Knürr® DCL User Manual

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Unit configuration number

Model number – Part 1/2										Model details										Part 2/2			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
D	C	L	3	0	L																			
D	C	L	3	4	H																			
D	C	L	3	0	R																			

1.-3. DCL (Data center rack cooling solution)
DCL – Data Center Loop

4.-5. Nominal cooling capacity
30 – 30 kW (2,000 mm/42U)
34 – 34 kW (2,200 mm/47U)

6. Type of application
L – closed loop architecture (without external panels)
H – hybrid architecture (without external panels)
R – in-row cooling (with external panels)

7. Depth
1 – 1,000 mm (DCL-R version only)
R – 1,100 mm (not for DCL-L version)
2 – 1,200 mm
H – 1,300 mm

8. Mechanical options
0 – none (two units per pallet possible)
D – caster bracket (only one unit per pallet with ramp)

9. Electrical connection
2 – 230V AC 1-phase 50/60Hz CE
4 – 230V AC 1-phase 50/60Hz CE with A/B transfer switch
A – 230V AC 1-phase 50/60Hz 2-pole CE
B – 230V AC 1-phase 50/60Hz 2-pole CE with A/B transfer switch
P – 208/230V AC 2-pole 50/60Hz CSA
S – 208/230V AC 2-pole 50/60Hz CSA with A/B transfer switch

10. Water connection/hex
Z – bottom
Y – top
9 – top and bottom
V – redundant bottom (valves external)

11. Filter (only for DCL-R)
N – no filter
A – MERV 1 (NA for 1,000 mm depth)
C – MERV 1, clog switch (NA for 1,000 mm depth)

12. Display
0 – none
Y – 5.7" display (14.5 cm) touchscreen

13. Preparation for automatic door release system
0 – none
1 – prepared for one DCM server rack
2 – prepared for two DCM server racks
3 – prepared for three DCM server racks
4 – prepared for four DCM server racks

14. Chilled water monitoring/condensate pump
0 – none
T – temperature sensor inlet/outlet
4 – calorific meter
5 – condensate pump
6 – temperature sensor inlet/outlet + condensate pump
7 – calorific meter + condensate pump

15. Ambience monitoring
0 – none
S – smoke detection
H – humidity monitoring
B – smoke detection and humidity monitoring

16. Color
1 – RAL 7021 (gray-black)
G – RAL 7035 (light gray)
2 – non standard color (SFA)

17. – 18. Free

19. Communication
0 – standard/always present (HTTPS, SSH, MODBUS TCP, SNMP V3)
D – input/output customer (8/4)
M – Modbus RTU
B – Bacnet
V – input/output customer + Modbus RTU
W – input/output customer + Bacnet

20. Server rack monitoring
0 – none
1 – door contacts for 1 rack
2 – door contacts for 2 racks
A – door contacts for 3 racks
B – door contacts for 4 racks
3 – 2 temperature sensors for 1 rack
4 – 2 x 2 temperature sensors for 2 racks
C – 3 x 2 temperature sensors for 3 racks
D – 4 x 2 temperature sensors for 4 racks
7 – door contacts + temperature sensors for 1 rack
8 – door contacts + temperature sensors for 2 racks
E – door contacts + temperature sensors for 3 racks
F – door contacts + temperature sensors for 4 racks

21. Packaging
P – land freight – short distance (pallet, shrink wrap, cardboard protection)
S – seaworthy (air freight) – long distance (wooden crate)

22. Special features
A = no SFAs, standard unit
X = SFA included

23. – 25. Factory configuration number

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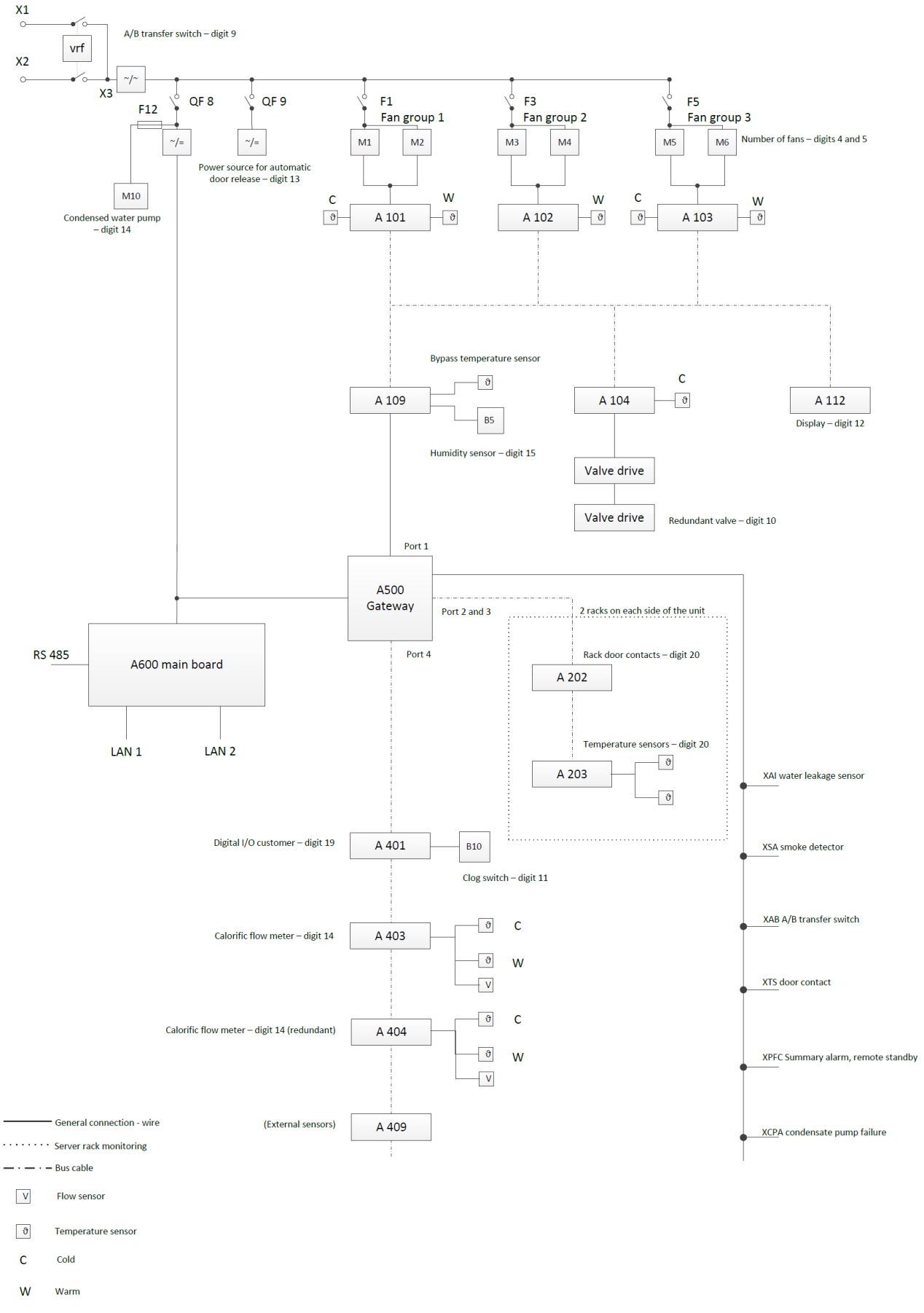
Block diagram



1 Safety

1.1 Safety symbols

Attention! Danger spot! Safety notice!

Hazard by electrical current or high voltage!

Caution! Hot surface!

Caution! Rotating parts/automatic start!

Disconnect from power prior to works!

Attention! Refers to possible damage to the device.

Hazard by high voltage!

Note! Marks possible hazards for the environment.

Important note, information!

1.2 Safety notice

Our engineers can give you comprehensive advice in assembling the Knürr DCL. Extensive material, functional and quality testing grants high benefit and a long life cycle.

Nonetheless, such devices may cause hazards if improperly handled by untrained personnel and if used for purposes they are not intended for.

Carefully read this assembly and operational manual prior to assembling and commissioning the Knürr DCL.

The electrical equipment corresponds with applicable VDE and accident prevention regulations. There are hazardous voltages (higher than 50V AC or higher than 100V DC):

- behind cabinet doors
- at the fans and their hook-ups

Use genuine fuses for the specified current.
Immediately switch OFF the device if there is any disturbance in the electrical supply or in the cold water supply.

Hazard by high voltage.
Maintenance and cleaning works are only permitted to be performed by trained personnel, whereby such personnel must make sure that the device is free from voltage at the time of maintenance and cleaning. Therefore, prior to any works, the device must be taken out of operation in accordance with instructions. Internal sockets shall be used by authorized personnel only.

Hazard by works on the device carried out by non-experts. Maintenance and cleaning works are permitted to be performed by trained personnel only. In order to keep the device in operationally safe condition and its long life cycle, maintenance and cleaning intervals must be observed by all means.

Operate the Knürr DCL in accordance with its specified purpose, within its limits of capacity and approved operating means only.

When performing any works on and with the device, please observe:
• any respectively applicable regulations
(e.g. VDE regulations or other nationally applicable guidelines)
• any applicable accident prevention regulations
• any respective provisions
• any applicable environmental protection acts

Operate the device in its proper condition only.
In the event of functional disturbances or deficiencies, the device must immediately be taken out of operation and the operator's responsible person must be informed of its state. The device must be taken into operation again only after the flawless function of the device has been restored.

Caution! Hot surface!
Defect fans, power supply units or control boards may have run hot. Allow them to cool down prior to any works.

2 Application conditions

Appropriate use

The device is an add-on/in-row cabinet for circulation cooling and is used only for the removal of heat from server cabinets to protect temperature-sensitive components. The cooling system (cabinet – Knürr DCL) works thermally independently of the room air or as an open system in conjunction with open server racks.

The total heat load issued from the installed equipment is taken out to be absorbed by a chilled water circuit in the building.

For reliable function of the Knürr DCL, chilled water must be available in an appropriate amount, at the appropriate temperature and pressure. The water quality must be in accordance with the table on page 65 (see Annex).

One of the fans must be running at all times (at least at minimum speed)! If this requirement cannot be met, the chilled water supply must be stopped! This requirement is crucial for the proper function of the device!

Ambient temperature at the site of installation (air supply side)	10°C to 35°C (40°F to 95°F) (other temperatures upon request)
Absolute humidity at the site of installation	Recommended 8 g H_2O/ kg air
Water temperature, feed	4 - 20°C
Nominal capacity at	10°C (50 °F) feed 16°C (61 °F) return
Use of anti-freeze in chilled water	Not recommended (upon request)
Water connection	Top or/and bottom (see Unit code)
Condensed water connection	Top or/and bottom (see Unit code)
Max. operating pressure	10 bar (145 psi)

3 Description

3.1 General function

The Knürr DCL is a chilled water cooling unit to be installed side by side with racks. Its modular design permits to be added on to the right, to the left or to both sides, and also centrally between two server racks to be cooled. There is the possibility to adjust the air flow pattern using a modular panel system. The Knürr DCL complies with the conditions of EN 60950.

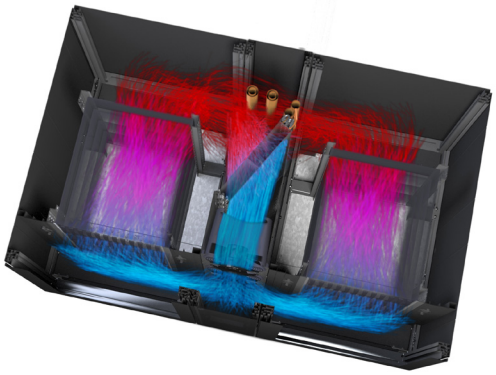
Heat emitted by installed equipment (e.g., servers) is reliably removed using the cold water system integrated in the Knürr DCL. The cooling system is entirely safe in itself, so that water is prevented from ever entering the server area.

Air that has been heated by the server (to, e.g., 35°C) is led through the laterally arranged wall openings or through the rear door to a special air/water heat exchanger.
The heat is absorbed there and the air is cooled down to, e.g., 20 - 25°C.
The cooled air is now provided again by speed-controlled fan boxes at the front of the server. Thereby, non-return flaps prevent any re-circulation within the fan boxes.

The chilled water is provided by a water chiller installed in the building. Below the heat exchanger, there is a tray for collecting condensed water, with a 5/8” outlet.
The Knürr DCL can optionally come with a condensed water pump to pump the possibly accumulating condensed water into the existing drainage system.

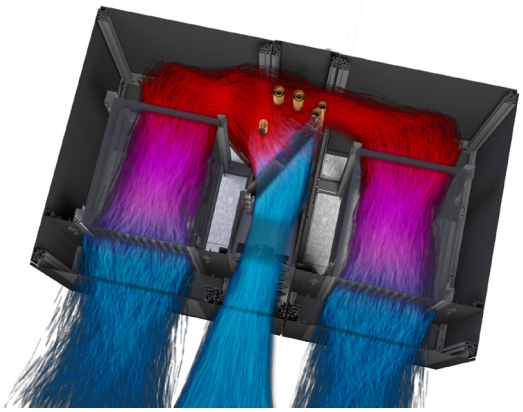
Attention! The Knürr DCL works only if the cold fresh air supplied to the server and the heated return air from the server have fully been separated. Height units not in use have to be sealed by blanking panels.

3.2 Modes of operation



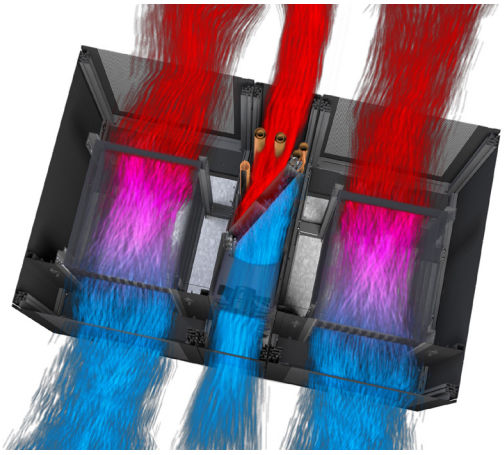
Closed loop mode of operation DCL-L

The closed-loop mode of operation completely contains cooling air. This solution is suitable for higher densities.



Hybrid mode of operation DCL-H

The hybrid mode contains the hot air released from the servers while the cold air is released into the installation area. This mode supports the “cold room” concept - no heat is released into the room.



In-row mode of operation DCL-R

The in-row mode of operation draws the air out of and releases it into the installation area. This setup is suitable for lower heat densities.

In all the above scenarios, multiple units can be used to cool one rack (to gain desired levels of redundancy) or a single unit may be used for multiple racks if desired.

In the event of any failure of the cooling plant, the server cabinet doors are to be opened (H and L versions) in order to avoid any heat from piling up inside the rack housing. In such a case, the heat is discharged as thermal load to the ambient room of installation. (Automatic opening is optional.)

In the event of any failure of the Knürr DCL fans, the doors are to be opened in order to avoid any heat from piling up inside the housing. In such a case, the heat is discharged as thermal load to the ambient room of installation.

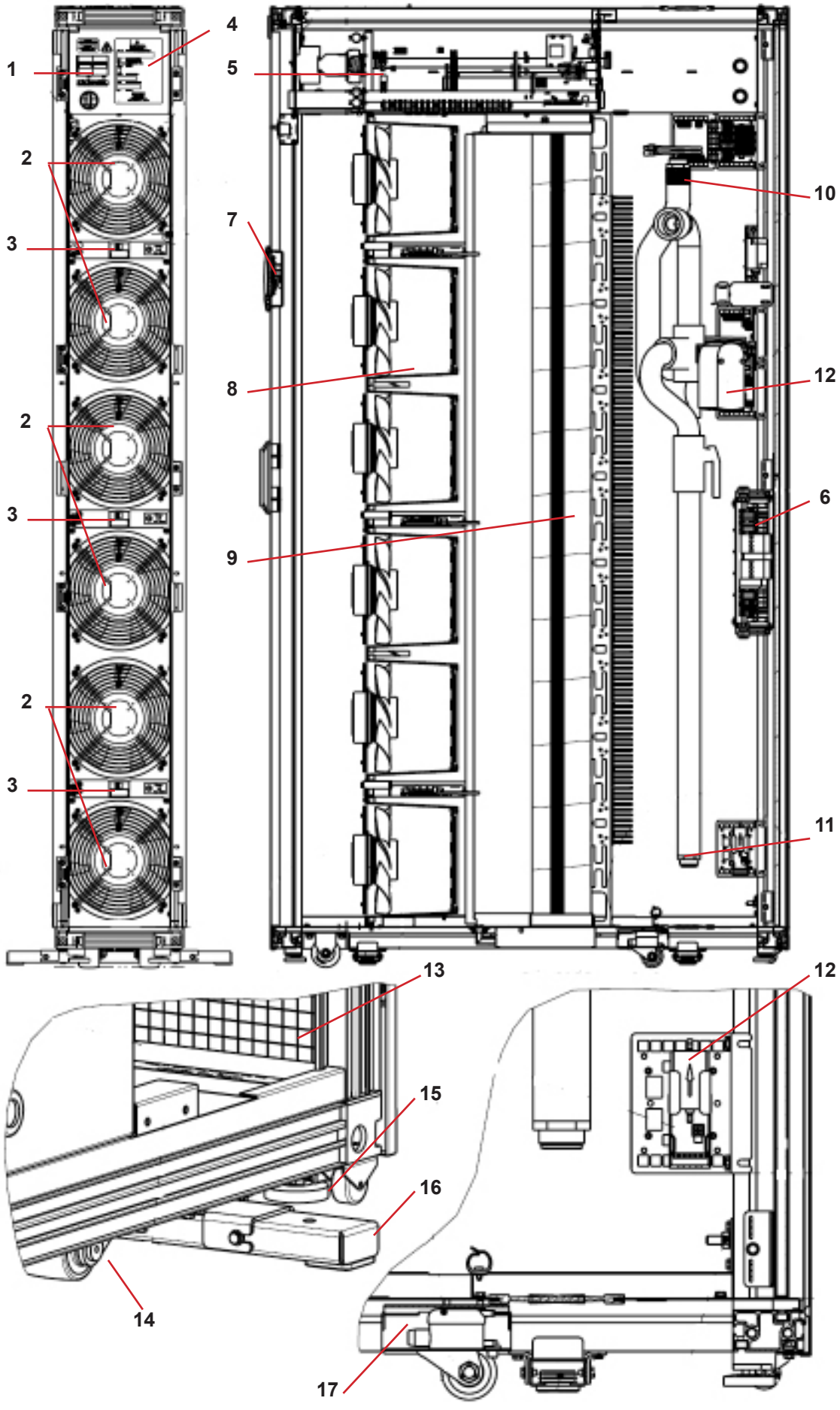
Note: The server rack can optionally be provided with automatic door opening, which would facilitate the use of ambient air for cooling the server temporarily.

For maintenance purposes, both the front and the rear doors can be opened jointly or separately. However, cooling of the equipment must be guaranteed.

3.3 Overview and dimensions

	DCL 30	DCL 34
Nominal cooling capacity*	30 kW	34 kW
Air flow (without filter)	5,000 m^3/h (2,943 cfm)	6,000 m^3/h (3,532 cfm)
Water flow	4.5 m^3/h (20 gpm)	5.0 m^3/h (22 gpm)
Max. water pressure	10 bar (145 psi)	10 bar (145 psi)
Number of fans	5	6
Fans power consumption	5x170 W	6x170 W
Dimensions (WxDxH)	300xD**x2,000 [mm]	300xD**x2,222 [mm]
Heat exchanger internal fluid volume	10.72 l (2.83 gal.)	11.93 l (3.15 gal.)

** Sensible cooling, at 10°C/16°C (50°F/61°F) water temperature, and 37°C (100°F) air inlet temperature*
*** Depends on unit configuration – see unit configuration number (dimensions 1,000mm, 1,100mm, 1,200mm, 1,300mm)*



Knürr DCL cross-section

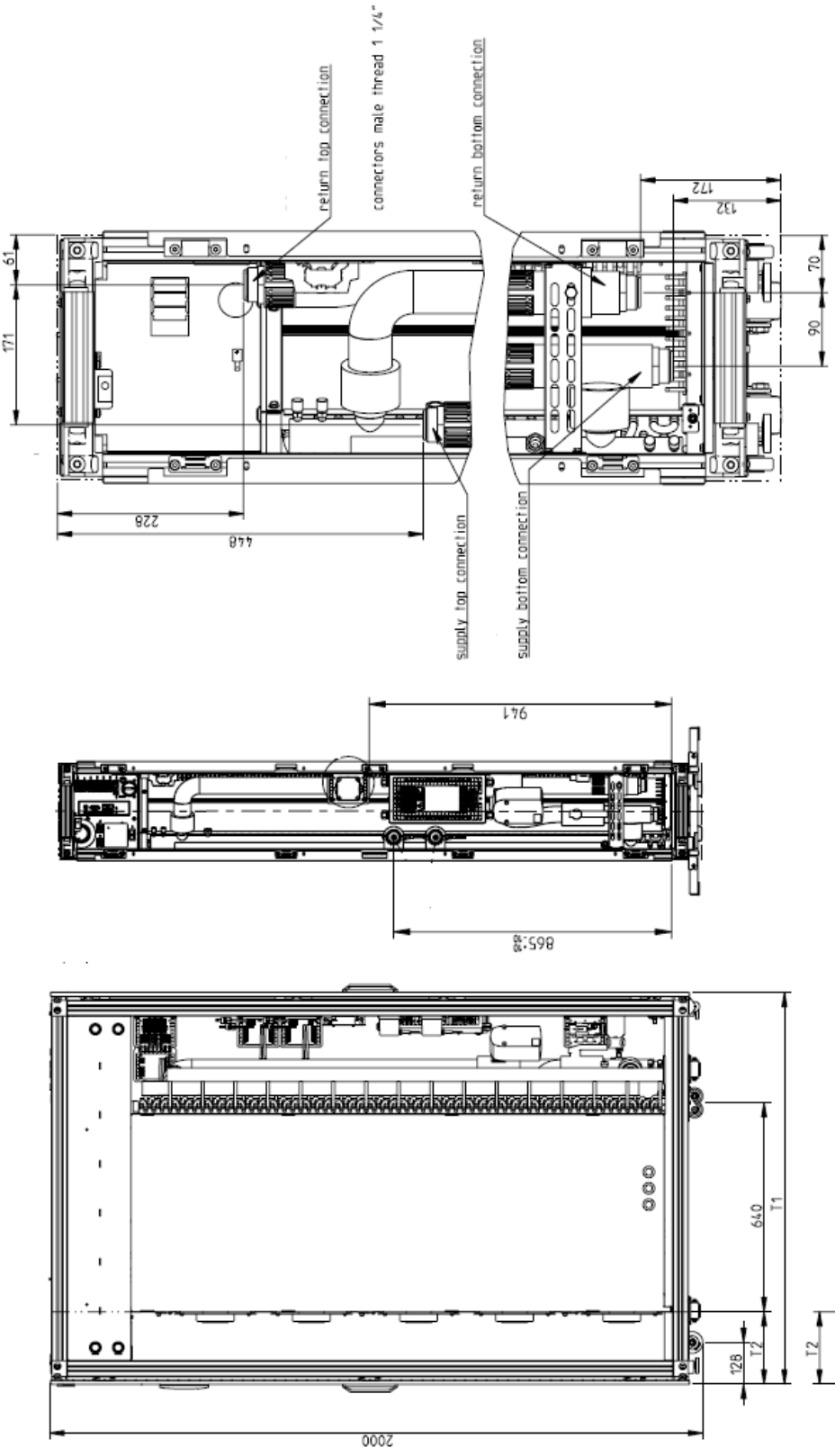
Nr.	Description
1	Electronics MCB
2	Fan groups (5 or 6 fans total - depending on version)
3	Fan group MCB
4	ID tag
5	Electronics box
6	A/B transfer switch
7	Display
8	Fan inlet rings (one for each fan)
9	Heat exchanger
10	Chilled water connection top (see unit code)
11	Chilled water connection bottom (see unit code)
12	Condensate pump (option)
13	Air filter (option)
14	Casters (option)
15	Levelling feet
16	Stabilizer bar (option)
17	Condensate pump flow switch

Table contains optional features. Please see unit configuration number.

