Operation instructions • english
Gebrauchsanweisung • deutsch
Manuel d'utilisation • français
Bruksanvisning • svenska

1922500E

Pro Dli 20

# PRODLI 20


KEMPPI
The Joy of Welding

CONTENTS

# 1. PREFACE

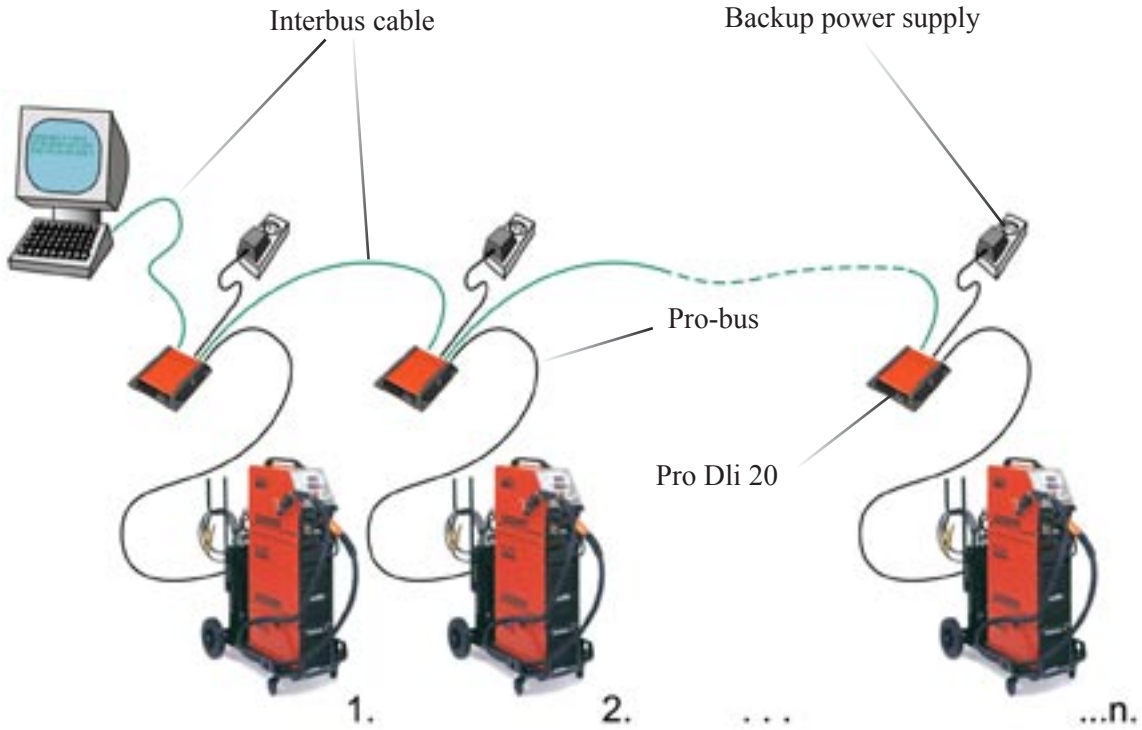
## 1.1. INTRODUCTION

Congratulations on having purchased this product. Properly installed Kemppi products should prove to be productive machines requiring maintenance at only regular intervals.

This manual is arranged to give you a good understanding of the equipment and its safe operation. It also contains maintenance information and technical specifications. Read this manual from front to back before installing, operating or maintaining the equipment for the first time. For further information on Kemppi products please contact your nearest Kemppi distributor.

The specifications and designs presented in this manual are subject to change without prior notice.

## 1.2. PRODUCT INTRODUCTION




Pro Dli 20 is an interface unit for the data monitoring system of Kemppi Pro product family. Together with Pro Weld Data, Pro Dli 20 establishes an integrated data monitoring system. An Interbus field bus is used as the medium for data transmission.

Pro Dli 20 collects the welding data from the data bus of Pro welding machine and sends them via the Interbus field bus to the host computer. The data can be monitored with the Pro Weld Data system of the computer.

## 1.3. UNITS OF THE DATA MONITORING SYSTEM

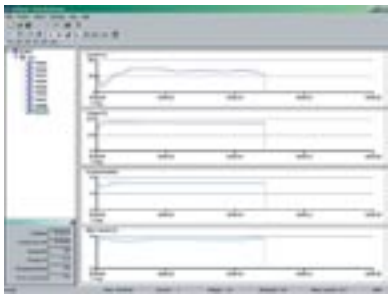
When purchasing the system you receive the Interbus host card with software, Interbus cables and connectors, Pro Weld Data, Pro Dli 20 data monitoring equipment as well as backup power supplies.

Pro Dli 20 data monitoring equipment

Interbus host card (desktop)

Interbus software

Interbus cable and connectors



Pro Weld Data

## 1.4. OPERATION SAFETY

⚠ **Be careful for voltage! Between work piece and Pro Dli 20 there is during data monitoring an open circuit voltage of power source, do not touch both at the same time.**

⚠ **Do not try to use Pro Dli 20 with other power sources than those of Kemppi Pro product family! See to that cables you intend to use are connected to right machine!**

Be careful for not touching cover of Pro Dli 20 with hot electrode!

Do not put Pro Dli 20 onto hot work piece!

Do not throw or drop Pro Dli 20!

# 2. INSTALLATION

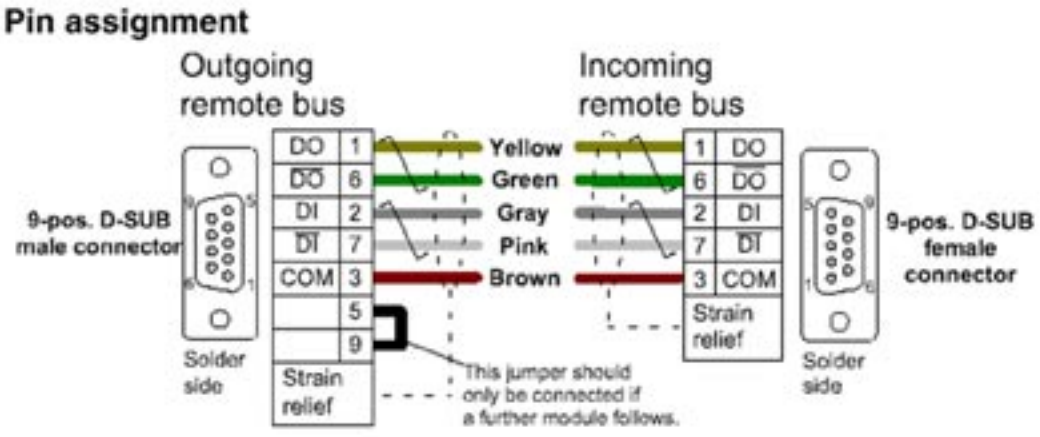
## 2.1. CABLING THE SYSTEM

The cable is delivered as piece goods. The connectors are connected to the cable when installing the cable.

