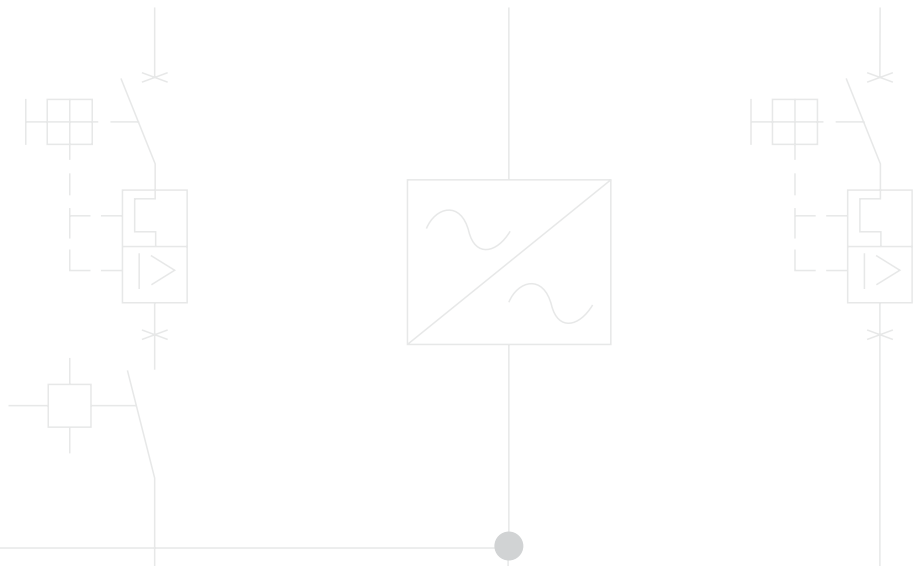
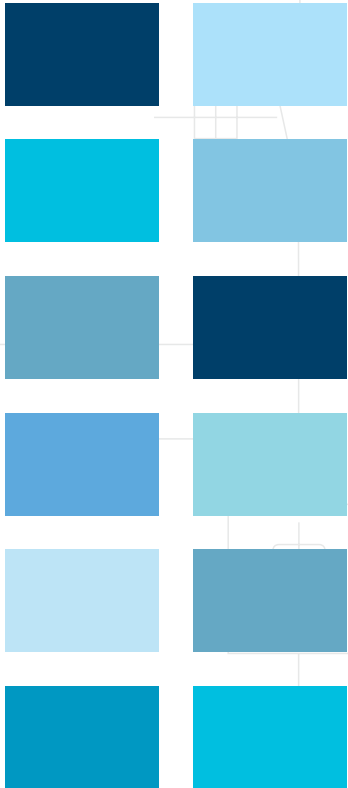


CFW11

Drive



CFW11



Variable Frequency Drives

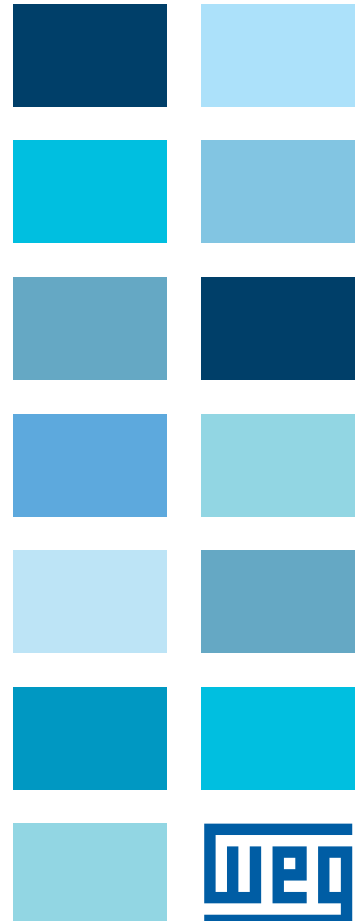
CFW11

WEG is launching a new generation of inverters with state-of-the-art technology for three-phase induction motor control. Aimed at increasing the productivity for its customers, this new line offers the following innovations:

