CDP/CDP-T 40-50-70

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IT	Deumidificatore - Manuale di servizio	Pagina 145
PT	Desumidificador- Manual de manutenção	Página 191
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03.02.2017

EN

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Declaration of Conformity

Dehumidification

Dantherm Air Handling A/S
Marienlystvej 65
DK - 7800 Skive

Tel.: +45 96 14 37 00
Fax: +45 96 14 38 00

Declaration of following product:

Product name: **CDP 40, CDP 40T, CDP 50, CDP 50T, CDP 70 & CDP 70T**

Product no.: 351510, 351516, 351511, 351517, 351512 & 351518

The product is in conformity with the following directives:

2006/42/EC	Machinery Directive
2014/35/EU	Low Voltage Directive
2014/30/EU	EMC Directive
2014/53/EU	R&TTE Directive
2014/68/EU	Pressure Equipment Directive
2009/105/EC	Simple Pressure Vessels Directive
2011/65/EU	RoHS Directive

- and is manufactured in conformity with the following harmonised standards:

DS/EN ISO 12100-1:2011	Safety of machinery - General principles for design
EN 60 335-1:2012	Household and similar electrical appliances - Safety - Part 1:
EN 60 335-2-40:2003	Household and similar electrical appliances - Safety - Part 2-40
DS/EN 61000-3-2:2014	Electromagnetic compatibility (EMC) - Part 3
DS/EN 61000-3-3:2013	Electromagnetic compatibility (EMC) - Part 3
DS/EN 61000-6-2:2005	Electromagnetic compatibility (EMC) - Part 6
DS/EN 61000-6-3:2007	Electromagnetic compatibility (EMC) - Part 6
DS/EN 60730-1:2012	Automatic electrical controls for household and similar use - Part 1
DS/EN 55014-1:2007	Electromagnetic compatibility - Requirements for household appliances - Part 1
DS/EN 55014-2:2015	Electromagnetic compatibility - Requirements for household appliances - Part 2
DS/EN 301489-1	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1
DS/EN 301489-3	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 3

Skive, 24/10-2016

Product manager

Jesper Holm Thorstensen
Managing director

DE

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Konformitätserklärung
Entfeuchtung

Dantherm Air Handling A/S
Marienlystvej 65
DK-7800 Skive

Tel.: +45 96 14 37 00
Fax: +45 96 14 38 00

Konformitätserklärung für folgendes Produkt:

Produktname: **CDP 40, CDP 40T, CDP 50, CDP 50T, CDP 70 und CDP 70T**

Produktnummer: 351510, 351516, 351511, 351517, 351512 und 351518

Das Produkt stimmt mit folgenden Richtlinien überein:

2006/42/EG	Maschinenrichtlinie
2014/35/EU	Niederspannungsrichtlinie
2014/30/EU	EMV-Richtlinie
2014/53/EU	R&TTE-Richtlinie
2014/68/EU	Druckgeräterichtlinie
2009/105/EG	Richtlinie über einfache Druckbehälter
2011/65/EU	RoHS-Richtlinie

- und wurde gemäß den folgenden harmonisierten Normen hergestellt:

DS/EN ISO 12100-1:2011	Sicherheit von Maschinen – Allgemeine Gestaltungsleitsätze
EN 60335-1:2012	Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke – Teil 1
EN 60335-2-40:2003	Sicherheit elektrischer Geräte für den Hausgebrauch und ähnliche Zwecke – Teil 2–40
DS/EN 61000-3-2:2014	Elektromagnetische Verträglichkeit (EMV) – Teil 3
DS/EN 61000-3-3:2013	Elektromagnetische Verträglichkeit (EMV) – Teil 3
DS/EN 61000-6-2:2005	Elektromagnetische Verträglichkeit (EMV) – Teil 6
DS/EN 61000-6-3:2007	Elektromagnetische Verträglichkeit (EMV) – Teil 6
DS/EN 60730-1:2012	Automatische elektrische Regel- und Steuergeräte für den Hausgebrauch und ähnliche Anwendungen – Teil 1
DS/EN 55014-1:2007	Elektromagnetische Verträglichkeit – Anforderungen an Haushaltgeräte, Elektrowerkzeuge und ähnliche Elektrogeräte – Teil 1
DS/EN 55014-2:2015	Elektromagnetische Verträglichkeit – Anforderungen an Haushaltgeräte, Elektrowerkzeuge und ähnliche Elektrogeräte – Teil 2
DS/EN 301489-1	Elektromagnetische Verträglichkeit (EMV) für Funkeinrichtungen und -dienste – Teil 1
DS/EN 301489-3	Elektromagnetische Verträglichkeit (EMV) für Funkeinrichtungen und -dienste – Teil 3

Skive, 24.10.2016

Produktmanager

Jesper Holm Thorstensen
Geschäftsführer

FR

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Déclaration de conformité

Déshumidification

Dantherm Air Handling A/S
Marienlystvej 65
DK - 7800 Skive

Tél. : +45 96 14 37 00
Fax : +45 96 14 38 00

Déclaration relative au produit suivant :

Nom du produit : **CDP 40, CDP 40T, CDP 50, CDP 50T, CDP 70 et CDP 70T**

Référence du produit : 351510, 351516, 351511, 351517, 351512 & 351518

Le produit est conforme aux directives suivantes :

2006/42/EC	Directive Machines
2014/35/EU	Directive Basse tension
2014/30/EU	Directive CEM
2014/53/EU	R&TTE Directive
2014/68/EU	Directive Équipements sous pression
2009/105/EU	Directive Récipients à pression simples
2011/65/EU	Directive RoHS

Le produit est également fabriqué conformément aux normes harmonisées suivantes :

DS/EN ISO 12100-1:2011	Sécurité des machines - Notions fondamentales, principes généraux de conception
EN 60 335-1:2012	Appareils électrodomestiques et analogues - Sécurité - Partie 1 :
EN 60 335-2-40:2003	Appareils électrodomestiques et analogues - Sécurité - Partie 2 à 40
DS/EN 61000-3-2:2014	Compatibilité électromagnétique (CEM) - Partie 3
DS/EN 61000-3-3:2013	Compatibilité électromagnétique (CEM) - Partie 3
DS/EN 61000-6-2:2005	Compatibilité électromagnétique (CEM) - Partie 6
DS/EN 61000-6-3:2007	Compatibilité électromagnétique (CEM) - Partie 6
DS/EN 60730-1:2012	Dispositifs de commande électriques automatiques pour usages domestiques et similaires - Partie 1
DS/EN 55014-1:2007	Compatibilité électromagnétique - Exigences pour les appareils électrodomestiques - Partie 1
DS/EN 55014-2:2015	Compatibilité électromagnétique - Exigences pour les appareils électrodomestiques - Partie 2
DS/EN 301489-1	Norme de compatibilité électromagnétique (CEM) pour les équipements et services hertziens ; partie 1
DS/EN 301489-3	Norme de compatibilité électromagnétique (CEM) pour les équipements et services hertziens ; partie 3

Skive, 24/10/2016

Responsable de produit

Jesper Holm Thorstensen
Directeur général

IT

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Dichiarazione di conformità CE

Deumidificazione

Dantherm Air Handling A/S
Marienlystvej 65
DK - 7800 Skive

Tel.: +45 96 14 37 00
Fax: +45 96 14 38 00

Dichiarazione relativa al seguente prodotto:

Nome del prodotto: **CDP 40, CDP 40T, CDP 50, CDP 50T, CDP 70 & CDP 70T**

Codice del prodotto: 351510, 351516, 351511, 351517, 351512 & 351518

Il prodotto è conforme alle seguenti direttive:

2006/42/CE	Direttiva Macchine
2014/35/UE	Direttiva Bassa Tensione
2014/30/UE	Direttiva EMC
2014/53/UE	Direttiva Apparecchiature radio (RED)
2014/68/UE	Direttiva Attrezzature a pressione
2009/105/CE	Direttiva Recipienti semplici a pressione
2011/65/UE	Direttiva Sostanze pericolose nelle apparecchiature elettriche (RoHS)

- ed è fabbricato in conformità con le seguenti norme armonizzate:

EN ISO 12100-1:2011	Sicurezza del macchinario - Principi generali di progettazione
EN 60 335-1:2012	Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 1:
EN 60 335-2-40:2003	Sicurezza degli apparecchi elettrici d'uso domestico e similare - Parte 2-40
EN 61000-3-2:2014	Compatibilità elettromagnetica (EMC) - Parte 3
EN 61000-3-3:2013	Compatibilità elettromagnetica (EMC) - Parte 3
EN 61000-6-2:2005	Compatibilità elettromagnetica (EMC) - Parte 6
EN 61000-6-3:2007	Compatibilità elettromagnetica (EMC) - Parte 6
EN 60730-1:2012	Dispositivi elettrici automatici di comando per uso domestico e similare - Parte 1
EN 55014-1:2007	Compatibilità elettromagnetica. Prescrizioni per gli elettrodomestici, gli utensili elettrici e gli apparecchi similari - Parte 1
EN 55014-2:2015	Compatibilità elettromagnetica. Prescrizioni per gli elettrodomestici, gli utensili elettrici e gli apparecchi similari - Parte 2
EN 301489-1	Compatibilità elettromagnetica (EMC) standard per apparecchiature e servizi radio; Parte 1
EN 301489-3	Compatibilità elettromagnetica (EMC) standard per apparecchiature e servizi radio; Parte 3

Skive, 24/10/2016

Responsabile prodotto

Jesper Holm Thorstensen
Amministratore delegato

PT

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Declaração de conformidade

Desumidificação

Dantherm Air Handling A/S
Marienlystvej 65
DK - 7800 Skive

Tel.: +45 96 14 37 00
Fax: +45 96 14 38 00

Declaração do seguinte produto:

Nome do produto: **CDP 40, CDP 40T, CDP 50, CDP 50T, CDP 70 e CDP 70T**

Referência do produto: 351510, 351516, 351511, 351517, 351512 e 351518

O produto está em conformidade com as seguintes diretivas:

2006/42/CE	Diretiva relativa às máquinas
2014/35/UE	Diretiva relativa à baixa tensão
2014/30/UE	Diretiva relativa à compatibilidade eletromagnética
2014/53/UE	Diretiva relativa aos equipamentos de rádio e equipamentos terminais de telecomunicações
2014/68/UE	Diretiva relativa aos equipamentos sob pressão
2009/105/CE	Diretiva relativa aos recipientes sob pressão simples
2011/65/UE	Diretiva relativa à restrição do uso de determinadas substâncias perigosas em equipamentos elétricos e eletrónicos

- e é fabricado em conformidade com as seguintes normas harmonizadas:

DS/EN ISO 12100-1:2011	Segurança de máquinas – Princípios gerais de conceção
EN 60 335-1:2012	Aparelhos eletrodomésticos e análogos – Segurança – Parte 1:
EN 60 335-2-40:2003	Aparelhos eletrodomésticos e análogos – Segurança – Parte 2-40
DS/EN 61000-3-2:2014	Compatibilidade eletromagnética (CEM) – Parte 3
DS/EN 61000-3-3:2013	Compatibilidade eletromagnética (CEM) – Parte 3
DS/EN 61000-6-2:2005	Compatibilidade eletromagnética (CEM) – Parte 6
DS/EN 61000-6-3:2007	Compatibilidade eletromagnética (CEM) – Parte 6
DS/EN 60730-1:2012	Dispositivos automáticos de comando elétrico para uso doméstico e análogo – Parte 1
DS/EN 55014-1:2007	Compatibilidade eletromagnética – Requisitos para aparelhos eletrodomésticos – Parte 1
DS/EN 55014-2:2015	Compatibilidade eletromagnética – Requisitos para aparelhos eletrodomésticos – Parte 2
DS/EN 301489-1	Norma de compatibilidade eletromagnética (CEM) para serviços e equipamento de rádio – Parte 1
DS/EN 301489-3	Norma de compatibilidade eletromagnética (CEM) para serviços e equipamento de rádio – Parte 3

Skive, 24/10-2016

Gestor de produto

Jesper Holm Thorstensen
Diretor-Geral

RU

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Декларация соответствия

Осушка воздуха

Dantherm Air Handling A/S
Marienlystvej 65
DK - 7800 Skive

Тел.: +45 96 14 37 00
Факс: +45 96 14 38 00

Декларация следующей продукции:

Наименование продукции: CDP 40, CDP 40T, CDP 50, CDP 50T, CDP 70 & CDP 70T

Номер продукции: 351510, 351516, 351511, 351517, 351512 & 351518

Продукция соответствует требованиям следующих директив:

2006/42/EC	Безопасность машин и оборудования
2014/35/EU	Низковольтное оборудование
2014/30/EU	Электромагнитная совместимость
2014/53/EU	Радиооборудование
2014/68/EU	Оборудование, работающее под давлением
2009/105/EC	Простые сосуды под давлением
2011/65/EU	Об ограничении использования некоторых вредных веществ в электрическом и электронном оборудовании

- и производится в соответствии со следующими едиными стандартами:

DS/EN ISO 12100-1:2011	Безопасность машин и оборудования - Общие принципы конструирования
EN 60 335-1:2012	Электрическое оборудование бытового назначения - Безопасность - Часть 1:
EN 60 335-2-40:2003	Электрическое оборудование бытового назначения - Безопасность - Часть 2-40
DS/EN 61000-3-2:2014	Электромагнитная совместимость (EMC) - Часть 3
DS/EN 61000-3-3:2013	Электромагнитная совместимость (EMC) - Часть 3
DS/EN 61000-6-2:2005	Электромагнитная совместимость (EMC) - Часть 6
DS/EN 61000-6-3:2007	Электромагнитная совместимость (EMC) - Часть 6
DS/EN 60730-1:2012	Автоматические регуляторы бытового назначения - Часть 1
DS/EN 55014-1:2007	Электромагнитная совместимость – Требования к электрическому оборудованию бытового назначения - Часть 1
DS/EN 55014-2:2015	Электромагнитная совместимость – Требования к электрическому оборудованию бытового назначения - Часть 2
DS/EN 301489-1	Стандарт электромагнитной совместимости радиооборудования и радиослужб: Часть 1
DS/EN 301489-3	Стандарт электромагнитной совместимости радиооборудования и радиослужб: Часть 3

Skive, 24/10-2016

Менеджер по продукции

Jesper Holm Thorstensen
Управляющий директор

DA

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Overensstemmelseserklæring

Affugtning

Dantherm Air Handling A/S
Marienlystvej 65
DK - 7800 Skive

Tlf.: +45 96 14 37 00
Fax: +45 96 14 38 00

Erklæring vedr. følgende produkt:

Produktnavn: **CDP 40, CDP 40T, CDP 50, CDP 50T, CDP 70 og CDP 70T**

Produktnr.: 351510, 351516, 351511, 351517, 351512 & 351518

Produktet er i overensstemmelse med følgende direktiver:

2006/42/EF	Maskindirektivet
2014/35/EU	Lavspændingsdirektivet
2014/30/EU	EMC-direktivet
2014/53/EU	R&TTE-direktivet
2014/68/EU	Direktiv om trykbærende udstyr
2009/105/EF	Direktiv om simple trykbeholdere
2011/65/EU	RoHS-direktivet

- og er fremstillet i overensstemmelse med følgende harmoniserede standarder:

DS/EN ISO 12100-1:2011	Maskinsikkerhed - Generelle principper for konstruktion
EN 60 335-1:2012	Husholdningsapparater og lignende elektriske apparater - Sikkerhed - Del 1:
EN 60 335-2-40:2003	Husholdningsapparater og lignende elektriske apparater - Sikkerhed - Del 2-40
DS/EN 61000-3-2:2014	Elektromagnetisk kompatibilitet (EMC) - Del 3
DS/EN 61000-3-3:2013	Elektromagnetisk kompatibilitet (EMC) - Del 3
DS/EN 61000-6-2:2005	Elektromagnetisk kompatibilitet (EMC) - Del 6
DS/EN 61000-6-3:2007	Elektromagnetisk kompatibilitet (EMC) - Del 6
DS/EN 60730-1:2012	Automatiske elektriske styringer til husholdninger og lignende anvendelser - Del 1
DS/EN 55014-1:2007	Elektromagnetisk kompatibilitet - Krav til husholdningsapparater - Del 1
DS/EN 55014-2:2015	Elektromagnetisk kompatibilitet - Krav til husholdningsapparater - Del 2
DS/EN 301489-1	Elektromagnetisk kompatibilitet (EMC) standard for radioudstyr og serviceydelser; Del 1
DS/EN 301489-3	Elektromagnetisk kompatibilitet (EMC) standard for radioudstyr og serviceydelser; Del 3

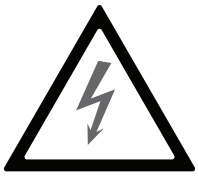
Skive, 24/10-2016

Produktchef

Jesper Holm Thorstensen
Administrerende direktør

Introduction

Warning



It is the responsibility of the operator to read and understand this service manual and other information provided and to use the correct operating procedure.
Read the entire manual before the initial start-up of the unit. It is important to know the correct operating procedures for the unit and all safety precautions to prevent the possibility of property damage and/or personal injury.

It is the responsibility of the installer to ensure the conformity of all, not supplied cables towards national regulations.

