

English

# H1ACS1 Addendum

## CFW700 Frequency Inverter



13617810

### 1 INTRODUCTION

This addendum contains information about the CFW700...H1ACS1 frequency inverters (models of the CFW700 line with single-phase power supply which are not shown in the user manual). Only the differences from the standard product are presented. The other information contained in the user manual is also valid for these models.

### 2 NOMENCLATURE OF THE INVERTER

Suffix 'H1AC' is used in the special hardware version field and 'S1' in the special software version field to identify models of CFW700...T2 and CFW700...T4 inverters that can be connected to single-phase lines. Those suffixes are only available for some inverters models (current and voltage). Chapter 3 LIST OF MODELS AND TECHNICAL SPECIFICATIONS contains the list of available models.

### 3 LIST OF MODELS AND TECHNICAL SPECIFICATIONS

See Table A1 of the APPENDIX A TECHNICAL SPECIFICATIONS.

External capacitors are specified in item 6.2 Specification of the External Capacitors and Resistors.

The models mentioned above are only available in the following configurations:

- Degree of protection - front part of the inverter: IP20, back part of the inverter: IP54.
- With dynamic braking IGBT included.
- Without RFI filter option.
- Without STO (Safe Torque Off) function.
- Without external 24 Vdc control power supply option.

If it's required a configuration different from the specification above, contact **WEG**.

Other specifications:

- Minimum line impedance: 2 %.
- Maximum of 10 connections per hour.
- Power factor: 0.70 with single-phase input in the rated condition.

For operation with switching frequency above the rated frequency, apply derating to the output current. Contact **WEG**.

The speed and torque control performance specification of the CFW700 series presented in the user manual is not the same as that of the CFW700...H1ACS1 inverters with single-phase power supply. Contact **WEG** for more information.