Component location

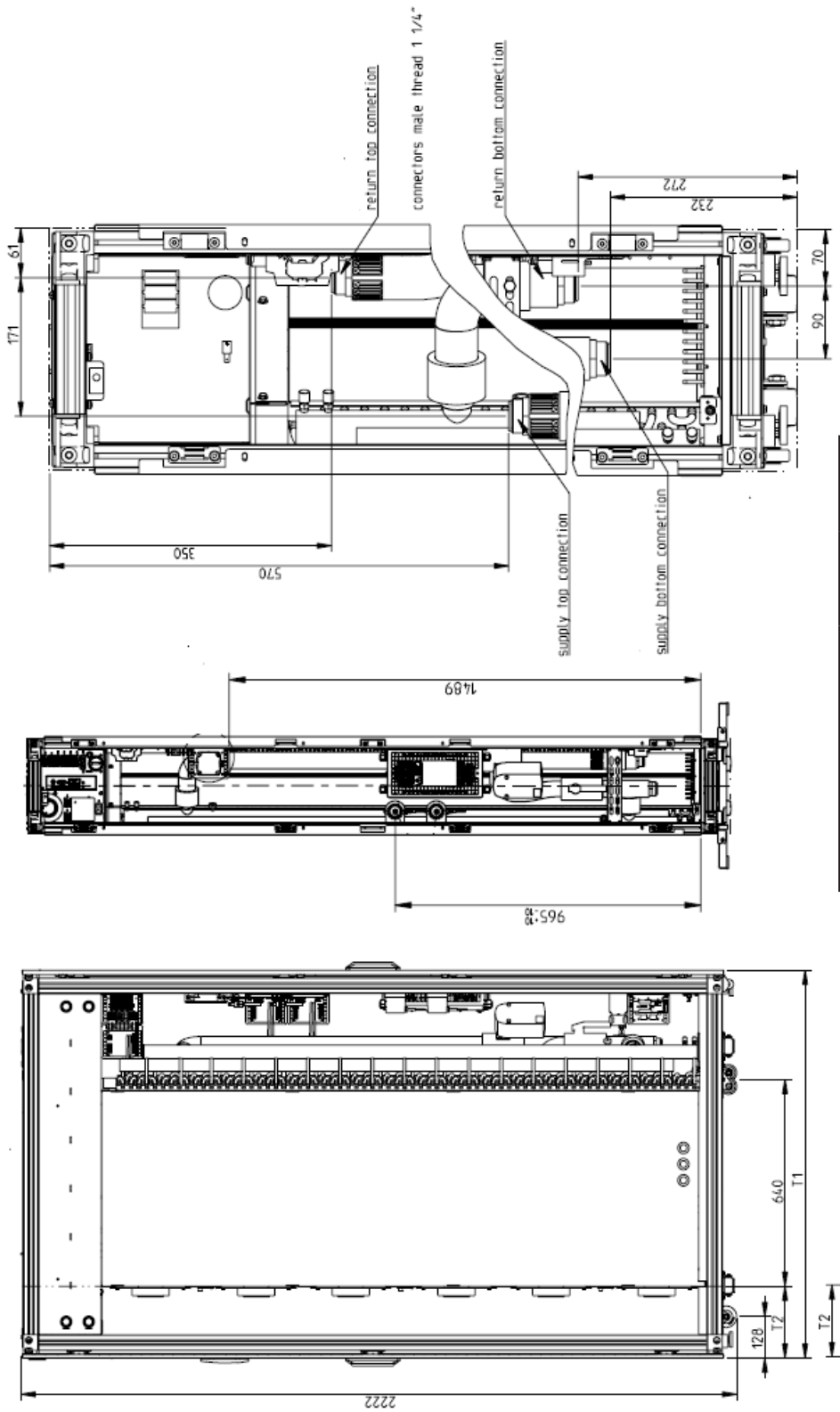
Frame depth	Dry net weight +/- 5%	
	DCL 30	DCL 34
1,000 mm	162 kg / 356 lb	180 kg / 396 lb
1,100 mm	166 kg / 356 lb	184 kg / 405 lb
1,200 mm	170 kg / 374 lb	188 kg / 414 lb
1,300 mm	174 kg / 392 lb	192 kg / 423 lb
Land freight packaging	+40 kg / 88 lb	+40 kg / 88 lb
Seaworthy packaging	+125 kg / 276 lb	+125 kg / 276 lb

Unit weight



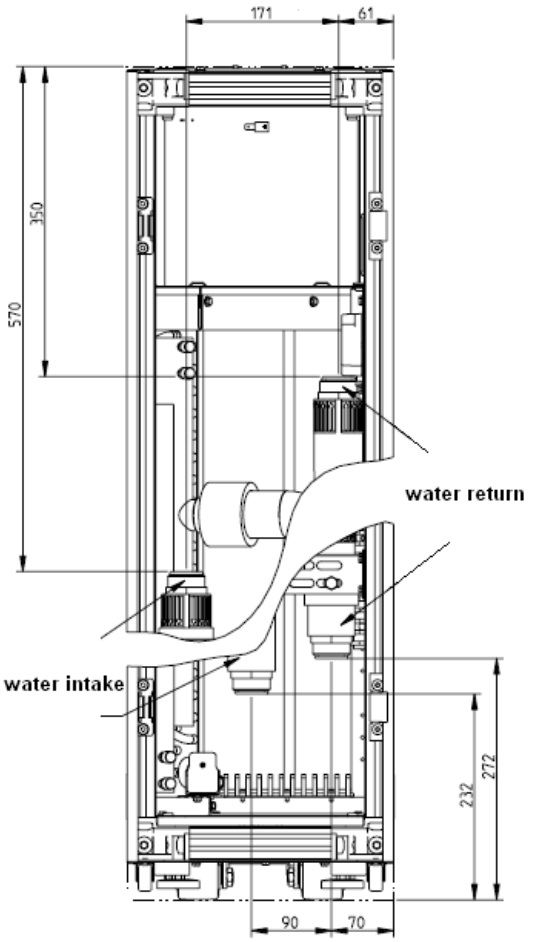
Dimensions	T1 [mm]	T2 [mm]
H2,000 W300 D1,000	1,000	122
H2,000 W300 D1,200	1,200	222
H2,000 W300 D1,100	1,100	222
H2,000 W300 D1,300	1,300	222

30 kW unit drawing

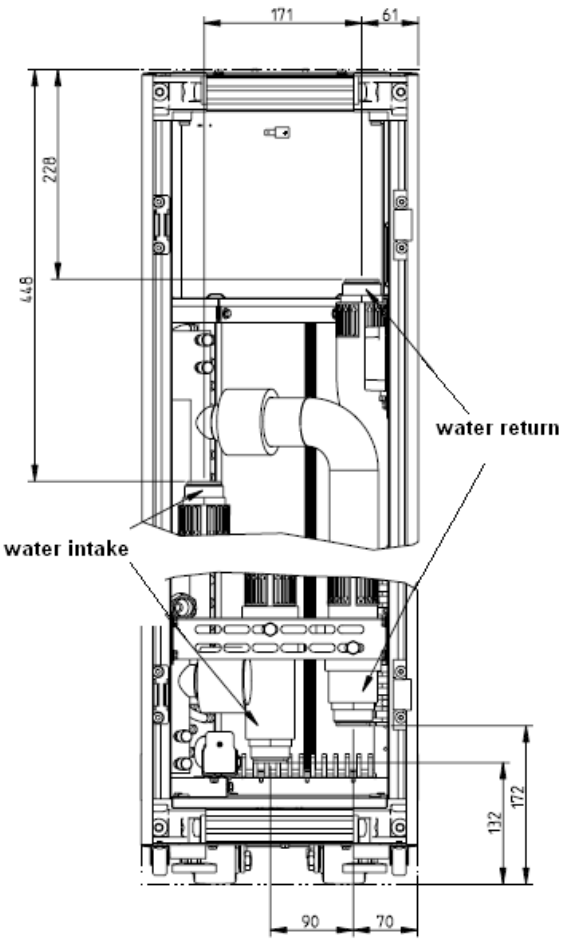


Dimensions	T1 [mm]	T2 [mm]
H2,200 W300 D1,000	1,000	122
H2,200 W300 D1,200	1,200	222
H2,200 W300 D1,100	1,100	222
H2,200 W300 D1,300	1,300	222

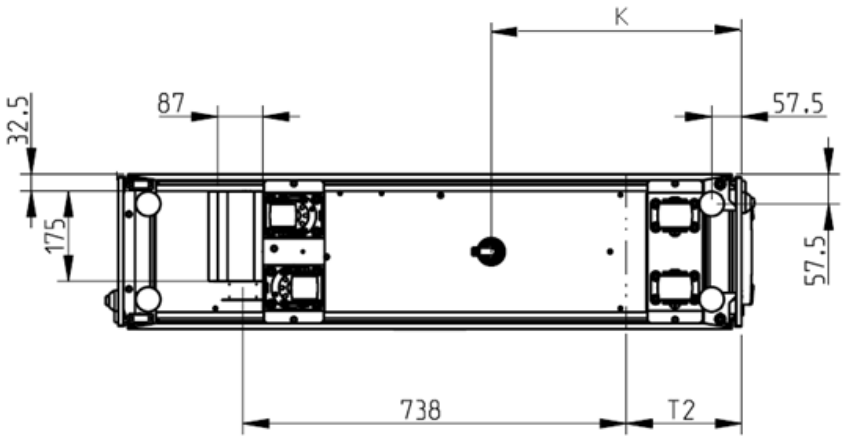
34 kW unit drawing



DCL 34 2,222 mm unit

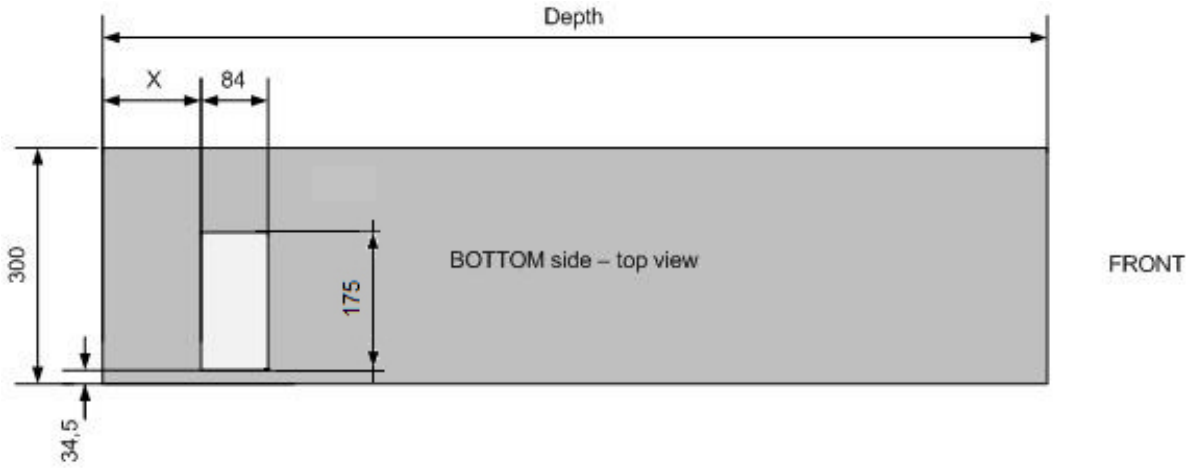


DCL 30 2,000 mm unit



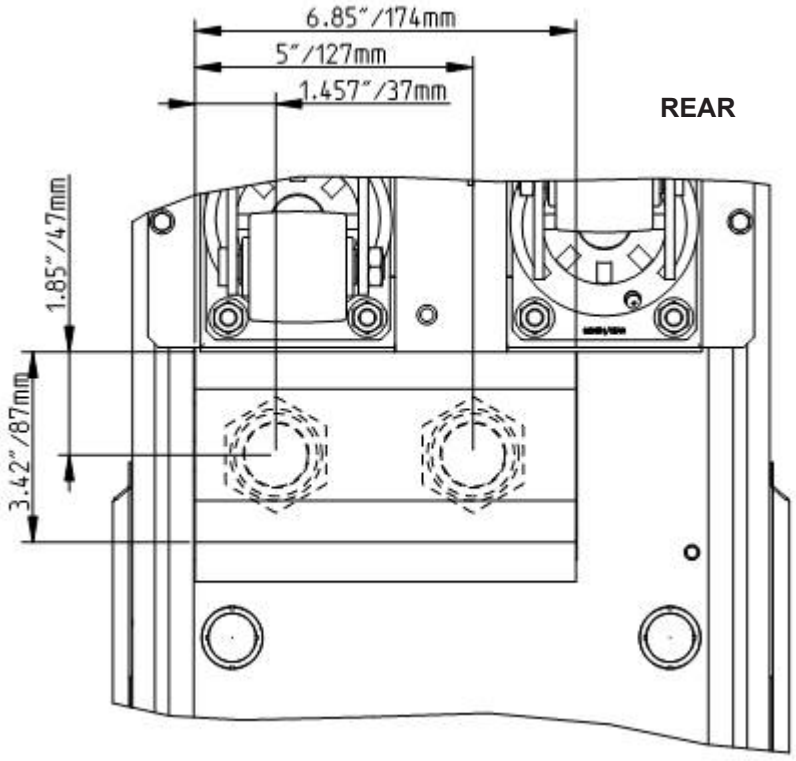
Dimensions	Depth [mm]	T2 [mm]	K [mm]
H2,000 W300 D1,000	1,000	122	382
H2,000 W300 D1,200	1,200	222	482
H2,000 W300 D1,100	1,100	222	382
H2,000 W300 D1,300	1,300	222	482

Possition of leveling feet and condensed water connection

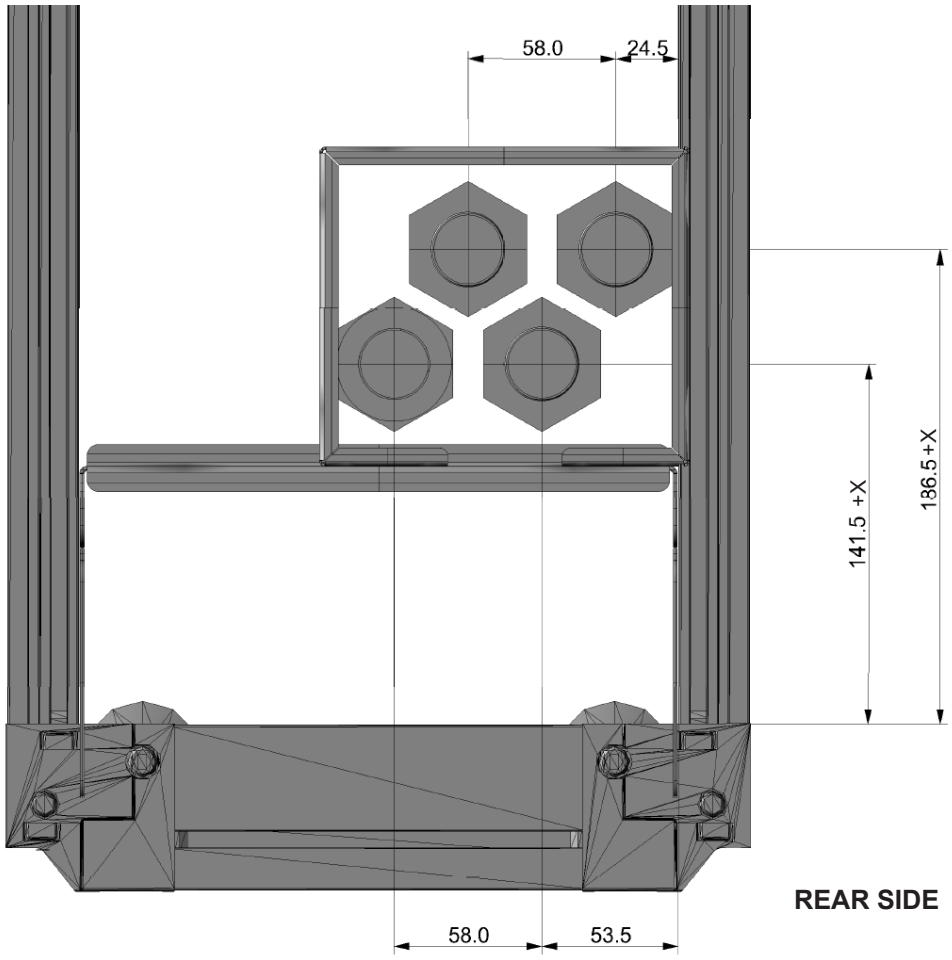


Depth [mm]	X [mm]
1,000	97
1,100	197
1,200	197
1,300	297

Floor cutout dimensions



Chilled water connection location - single feed heat exchanger



Chilled water connection location - redundant heat exchanger (top view)

Depth [mm]	X [mm]
1,000	-100
1,100	0
1,200	0
1,300	100

Pipe position - redundant heat exchanger

The air inlet/outlet opening must be kept unobstructed to guarantee free air circulation all the time. Do not cover them by separate installation, such as socket strips.

3.5 Technical specifications

Housing material	Frame of aluminum profile/steel sheet, galvanized and powder-coated
Ambient temperature range	10°C to 35°C (40°F to 95°F)
Absolute humidity	Recommended 8 g H_2O/kg air
Cold air outlet after heat exchanger	20 - 25°C acc. to ASHRAE
Temperature difference via server	Approx. 15K, depending on server equipment
Chilled water	
Cooling capacity depending on number of fans:	30 kW (5 fans) and 34 kW (6 fans)
Chilled water temperature, feed	4 - 20°C
Nominal capacity at	10°C/16°C (50°F/61°F) water temperature, and 37°C (100°F) air inlet temperature
Max. operating pressure, chilled water	10 bar (145 psi)
Connection feed/return	1 ¼", male thread (ISO 228) – union connection (flat sealed)

Effective cooling capacity	Number of fans	Height	Width	Depth	Chilled water flow	Pressure loss DCL	Pressure loss connecting set	Air flow	Electrical connections	External power supply / fusing
kW	-	mm	mm	mm	m^3/h	kPa	kPa	m^3/h	V/Hz	A/mm^2
30	5	2,000	300	1,000 1,100 1,200 1,300	4.5	51.0	6.8	5,000	230V AC 50/60Hz 208 / 230V AC 50/60Hz	16 / 3 x 2.5 (C type tripping characteristic)
34	6	2,222	300	1,000 1,100 1,200 1,300	5.0	62.0	8.3	6,000	230V AC 50/60Hz 208 / 230V AC 50/60Hz	16 / 3 x 2.5 (C type tripping characteristic)

4 Unpacking and installation

4.1 Unpacking

Warning! Risk of top-heavy unit falling over. May cause equipment damage, personal injury or death. Read all of the following instructions before attempting to move, lift or remove packaging from the Knürr DCL.

Caution! Risk of sharp edges, splinters and exposed fasteners. May cause personal injury. Only properly trained and qualified personnel wearing appropriate safety gear (follow local health and safety regulations) should attempt to move, lift or remove packaging from the Knürr DCL or prepare the unit for installation.

Notice! Risk of overhead interference. May cause unit and/or building damage. The unit may be too tall to fit through a doorway while on the pallet. Measure the unit and doorway heights and refer to the installation plans to verify clearances prior to moving the unit.

Notice! Risk of improper unit storage. May cause unit damage.
Keep the unit upright, indoors and protected from dampness, freezing temperatures and contact damage.

All the packaging material is recyclable. Please save this material for future use or dispose of it in accordance with local waste policy and laws.

Before unpacking the Knürr DCL, verify that the delivered equipment matches the bill of lading. Examine the packaging for any signs of mishandling or damage. Inspect all items for damage, visible or concealed. Immediately report any damage to the carrier and file a damage claim. Send a copy of the claim to Knürr or your Knürr representative.

Transport the packaged Knürr DCL using a forklift, pallet jack or a crane with slings and spreader bars rated for the weight of the unit. See table in chapter 3.3 for unit weights.

- If using a fork lift or pallet jack, make sure the forks (if adjustable) are spread to the widest possible distance that fits under the pallet. Make sure the fork length is suitable for the pallet length.
- When moving the packaged unit with a forklift or pallet jack, lift the unit from either end of the pallet.
- WARNING. Risk of improper handling or moving. Can cause equipment damage, injury or death. When handling the packaged Knürr DCL with a forklift or pallet jack, do not lift it any higher than 4” (102mm) off the floor. Any personnel not directly involved in lifting the unit must be at least 12 ft (3.7m) from the unit.

List of required tools

Phillips screwdriver PH1, PH2	Hexagonal key 6mm (Allen)
Utility knife	Flat-bladed screwdriver
Hexagonal socket screwdriver 8mm (Allen)	Torx screwdriver T20
Open-jawed/ring wrench 8mm	Magnet or a tool a with magnetic tip
Open-jawed/ring wrench 7mm	(for activating hall sensors)
Open-jawed/ring wrench 13mm	Hose with Schrader valve for bleeding

Wooden crate disassembly

1 Locate and remove all the bolts holding the side walls of the crate together. The number of bolts may vary.
2 Take all the side panels off. Two people are required to do this.


1


2

Rolling the unit off the ramp

1 Use the utility knife to cut the shrink wrap. Remove cardboard protectors.


1


2a

2 Locate the ramp, detach it and place it in the designated position.

2b

2c

1 Use the open-jawed/ring spanner to undo the bolts securing the unit to the pallet. (Please note that from this moment on the unit is not secured to the pallet and is prone to tilting.)
2 Align the holes in the ramp with the holes in the pallet. Use three of the four bolts to secure the ramp to the pallet.
3 Remove the wedges.
4 Roll the unit off the pallet. Two people are required to do this.


1


2


3


4

Unit positioning

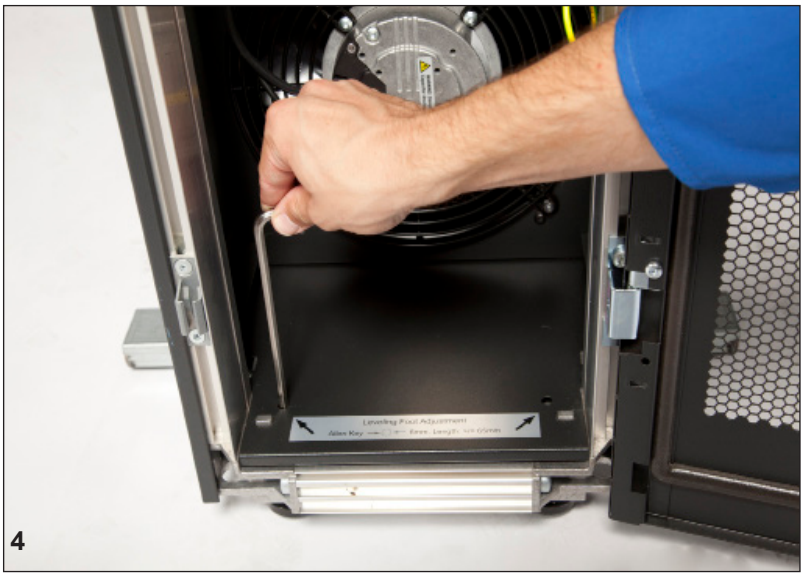
1 Roll the unit into the desired position.
2 Use the 8mm open-jawed/ring spanner to detach the stabilizer bar from brackets.
3 Use the 8mm open-jawed/ring spanner to detach the brackets from the unit frame.
4 Adjust the leveling feet using a hexagonal key.


2a


2b


3a


3b


4

The built-in casters allow rolling the Knürr DCL into position for installation. The stabilizers reduce the likelihood of the unit tipping over. These stabilizers must be removed before the unit is positioned in the row (use the hexagonal socket screwdriver – 8 mm). The adjustable leveling feet prevent moving after positioning. Once positioned, the Knürr DCL must be secured either to the floor with the included shipping brackets or to an adjacent cabinet.

4.2 Securing brackets

The Knürr DCL and the added-on server cabinet or cabinets are bolted with each other by means of the connecting set in order to reach the required stability. Available securing brackets are shown in chapter “Accessories”.

Securing bracket between DCM and DCL

4.3 Chilled water connection

Notice! Risk of water leakage. Can cause severe property damage and loss of critical data center equipment. This unit requires a water drain connection. Improper installation, application and service practices can result in water leakage from the unit. Do not locate the Knürr DCL directly above any equipment that could suffer from water damage. Emerson recommends installing leak detection equipment for the unit and supply lines.

Notice! Risk of corrosion. Can cause equipment damage.
Read and follow the individual unit installation instructions for precautions regarding the fluid system design, material selection and use of field-provided devices. Knürr systems contain iron and copper alloys that require appropriate corrosion protection.

Contact a local water consultant regarding water quality, corrosion and freeze protection requirements and follow their recommendations for the monitoring and treatment of the water/coolant fluid.

The water chemistry varies widely by location, as do the required additives or inhibitors that reduce the corrosive effect of the fluids on the piping systems and components. The chemistry of the water used must be considered, because water from some sources may contain corrosive elements that reduce the effectiveness of the inhibited formulation.

Chilled water that is classified as soft and that is low in chloride and sulfate ion content should preferably be applied. Proper inhibitor maintenance must be performed in order to prevent corrosion of the system. Consult the glycol manufacturer for the testing and maintenance of inhibitors. Commercial ethylene glycol (e.g., Union Carbide Ucartherm, Dow Chemical Dowtherm SR-1 and Texaco E.G. Heat Transfer Fluid 100), when pure, is generally less corrosive to common metals of construction than water itself. It will, however, assume the corrosivity of the water from which it is prepared and may become increasingly corrosive with use if not properly inhibited.

All the control and measuring armatures are installed within the Knürr DCL. Their connection is made about 10 - 20 cm above the bottom (or at the top) of the Knürr DCL. By closing the internal ball valve the configuration can be changed from a 3-way valve to a 2-way valve.

Field-installed piping must be installed in accordance with local codes and must be properly assembled, supported, isolated and insulated. All piping below the elevated floor must be arranged so that it offers the least resistance to airflow. Careful planning of the piping layout under the raised floor is required to prevent the airflow from being blocked. When installing piping in the raised floor, Knürr recommends installing the pipes in a horizontal plane rather than stacked one above the other. Whenever possible, the pipes should run parallel to the airflow.

Condensate piping — field-installed

- Do not expose the drain line to freezing temperatures.
- The drain line must comply with local building codes.
- Emerson recommends installing under-floor leak detection equipment.

Requirements of systems using water or glycol
These guidelines apply to the field leak checking and fluid requirements for field piping systems, including Knürr chilled water circuits.

General Guidelines

- Equipment damage and personal injury can result from improper piping installation, leak checking, fluid chemistry and fluid maintenance.
- Follow local piping codes and safety codes.
- Qualified personnel must install and inspect system piping.
- Contact a local water consultant regarding water quality, corrosion protection and freeze protection requirements.
- Install manual shut-off valves at the supply and return line to each indoor unit to permit routine service and emergency isolation of the unit.

NOTICE
Risk of no-flow condition. May cause equipment damage.
Idle fluid allows sedimentation that prevents the formation of a protective oxide layer on the inside of tubes. Keep the unit switched ON and the system pump operating.

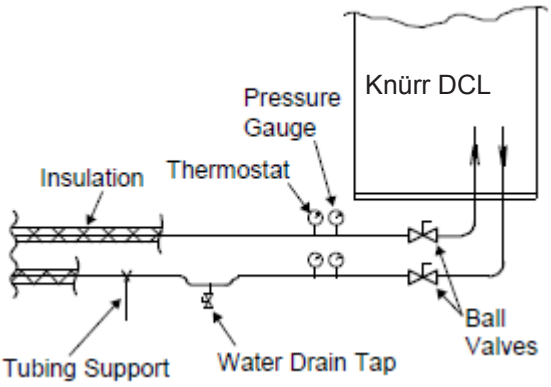
NOTICE
Flexible pipe connection
When using top CW connection, please consider using flexible pipes. We recommend using flexible pipes to reduce strain to the roof panels.

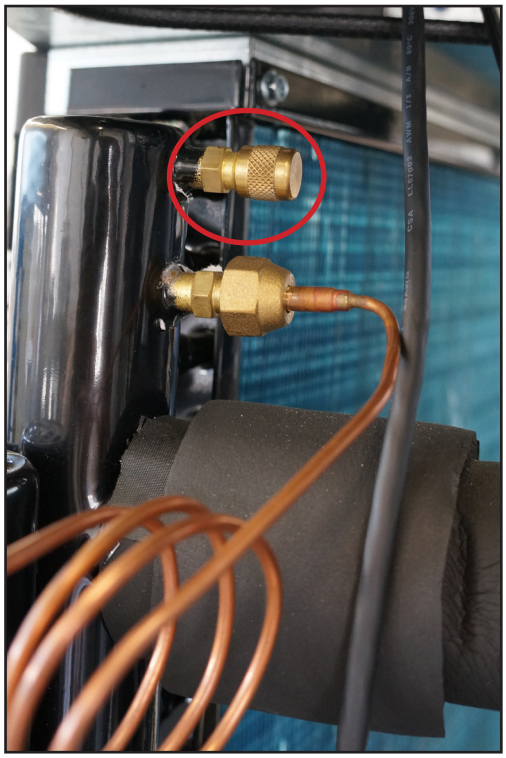
Notes for closed-circuit applications

The installation in the picture below is for the purpose of illustration only; for individual installations follow the project diagram.

- Install a pump system calculated on the basis of the flow and total head of the system (see site plan data).
- Insulate both pipes.
- Very important: Add anti-freeze to the circuit when the ambient temperature falls below 0°C (32°F); refer to the Knürr DCL technical data manual, SL-11978, page 65. Do not exceed the nominal operating pressure of the circuit components.
- Bleed the circuit. It is recommended to use a hose for bleeding the system because there is the risk of water being sprayed over the optional A/B transfer switch or other electronic appliances located in the vicinity.

• Gravity drain — units without factory-installed condensate pump.
• 3/4” FPT drain connection is provided to units without an optional factory-installed condensate pump.
• Pitch the drain line toward the drain at a minimum of 3mm (1/8”) per 300mm (1 foot) of length (1%).
• The drain is trapped internally. Do not trap the drain outside the equipment.
• The drain line must be sized for a flow of 15 l/h (0.07 gpm).