Table of Contents

This service manual covers the following topics:

Topic	See page
Introduction	10
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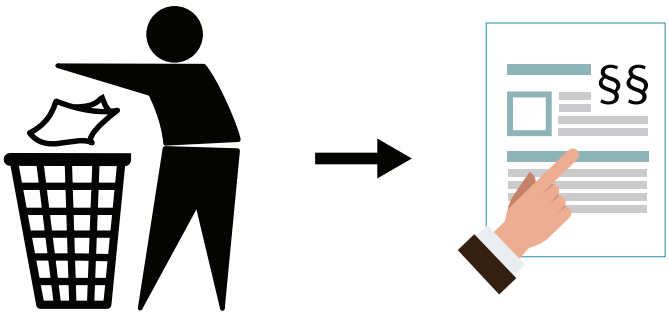
General information

Introduction	This topic gives the general information about this service manual and about the Dantherm CDP and the CDP-T dehumidifier.
Manual, part no.	Part number of this service manual is 094017.
Target group	The target group for this service manual is the technicians who install and maintain the CDP and CDP 40T-50T-70T dehumidifier.
Copyright	Copying of this service manual, or part of it, is forbidden without prior written permission from Dantherm.
Reservations	Dantherm reserves the right to make changes and improvements to the product and the service manual at any time without prior notice or obligation.
Recycling	The unit is designed to last for many years. When the time comes for the unit to be recycled, it should be recycled according to national rules and procedures to protect the environment. The CDP dehumidifiers contain R407C refrigerant and compressor oil. The compressor must be returned to authorities for disposal according to local regulations.

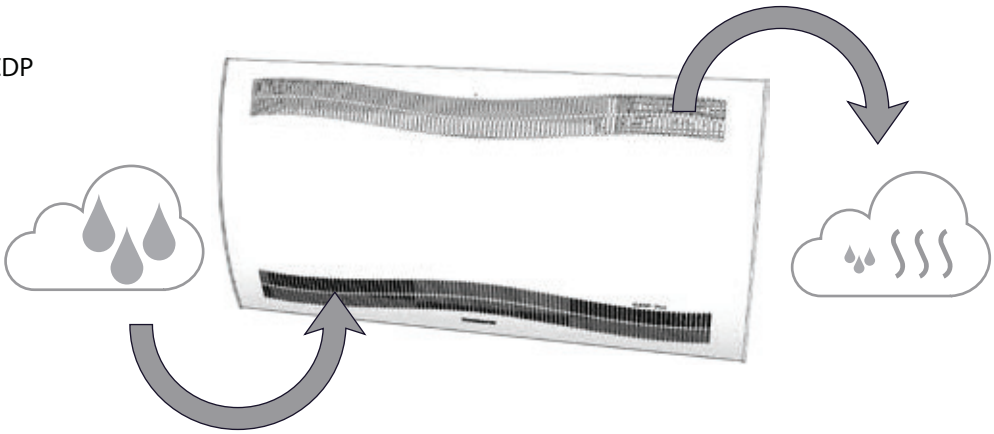


Product and functional description

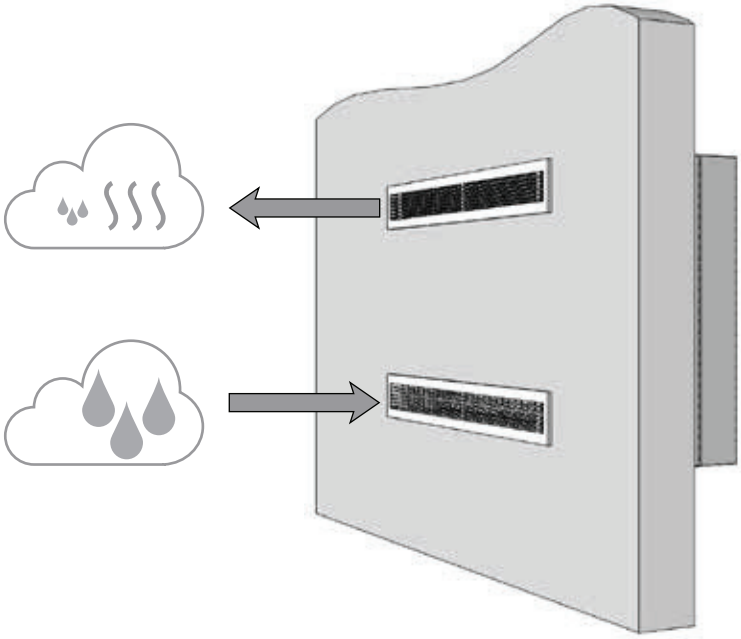
Product and functional description

Illustration of the functional principle of the CDP 40-50-70

CDP



CDP -T



Functionality of the dehumidifier

CDP 40-50-70 and CDP 40T-50T-70T work in accordance with the condensation principle.
Humid air from the pool room is drawn into the unit by one or two fans.
When passing through the evaporator the air is cooled down to below dew point and water vapour is condensed into water, which is drained.
The dry air is then passed through the condenser where it is heated and returned to the pool room. As a result of the latent heat from the condensation process and the compressor energy the return air temperature to the pool room is approx. 5ºC higher than the air from the pool room.

Fan control

When the dehumidifier is started by the hygrostat, the fan(s) are activated at the same time as the compressor.

Product and functional description - *continued*

Compressor control	The number of compressor starts is limited by a 6 minutes timer, which starts when the compressor is switched on. The timer must have come to an end before the compressor can be switched on again. Each time the unit has been switched off on the main switch, by the built-in hygrostat or by an external hygrostat, it will take 30 seconds before the unit can be switched on again. This is a safety feature protecting the compressor against overloading caused by too high pressure in the cooling circuit at start up.
Defrosting	This unit is equipped with an intelligent defrosting strategy. The unit monitors the temperature of the evaporator, and when the temperature have been below a certain temperature for a period of time, then the dehumidifier will switch to active defrosting, the fans will stop, and the magnetic valve will open. The hot gas can now pass through the evaporator. When the evaporator have the right temperature again the magnet valve will close and the dehumidification will continue.
Safety circuit	If the temperature in the dehumidifier increases to a temperature of more than 55 °C (in case of fan failure or room air temperature higher than 36 °C), the compressor stops automatically to avoid damaging it. When the temperature allows for it the dehumidification will continue.

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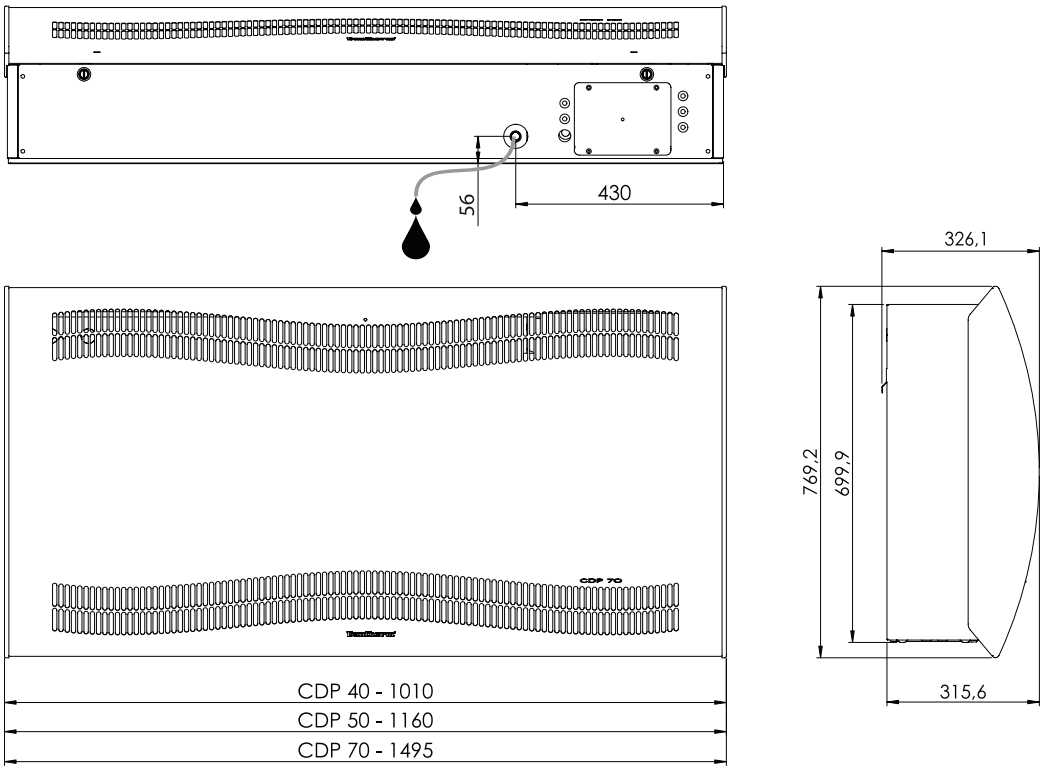
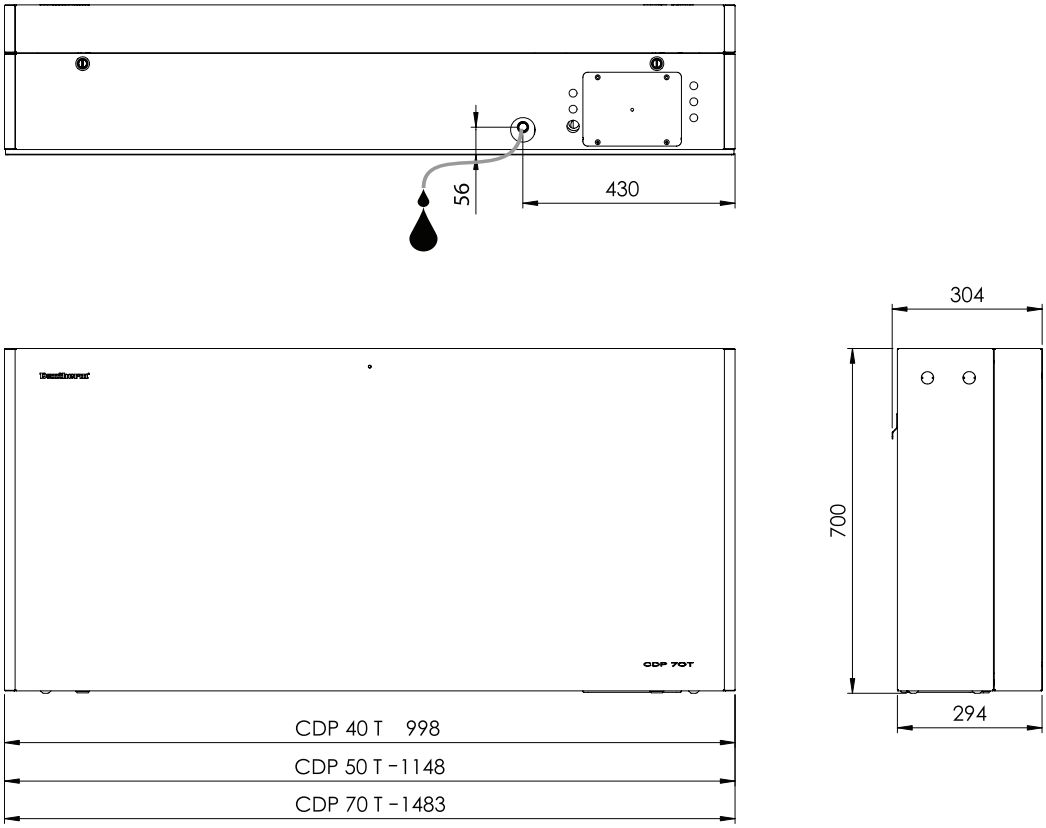
Dimensions

CDP 40-50-70

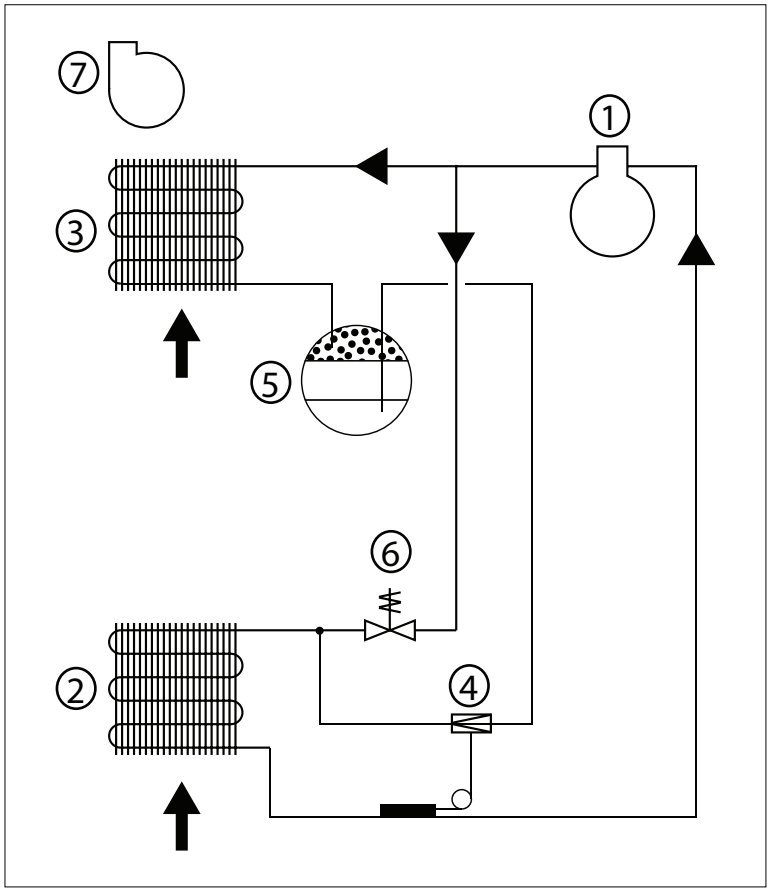


CDP 40T-50T-70T



Cooling Circuit CDP 40-50-70, CDP 40T-50T-70T

Illustration



No.	Description
1	Compressor
2	Evaporator
3	Air-cooled condenser
4	Thermostatic expansion valve
5	Receiver/liquid line drier
6	Solenoid valve for pressure equalization
7	Fan

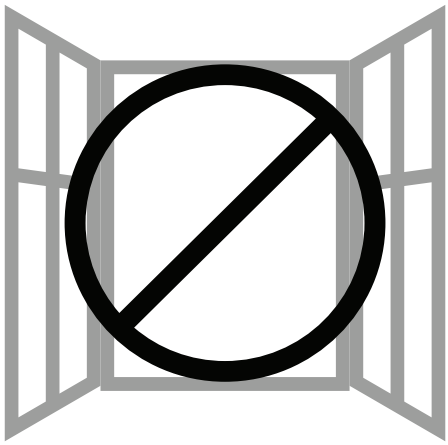
Mounting and installation instructions

Introduction

This section contains all necessary information for correct mounting of the dehumidifier.
The electrical installation is described at the end of this section.

Important

- Do not place the dehumidifier close to a heating source, e.g. a radiator.
- Doors and windows must be kept closed when the dehumidifier is in function.
- To make sure that the room air passes freely through the dehumidifier, air inlet and air outlet openings must be free.



Dantherm®
CONTROL YOUR CLIMATE

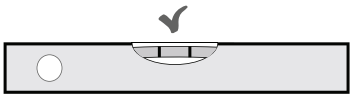
Mounting and installation instructions CDP

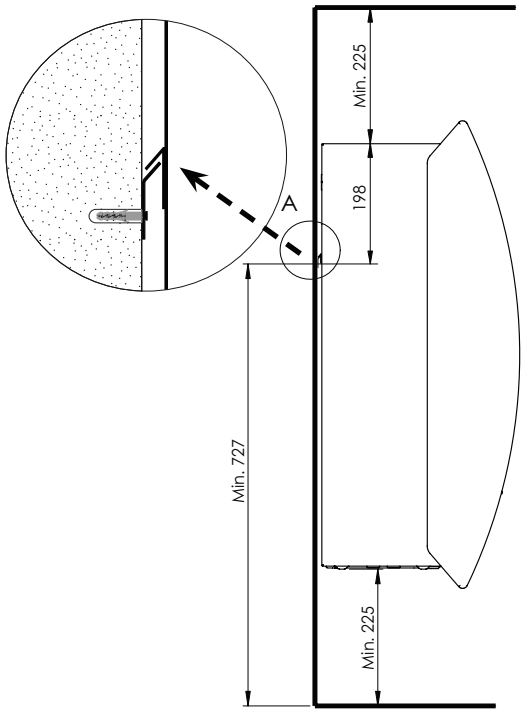
Mounting of CDP 40-50-70

Please follow this procedure to mount the CDP 40-50-70:
- Fix the wall suspension bar supplied with the unit to the wall.
It is important to fix it horizontally to ensure correct condensate outlet.

- Hang the dehumidifier on the wall suspension bar.

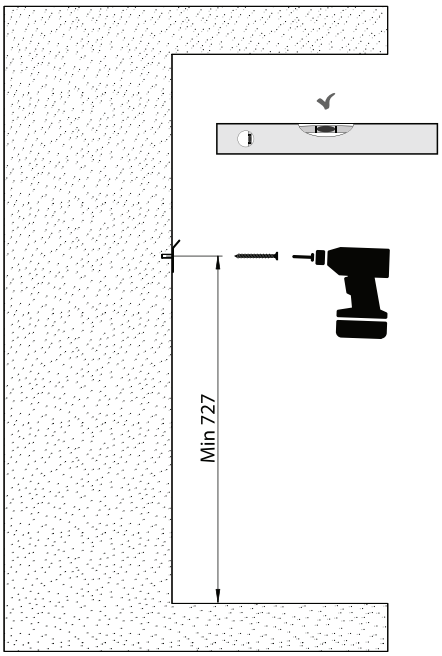
Recommended distance from dehumidifier to:
Ceiling: min 225 mm
Floor: min 225 mm



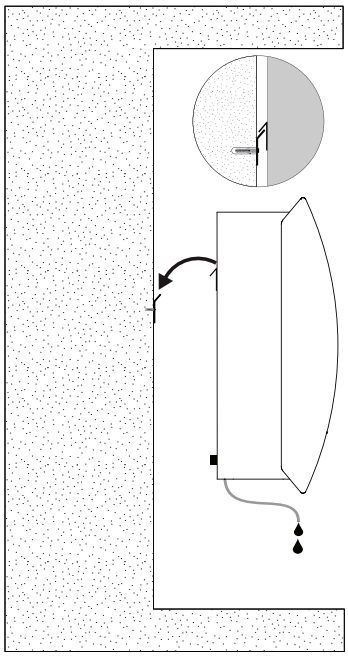


When installing the CDP, please wear gloves to prevent the unit from getting dirty.