### 4 BLOCK DIAGRAM

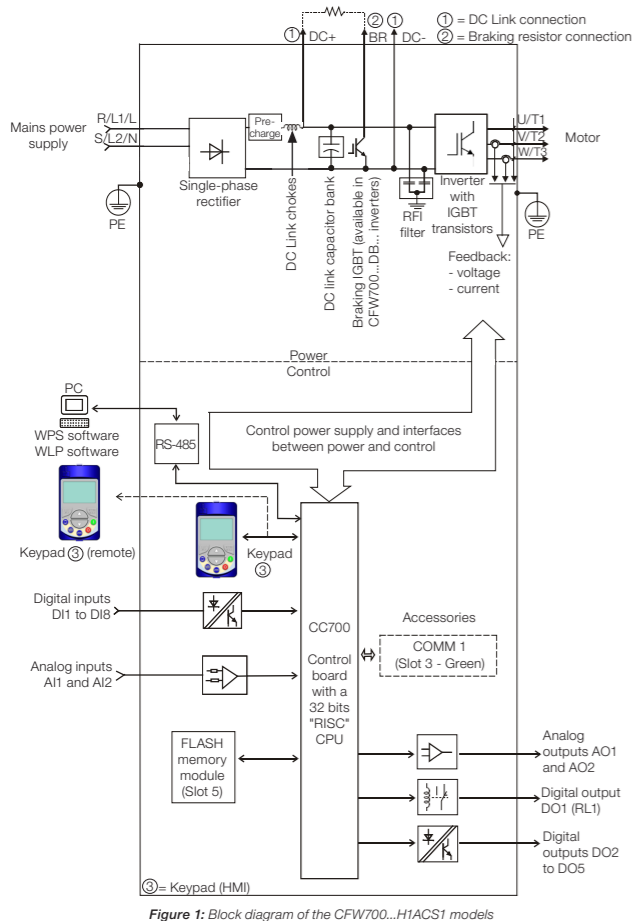


Figure 1: Block diagram of the CFW700...H1ACS1 models

### 5 IDENTIFICATION LABELS

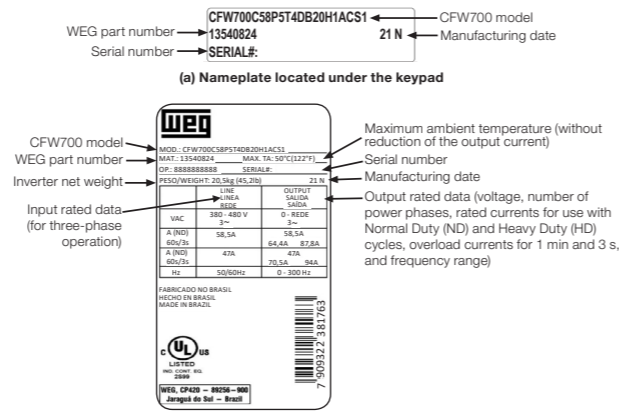


Figure 2: (a) to (b) Identification label of the models CFW700...H1ACS1

### 6 ELECTRICAL INSTALLATION

#### 6.1 Power Connections

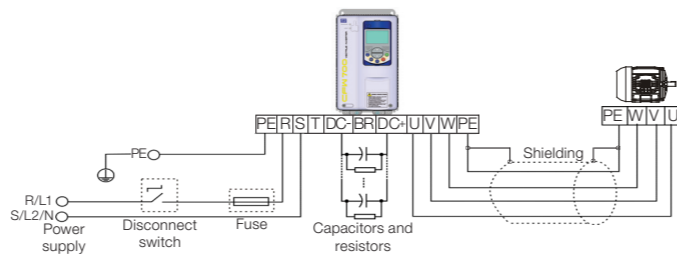
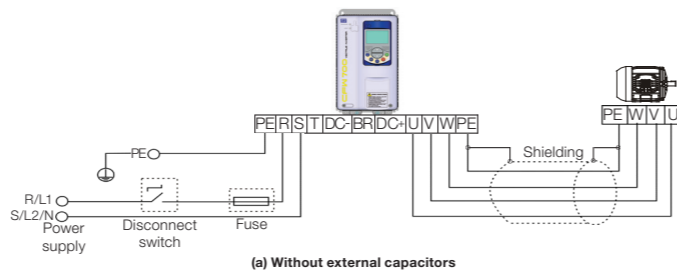


Figure 3: (a) to (c) Power and grounding connections

#### 6.2 Specification of the External Capacitors and Resistors

Connecting the external capacitors specified in table below according to Figure 3 (b) and (c) increases the rated current capacity of the inverter as specified in Chapter 3 LIST OF MODELS AND TECHNICAL SPECIFICATIONS.

Table 1: Specification of the external capacitors and resistors to increase the current capacity of the CFW700...H1ACS1 inverters

Material	Inverter Model WEG Nomenclature	Frame Size	Specification of External Capacitors
13540827	CFW700B33P5T2DB20H1ACS1	B	1 x 1500 uF / 400 V
13541028	CFW700C70P0T2DB20H1ACS1	C	3 x 1500 uF / 400 V connected in parallel
13541029	CFW700D0105T2DBN1H1ACS1	D	4 x 1500 uF / 400 V connected in parallel
14852078	CFW700E0142T2DBN1H1ACS1	E	External capacitors are not necessary
13541032	CFW700E0211T2DB20H1ACS1	E	External capacitors are not necessary
13540823	CFW700B31P0T4DB20H1ACS1	B	1 set (*) of 2 x 1500 uF / 400 V connected in series (total: 2 capacitors)
13540824	CFW700C58P5T4DB20H1ACS1	C	2 sets (*) of 2 x 1500 uF / 400 V connected in series (total: 4 capacitors)
13540825	CFW700D88P0T4DBN1H1ACS1	D	4 sets (*) of 2 x 1500 uF / 400 V connected in series (total: 8 capacitors)
14852081	CFW700E0142T4DBN1H1ACS1	E	3 sets (*) of 2 x 1500 uF / 400 V connected in series (total: 6 capacitors)
13540826	CFW700E0211T4DB20H1ACS1	E	2 sets (*) of 2 x 4700 uF / 400 V connected in series (total: 4 capacitors)

(\*) The capacitor sets are connected in parallel.

