



**STÖBER**

# **CAN 5000 and DP 5000**

## **Commissioning Instructions**

**Installation**

**Connecting**

**V 5.6-E or later**

**04/2012**

**en**

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Commissioning Instructions CAN 5000 and DP 5000



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# 1 Overview

Inverter	HW status of the inverter	CAN 5000	DP 5000	ECS 5000	PN 5000
FDS 5000A	200 or higher	Yes	Yes	Yes	Yes
FDS 5000	up to 199	Yes	Yes	Yes	No

Inverter	HW status of the inverter	CAN 5000	DP 5000	ECS 5000	PN 5000
MDS 5000A	200 or higher	Yes	Yes	Yes	Yes
MDS 5000	up to 199	Yes	Yes	Yes	No

## Fieldbus module CANopen® DS-301 CAN 5000

ID No. 44574

Description: Accessory part for coupling of CAN-Bus



## Fieldbus module PROFIBUS DP-V1 DP 5000

ID No. 44575

Description: Accessory part for coupling of PROFIBUS DP-V1



## 2 Notes on Safety

The devices may cause risks. For these reasons, comply with the following:

- The safety notes listed in the following sections and points
- The technical rules and regulations.

In addition, always read the appropriate documentation. STÖBER ANTRIEBSTECHNIK GmbH + Co. KG accepts no liability for damages caused by non-adherence to the instructions or applicable regulations. Subject to technical changes to improve the devices without prior notice. This documentation is purely a product description. It does not represent promised properties in the sense of warranty law.

### 2.1 Component part of the product

The technical documentation is a component part of a product.

- Since the technical documentation contains important information, always keep it handy in the vicinity of the device until the machine is disposed of.
- If the product is sold, disposed of, or rented out, always include the technical documentation with the product.

### 2.2 Operation in accordance with its intended use

The CAN 5000 accessory is only intended for establishing communication between devices from the 5th generation of STÖBER inverters and a CANopen® network.

Improper use includes integration in other communication networks.

The DP5000 accessory is only intended for establishing communication between devices from the 5th generation of STÖBER inverters and a PROFIBUS network.

Improper use includes integration in other communication networks.

### 2.3 Qualified personnel

Since the devices may harbor residual risks, all configuration, transportation, installation and commissioning tasks including operation and disposal may only be performed by trained personnel who are aware of the possible risks.

Personnel must have the qualifications required for the job. The following table lists examples of occupational qualifications for the jobs:

Activity	Possible occupational qualifications
Transportation and storage	Worker skilled in storage logistics or comparable training
Configuration	<ul style="list-style-type: none"> <li>- Graduate engineer (electro-technology or electrical power technology)</li> <li>- Technician (m/f) (electro-technology)</li> </ul>



Activity	Possible occupational qualifications
Installation and connection	Electronics technician (m/f)
Commissioning (of a standard application)	- Technician (m/f) (electro-technology) - Master electro technician (m/f)
Programming	Graduate engineer (electro-technology or electrical power technology)
Operation	- Technician (m/f) (electro-technology) - Master electro technician (m/f)
Disposal	Electronics technician (m/f)

Tab. 2-1: examples of occupational qualifications

In addition, the valid regulations, the legal requirements, the reference books, this technical documentation and, in particular, the safety information contained therein must be carefully

- read
- understood and
- complied with

## 2.4 Installation and connection

Installation and connection work are only permitted after the device has been isolated from the power! The accessory installation instructions allow the following actions during the installation of accessories:

- The housing in the upper slot can be opened
- The housing in the bottom slot can be opened.

Opening the housing in another place or for other purposes is not permitted.

The accessory installation instructions allow the following actions during the installation of accessories:

- The housing in the upper slot can be opened.

Opening the housing in another place or for other purposes is not permitted.

Use only copper lines. For the line cross sections to be used, refer to DIN VDE 0298-4 or DIN EN 60204-1 Appendix D and Appendix G.

Protect the device from falling parts (pieces of wire, leads, metal parts, and so on) during installation or other tasks in the switching cabinet. Parts with conductive properties inside the inverter can cause short circuits or device failure.

The motor must have an integrated temperature monitor with basic isolation in acc. with EN 61800-5-1 or external motor overload protection must be used.

The permissible protection class is protective ground. Operation is not permitted unless the protective conductor is connected in accordance with the regulations.

Comply with the applicable instructions for installation and commissioning of motor and brakes.

## 2.5 Commissioning, operation and service

Remove additional coverings before commissioning so that the device cannot overheat. During installation, provide the free spaces specified in the projecting manuals to prevent the inverter from overheating. The housing of the drive controller must be closed before you turn on the supply voltage. When the supply voltage is on, dangerous voltages can be present on the connection terminals and the cables and motor terminals connected to them. Remember that the device is not necessarily de-energized after all indicators have gone off.

