



MFC1000AcR

Active front end frequency converter



75 kW, 90 kW, 110 kW
3 x 400 V, 3 x 500V, 3 x 690V

The **MFC1000AcR** is a frequency converter with an active front end (AFE) enabling the return of energy to the mains (e.g. during braking) and the reduction of higher harmonics - the consumption of sinusoidal current. It is especially dedicated to variable load drives and renewable energy sources.

TECHNICAL DATA

Input:	3 x 400V, 3 x 500V, 3 x 690V, 45 .. 60Hz
Output:	0 .. 400Hz, 3 x 400V, 3 x 500V, 3 x 690V
Operating modes:	
◦ Vector:	sensor, sensorless
◦ V/f:	linear, exponential
Braking:	
◦ AFE (Active Front End) - return of braking energy to the mains	
◦ Optional external resistor	
◦ deceleration ramp, run-down	
◦ control of external mechanical brake	
Analog inputs:	5
Analog outputs:	up to 12
Digital inputs:	up to 40
Relay outputs:	up to 11
PID controller:	4 PID controllers with SLEEP mode
Built-in data communications protocols:	
◦ RS-485 (Modbus RTU),	
◦ USB,	
◦ Ethernet,	
◦ CANopen.	
Built-in encoder interface:	5V, line driver
Ingress Protection:	IP00

Nominal currents:

Input voltage U_n	Power P_n	Nominal current I_n	Designation
3 x 400 V	75 kW	150 A	MFC1000AcR-75-04
	90 kW	180 A	MFC1000AcR-90-04
	110 kW	210 A	MFC1000AcR-110-04
3 x 500 V	75 kW	120 A	MFC1000AcR-75-05
	90 kW	150 A	MFC1000AcR-90-05
	110 kW	180 A	MFC1000AcR-110-05
3 x 690 V	75 kW	90 A	MFC1000AcR-75-07
	90 kW	105 A	MFC1000AcR-90-07
	110 kW	120 A	MFC1000AcR-110-07

Overload: $1,5 \cdot I_n$ for 60 seconds every 10 minutes.

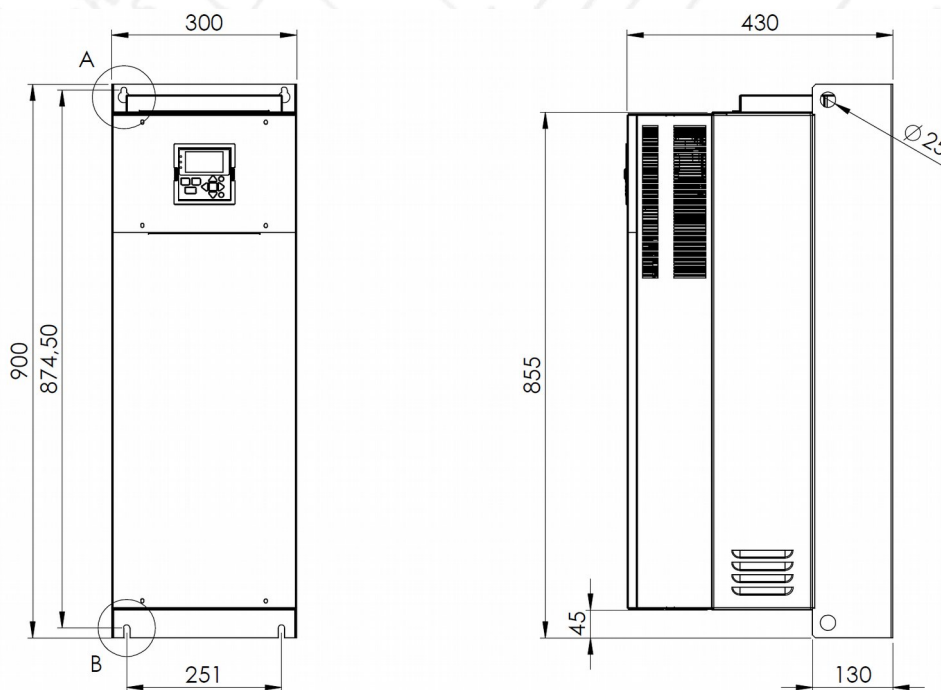
Maximum efficiency: 95%

Compliance with standards and directives:

- 2014/35/UE The Low Voltage Directive (LVD)
- 2014/30/UE The electromagnetic compatibility

The weight and dimensions

- Width x height x depth: 300 x 900 x 430 mm
- Weight: about 100 kg



TWERD ENERGO-PLUS Sp. z o.o.

ul. Aleksandrowska 28-30
87-100 Toruń, Poland

tel. +48 56 654 60 91
e-mail: twerd@twerd.pl

www.twerd.pl

