INOVANCE

Крановый привод CS710

Преобразователь частоты с открытым и замкнутым контуром

Широкий диапазон рабочего напряжения 3-фазное 380–480 В AC 0,4–450 кВт

Работа при высокой температуре окружающей среды до 50 °C*1

Встроенный DC-реактор (400 В: от 18,5 кВт)

Повышенная надежность и увеличенный срок службы:
- компоненты повышенного класса
- защитное покрытие для сред 3C2 и 3S2

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Функции и возможности

- Управление V/F и SVC без обратной связи
- Векторное управление FVC с обратной связью
- Пусковой момент
  - 150% при 0,25 Гц (SVC)
  - 180% при 0 Гц (FVC)
- Интерфейсы связи:
  - Modbus-RTU
  - PROFIBUS-DP
  - CANopen
  - CANlink
  - PROFINET
- Компенсация скольжения
- Упрощенные параметры для быстрого запуска
- Выбор линейного или S-образного профиля разгона/торможения
- Гибко программируемые входы/выходы
- Пользовательские программируемые функции
- Регулируемое торможение впрыском постоянного тока
- Расширенная диагностика аварий
- Встроенный блок динамического торможения (до 75 кВт включительно)
- Специализированные функции для кранов:
  - Логика управления тормозом
  - Функция легкой нагрузки
  - Электронный мотор-потенциометр
  - Защита от перегрузки
  - Предварительное возбуждение
  - Входы концевых выключателей
  - Подавление раскачивания (опционально)





ПО для ПК: упрощенный запуск и резервное копирование*2

Варианты сквозного монтажа (0,4–160 кВт)

*1 При работе выше 40 °C требуется снижение номинальной мощности.

*2 Требуется комплект связи с ПК (опциональный аксессуар).

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General specifications

Voltage class		Three-phase 380 to 480 Vac										
Drive model: CS710-4T**xxxGx**-INT		**0.4GB**	**0.75GB**	**1.1GB**	**1.5GB**	**2.2GB**	**3.0GB**	**3.7GB**	**5.5GB**	**7.5GB**	**11GB**	**15GB**
Frame size		**T1**[*1]						**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	0.7	1.1	1.5	2.2	3	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	13	17	25	32
	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)**										
	Max. output frequency	**150 Hz**										
Braking resistor	Recommended power **[kW]**	0.2	0.35	0.55	0.75	1.1	1.5	1.8	2.7	3.7	5.5	7.5
	Minimum resistance **[Ω]**	96	96	96	96	64	64	32	32	32	20	20
	Braking unit	**Built-in**										
	Enclosure	**IP 20**										

Voltage class		Three-phase 380 to 480 Vac										
Drive model: CS710-4T**xxxGx**-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]**[*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)**										
	Max. output frequency	**150 Hz**										
Braking resistor	Recommended power **[kW]**	9	11	15	18	22	27	37	45	55	66	80
	Minimum resistance **[Ω]**	24	24	19.2	14.8	12.8	9.6	6.8	2.5	2.5	2.5	2.5
	Braking unit	**Built-in**							**MDBUN-200-5T**			
	Enclosure	**IP20**										

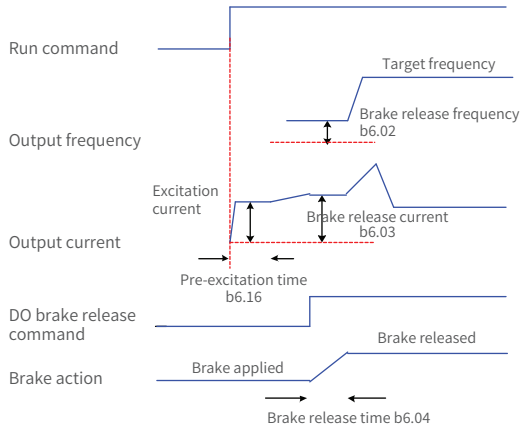
*1 0.75/1.5/2.2/3.7/5.5 kW are the preferred stocking ratings. To learn more, please get in touch with your local Inovance representative.