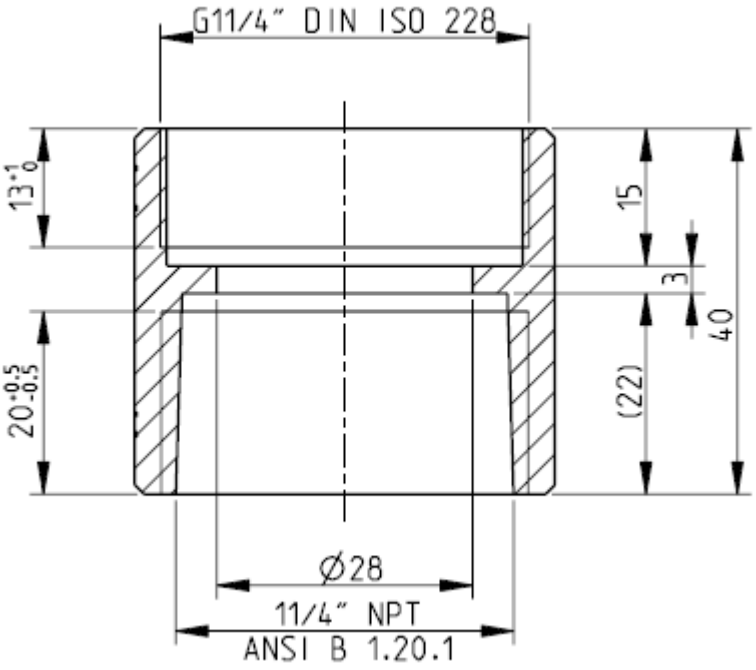
Bleeding point location

NOTICE
In case your unit comes with a redundant chilled water supply heat exchanger. The internal piping is 1” and the chilled water valves have to be installed outside of the unit.

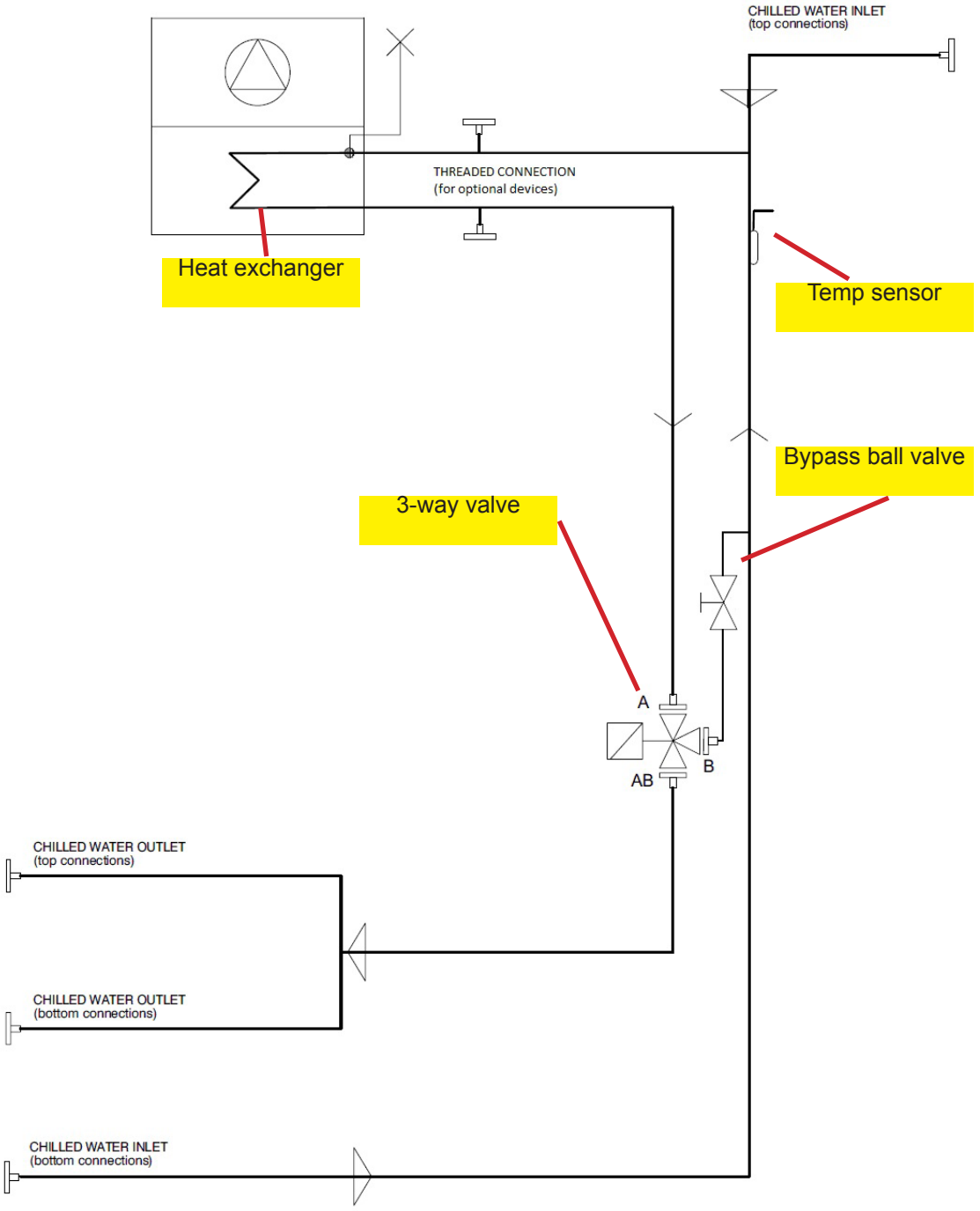
To prevent condensate from building up on the water connection pipes, cover them with appropriate insulation.
Insulation thickness: “F” (9-12mm) at λ = 0.037 W.m-1.K-1 (10°C)

National pipe thread conversion kit (for use in US only)

In case on site piping provides national pipe thread (NPT), it is possible to connect the unit using the optional conversion kit. The conversion kit consists of a pipe adaptor and sealing material. The NPT site is to be sealed with Teflon tape and the ISO 228 site with a flat sealing.



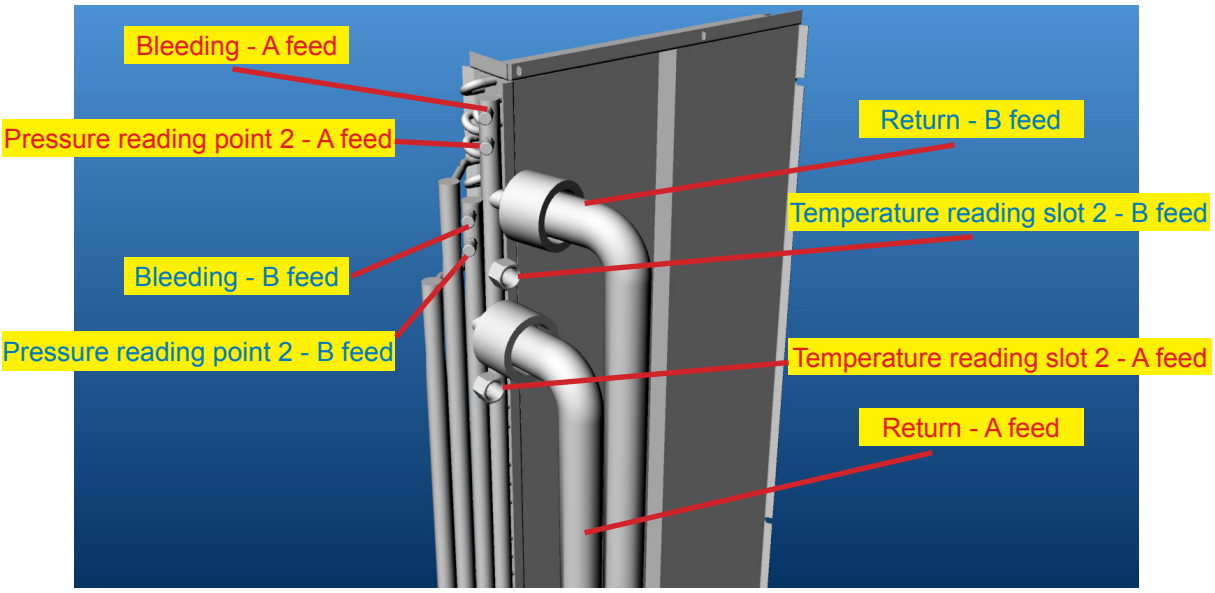
NPT adaptor

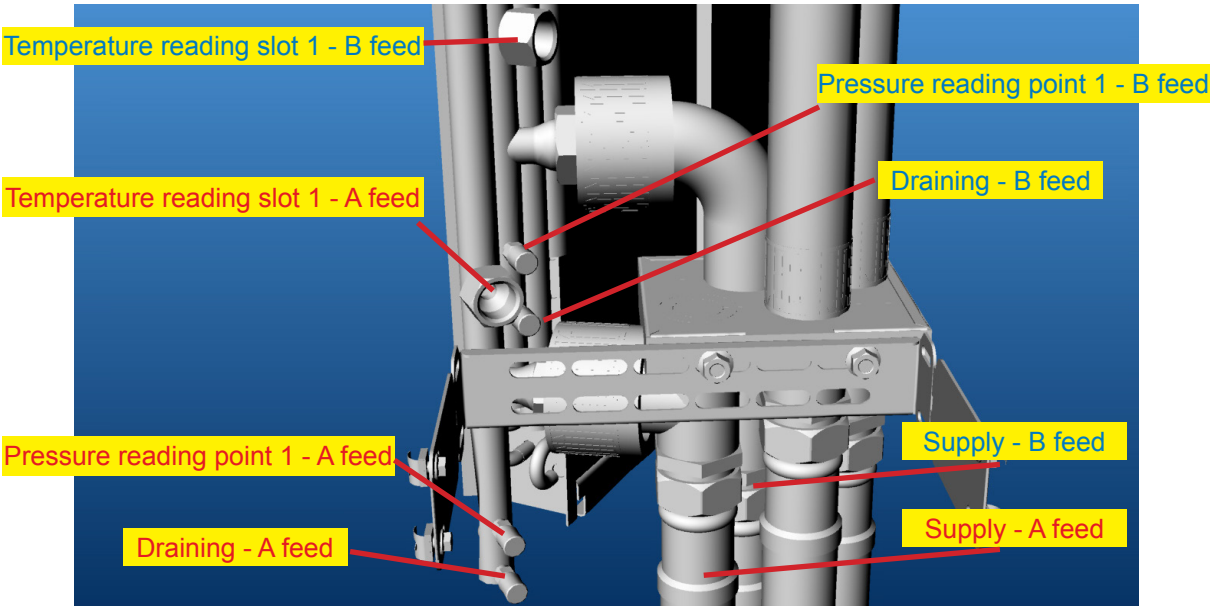


Hydraulic schematic

Dual feed heat exchanger (optional)

In case an extended redundancy is required the unit can be equipped with dual-feed heat exchanger which allows two chilled water circuits to feed the coil at the same time. All connection points as well as the service ports are then doubled (i.e. two sets of bleeding/drainage ports, two sets of ports for additional equipment and two sets of temperature reading pockets). Piping diameter is reduced from 5/4” to 1” diameter (connection remains at 5/4”).
In case one chilled water feed fails the unit can still provide sufficient cooling capacity (the percentage depends on chilled water flow rate of the remaining circuit and permitted air supply temperature increase. Chilled water control valves and bypass lines have to be installed outside (e.g. raised floor).

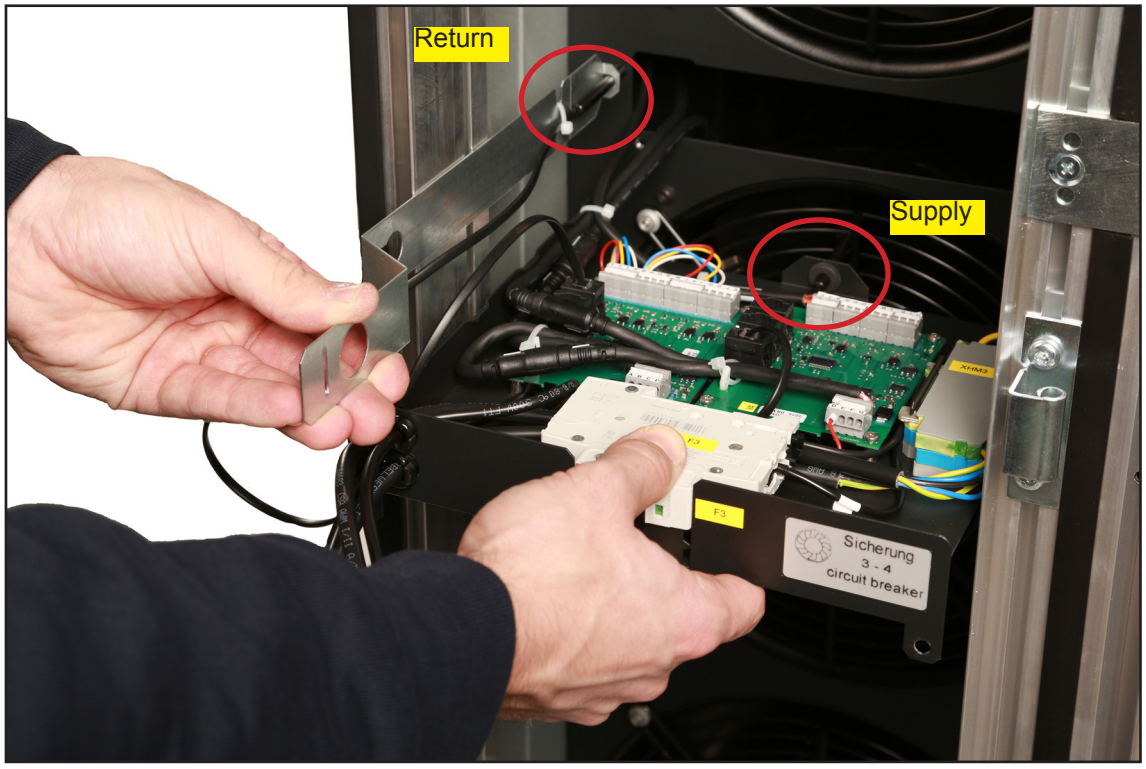




4.4 Control

The main task of the control is to provide constant temperature conditions to the installations in the server cabinet at varying loads as well as to run the supporting system in an energy-saving mode.
Another task is the comprehensive visualization and transfer of the monitored parameters, with process decisions derived to guarantee availability; everything in view of data exchange and access via the network.
A series of control and monitoring options complements the basic concept for all applications that occur and that are to be safeguarded.
The temperature is controlled depending on the temperature inside the server cabinet.

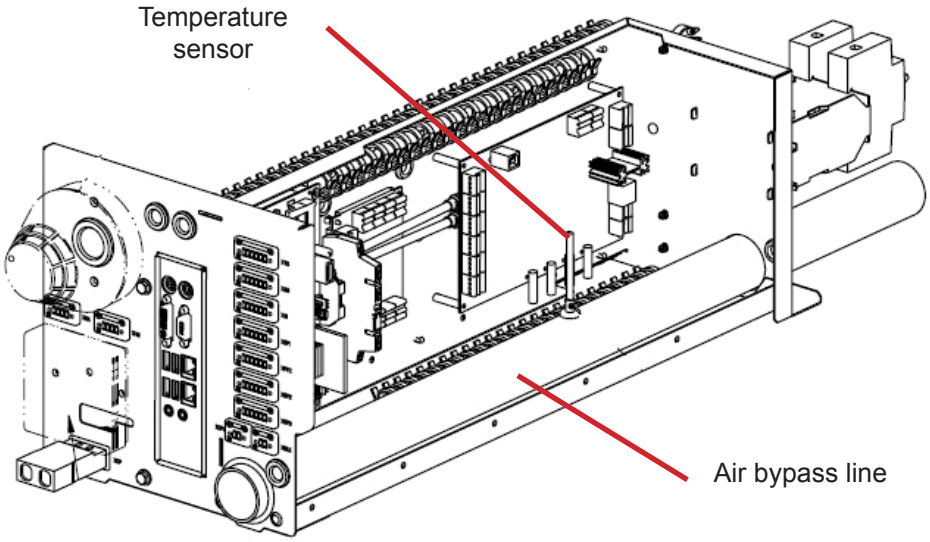
Fan control
The fan speed is controlled by air temperature sensors (three supply sensors or three return sensors). The air temperature is constantly monitored and the fan speed is adjusted accordingly to provide a sufficient amount of cooling air. Any sensor can be selected as a control sensor (see the web interface chapter 6.2). The fan speed may be set either manually or automatically. The minimum fan speed is 25%. For closed loop units (DCL-L and DCL-H), there is a bypass pipe with a temperature sensor running from back to front. This solution allows indirect monitoring of the pressure difference and accurate fan speed adjustment to provide a sufficient amount of cooling air.



Return and supply temperature sensor location

Chilled water valve control

A 3-way or 2-way valve (manually adjustable) adjusts the chilled water flow to modify the cooling capacity. This is to avoid low temperatures during operation at partial load.
In the event of failure, the valve will close and the entire volume flow will be run via the bypass. To keep the desired temperature on the air supply side, the valve controls the water flow between 0% and 100% of the designed flow rate (distribution and quantity control).

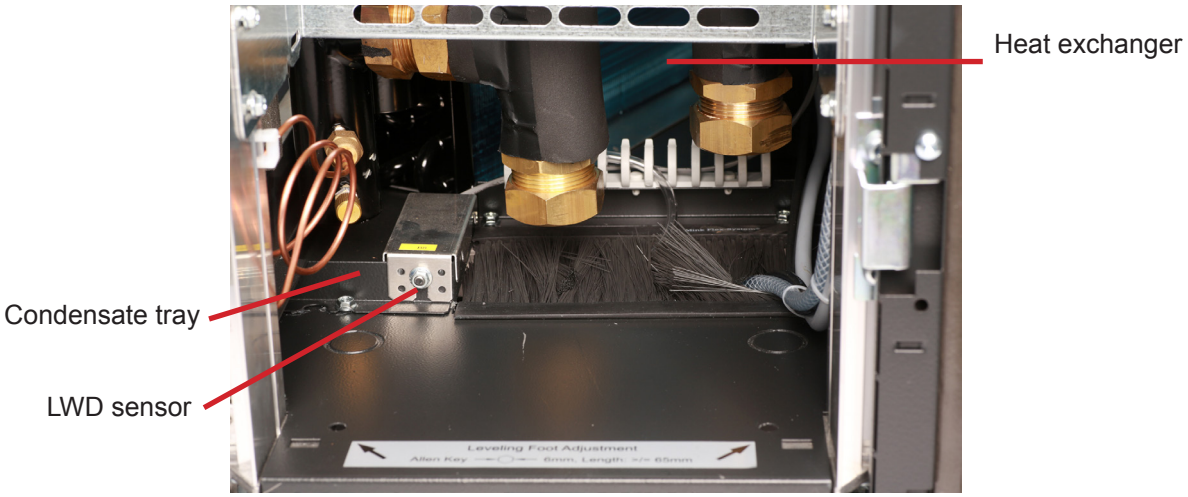


Bypass pipe location

Chilled water system

4.5 Condensate drain connection

Condensation may occur during the operation of the Knürr DCL unit. For draining such condensed water, a 5/8” condensed water connection is provided with both the condensed water tub and the condensate pump (optional).
When connecting the condensed water tube, take care that the condensed water line is connected to a siphon trap with a self-filling non-return valve and that the condensed water line is inclined. The level of installation of the respective siphon trap must be designed for negative or excess pressure of 300 Pa, respectively, so that sucking in air or releasing it from the sewage system is prevented. The condensed water is drained de-pressurized or optionally by means of the condensate water pump.



Condensate management system

Condensate pump location

Pump performance

Head (ft)	Flow (gph)	Head (m)	Flow (l/h)
1	2.5	0.3	9.5
5	1.5	1.5	5.7
10	1	3.0	3.8
15	0.7	4.6	2.6
20	0.6	6.1	2.3

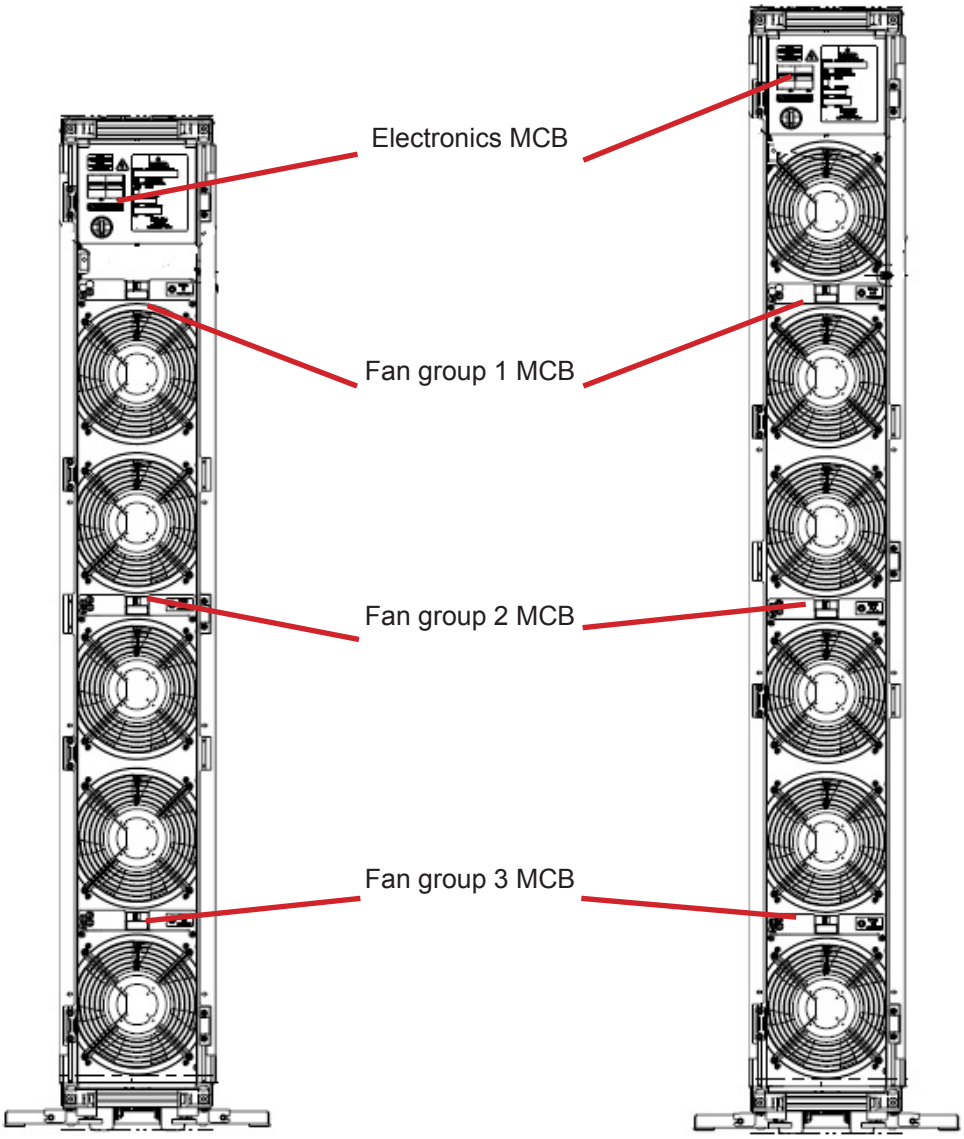
** To ensure proper condensate drainage, please keep the unit level or slightly inclined to the front.*

4.6 Electrical connection

WARNING. Risk of arc flash or electric shock. May cause injury or death. Disconnect all local and remote electric power supplies and wear appropriate personal protective equipment per NFPA 70E (or any other local safety regulations which may apply) before working within. Therefore, take the cabinet out of operation prior to assembly and secure it against unauthorized re-connection.

The device must be connected electrically by authorized personnel (electrically skilled staff) only. Make sure that during such connecting works the cabinet remains free from voltage and is secured against being switched ON by unauthorized parties. Internal sockets must be used by authorized personnel only.

As soon as all precautions for assembly have been taken, you may start installing the electrical connection. Check if the voltage and frequency as indicated by the manufacturer as well as pre-fusing meet the requirements as specified on the nameplate.



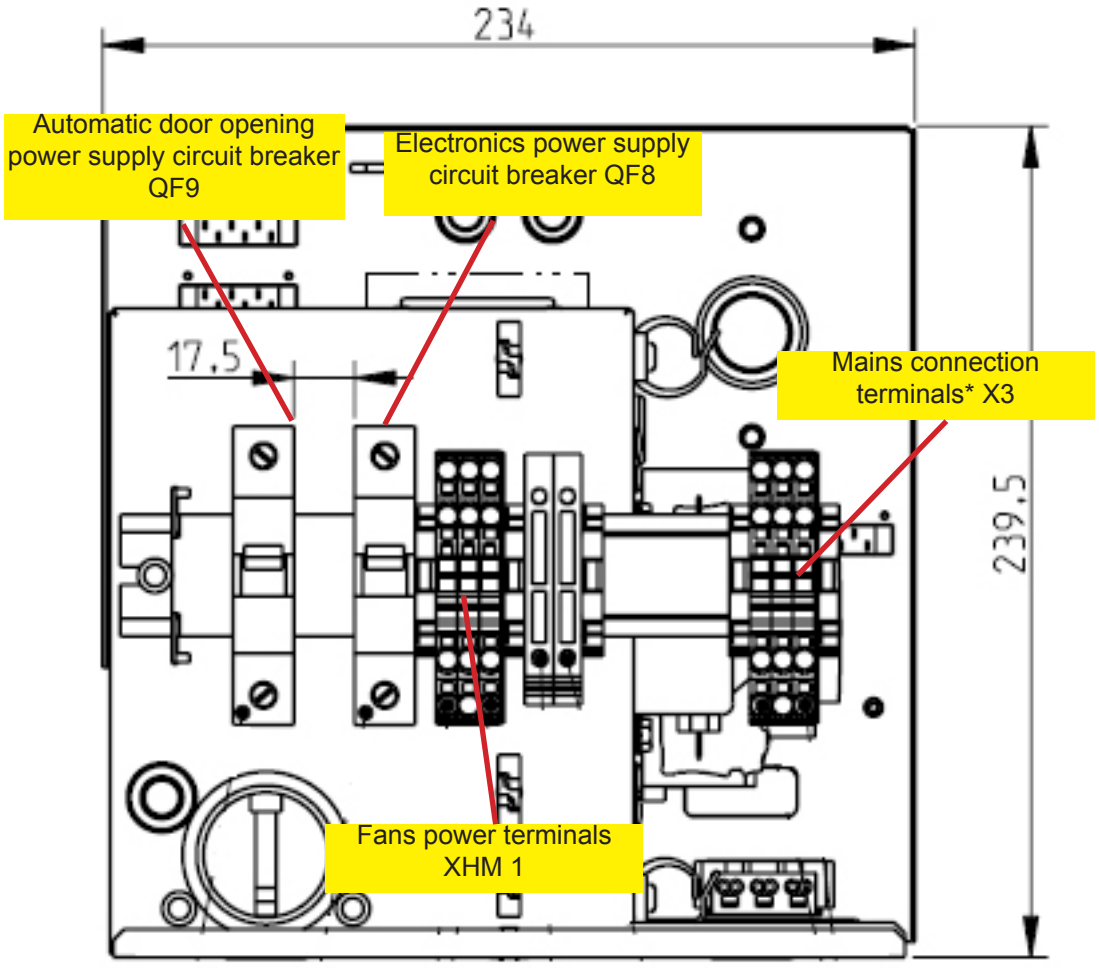
Electrical connections

For connection of the device to power

- Switch the main switch OFF (superior circuit breaker).
- Derive the connection scheme from the power flow diagram.
- Check for safe grounding.

Put the DCL into operation again in accordance with instructions.
Switch all automatic safety cutouts ON.
The device fans start turning clockwise.

Warning! Risk of electric shock. May cause injury or death. This unit has high leakage current potential. Proper grounding as per national and local codes is required before connection to electric power supply.
The lithium battery must be exchanged by the manufacturer only. The battery is soldered to the control PCB. Caution! Explosion hazard.