- Plug and play philosophy (connect and use) enables quick and easy installation of accessories and options.
- USB for microcomputer connection for using SUPERDRIVE programming and monitoring software as well as updating inverter firmware.
- Human-Machine Interface (HMI) with backlit graphic display and soft-keys, greatly facilitates inverter programming and operation.
- DC link inductors (symetrically connected to positive and negative DC link terminals) enable compliance with IEC61000-3-12 standard requirements regarding harmonics, (no need for external line reactance)
- Intelligent thermal management enables full protection of IGBTs, monitoring of heatsink and internal air temperature.
- Automatic control of the heatsink fan with speed sensor (additional protection) and easily detachable from the unit for cleaning and maintenance.
- Normal Duty and Heavy Duty ratings to adapt optimally to all kinds of loads.
- Protection with failure and alarm warnings.
- Motor overload protection in compliance with IEC 60947-4-2/UL 508 C.
- Memory card built into the standard product allows user to create functions without the need to use an external PLC (soft-PLC via IEC61131-3 programming software)
- Guided start-up simplifies initial user programming.
- Real time clock
- TRACE / SCOPE function to assist with the start-up and system diagnostics.



Mounting Options



Variable Frequency Drives

CFW11

Plug and Play

The CFW11 frequency inverter incorporates Plug and Play technology automatically recognizing and configuring accessories and options used, enabling easy installation and safe operation while eliminating manual configuration.

Accessories

Name	Description	Slot
IOA-01	14-bit analog input; 2 digital inputs; 2 14-bit analog outputs in voltage and current; 2 open collector type digital outputs	1
IOB-01	2 isolated analog inputs; 2 digital inputs; 2 analog isolated outputs in voltage and current; 2 open collector type digital outputs	1
IOC-01 (*)	8 digital inputs and outputs	1
IOD-01 (*)	8 - 120VAC - digital inputs	1
IOE-01 (*)	6 - PT100 or KTY 84 - thermistor inputs	1
ENC-01	Interface for incremental encoder 5 to 12Vdc, 100kHz (1) with repeater	2
ENC-02	Interface for incremental encoder 5 to 12Vdc, 100kHz(1)	2
RS485-01	Interface for RS-485 serial communication (modbus)	3
RS232-01	Interface for RS-232C serial communication	3
CAN/RS485-01	CAN interface (CANopen, DeviceNet); RS-485	3
CAN-01	CAN interface (CANopen, DeviceNet)	3
PROFIBUS DP-01 (*)	Profibus DP interface	3
PLC11-01 (*)	PLC functions; IEC programming; electronic gear box 9 digital inputs; 3 relay outputs; 3 digital outputs 14-bit analog input; 2 analog outputs with 14-bit resolution 2 encoder interfaces; RS-485 MODBUS-RTU; CAN (CANopen, DeviceNet, CANopen master/slave)	1, 2 and 3
PROFIBUS DP-05	Profibus DP interface	4
Devicenet-05	Devicenet 4 interface	4
EtherNetIP-05 (*)	Ethernet IP interface	4
HMID - 01	Blind cover for slot HMI	-
RHMIF - 01	Frame for remote HMI	-
KN1A - 01	Conduit kit for size A	-
KN1B - 01	Conduit kit for size B	-
KN1C - 01	Conduit kit for size C	-

