G/75P	75G/90P	90G/110P	110G/132P	132G/160P	160G/200P
Frame size		T5		T6		T7		T8			T9	
Drive Input	Rated input voltage	Three Phase 380 to 480Vac, -15% to +10%										
	Rated input current, [A]	49.5/59	59/65.8	57/71	69/86	89/111	106/143	139/167	164/198	196/239	240/295	287/359
	Power capacity, [kVA]	54	60	65	79	102	131	153	181	219	270	328
	Rated input frequency	50/60 Hz, ±5%										
Drive Output	Applicable motor [kW]	18.5/22	22/30	30/37	37/45	45/55	55/75	75/90	90/110	110/132	132/160	160/200
	Output current ,[A]*	37/45	45/60	60/75	75/91	91/112	112/150	150/176	176/210	210/253	253/304	304/377
	Default carrier frequency, [kHz]	6	6	6	5	5	4	3	3	3	3	3
	Overload capacity	150% for G type and 110% for P type, 60 Sec										
	Max. output voltage	Three Phase 380Vac to 480Vac (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
Enclosure		IP 20										

Voltage class		Three Phase 380- 480Vac															
Drive Model: MD290Txxx (-L)**-INT		200G	220P	220G	250P	250G	280P	280G	315P	315G	355P	355G	400P	400G	450P	450G	500P
Frame size		T10				T11				T12							
Drive Input	Rated input voltage	Three Phase 380 to 480Vac, -15% to +10%															
	Rated input current, [A]	365	410	410	456	441	507	495	559	565	624	617	708	687	782	782	840
	Power capacity, [kVA]	334	375	375	417	404	464	453	511	517	571	565	647	629	715	716	768
	Rated input frequency	50/60 Hz, ±5%															
Drive Output	Applicable motor [kW]	200	220	220	250	250	280	280	315	315	355	355	400	400	450	450	500
	Output current ,[A]*	377	426	426	465	465	520	520	585	585	650	650	725	725	820	820	880
	Default carrier frequency, [kHz]	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	Overload capacity	150% for G type and 110% for P type, 60 Sec (130% for MD290T450G (-L))															
	Max. output voltage	Three Phase 380Vac to 480Vac (Proportional to input voltage)															
	Max. output frequency	500 Hz															
Braking Resistor	Recommended power, [kW]	38	38	42	42	48	48	54	54	60	60	69	69	78	78	87	87
	Recommended resistance, [Ω]	2.9	2.9	2.7	2.7	2.3	2.3	2.1	2.1	1.9	1.9	1.7	1.7	1.5	1.5	1.3	1.3
Enclosure		IP 00															

*Default carrier switching frequency at rated output current.

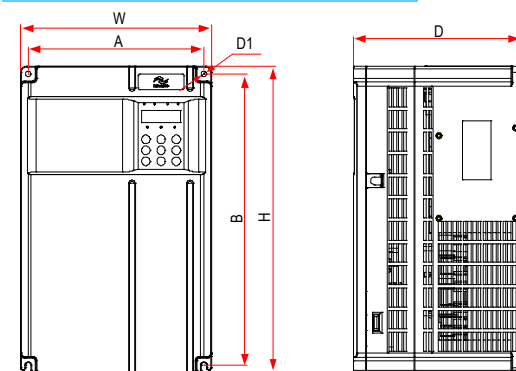
** Model name with '-L' means with the built-in AC output reactor and cabinet.