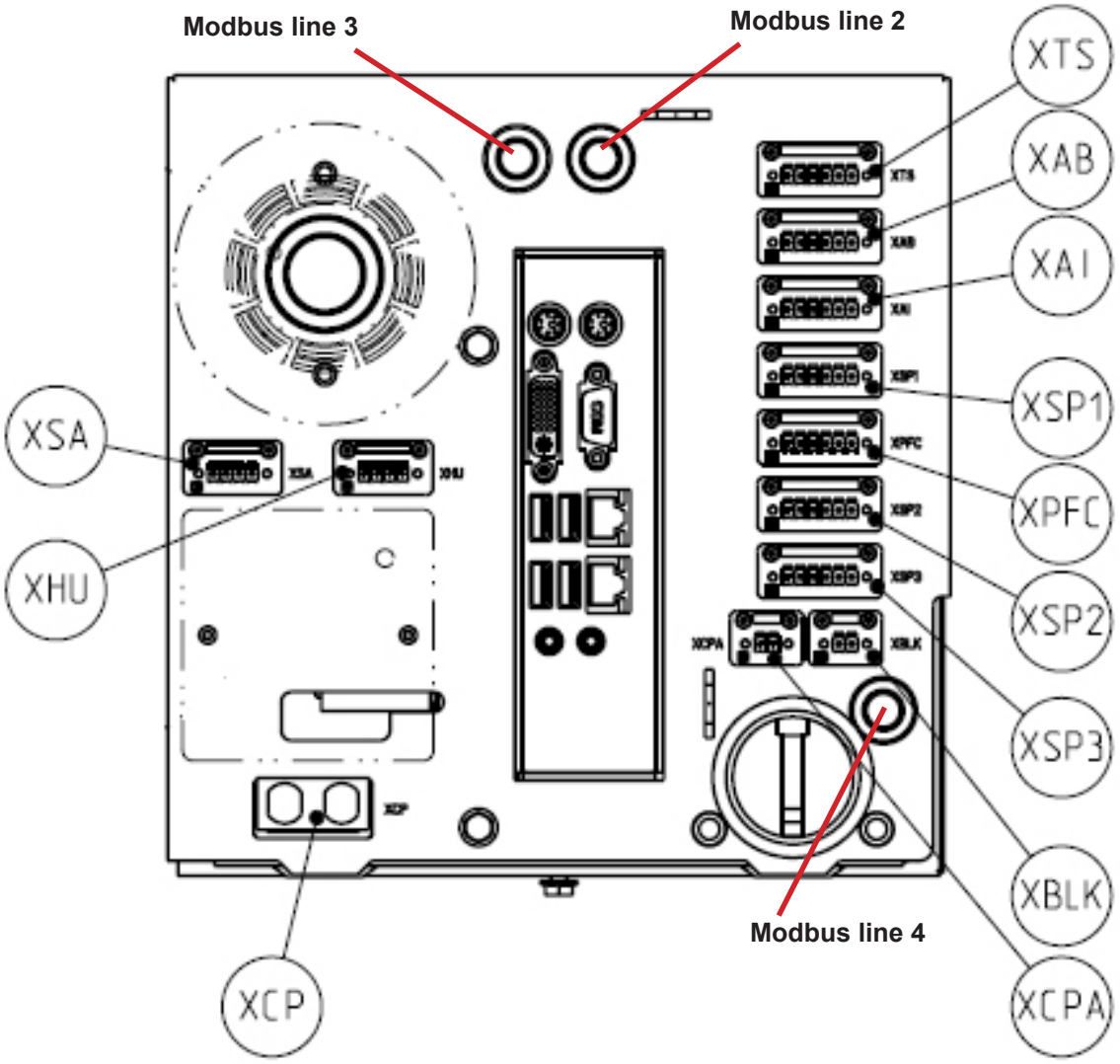
Electrical connection terminals

For cable routing, there are two pipes running alongside the electronics box from front to back of the unit.

* In case your unit is equipped with the optional A/B transfer switch, these terminals come pre-connected. In such a case, your connection point is the A/B transfer switch at the back of the unit. (Terminals X1 and X2 - see chapter 5.2)

	Single pole version 230 V / 50 Hz (60 Hz)	Dual pole version 208/230 V / 50 Hz (60 Hz)
Electronics circuit breaker	1 x ABB S201-C6 **Number of poles**: 1 **Tripping characteristic**: C **Rated current (I_n)**: 6.00 A **Rated operational voltage (U_e)**: 230 V AC **Rated short-circuit capacity (I_{cn})**: 6.0 kA **Degree of protection**: IP20	1 x ABB S202-C6 **Number of poles**: 2 **Tripping characteristic**: C **Rated current (I_n)**: 6.00 A **Rated operational voltage (U_e)**: 208/230 V AC **Rated short-circuit capacity (I_{cn})**: 6.0 kA **Degree of protection**: IP20
Fan circuit breakers	3 x ABB S201-C6 **Number of poles**: 1 **Tripping characteristic**: C **Rated current (I_n)**: 6.00 A **Rated operational voltage (U_e)**: 230 V AC **Rated short-circuit capacity (I_{cn})**: 6.0 kA **Degree of protection**: IP20	3 x ABB S202-C6 **Number of poles**: 2 Tripping characteristic: C Rated current (I_n): 6.00 A **Rated operational voltage (U_e)**: 208/230 V AC **Rated short-circuit capacity (I_{cn})**: 6.0 kA **Degree of protection**: IP20

Circuit breakers



Electronics connection terminals
** Description of the connectors is shown in the Annex*

Put the Knürr DCL into operation again in accordance with instructions.
Switch the main switch ON.
Switch all automatic safety cutouts ON.
The device fans start turning clockwise.

This device has no main switch, a switch must be installed in the building's electrical network. Please use a 16A pre-fuse (MCB) according to the wiring scheme. (EN 60950-1, 3.4.3)

Typical EU voltage levels	230 V AC (1ph – 50 Hz/60 Hz)
Typical other voltage levels	208/230 V AC (1ph/2ph – 50 Hz/60 Hz)
Nominal current (30kW/34kW)	9.1 A / 10 A
Short circuit current rating	6 kA

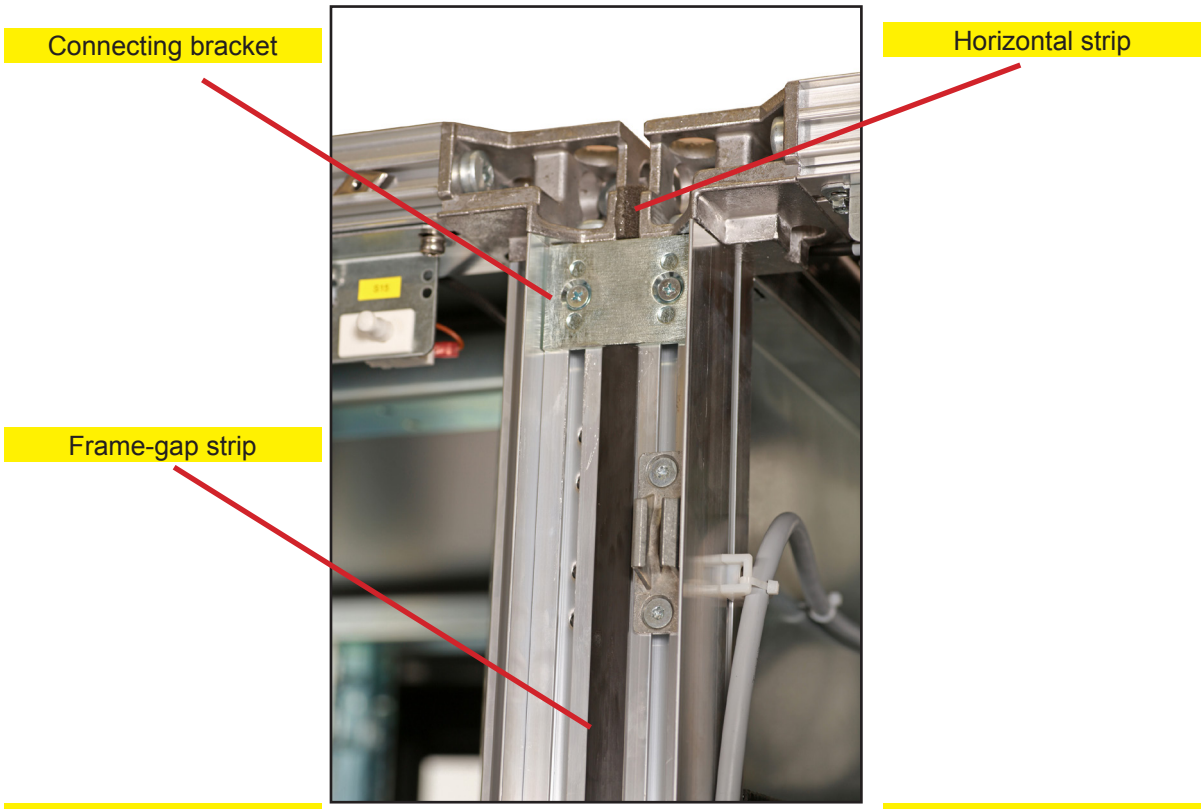
4.7 Sealing the housing

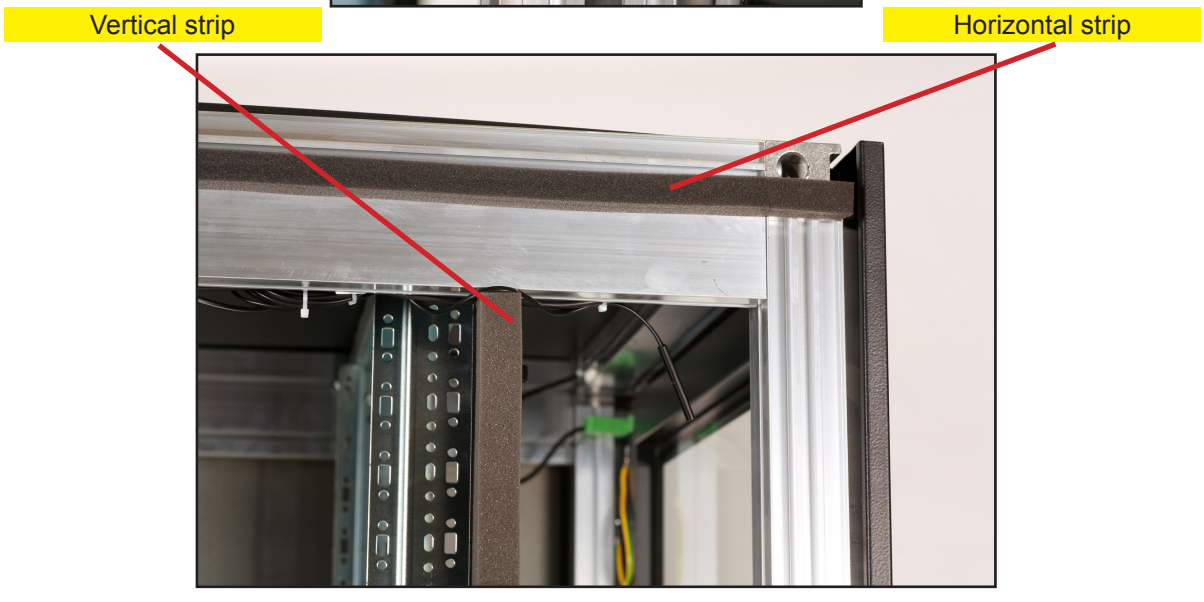
In order to guarantee optimum cooling performance, the housing must be sealed as follows:

- Use the provided connecting kit to seal the seams between cabinets
  (kit contains - connecting brackets, horizontal and vertical foam sealing strips, plastic sealing strips for the frame gap).

- Seal cable outlets by applying foam or similar material.

- Keep air between the cold and warm sides of the Knürr DCL and the server cabinet thoroughly separated.

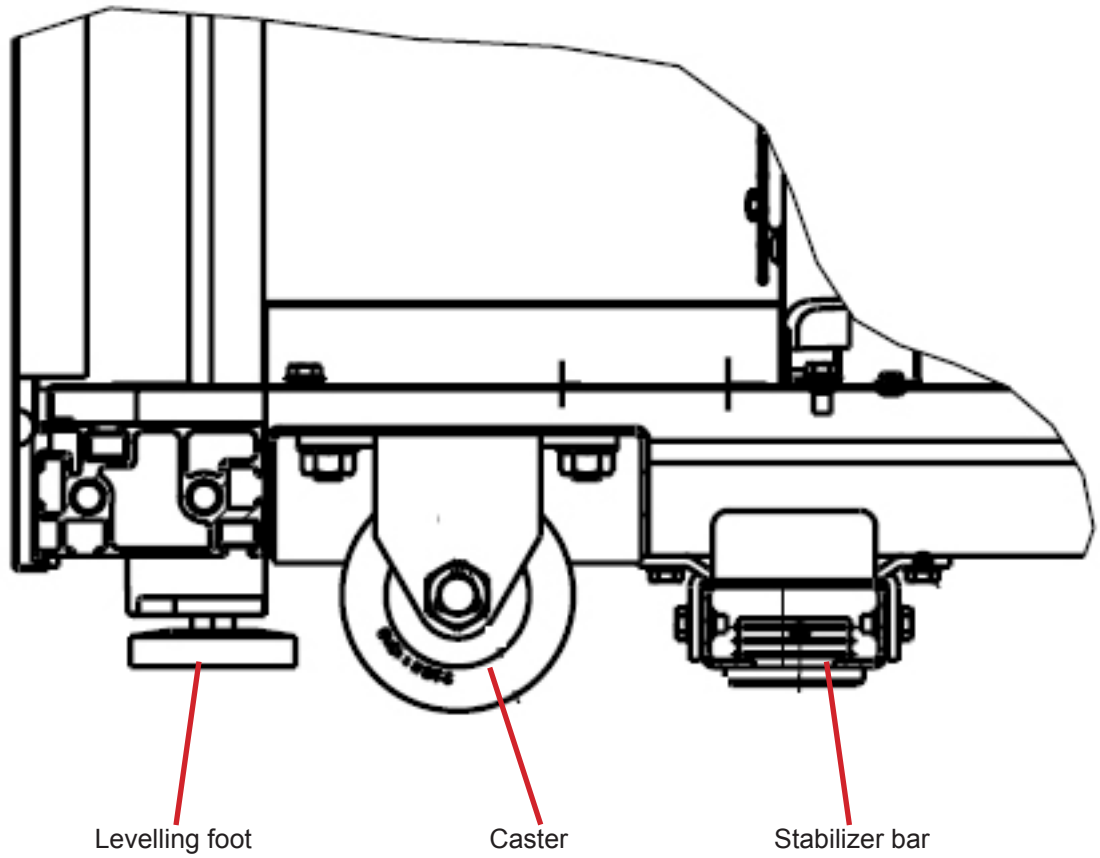




5 Options

5.1 Caster bracket

The unit can be ordered with optional caster brackets which allow for easy movement around the installation area. The unit equipped with casters also comes with stabilizers to prevent the top-heavy unit from toppling over. However, a unit ordered with casters can be shipped one per pallet only.



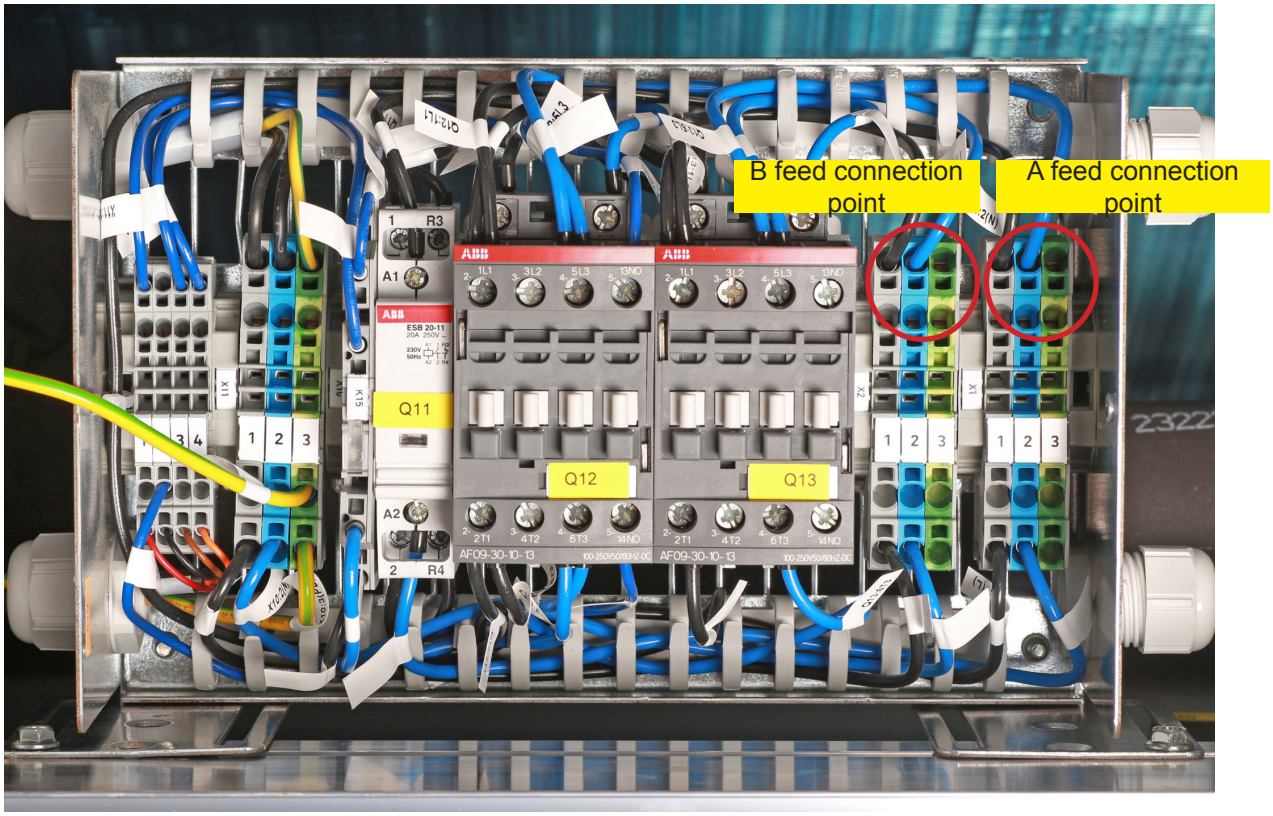
Servicing and maintenance shall be performed by properly trained personnel in accordance with applicable regulations as well as manufacturers' specifications only.

5.2 A/B transfer switch

The A/B change-over circuit offers the possibility to supply the Knürr DCL control equipment and fans from two independent mains supplies. The switch works automatically. It is located at the back of the unit.
There are two cables to connect the Knürr DCL to the external mains. These cables are connected to the internal circuit of the cabinet by terminal X (X1:1 = phase, X1:2 = neutral , X1:3 = PE for mains A and X2:1 = phase, X2:2 = neutral , X2:3 = PE for mains B).

Please observe the recommendations regarding external fusing. The changeover circuit itself consists of contactors Q11 to Q14. Q11 is an auxiliary contactor that presets the circuit to supply power from mains A (if both mains supplies are powered up). Only in the case that power from mains A is OFF, the circuit automatically switches to mains B. When powering up mains A again, the circuit automatically switches back to mains A.

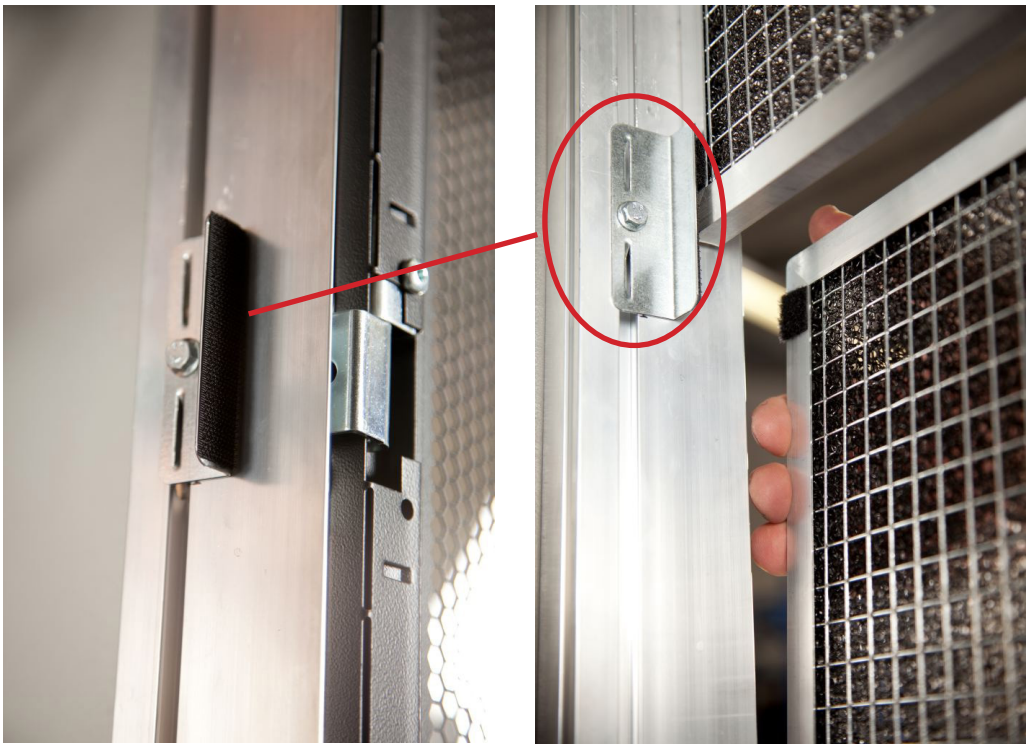
Change-over time is about ten milliseconds. The interruption causes no “power failure” alarm signal. It only shows which supply is powering the unit. Main contactors Q12 and Q13 are mechanically coupled by part Q14 (the new version comes without Q14), which ensures that only one of the main contactors is closed. The phase and the neutral wires are switched. All internal equipment is connected to the output of the A/B change-over circuit. That means that there is redundant supply to the fans and the fan control unit.



A/B transfer switch – internal components

5.3 Filter

A G1-class air filter is available to provide air purification. The unit can additionally be equipped with a filter clog switch to detect dirty filters to be replaced. The filter is mounted in the back of the unit on metal brackets (see pictures).



Air filter bracket

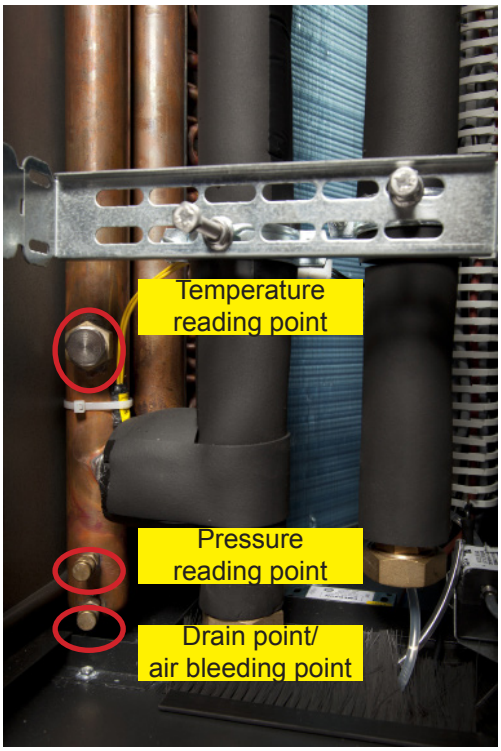
Air filter clog switch

5.4 Chilled water monitoring

For managing the chilled water system, including potential condensation, the unit may come equipped with several devices:

- temperature sensors,
- a flow meter (pressure difference),
- a condensate pump.

The pipework of the Knürr DCL is equipped with flanges that allow connecting additional equipment. There are two flanges on the pipe before the heat exchanger and two on the pipe after the exchanger. These are intended for bleeding and pressure measurements. There are also two ports (one before and one after the heat exchanger) for measuring the temperature.



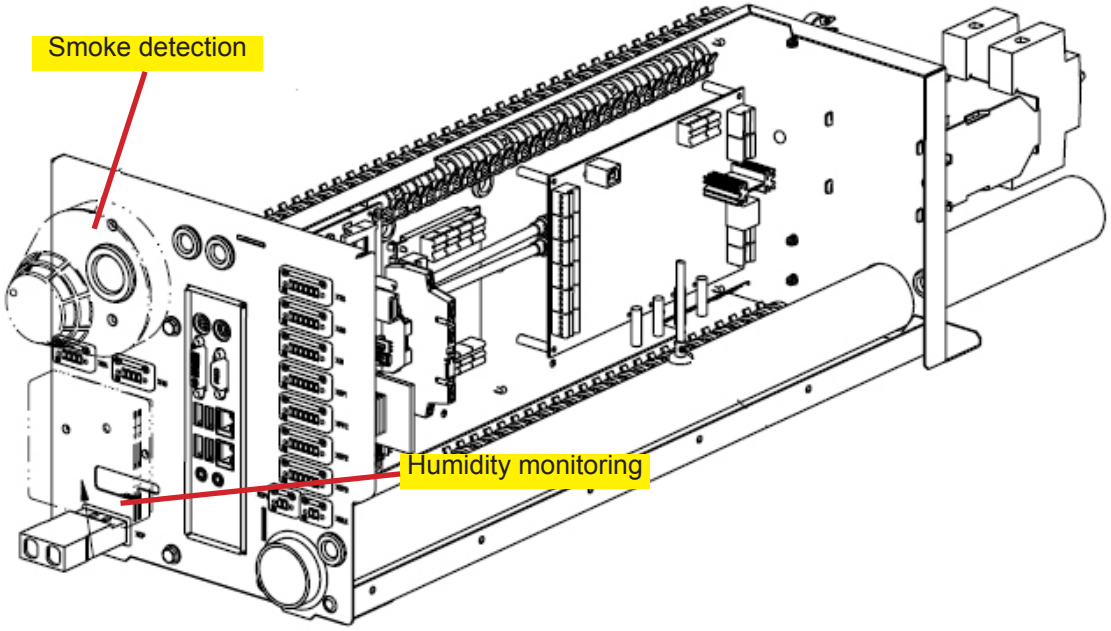
The pressure difference provides the value for the flow rate of the chilled water. And, jointly with the temperature difference of the chilled water, the cooling capacity can be calculated based on the calorific formula. All sensors come prewired. The information obtained is shown on the display (or in the web interface). The pressure difference sensor is attached to the aluminium frame in the back of the unit (see picture below).

Pressure difference sensor

The condensed water pump is described in chapter 4.5.

5.5 Ambience monitoring

For monitoring the ambient conditions, the unit can be ordered with a smoke detection sensor (optical) and a humidity monitoring sensor. The sensors are located at the back of the electronics box at the rear of the unit (on the return air side). The values obtained are shown on the display and/or in the web interface.