When network voltage is applied, the following are prohibited:

- Opening the housing
- Connecting or disconnecting the connection terminals
- Installing accessories

Before carrying out any work on the machine, observe all the following five safety regulations in the above-mentioned sequence:

1. Enable. Ensure that you also activate the auxiliary circuits.
2. Secure against switching on.
3. Ensure that the parts are de-energized.
4. Earth and short-circuit.
5. Cover or isolate any live neighboring parts.



### Information

Please note that the discharge time for the intermediate circuit capacitors is 5 min. You can only ensure that the parts are de-energized after this time.

You can then start your work on the drive controller. Repairs may only be performed by STÖBER ANTRIEBSTECHNIK GmbH + Co. KG.

Send defective devices together with a fault description to:

STÖBER ANTRIEBSTECHNIK GmbH + Co. KG

Department VS-EL

Kieselbronner Str.12

75177 Pforzheim

GERMANY

## 2.6 Disposal

Please comply with the latest national and regional regulations! Dispose of the individual parts separately depending on their nature and currently valid regulations such as, for example:

- Electronic scrap (PCBs)
- Plastic
- Sheet metal
- Copper
- Aluminum



## 2.7 Presentation of notes on safety

### NOTICE

#### Notice

means that property damage may occur

- ▶ if the stated precautionary measures are not taken.

### CAUTION!

#### Caution

with warning triangle means that minor injury may occur

- ▶ if the stated precautionary measures are not taken.

### WARNING!

#### Warning

means that there may be a serious danger of death

- ▶ if the stated precautionary measures are not taken.

### DANGER!

#### Danger

means that serious danger of death exists

- ▶ if the stated precautionary measures are not taken.



#### Information

indicates important information about the product or a highlighted portion of the documentation which requires special attention.

## 3 Installation

### 3.1 Installation in the MDS 5000 and SDS 5000

You will need the following accessories for the connection of CANopen® or PROFIBUS. The accessory part is installed above the inverter's display.

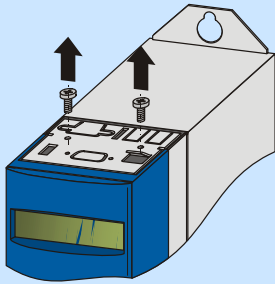
- CANopen®: CAN 5000
- PROFIBUS: DP 5000

You will need the following for installation of CAN 5000 or DP 5000.

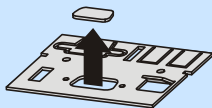
- A TX10 Torx screwdriver
- A pair of pliers
- Hexagon socket wrench, 4.5 mm

#### Installation of a CAN 5000 or DP 5000 in an inverter

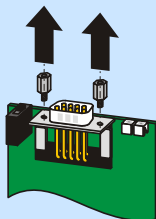
- 1 Remove the mounting screws and take off the cover plate:



- 2 Remove the metal plate punch-out with a pair of pliers:



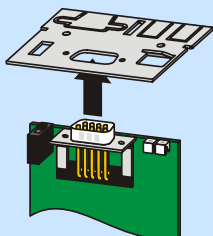
- 3 Remove the screws from the option board:



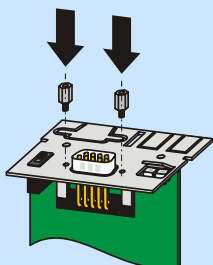




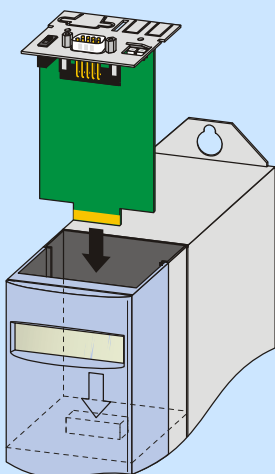
- 4 From below, thread the sub D plug connector of the PCB through the metal plate:



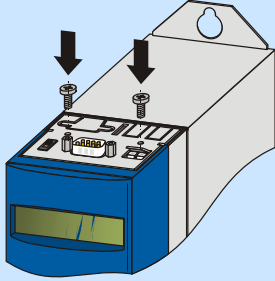
- 5 Secure the PCB to the metal plate with the screws which you removed in step 3:



- 6 Guide the option board into the inverter so that the gold contacts slide into the black connector:



7 Secure the metal plate to the inverter with the mounting screws:



⇒ You have now installed the accessory.



### WARNING!

**Danger of injury/death and property damage due to electric shock!**

- ▶ Before installing accessories, turn off all voltage supplies! Then wait 5 minutes for the DC link capacitors to discharge. Never begin with accessory installation until after this!