CFW11

Options••

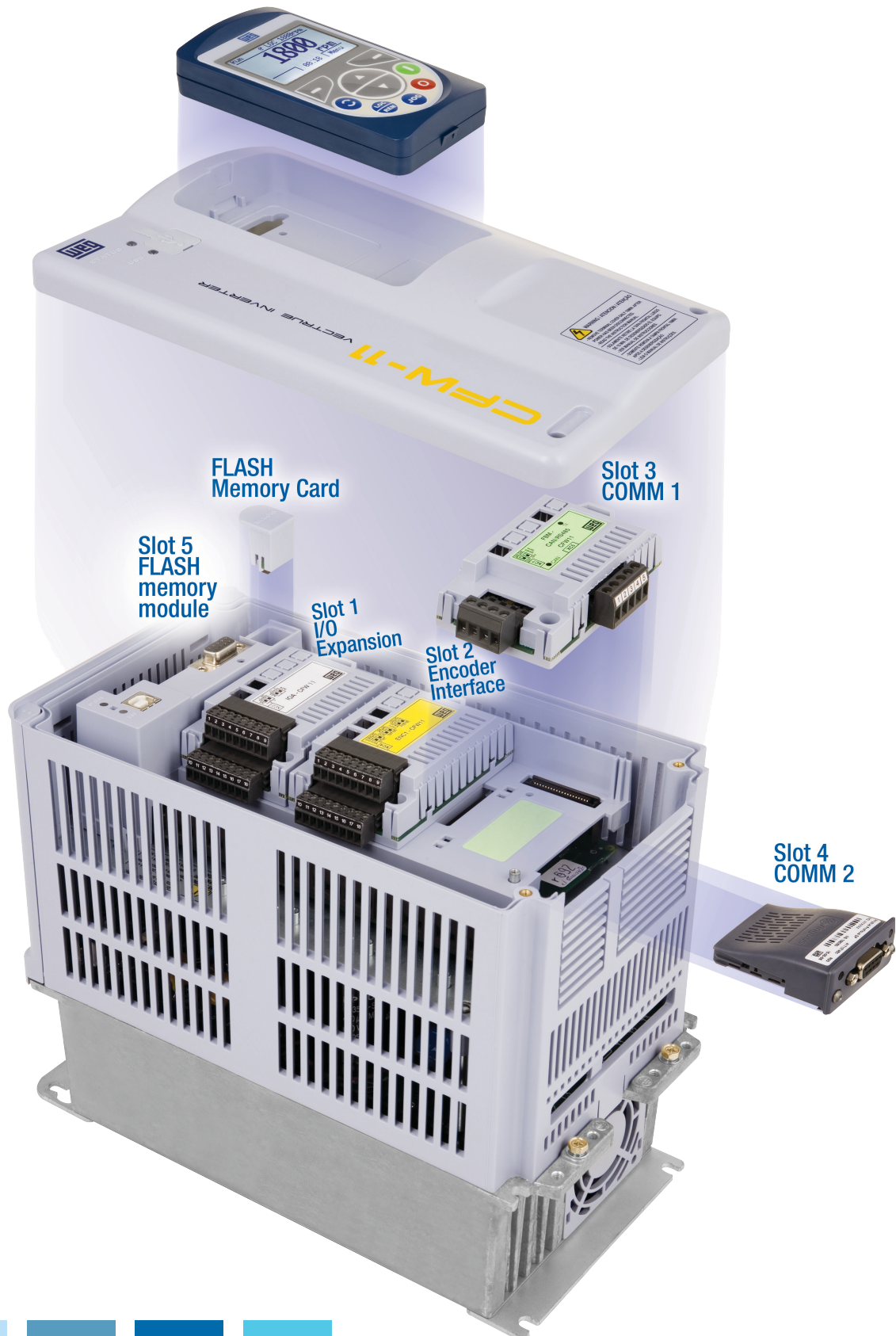
- Safety stop in compliance with EN 954 - 1 / category III
- External control feed with 24 Vdc
- RFI filter in compliance with EN 61800 - 3 (internal)

** Factory ordered



Variable Frequency Drives CFW11

CFW11



Variable Frequency Drives CFW11

Superdrive Programming Software



Programming software for PC (USB connection), Windows™ environment for parametrization, command and monitoring of CFW11 inverters.

CFW11

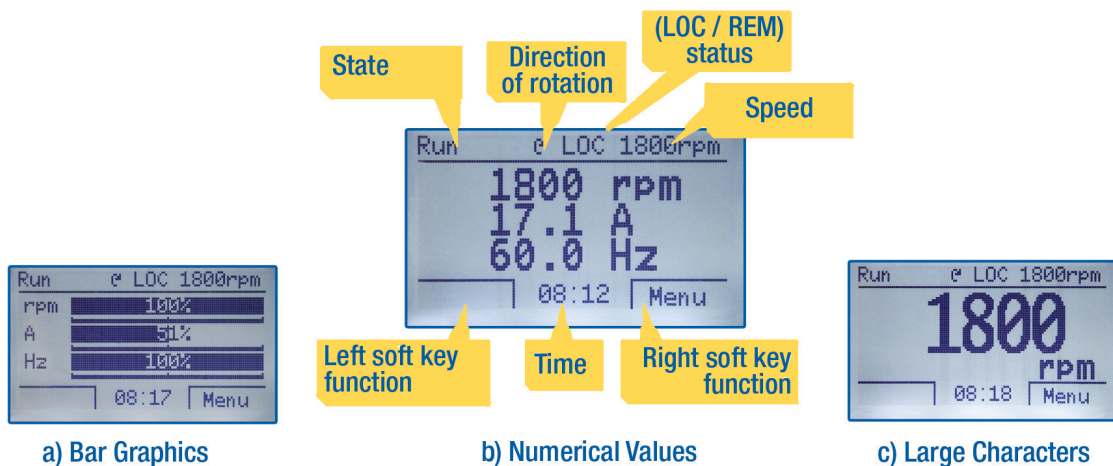
Human/Machine Interface

Left soft key: function defined by the text in the display

Right soft key: function defined by the text in the display.