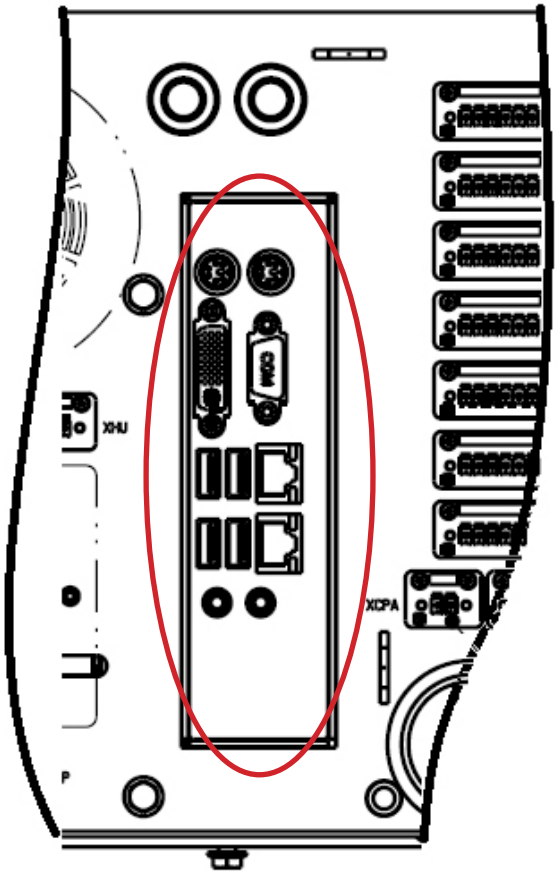
Ambience monitoring sensors

5.6 Communication

Various communication protocols are available.

- TCP/IP – standard, always available (SNMP up to V3, HTTP and HTTPS)
- 8/4 Digital I/O for customer specific application
- Modbus RTU

... and their combinations (see unit configuration number). Ports are accessible from the rear side of the unit. Top LAN port has IP address **192.168.0.88**, the bottom one has IP address **192.168.254.88**.



Communication connection

5.7 Server rack monitoring

As the unit is based on the same platform as the Knürr DCM racks and is intended to be used alongside such racks, there are options available for adjacent racks.
See unit configuration number – digit 20.

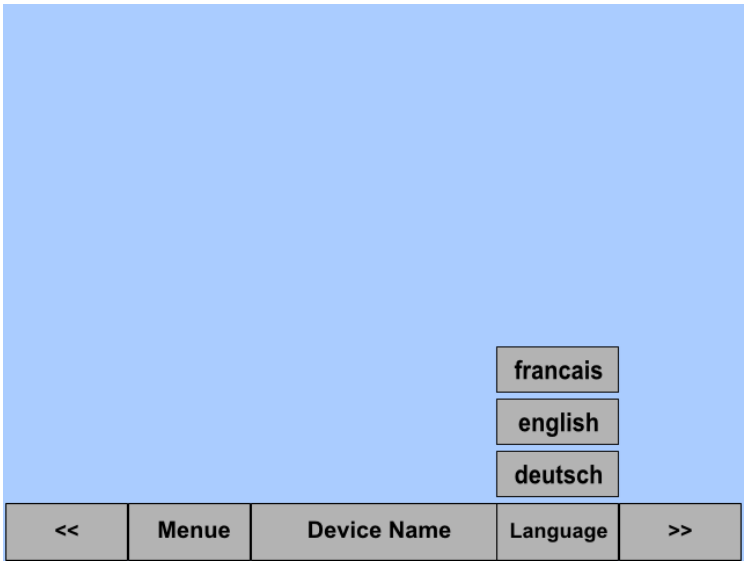
- Door contacts
- Temperature sensors

The connection status of sensors is then shown on the display and/or in the web monitoring interface (see chapter 6).

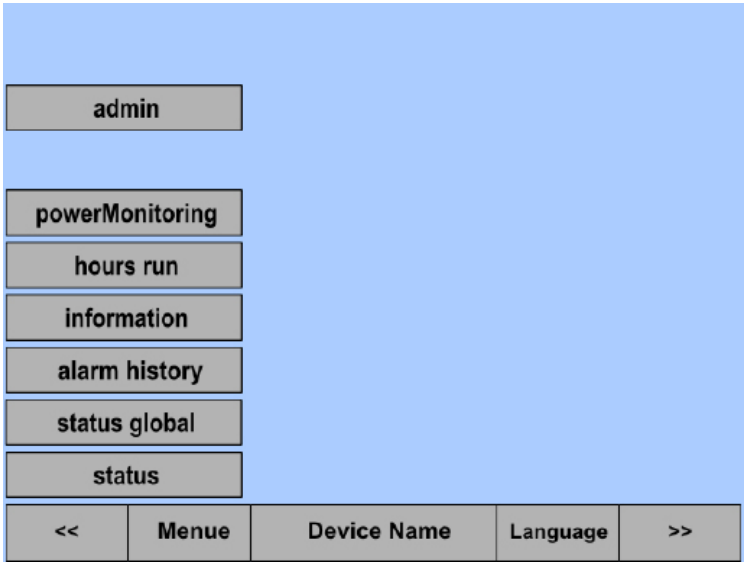
6 User interface

6.1 Display screens

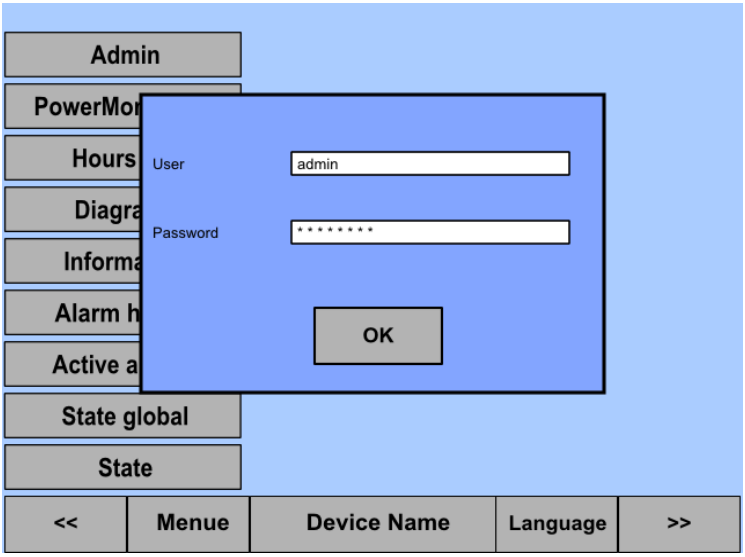
The display of the unit is a color touch screen.
Three languages are currently available. For accessing the user interface on the display, enter “**user**” as the user name and “**1111**” as the password.
Please note that temperature-sensor value of -30°C indicates a faulty sensor.

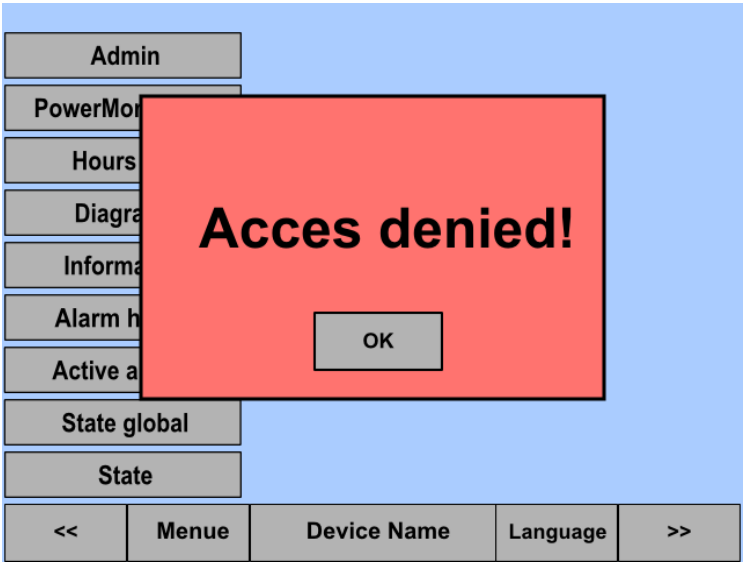


After having selected your language, you can proceed to various menus. User menus provide a basic overview of the operational mode of the unit.



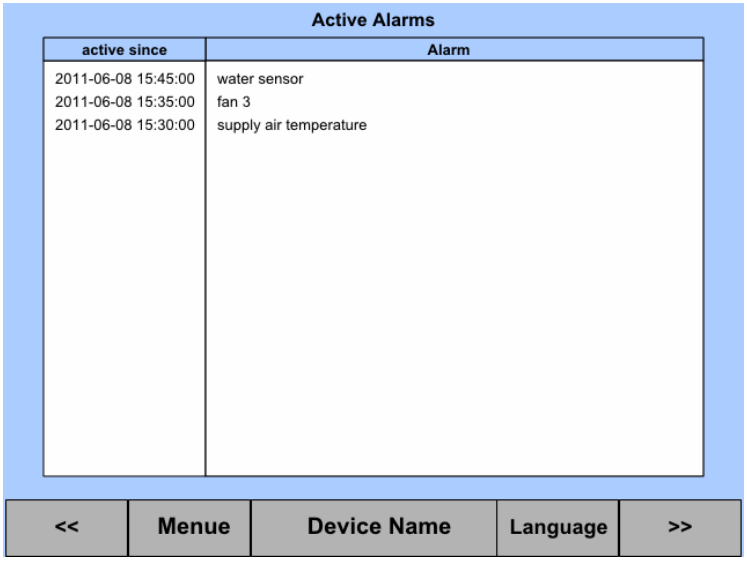
In order to proceed to higher levels (Admin, Service, Default settings), you need to select the desired level from the touch-screen menu and enter the relevant user name and password. Using an incorrect user name and/or password will cause an error message.

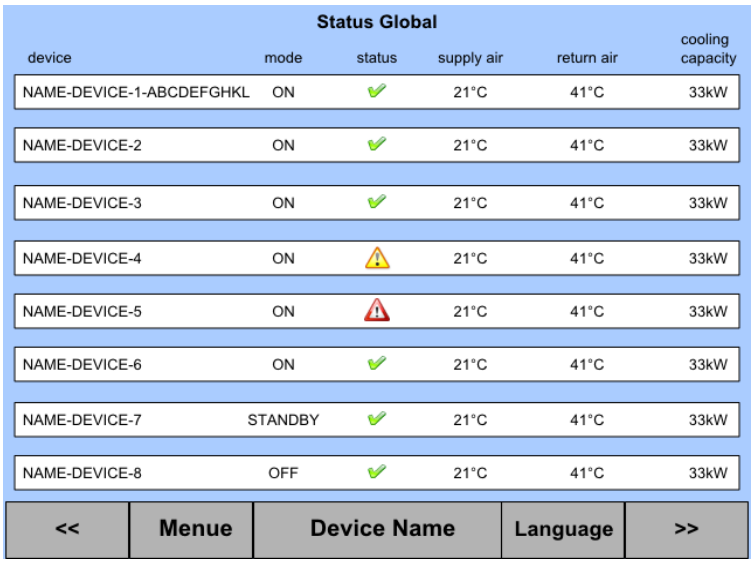


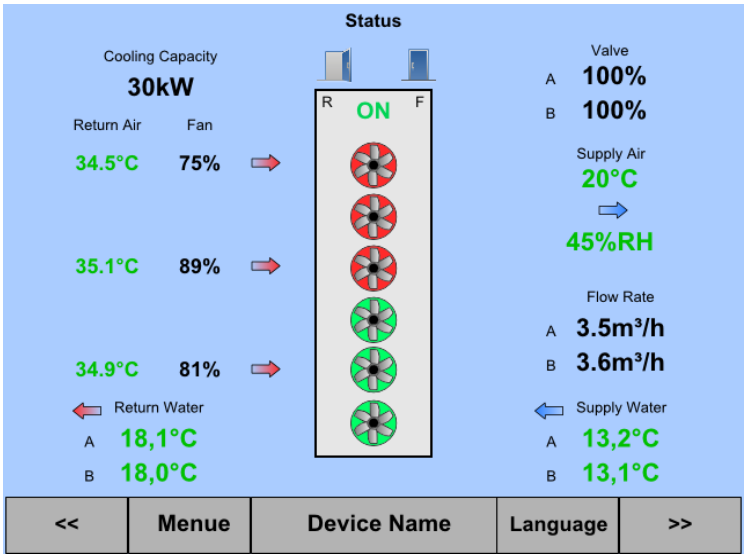


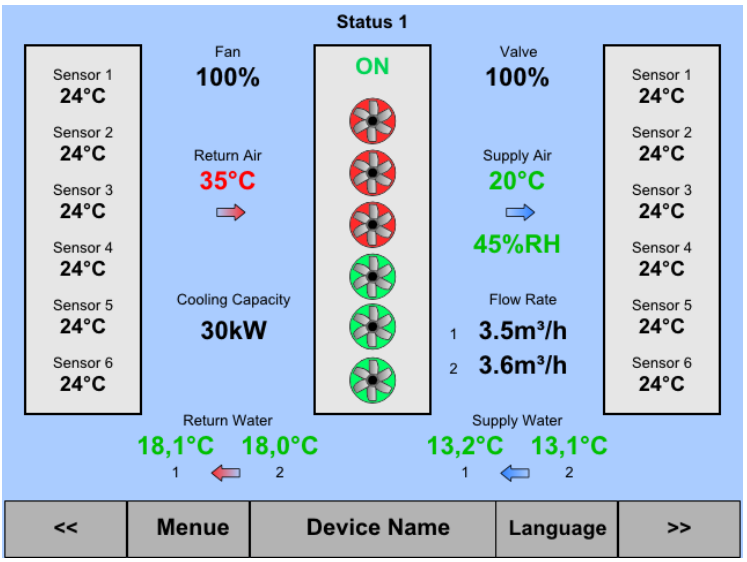
There are some basic screens available for the user. See pictures below.

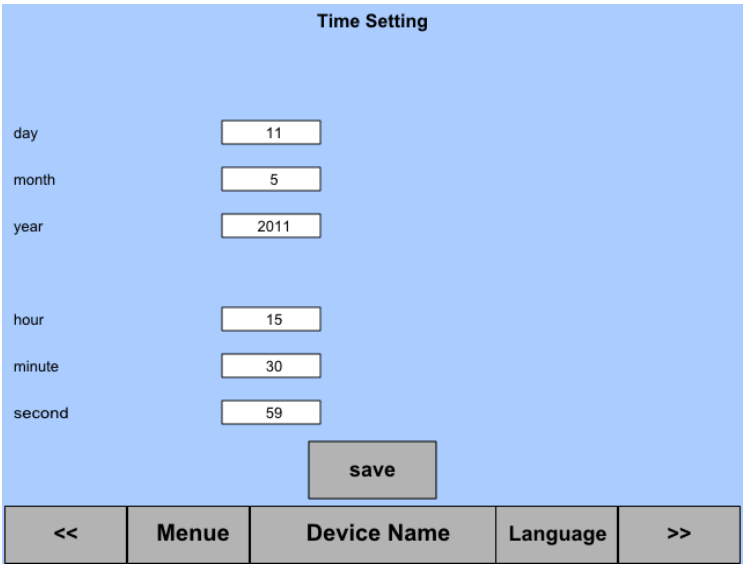
Hours run	Indicates how many hours each fan has run – for ease of maintenance.
Diagrams	Graphical representation of temperatures, etc.
Information	Displays information on controllers and the firmware version.
Alarm history	Shows information about past alarms and their duration.
Active alarms	Displays currently active alarms.
Status global	Provides information on all cooling units in the group.
Status	Displays multiple pages about the current unit and its remote sensors (if active); use left or right arrow keys for navigating through the pages.

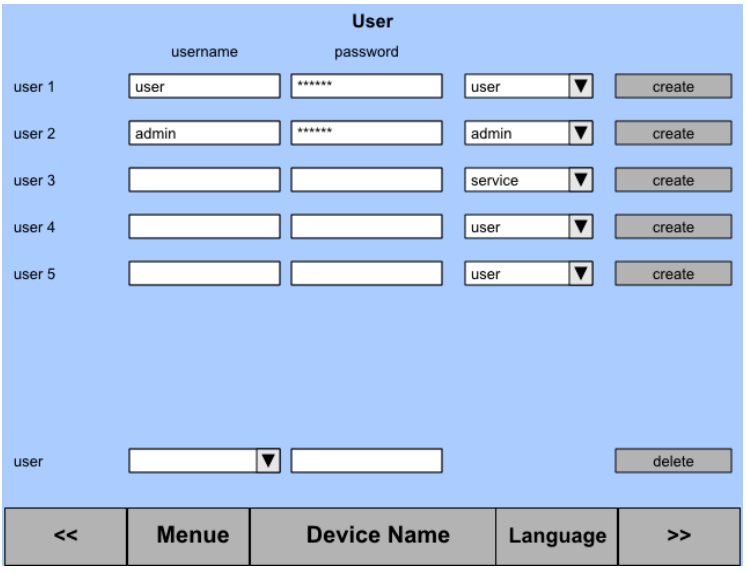

Active Alarms
active since
Alarm
2011-06-08 15:45:00
water sensor
2011-06-08 15:35:00
fan 3
2011-06-08 15:30:00
supply air temperature
<<
Menue
Device Name
Language
>>

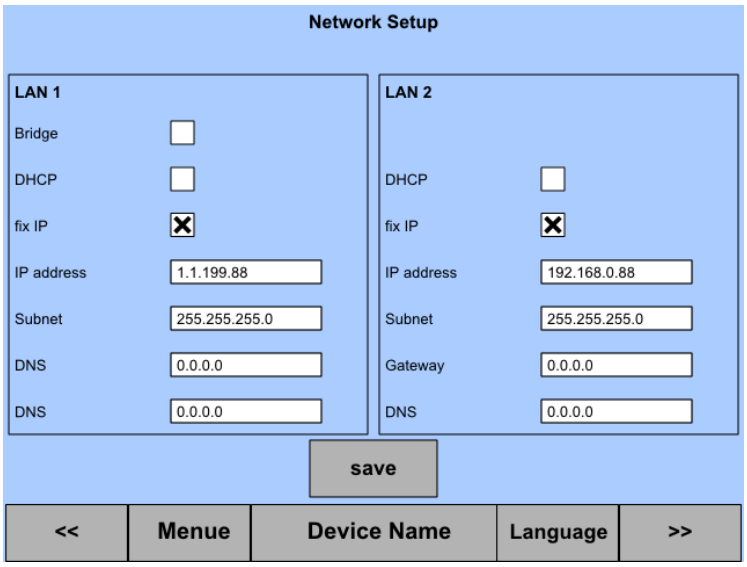

Status Global
device
mode
status
supply air
return air
cooling capacity
NAME-DEVICE-1-ABCDEFGHKL
ON
21°C
41°C
33kW
NAME-DEVICE-2
ON
21°C
41°C
33kW
NAME-DEVICE-3
ON
21°C
41°C
33kW
NAME-DEVICE-4
ON
21°C
41°C
33kW
NAME-DEVICE-5
ON
21°C
41°C
33kW
NAME-DEVICE-6
ON
21°C
41°C
33kW
NAME-DEVICE-7
STANDBY
21°C
41°C
33kW
NAME-DEVICE-8
OFF
21°C
41°C
33kW
<<
Menue
Device Name
Language
>>


Status
Cooling Capacity
30kW
Return Air
Fan
34.5°C
75%
35.1°C
89%
34.9°C
81%
Return Water
A 18,1°C
B 18,0°C
R
ON
F
Valve
A 100%
B 100%
Supply Air
20°C
45%RH
Flow Rate
A 3.5m³/h
B 3.6m³/h
Supply Water
A 13,2°C
B 13,1°C
<<
Menue
Device Name
Language
>>


Status 1
Sensor 1 24°C
Sensor 2 24°C
Sensor 3 24°C
Sensor 4 24°C
Sensor 5 24°C
Sensor 6 24°C
Fan 100%
Return Air 35°C
Cooling Capacity 30kW
ON
Valve 100%
Supply Air 20°C
45%RH
Flow Rate
1 3.5m³/h
2 3.6m³/h
Sensor 1 24°C
Sensor 2 24°C
Sensor 3 24°C
Sensor 4 24°C
Sensor 5 24°C
Sensor 6 24°C
Return Water 18,1°C 18,0°C
Supply Water 13,2°C 13,1°C
<< Menue Device Name Language >>


Time Setting
day 11
month 5
year 2011
hour 15
minute 30
second 59
save
<< Menue Device Name Language >>


User
username password
user 1 user ****** user create
user 2 admin ****** admin create
user 3 service create
user 4 user create
user 5 user create
user delete
<< Menue Device Name Language >>


Network Setup
LAN 1
Bridge
DHCP
fix IP
IP address
1.1.199.88
Subnet
255.255.255.0
DNS
0.0.0.0
DNS
0.0.0.0
LAN 2
DHCP
fix IP
IP address
192.168.0.88
Subnet
255.255.255.0
Gateway
0.0.0.0
DNS
0.0.0.0
save
<<
Menue
Device Name
Language
>>

6.2 Web interface

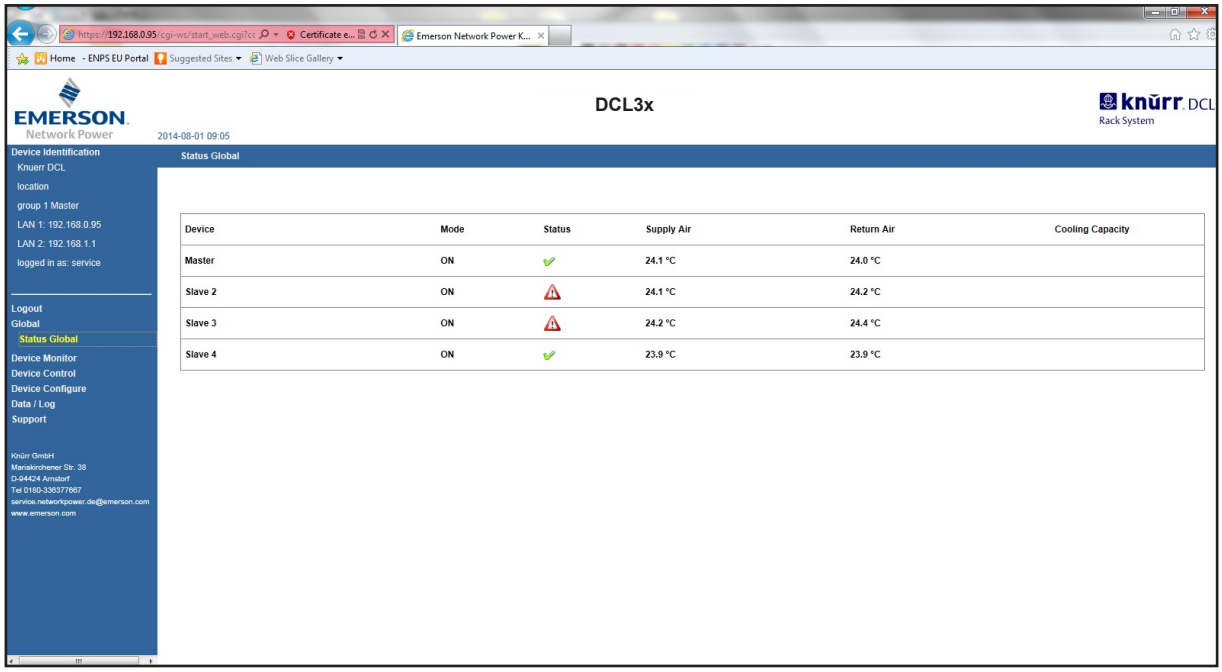
The CoolCon control serves the control of air conditioning and the monitoring of the Knürr DCL and the server cabinets attached to it. It is a modularly expandable monitoring and control system.
The basic variant enables the monitoring of up to four fan racks, a leakage sensor, temperature sensors for supply and return air as well as air conditioning of the cabinet. Thereby, the chilled water flow is adjusted to the required cooling by means of a control valve; the fan speed is likewise variable.

A 10/100MBit Ethernet connection is available for communication to support TCP/IP, HTTP(S), FTP, SNMP (up to V3) and NTP protocols. It is configured and monitored via an integrated Web server, an FTP server as well as an SNMP agent.

To access the web interface, please enter “**user**” as the user name and “**1111**” as the password or enter “**admin**” as the user name und “**knuerr**” for administrator level access.

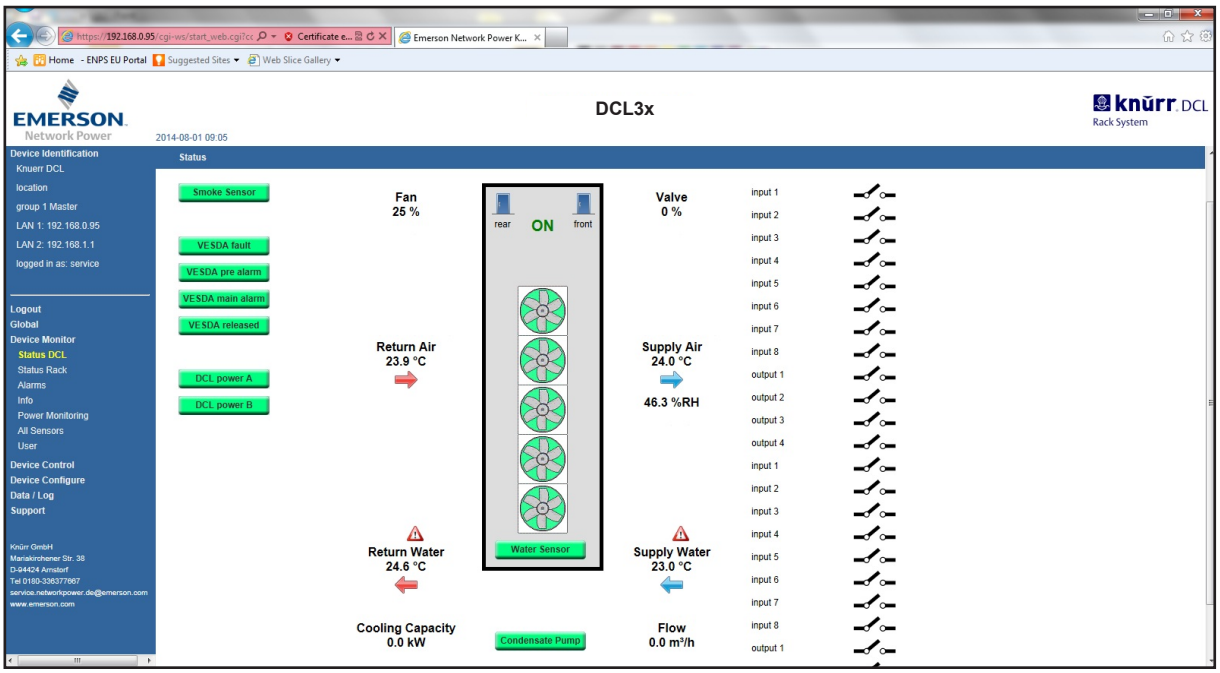
Please note that temperature-sensor value of -30°C indicates faulty sensor.