1



2



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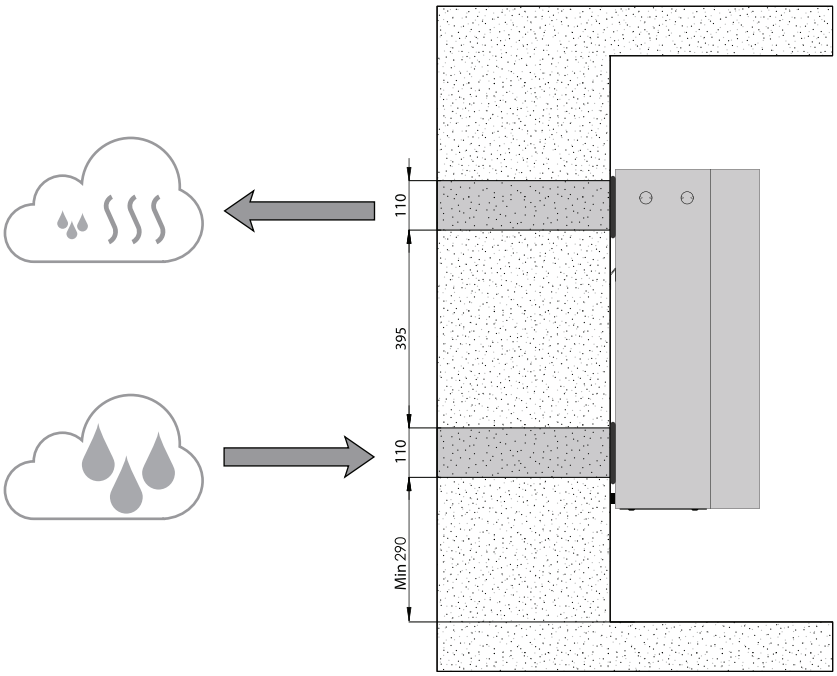
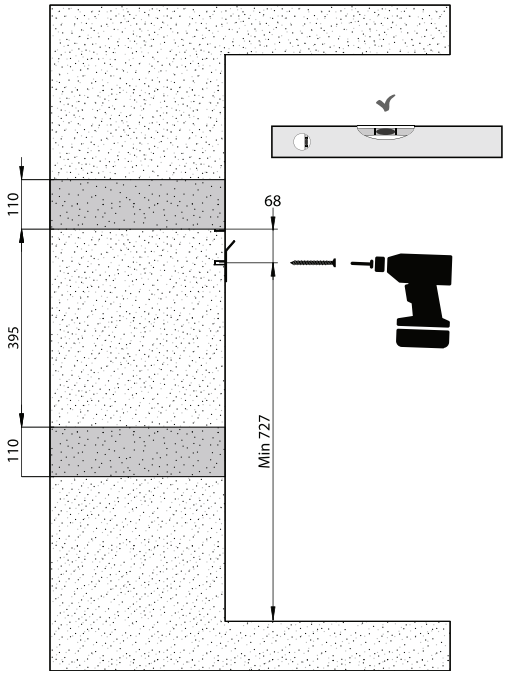
Mounting and installation instructions CDP-T

CDP-40T-50T-70T

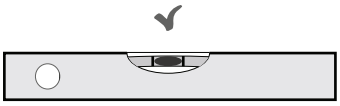


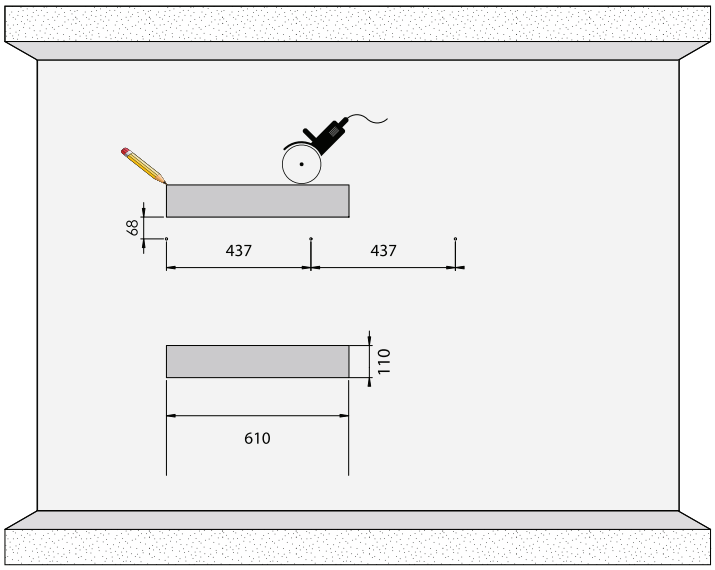
1



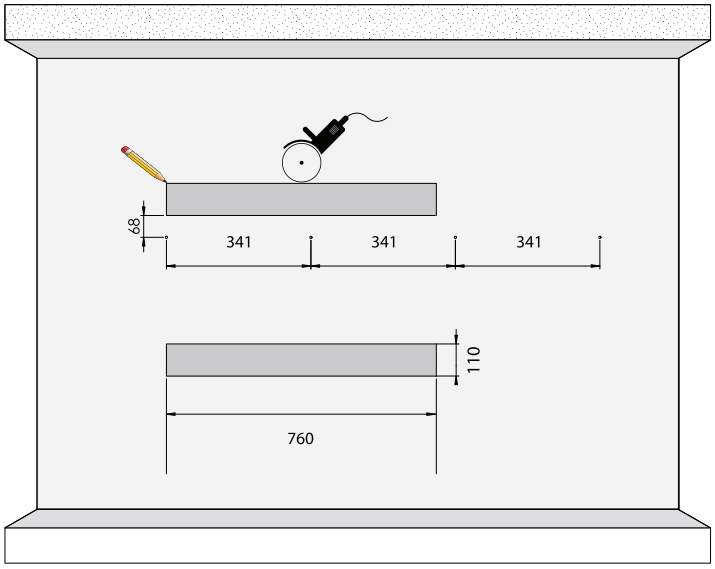
Mounting and installation instructions CDP-T *Continued*

2a CDP 40T

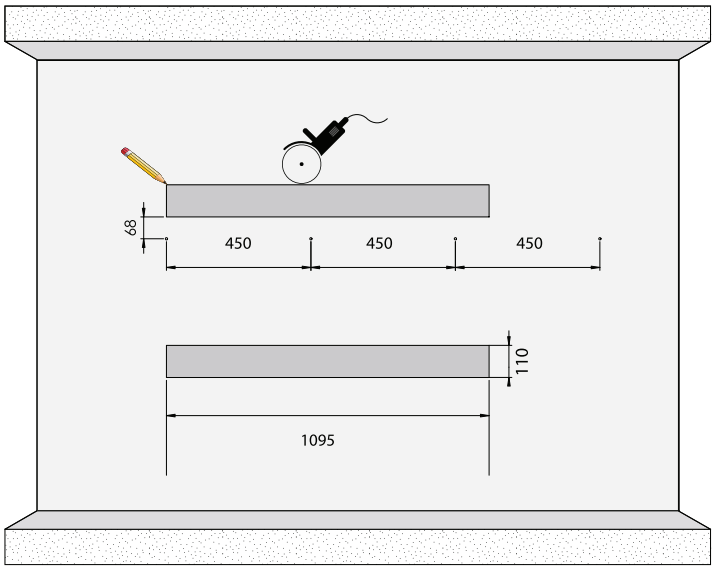




2b CDP 50T

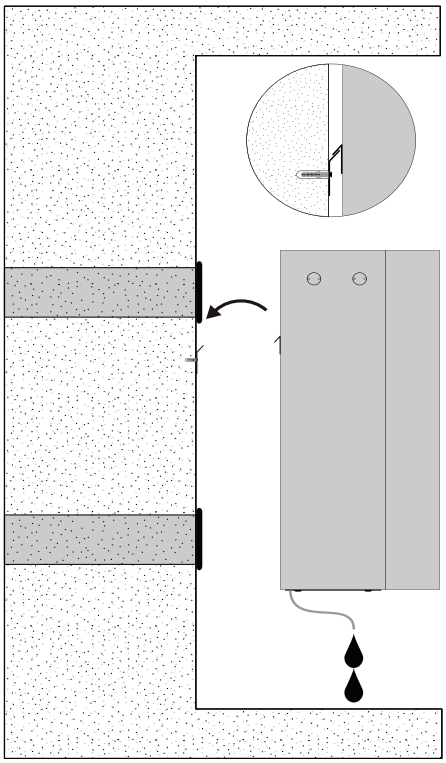


2c CDP 70T



Mounting and installation instructions CDP-T *Continued*

3

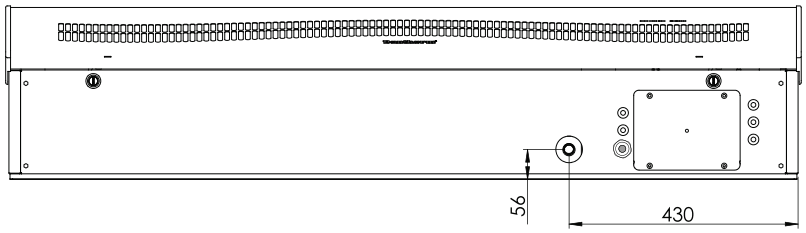


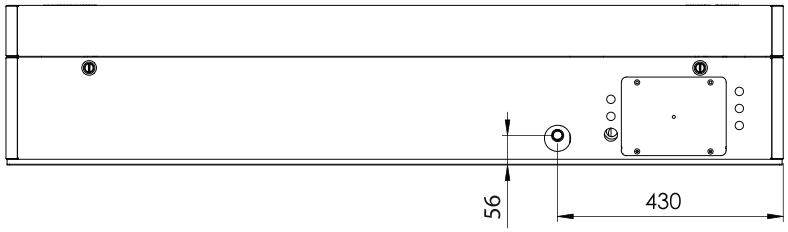
Mounting and installation instructions CDP and CDP-T*Continued*

Condensate outlet

The condensate outlet is located at the base of the dehumidifier. The unit has a drain spigot intended for connection of a ¾" flexible or fixed water hose or simply dripping. If you choose to have the outlet through the wall, a matching hole is made in the wall and the drain is connected to the dehumidifier before it is placed on the wall suspension bar.
It is important that the hose from the dehumidifier to the drainage has a drop of at least 2 % to make sure that the water runs away from the condensate tray.
Alternatively a condensate pump can be fitted at the water outlet to pump the water to a drain.

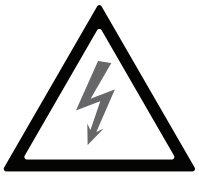
The position of the condensate outlet is shown on the drawing – the unit is seen from below.



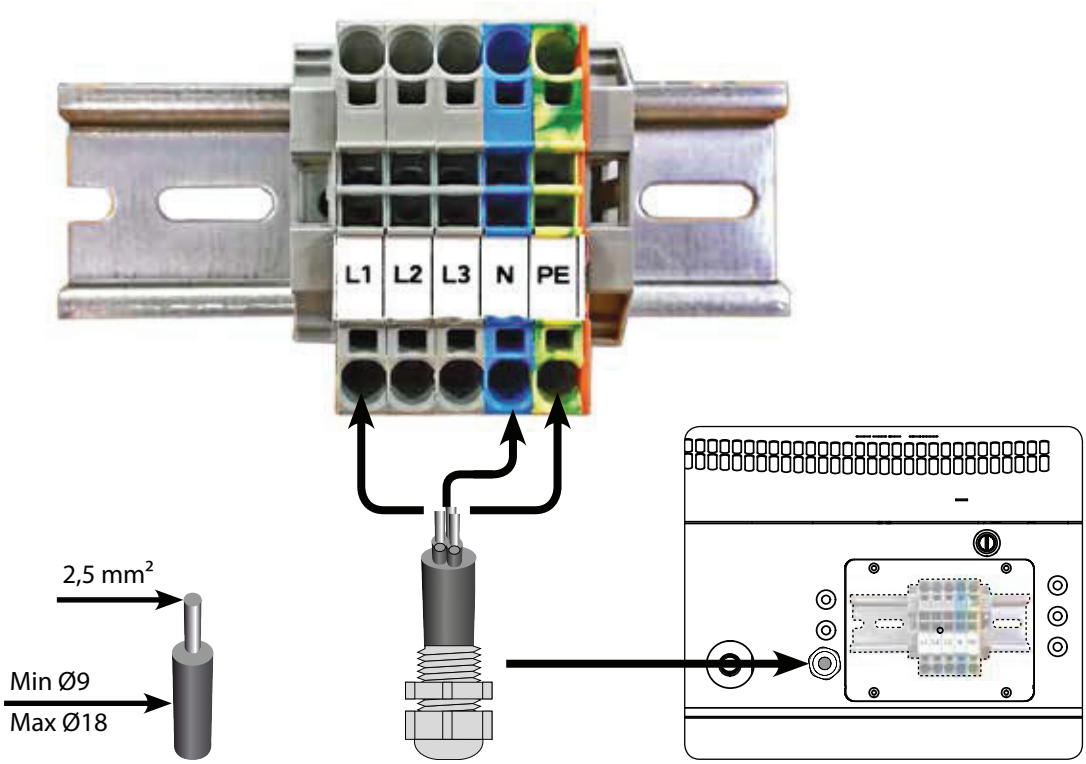


Connection of power supply

Power must be connected to the unit in accordance with the values stated on the name-plate.
Please see wiring diagrams starting on page 327.
The AC mains must be connected as shown below.



Note:
It is the responsibility of the installer to ensure the conformity towards national regulations of all, not supplied cables.



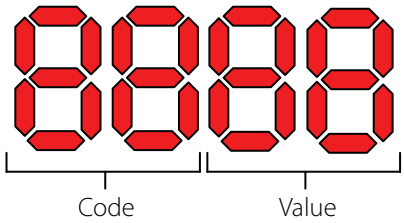
Operation

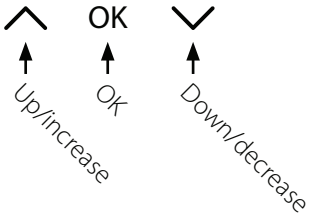
Display and control panel

- 4 digit display, indicating temperature, RH, alarms etc.
- USB for PC-TOOLS
- RS485 for BMS (Modbus)
- EXTERNAL RH/T sensor
- ALARM
- 12VDC for heating coil, LPHW, electric
- Arrow Up - Increase
- OK
- Arrow Down - Decrease

Layout

4 digit Display divided into 2 sections: The first 2 digits show the code and the last 2 show the value of the code.

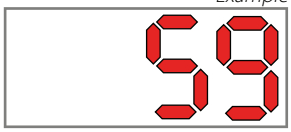




Default View

By default the display will show the relative humidity RH %. This reading can be from the external humidity/temperature sensor when available, if not the RH will be from the internal humidity sensor.

Example

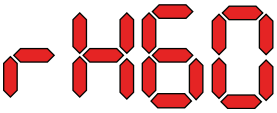


Menu

Press and hold OK button for 3 sec to enter menu mode

Toggle Menu Page

Code: rH



The Code is rH. The value can be set between 40 and 99 by pressing the Up or Down key.

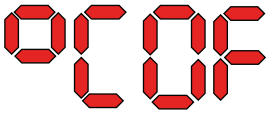
Default value is 60%RH. Follow these steps to change to the desired value:

1. Press OK. The Value digits will flash.
2. Press the Up or Down key to the desired value. Note that pressing and holding the Up or Down key will accelerate the number increment to 5 per second.

3. Press OK to save the new value.

Operation, continued

Code °C

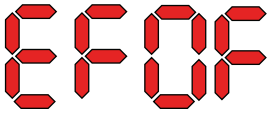


The Code is °C and the value can be set between 05 and 34 °C. Default setting is OF. Follow these steps to change to the desired value:

1. Press OK. The result is that the Value digits will start flashing.
2. Press the Up or Down key to the desired value. Note that pressing and holding the Up or Down key will accelerate the number increment to 5 per second.
3. Press OK to save the new value.

Note: If no button is pressed for 10 seconds it will return to Standard view.

Code EF

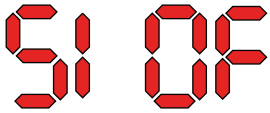


The Code is EF and is the setpoint value for start of the extractor fan. The value can be set between 40 and 99 %RH. Default setting is OF. Follow these steps to change to the desired value:

1. Press OK. The result is that the Value digits will start flashing.
2. Press the Up or Down key to the desired value. Note that pressing and holding the Up or Down key will accelerate the number increment to 5 per second.
3. Press OK to save the new value.

Note: If no button is pressed for 10 seconds it will return to Standard view.

Code SI

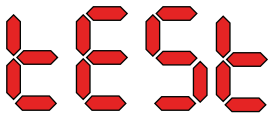


The Code is SI for Service Interval and mesured in weeks. Default value is OF. The value can be set from 1 to 99 weeks. Follow these steps to change to the desired value:

1. Press OK. The Value digits will start flashing.
2. Press the Up or Down key to the desired value. Note that pressing and holding the Up or Down key will accelerate the number increment to 5 per second.
3. Press OK to save the new value.

Note: If no button is pressed for 10 seconds it will return to Standard view.

Code tE



The Code is tE and the value is St for Selftest.

Press OK to alter the value to start self-test.
If you want to dismiss the test press and hold the down button for 5 seconds.
The unit will return to Standard View.

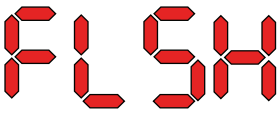
RS-485 Interface

A list of data for the RS-485 interface is available on page 51

Datalog

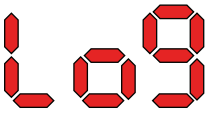
A list of data log parameters is avialable on page 54

Information



Changes saved to memory

After Flash a number is displayed. This shows the time of saving.



Log file saved to USB

Configuration file from USB loaded successfully.