*2 Rated output current at default carrier frequency.

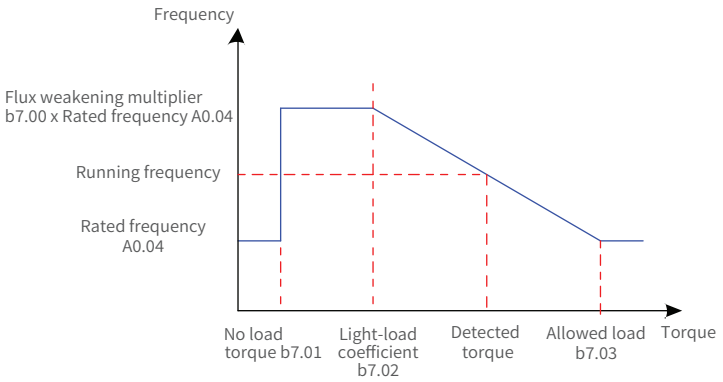
General specifications

	Voltage class	**Three-phase 380 to 480 Vac**						
	Drive model: CS710-4T**xxxG**-INT*1	**200G**	**220G**	**250G**	**280G**	**315G**	**355G**	**400G**
	Frame size	**T10**		**T11**		**T12**		
Drive input	Rated input voltage	**Three-phase 380 to 480 Vac -15% to +10%**						
Drive input	Rated input current **[A]**	365	410	441	495	565	615	687
Drive input	Rated input frequency	**50/60 Hz ±5%**						
Drive output	Applicable motor **[kW]**	200	220	250	280	315	355	400
Drive output	Output current **[A]***2	377	426	465	520	585	650	725
Drive output	Default carrier frequency **[kHz]**	**1.0-6.0 kHz**						
Drive output	Overload capacity	**150% for 60 s**						
Drive output	Max. output voltage	**Three-phase 380 to 480 Vac (proportional to input voltage)**						
Drive output	Max. output frequency	**500 Hz**						
Braking resistor	Recommended power **[kW]**	50 x2	55 x2	63 x2	70 x2	80 x2	60 x3	67 x3
Braking resistor	Minimum resistance **[Ω]**	2.5 x2	2.5 x2	2.5 x2	2.5 x2	2.5 x2	2.5 x3	2.5 x3
	Braking unit	**MDBUN-200-5T x2**					**MDBUN-200-5T x3**	
	Enclosure	**IP 00**						

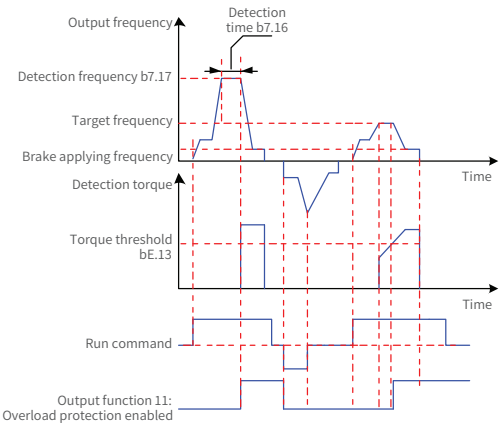
*1 For the standard AC drive, we recommend motor cable lengths to be <100 m. Where your installation exceeds 100 m, the "-L" version is an option with a built-in AC output reactor (1% voltage drop) which can help to overcome the effects of long cable installations. To discuss your application, contact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