User section



Global status

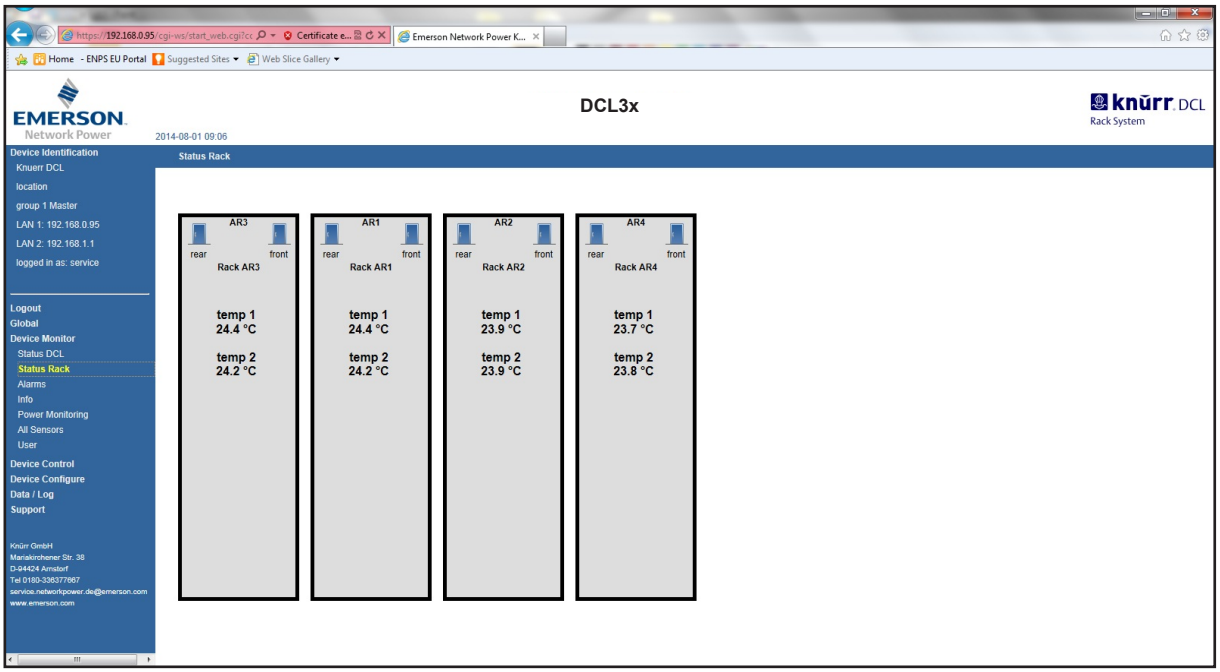
All devices in the group are displayed in “DCL grouping”. Change to the status page of the respective DCL by clicking on the device name.



Unit status

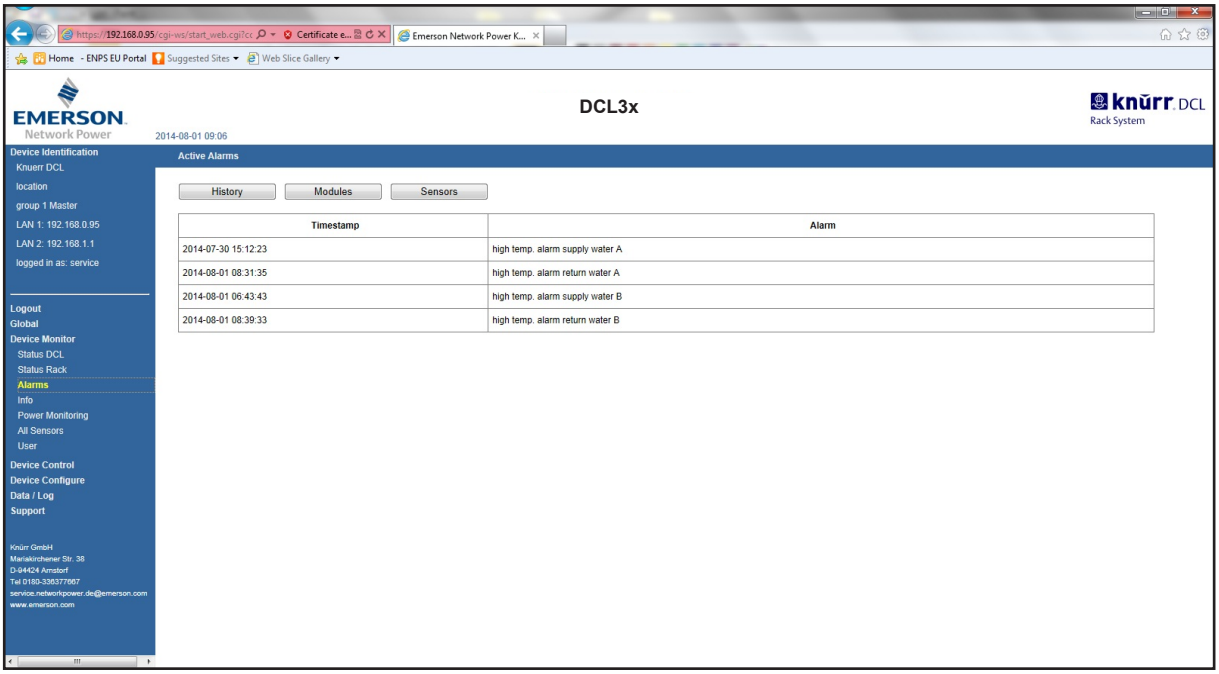
Shows the current status of the Knürr DCL. This screen shows equipment actually installed on the unit.

Alarm boxes: green = normal, red = alarm
Input 1 - 8: Digital inputs (option digital I/O)
Output 1 - 4: Digital outputs (option digital I/O)
Fan speed in %: the actual value of the fan controller
Valve opening in %: the actual value of the valve controller
Hand icon appears when the respective controller is operating in manual mode



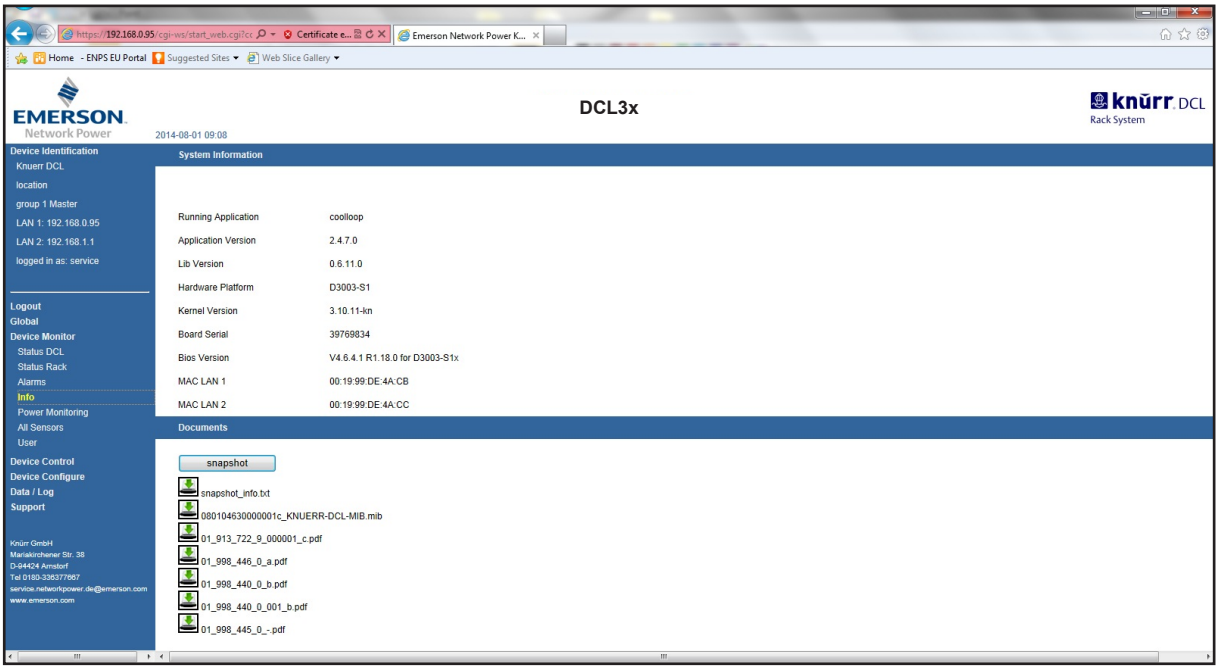
Rack status

Displays devices connected to the DCM server racks. Content depends on the actual situation.



Alarms

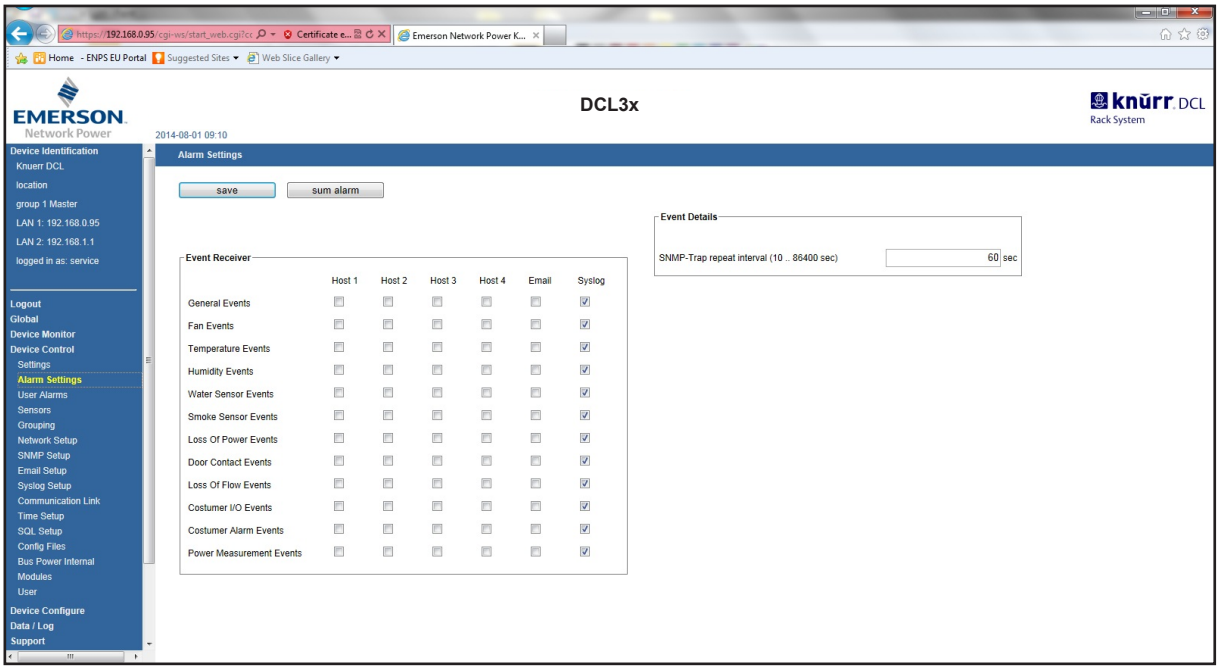
List of active alarms with the option of displaying the alarms history (with a time stamp) and an export option (under ‘History’)



Firmware/software information

Displays various system information and documents (Manual, MIB file, spare parts list, circuit diagram, etc.).
This page is displayed for three sec after the first login; it will then switch on to the “Status” page.
The “Snapshot” button saves the current status of the unit in a file for service purposes.

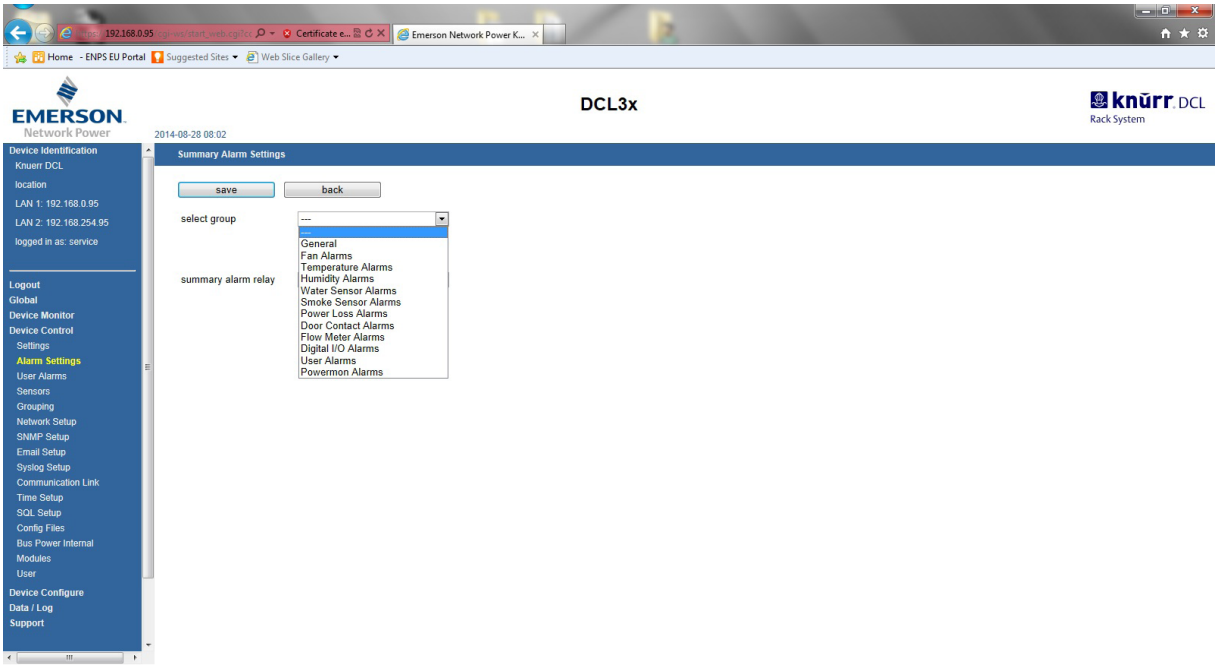
Admin section



Alarm settings

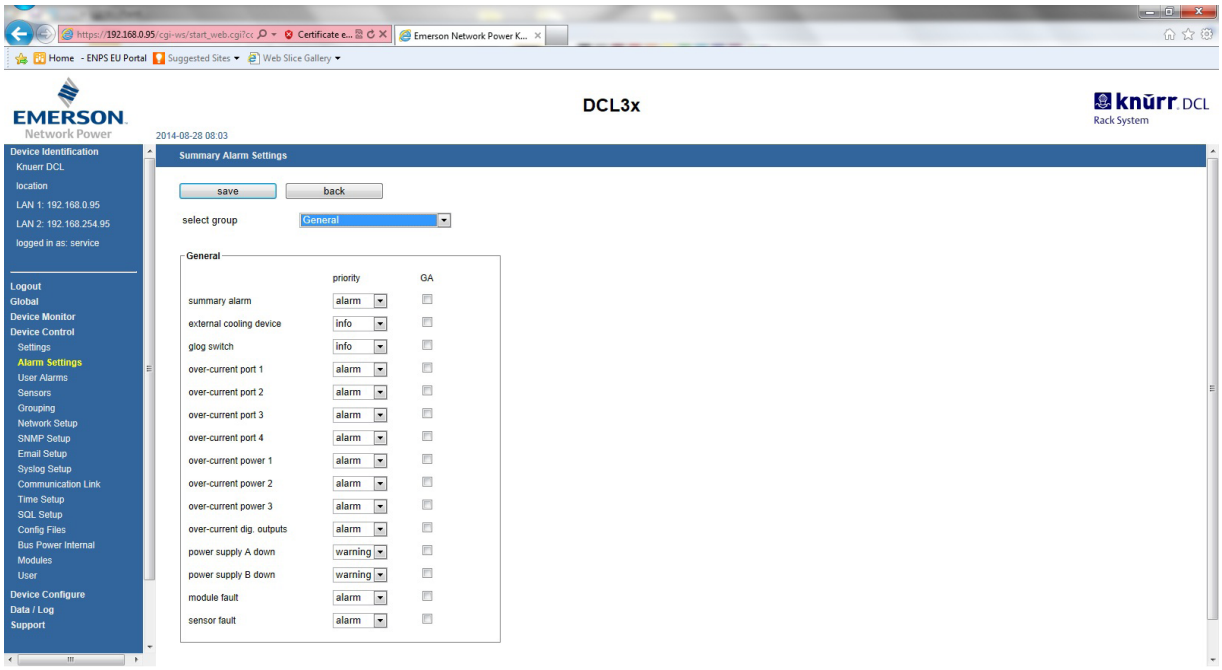
This matrix determines where the alarm groups will be sent – to traphost, e-mail, sms, etc.
General Alarm button (summary alarm): General alarm settings.

General alarm settings
Here you can select which alarm groups will trigger the general alarm/general alarm relay.



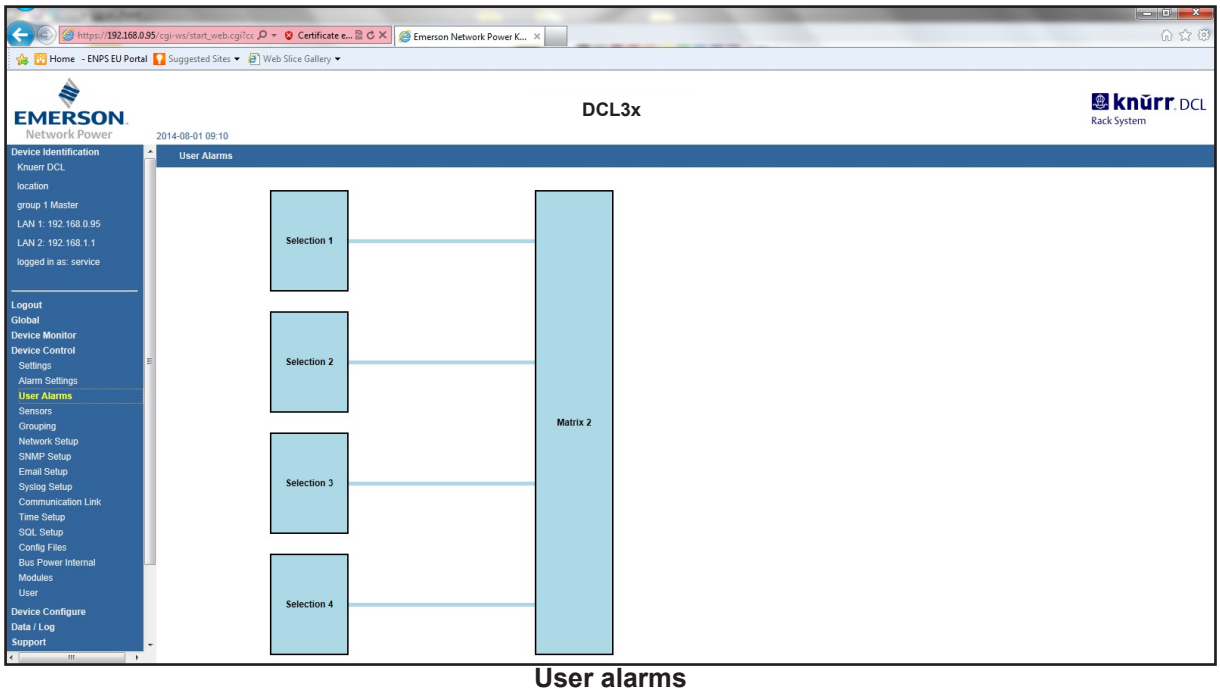
Summary alarm settings

Under summary alarm settings all the events are grouped into logical groups. By selecting particular group you gain access to detailed settings for this group of events.



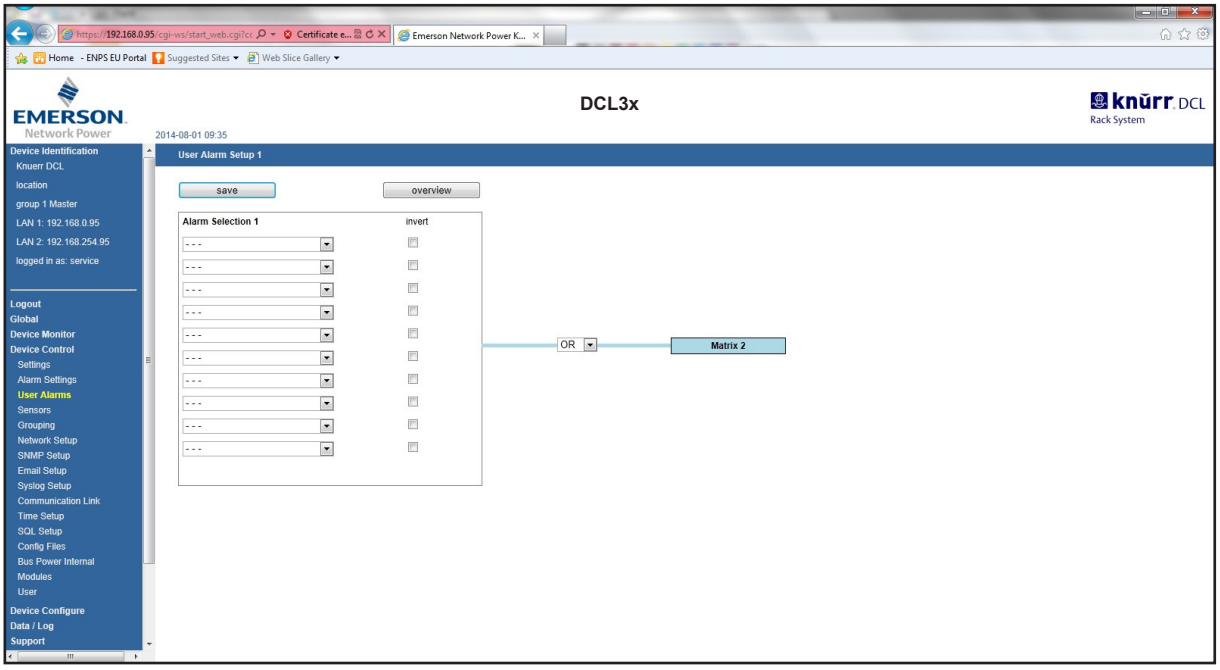
Summary alarm settings

Within the group you can select whether the particular event is going to be treated as info, warning, alarm or critical. And if this event will trigger the alarm relay (please refer to chapter 10.5 - XPFC contact).

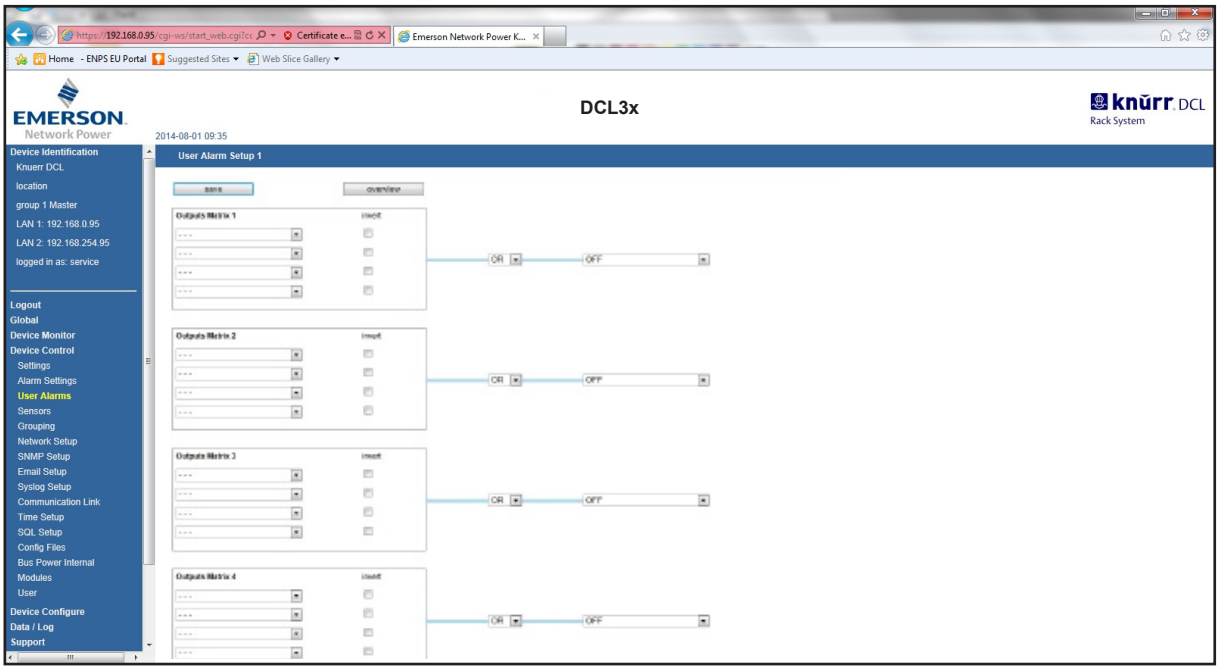


User alarms

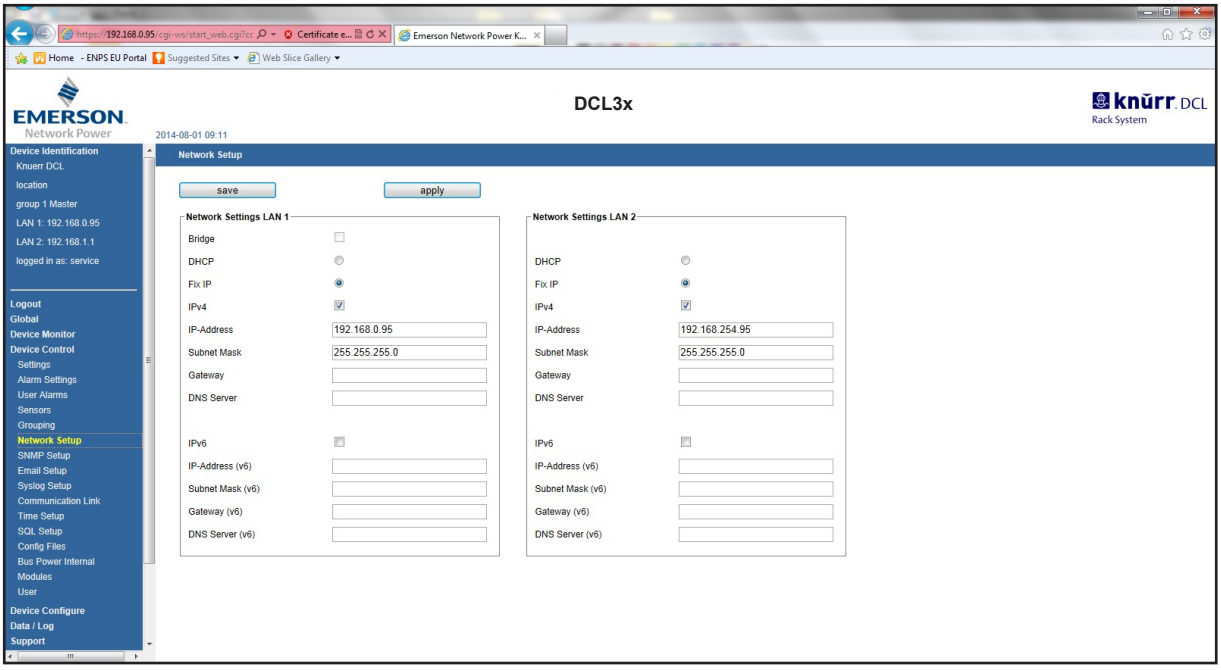
This screen allows you to create your own logic using the outputs of the various sensors on the unit (temperature measurements, door contacts, etc.) in order to create your own events. There are two levels of logic creation. The “result” of the first level is handed on to the second level.



