



VECTOR FREQUENCY CONVERTER

**MFC 710 for supply voltages:
3x400 V; 3x500 V; 3x690 V**

TRANSFORMERLESS FREQUENCY CONVERTERS
DESIGNED FOR ADVANCED INDUCTION MOTOR
CONTROL APPLICATIONS FOR SUPPLY
VOLTAGES OF: **3x400V; 3x500V; 3x690V**



Basic parameters:

- Input Voltage: 3 x 400 V; 3 x 500 V; 3 x 690 V; 45..66 Hz
- Output Voltage: 3 x 400 V; 3 x 500 V; 3 x 690 V; 0..400 Hz (0-200 Hz in vector mode)
- Active Front End (AFE) technology on MFC710 AcR devices
- V/F control: linear and square; Vector: sensor and sensorless
- Removable signaling and control panel
- Built-in PLC
- Integrated PID controller
- Identification of engine parameters
- Built-in winder calculator controller
- Built-in pump and fan set controller
- Built-in RS232/RS485 Modbus RTU communication module
- Programmable constant speeds
- Motorpotentiometer function
- Encoder can be connected directly (5V line transmitter)
- Skipping programmable resonant frequency bands
- Defining Shapes and Slopes of Characteristics speed controller (linear, "S" curve)
- Can be operated with torque control
- Programmable Structure:
 - Switchable control variants (A, B)
 - Speed controller: control panel, analog inputs, PID controller, motopotentiometer, RS-232 / RS-485, function blocks
 - Torque controller: analogue inputs, function blocks
 - Start and direction control: control panel, digital inputs, function blocks
 - Programmable digital inputs: start, direction, work lockout, external fault
 - Programmable digital outputs: (3 relays and 1 open collector): standby, operation, failure, warning, exceeded the programmed inverter temperature
 - Programmable analogue outputs: frequency, rotational speed, output current, voltage, load, function blocks
- Built-in RFI filter – up to and including 18.5 kW
- Four motors can be stored in memory
- Interlock and diagnostic system
- Time measurement
- Defined sets of factory parameters