Table 2: Characteristics of the capacitors specified in Table 1

Capacitor (Capacitance / Rated Voltage)	Size (Diameter x Height)	Rated Ripple Current (Ir, nom)	Rated Temperature	Useful Life	Suggested Capacitor (Manufacturer/Model)	WEG Part Number
1500 uF / 400 V	516 x 80.7mm	6.4 Arms	85 °C (185 °F)	20000h @ Ir,nom, 100 Hz, 85 °C (185 °F) and 400 V	EPCOS B43733-A9158-M050 or B43584-S9158-M3	10692675
4700 uF / 400 V	76 x 105mm	13.8 Arms	85 °C (185 °F)	20000h @ Ir,nom, 100 Hz, 85 °C (185 °F) and 400 V	EPCOS B43584-A9478-M000	10829367

**Important:** use of 33 kohms/5 %/10 W resistor (example: ATE 7SR/B 33 K 5 % - WEG material: 10630633) in parallel with each capacitor of 1500 uF/400 V and 22 kohms/5 %/13 W resistor (example: UP 10SR 22 K 5 % - WEG material: 10190128) in parallel with each capacitor of 4700 uF / 400 V.

#### 6.3 Recommended Fuses, Circuit Breakers, and Power and Grounding Wiring

See Table A2 of the APPENDIX A TECHNICAL SPECIFICATIONS.

#### 6.4 AC Power Supply Considerations

The CFW700...H1ACS1 inverter is suitable for application on a circuit able to supply no more than 30 kVA symmetrical (240 V / 480 V).

### 7 INSTALLATION ACCORDING TO THE EUROPEAN DIRECTIVE OF ELECTROMAGNETIC COMPATIBILITY

#### 7.1 Emission and Immunity Levels

- Conducted and radiated emission: category C4 according to IEC/EN61800-3.

#### 8 FIRST TIME POWER-UP AND START-UP

- For operation with single-phase power supply, it is necessary to disable the phase loss fault (F006) by setting P0357 = 0 (phase loss time = 0) - the CFW700...H1ACS1 inverters leave the factory with this setting.
- Set the motor overload protection (parameters P0156, P0157, P0158, P0159 and P0349) according to the motor used.
- Parameter P0348 (Motor Overload Configuration) must be set to 1 (fault/alarm) or 2 (fault).



Español

# Adendo H1ACS1

## CFW700 Convertidor de Frecuencia

### 1 INTRODUCCIÓN

Este anexo contiene informaciones sobre los convertidores CFW700...H1ACS1 (modelos de la línea CFW700 con alimentación monofásica que no son presentados en el manual del usuario). Solamente se presentadas las diferencias con relación al producto estándar. Las demás informaciones presentadas en el manual del usuario también son válidas para tales modelos.

### 2 NOMENCLATURA DEL CONVERTIDOR

Es utilizado el sufijo 'H1AC' en el campo versión de hardware especial y 'S1' en el campo versión de software especial, para identificar los modelos de convertidores CFW700...T2 y CFW700...T4 que pueden ser conectados en redes monofásicas. Estos sufijos solamente están disponibles para algunos modelos (corriente y tensión) de convertidores. El Capítulo 3 RELACIÓN DE MODELOS Y ESPECIFICACIONES TÉCNICAS presenta la lista de los modelos disponibles.

### 3 RELACIÓN DE MODELOS Y ESPECIFICACIONES TÉCNICAS

Consulte la Tabla A1 del ANEXO A - ESPECIFICACIONES TÉCNICAS.

Los condensadores externos están especificados en el ítem 6.2 Especificación de los Condensadores y Resistores Externos.

Los modelos citados arriba solamente están disponibles en las siguientes configuraciones:

- Grado de protección - parte frontal del convertidor: IP20, parte trasera del convertidor: IP54.
- Con IGBT de frenado reostático incluido.
- Sin opcional filtro RFI.
- Sin la función STO (Safe Torque Off - parada de seguridad).
- Sin el opcional alimentación independiente de la electrónica en 24 Vcc.

Siendo necesaria una configuración diferente a la especificada arriba, consulte la **WEG**

Otras especificaciones:

- Impedancia mínima de red: 2 %.
- Máximo de 10 conexiones por hora.
- Factor de potencia: 0.70 con entrada monofásica en la condición nominal.

Para operación con frecuencia de conmutación mayor que la nominal, aplicar reducción de la corriente de salida. Consulte la **WEG**.