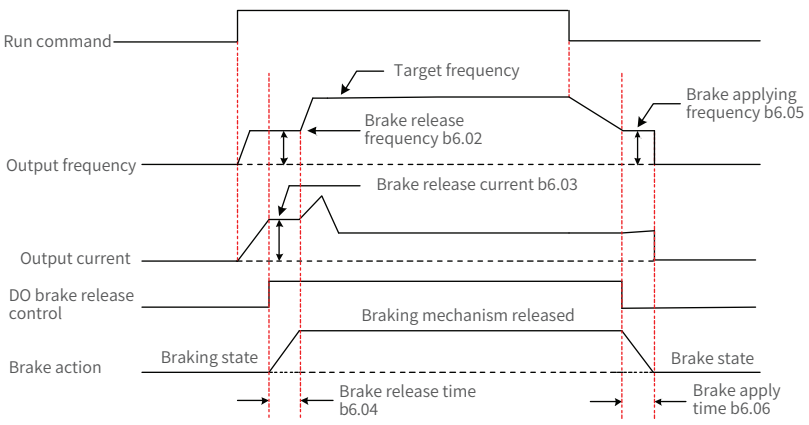
Pre-excitation function



Light load function

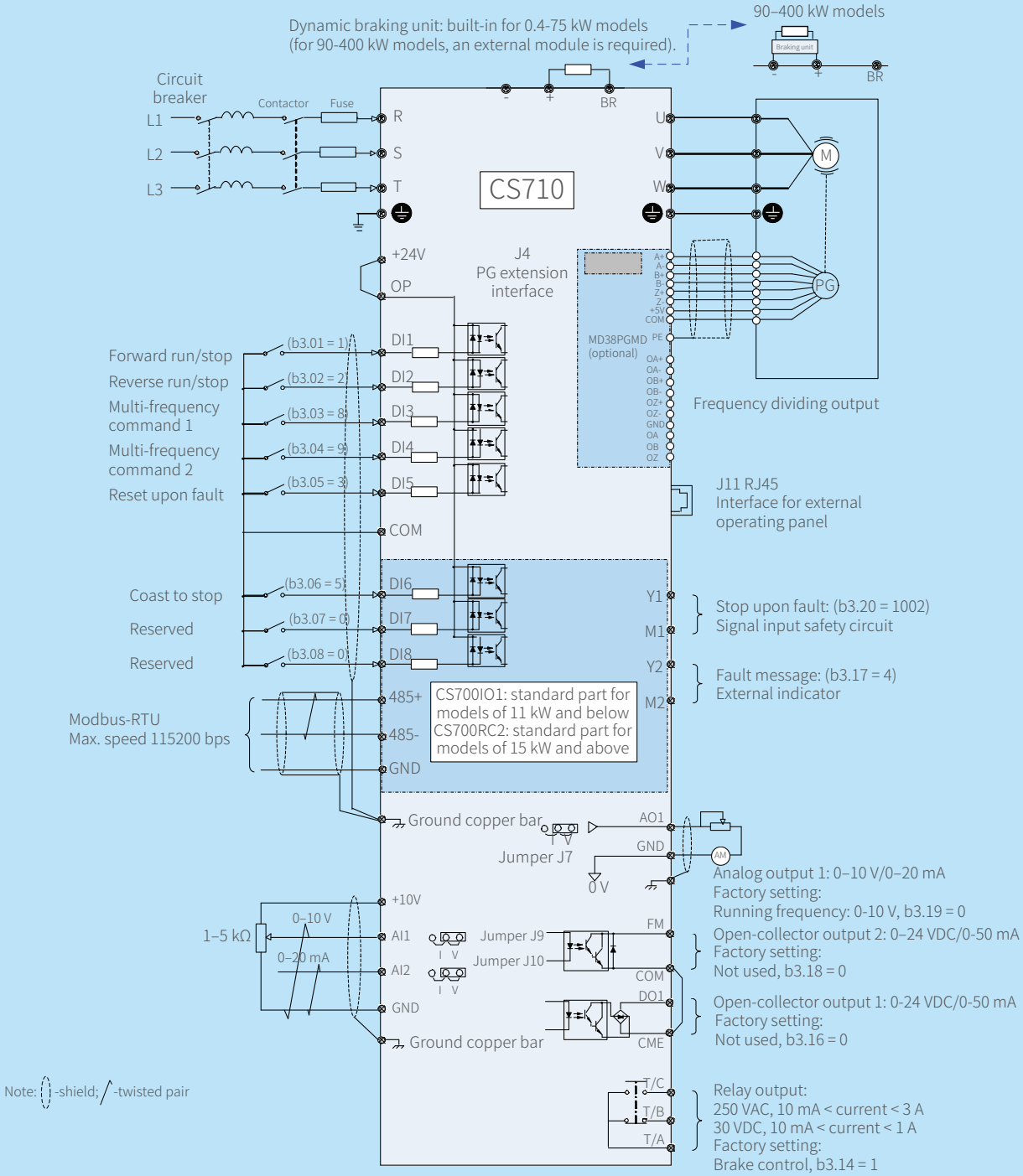


Overload protection



Brake control logic

Typical system connection diagram



Typical applications



Construction hoist



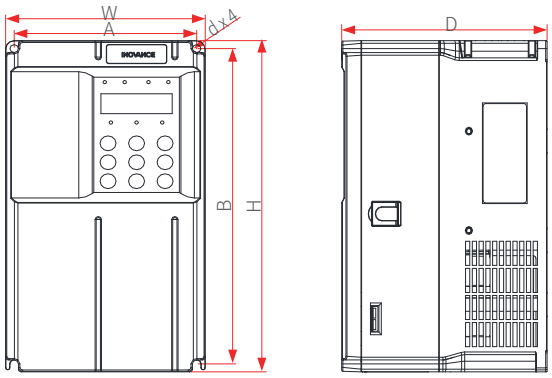
Overhead crane



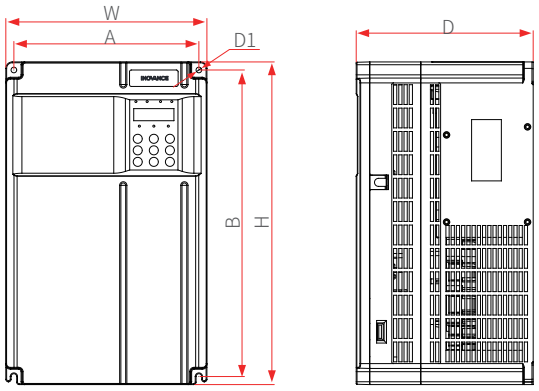
Gantry crane

Dimensions

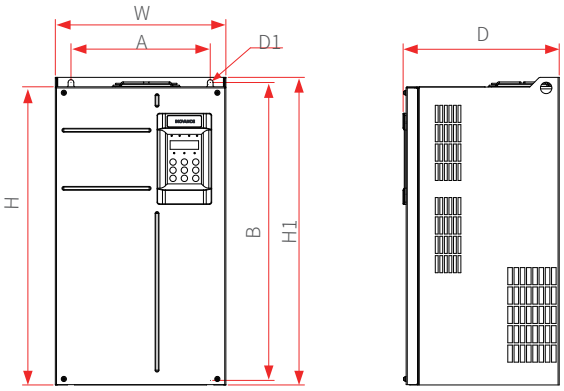
CS710-4T0.4GB to CS710-4T15GB



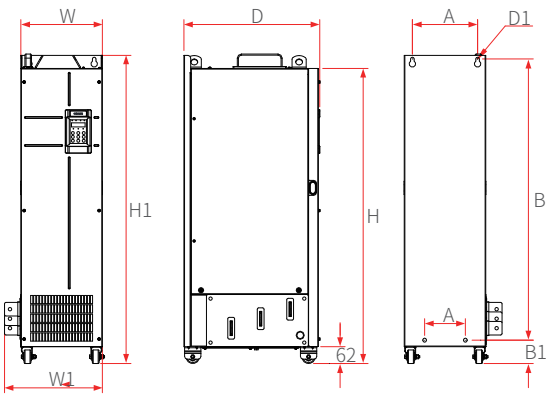