Monitoring Modes





Variable Frequency Drives

CFW11

(NEMA1/IP21 Frame size A, B, C – NEMA1/IP20 Frame Size D)

Motor Volts	ND HP	HD HP	ND Amps	HD Amps	CATALOG NUMBER	Frame Size	Dynamic Braking	DIMENSIONS H x W x D	App. Shpg. Wt. (lbs.)	List Price	Multiplier Symbol
200...240V	INPUT POWER SUPPLY: SINGLE OR THREE PHASE - 200...240V										
	1.5	1.5	6	5	CFW110006B20N1Z	A	YES	12.04 x 5.71 x 8.94	19.9	\$1,370	V1
	2	2	7	7	CFW110007B20N1Z	A		12.04 x 5.71 x 8.94	20.8	\$1,430	V1
	INPUT POWER SUPPLY: SINGLE PHASE - 200...240V										
	3	3	10	10	CFW110010S20N1Z	A	YES	12.04 x 5.71 x 8.94	20.8	\$1,510	V1
	INPUT POWER SUPPLY: THREE PHASE - 200...240V										
	2	1.5	7	5.5	CFW110007T20N1Z	A	YES	12.04 x 5.71 x 8.94	19.9	\$1,350	V1
	3	2	10	8	CFW110010T20N1Z	A		12.04 x 5.71 x 8.94	19.9	\$1,410	V1
	4	3	13	11	CFW110013T20N1Z	A		12.04 x 5.71 x 8.94	20.8	\$1,440	V1
	5	4	16	13	CFW110016T20N1Z	A		12.04 x 5.71 x 8.94	21.2	\$1,542	V1
	7.5	6	24	20	CFW110024T20N1Z	B		13.82 x 7.45 x 8.94	28.5	\$2,020	V1
	10	7.5	28	24	CFW110028T20N1Z	B		13.82 x 7.45 x 8.94	28.5	\$2,201	V1
	12.5	10	33.5	28	CFW110033T20N1Z	B		13.82 x 7.45 x 8.94	28.5	\$2,900	V1
	15	12.5	45	36	CFW110045T20N1Z	C		17.64 x 8.66 x 11.51	44.1	\$3,310	V1
	20	15	54	45	CFW110054T20N1Z	C		17.64 x 8.66 x 11.51	45	\$4,400	V1
	25	20	70	56	CFW110070T20N1Z	C		17.64 x 8.66 x 11.51	49.2	\$6,600	V1
	30	25	86	70	CFW110086T20N1Z	D		19.82 x 11.81 x 12	115.9	\$7,222	V1
	40	30	105	86	CFW110105T20N1Z	D		19.82 x 11.81 x 12	120.2	\$9,000	V1
	50	40	142	115	CFW110142T20N1Z	E	NO USE CFW11 XXXXT20N1D- BZ BELOW	26.6 x 13.2 x 14.1	150	\$10,590	V1
	60	50	180	142	CFW110180T20N1Z	E		26.6 x 13.2 x 14.1	150	\$13,750	V1
	75	60	211	180	CFW110211T20N1Z	E		26.6 x 13.2 x 14.1	150	\$19,600	V1
	50	40	142	115	CFW110142T20N1DBZ	E	YES	26.6 x 13.2 x 14.1	150	\$12,114	V1
	60	50	180	142	CFW110180T20N1DBZ	E		26.6 x 13.2 x 14.1	150	\$16,719	V1
	75	60	211	180	CFW110211T20N1DBZ	E		26.6 x 13.2 x 14.1	150	\$23,219	V1
380...480V	INPUT POWER SUPPLY: THREE PHASE - 380...480V										