Diodes

BLUE:	Power connected, standby mode
GREEN:	Compressor ON, deicing
YELLOW:	Remote pairing mode
RED:	Errors

Service guide

Introduction

The dehumidifier requires very little attention for trouble free running. All the necessary safety and control functions have been built in. The fan motor(s) and the compressor have permanent lubrication and require no particular maintenance.

Monthly service

The air inlet filter is to be cleaned once a month. The filter is placed in a stand behind the grill in the air inlet duct. Also drip tray and outlet should be cleaned so that water can run off freely. Please follow this procedure to perform the monthly service:

Step	Action
1	Unlock the two locks underneath the dehumidifier
2	Dismount the front cap by lifting it up and take out the filter. The filter is located on the rear of the front cap
3	Wash the filter in tepid soapy water or vacuum clean thoroughly. If the filter is faulty, replace it.
4	Insert filter in the filter holder, reattach the cap and lock the two locks. (From Step 1)

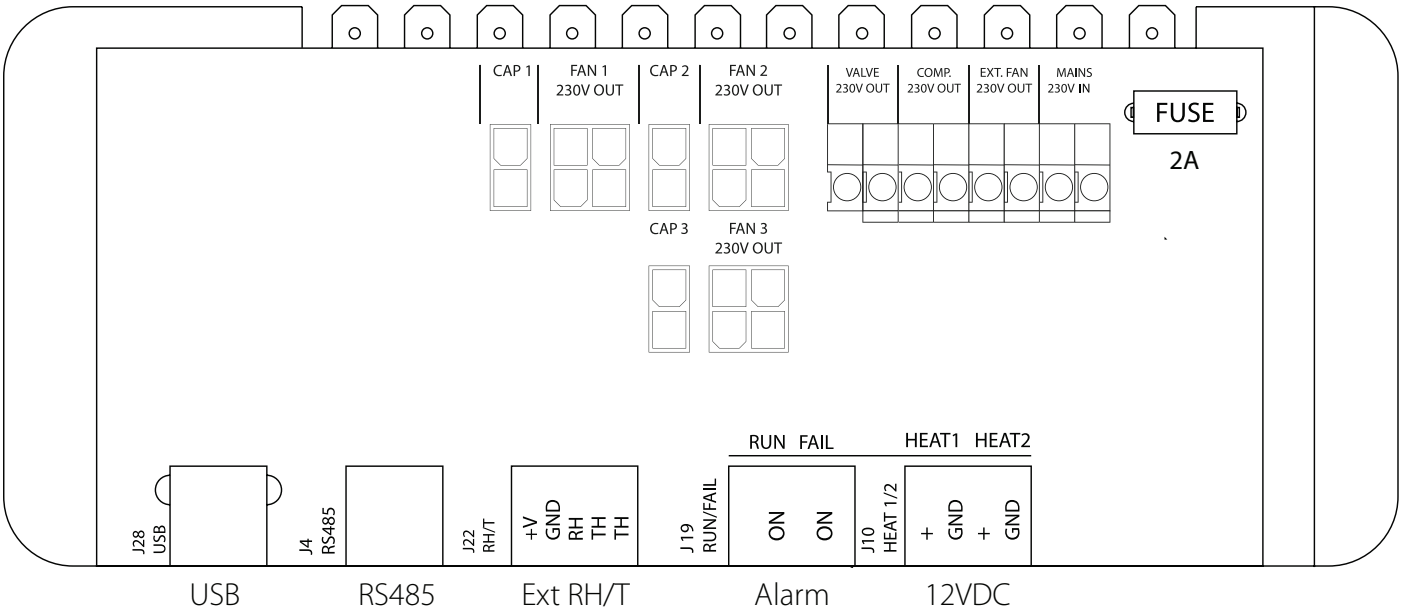
Annual service

The dehumidifier should be inspected once a year.
Please follow this procedure to perform the annual service:

Step	Action
1	Remove the front from the dehumidifier
2	Inspect the inside of the dehumidifier
3	Vacuum clean the dehumidifier to remove any dust or debris Important: Vacuum clean the condenser thoroughly
4	If necessary wash the lamella evaporator in tepid soapy water if it is badly soiled

Main PCB and wiring diagrams

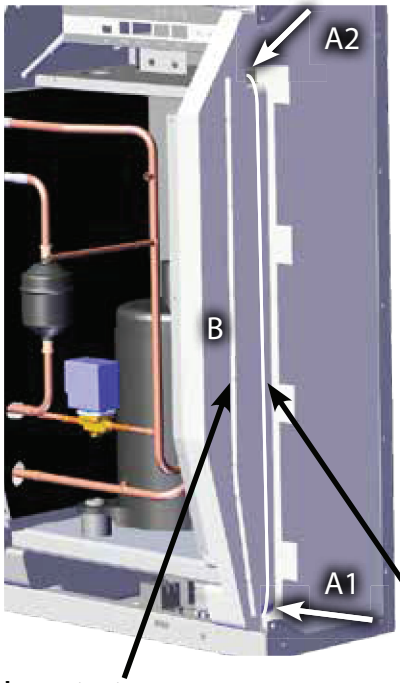
Overview of PCB connections



Routing of cables for accessories from terminal rail to PCB

Pull the cable through hole A1 and to the hole A2 to connect to PCB.
The groove B is for use with cable from external RH sensor (not included) as it requires a seperate groove to avoid interference.
All other cables are to be placed in groove A1-A2

Wiring diagrams- Page 327



All other cables.

Important:
External RH sensor cable only.

Fault finding guide

Important!

If the dehumidifier is not functioning correctly, shut it down immediately!

Fault finding

Use this table to localize and solve a possible problem or fault:

Fault	Possible cause	Solution
• The dehumidifier does not work • no light in the LEDs on the display	-	• Check the external fuses • Check the power supply to the unit
• The compressor does not work • the display shows wrong type	The compressor has stopped automatically caused by a too high temperature on the condenser	If the unit does not start again after 45 minutes, check the following: • Check that the fan(s) is running • Check if the filter in the duct kit is dirty, clean if necessary. • Check if the condenser coil is dirty • Check if the room temperature is higher than 36 °C. If the room temperature is higher than 36 °C, the unit must be stopped • Check that the duct openings are not covered
• The dehumidifier does not work		Check the built-in or the external hygrostat, if any, by setting it to a low relative humidity, e.g. 10 – 20 %RH. If the unit still does not start, check the built-in or external hygrostat for defects.

More help

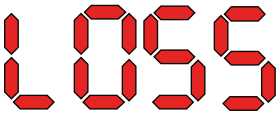
If you cannot find the reason for the fault, switch off the unit immediately in order to prevent further damage.
Contact a service technician or a Dantherm representative.

Error messages

Introduction

The CDP can display a number of Error Messages to help finding a fault.
This topic explains the messages in the display and what the problem might be.

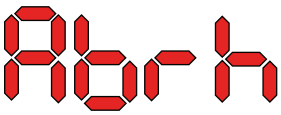
Code LO



The Code LO displays LOSS
The connection to the Remote Panel is lost.
When the connection is reestablished the error message can be cleared by pressing OK.

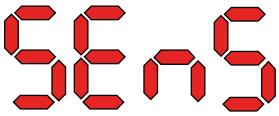
Code Ab

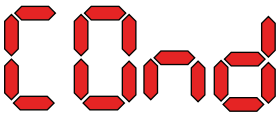
The Code Ab with the value t indicates that the ambient temperature is out of range.
This alarm cannot be dismissed by pressing OK, but will automatically return to Standard View when the temperature is within range again.

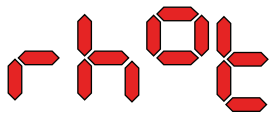


The Code Ab with the value rh indicates that the relative humidity is out of range.
This alarm cannot be dismissed by pressing OK, but will automatically return to Standard View when the relative humidity is within range again.

Code SE







The Code SE with the value nS indicates a sensor fault and will cause the unit to stop.

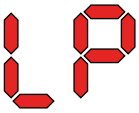
Press either Up or Down to determine which sensor is faulty. The faulty sensor can be:

- Condensor sensor Cond
- Evaporator sensor EVAP
- Humidity sensor rh°t

The fault can only be dismissed by the unlock sequence initialized by pressing OK.
If no button is pressed for 10 seconds it will return to SEnS

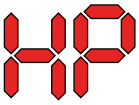
Error messages

Code LP



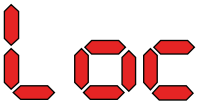
If the Code LP (Low Pressure detection) is showm, the fault must be found and rectified.
The fault can only be dismissed by the unlock sequence which is initiated by pressing OK.

Code HP



If the Code HP (High Pressure detection) is shown, the fault must be found and rectified.
The fault can only be dismissed by the unlock sequence which is initiated by pressing OK.

Unlock Sequence



Code Lo and value c indicates that the unit is locked.
Press the Down button to unlock.
If no buttons are pressed within 5 seconds the display will return to previous fail state.

Code Un and value Lo shows Unlock option.
Press OK to confirm

Service agreement

Introduction

The unit includes mechanical and electrical parts and the unit is often placed in a rough environment where the components are exposed to different climate conditions.
Therefore the unit will need preventative maintenance on a regular basis.

Hotline

The After Sales Support Department of Dantherm A/S is ready to help you in case of a problem. To be able to offer quick and efficient help, please have the following information ready when contacting Dantherm A/S:

-Name	-Phone no	-Location of unit
-Company	-Email	-Serial no./ Order no.
-Country	-Type (unit)	-Description of problem

Contact Dantherm A/S, ask for the After Sales Support department and help will be provided as soon as possible:

Phone: +45 96 14 37 00
Fax: +45 96 14 38 00
Email: service@dantherm.com

Preventive maintenance

Dantherm A/S offers to perform preventive maintenance on the units so they will continue to operate according to factory standards.

Corrective and emergency repair

In case the unit malfunctions Dantherm A/S offers to perform emergency repair on the units. Agreements will be made with the customer regarding response time and price

Setup

Dantherm A/S has established a network of service partners to perform preventative maintenance. The partner is trained and certified on the actual climate units. The partner will also carry an adequate number of spare parts – so any repairs can be made during the same visit.
The agreement will be made with Dantherm A/S – and the overall responsibility for the agreement will be that of Dantherm A/S.

Further information

For further information about a service agreement in your country or region, please contact:

Henrik Hersted
After Sales Support Manager
Dantherm A/S
Phone: +45 9614 4767
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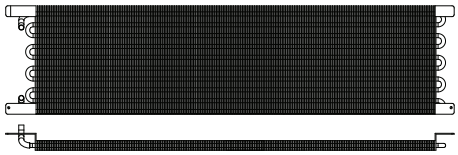
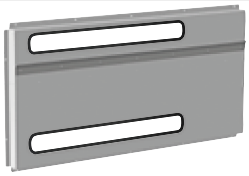
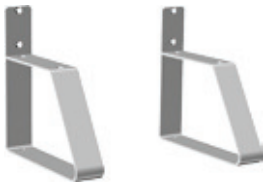
Email: heh@dantherm.com

Accessories

Part No.	Description		Page
094336	Electric heating surface 2KW for CDP 40		32
094337	Electric heating surface 3.5KW for CDP 50		
094338	Electric heating surface 5KW for CDP 70		
094333	Water heating surface LPHW, 2KW, CDP 40		35
094334	Water heating surface LPHW, 3.5 KW CDP 50		
094335	Water heating surface LPHW, 6.5KW, CDP 70		
094271	Wall Duct, complete for CDP 40T		38
094243	Wall Duct, complete for CDP 50T		
093508	Wall Duct, complete for CDP 70T		
094801	Wall duct adaptor for CDP 40T		38
094802	Wall duct adaptor for CDP 50T		
094804	Wall duct adaptor for CDP 70T		
093455	Control panel, DRC1		39
094332	Floor stand		-
094339	External fan 230V, Ø100		-
094341	External fan 230V, Ø125		
094340	Control valve 1/2" ON/OFF, 230V, Frese type with actuator.		-

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Electrical heating coil for CDP dehumidifier

Introduction

This section gives all nescessary information on how to install and use the electrical heating coil for Dantherm CDP Dehumidifiers.

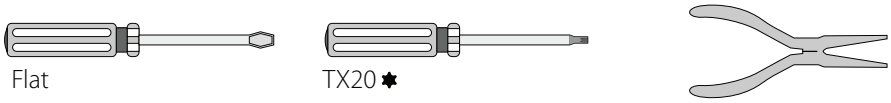
Part numbers

Electrical heating coil for CDP/CDP40T: **094336**
Electrical heating coil for CDP/CDP 50T: **094337**
Electrical heating coil for CDP/CDP 70T: **094338**

Overview

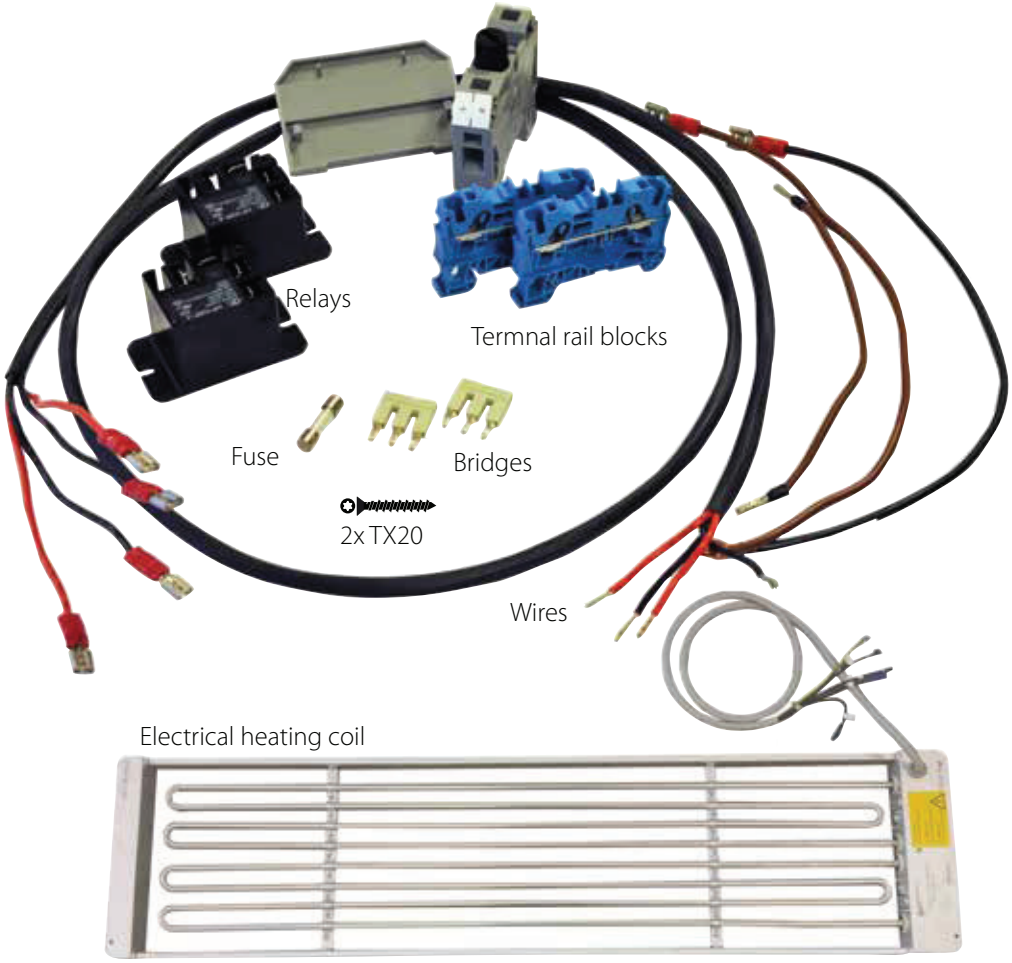
The heating surface is an accessory for the CDP and CDP-T ranges and supply additional heat to the dehumidified air from the dehumidifier.

Tools needed



Content

Shown below are the components included in the electical heating coil kit.



Technical data

	Power	Current	Total max. load	Fuse
Electrical heater for CDP/CDP40T	2 kW	8,70 A	16,20 A	10A 5x20mm
Electrical heater for CDP/CDP 50T	3,5 kW	15,22 A	22,80 A	10A 5x20mm
Electrical heater for CDP/CDP 70T	5 kW	21,80 A	29,30 A	10A 5x20mm

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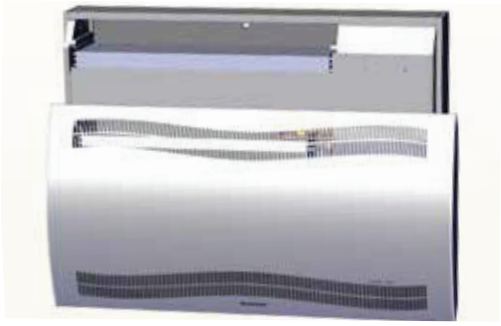
Electrical heating coil for CDP dehumidifier

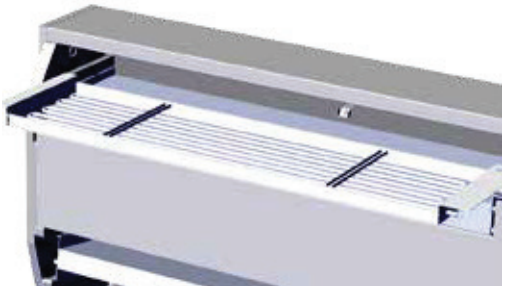
Installation procedure

Disconnect power

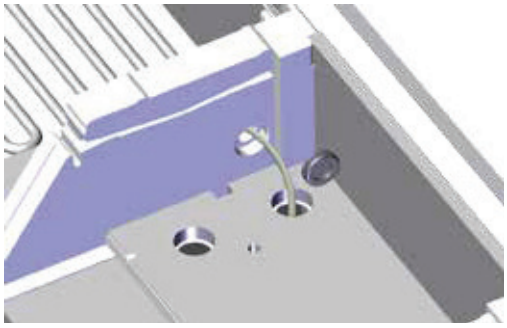
1. Remove front cover



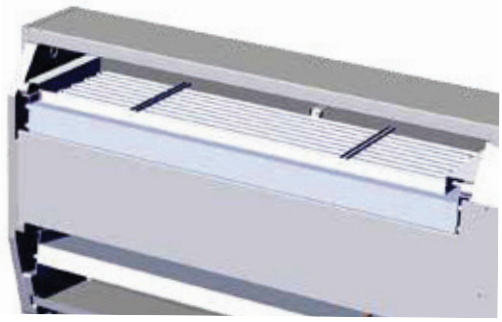
2. Slide heating coil halfway in.1/2



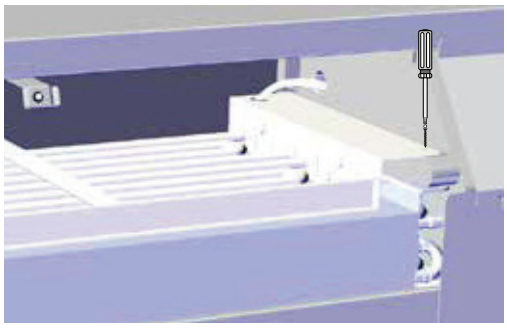
3. Remove rubber plug and pull wire to compressor compartment.



