# oventrop

## Valves, controls and systems

ΕN

Before installing the control and regulation unit DDC "CR-A BS"/ "CR-BX"/ "CW-BS"; as well as its accessory components, please read and follow the short operating instructions and the operating manual for the respective "DynaTemp" system in full!

Installation, commissioning, operation and maintenance must only be performed by trained and specialised staff in compliance with applicable rules and regulations!

The short operating instructions, the operating manual as well as all other valid documentation is to be forwarded to the system operator!

#### Content

1	General information	
2	Safety instructions	2
3	Transport, storage and packaging	2
4	Technical specifications	2
5	Assembly and installation	3
6	System description	6
7	Operating program	6
8	Maintenance and servicing	6
9	Declaration of conformity	6
10	Warranty	6
	,	



Fig. 1.1 Control and regulation unit (DDC)

"DynaTemp"; DDC "CR-BS"/ "CR-BX"/ "CW-BS" Short operating instructions for first commissioning by the specialised installer

#### 1 **General information**

#### 1.1 Information about the short operating instructions and the operating manual

These short operating instructions are to be used by the trained and specialised staff to properly install, commission and configure the control and regulation unit (DDC). For the configuration and operation, the operating manual is to be downloaded and possibly printed from the DCC as PDF document using an Internet browser, e.g. "Mozilla Firefox" ("HELP/INFO - Documentation").

Additionally applicable documentation - instructions for all system components as well as applicable technical rules - are to be complied with.

#### 1.2 Safekeeping of documentation

The short operating instructions and the operating manual are to be kept in a safe place by the system operator for later use.

#### 1.3 Symbol explanation

Safety guidelines are displayed by symbols. These guidelines are to be observed to prevent accidents, damage to property and malfunctions.

A DANGER DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

AWARNING WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

A CAUTION CAUTION indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTICE NOTICE indicates a situation which, if not addressed, may result in property damage.

#### 1.4 Copyright

The short operating instructions and the operating manual are protected by copyright.

Usage of the control and regulation unit is subject to a license. The license text can be found on the DCC "HELP/INFO - Documentation" submenu. By using the product you agree to the license agreement.

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### 2 Safety instructions

### **A**CAUTION

Any work on the unit must only be performed in a de-energised state!

The unit must only be connected to the power supply by a qualified electrician!

The unit must only be installed in dry rooms that are not subject to explosion hazards!

Assembly on flammable ground is not permitted!

#### 2.1 Intended use

Operational safety can only be ensured for intended use of the "DynaTemp" control and regulation unit and its accessories. Any additional and/or other usage of the control and regulation unit is prohibited and is considered as contrary to intended use. Any claims against the manufacturer and/or his authorised representatives for damages as a result of non-intended use cannot be recognised. The intended use also includes proper compliance with the short operating instructions, the operating manual as well as the installation instructions of all accessories.

The content of these short operating instructions is solely intended for the transmission of information. The customer is personally responsible for data backup.

# 2.2 Risks posed by the place of installation and transport

The possibility of an external fire was not considered when designing the control and regulation unit and its accessories.

## **AWARNING**

#### Hot or cold surfaces!

**Risk of injury!** Only touch with suitable protective gloves. During operation, the heating valve can get as hot as the medium.

Sharp edges!

**Risk of injury!** Only touch with suitable protective gloves. Threads, holes and edges are sharp-edged.

#### Small parts!

**Risk of accidental swallowing!** Do not store and install the control and regulation unit and its accessories within the reach of children.

#### Allergies!

Health hazard! Do not touch items and avoid any contact if allergies to materials used are known.

#### 3 Transport, storage and packaging

#### 3.1 Transport inspection

Check consignment for completeness and any transport damage immediately after receipt and before installation.

If such or other defects are found, only accept the consignment with reservation. File a complaint. Observe complaint deadlines in doing so.

#### 3.2 Storage

Only store the control and regulation unit under the following conditions:

- Store indoors in dry and dust-free conditions.
- Do not expose to aggressive media or heat sources.
- Protect from solar radiation and excessive mechanical vibrations.
- Storage temperature: -20°C ...+70°C
- Relative humidity (r.h.): 10 ...95%, non-condensing

#### 3.3 Packaging

All packaging material is to be disposed of in an environmentally sound manner. Please do not let your children play with any packaging materials – they could be a danger to them.