	2	2	3.6	3.6	CFW110003T40N1Z	A	YES	12.04 x 5.71 x 8.94	19.9	\$1,469	V1
	3	3	5	5	CFW110005T40N1Z	A		12.04 x 5.71 x 8.94	20.3	\$1,500	V1
	4	3	7	5.5	CFW110007T40N1Z	A		12.04 x 5.71 x 8.94	20.3	\$1,556	V1
	6	6	10	10	CFW110010T40N1Z	A		12.04 x 5.71 x 8.94	20.8	\$1,790	V1
	7.5	6	13.5	11	CFW110013T40N1Z	A		12.04 x 5.71 x 8.94	21.2	\$1,880	V1
	10	7.5	17	13.5	CFW110017T40N1Z	B		13.82 x 7.45 x 8.94	28.5	\$2,300	V1
	15	10	24	19	CFW110024T40N1Z	B		13.82 x 7.45 x 8.94	29.8	\$2,720	V1
	20	15	31	25	CFW110031T40N1Z	B		13.82 x 7.45 x 8.94	31.3	\$3,873	V1
	25	20	38	33	CFW110038T40N1Z	C		17.64 x 8.66 x 11.51	45.9	\$4,300	V1
	30	25	45	38	CFW110045T40N1Z	C		17.64 x 8.66 x 11.51	52.9	\$5,400	V1
	40	30	58.5	47	CFW110058T40N1Z	C		17.64 x 8.66 x 11.51	54.9	\$6,030	V1
	50	40	70.5	61	CFW110070T40N1Z	D		19.82 x 11.81 x 12	119.5	\$7,500	V1
	60	50	88	73	CFW110088T40N1Z	D	19.82 x 11.81 x 12	122.8	\$8,900	V1	
	75	60	105	88	CFW110105T40N1Z	E	NO USE CFW11 XXXXT20N1D- BZ BELOW	26.6 x 13.2 x 14.1	150	\$10,650	V1
	100	75	142	115	CFW110142T40N1Z	E		26.6 x 13.2 x 14.1	150	\$12,500	V1
	150	100	180	142	CFW110180T40N1Z	E		26.6 x 13.2 x 14.1	150	\$17,500	V1
	175	150	211	180	CFW110211T40N1Z	E	YES	26.6 x 13.2 x 14.1	150	\$21,000	V1
	75	60	105	88	CFW110105T40N1DBZ	E		26.6 x 13.2 x 14.1	150	\$13,600	V1
	100	75	142	115	CFW110142T40N1DBZ	E		26.6 x 13.2 x 14.1	150	\$15,900	V1
	150	100	180	142	CFW110180T40N1DBZ	E		26.6 x 13.2 x 14.1	150	\$23,115	V1
	175	150	211	180	CFW110211T40N1DBZ	E	NO, use external module	26.6 x 13.2 x 14.1	150	\$27,020	V1
	200	150	242	211	CFW110242T40N1Z*	F		48.6 x 16.9 x 14.2	267	\$23,000	V1
	250	200	312	242	CFW110312T40N1Z*	F		48.6 x 16.9 x 14.2	271	\$29,366	V1
	300	250	370	312	CFW110370T40N1Z*	F	NO, use external module	48.6 x 16.9 x 14.2	277	\$31,314	V1
	350	300	477	370	CFW110477T40N1Z*	F		48.6 x 16.9 x 14.2	287	\$41,027	V1
	400	350	515	477	CFW110515T40N1Z*	G		50.0 x 21.1 x 16.8	420	\$43,970	V1
	500	450	601	515	CFW110601T40N1Z*	G	NO, use external module	50.0 x 21.1 x 16.8	425	\$50,088	V1
	600	500	720	560	CFW110720T40N1Z*	G		50.0 x 21.1 x 16.8	441	\$59,330	V1

