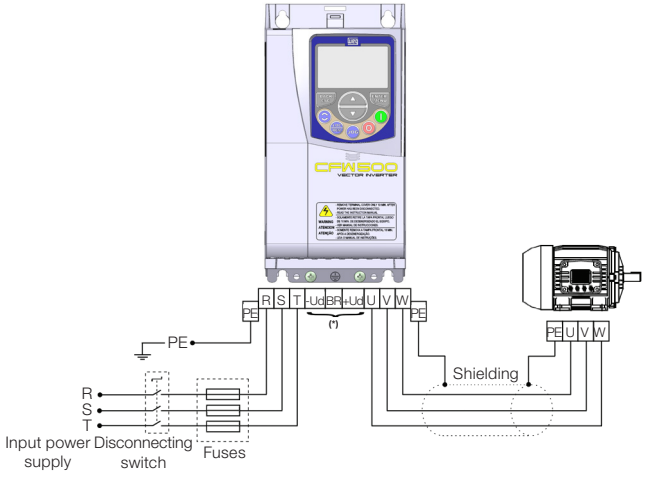
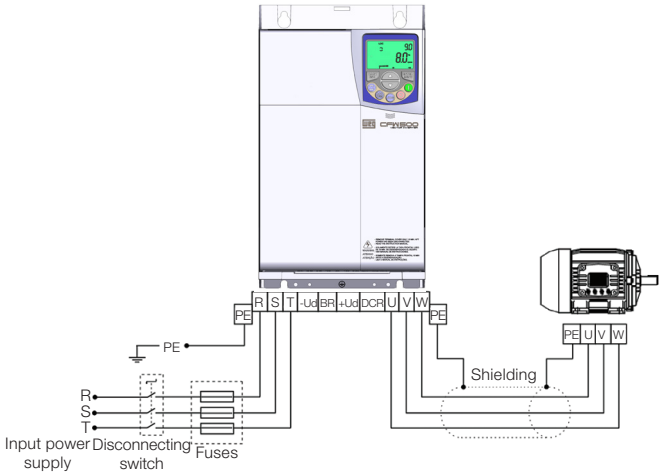
POWER CONNECTIONS

For further details, refer to user's guide chapter 3.



(*) The power terminals -Ud, BR and +Ud are not available in models of frame A.

(a) Frame A, B and C



(b) Frame D

DANGER!
Always disconnect the main power supply before touching any electrical component associated to the inverter. Several components can remain charged with high voltages or remain in movement (fans) even after the AC power is disconnected or switched off.
Wait at least ten minutes after turning off the input power for the complete discharge of the power capacitors.
Always connect the grounding point of the inverter to the protection earth (PE).

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Document: 10003219660 / 00

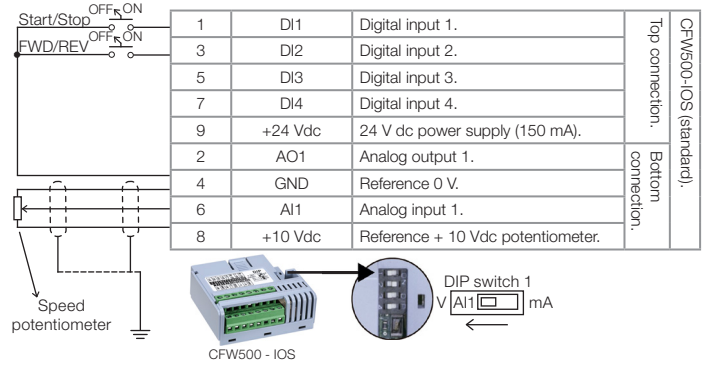
Frequency Inverter

CFW500

Quick Setup Guide

TYPICAL CONTROL CONNECTION

Example 1: 2 - Wire Start/Stop, Speed Potentiometer

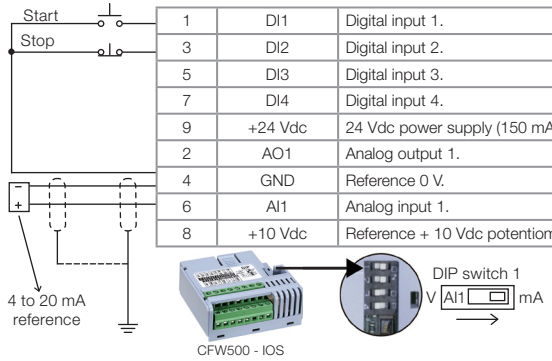


1	DI1	Digital input 1.	Top connection.	CFW500-IOS (standard).
3	DI2	Digital input 2.		
5	DI3	Digital input 3.		
7	DI4	Digital input 4.		
9	+24 Vdc	24 V dc power supply (150 mA).		
2	AO1	Analog output 1.	Bottom connection.	
4	GND	Reference 0 V.		
6	AI1	Analog input 1.		
8	+10 Vdc	Reference + 10 Vdc potentiometer.		

Note: (*) The digital input 2 (DI2) can also be used as input in frequency (FI). For further details refer to the programming manual of the CFW500.