La especificación de performance del control de velocidad y de torque de la serie CFW700 presentada en el manual del usuario no es la misma en los convertidores CFW700...H1ACS1 alimentados con tensión monofásica. Para más informaciones consulte la **WEG**.

### 4 DIAGRAMA DE BLOQUE

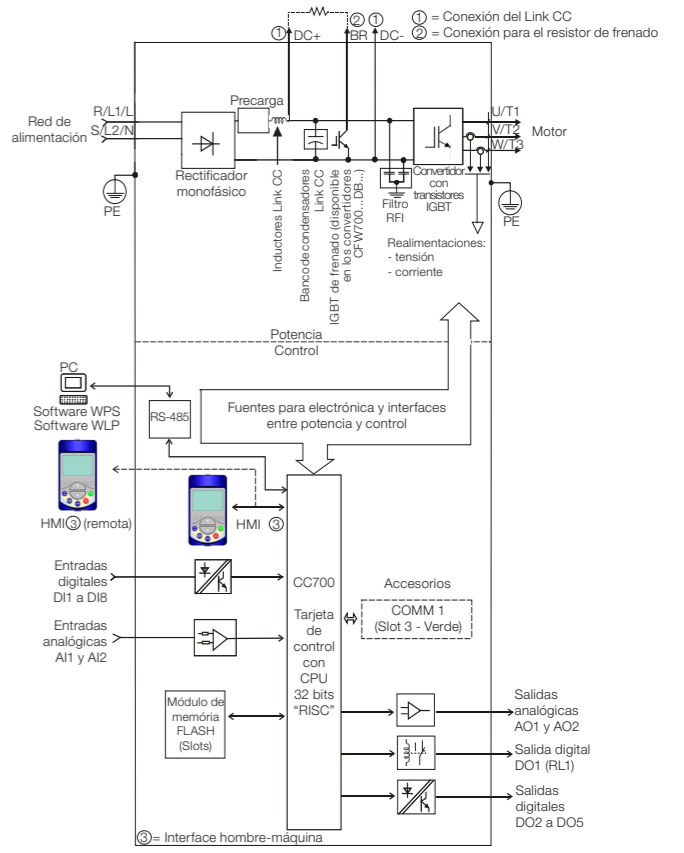


Figura 1: Diagrama de bloques de los modelos CFW700...H1ACS1

### 5 ETIQUETAS DE IDENTIFICACIÓN



Figure 2: (a) e (b) Etiquetas de identificación de los modelos CFW700...H1ACS1

### 6 INSTALACIÓN ELÉCTRICA

#### 6.1 Conexiones de Potencia

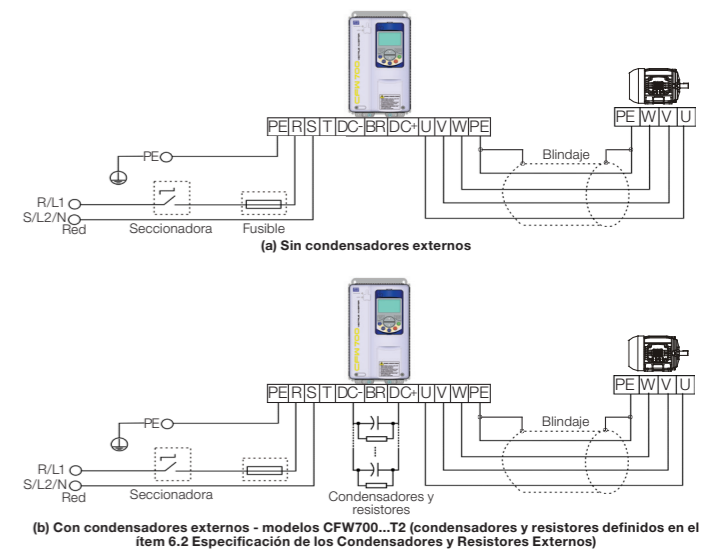


Figure 3: (a) Sin condensadores externos - modelos CFW700...T2 (condensadores y resistores definidos en el ítem 6.2 Especificación de los Condensadores y Resistores Externos)