*NEMA 1 Kit for frame size F and G is available for free under request when purchased together with a CFW11 frame size F or G.

Variable Frequency Drives

CFW11

Options and Accessories

DESCRIPTION		CATALOG NUMBER	List Price	Multiplier Symbol
I/O Exp Modules	IOA Module for CFW11: 2 analog inputs (14 bits, voltage or current); 2 digital inputs; 2 analog outputs (14 bits, voltage or current); 2 digital outputs (open-collector)	IOA-01	\$1,000	V1
	IOB Module for CFW11: 2 isolated analog inputs (12 bits, voltage or current); 2 digital inputs; 2 isolated analog outputs (11 bits, voltage or current); 2 digital outputs (open-collector)	IOB-01	\$500	V1
Encoder Modules	Incremental encoder module, 5 to 12 VDC at 100 KHZ, with encoder signal repeater	ENC-01	\$400	V1
	Incremental encoder module, 5 to 12 VDC at 100 KHZ, without encoder signal repeater	ENC-02	\$400	V1
Communication Modules	RS-485 serial communication module (Modbus-RTU)	RS485-01	\$200	V1
	RS-232C serial communication module (Modbus-RTU)	RS232-01	\$150	V1
	RS232C serial communication module with DIP-switches for microcontroller's flash memory programming	RS232-02	\$180	V1
	CAN and RS-485 communication module (CANopen / Modbus / DEVICENET)	CAN/RS485-01	\$480	V1
	CAN interface module (CANopen / DEVICENET)	CAN-01	\$390	V1
	Profibus DP interface module - Anybus card*	PROFDP-05	\$1,100	V1
	DeviceNet interface module - Anybus card*	DEVICENET-05	\$1,100	V1
	Ethernet/IP interface module - Anybus card*	ETHERNET/IP-05	\$1,100	V1
	RS-232 serial communication module (Modbus-RTU)	RS232-05	\$250	V1
	RS-485 serial communication module (Modbus-RTU)	RS485-05	\$300	V1
PLC & Flash Memory Modules	PLC functions; Ladder programming; electronic gear box; 9 digital inputs; 3 dry-contact digital outputs; 3 open-collector digital outputs; 1 analog input (14 bits); 2 analog outputs (14 bits); 2 encoder interfaces; RS-485 Modbus-RTU interface; CAN interface (CANopen, CANopen master/slave)	PLC11-01	\$1,876	V1
	Flash Memory Module for CFW11	MMF-01	\$59	V1
Keypad Accessories and Remote Keypad Cables	CFW11 keypad	HMI-01	\$304	V1
	Frame for keypad remote assembly	RHMIF-01	\$57	V1
	Blank cover for keypad slot	HMID-01	\$45	V1
	1m (3.3ft) remote keypad cable	IHM-CAB-RS-1M	\$47	V1
	2m (6.6ft) remote keypad cable	IHM-CAB-RS-2M	\$52	V1
	3m (10ft) remote keypad cable	IHM-CAB-RS-3M	\$57	V1
	5m (16ft) remote keypad cable	IHM-CAB-RS-5M	\$65	V1
	7.5m (25ft) remote keypad cable	IHM-CAB-RS-7.5M	\$76	V1
	Remote Station-includes Start PB, Stop PB, 1-NC and 1-NO contact block, Potentiometer 5k and legends (22mm) replaces CFW-REM	CSW-SP3PBS	\$460	Z5
	Remote Station-includes Start PB, Stop PB, 1-NC and 1-NO contact block, Potentiometer 5k and legends (30mm) replaces CFW-REM	CSW30-SP3PBS	\$535	Z5
Conduit Kit	10m (33ft) remote keypad cable	IHM-CAB-RS-10M	\$88	V1
	Conduit Kit for frame size A	KN1A-01	\$69	V1
	Conduit Kit for frame size B	KN1B-01	\$82	V1
	Conduit Kit for frame size C	KN1C-01	\$94	V1
Shielding Kit	IP21 Kit for frame size D	KIP21D-01	\$100	V1
	Power Cables Shielding Kit for frame size A	PCSA-01	\$40	V1
	Power Cables Shielding Kit for frame size B	PCSB-01	\$42	V1
	Power Cables Shielding Kit for frame size C	PCSC-01	\$45	V1

*Anybus card goes in slot 4 and allows the user to combine the PLC11 board with DeviceNet or Profibus or Ethernet/IP.