### NOTICE

**Danger of property damage from incorrect installation of the devices!**

- ▶ It is essential to comply with the following installation instructions to avoid damage to the devices.

## 3.2 Installation in the FDS 5000

You will need the following accessories for the connection of CANopen® or PROFIBUS. The accessory part is installed above the inverter's display.

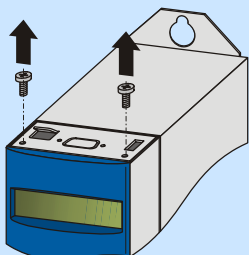
- CANopen®: CAN 5000
- PROFIBUS: DP 5000

You will need the following for installation of CAN 5000 or DP 5000.

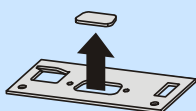
- A TX10 Torx screwdriver
- A pair of pliers
- Hexagon socket wrench, 4.5 mm

### Installation of a CAN 5000 or DP 5000 in an inverter

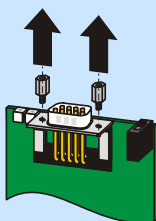
- 1 Remove the mounting screws and take off the cover plate:



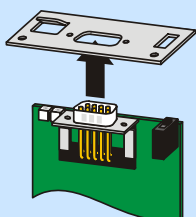
- 2 Remove the metal plate punch-out with a pair of pliers:



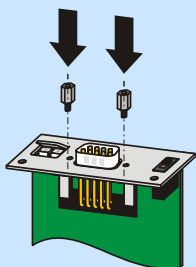
- 3 Remove the screws from the option board:



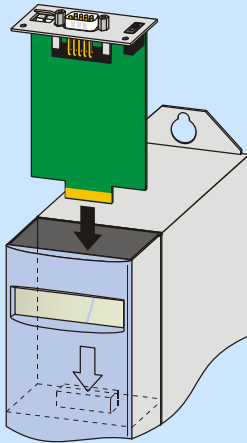
- 4 From below, thread the sub D plug connector of the PCB through the metal plate:



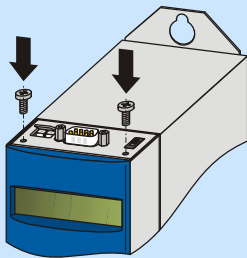
- 5 Secure the PCB to the metal plate with the screws which you removed in step 3:



- 6 Guide the option board into the inverter so that the gold contacts slide into the black connector:



- 7 Secure the metal plate to the inverter with the mounting screws:



⇒ You have now installed the accessory.

### **WARNING!**

#### **Danger of injury/death and property damage due to electric shock!**

- Before installing accessories, turn off all voltage supplies! Then wait 5 minutes for the DC link capacitors to discharge. Never begin with accessory installation until after this!

### **NOTICE**


#### **Danger of property damage from incorrect installation of the devices!**

- It is essential to comply with the following installation instructions to avoid damage to the devices.

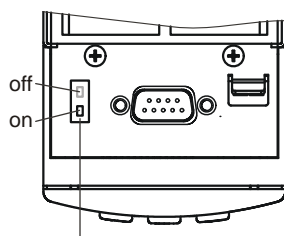
## 4 Connection

### 4.1 CAN 5000

#### Terminal description X200

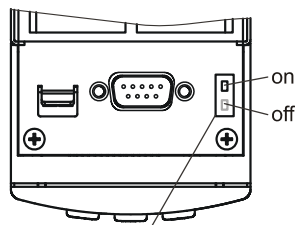
Pin		Designation	Function
	1	nc	—
	2	CAN-low	CAN-low line
	3	GND	Signal Ground
	4	nc	—
	5	nc	—
	6	CAN-low	CAN-low line connected internally with pin 2
	7	CAN-high	CAN-high line
	8	nc	—
	9	CAN-high	CAN-high line connected internally with pin 7

#### MDS 5000, SDS 5000



Internal terminating resistance 120  $\Omega$  can be activated


#### FDS 5000



internal terminating resistance 120  $\Omega$  can be activated

### 4.2 DP 5000

#### Terminal description X200

Pin	Designation	Function
socket 	1	nc
	2	nc
	3	B
	4	RTS
	5	GND
	6	+5 V
	7	nc
	8	A
	9	nc



## Address registers

Always up to date on the internet: [www.stober.com](http://www.stober.com) → contact

- Technical Offices (TB) for advice and marketing in Germany
- Global presence for advice and marketing in about 25 countries
- Service Network Germany
- Service Network International
- STÖBER Subsidiaries:

### Austria

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[www.stoeber.at](http://www.stoeber.at)

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Technische Änderungen vorbehalten  
Errors and changes excepted  
ID 442148.03  
04/2012