General Wiring Diagram

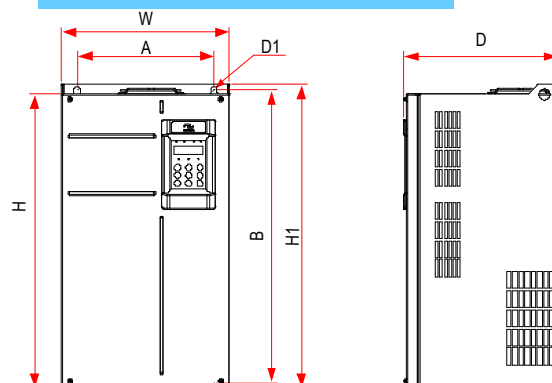


Dimensions

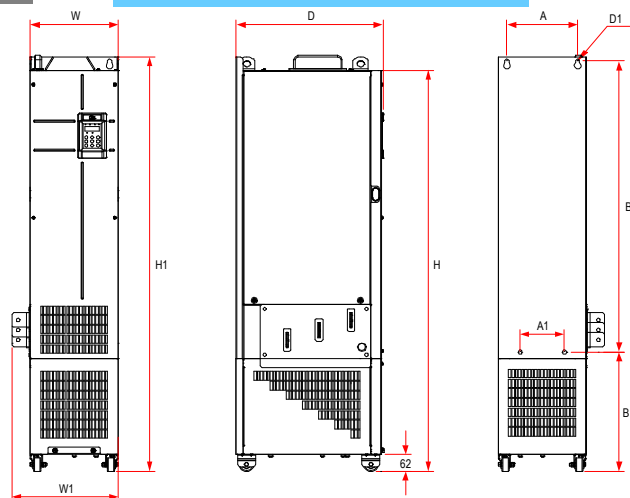
MD290T18.5G/22P-INT to MD290T37G/45P-INT



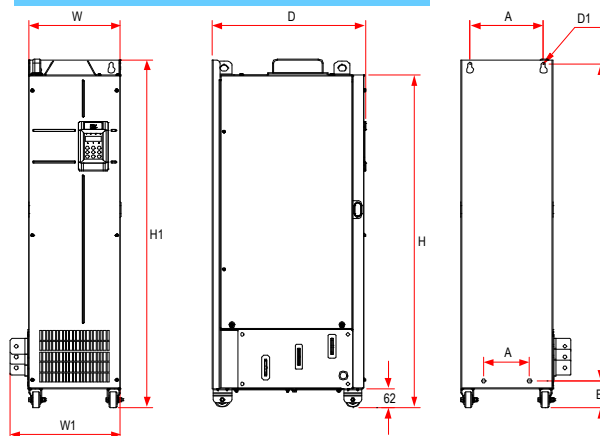
MD290T45G/55P-INT to MD290T160G/200P-INT