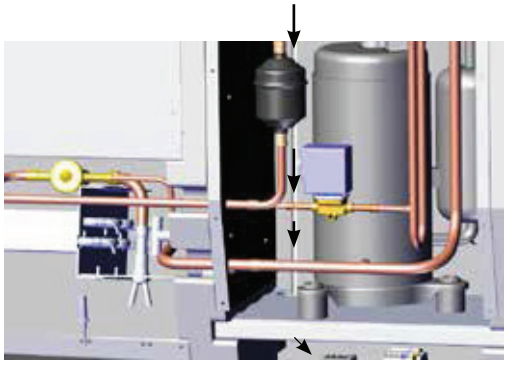
4 . Slide heating coil all the way in place. 2/2



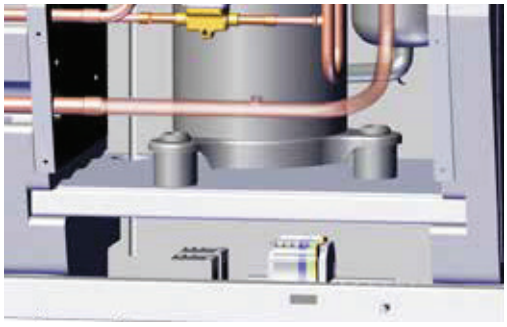
5. Secure heating coil with two screws left and right.



6. Pull wire through compressor compartment.



7. Gain access to terminal rail by removing rubber plug.



8. Connect wires to terminal rail and circuit board according to diagram on page 328

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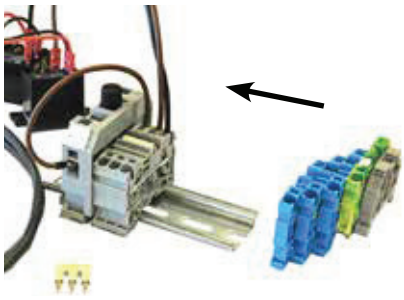
Electrical heating coil for CDP dehumidifier

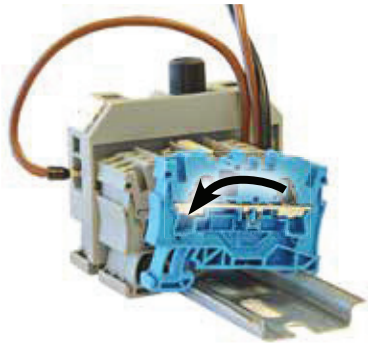
Terminal Rail Assembly Procedure

1. Use flat screwdriver to remove terminal rail blocks.

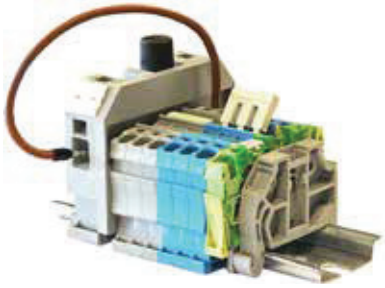
2. Slide additional terminal rail blocks into place in this order.



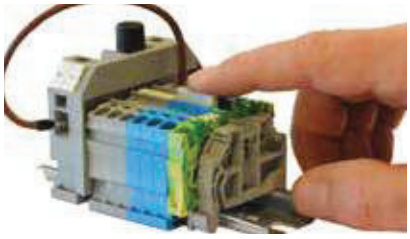
3. The terminal rail block can also be clipped on.



4. Place bridge in the three blue terminal rail blocks.

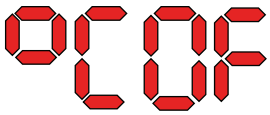


5. Press bridge firmly into place.



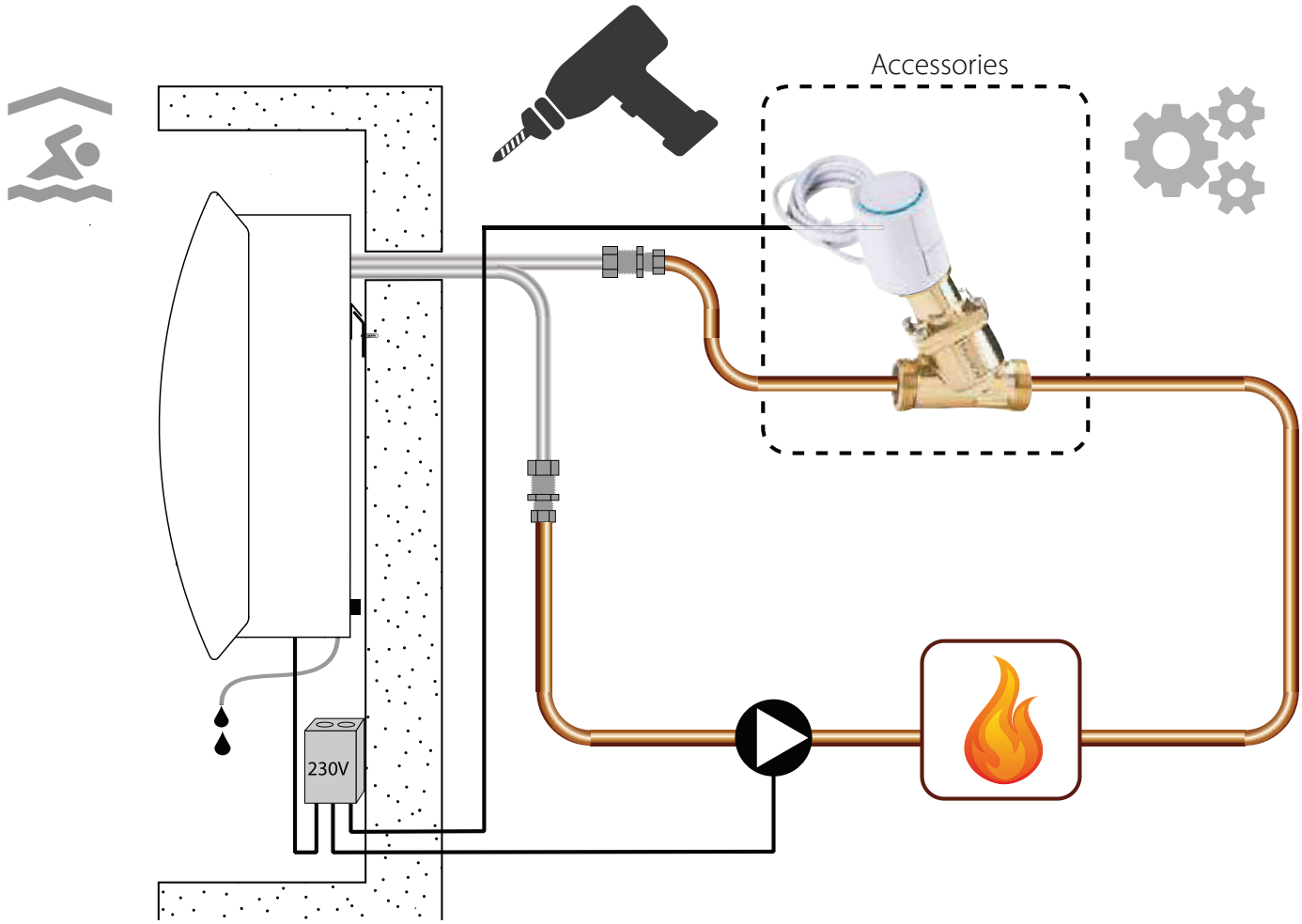
6. Glass fuse in large terminal rail block. 10A 5x20mm

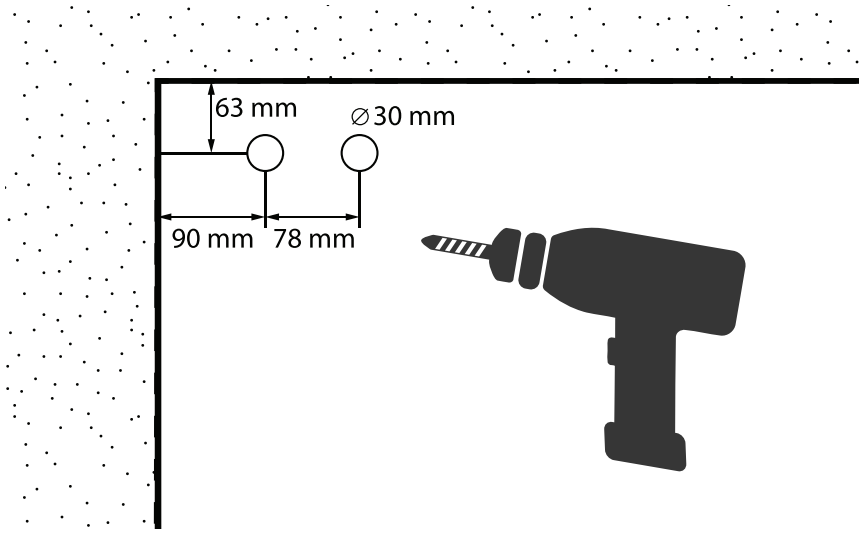
6. Activate heater as described in operation chapter, section "Code °C"



Water heating coil for CDP dehumidifier

Overview





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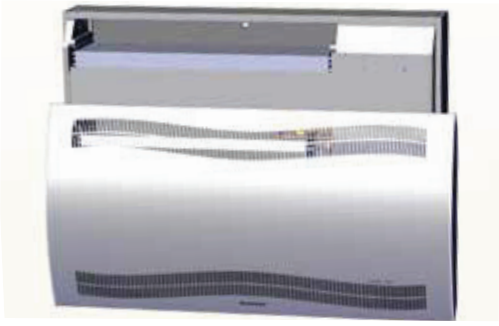
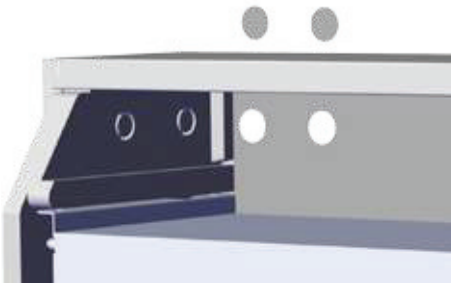
Water heating coil for CDP dehumidifier - mounting

Installation procedure

1. Remove front cover

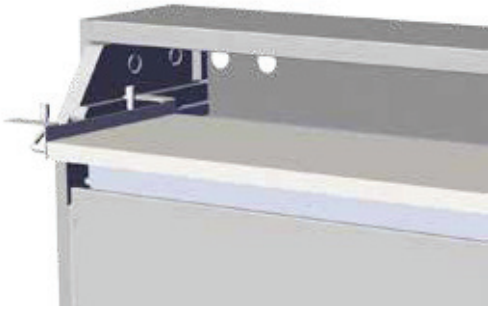


2. Punch out the two discs in the rear of the unit.

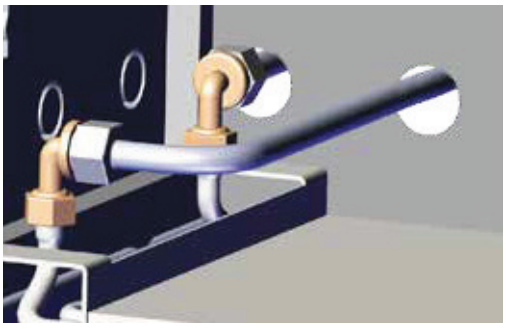


3. Pre-assemble gaskets, fittings and flexible hoses.

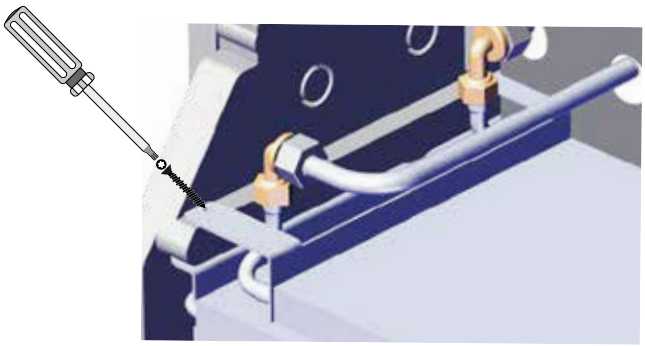
4. Slide heating coil into place.



5. Connect hoses to external heating source.
Note: the hoses run through the wall behind the unit.

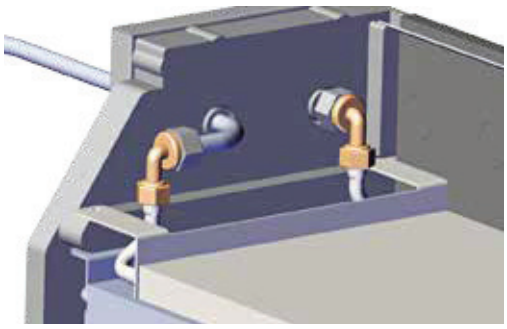


6. Secure heating coil with two screws left and right front.



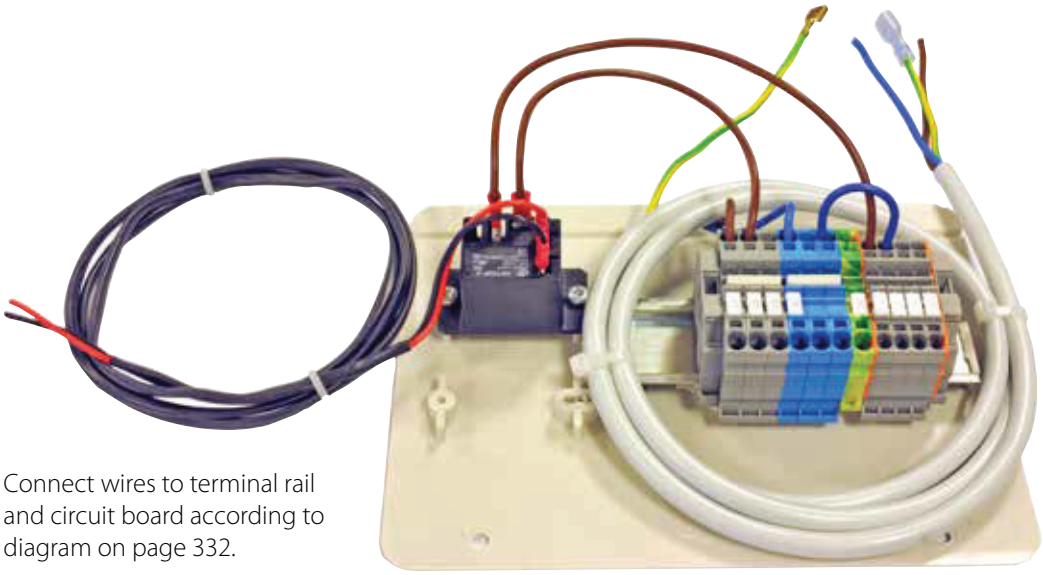
7. Cut along dotted lines and fit grommet around flex hose. Push grommet and hose in place using liquid detergent for lubricant.

8. For CDP-T models the hoses are at the end of the unit.



Water heating coil for CDP dehumidifier - mounting

DIN rail with terminal blocks and connections.



Connect wires to terminal rail and circuit board according to diagram on page 332.