Chip Type MFC710 400V	Constant moment load		Moment Variable Load		Overload current 60 sec. Every 10 min. [A]	Dimensions (W x H x D) [mm]
	Motor power [kW]	Rated output current [A]	Motor power [kW]	Rated output current [A]		
MFC710/ 0,75 kW	0,75	2,5	0,75	3,5	3,75	114 x 267 x 154
MFC710/ 1,1 kW	1,1	3,5	1,1	4,0	5,25	114 x 267 x 154
MFC710/ 1,5 kW	1,5	4,0	1,5	5,5	6,0	114 x 267 x 154
MFC710/ 2,2 kW	2,2	5,5	2,2	7,8	8,3	114 x 267 x 154
MFC710/ 3,0 kW	3,0	7,8	3,0	9,5	11,7	114 x 267 x 154
MFC710/ 4,0 kW	4,0	9,5	4,0	9,5	15,8	114 x 267 x 154
MFC710/ 5,5 kW	5,5	12,0	5,5	16,0	18,0	130 x 337 x 188
MFC710/ 7,5 kW	7,5	17,0	7,5	23,0	25,0	130 x 337 x 188
MFC710/ 11 kW	11,0	24,0	11,0	29,0	36,0	130 x 337 x 223
MFC710/ 15 kW	15,0	30,0	15,0	37,0	45,0	130 x 337 x 223
MFC710/ 18,5 kW	18,5	39,0	18,5	39,0	60,0	130 x 337 x 223
MFC710/ 22 kW	22,0	45,0	22,0	60,0	68,0	220 x 450 x 225
MFC710/ 30 kW	30,0	60,0	30,0	75,0	90,0	225 x 600 x 247
MFC710/ 37 kW	37,0	75,0	37,0	90,0	112,0	225 x 600 x 247
MFC710/ 45 kW	45,0	90,0	45,0	110,0	135,0	256 x 615 x 266
MFC710/ 55 kW	55,0	110,0	55,0	150,0	165,0	256 x 615 x 266
MFC710/ 75 kW	75,0	150,0	75,0	180,0	225,0	256 x 615 x 266
MFC710/ 90 kW	90,0	180,0	90,0	210,0	270,0	283 x 865 x 400
MFC710/ 110 kW	110,0	210,0	110,0	250,0	315,0	283 x 865 x 400
MFC710/ 132 kW	132,0	250,0	132,0	310,0	375,0	460 x 920 x 345
MFC710/ 160 kW	160,0	310,0	160,0	375,0	465,0	460 x 920 x 345
MFC710/ 200 kW	200,0	375,0	200,0	465,0	570,0	460 x 920 x 345
MFC710/ 250 kW	250,0	465,0	250,0	465,0	690,0	460 x 920 x 345
MFC710/ 315 kW	315,0	585,0	315,0	650,0	850,0	640 x 920 x 345
MFC710/ 355 kW	355,0	650,0	355,0	730,0	940,0	640 x 920 x 345
MFC710/ 400 kW	400,0	730,0	400,0	730,0	1100,0	640 x 920 x 345
MFC710/ 450 kW	450,0	820,0	450,0	910,0	1190,0	800 x 1090 x 345
MFC710/ 500 kW	500,0	910,0	500,0	1020,0	1365,0	800 x 1090 x 345
Power	U _{IN} voltage		MFC710 400 V: 3-phase (-15% +10%), 45-66 Hz MFC710 500 V: 3-phase (-15% +10%), 45-66 Hz MFC710 690 V: 3-phase (-15% +10%), 45-66 Hz			
Egress	Voltage/Frequency		0-U _{IN} / 0.0-400 Hz (0.0-200 Hz in vector mode)			
	Resolution		0,1 Hz / 1 obr/min			
Driver	Operating Mode		Scalar V/f: linear or quadratic characteristic			
	Keying frequency		Vector DTC-SVM: sensorless or with angular position sensor			
Control inputs/outputs	Analog inputs		3 analog inputs: WeA0: 0(2) voltage mode. 10 V, R _{in} ≥ 200 kΩ WeA1, WeA2: voltage mode 0(2).. 10 V, R _{in} ≥ 100 kΩ; Current mode 0(4).. 20mA, R _{in} =250 Ω			
	Digital Inputs		6 digital inputs separated 0/(15..24)V, R _{in} ≥ 3 kΩ			
	Analog Outputs		2 voltage-current outputs: 0(2).. 10 V/ 0(4).. 20 mA			
	Digital outputs		3 relays: K1, K2 and K3. Breaking capacity: 250V/1A AC, 30V/1A DC 1 transistor open collector of 100mA/24V			

Inverter data for 500V and 690V supply voltages as well as AcR designs are available on request

For more detailed information, please contact us. The data provided is subject to change without notice. Frequency converters for 3x400V and 3x500V with a power of up to and including 18.5 kW have a braking transistor built in as standard. Other devices are equipped with a braking transistor only if this is clearly indicated when ordering. After the converter is manufactured, it is not possible to add a braking transistor.



ORDER CODE – HOW TO CONFIGURE THE REPEATER

(please tick the appropriate boxes and write down the symbol of the ordered device according to the pattern under the table)

MFC710 – [1] – [2] – [3] – [4] – [5] – [6]

[1]: – power [kW]

[2]: – voltage [V]

[3]: – braking

0 – without braking transistor

H – with braking transistor

[4]: - return of energy to the power grid

0 – no energy return to the mains

1 - ACR – inverter with return of energy to the power supply network

[5]: - input filter

0 – the order does not include an external input filter

1 – the order includes an external input filter – the specification is agreed upon when placing the order

[6]: - output filter

0 – the order does not include an external output filter

1 - the order includes an external output filter – the specification is agreed upon when placing the order

An example of how to configure a symbol to place an order:

55 kW circuit with 400V power supply, without braking transistor, with energy return to the grid, with input filter, without output filter:

MFC710 55 – 400 – 0 - ACR – 1 - 0