CFW701 HVAC

Variable Speed Drive

In order to be present in the world's biggest drives market WEG developed a product dedicated to heating, ventilation, air conditioning and refrigeration applications. Beyond a specific hardware designed for this purpose the CFW701 also brings in specific functions to perform according to market needs.

The Full HVAC Potential

Fire Mode
This function makes the drive to inhibit its internal faults making the motor run at adverse conditions without stopping the process.

Sleep / Wake-Up Mode
It prevents the operation of the motor at low speeds for certain amount of time to be previously programmed. Also the instant when the motor has to be restarted can determined by using the wake-up mode.

Broken Belt
It monitors motor torque and prevents it from running with no load in case of a broken belt.

Energy Saving
Depending on the motor speed and load conditions the flux is reduced decreasing losses and therefore efficiency is improved causing energy saving.

Filter Maintenance Alarm
It warns about the need to replace the filter.

Bypass
Using one of its output relay the CFW701 HVAC allows the motor to be started cross the line.
An external circuitry is needed for this operation.

USB Port
Ready to conect with a computer.

Dry Pump
It prevents the pump from running with no load.

PTC
Possibility for monitoring PTC sensor.

Short Cycle Protection
It prevents a compressor/motor from being switched on and off in short period of times.

Motor Power Range
0.18 to 110 kW (0.25 to 150 HP)

Certifications

Characteristics

- **Focus on HVAC Duty**
  Overload current: 150% during 60s
  Ambient temperature: up to 50 °C
- **RFI Filter Built-In**
  RFI Filter complying with IEC 61800-3 Category C3
- **Low Harmonic Distortion**
  Meets the standard IEC 61000-3-12
- **SoftPLC**
  PLC functions: making it a flexible and optimized solution
- **Advanced PID**
  Main PID control the process by itself and 2 additionals PID for use to control an independent process
- **Communication Protocols**
  BACnet MS/TP, Metasys N2 and Modbus-RTU
- **Conformal Coating as Standard**

Accessories

- **Intuitive HMI**
  Built-in as standard and remote for the panel door

Specific Engineering Units for HVAC for both HMI.

- **Inputs and Outputs (I/O):**
  - 8 Isolated digital inputs
  - 3 Differential analog inputs (0-10 V/4-20 mA (2) and 4-20 mA (1))
  - 5 Digital outputs (2 relays with NA contacts, 3 isolated transistors)
  - 2 Non-isolated analog outputs
  - 1 Dedicated input for PTC

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Variable Speed Drive

Applications

- Hospitals
- Shoppings
- Commecial buildings
- Universities
- Schools
- Airports
- Hotels
- Clean rooms
- Pump and fan applications in general

Drive Ratings

CFW701 - variable speed drive						Maximum ND motor power [1]				Maximum HD motor power [1]			
Power supply (V)		Model	Frame sizes	Normal Duty (ND)	Heavy Duty (HD)	IEC		NEMA		IEC		NEMA	
				A	A	kW		HP		kW		HP	
Single-phase	200-240	CFW701 A 06P0 S2	A	6	5	50 Hz - 220 V / 230 V	1.1	60 Hz - 230 V	1.5	50 Hz - 220 V / 230 V	1.1	60 Hz - 230 V	1
		CFW701 A 07P0 S2		7	7		1.5		2		1.5		2
		CFW701 A 10P0 S2		10	10		2.2		3		2.2		3
Single-phase or three-phase	200-240	CFW701 A 06P0 B2	A	6	5		1.1		1.5		1.1		1
		CFW701 A 07P0 B2		7	7		1.5		2		1.5		2
Three-phase	200-240	CFW701 A 07P0 T2	A	7	5.5		1.5		2		1.1		1
		CFW701 A 10P0 T2		10	8		2.2		3		1.5		2
		CFW701 A 13P0 T2		13	11		3		3		2.2		3
		CFW701 A 16P0 T2		16	13		4		5		3		3
		CFW701 B 24P0 T2	B	24	20		5.5		7.5		5.5		5
		CFW701 B 28P0 T2		28	24		7.5		10		5.5		7.5
		CFW701 B 33P0 T2		33.5	28		9.2		10		7.5		10
		CFW701 C 45P0 T2	C	45	36		11		15		9.2		10
		CFW701 C 54P0 T2		54	45		15		20		11		15
		CFW701 C 70P0 T2		70	56		18.5		25		15		20
		CFW701 D 86P0 T2	D	86	70		22		30		18.5		25
		CFW701 D 0105P0 T2		105	86		30		40		22		30
Three-phase	380-480	CFW701 E 0142P0 T2	E	142	115		37		50		30		40
		CFW701 E 0180P0 T2		180	142		55		60		37		50
		CFW701 E 0211P0 T2		211	180		55		75		55		60
Three-phase	380-480	CFW701 A 03P6 T4	A	3.6	3.6	50 Hz - 380 V / 415 V	1.5	60 Hz - 460 V	2	50 Hz - 380 V / 415 V	1.5	60 Hz - 460 V	2
		CFW701 A 05P0 T4		5	5		2.2		3		2.2		3
		CFW701 A 07P0 T4		7	5.5		3		3		2.2		3
		CFW701 A 10P0 T4		10	10		4		5		4		5
		CFW701 A 13P5 T4		13.5	11		5.5		7.5		4		7.5
		CFW701 B 17P0 T4	B	17	13.5		7.5		10		5.5		7.5
		CFW701 B 24P0 T4		24	19		11		15		9.2		10
		CFW701 B 31P0 T4		31	25		15		20		11		15
		CFW701 C38P0 T4	C	38	33		18.5		25		15		20
		CFW701 C45P0 T4		45	38		22		30		18.5		25
		CFW701 C58P5 T4		58.5	47		30		40		22		30
		CFW701 D 70P5 T4	D	70.5	61		37		50		30		40
		CFW701 D 88P0 T4		88	73		45		60		37		50
		CFW701 E 0105 T4	E	105	88		55		75		45		60
		CFW701 E 0142 T4		142	115		75		100		55		75
		CFW701 E 0180 T4		180	142		90		150		75		100
		CFW701 E 0211 T4		211	180		110		150		90		150
Three-phase	500-600	CFW701 B 02P9 T5	B	2.9	2.7	50 Hz - 525 V / 575 V	1.5	60 Hz - 575 V	2	50 Hz - 525 V / 575 V	1.5	60 Hz - 575 V	2
		CFW701 B 04P2 T5		4.2	3.8		2.2		3		2.2		2
		CFW701 B 07P0 T5		7	6.5		4		5		4		5
		CFW701 B 10P0 T5		10	9		5.5		7.5		5.5		7.5
		CFW701 B 12P0 T5		12	10		7.5		10		5.5		7.5
		CFW701 B 17P0 T5		17	17		11		15		11		15
		CFW701 D 22P0 T5	D	22	19		15		20		11		15
		CFW701 D 27P0 T5		27	22		18.5		25		15		20
		CFW701 D 32P0 T5		32	27		22		30		18.5		25
		CFW701 D 44P0 T5		44	36		30		40		22		30
		CFW701 E 53P0 T5	E	53	44		37		50		30		40
		CFW701 E 63P0 T5		63	53		45		60		37		50
		CFW701 E 80P0 T5		80	66		55		75		45		60
		CFW701 E 0107 T5		107	90		75		100		55		75
		CFW701 E 0125 T5		125	107		90		125		75		100
		CFW701 E 0150 T5		150	122		110		150		90		100

Note: 1) Use motor power ratings above only as a guideline. Motors are rated for 400 V, 50 Hz, 4-pole. The right way to size a VSD is matching its output current with the rated motor current.

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