Flexible water hoses with gaskets and fittings

Water Heating Coil - Shown here: coil for CDP/CDP 70T

Technical data

Type	Total capacity	Air Flow
Water heating coil for CDP/CDP 40T	2 kW	300 m³/h
Water heating coil for CDP/CDP 50T	3,5 kW	680 m³/h
Water heating coil for CDP/CDP 70T	6,5 kW	900 m³/h

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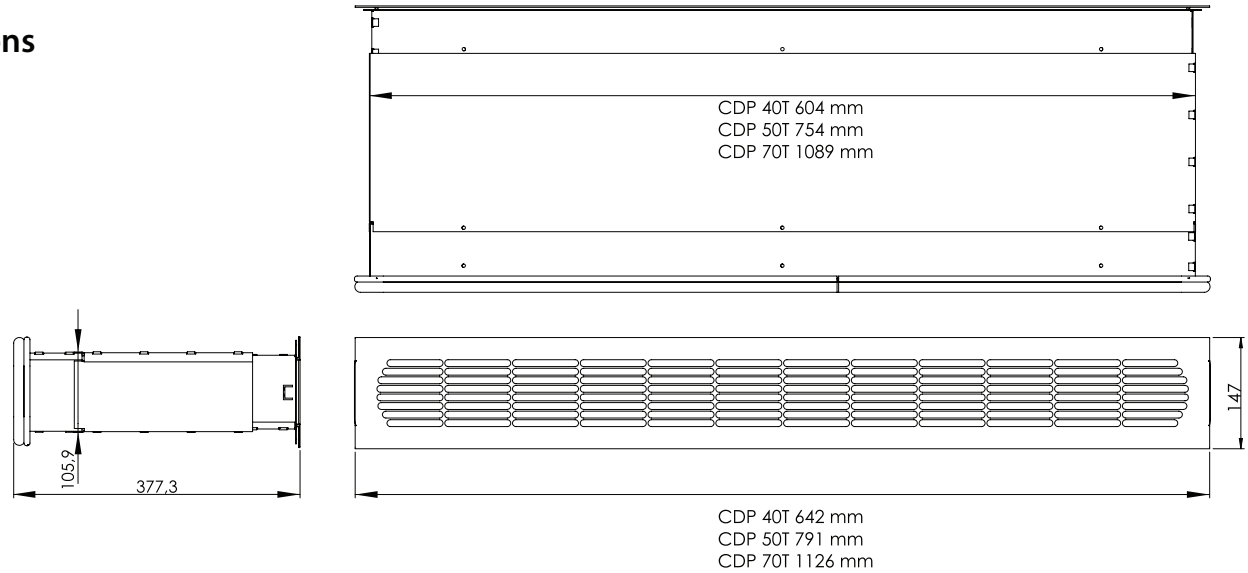
Wall duct for CDP-T

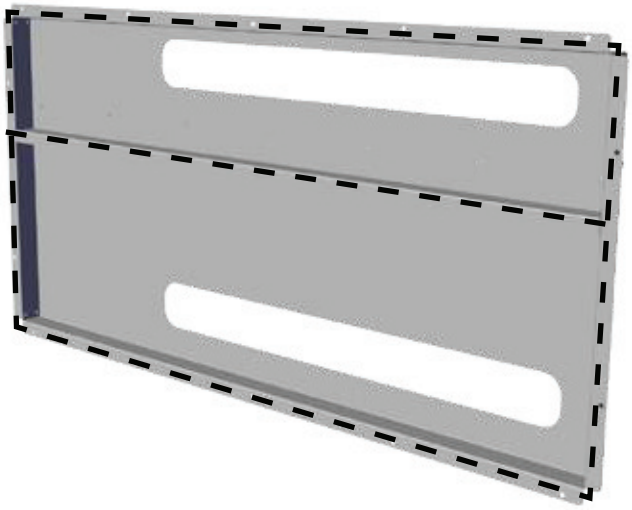
Dimensions



Wall duct adaptor CDP-T

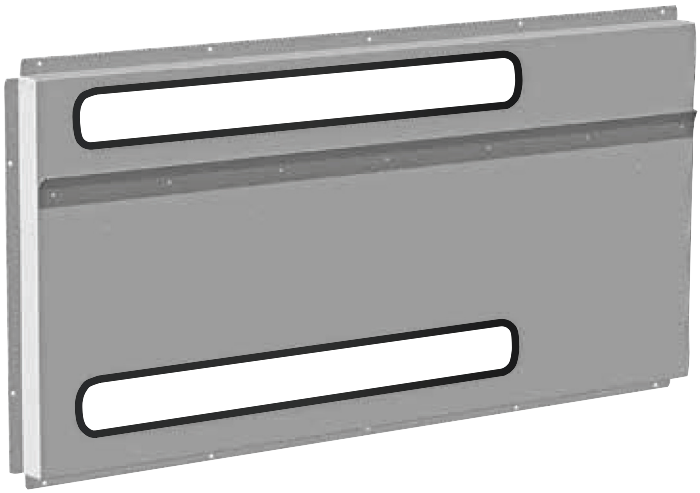
For use if you have previously cut holes in your wall and want to install a new generation CDP-T dehumidifier.

1. Fit rubber seal along the edges of the adaptor. (Dotted lines on this illustration.)



2. Mount the adaptor on the wall covering existing holes.

3. Hang the CDP-T dehumidifier on the bracket mounted on the adaptor.



Wireless Remote Controller DRC1

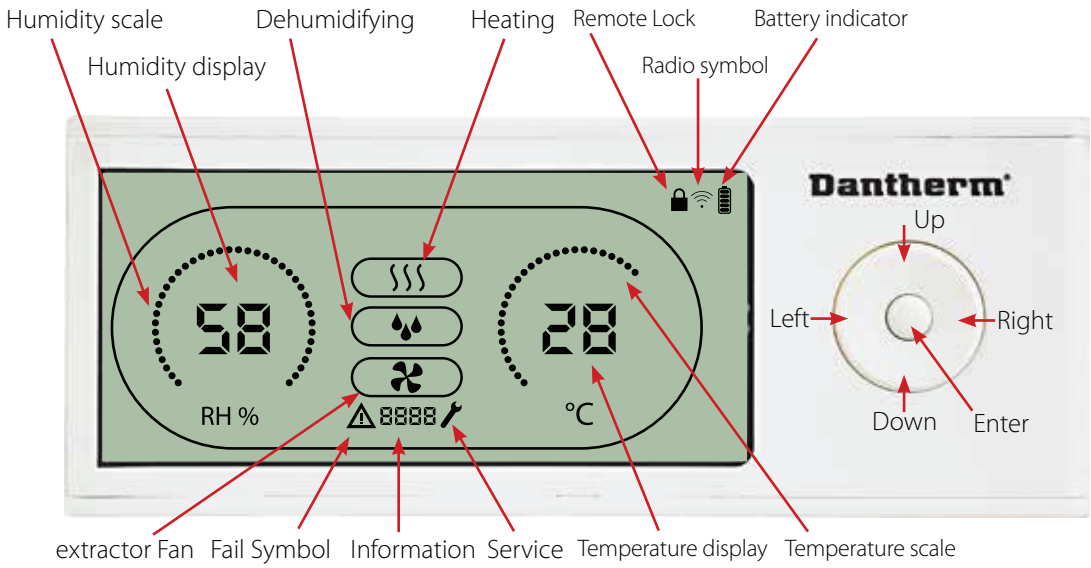
Warning

It is the responsibility of the operator to read and understand this service manual and other information provided and to use the correct operating procedure.
Read the entire manual before using the control panel. It is important to know the correct operating procedures for the unit and all safety precautions to prevent the possibility of property damage and/or personal injury.

Product description

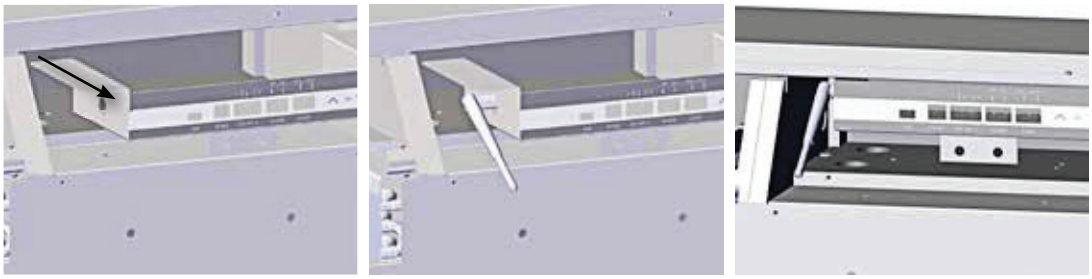
The DRC1 is a wireless remote control panel for use with Dantherm dehumidifier range CDP/CDP-T 40-50-70.
In this manual you will learn how to use the DRC1 remote control panel to control your dehumidifier.
The range of DRC1 is up to 50 meters depending on conditions.

Remote panel Layout



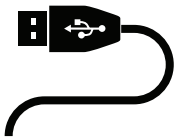
Humidity and Temperature scale.
Temperature scale from 0° till 40°C.
Humidity scale from 0 to 99 % RH

Antennae



USB cable

The USB cable is for updating software.
It can also be used as external power supply.

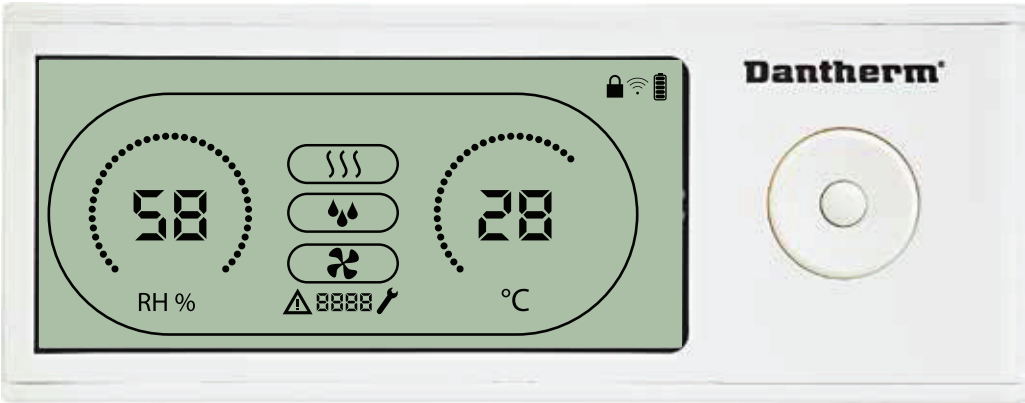


Mating

Mating Mode

Before use, the DRC1 must be mated with the CDP unit.
This section describes how to mate the DRC1 with the dehumidifier.

Mating

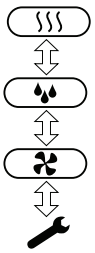


Procedure

1. Insert batteries (included)
2.a. The DRC1 will search for the dehumidifier 2 min. While searching display will flash at 0,5 Hz
2.b. To enter mating mode on the dehumidifier:
- Press and hold both up and down buttons on the dehumidifier for 5 seconds -
Note: this must be done while the DRC1 is searching for the dehumidifier.
OR: turn the dehumidifier Off and ON.

3. The dehumidifier will send a serial number to the DRC1.
When mating is successful, the radio icon comes on.
4. The dehumidifier will confirm connection by showing code "Conn" for 3 seconds
More than one remote control panel can be connected to the dehumidifier.

Navigation



ENTER press and hold for 3 seconds to enter user menu setup
UP and **DOWN** buttons to navigate between icons.
LEFT and **RIGHT** buttons allows to change set points value 1press = 1unit
ENTER confirms new set point value and automatically switches to next icon/or exits the menu
Press and hold **RIGHT** for 5 seconds to enter installer menu setup. (Exit setup menu first)

When no button is pressed for 10 sec, the DRC1 exits the menu and returns to readings screen

Failed mating

Press and hold for 10 seconds to reset the serial number stored in DRC1.

If mating fails ⚠ and Conn is shown in the display and the radio symbol flashes
Reset DRC1 and repeat mating process.

Standard readings

Standard readings when connected:
-Stand by, RH and °C scale
-Compressor active, dehumidifying symbol on

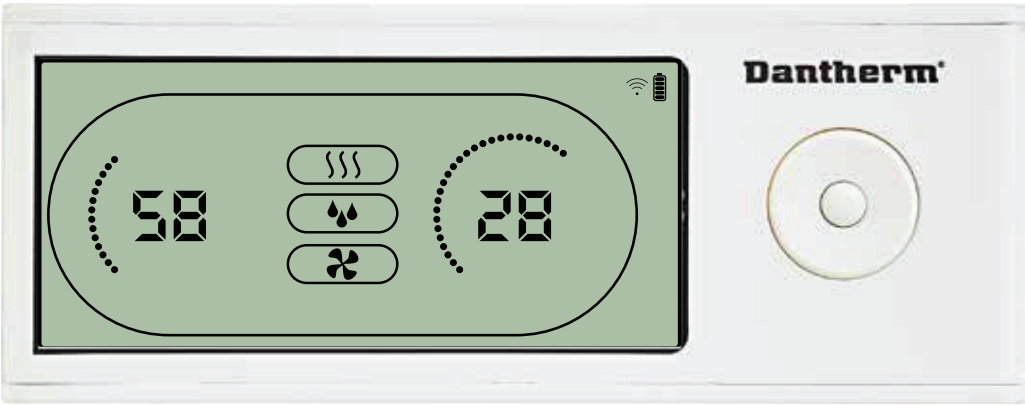
General information

Operation

Press and hold for 10 seconds to reset the serial number stored in DRC1.

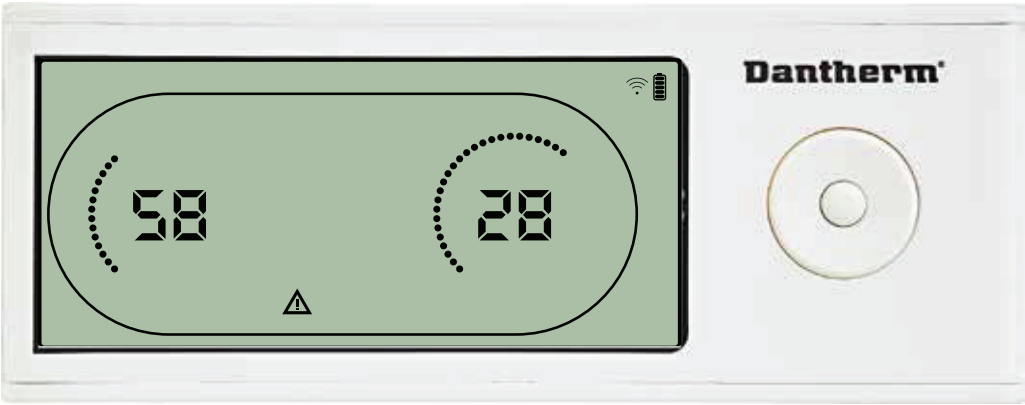
Press and Hold for 3 seconds to enter user menu setup.

Press and hold for 5 seconds to enter installer menu.



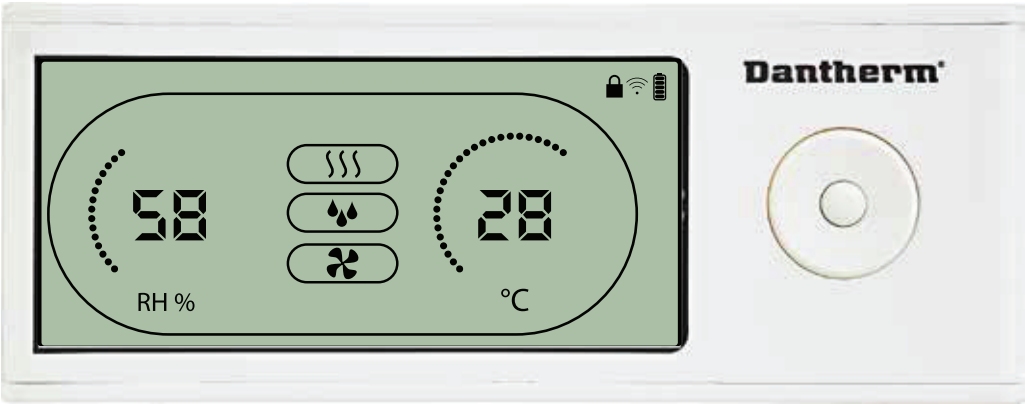
When the dehumidifier is running the dehumidifying symbol (💧) is shown in the DRC1 display.
When heating is toggled ON, the heating icon (♨)will be shown in the DRC1 display.
When the extractor fan is turned on, the extractor fan icon (✇) will be shown in the DRC1 display.

Fail Condition



If the dehumidifier enters fail mode, the warning sign (⚠) will be shown in the DRC1 display.

Locked remote



The DRC1 is equipped with switch in the battery compartment.
When switched to "lock" position, the buttons on the DRC1 become inactive.
The display will still update with information, but does not allow user inputs.

User menu
Set points

Dehumidifying set point

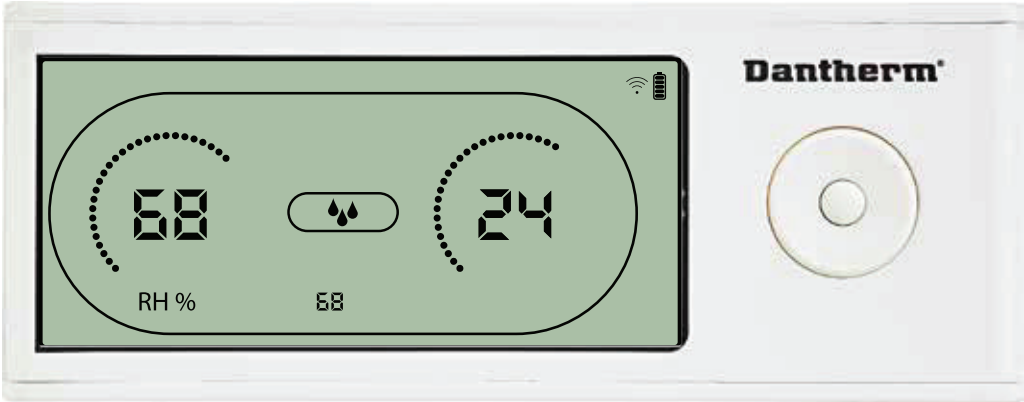
Press for 3 sec to enter user menu setup. Press to confirm.

Decrease with 1 unit

Increase with 1 unit

Navigation between icons

Navigation between icons



The humidity value and the dehumidifying icon will flash.
The display shows the desired humidity set point.
While flashing, the value can be increased or decreased by pressing Up/Increase or Down/Decrease button on DRC1.
Press enter to confirm humidity set point and go to next menu page.