You should always start cabling the system from the computer. This way you make sure that you have the right kind of connector at both ends of the cable. The first cable is attached between the computer and the first Pro Dli 20 unit. The second cable is attached between the first and second Pro Dli 20. Continue until every Pro Dli 20 unit is cabled. From the last unit there is no cable going out i.e. nothing is attached to the IB-OUT connector (see picture below).

There is a male connector in the outgoing cable of the Pro Dli 20 and the computer. The incoming cable of Pro Dli 20 has a female connector.

The cable used in cabling the data monitoring system is a special cable for Interbus. The cable has three twisted copper pairs.




D-SUB connector pin assignment

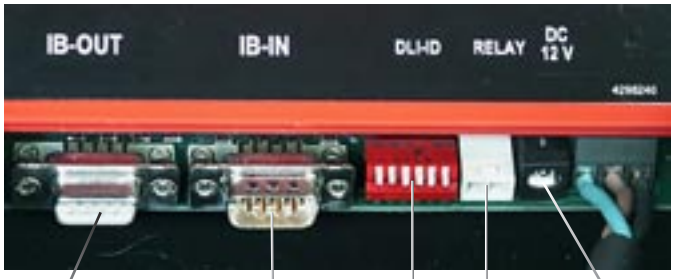
## 2.2. INSTALLATION OF PRO DLI 20

On the side of Dli 20 there are holes for fixed installation of the unit. We recommend that the unit is installed fixedly to a steady base next to the welding machine, e.g. to a wall or cable rack.

Connect the bus interface cable to the Pro bus of the Pro welding machine. See picture below.

Connect the backup power supply to 230 V net. Connect the connector of backup power supply to DC 12 V connector of Pro Dli 20. See picture below.

Connect the Interbus cables to the connectors of Pro Dli 20.




Interbus cable

Interbus cable

Backup power supply

Output relay outlet

Switches for Pro Dli 20 identification numbers

## 2.3. IDENTIFICATION NUMBER

| switch | value |
|---|---|
| 1 | 1 |
| 2 | 2 |
| 3 | 4 |
| 4 | 8 |
| 5 | 16 |
| 6 | 32 |

Underneath the lid of Pro Dli 20 there is are switches for giving an identification number for the unit. ProWeldData uses this number as identification number of PRO DLI 20. The keys of the two-position switch are numbered. The identification number is defined by summing up the value of the connected keys. The values of the keys are given in the table.

## 2.4. RELAY OUTLET

With isolated relay outlet it is possible to transmit information when the welding limits are exceeded. Output relay outlet is in connector ‘Relay’ of Pro Dli 20.

## 2.5. INSTALLATION OF SOFTWARE OF HOST CARD

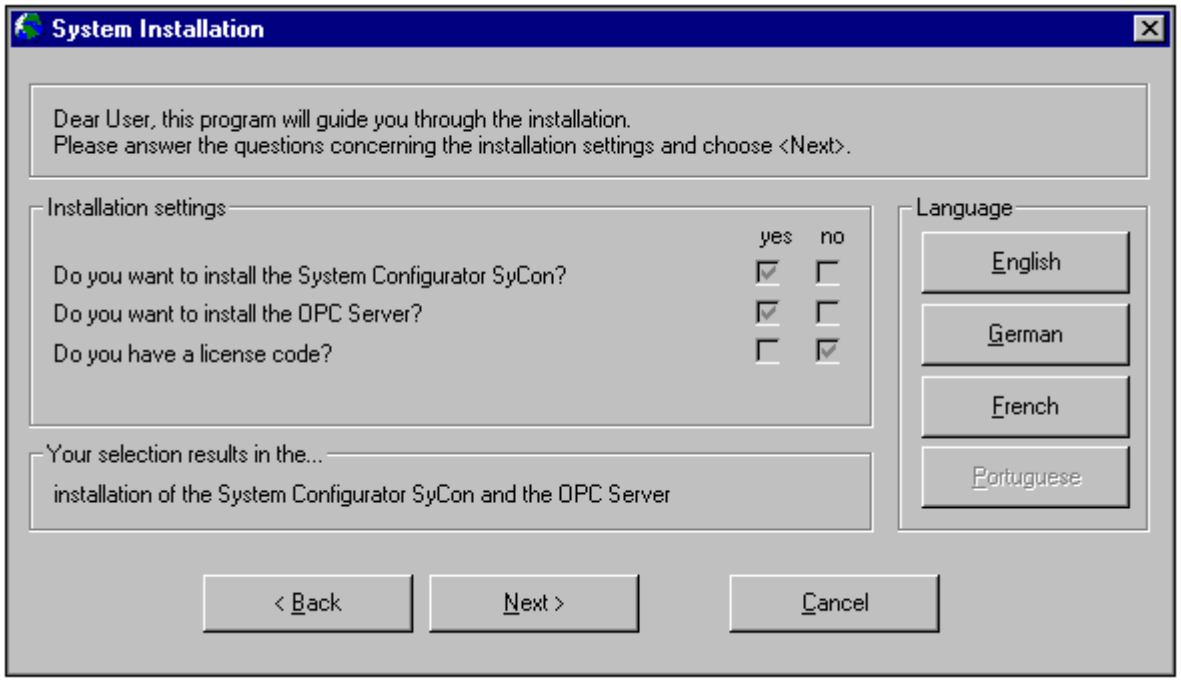
⚠ **These instructions are based on the installation of SyCon 2.701. Installation of a newer version might be different from this. In that case read the more detailed installation instructions enclosed with the program.**

When installing the software, you might need the access rights of system administrator.