### 4 Technical specifications

4.1 General

#### **Operating conditions:**

Temperature: 0...+50°C Humidity: 10 ...95% r.h., non-condensing (DIN EN 61131-2)

#### Storage conditions:

Temperature: -20...+70°C Humidity: 10 ...95% r.h., non-condensing (DIN EN 61131-2)

#### Connection housing complete unit:

Dimensions (without screw connections): 250 × 175 × 100 Length × Width × Height (installation depth) in mm Weight: approx. 1500g Material / colour: Plastic ABS base part; light grey (RAL 7035) Cover: transparent, printing similar to anthracite (RAL 7021) Protection type: IP30 Protection class: III, extra-low voltage Type of installation: Assembly (surface-mounted installation) Cable inlet: 4 × stepped nipple M20

#### Housing DDC:

Dimensions:  $125 \times 108.5 \times 77$ , L x W x H in mm Weight: approx. 585gType of installation: Sturdy metal housing Industrial design for top hat rail mounting Material / colour: Aluminium, black (RAL 9005) Protection class: III, extra-low voltage Protection type: IP20

#### **Electrical connection DDC:**

Power supply (X1): AC  $24V \pm 10\%$ , 50 ...60Hz Power consumption **DDC**: DDC's with 32 C-Bus addresses 24VADDC's with 64 C-Bus addresses 35VA

### Communication DDC:

USB (X2): 1x type B, USB port standard B (Service)

TCP/IP (X3): 1x RJ45 Ethernet connection 10/100 MBit/s

RS485-1 (X4): not used

RS232-1 (X7): not used

C-Bus line (X9): twisted, shielded data line 0.5 mm<sup>2</sup>...2.5 mm<sup>2</sup>, max. 400 mA, Line length in the entire C-Bus network max. 1000 m

#### Memory DDC:

SD-RAM: 32 MB main memory

NVRAM: 2 MB data storage for data points are buffered by a battery (CR 1632), which is accessible from outside.

FLASH SD card: 1 GB for program and configuration data

#### Other DDC:

Real time clock (RTC), automatic summer / winter time. Buffered by a battery (CR 1632), which is accessible from outside.

#### 4.2 DDC "CR-BS"/ "CR-BX"/ "CW-BS"

#### 4.2.1 Terminal assignment of the DDC

The terminal names are affixed to the DCC.

Name	Terminal name / Description		
Connector X1	Power	Permitted cable cross sections	
	input	0.5mm <sup>2</sup> 2.5mm <sup>2</sup>	
1	L1	AC 24V	
2	L2	GND / 0V	
3	Ļ	Grounding housing, via top hat rail	
Socket X2	USB	USB socket (type B) for	
	service	communication and parameterisa-	
Socket X3	Ethernet	Ethernet connection (RJ45) for	
0001101710	10/100	communication and parameterisa-	
		tion via TCP/IP	
Connector X4	RS485-1	Permitted cable cross sections	
		0.5mm <sup>2</sup> 2.5mm <sup>2</sup>	
1	A1	RS485-1, bus interface	
2	B1	not used	
3	Shield	Grounding / shielding RS485-1	
Socket X7	RS232-1	Serial interface for modem	
1	DCD	Data Carrier Detect	
2	RxD	Receive Data	
3	TxD	Transmit Data	
4	DTR	Data Terminal Ready	
5	GND	Signal Ground	
6	DSR	Data Set Ready	
7	RTS	Request To Send	
8	CTS	Clear To Send	
9	-	-	
Socket X8	E-HMI	not used	
Connector X9	C-Bus	Permitted cable cross sections 0.5mm <sup>2</sup> 2.5mm <sup>2</sup>	
1	A		
2	В	C-Bus, bus interface	
3	Shield	Grounding / shielding C-Bus	
4	-	-	

#### 4.2.2 Dimensions connection housing





The dimensions for the bore holes are also located at the rear of the housing.