Temperature set point

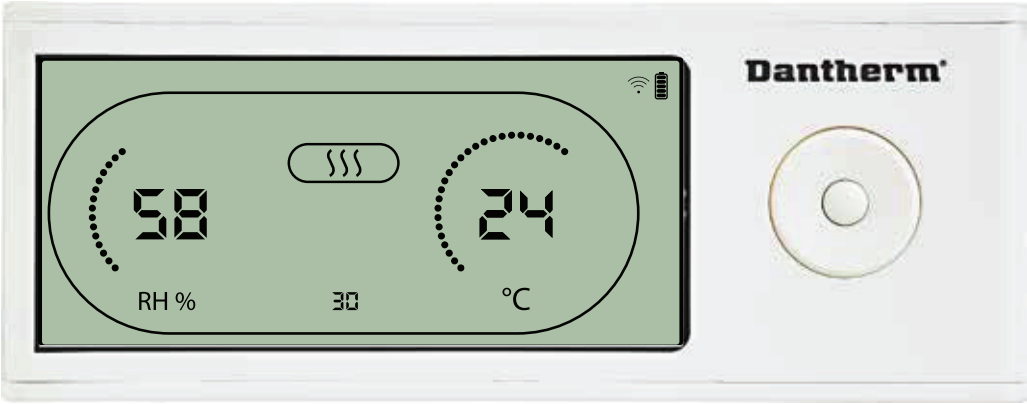
Press for 3 sec to enter user menu setup. Press to confirm.

Decrease with 1 unit

Increase with 1 unit

Navigation between icons

Navigation between icons



The temperature value and the heating icon will flash.
The value displayed shows the desired temperature set point. While flashing, the value can be increased or decreased by pressing Up/Increase or Down/Decrease button on the DRC1
Maximum: 34 °C, Minimum: 5 °C. Press enter to confirm new set point and go to next menu page.

Installer menu

Press and hold for 5 seconds to enter installer menu.

Fan set point.

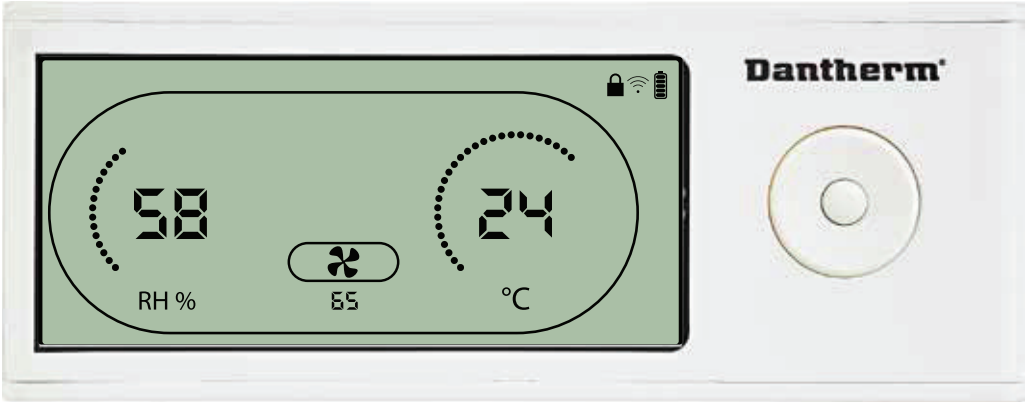
Decrease with 1 unit

Increase with 1 unit

Navigation between icons

Navigation between icons

Press to confirm.



When the extractor fan icon flashes at 0.5 Hz and extractor fan set point value is shown on info line. Left or right button to decrease or inrease value. Enter to confirm set point and go to next icon. If you do not confirm change, the new setpoint will not be stored

Service interval

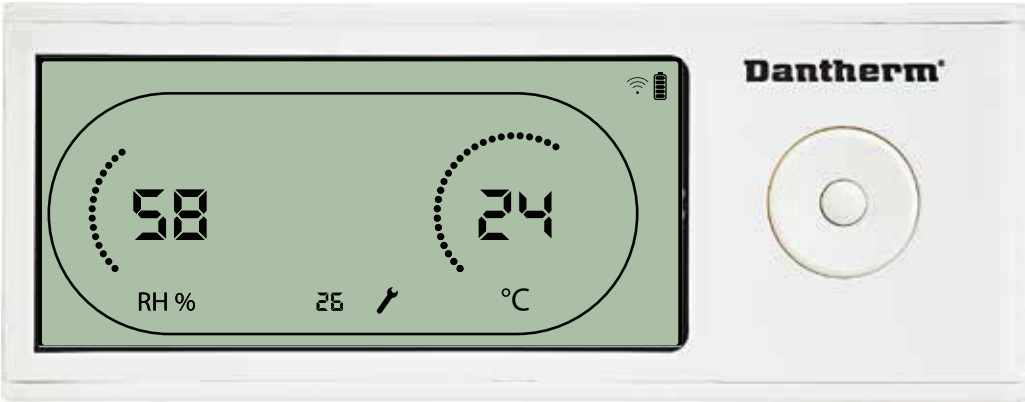
Decrease with 1 unit

Increase with 1 unit

Navigation between icons

Navigation between icons

Press to confirm.



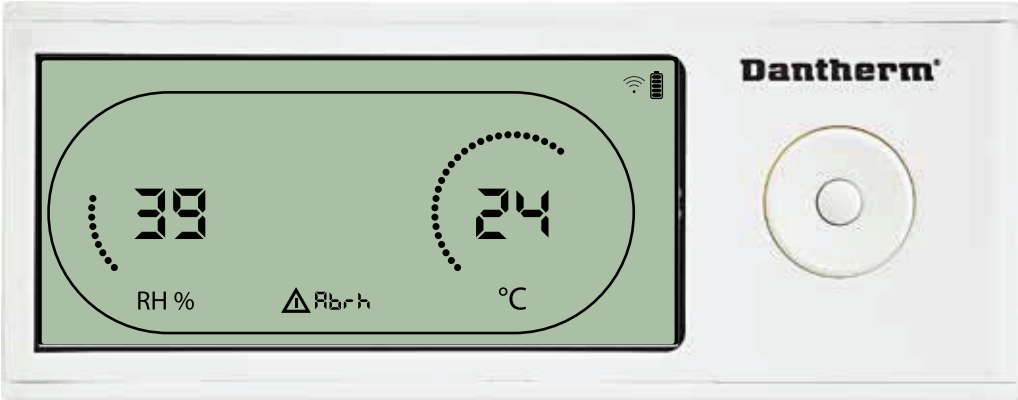
While flashing, the service interval can be increased by pressing RIGHT Button or decreased by pressing the LEFT Button.
Maximum 99 Weeks. Minimum is 1 week.

Alarms

Ambient condition Stand-by mode 2

Press for 3 seconds to enter user menu setup.

Press for 5 seconds to enter installer menu setup

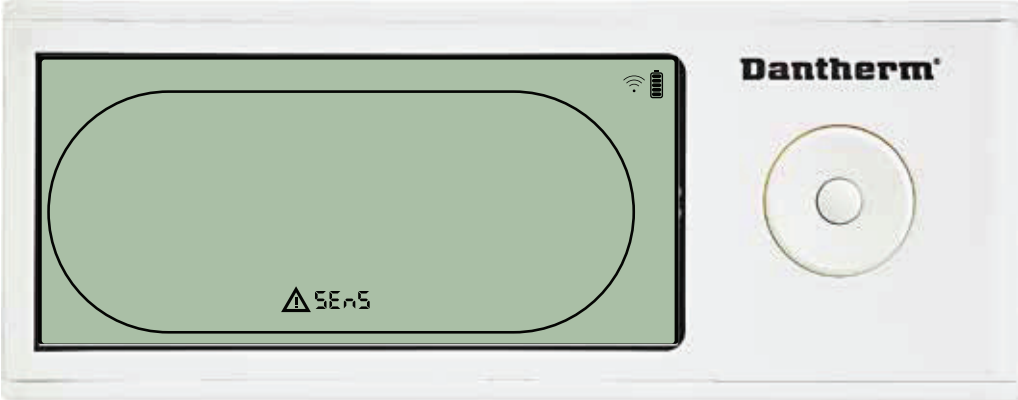


DRC1 enters stand-by mode 2 when ambient conditions are out of operation range.
The display will show temperature and Rh readings when the unit is in stand-by mode 1.
This state will only get corrected when the ambient temperature (abt) or ambient humidity (abrh) is in range, and can not be dismissed.
You can enter menu setup to modify set point values – only in this case.
While in Menu Setup, the alarm icon turn off and set point value will be shown instead of "Abt/Abrh" code on INFO line

Sensor fail

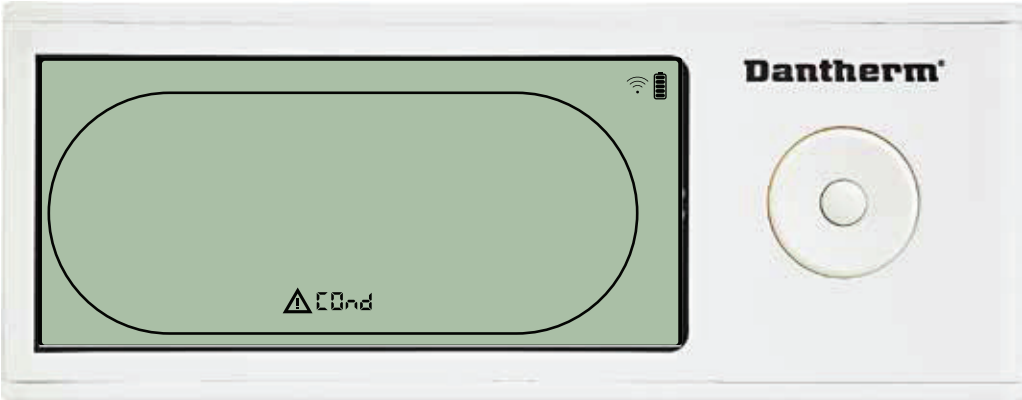
Press to see which sensor is defect.

Press to see which sensor is defect.



Dehumidifier is stopped because sensor failure is detected.
Sensor Fail can not be dismissed from DRC1.
Use UP or DOWN button to see which sensor/sensors are defect
If all sensors are defect these codes show in the following sequence: "COnd" ↑↓ "EVAP" ↑↓ "RH/T"
It is not possible to enter menu setup to modify set point values

Condensor sensor fail



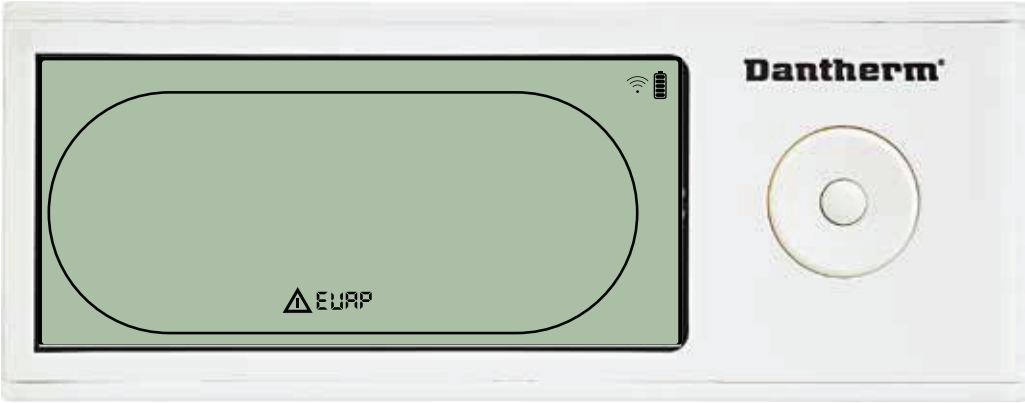
If condenser sensor is defected, then "COnd" code will be shown when pressing UP or DOWN when screen shows Sensor fail code "SEnS".
If no buttons pressed within 10 seconds then screen will again show "SEnS" again.
It is not possible to enter menu setup to modify set point.

Alarms continued

Evaporator sensor fail

Press to see which sensor is defect.

Press to see which sensor is defect.

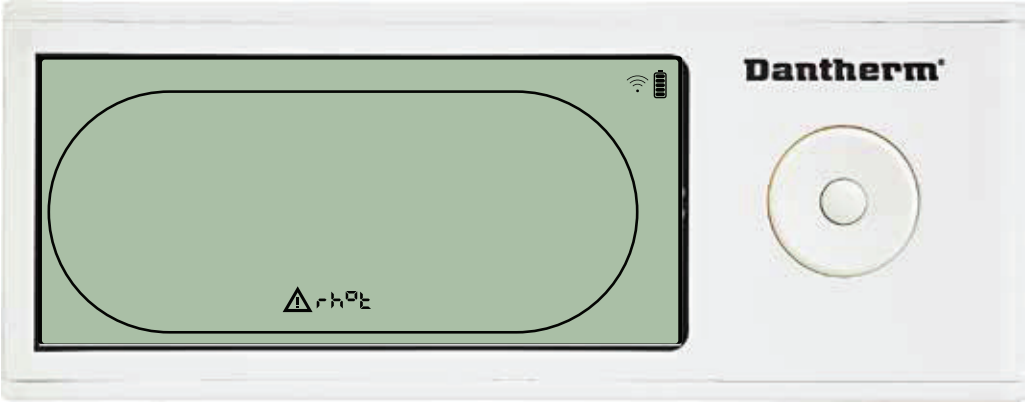


If evaporator sensor is defect, then "EVAP" code will be shown when pressing UP or DOWN during screen shows Sensor fail code "SEnS".
If Evaporator sensor ok, then no "EVAP" code shall be shown.
If no buttons pressed within 10 seconds then screen will show "SEnS" fail again.
It is not possible to enter menu setup to modify set point.

RH/T sensor fail

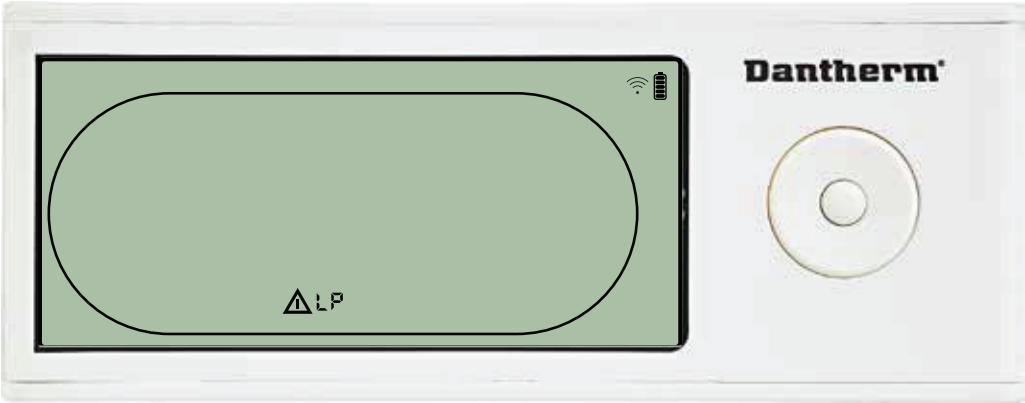
Press to see which sensor is defect.

Press to see which sensor is defect.



If RH/T sensor is defect, then "rh°t" code will be shown when pressing UP or DOWN during screen shows Sensor fail code "SEnS".
If RH/T sensor ok, then no "rh°t" code shall be shown.
If no buttons pressed within 10 seconds then screen will show "SEnS" fail again.
It is not possible to enter menu setup to modify set point.

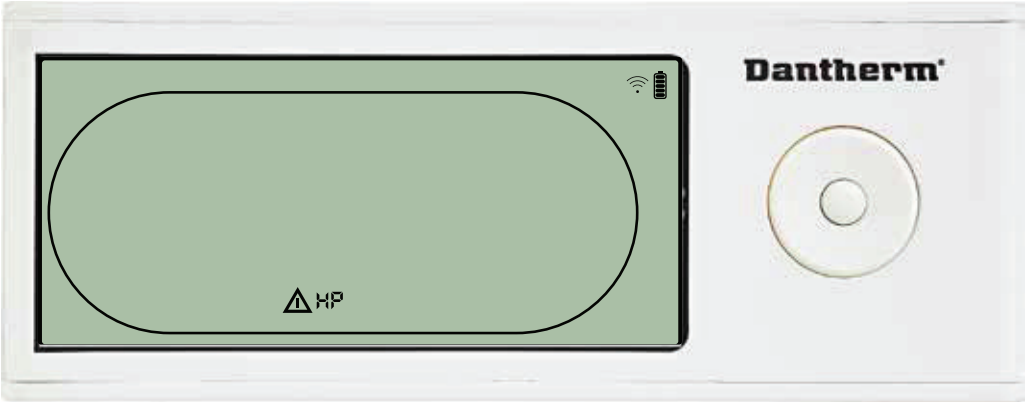
Low pressure fail



Dehumidifier stopped because of Low Pressure detection.
Fail can not be dismissed from DRC1.
It is not possible to enter menu setup to modify set point.

Alarms continued

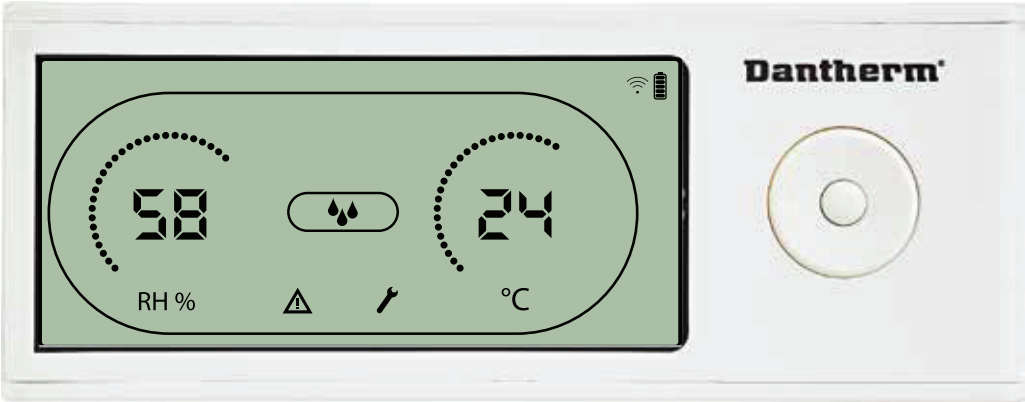
High pressure fail



Dehumidifier has stopped because of High Pressure detection.
Fail can not be dismissed from Remote panel.
It is not allowed to enter menu setup for modification of set points values.