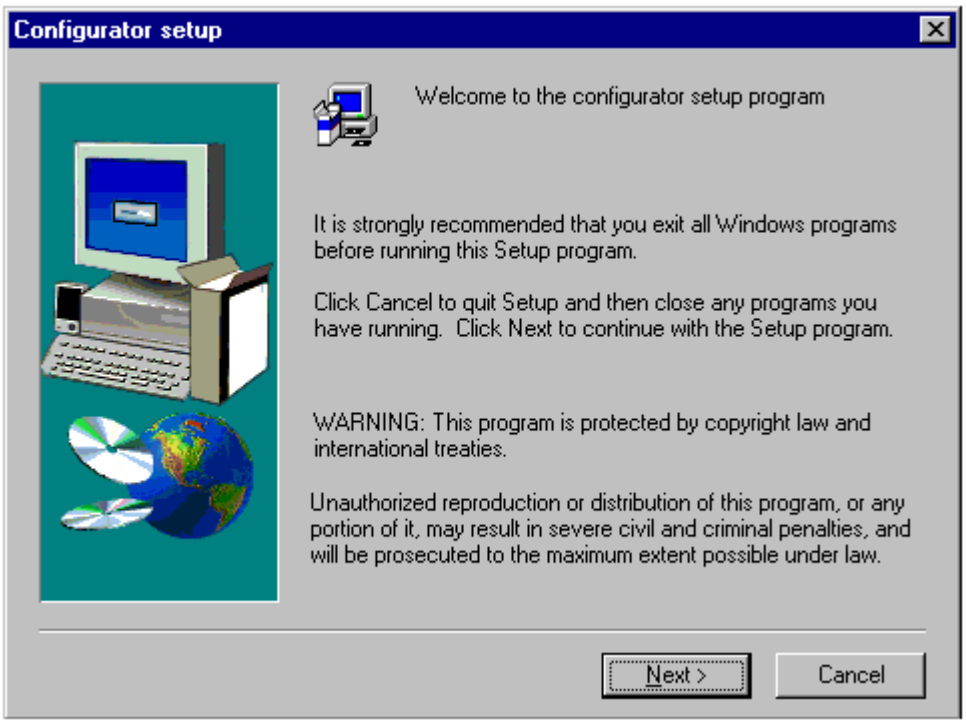
The software to be installed includes: SyCon System Configurator, OPC-Server and Pro Weld Data. SyCon System Configurator and OPC-Server are on the CD-ROM ‘System Software Interbus’. This disc is in the same package as the PC card.

SyCon System Configurator and OPC-Server are installed with the same setup program.

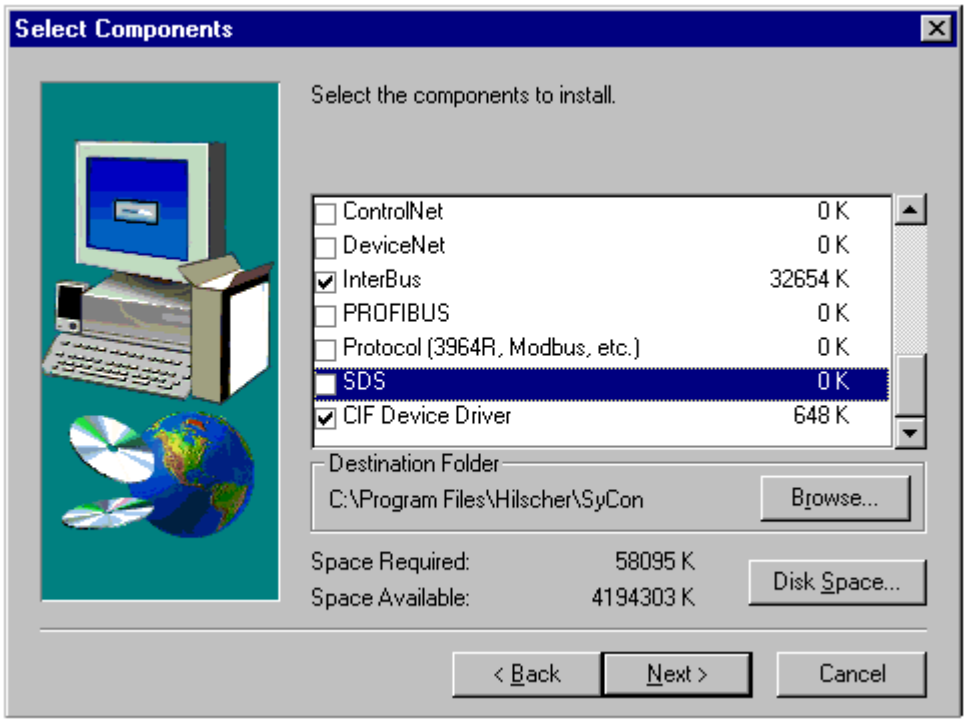
1. Insert the setup CD to the CD drive. If the CD starts automatically, skip to point 3.
2. Open the menu of the CD by clicking the icon “My Computer” on the desktop. Open the menu of the CD drive and start Autorun.exe.
3. Select System Installation from the menu.
4. Tick the boxes as in picture below and click Next.