User alarms 1

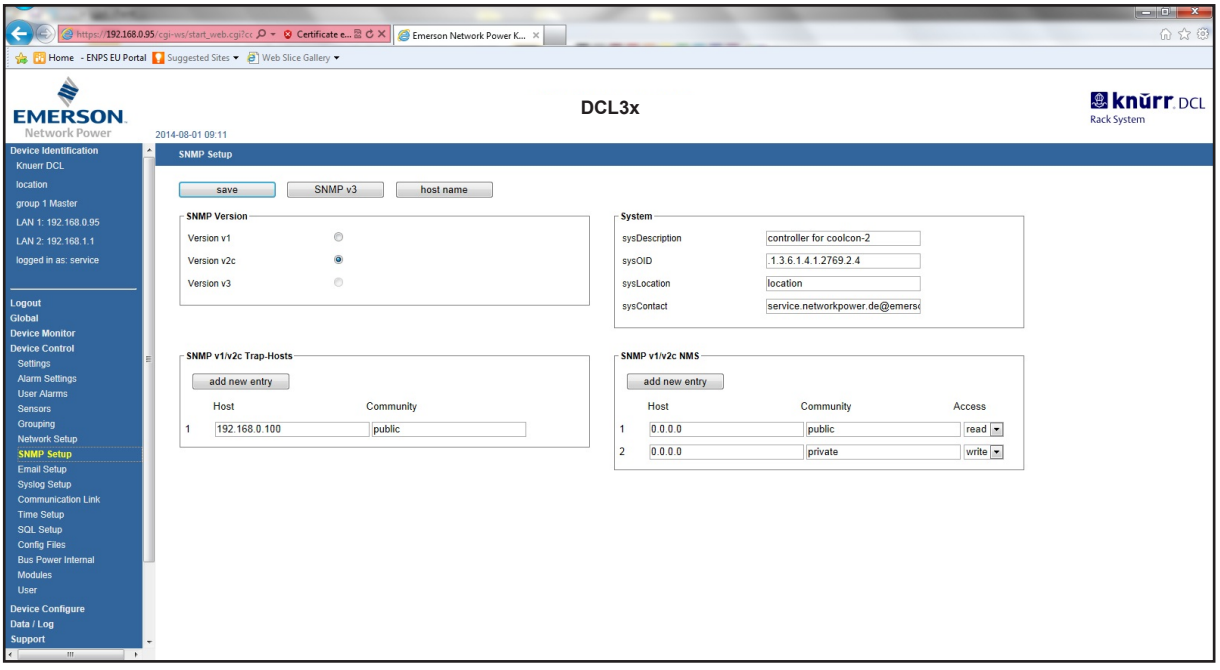


User alarms 2



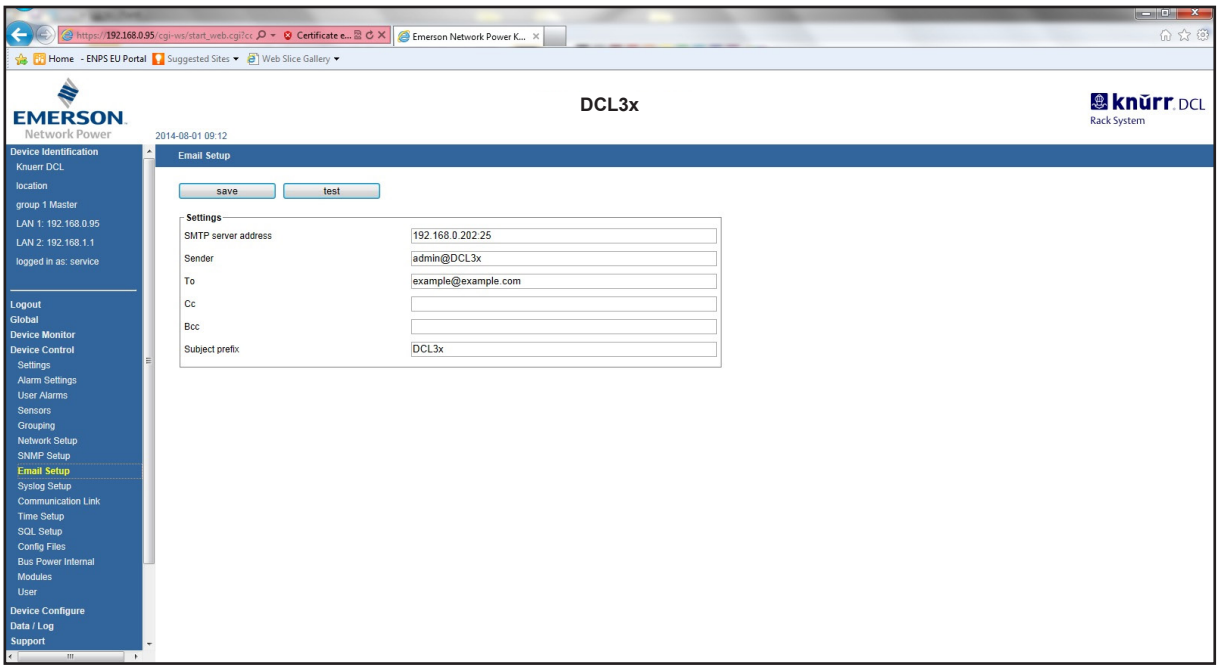
Network setup

Here you can change the IP addresses of LAN ports 1 and 2 (static IP) or, if a DHCP server is present, you can use dynamic addressing. The IP address of port 2 is changed based on the grouping mode automatically and should not be changed manually.



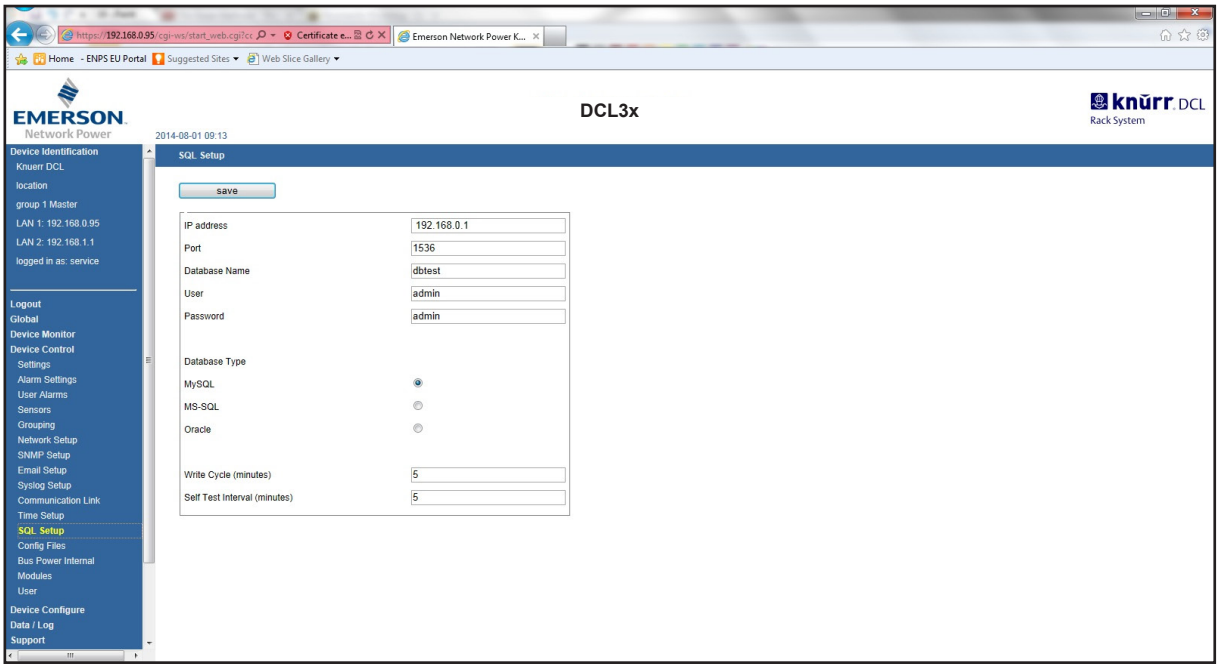
SNMP setup

Settings for SNMPv3 can be changed here. SNMPv3 users can be created and deleted. Trap recipients can be defined – it can use various security settings, such as MD5/SHA or DES/AES.



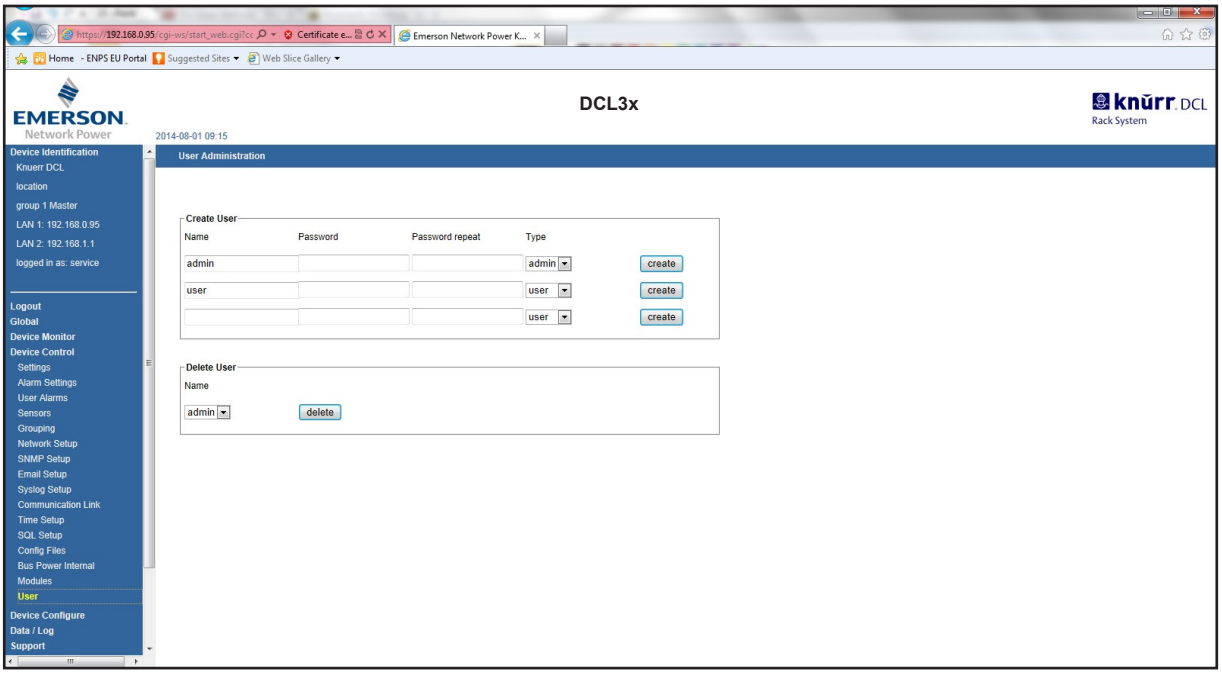
E-mail setup

Here you can set email recipients and send a test e-mail by pressing the “Test” button.



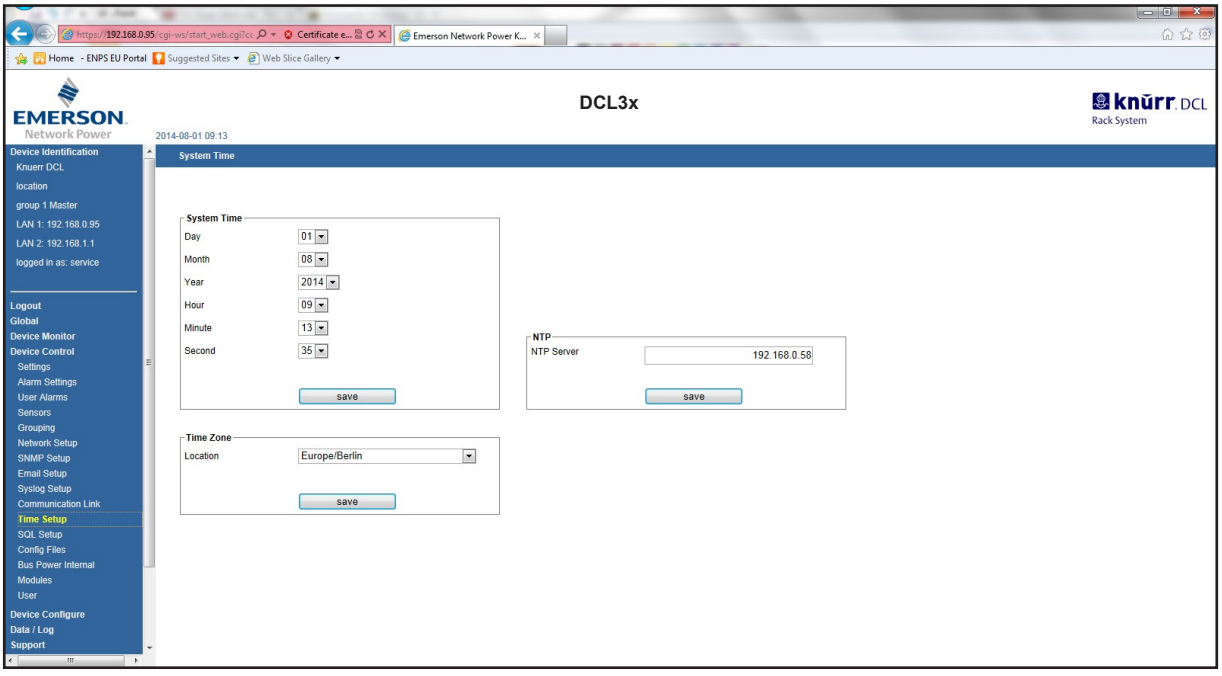
SQL setup

Configuration of the internal SQL client. This can be used to write values into an external database, featuring MySQL, MS-SQL or Oracle support.



User accounts

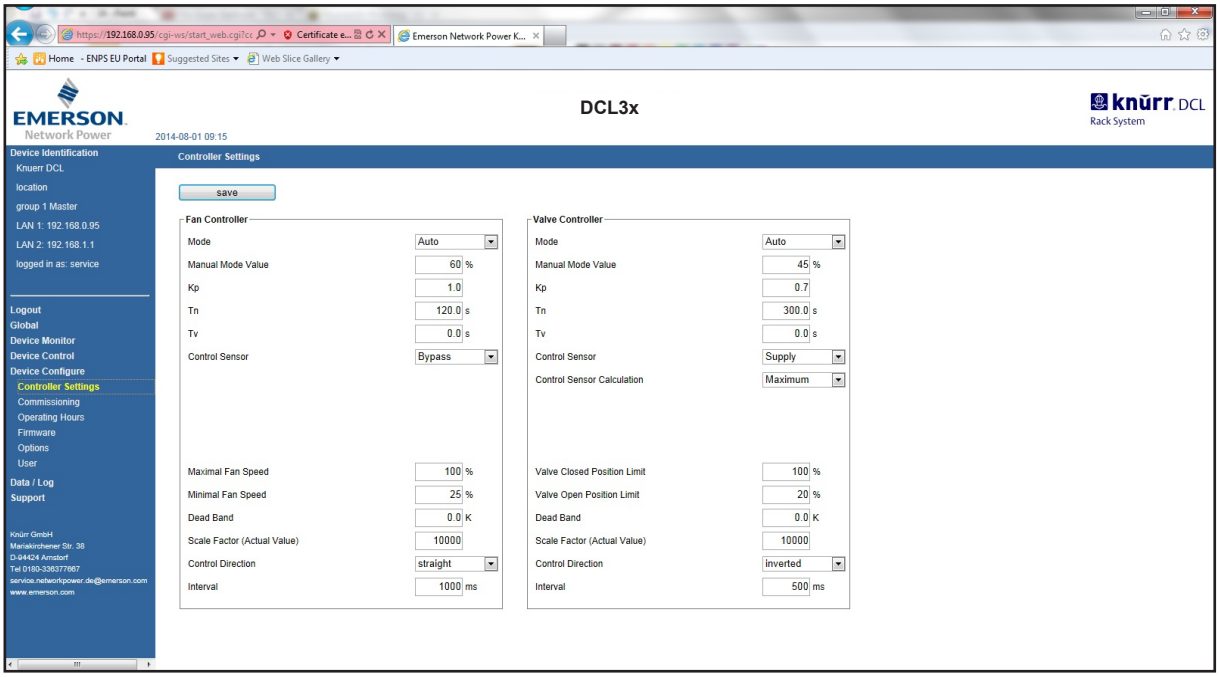
Up to eight users can be created. Three user levels (user, admin, service) are available with different rights.To delete a user account, related password needs to be used.



Time settings

Time can be set manually or using a time server.

Service section

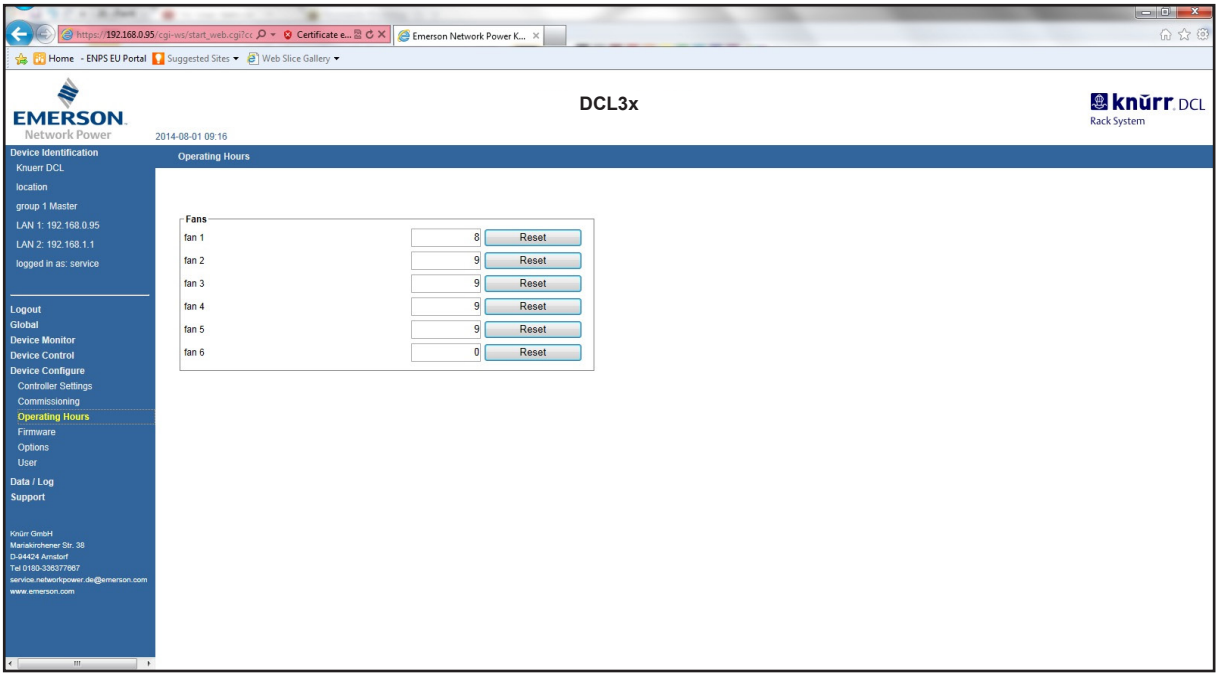


Controller settings

Settings of the fan and valve controllers. Manual or automatic mode can be selected. Manual input values will be used in manual mode.

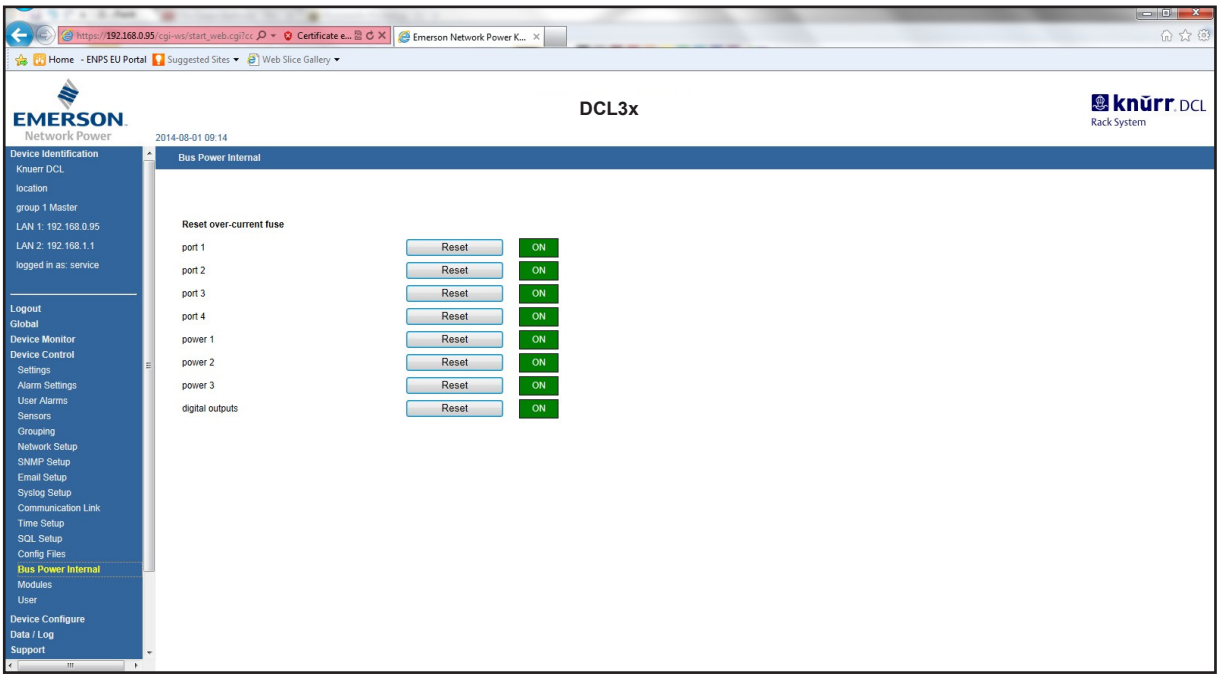
Kp, Tn, Tv: Values for PID controller, should not be changed
Rule sensor: Choice of the sensor used for the control

Speed max/min: Limit fan speed
Valve limits: Limit the valve control range
Scaling, control direction, interval: Do not change – these are constant values for components in use.



Operation hours

Shows hours of fan operation. Will be reset after fan replacement.



Bus power internal

This allows you to reset the electronic fuses after an unexpected error/event (interrupted cable, replacing the module, etc.)

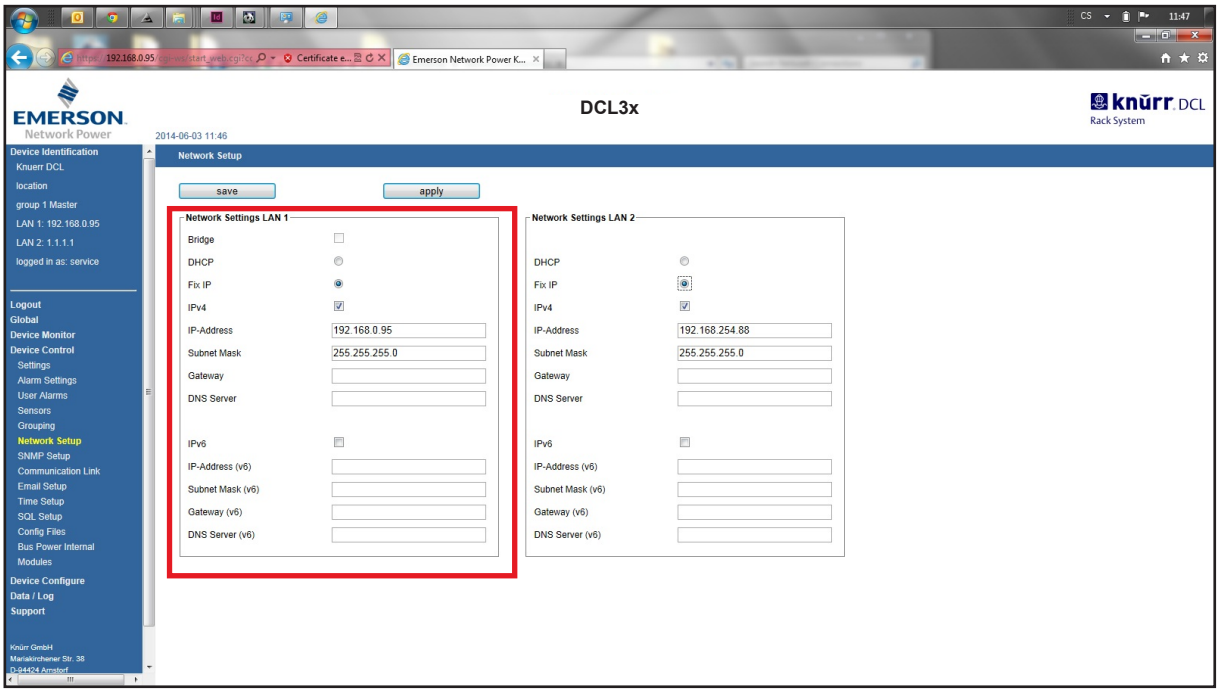
6.3 *Unit grouping*

Running the units in “group” mode is highly recommended for rack cooling or when using a containment solution (e.g., Smart Aisle). In the group regime, the fan speed regulation (only) is handled by the group’s master unit. Chilled water valve regulation is autonomous for each unit. The master unit collects sensor data from all selected “slave” units (step 5) and sets the regulation parameters accordingly. In case the master unit fails, all of the units revert to autonomous operation (“single” mode) using their respective settings. Up to 32 units (1 master + 31 slaves) can be in one group. The size of the group should reflect the actual physical arrangement of the units (usually up to 12 units). We suggest to divide the units into the groups based on which rack or row or containment they belong to. If you have any doubts please contact your respective service organization.
Group connection and communication is always handled via LAN port 2. LAN port 1 is used for connecting the units to the customer network (monitoring etc.) or to a computer (service purposes). It is possible to use only one switch for these connections. However, it is possible to use two separate network switches – one for the grouping (LANs 2) and one for the monitoring (LANs 1).

To create a group
Steps 1 and 2 describe LAN 1 network creation. When you are configuring a group mode for units with an existing LAN 1 network, you can skip steps 1 and 2.

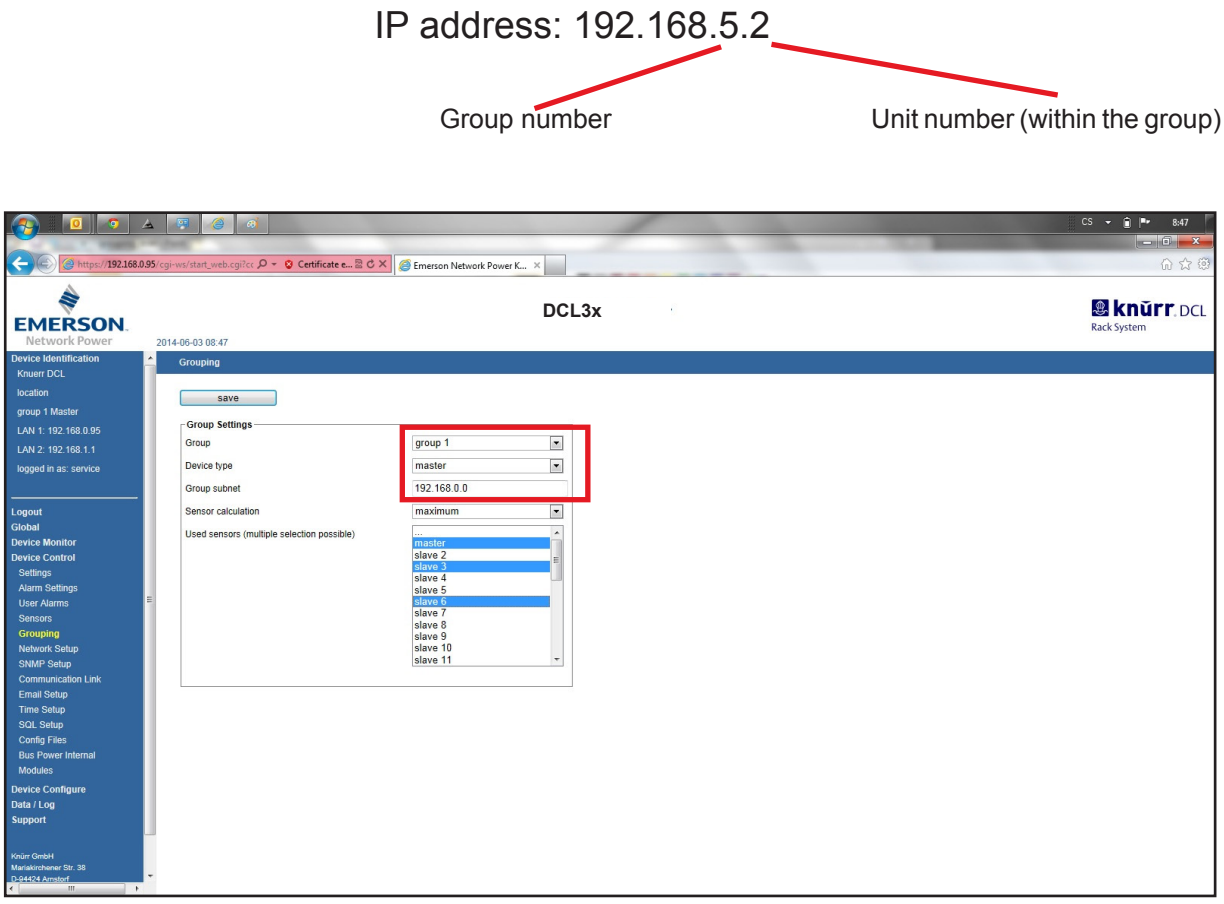
1 Prepare a layout (drawing) of your data center/computer room and plan out the groups.