CS710-4T18.5GB to CS710-4T37GB



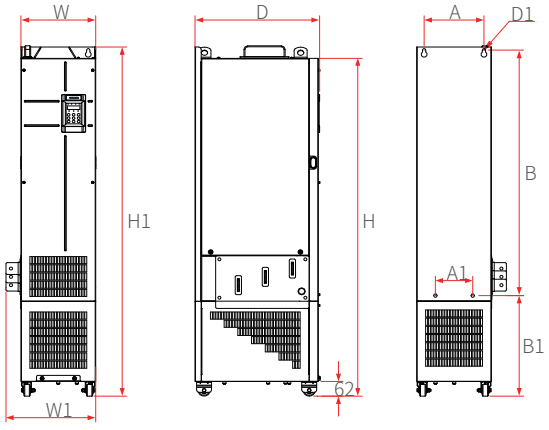
CS710-4T45GB to CS710-4T160G



CS710-4T200G to CS710-4T400G

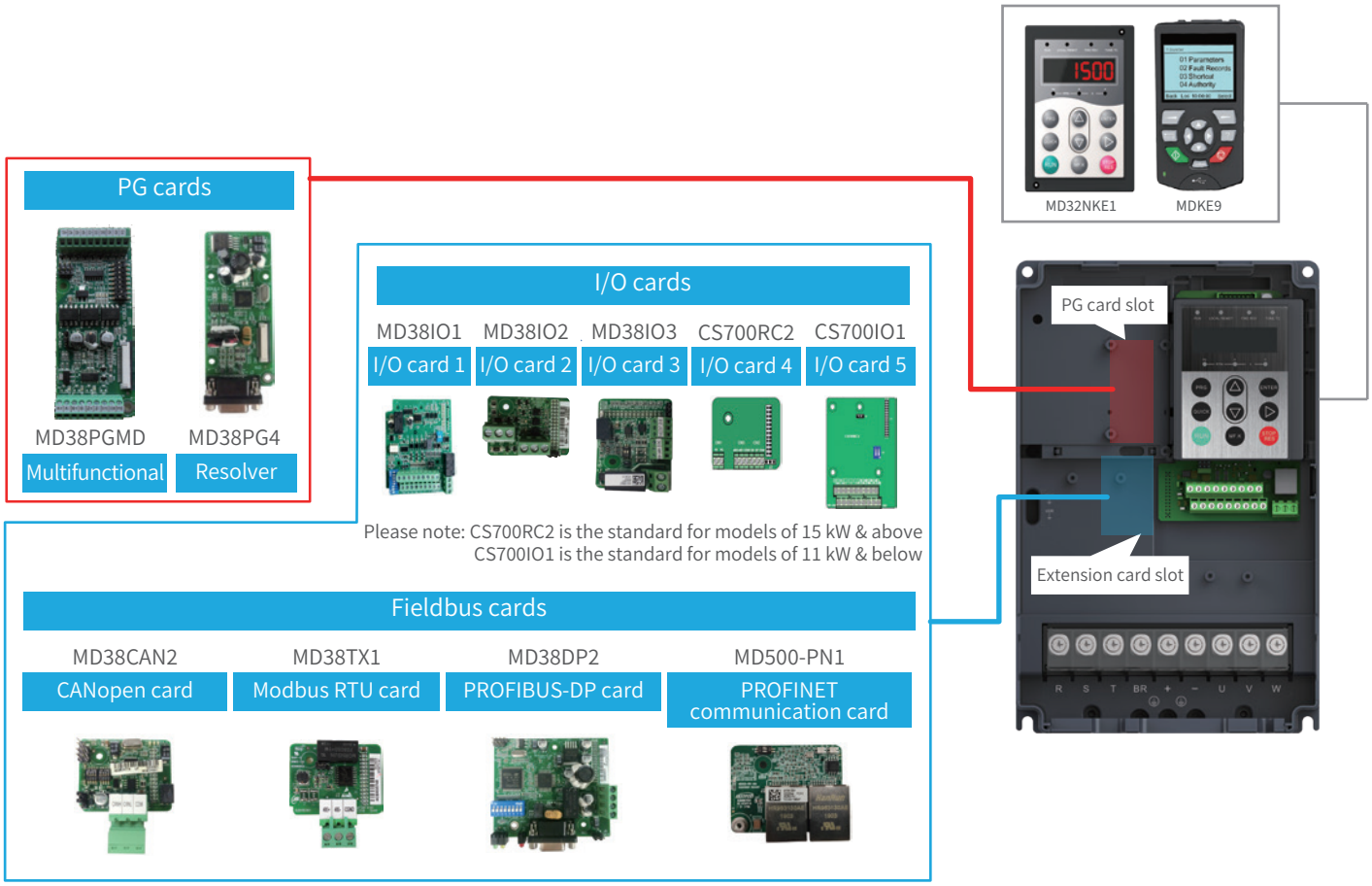


CS710-4T200G-L to CS710-4T400G-L (built-in output reactor)



CS710 model	Model size	Dimensions (mm)										Mass (kg)
		A	A1	B	B1	H	H1	W	W1	D	D1	
CS710-4T0.4GB, CS710-4T0.7GB, CS710-4T1.1GB	T1	119	/	189	/	200	/	130	/	152	Ø5	1.6
CS710-4T1.5GB, CS710-4T2.2GB, CS710-4T3.0GB	T1	119	/	189	/	200	/	130	/	152	Ø5	1.6