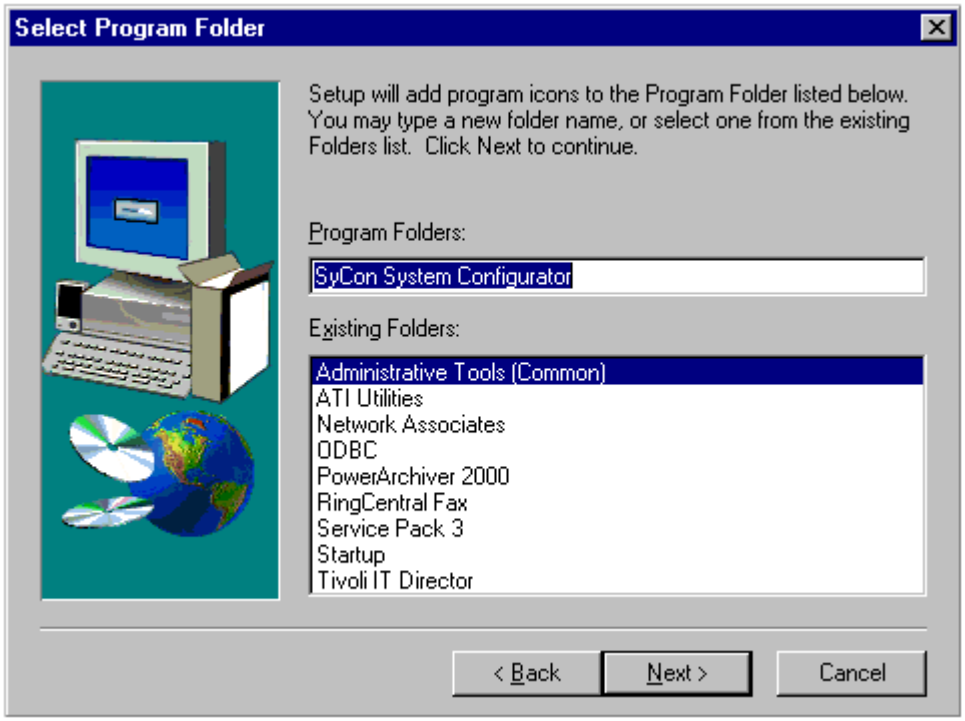

5. In the following window, click Next.



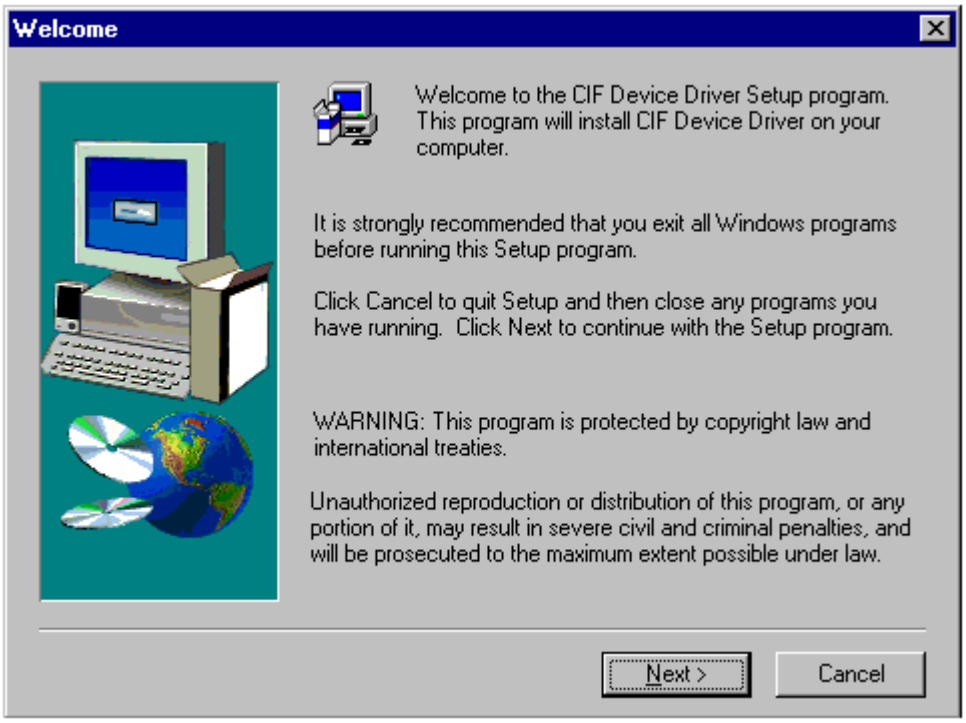
6. Remove tick from all boxes except Interbus and CIF Device Driver. Click Next.