#### 5 Assembly and installation

#### 5.1 First steps

Before the actual installation it is recommended to configure the control and regulation unit for the present network. Here, the control is connected to a PC or Notebook via a switch or directly with a patch cable, and then supplied with voltage via a 24V AC transformer.

#### The terminal strips 9 and 10, connections L1 and L2 GND are used for this purpose.

At delivery, the control and regulation unit has the following settings:

- IP address: http://192.168.135.1
- (factory setting) Subnet mask: 255.255.255.0
- Gateway: 0.0.0.0

The network card of the PC or Notebook must now be configured so that it is in the same network area of the preset IP address. If in doubt, please contact your system administrator.

By entering the IP address "http://192.168.135.1" into a web browser (e.g. Mozilla Firefox), the control and regulation unit can be accessed. The login window is displayed. Before clicking on < Anmelden / Login / Connexion >, the user name and password must be entered. At delivery this is:

- User name: admin ٠
- Password: admin

The current building status is displayed in the "OVERVIEW" menu. The detailed operating manual can be downloaded to a computer in PDF format with the "HELP/INFO" menu option and from the "Documentation" submenu. Please read the manual before you continue with the installation! Programming is performed in a web browser, e.g.

B NEW PLAN	🗇 - O 🛛 🖬 * Longe	214
OVERTOP OVERVEM SYSTEM BUILDING USER	System name object Helpitafo Helpitafo	Heplat
HELPENFO	System platers Picture of the system (to induce picture see operating manual)	
Documentation	Dissumministration Tatorials and documentations	
information	Cardinat	
LOBOUT	Contact	
DynaTemp CR-85	Laformation Complete Informationen abaut that system	

#### 5.2 Assembly instructions

Always install the housing vertically with the cable inlets downwards and distortion-free on all four fastening points provided, preventing moisture from penetrating and the cover closing tightly.

### Warnings regarding assembly and installation Observe (safety instructions)!

Before you continue with installation of the unit and its accessories, you must refer to the respective operating manual and the instructions of the components used.

### A CAUTION

Any work on the unit must only be performed in a de-energised state!

Before commissioning the system, the cabling and wiring is to be checked for correctness and to be documented! The unit must only be connected to the power supply by a quali-

fied electrician!

The unit must only be installed in dry rooms that are not subject to explosion hazards!

Assembly on flammable ground is not permitted!

### 5.3 Removing and inserting the SD card and battery



### NOTICE

Only use original SD cards of OVENTROP GmbH & Co. KG. When using other SD cards, continuous and proper functioning of the unit cannot be guaranteed.

Normally, the SD card does not need to be removed.

Before performing any work, the unit must always be disconnected from the power supply.

The SD card must only be removed in emergencies. In order to remove it, the DDC must be dismounted from the top hat rail. For this purpose, the unit is pushed upwards and first of all released at the top.

The SD card must then be pushed into the unit slightly to open the interlock (same mechanism as for ballpoint pen). The SD card now protrudes a small bit and can be pulled out.

This procedure is to be followed in reverse to re-insert the SD card.

The buffer battery (CR 1632) can be replaced via the insert tray if required.

### 5.4 Connection assignment



	Name	Description
Pos. 1		4 × stepped nipple M20
Pos. 2	Ethernet RJ45	Ethernet connection (RJ45) for communication and parameterisation via TCP/IP
Pos. 3		2x shield terminal for C-Bus and RS485-1 Attach only once wires are connected in terminal strips
Pos. 4	Terminal strips	Permissible cable cross sections 0.5mm <sup>2</sup> 2.5mm <sup>2</sup>

terminal	Name	Description	
1	A	PS485 1 bus interface not used	
2	В	N3403-1, bus interface, not used	
3	Ļ	PE, protective earth conductor	
4	А	C-Bus, bus interface	
5	В		
6	L1.1	AC 24V, power supply room and field modules, <b>only connect</b> if no separate transformer supplies the modules with power	
7	L2.1 GND	GND	
8		PE, protective earth conductor	
9	L1	AC 24V, power input DDC housing	
10	L2 GND	GND	

#### Note:

For initial accessing of the control and regulation unit and **downloading the operating manual**, only the AC 24V power supply and the Ethernet connection (patch cable) must be established (see table fields highlighted in grey).