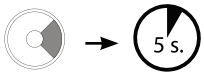
Service alarm

Press for 5 seconds to enter installer menu setup



The Service icon will be shown when it is time for servicing the dehumidifier.
The service alarm does not affect the operation of dehumidifier.

To dismiss/reset service alarm:
- Press right for 5 seconds to enter the installer menu.
- Press DOWN/UP to navigate to service icon.
- Press RIGHT/LEFT to change setpoint from 0 to desired service interval.
- Confirm service interval by pressing enter.



Alarms priority

HP	↑	High priority
LP		
SEnS		
Abt		
Abrh		Low priority

When more than one alarm is active the list above shows the priority of the alarms.

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Technical data

Model		CDP 40	CDP 40T	CDP 50	CDP 50T	CDP 70	CDP 70T
- Operating range, humidity	%RH	40-100	40-100	40-100	40-100	40-100	40-100
- Operating range, temperature	°C	10-36	10-36	10-36	10-36	10-36	10-36
- Air volume at max. external pressure	m³/h	400	400	680	680	900	900
- Capacity at 28ºC - RH 60	l/day	34	34	52	52	69	69
- SEC 28ºC - RH 60	kWh/l	0,47	0,47	0,48	0,48	0,43	0,43
- Power supply	V/Hz	1 × 230/50	1 × 230/50	1 × 230/50	1 × 230/50	1 × 230/50	1 × 230/50
- Max. power consumption	kW	0.9	0.9	1.5	1.5	1.8	1.8
- Max Ampere consumption	A	3,8	3,8	6,6	6,6	8	8
- Refrigerant	-	R407C					
- Quantity of refrigerant,	kg	0.7	0.7	0.9	0.9	1.2	1.2
- GWP (Global Warming Potential)	-	1774					
- Noise level* (1 m from unit)	dB(A)	46	43	47	44	50	47
- Weight,	kg	56,5	57,5	65,0	66	75,5	77,5
Filter Type	PPI 15						

Ensure the chemistry of the water is correct

Water quality

The correct combination of chemicals in an indoor swimming pool is crucial, both for the health of users and for the inventory inside the pool room and the swimming pool's technical room.
Insufficiently treated water results in poor hygiene, while water that has been excessively treated results in gases in the air that contain chlorine, which can irritate the eyes and cause breathing difficulties.
At the same time, the incorrect composition of chemical ingredients in the water can destroy all of the inventory in a very short space of time, including the dehumidifier and other equipment that have been installed to process the air.
Shown below are the threshold values, which apply to products for indoor swimming pools in accordance with EN/ISO 12944-2, protection class C4. These threshold values must be complied with for the warranty to be valid.

When adding chemicals

The following guideline values are applicable to swimming pools with the addition of chemicals.

Chemicals	ppm
Free chlorine content	1.0-2.0
Combined chlorine content	Max. 1/3 of free chlorine content
pH	7.2-7.6
Total alkalinity	80-150
Calcium hardness	250-450
Total dissolved solids	< 2000
Sulphates	< 360

Wit own production of chlorine

The following guideline values are applicable to swimming pools with self-production of chlorine:

Chemicals	ppm
Salt (NaCl)	< 30,000
Total dissolved solids	< 5500
pH	7.2-7.6
Total alkalinity	80-150
Calcium hardness	250-450
Sulphates	< 360

Langelier Saturation index

It is advisable to use the Langelier Saturation index to ensure that the combination of the different water parameters is acceptable.
Contact Dantherm Air Handling A/S if necessary.

Spare parts list

See illustration next page

Illu-stration	Part no.	Description
1	094696	Wall bracket, CDP/CDP-T 40
	094827	Wall bracket, CDP/CDP-T 50
	094828	Wall bracket, CDP/CDP-T 70
2	094811	Wall mounting spacers, CDP/CDP-T 40-50-70
3	094812	Cable gland M25, CDP/CDP-T 40-50-70
4	094666	Terminal bloks on DIN rail, CDP/CDP-T 40-50-70
5	094685	Control board CDP/CDP-T 40-50-70
6	094687	Interface panel with holder CDP/CDP-T 40-50-70
7	094975	Fan capacitor CDP/CDP-T 40-50-70
8	094822	Motor capacitor, Compressor CDP/CDP-T 70
	094821	Motor capacitor, Compressor CDP/CDP-T 50
	094688	Motor capacitor, Compressor CDP/CDP-T 40
9	094682	Splash stop, CDP 40T
	094831	Splash stop, CDP 50T
	094832	Splash stop, CDP 70T
10	094693	Compressor, CDP/CDP-T 40
	094825	Compressor, CDP/CDP-T 50
	094826	Compressor, CDP/CDP-T 70
11	094691	Compressor accessories, CDP/CDP-T 40
	094823	Compressor accessories, CDP/CDP-T 50
	094824	Compressor accessories, CDP/CDP-T 70
12	094973	Magnet valve CDP/CDP-T 40-50-70
13	094665	Dry filter CDP/CDP-T 40-50-70
14	094694	Copper tubes kit, CDP/CDP-T 40
	094833	Copper tubes kit, CDP/CDP-T 50
	094834	Copper tubes kit, CDP/CDP-T 70
15	094683	Drip tray, CDP/CDP-T 40
	094817	Drip tray, CDP/CDP-T 50
	094818	Drip tray, CDP/CDP-T 70
16	094664	Front CDP 40 cpl.
	094807	Front CDP 50 cpl.
	094808	Front CDP 70 cpl.
17	094686	PPI filter (one size)
18	094700	Front, CDP 40T cpl.
	094829	Front, CDP 50T cpl.
	094830	Front, CDP 70T cpl.
19	094671	Fan assembly CDP/CDP-T 40
	094815	Fan assembly CDP/CDP-T 50
	094816	Fan assembly CDP/CDP-T 70
20	094669	Fan CDP/CDP-T 40-50-70
21	094670	Evaporator coil cpl., CDP/CDP-T 40
	094813	Evaporator coil cpl., CDP/CDP-T 50
	094814	Evaporator coil cpl, CDP/CDP-T 70
22	094684	Thermo valve, CDP/CDP-T 40
	094819	Thermo valve, CDP/CDP-T 50
	094820	Thermo valve, CDP/CDP-T 70
23	094667	Condenser coil, CDP/CDP-T 40
	094809	Condenser coil, CDP/CDP-T 50
	094810	Condenser coil, CDP/CDP-T 70
24	094697	Insulation for compressor CDP/CDP-T 40-50-70
25	094690	Harness cpl. CDP/CDP-T 40-50-70
26	094681	Plastic rivets, fastening, CDP/CDP-T 40-50-70
27	094695	Screw and lock, CDP/CDP-T 40-50-70
28	094689	Temperature, RH sensor and light diode, CDP/CDP-T 40-50-70

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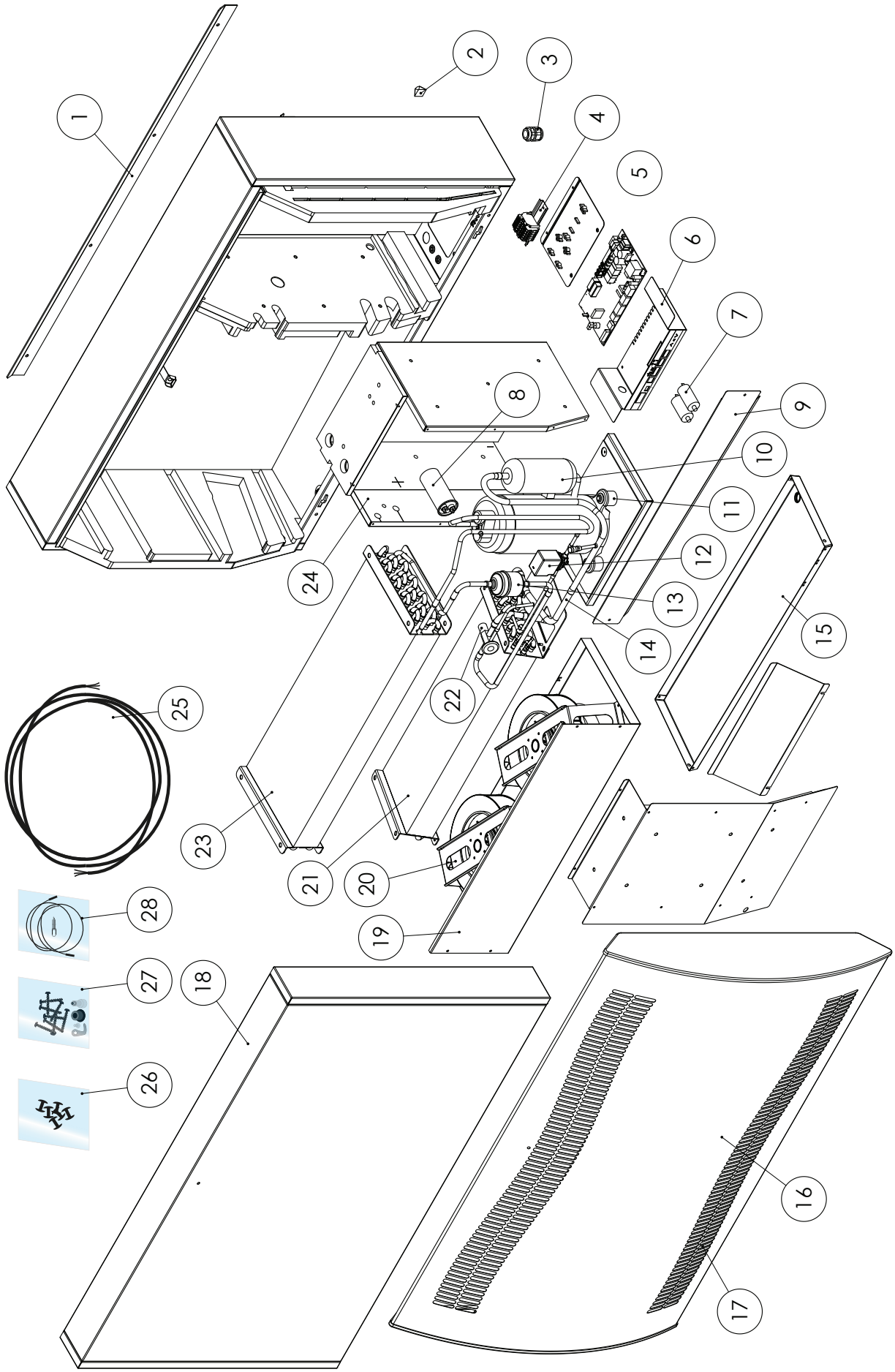
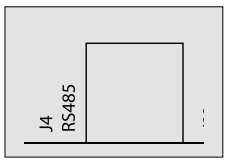
Spare parts



RS-485 Interface



RS-485 Interface implements Modbus RTU protocol as slave device. Device doesn't have address . Settings: 115200, N, 8, 1. and accepts requests to any address.

Code Functions	
0x06	preset single register
0x10	preset multiple registers
0x03	read holding registers

Register	Byte	Database parameter	Min	Max	De-fault	Description
2	2	Comp_ state	0	1	0	Compressor state: 0 - Compressor stopped 1 - Compressor works
	3	Fan_state	0	1	0	FAN state: 0 - FAN stopped 1 - FAN works
3	4	Sole_state	0	1	0	Solenoid valve: 0 - closed 1 - open
	5	ExFan_state	0	1	0	Exhaust FAN state: 0 - FAN stopped 1 - FAN works
4	6	Heat1_state	0	1	0	Heater 1 state: 0 - Heater turned off 1 - Heater turned on
	7	Heat2_state	0	1	0	Heater 2 state: 0 - Heater turned off 1 - Heater turned on
5	8	Alarm1_ state	0	1	0	Alarm 1 output: 0 - Alarm out turned off 1 - Alarm out turned on
	9	Alarm2_ state	0	1	0	Alarm 2 output: 0 - Alarm out turned off 1 - Alarm out turned on
6	10	Evap_ temp1 (decimal)	-40	100	0	Temperature from evaporator 1: decimal: may be used as integer value of temperature fraction: may be recalculated to value after decimal point. To get whole value use the equation in float point values "val = decimal + (fraction / 256)"
	11	Evap_ temp1 (fraction)	-40	100	0	

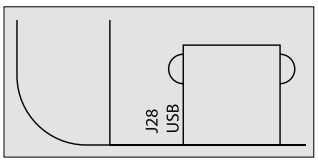
RS-485 Interface
Continued

Register	Byte	Database parameter	Min	Max	De-fault	Description
7	12	Evap_ temp2 (decimal)	-40	100	0	Temperature from evaporator 2: Usage the same as above.
	13	Evap_ temp2 (fraction)	-40	100	0	
8	14	Cond_ temp1 (decimal)	-40	100	0	Temperature from condenser: Usage the same as above.
	15	Cond_ temp1 (fraction)	-40	100	0	
9	16	Aux_temp (decimal)	-40	100	0	Temperature from auxiliary sensor: Usage the same as above.
	17	Aux_temp (fraction)	-40	100	0	
10	18	Amb_temp (decimal)	-40	100	0	Temperature of ambient air: Usage the same as above.
	19	Amb_temp (fraction)	-40	100	0	
11	20	Amb_hum (High byte)	0	100	0	Humidity of ambient air: High byte has no meaning and always contains zero. Only low byte can be used.
	21					
12	22	RH_set	40	95	40	Setpoint value of desired humidity.
	23	RH_Fan	40	95	40	Setpoint value of humidity for exhaust fan start.
13	24	Temp_set (decimal)	0	36	0	Setpoint value of desired temperature: Usage the same as for Evap_temp1.
	25	Temp_set (fraction)				
16	30	Fail_start	0	1	0	State of Fail_start mode
	31	SB_mode	0	1	0	Stand-by mode state
17	32	DEH_mode	0	1	0	Dehumidifying state
	33	Ice_mode	0	1	0	Deicing state

RS-485 Interface
Continued

Register	Byte	Database parameter	Min	Max	De-fault	Description
18	34	LP_mode	0	1	0	LP fail mode state
	35	Sens_mode	0	1	0	Sensor fail mode state
19	36	HP_mode	0	1	0	HP fail mode state
	37	Amb_mode	0	1	0	Ambient fail mode state
20	38	AmbT_ mode	0	1	0	Ambient temperature fail mode state
	39	AmbRH_ mode	0	1	0	Ambient humidity fail mode state
21	40	SW Build number (high)	0	65535	x	SW build number
	41	SW Build number(low)	0			
22	42	SW Version (Major)	0	255	x	SW version major
	43	SW Version (Minor)	0	255	x	SW version minor
23	44	HP Alarm Temp. (Decimal)	0	99	60	HP fail occurs when Cond_temp1 is more then this value. Usage the same as for Evap_temp1.
	45	HP Alarm Temp. (Fraction)				
41	80	Fan_func-tion	0	1	0	Enable FAN function in standby mode
	81					
42	82	Time_wait_ fan	60	7200	3600	Time to wait until FAN will be started in standby mode, if enabled (seconds)
	83					
43	84	Time_run_ fan	15	600	60	Time to run FAN in standby mode if enabled (sec-onds)
	85					
44	86	RH_Fen	0	1	0	Enable/disable Exhaust Fan function
	87	Service_ena	0	1	0	Enable/disable Service interval function
45	88	Service_int	0	99	0	Service interval value in weeks
	89					

Data log/USB



Parameters

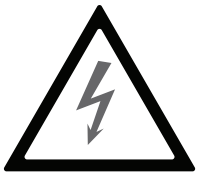
Data log uses 2KB of backup SRAM (under battery) for data records.
Interval for storing records is 3 hours. State change to fail mode also invokes record store.
If whole space filled by record then new one will replace the oldest.
After connecting USB flash drive all collected records will be stored to file data_log.csv in CSV format. Records won't be deleted from board so it is possible to get data onto several USB drives.

Data log record content:

Database parameter	Size (bits)	Output text	CSV column
Work_time	32	<dd:mm:hh:ss>	Timestamp
Amb_temp	8	<value>	T_amb
Amb_int_temp	8	<value>	T_amb_int
Amb_ext_temp	8	<value>	T_amb_ext
Aux_temp	8	<value>	T_aux
Cond_temp1	8	<value>	T_cond
Evap_temp1	8	<value>	T_evap1
Evap_temp2	8	<value>	T_evap2
Temp_set	8	<value>	T_set
Amb_hum	8	<value>	RH_amb
Amb_int_hum	8	<value>	RH_amb_int
Amb_ext_hum	8	<value>	RH_amb_ext
RH_set	8	<value>	RH_set
RH_Fan	8	<value>	ExtFanSet
Evap_temp_err	1	"EVAP"	Error
Cond_temp_err	1	"COND"	Error
Aux_temp_err	1	"AUX"	Error
Amb_int_err	1	"AMB_INT"	Error
Amb_ext_err	1	"AMB_EXT"	Error
SB_mode	1	"SB"	Mode
Startup_mode	1	"STARTUP"	Mode
DEH_mode	1	"DEH"	Mode
Ice_mode	1	"ICE"	Mode
LP_mode	1	"LP"	Mode
HP_mode	1	"HP"	Mode
Sens_mode	1	"SENS"	Mode
AmbT_mode	1	"AMBT"	Mode
AmbRH_mode	1	"AMBRH"	Mode
Service_ena	1	"ENABLED"	Mode

Einführung

Warnung



Der Benutzer muss dieses Servicehandbuch und weitere bereitgestellte Informationen gelesen und verstanden haben und ist für den ordnungsgemäßen Betrieb verantwortlich.
Vor der ersten Inbetriebnahme des Geräts das ganze Handbuch durchlesen. Die Verfahrensweisen für einen ordnungsgemäßen Betrieb des Geräts und alle Sicherheitsvorkehrungen müssen bekannt sein, um Sachschäden und/oder Verletzungen zu vermeiden.

Der Installateur ist dafür verantwortlich, dass alle verwendeten Kabel, die nicht Teil des Lieferumfangs sind, den nationalen Vorschriften entsprechen.

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