7. In the following window, click Next.

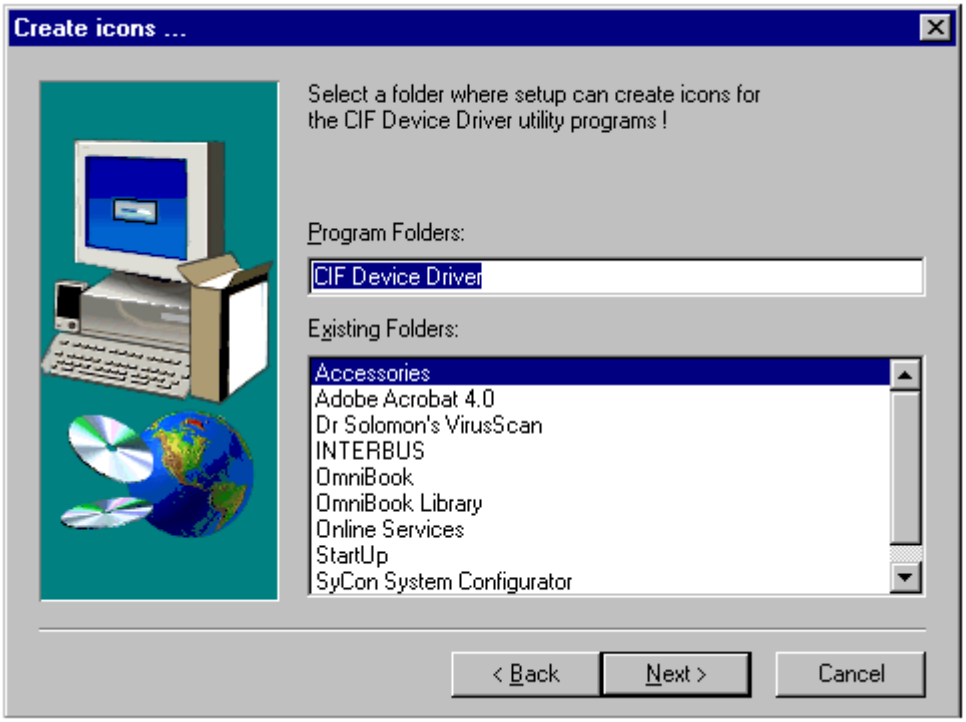


8. In the following window, click Next.

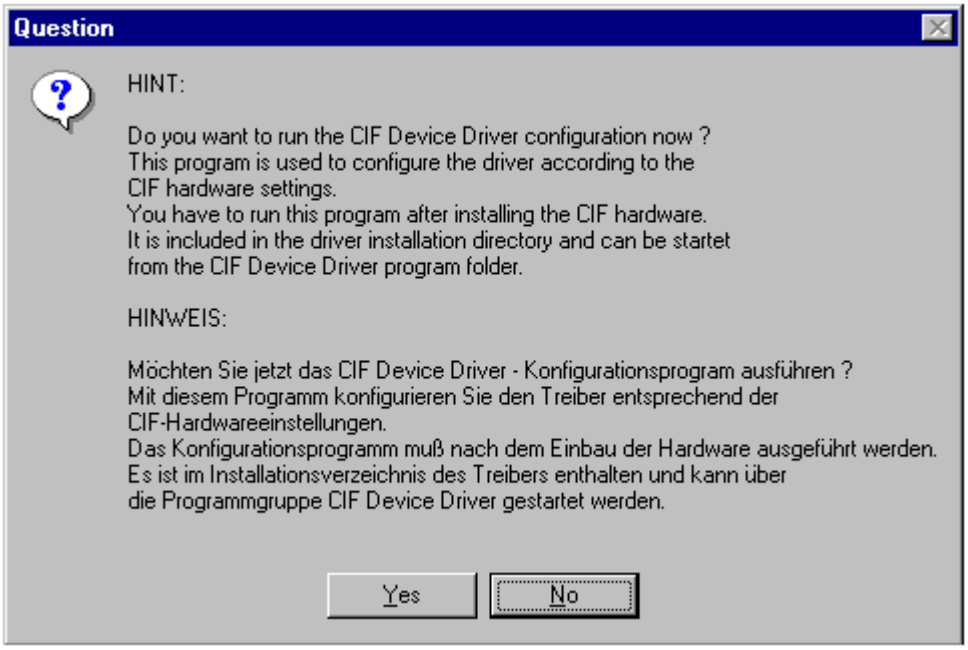



9. In the following window, click Next.

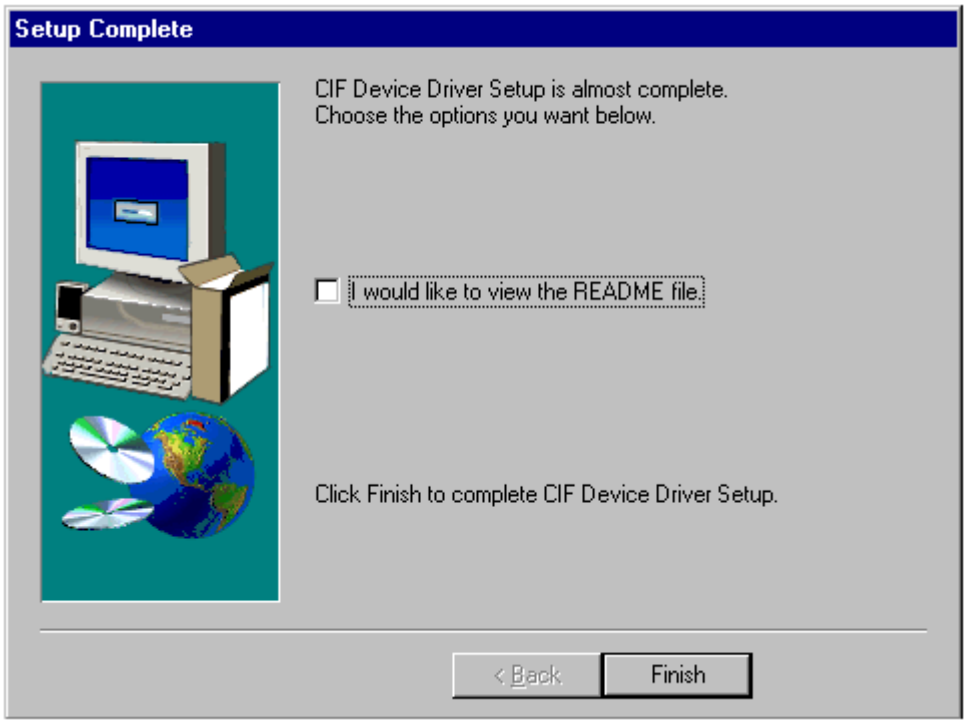
10. In the following window, click Next.



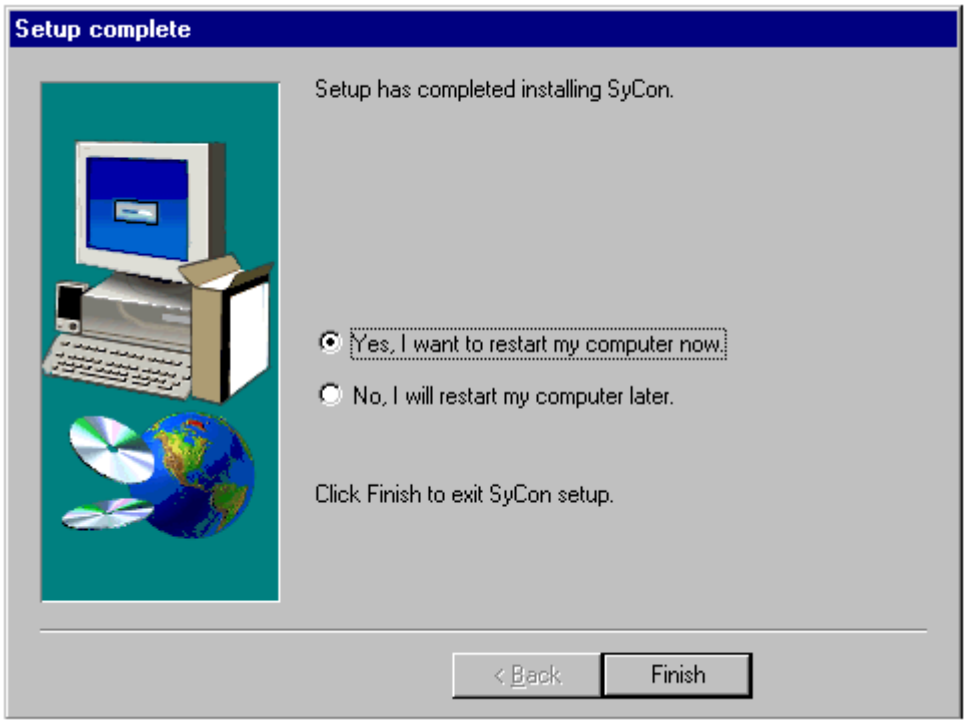

11.In the following window, click No.