Variable Frequency Drives

CFW11

Technical Data

Supply	200...240V: +10% ...-15% of rated voltage
	380...480V: +10% ...-15% of rated voltage
Supply frequency	50/60Hz, +/-2Hz
Output frequency	0 to 300Hz
Types of control	Vector with encoder
	Vector sensorless
	V V W: voltage vector
	V/F (scalar)
Ambient temperature	-10 ...50°C
	up to 60° with output current reduction (2%/°C above 50°C)
Humidity	5 to 90% without condensation
Altitude	0 to 1000m
	Up to 4000m without current reduction (1%n for each 100m above 1000m)
Braking methods	Dynamic braking (available in all standard models)
	Optimal braking
	DC braking
Efficiency	Greater than 97%
Degree of protection	IP21 for models with A, B and C sizes
	IP20 / NEMA1 for models with D size
Possibility of flange mounting	Available in all standard models, rear part of heatsink with IP54 degree of protection
Overload	Normal Duty: 110%, 60s
	Heavy Duty: 150%, 60s
Analog inputs	1 differential, resolution 12 bits, 0 to 10V/(0)4 to 20mA
	1 differential, resolution 11 bits + signal, 0 to +/- 10V/(0)4 to 20mA
Analog outputs	2 isolated, resolution 11 bits, 0 to 10V/(0)4 to 20mA
Digital inputs	6 optoisolated, bi-directional, 24Vdc
Relay outputs	3 reverse contact outputs (NO/NC), 240Vac/1A
Motor thermistor	PTC/PT100/KTY84, use 1 analog output programmed for constant current + 1 analog input programmed for voltage
Supply + 24Vdc available for user	24Vdc +/-20%, 500ma
Norms	IEC 60146 – Semiconductor converters
	UL508C – Safety for power conversion equipment
	EN 50178 – Electronic equipment for use in power installations
	EN 61800-2 – General requirements adjustable speed electrical power drive systems
	EN 61800-5-1 – Safety requirements adjustable speed electrical power drive systems
	EN 61800-3 – EMC product standard including specific test methods adjustable speed electrical power drive systems
	EN 60204 – Electronic equipment of machines
	RoHS and WEEE Guidelines

Variable Frequency Drives

Communication Options & Superdrive

Profibus, Modbus and Device Net

Description	Catalog Number	List Price	Multiplier Symbol
SUPERDRIVE Software G2	SUPERDRIVE	\$37	V1
SUPERDRIVE Software + USB Cable	SUPERDRIVE+USB	\$301	V1
SUPERDRIVE KIT - CFW08 (KCS-CFW08 - RS232 PC Cable + CD Software)	KSD-CFW08	\$97	V1
SUPERDRIVE KIT - CFW09 (KCS-CFW09 - RS232 PC Cable + CD Software)	KSD-CFW09	\$156	V1
SUPERDRIVE G2 KIT - SSW06	KSDG2-SSW06	\$62	V1
SUPERDRIVE G2 KIT - SSW07 (KRS-232-SSW07 + CAB-RS-3 + CD Software)	KSDG2-SSW07	\$225	V1
RS-232/485 Converter (mounted externally)	MIW-02	\$221	V1
RS-485 Kit for PC	417102506	\$900	V1

Communication Options

The table below shows the hardware options required to provide WEG VFD's and Soft Starters with different serial communications or networking capabilities.

	RS-232	RS-485	Profibus-DP	DeviceNet	Modbus-RTU
CFW08	KCS-CFW08	KCS-CFW08 MIW-02	KCS-CFW08 MIW-02 MF01-PD	KCS-CFW08 MIW-02 MF01-DN	KCS-CFW08 MIW-02
CFW09	Standard	Exp. Boards	KFB-PD	KFB-DN	Exp. Boards
CFW11	-	-	PROFDP-05 Slot 4	DEVICENET-05 - Slot 4 CAN/RS-485-01 - Slot 3 CAN-01 - Slot 3	RS485-01 08 RS232-01 Slot 3
SSW05	Standard	MIW-02	MIW-02 MF01-PD	MIW-02 MF01-DN	MIW-02 MF01-MR
SSW06	NO	NO	KFB-PD-SSW06	KFB-DN-SSW06	KRS-485 SSW06
SSW07	See SSW07 Accessories				

"RS-485 Kit for PC" is required when SUPERDRIVE communicates with a multi drive RS-485 network. It is composed of a RS-232/RS-485 converter and a cable to connect to PC.

Superdrive

WEG Superdrive is a windows based software program that allows serial (RS - 232 or RS - 485) communication between a PC and all WEG Soft Starters and Variable Frequency Drives. Superdrive is an excellent programming, documentation, and troubleshooting tool for WEG Soft Starters and VFD's. Superdrive is available for free download at www.wegelectric.com.

Hardware accessories may be required depending on the Soft Starter or VFD line.

Standard Features

- Online and Offline Soft Starter or VFD programming
- Command and Monitoring
- Parameter set storage in a computer file format



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