CS710-4T3.7GB, CS710-4T5.5GB	T2	119	/	189	/	200	/	130	/	162	Ø5	2.0
CS710-4T7.5GB, CS710-4T11GB	T3	128	/	238	/	250	/	140	/	170	Ø6	3.3
CS710-4T15GB	T4	166	/	266	/	280	/	210	/	192	Ø6	3.1
CS710-4118.5GB, CS710-4T22GB	T5	195	/	335	/	350	/	210	/	192	Ø6	9.1
CS710-4T30GB, CS710-4T37GB	T6	230	/	380	/	400	/	250	/	220	Ø7	17.5
CS710-4T45GB, CS710-4T55GB	T7	245	/	523	/	525	542	300	/	275	Ø10	35
CS710-4T75GB, CS710-4T90G, CS710-4T110G	T8	270	/	560	/	554	580	338	/	315	Ø10	51.5
CS710-4T132G, CS710-4T160G	T9	320	/	890	/	874	915	400	/	320	Ø10	85
CS710-4T200G, CS710-4T220G	T10	240	150	1035	86	1086	1134	300	360	500	Ø13	110
CS710-4T200G-L, CS710-4T220G-L		240	150	1035	424	1424	1472	300	360	500	Ø13	160
CS710-4T250G, CS710-4T280G	T11	225	185	1175	97	1248	1248	330	390	545	Ø13	155
CS710-4T250G-L, CS710-4T280G-L		225	185	1175	437	1586	1622	330	390	545	Ø13	215
CS710-4T315G, CS710-4T355G, CS710-4T400G	T12	240	200	1280	101	1255	1405	340	400	545	Ø16	185
CS710-4T31G-L, CS710-4T355G-L, CS710-4T400G-L		240	200	1280	432	1683	1733	340	400	545	Ø16	245