12. In the following window, click Finish.




13. In the following window, click Finish.

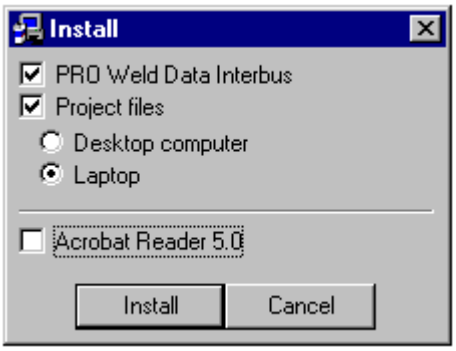



The software required by the host card has now been installed. If installation did not succeed please contact IT administration of your working place.

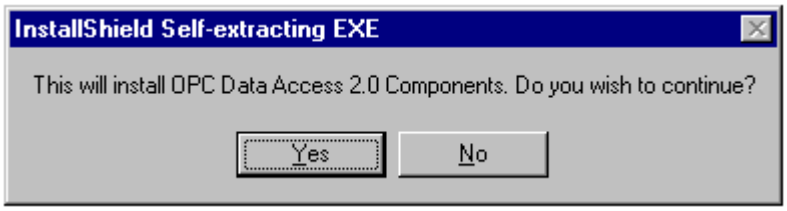
## 2.6. INSTALLATION OF PRO WELD DATA

If you install the system to Ethernet network please contact the IT administration of your working place.

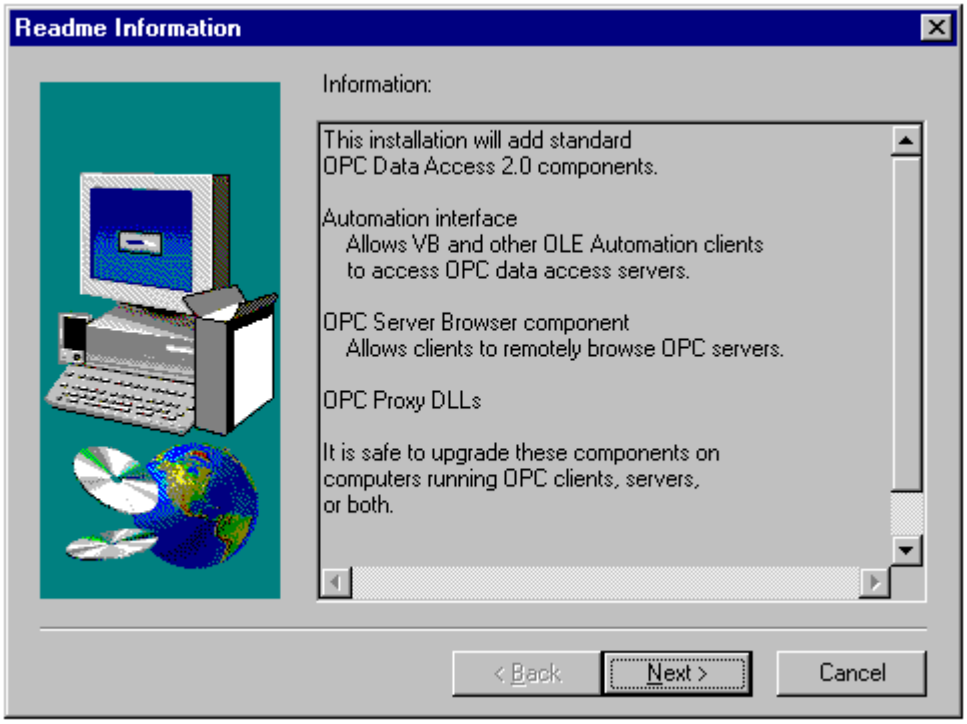
1. Insert the CD-ROM of Pro Weld Data in the drive. If the setup program starts automatically, skip to point 3.
2. Open the menu of the CD by clicking the icon “My Computer” on the desktop. Open the menu of the CD drive and start Install.exe.
3. Tick boxes Pro Weld Data Interbus and Project files. Select desktop computer. You can also install Acrobat Reader if its not yet installed on your computer. Acrobat Reader is needed to read the instructions of Pro Weld Data. Click Install.



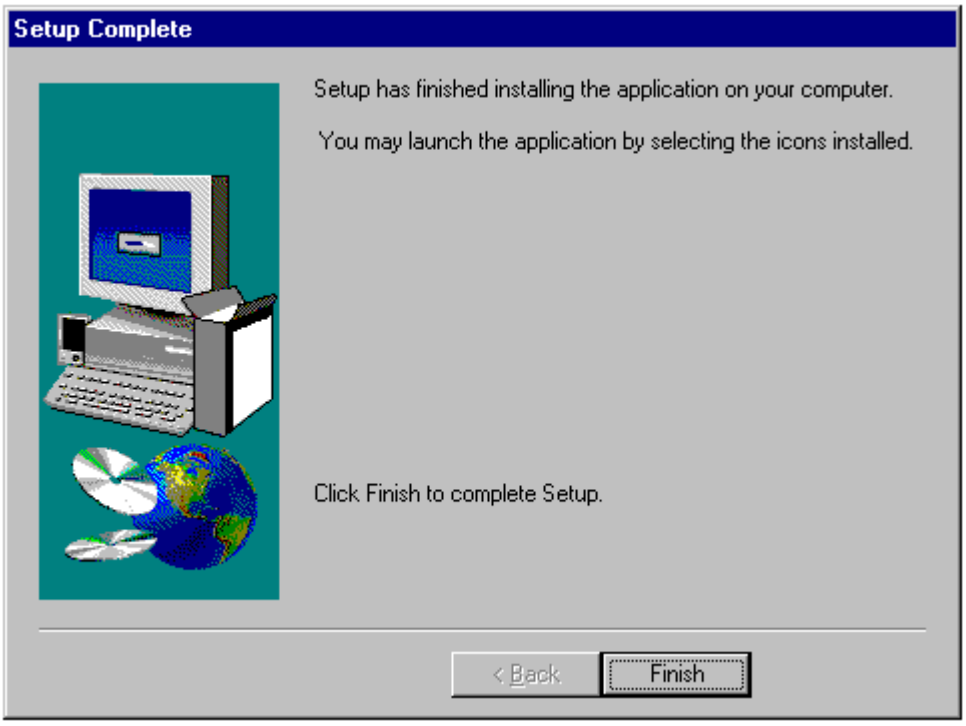

4. If you use monitoring over Ethernet network you have to install OPC Data Access 2.0 Components. In that case click Yes. Otherwise click No, in which case the setup program skips to point 7.