MD290T200G-L-INT to MD290T500P-L-INT



MD290T200G-INT to MD290T500P-INT

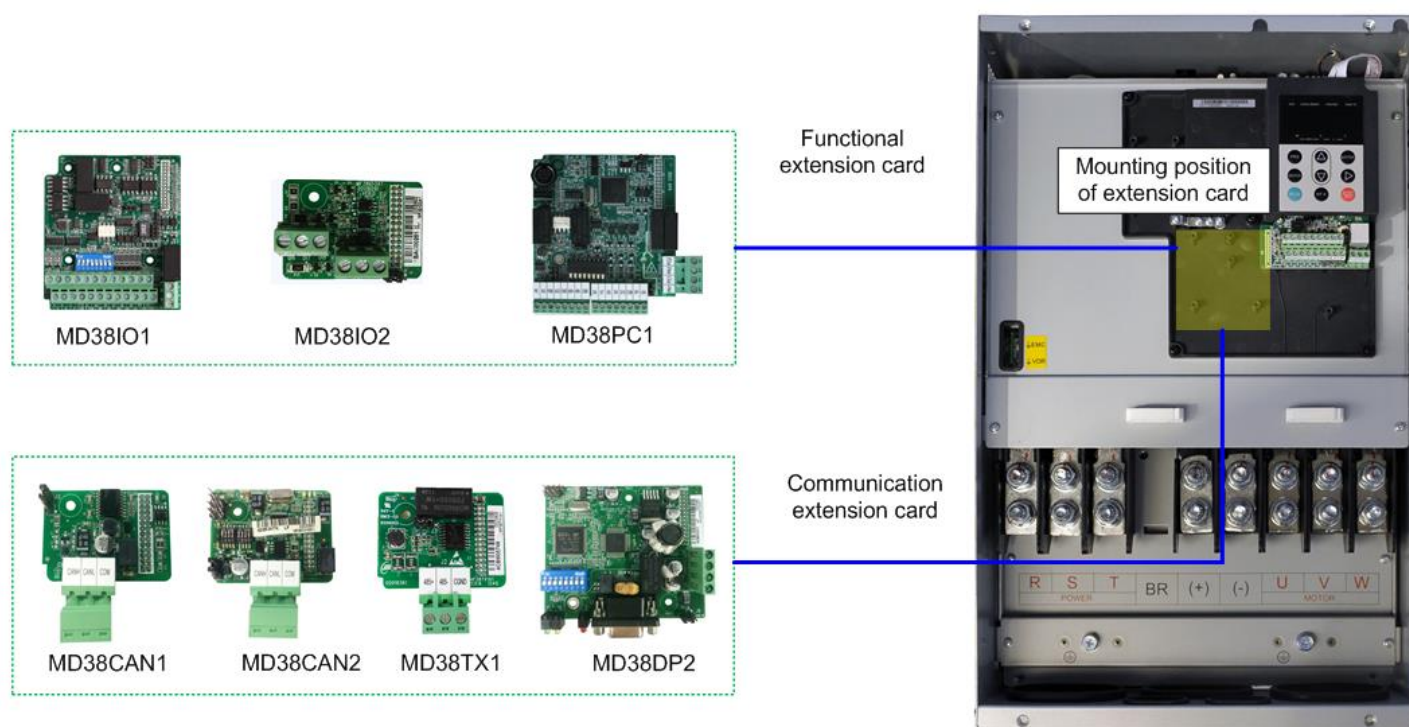


MD290 Model	Frame size	Dimensions (mm)										Weight (kg)
		A	A1	B	B1	H	H1	W	W1	D	D1	
MD290T18.5G/22P-INT, MD290T22G/30P-INT	T5	195	/	335	/	350	/	210	/	192	Ø6	9.1
MD290T30G/37P-INT, MD290T37G/45P-INT	T6	230	/	380	/	400	/	250	/	220	Ø7	17.5
MD290T45G/55P-INT, MD290T55G/75P-INT	T7	245	/	523	/	525	542	300	/	275	Ø10	35
MD290T75G/90P-INT, MD290T90G/110P-INT, MD290T110G/132P-INT	T8	270	/	560	/	554	580	338	/	315	Ø10	51.5
MD290T132G/160P-INT, MD290T160G/200P-INT	T9	320	/	890	/	874	915	400	/	320	Ø10	85
MD290T200G-INT, MD290T220P-INT, MD290T200G-INT, MD290T250P-INT	T10	240	150	1035	86	1086	1134	300	360	500	Ø13	110
MD290T200G-L-INT, MD290T220P-L-INT, MD290T200G-L-INT, MD290T250P-L-INT		240	150	1035	424	1424	1472	300	360	500	Ø13	160
MD290T250G-INT, MD290T280P-INT, MD290T280G-INT, MD290T315P-INT	T11	225	185	1175	97	1248	1284	330	390	545	Ø13	155
MD290T250G-L-INT, MD290T280P-L-INT, MD290T280G-L-INT, MD290T315P-L-INT		225	185	1175	435	1586	1622	330	390	545	Ø13	215
MD290T315G-INT, MD290T355P-INT, MD290T355G-INT, MD290T400P-INT, MD290T400G-INT, MD290T450P-INT, MD290T450G-INT, MD290T500P-INT	T12	240	200	1280	101	1355	1405	340	400	545	Ø16	185
MD290T315G-L-INT, MD290T355P-L-INT, MD290T355G-L-INT, MD290T400P-L-INT, MD290T400G-L-INT, MD290T450P-L-INT, MD290T450G-L-INT, MD290T500P-L-INT		240	200	1280	432	1683	1733	340	400	545	Ø16	245

Accessories List

Model	Function description	Part no.
MDBUN& MDBU	External braking unit of 90kW and larger power range.	--
MD32NKE1	Remote LED keypad.	01013061
MD38IO1	I/O extension card 1, provides the following extension terminals: 5x DI, 1x AI, 1x relay output, 1x DO, 1x AO, Modbus-RTU and CANlink.	01013098
MD38IO2	I/O extension card 2, provides 3x extra DI terminals.	01013103
MD38PC1	User programmable extension card, completely compatible with the Inovance PLC.	01013104
MD38CAN1	CANlink communication card	01013100
MD38CAN2	CANopen communication card	01013102
MD38TX1	Modbus communication card	01013112
MD38DP2	Profibus-DP communication card	01013144

The extension cards and the mounting positions



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