Prog	DEF	User	Description
P0220	2	1	Local/Remote = Always Remote.
P0222	1	1	Remote Reference = AI1.
P0226	4	4	FWD/REV = DIx.
P0227	1	1	Run/Stop Remote = DIx.
P0231	0	0	AI1 = Speed Reference.
P0233	0	0	AI1 = 0 to 10 V.
P0263	1	1	DI1 = Run/Stop.
P0264	8	8	DI2 = Clockwise Rotation Direction.

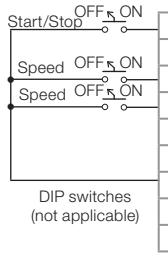
Example 2: 3 - Wire Start/Stop, 4 to 20 mA Reference



1	DI1	Digital input 1.	Top connection.	CFW500-IOS (standard).
3	DI2	Digital input 2.		
5	DI3	Digital input 3.		
7	DI4	Digital input 4.		
9	+24 Vdc	24 Vdc power supply (150 mA).		
2	AO1	Analog output 1.	Bottom connection.	
4	GND	Reference 0 V.		
6	AI1	Analog input 1.		
8	+10 Vdc	Reference + 10 Vdc potentiometer.		

Prog	DEF	User	Description
P0220	2	1	Local/Remote = Always Remote.
P0222	1	1	Remote Reference = AI1.
P0227	1	1	Run/Stop Remote = DIx.
P0231	0	0	AI1 = Speed Reference.
P0233	0	1	AI1 = 4 to 20 mA.
P0263	1	6	DI1 = Start.
P0264	8	7	DI2 = Stop.

Example 3: 2 - Wire Start/Stop, Multispeed (4 Speeds)



1	DI1	Digital input 1.	Top connection.	CFW500-IOS (standard).
3	DI2	Digital input 2.		
5	DI3	Digital input 3.		
7	DI4	Digital input 4.		
9	+24 Vdc	24 Vdc power supply (150 mA).		
2	AO1	Analog output 1.	Bottom connection.	
4	GND	Reference 0 V.		
6	AI1	Analog input 1.		
8	+10 Vdc	Reference + 10 Vdc potentiometer.		

Prog	DEF	User	Description
P0220	2	1	Local/Remote = Always Remote.
P0222	1	8	Remote Reference = Multispeed.
P0227	1	1	Run/Stop Remote = DIx.
P0263	1	1	DI1 = Run/Stop.
P0265	20	13	DI3 = Multispeed.
P0266	10	13	DI4 = Multispeed.
P0124	3.0	▲	Speed = ▲ (DI3 = Open and DI4 = Open).
P0125	10.0	▲	Speed = ▲ (DI3 = Open and DI4 = Closed).
P0126	20.0	▲	Speed = ▲ (DI3 = Closed and DI4 = Open).
P0127	30.0	▲	Speed = ▲ (DI3 = Closed and DI4 = Closed).

Note: ▲ Speed setting depends on application.

PROGRAMMING

CFW500 Keypad

Menu/Enter button:
- Enter programming mode.
- Use to Select/Save.

Run button:
- Run in local mode.

Stop button:
- Stop in local mode.
- Reset.

Up/Down buttons:
- Adjust speed in local mode.
- Navigate through parameters.

Back/ESC button:
- Return to monitoring mode.
- Return to previous programming level.

Oriented Start Up - STARTUP Group (Scalar - V/f Mode)

Prog	DEF	User	Description
P0202	0	0	Control Type V/f.
P0401	-	■	Motor Current (A).
P0402	1710	■	Motor Speed (rpm).
P0403	60	■	Motor Frequency (Hz).

Note: set P0202 = 5 during oriented start-up for improved speed control and higher torque capacity at low speed (especially < 5 Hz).
■ Set as per motor nameplate data.

Motor Overload Settings - MOTOR Group

Prog	User	Description
P0156	1.1 x P0401	Overload Current at 100% Speed.
P0157	1.0 x P0401	Overload Current at 50% Speed.
P0158	0.8 x P0401	Overload Current at 5% Speed.

Basic Application - BASIC Group

Prog	DEF	Description
P0100	10.0 s	Acceleration Time (s).
P0101	10.0 s	Deceleration Time (s).
P0133	3.0 Hz	Minimum Speed (Hz).
P0134	66.0 Hz (55.0) Hz	Maximum Speed (Hz).

Relay Output

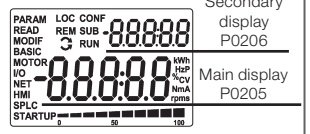
11	DO1-RL-NO	Normally open.	NO	Top connection.
13	DO1-RL-C	Common.		
15	DO1-RL-NC	Normally closed.	NC	

Prog	DEF	User	Description
P0275	13	11	Run.
		12	Ready.
		13	No Fault.
		14	With Fault.

Note: for more advance functions, please refer to the the programming manual.

Changing Monitor Display Parameter

Prog	DEF	User	Description
P0205	2	1	Speed Reference (rpm).
P0206	1	2	Output Speed (rpm).
		3	Motor Current (A).
		5	Output Frequency (Hz).
		7	Output Voltage (V).
		9	Motor Torque (%).



Secondary display P0206

Main display P0205

Note: for more advance functions, please refer to the programming manual (chapter 5.3).

Loading Factory Default Setting

Prog	DEF	User	Description
P0204	0	5	Load WEG 60 Hz.
		6	Load WEG 50 Hz.