### 5.5 Indicator LEDs

Left column ...

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Status 1	
Status 2	
TxD-R\$485	
RxD-RS485	
🛑 Error-R6485	
	B Drond-Date of OBAChol"

Labelling	Colour LED	Function	
Status 1	green 🔍 red 📕	<b>Display when starting</b> Flashes green: 40ms cycle	
	OFF	Display during operation	
		Lights green: no program release	
		Flashes green: Program execution in flash cycle Flashing slows down with increasing program execution time (size).	
		Lights red: invalid program	
Status 2	green 🔵	Displays during operation	
		Flashing: Processing of clock timers	
		OFF: Normal operation	
TxD-485-1	yellow O	Flashing: The unit sends data via RS485, channel 1.	
	OFF 🛛 🛡		
RxD-485-1	green 🔵	Flashing: The unit receives data via RS485, channel 1.	
	OFF 🗨		
Error-485-1	red	ON The unit detects errors on the RS485-Bus, channel 1 (checksum,	
	OFF 🗨	collision, protocol error).	

... Centre column



Labelling	Colour LED	Function	
Status USB	red	Lights red: USB cable plugged in, no communication.	
	green 💛	Lights green: USB cable plugged in	
	OFF	and communication established. Off: -	
DCD-RS232	green 🔵	ON The unit is connected to a	
	OFF		
TxD-RS232	yellow 🔾	Flashing: The unit sends data via	
	OFF	N3232.	
RxD-RS232	green 🔵	Flashing: The unit receives data via	
	OFF 🔴	1.0202.	
Status RS232	red	Lights red: Modem configuration present, but no communication with	
	green 🔾	a modem.	
	OFF	Lights green: Modem configuration present and communication with modem established.	
		OFF: No modem configuration present.	
TxD C-Bus	yellow 🔾	Flashing: The unit sends data via	
	OFF		
RxD C-Bus	green 🔵	Flashing: The unit receives data via	
	OFF		
Error C-Bus	red	ON The unit detects errors on the	
	OFF	protocol error or usage of same address twice).	

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Status Unit	<b>B</b> <sup>1</sup>	
DED-RORES	p <sup>2</sup>	
5 T-D-R8332	1 <sup>2</sup>	
HAD-RRIDE	<b>0</b> <sup>4</sup>	
B Blatter Hilliand	p*	
🔿 THD-O-Dusi 😸	•*	
Rub-G-Bus	• <sup>7</sup>	
Error-C-Bus	BiCnet Fullin	
	50	
	Norma USA DOD-Reizitz Hull-POIZIZ Hull-POIZIZ Hull-POIZIZ Hull-POIZIZ Hull-POIZIZ Hull-POIZIZ Hull-POIZIZ Hull-POIZIZ Hull-Poiziz Hull-Poi	Norman Image: Control of

Labelling	Colour LED			Function
18	red	•	not used	
	green			
	OFF			

#### Ethernet connection



Labelling	Colour LED	Function
10/100	yellow OFF	ON Ethernet 100MBit/s OFF: Ethernet 10MBit/s
LNK	green OFF	ON Ethernet link available, no data exchange. Flashing: Ethernet link avail- able and data exchange.

### 6 System description

See operating manual

### 7 Operating program

See operating manual

#### 8 Maintenance and servicing

The product is maintenance-free. A repair must only be performed by a qualified electrician. Clean the product with a soft, clean, dry and lint-free cloth. To remove severe contamination, the cloth can be lightly dampened with lukewarm water. Do not use any cleaning agents containing solvents or abrasive substances. The plastic housing and the labelling could be damaged by it.

#### 9 Declaration of conformity

Oventrop GmbH & Co. KG hereby declares that the appliance complies with the following directives.

- Directive relating to electromagnetic compatibility (EMC) 2014/30/EU
- Low-voltage directive (LVD) 2014/35/EU

The complete text of the EU declaration of conformity is available on the Oventrop Internet page.

#### 10 Warranty

Oventrops general conditions of sales and delivery valid at the time of supply are applicable.