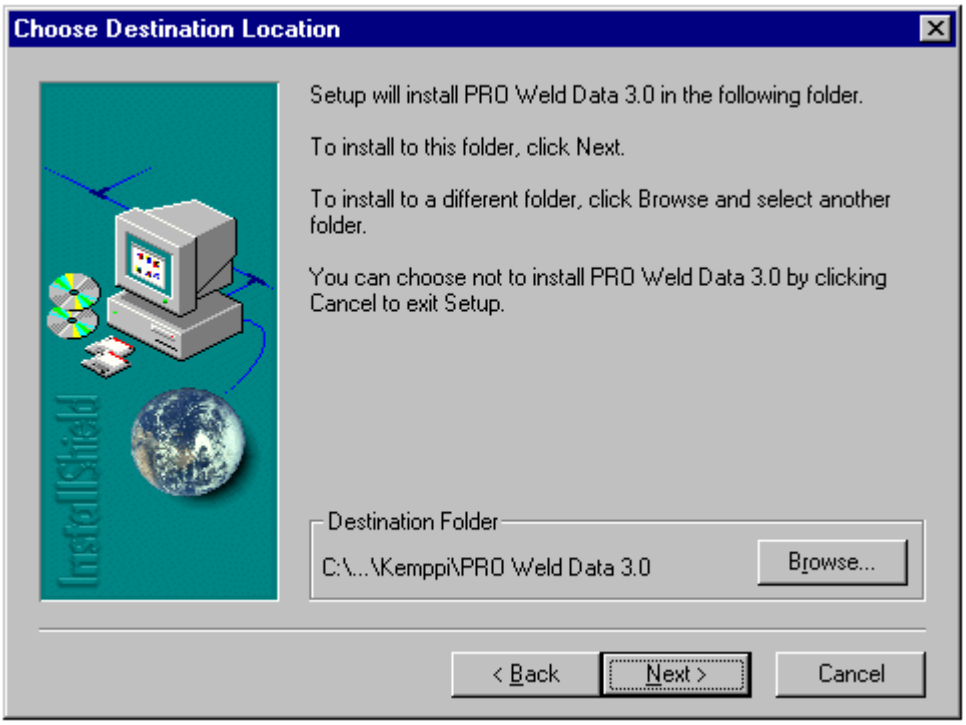

5. In the following window, click Next.



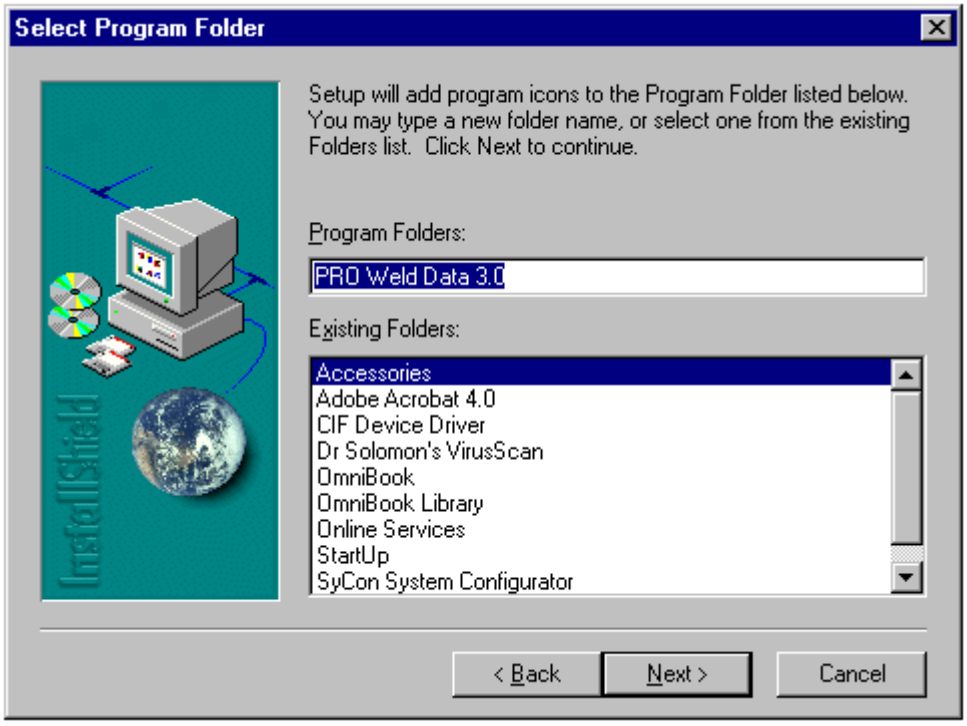
6. In the following window, click Finish.




7. In the following window, click Next.



8. In the following window, click Next.




9. Restart the computer.

Pro Weld Data has now been installed. If installation did not succeed please contact IT administration of your working place.

## 2.7. INSTALLATION OF HOST CARD

When installing the host card, turn off the computer.

In a desktop computer, the card is installed in the central processing unit in PCI card slot.

## 2.8. STARTING THE DRIVER

### Desktop computer

The driver support for PCI cards must be activated because it is disabled by default. The resources are assigned automatically by the PC (BIOS). Start the program **CIF Device Driver** of the program group **CIF Device Driver**. Select the menu **PCI – Setup** and check the **Activate PCI support** field. Interrupt support for the cards will be enabled or disabled by **Enable interrupt for board 0…3** (default: disabled). Set all entries for not installed ISA cards (**Board 0..3**) to **00000** respectively **NONE**.

Restart your PC after configuration.

During system start, the configuration data will be determined by the driver and will be shown in the driver setup program. Also the board number for PCI cards will be automaticly assigned by the driver. Therefore, the driver uses only free (unused) card numbers in rising order from 0 to 3. The driver does not accept additional PCI boards if all card numbers are in use.

## Windows 2000

Windows 2000 will recognize PCI cards automatically during system startup. The system will show **New hardware found**. If not choose the **Hardware Wizard** under **Control Panel > System > Hardware > Hardware Wizard** and select **Add/Troubleshoot a device**. Windows 2000 searches for new Plug and Play devices. The CIF PCI card will be shown as **Other PCI Bridge Device**. Select **Search for a suitable driver for my device (recommended)** and click **Next**. Select on the CD in the directory **Driver\Win2000\PCI** or if the device driver is already installed, the directory **...\Programs\CIF Device Driver\Win2000\PCI**. If the Device Manager already shows **Other Bridge Device** marked with a question mark. Right click to the device and choose **Uninstall**. Proceed for all such cards. After uninstallation choose **Action > Scan for hardware changes** from the menue. When the system signals **New hardware found** follow the description above.

