DATASHEET
Variable Speed Drives

Main Features

Reference	: EUCFW110877T4OYZ
Product code	: 13107478
Product line	: CFW11

Basic data

Power supply	: 380-480 V
Input minimum-maximum voltage	: 323-528 V
Number of phases	
Input	: 3
Output	: 3

Supply voltage range	380-480 V		380-480 V	
Overload regime	Normal (ND)	Heavy (HD)	Normal (ND)	Heavy (HD)
Rated current	877A	691		
Overload current at 60 s	965A	1037A		
Overload current at 3 s	1316A	1382.0		

Maximum applicable motor

Voltage/Frequency	Power (HP / kW) [1]	
	Normal Overload (ND)	Heavy Overload (HD)
380V / 50Hz	610 / 450	500 / 370
380V / 60Hz	650 / 480	500 / 370
400V / 50Hz	680 / 500	500 / 370
400V / 60Hz	650 / 480	500 / 370
440V / 50Hz	750 / 560	550 / 400
440V / 60Hz	750 / 560	550 / 400
460V / 60Hz	750 / 560	600 / 440
480V / 60Hz	750 / 560	600 / 440

Dynamic braking [2]	: Standard without braking
Electronic supply	: Internal
Safety Stop	: Yes
RFI internal filter [3]	: With filter (C3 category)
External filter	: Not available
Link Inductor	: No
Memory card	: Included in the product
USB port	: Standard in the product
Line frequency	: 50/60Hz
Line frequency range (minimum - maximum)	: 48-62 Hz
Phase unbalance	: Less or equal to 3% of input rated line voltage
Transient voltage and overvoltage	: Category III
Rated current of single-phase input	
- Overload (ND)	:
- Overload (HD)	:
Rated current of three-phase input	
- Overload (ND)	: 877A
- Overload (HD)	: 691A
Power factor	: 0,94
Displacement factor	: 0,98
Rated efficiency	: ≥ 97%
Maximum connections (power up cycles - on/off) per hour	: 60
DC power supply	: Not allow
Standard switching frequency	
- Overload ND	: 2 kHz
- Overload HD	: 2 kHz
Selectable switching frequency	: 1,25 and 2 kHz
Real-time clock	: Yes, in the HMI
COPY Function	: Yes, by HMI/MMF
Dissipated power:	

Mounting type	Overload		Overload (*)	
	ND	HD	ND	HD
Surface	10993 W	8836 W	Not applicable	Not applicable
Flange	759 W	751 W	Not applicable	Not applicable

Source available to the user

Output voltage	: 24 Vcc
Maximum capacity	: 500 mA

Control/performance data

Power supply	: Switched-mode power supply
Control method	: V/f, VVW, Vector and PM motor
Encoder interface	: Only with 'Slot 2' accessory
Control output frequency	: 0 to 300 Hz
Frequency resolution	: Equivalent to 1 rpm
V/F Control	
- Speed resolution	: 1% of rated speed
- Speed range	: 1:20
VVW Control	
- Speed resolution	: 1% of rated speed
- Speed range	: 1:30
Sensorless vector control	
- Speed resolution	: 0,5% of rated speed
- Speed range	: 1:100
Vector control with encoder	
- Speed resolution	: 0,05% of rated speed
- Speed range	: Up to 0 rpm

Analog inputs

Quantity (standard)	: 2
Levels	: 0-10V, 0/4-20mA and -10-+10V
Impedance	
- Impedance for voltage input	: 400 kΩ
- Impedance for current input	: 500 Ω
Function	: Programmable
Maximum allowed voltage	: ±30 Vcc

Digital inputs

Digital inputs - Quantity (standard)	: 6
Activation	: Active low and high
Maximum low level	: 3 V
Minimum high level	: 18 V
Input current	: 11 mA
Maximum input current	: 13,5 mA
Function	: Programmable
Maximum allowed voltage	: 30 Vcc

Analog outputs

Analogic outputs - Quantity (standard)	: 2
Levels	: 0 to 10V, 0 to 20mA and 4 to 20mA
RL for voltage output	: 10 kΩ
RL for current output	: 500 Ω
Function	: Programmable

Digital outputs

Digital outputs - Quantity (standard)	: 3 NO/NC relays
Maximum voltage	: 240 Vca
Maximum current	: 1 A
Function	: Programmable

Communication

- Modbus-RTU (with accessory: RS485-01; RS485-05; CAN/RS485-01; RS232-01 or RS232-05)
- Modbus/TCP (with accessory: MODBUSTCP-05)
- Profibus DP (with accessory: PROFDP-05)
- Profibus DPV1 (with accessory: PROFIBUS DP-01)
- Profinet (with accessory: PROFINETIO-05)
- CANopen (with accessory: CAN/RS485-01 or CAN-01)
- DeviceNet (with accessory: DEVICENET-05; CAN/RS485-01 or CAN-01)
- EtherNet/IP (with accessory: ETHERNET/IP-05 or ETHERNETIP-2P-05)
- EtherCAT (with accessory: ETHERCAT-01)
- BACnet (with accessory: RS485-01 or CAN/RS485-01)

Protections available

- Output overcurrent/short circuit
- Power supply phase loss
- Under/Overvoltage in power
- Overtemperature
- Motor overload
- IGBT's modules overload
- Fault/External alarm
- Breaking resistor overload
- CPU or memory failure
- Output phase-ground short circuit