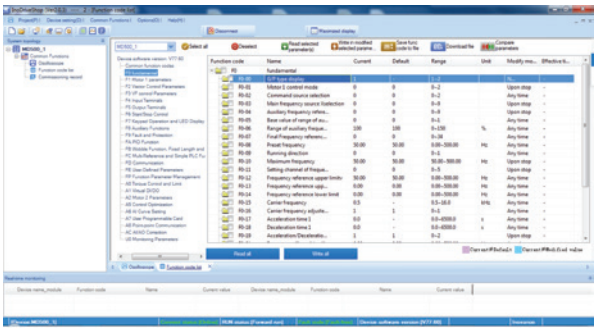
Extension cards and mounting position



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



Parameter uploading/downloading



Multi-drive, multi-channel oscilloscope

Accessories list

Category	Model	Function description	Suitable for
External braking units	MDBUN-60-2T	External braking unit, rated current 60 A, for supply input voltage 200 to 240 Vac AC drives.	2T models: 45G - 55G
	MDBUN-200-5T	External braking unit, rated current 200 A, for supply input voltage 380 to 480 Vac AC drives.	T models: 200G - 450G
	MDBUN-60-5T	External braking unit, rated current 60 A, for supply input voltage 380 to 480 Vac AC drives.	T models: 90G - 110G
	MDBUN-90-5T	External braking unit, rated current 90 A, for supply input voltage 380 to 480 Vac AC drives.	T models: 132G - 160G
Keypads	MD32NKE1	Remote LED keypad. Includes MDCAB cable.	All
	MDKE9	Remote LCD keypad. For parameter programming and monitoring, data copy (for various MD series). Includes MDCAB cable.	All
	MDCAB	3 meter connecting cable for remote keypad (spare unit).	All
	MDCAB-1.5	1.5 meter connecting cable for remote keypad (spare unit).	All
I/O cards	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 (15 kW and above)
	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
	CS700RC2	Crane dedicated I/O extension card, provides 3x DI, 3x relay output, 1 RS485 Modbus-RTU interface.	Included as standard for models of 15 kW and above
	CS700IO1	Crane dedicated I/O extension card, provides 2x DI, 1x relay output, 1 RS485 Modbus-RTU interface.	Included as standard for models of 11 kW and below
Fieldbus	MD38CAN2	CANopen communication card.	All
	MD38TX1	Modbus-RTU communication card.	All
	MD38DP2	PROFIBUS-DP communication card.	Frame sizes T4-T12
	MD500-PN1	PROFINET communication card.	All
PG cards	MD38PG4	Interface card for resolver (10 kHz excitation) with DB9 connector.	All
	MD38PGMD	Multifunctional encoder card, compatible with differential, open-collector and push-pull encoder types. Supports differential output and open-collector output.	All
PC comms kit	MDPCKIT02	PC comms kit.	All
Mounting brackets	MD500-AZJ-A1T1	Through hole mounting bracket - MD290/MD500 for frame T1.	Frame size T1
	MD500-AZJ-A1T2	Through hole mounting bracket - MD290/MD500 for frame T2.	Frame size T2
	MD500-AZJ-A1T3	Through hole mounting bracket - MD290/MD500 for frame T3.	Frame size T3
	MD500-AZJ-A1T4	Through hole mounting bracket - MD290/MD500 for frame T4.	Frame size T4
	MD500-AZJ-A1T5	Through hole mounting bracket - MD290/MD500 for frame T5.	Frame size T5
	MD500-AZJ-A1T6	Through hole mounting bracket - MD290/MD500 for frame T6.	Frame size T6
	MD500-AZJ-A1T7	Through hole mounting bracket - MD290/MD500 for frame T7.	Frame size T7
	MD500-AZJ-A1T8	Through hole mounting bracket - MD290/MD500 for frame T8.	Frame size T8
	MD500-AZJ-A1T9	Through hole mounting bracket - MD290/MD500 for frame T9.	Frame size T9
Guide rails	MD500-AZJ-A3T10	Guide rails for inserting in/ extracting from the cabinet - frame sizes T10 to T12.	Frame sizes T10-T12

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AC Drives



AC MultiDrives



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Elevator Drives



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Kazakhstan

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