The CIF will be always installed in polling mode. Use CIF Driver Setup Program to change the operating mode of the PCI cards from polling to interrupt. After changing the mode, you have to restart your PC.

## 2.9. SETTINGS OF THE PROGRAM

1. Start SyCon System Configurator by selecting -> Start -> Programmes -> SyCon System Configurator.
2. Select the right project from the top menu bar File -> Open. The first part of project files means the number of Pro Dli 20 units. E.g. if you have five Pro Dli 20 units in your data monitoring system, select project file 5_device.ib. Now a view opens on the desktop with right amount of units in the network.

   If project files do not open directly, they can be found in directory Program Files -> Hilscher -> SyCon -> Project.
3. Select from top menu bar Settings -> Device Assignment. Click OK.
4. Select from top menu bar Online -> Download. Click Yes.

## 2.10. SETTINGS FOR REMOTE LOGIN

**Access rights of system administrator are required.**

**Remote login is possible only if your operating system is Windows NT or 2000.**

Remote login will not function until DCOM is configured correctly.

1. Start /WINNT/SYSTEM32/DCOMCNFG.EXE

   (DCOMCNFG can also be started with DOS command prompt of Windows NT)
2. Window DCOM Configuration Properties will open on the desktop. You have do make the following settings.

**A. No security properties (start with these settings):**

**Default Properties:**

- Tick the box Enable DCOM on this computer
- Default Authentication Level: None
- Default Impersonation Level: Anonymous

**Default Security:**

- Default Access Permissions: Add ‘Everyone’ with option ‘Allow access’
- Default Launch Permissions: Add ‘Everyone’ with option ‘Allow access’

**A. Security properties:**

When you want to set security properties, remove ‘Everyone’ and add limited groups or individual users:

**Default Properties:**

- Tick the box Enable DCOM on this computer
- Default Authentication Level: Connect
- Default Impersonation Level: Identify

**Default Security:**

- Default Access Permissions: Add ‘XXX’ with option ‘Allow access’
- Default Launch Permissions: Add ‘XXX’ with option ‘Allow launch’

**Make the following settings only to a computer with host card.**

Applications:

Select CifOpcServer from the list

Click Properties

- Location / Run application on this PC

- Security / Use default access permissions
- Security / Use default launch permissions
- Security / Use custom configuration permissions (with defaults)
- Identify / Interactive user

Turn off DCOM Configuration.

These settings will function when the Windows NT network has a Domain Server. If there is no Domain Server, all OPC machines have to be in the same work group.

# 3. OPERATION

## 3.1. STARTING DATA MONITORING LOCALLY

If you have not made any changes in the network, all you have to do is start SyCon System Configurator and leave it on at the background. Select Start -> Programmes -> SyCon System Configurator. After this start Pro Weld Data and use it according to the quick guide.

If you have added or removed units from the network, proceed according to point 2.9.

## 3.2. STARTING DATA MONITORING BY REMOTE LOGIN

As in local data monitoring, you have to start SyCon System Configurator in the computer with the host card. Pro Weld Data can be used simultaneously on several computers by remote login. Use Pro Weld Data according to the instructions.

## 3.3. ENDING DATA MONITORING

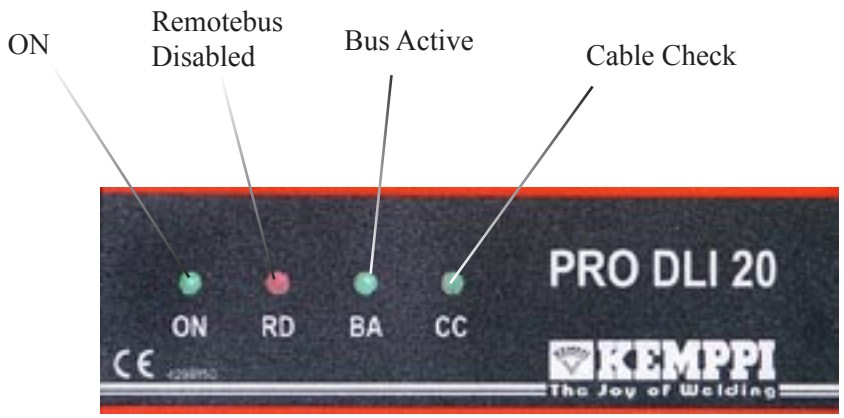
End recording in Pro Weld Data according to the instructions and turn off SyCon System Configurator.

## 3.4. DIAGNOSTIC SIGNAL LIGHTS

A Pro Dli 20 unit has four diagnostic signal lights:

1. Green ON signal light means that the unit is switched on.
2. Red RD (Remotebus Disabled) signal light means that the unit is not in operation.
3. Green BA (Bus Active) signal light means that the network is in operation.

4. Green CC (Cable Check) signal light means that the Interbus cable is connected and in working order.



# 4. ORDERING NUMBERS

| | |
|---|---|
| Pro Dli 20 | 6265008 |
| Host card for desktop computer | 9774110 |
| Host card software | 9774112 |
| Interbus cable | 9720770 |
| Interbus connector male | 9770491 |
| Interbus connector female | 9770492 |
| Interbus connector cover | 9770486 |
| Pro Weld Data (version 3.0 and newer) | 6265003 |

# 5. TECHNICAL DATA

| | | |
|---|---|---|
| Rated power | | 4 W |
| Interfaces | | |
| | IB-IN, IB-OUT | Interbus-S 500 kbit/s |
| | | Pro-bus 50 V |
| | Relay | relay outlet 1 A / 230 V |
| | DC 12 V | DC direct current 12 V |
| External dimensions | | |
| | Length | 250mm |
| | Width | 208 mm |
| | Height | 51 mm |
| | Weight | 1.7 kg |
| Operating temperature range | | -20°C…+40°C |
| Storage temperature range | | -40°C…+60°C |
| Degree of protection | | IP 23 |

The products meet conformity requirements for CE marking.

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