Operation interface (HMI)

Avaliability	: Included in the product
Installation	: Local
Number of HMI buttons	: 9

Operation interface (HMI)

Display	: Graphic LCD
Indication accuracy	: 5% of rated current
Speed resolution	: 1 rpm
Standard HMI degree of protection	: IP56
HMI battery type	: CR2032
HMI battery life expectancy	: 10 years
Remote HMI type	: Detachable of the inverter
Remote HMI frame	: Accessory
Remote HMI degree of protection	: IP56

Ambient conditions

Enclosure	: IP20
Degree of pollution	: 2
Temperature	
- Minimum	: -10 °C / 14 °F
- Nominal [4]	: 40 °C / 104 °F
Current reduction factor [5]	: 2 % per °C of 45 (113) to 55 °C (131 °F)
Relative humidity (non-condensing)	
- Minimum	: 5%
- Maximum	: 90%
Altitude	
- Rated conditions	: 1000 m (3281 ft)
- Maximum altitude allowed for operation	: 4000 m (13123 ft)
Current Reduction factor[6]	
- Current derating factor (for altitudes above rated)	: 1% for each 100 m above
- Voltage derating factor (for altitudes above 2000 m / 6562 ft)	: 1,1% for each 100 m above

Sustainability policies

RoHS	: Yes
Conformal Coating	: 3C2

Dimensions

Size	: H
Height	: 1414 mm / 55.7 in
Width	: 686 mm / 27.0 in
Depth	: 420,8 mm / 16.6 in
Weight	: 213 kg / 469.6 lb

Mechanical installation

Mounting position	: Surface or flange
Fixing screw	: M10
Tightening torque	: 37 N.m / 27.31 lb.ft
Allows side-by-side assembly	: No
Minimum spacing around the inverter	
- Top	: 150 mm / 5.91 in
- Bottom	: 250 mm / 9.84 in
- Front	: 20 mm / 0.78 in
- Side	: 80 mm / 3.15 in

Electrical connections

Cable gauges and tightening torque:

	Recommended cable gauge to 75 °C (167 °F)	Recommended tightening torque
Power	4x 120 mm² (4x 4/0 AWG) HD	60 N.m / 44,28 lb.ft
Braking	Not applicable	60 N.m / 44,28 lb.ft
Grounding	2x 95 mm² (2x 3/0 AWG)	10 N.m / 7.38 lb.ft
Control	0,5 to 1,5 mm² (20 to 14 AWG)	0,5 N.m / 0.37 lb.ft

Additional especifications

Maximum breaking current	: Not available
Minimum resistance for the brake resistor	: Not available
Recommended aR fuse	: FNH3-800K-A
Recommended aR fuse	: Not applicable
Recommended circuit breaker	: To define
Recommended circuit breaker	: Not applicable

Standards

Safety	- UL 508C - Power conversion equipment. - UL 840 - Insulation coordination including clearances and creepage distances for electrical equipment. - EN 61800-5-1 - Safety requirements electrical, thermal and energy. - EN 50178 - Electronic equipment for use in power instalations - EN 60204-1 - Safety of machinery. Electrical equipment of machines. Part 1: General requirements. Note: To have a machine in accordance with this standard, the machine manufacturer is responsible for installing an emergency stop device and supply disconnecting device. - EN 60146 (IEC 146) - Semiconductor converters.

	- EN 61800-2 - Adjustable speed electrical power drive systems - Part 2: General requirements - Rating especifications for low voltage adjustable frequency AC power drive systems.
Electromagnetic compatibility	EN 61800-3 - Adjustable speed electrical power drive systems - Part 3: EMC product standard including specific test methods. - EN 55011 - Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment. - CISPR 11 - Industrial, scientific and medical (ISM) radio-frequency equipment - Eletromagnetic disturbance characteristics - Limits and methods of measurement. - EN 61000-4-2 - Eletromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Eletrostatic discharge immunity test. - EN 61000-4-3 - Eletromagnetic compatibility (EMC) - Part4: Testing and measurement techniques - Section 3: Radiated, radio-frequency, electromagnetic field immunity test. - EN 61000-4-4 - Eletromagnetic compatibility (EMC) - Part4: Testing and measurement techniques - Section 4: Electrical fast transient/burst immunity test. - EN 61000-4-5 - Eletromagnetic compatibility (EMC) - Part4: Testing and measurement techniques - Section 5: Surge immunity test. - EN 61000-4-6 - Eletromagnetic compatibility (EMC) - Part4: Testing and measurement techniques - Section 6: Immunity to conducted disturbances, induced by radio-frequency fields.
Mechanical construction	- EN 60529 - Degrees of protection provided by enclosures (IP code). - UL 50 - Enclosures for electrical equipment. - EN 60529 e UL 50

Certifications

Notes

1) Orientative motor power, valid for WEG Motors standard of IV poles. The correct sizing must be done according to the nominal current of the motor used, which must be less than or equal to the rated output current of the inverter;
2) Braking resistor is not included;
3) With category for emission level conducted;
4) Without derating and with minimum spaces;
5) For temperatures above the nominal and maximum temperature (with derating of current and minimum spaces);
6) For altitude over of specified;
7) All images are merely illustrative;
8) For more information, see the users manual of the CFW-11 (size H).