2 Before you connect the units to the network physically, it is necessary to change the IP addresses to avoid conflicts. You only need to set the LAN port 1 address manually. The LAN port 2 address will be changed automatically based on the group settings. Log in to the web interface with your administrator user name (see chapter 6.2) and go to “De- vice control” – “Network setup”. Set up your LAN port 1 settings according to your requirements and in order to avoid conflicts. We recommend giving the units fixed IP addresses. Leave the LAN port 2 settings untouched. Now you can connect all the units to the switch using LAN port 1. LAN port 2 remains unconnected at this point. Save the settings you made.

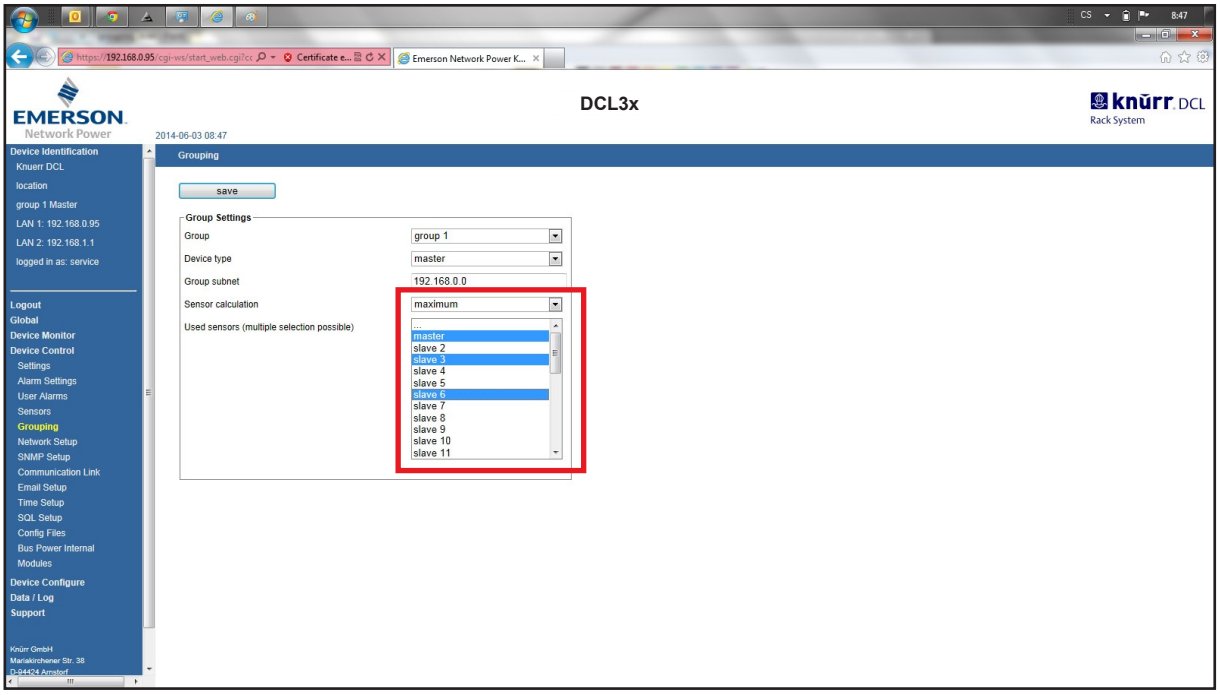


3 Now access the web interface of each individual unit (through LAN 1 switch or directly)

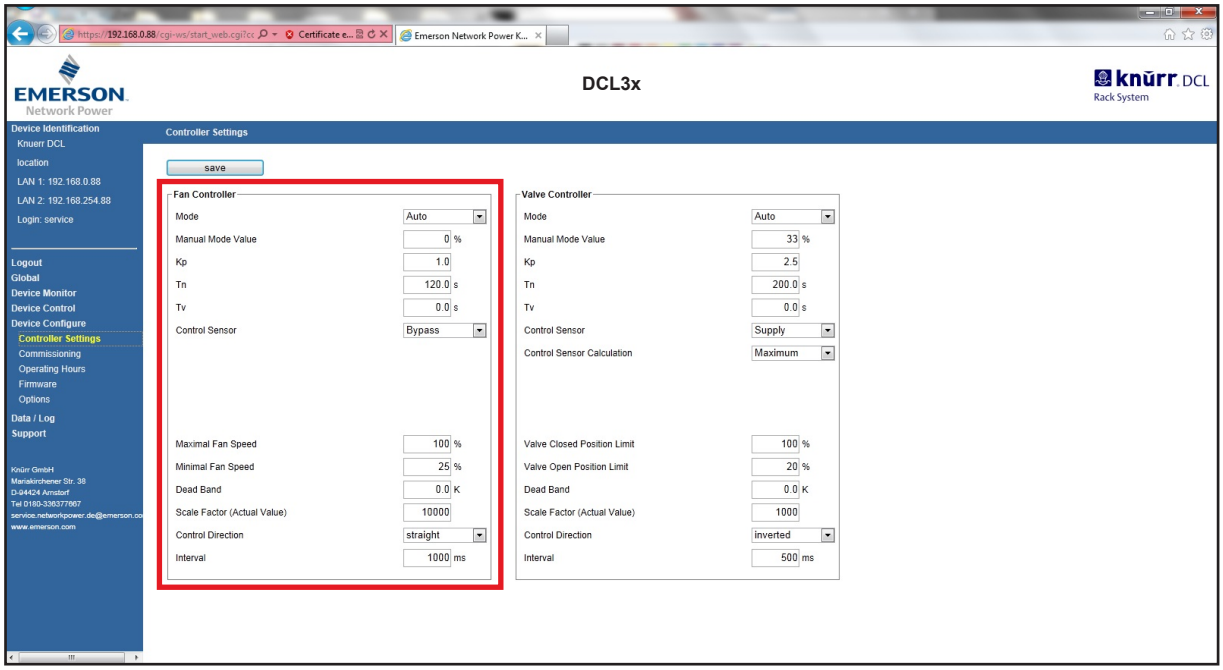
4 To establish the group communication, you need to log in to the web interface of each of the units you want to have in the respective group and make the following settings: Under “Device control” – “Grouping”, please select the number of the group the unit belongs to. You also need to select whether the unit is a “master” or a “slave” (only one unit can be the master within the group). The “Group subnet” address determines the range of IP addresses used within the group. You are free to select the first two positions (X.X.0.0). The last two positions remain at “0” and their value is determined based on the group number and the unit’s position within the group hierarchy. For example: The first slave unit (Slave 1) in group 5 would have the IP address of 192.168.5.2. The master unit of this group would then have the IP address of 192.168.5.1. Please note that these changes cannot be made to the working group. If you want to change anything, you need to start over with the group creation (set all units to single mode and start all over again). Save the settings you made.



5 On the master unit (only), in the same section “Device control” – “Grouping”, it is also necessary to select which units will be taken into account when calculating the control value for the fan regulator as well as the method of calculation. Multiple units can be selected by holding “Ctrl” on your keyboard and clicking on the name of the unit. After this step you can connect all the LAN ports 2 to the switch. Save the settings you made.

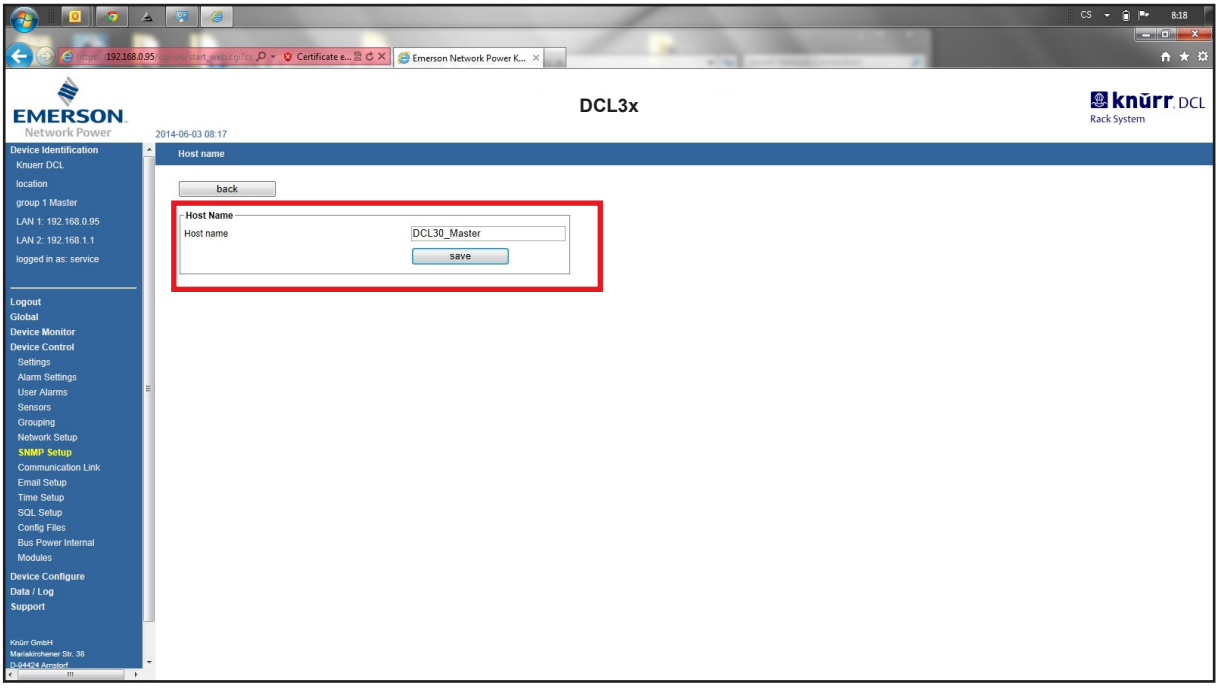


6 As there are multiple sensors on the units available for fan control, the sensor referred to in the “Grouping” setup (above) also needs to be selected. You can select this sensor in “Device configure” - “Controller settings”. Make this change ONLY on the master unit. Any changes made to any of the slave units will not be considered in the grouping mode. Slave units will use these settings only once the master unit has failed. Save the changes you made.



7 The master unit will now “collect” the information from the respective sensors (step 6) of all the units considered within the group (step 4 and 5), calculate the control value based on the calculation method desired (step 5) and set the group fan speed accordingly.

8 Optionally you can assign an individual name to each of the units to make them easily distinguishable. Under “Device control” – “SNMP setup” click on “Host name” and write the name for that particular unit into the box and save the changes. **Names must not contain any spaces or underscores.**



7 Maintenance and repair

WARNING. Hazards due to arc flashing, electric shock, high and low temperatures and fan blades rotating at high speed. May cause equipment damage, injury or death. Disconnect local and remote electric power supplies and wear appropriate personal protective equipment per NFPA 70E. Allow component temperatures to become safe for human contact before removing protective covers and working within. If the doors are opened immediately after the Knürr DCL has been switched OFF, the following hazards may prevail:

- electrical heaters, outlet areas may remain at high temperature of about 212°F (100°C);
- piping may remain at low temperature;
- fan blades may continue to rotate.

These residual risks are highlighted by warning labels on the **Knürr DCL**.

WARNING. Risk of electrical shock. Can cause injury or death. Disconnect all local and remote electric power supplies before working within. Before proceeding with installation, read all instructions, verify that all the parts are included and check the nameplate to be sure the unit voltage matches available utility power. The microprocessor controller does not isolate power from the unit, not even in the Unit OFF mode. Some internal components require and receive power even during the Unit OFF mode of the embedded controller. An optional factory-supplied disconnect switch may be installed inside the unit. The line side of this switch contains live high voltage when switched OFF. You must open all local and remote electric power disconnect switches to ensure that there is NO life-threatening voltage potential inside the unit. Refer to the unit electrical schematic. Follow all local codes.

Risk of improper maintenance. May cause equipment damage. All maintenance must be performed by authorized and properly trained and qualified personnel only.

All maintenance operations must strictly observe national, state and local accident prevention regulations, especially regulations concerning electrical systems, refrigerators and manufacturing resources. Maintenance on air conditioning equipment must be performed by authorized and properly trained and qualified personnel only. In order to keep all warranties valid, any maintenance must adhere to the manufacturer's regulations.

Ignoring safety instructions can be dangerous to humans as well as to the environment. Soiled parts always cause loss of performance and, for switch or control devices, may lead to the breakdown of the facility.

Spare parts originally made by Emerson Network Power must be used only. Using third-party material may void warranty. When seeking technical assistance, always refer to the component list supplied with the equipment, and specify the model number, serial number and, if available, the part number.

Conduct checks monthly, quarterly, biannually and annually according to the following guidelines.

NOTICE. When replacing a component, follow the relevant manufacturer's instructions. When replacement parts must be brazed, be careful not to damage the internal parts (gaskets, seals, O-rings, etc.).

All tasks and time periods listed here are the manufacturer's regulations and must be documented in an inspection report.
Follow the maintenance schedule below (skip the parts of no relevance to your unit).

Component		Maintenance period			
		Monthly by user	Every 3 months	Every 6 months	Annually
General	Check unit display for clogged filter warning	X			
	Check for irregular noise from the unit fans	X			
Filters	Check state of the filters		X		
	Replace filter if necessary		X		
	Check filter switch functionality			X	
Fans	Verify that impellers move freely		X		
	Check bearings			X	
	Check motor mounts for tightness			X	
Electrical/electronics	Check condition of contacts			X	
	Check electrical connections				X
	Check operation of controller			X	
	Check unit operation sequence			X	
Chilled water circuit	Check for leakages / general condition		X		
	Check water inlet and outlet temperatures			X	
	Check water valve operation			X	
Air circuit	Check coil condition			X	
	Check pipeline conditions			X	
Water pump	Check functionality			X	

Maintenance schedule

Problem	Possible cause	Corrective action
Rack temperature is too high	Dirty filters	Replace filter
	Faulty filter clogs	Call service
	Incorrect positioning of temperature sensors	Verify remote temperature sensors correct positioning
	Remote temperature sensor issue	Call service
	Inlet water temperature is too high	Check cooling water temperature
	Cold/hot air short circuit	Verify unit positioning/check containment sealing
	Insufficient room cooling capacity	Reduce rack heat load or add cooling units
	Water regulating valve issue	Call service
	Unit safety devices intervention	Call service
Unit fan fails to start	Faulty fan	Call service
Water drops carried by airflow	Room humidity is off limit	Check room conditioning
	Condensate tray is clogged	Call service
Water on the floor around the unit	Unit is not properly levelled	Adjust the levelling feet
	Condensate pipe is clogged	Remove pipe obstruction
	Water circuit leak	Locate the leak and fix it
	Broken piping insulation	Repair the insulation
	Leak in drain circuit	Call service
	Condensate pump is faulty	Call service
Noise level is higher than expected	Incorrect positioning of remote temperature sensors	Verify correct positioning of remote temperature sensors
	Unbalanced heat load	Enhance rack heat load distribution
	Remote temperature sensor issue	Call service
Unsteady air supply temperature	Faulty temperature sensors	Call service
	Unit controller issue	Call service
Local display not operational but unit operates	Display cable disconnected	Connect the cable
	Display cable damaged	Replace the cable
	Local display configuration lost	Call service
Local display not operational and the unit does not operate	Unit electrical supply is off	Restore power supply
	Main switch is off	Switch the unit on
	Control boar issue	Call service

Basic troubleshooting

Heavily soiled heat exchangers are largely limited in their operation and must immediately be cleaned. For cleaning their lamellas, use a vacuum cleaner, compressed air or a soft brush. When cleaning the lamellas, do not bend them. This will increase pressure loss.

Regularly check the condensed water drain and, if necessary, clean it.

8 Disassembly and disposal

Properly switch OFF all fans and other electrical components and disconnect them from their power supply!

Protect them against being re-connected!

	Any disassembly of the Knürr DCL unit must be performed by qualified personnel only.
	Shut down the chilled water system before disassembly and prevent it from restarting.
	Dispose of all components and parts in accordance with local waste management and regulations. We recommend a recycling company. All components consist of: • aluminium, steel, brass, copper • marked plastic components

9 Customer service contact and address

EMERSON NETWORK POWER - EMEA
Racks and Solutions
Knürr GmbH
Mariakirchener Str. 38
94424 Arnstorf Germany

T +498723270
F +49872327154
thermalmanagement.EMEAhelpdesk@emerson.com
servicecooling.networkpower.emea@emerson.com

10 Annexes

10.1 Quality requirements for water

Water impurity	Method for removal
Mechanical impurity (dp < 0.3 mm)	Filter the water
Excess hardness	Soften the water by ion exchange
Moderate level of mechanical impurities and hardeners	Add dispersion or stabilizing agents
Moderate level of chemical impurities	Add deadening agents and inhibitors
Biological impurities (bacteria and algae)	Add biocides

Hydrological data	Values	
pH values	(7 ÷ 10,5)	
Carbonate hardness	(0.54 ÷ 1.43)	mmol/l
Free carbon dioxide	(8 ÷ 15)	mg/dm^3
Combined carbon dioxide	(8 ÷ 15)	mg/dm^3
Aggressive carbon dioxide	0	mg/dm^3
Sulphides	< 10	mg/dm^3
Oxygen	< 50	mg/dm^3
Chloride ions	< 250	mg/dm^3
Sulphate ions	< 10	mg/dm^3
Nitrates and nitrites	< 7	mg/dm^3
COB	< 5	mg/dm^3
Ammonia	< 5	mg/dm^3
Iron	< 0.2	mg/dm^3
Manganese	< 0.2	mg/dm^3
Conductivity	< 30	µS/cm
Solid residue from evaporation	< 500	mg/dm^3
Potassium manganese consumption	< 25	mg/dm^3
Suspended matter	< 3	mg/dm^3
(partial flow cleaning is recommended)	(3 ÷ 15)	mg/dm^3
(permanent cleaning)	> 15	mg/dm^3

10.2 Check list for setting up the device

Performed checks	Done (to be signed upon completion)	Notes
Check device for damage upon receipt.		
Check the ground for being horizontal.		
Check bearing capacity of ground.		
Add-on and align, connect to server cabinet, position feet of Knürr DCL and adjust them horizontally		
Cables connected with server cabinet: - Temperature sensors (optional) - Server shut-down (optional) - Automatic door opening - Door contact (optional) - Fire alarm systems (optional)		
Cable connected with set of external valves (optional): - Valve drive - Flowmeter with temperature sensors (optional)		
Optional automatic door opening adjusted at server cabinet		
No remains of packaging inside Knürr DCL		
All assembly tools removed		
Cable bushings into the device proper and air-tight		
Cable connections checked (power supply)		
Chilled water connection leak-proof/ pressure-tested		
Chilled water system deaerated		
Volume flow of chilled water adjusted		
Condensed water line unobstructed		
Smell trap of chilled water system functional		
Cooler tub connected to condensed water line		
Fans checked for function		
All front panels closed (air ducts technically separated)		

..... Place:

..... Date:

..... Signature of Tester

10.3 Commissioning protocol

Knürr DCL Commissioning Protocol

1. General Details
1.1 Customer/Site of installation

Customer's name: ……..

Customer's address: ……..

……..

……..

Contact partner: ……..

Phone number: ……..

Site of installation/room number: .....

Humidity at site of installation: ..... % rel. humidity

Ambient temperature ..... ° C

1.2 Configuration

Cabinet type:
Knürr DCL 30 kW □ Knürr DCL 34 kW □
DCL-R □ DCL-L □ DCL-H □

Commission number: .....
Serial number: .....

Special remarks:
.....
.....
.....

2. State Check
2.1 General State

Customer's proof of bearing capacity of ground / transport ways □
Check of alignment □
Transport damage to housing: yes □ no □

Remarks
.....
.....
.....

Residual packaging removed: yes □ no □

Assembly tools removed: yes □ no □

Air ducts checked: yes □ no □
(server cabinet front plates closed, passages/opening Knürr DCL/server cabinet)

2.2 Chilled water system within the facility

Chilled water: with anti-freeze □ without anti-freeze □

Knürr DCL
Connected to: CTU □ cold water system, direct □
circuit in building, direct □

Chilled water temperature
(primary): Feed: ..... °C Return: ..... °C

Chilled water pressure Feed: ..... bar Return: ..... bar

Connection: set of internal valves □
with Knürr connection set □
set of external valves □

Customer's hydraulic plant OK
(visual check): yes □ no □

Remarks: ……..

2.3 Electrical data/documents

Power circuit diagram enclosed: yes □ no □
Remarks:
.....

Cabling checked: yes □ no □

Acceptance protocol for electrical installation available:
yes □ no □
Remarks:
.....

3. Functional check

3.1 Mechanical functions

Damage to heat exchanger/
Connections/ lamellas / surface: none □ existing □
Remarks:
.....
Add-on screwed to fit, stiffening wall: yes □ no □
remarks:
.....

Front door, closing: yes □ no □
Remarks:
.....
Rear door, closing: yes □ no □
Remarks:
.....

Pipe duct inlets / cable bushings closed: yes □ no □
Remarks:
.....

Condensed water drain open / connected: yes □ no □
remarks:
.....

Fans run perfectly (bearings OK)
Visual check yes □ no □
Remarks:
.....

3.2 Electrical functions

Functional check of valve / fan control yes □ no □
Remarks:
.....

Functional check of smoke alarm (optional) yes □ no □
Remarks:
.....

Functional check of temperature control:
yes □ no □
Remarks:
.....

Functional check
of automatic door opening (optional) yes □ no □
Adjustment of electric magnets – see Operation Manual “Automatic Door Opening/Initial Commissioning”
Remarks:
.....

Functional check of water alarm (optional) yes □ no □
Remarks:
.....

Check for error / disturbance alarms yes □ no □
Remarks:
.....

3.3 Thermodynamic Checks

Condensed water forming at heat exchanger yes □ no □
Remarks:
.....

Chilled water entering heat exchanger: .....° C

Chilled water leaving heat exchanger: .....° C

Cabinet temperature in front of heat exchanger: .....° C

Cabinet temperature behind the heat exchanger: .....° C

Chilled water network bleeded: yes □ no □

Pressure of chilled water network tested: yes □ no □
(customer’s protocol available)

Chilled water flow adjusted: yes □ no □ external □

Chilled water flow: ……. l / min external □

Remarks:
.....

Correctness of above values is hereby confirmed.
Commissioning was performed during on-going operation.

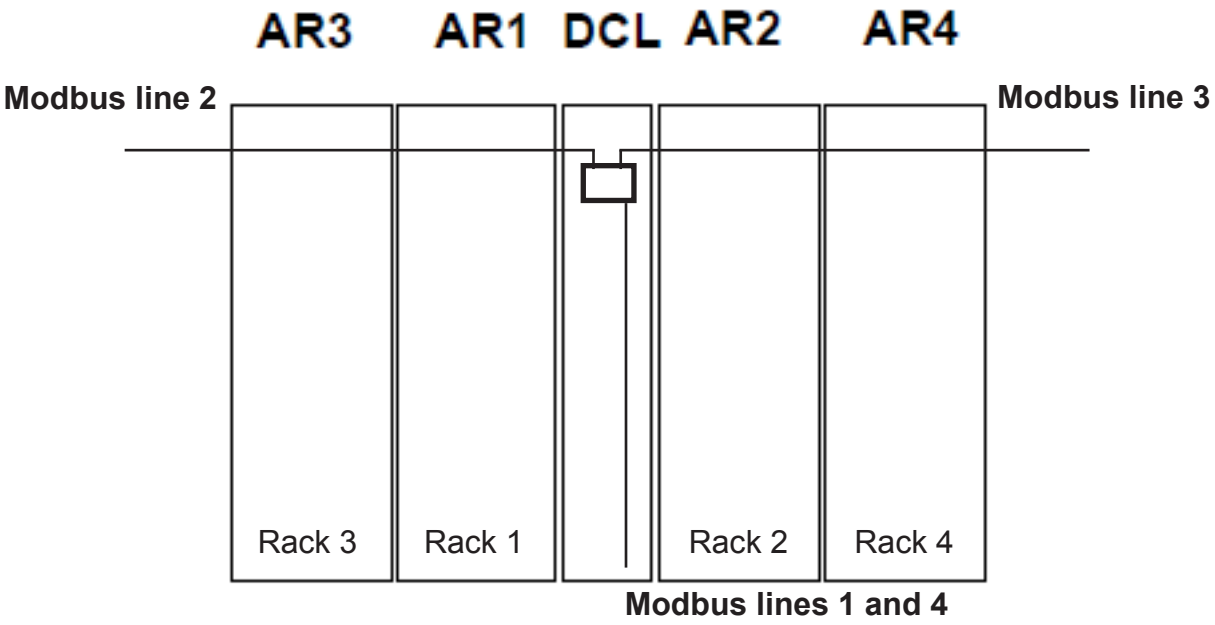
.....	.....	.....
Commissioning firm	Date	Signature

.....	.....	.....
Customer	Date	Signature

10.4 Additional modules - installation procedure

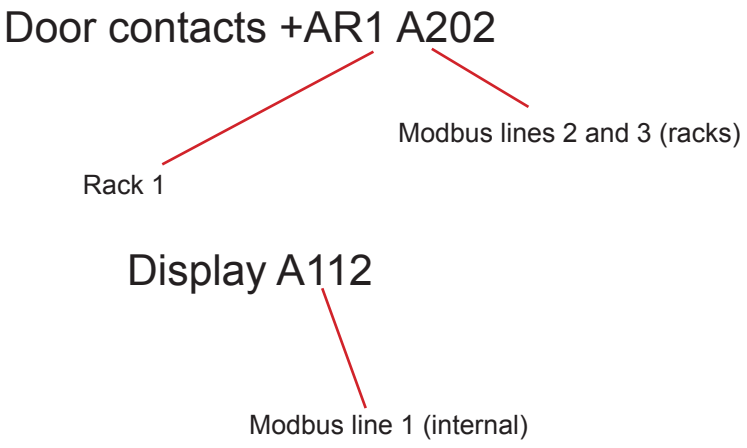
Modbus lines/sensor modules numbering

To determine the number of the rack/module and the number of the sensor module, you need to consult the following diagram.
There are 4 Modbus lines in total. Line number 1 is used internally for modules within the unit itself. Line number 4 is used for connecting external optional equipment. Line number 2 is used for connecting modules which are located in the racks to the left (viewed from the front) of the unit. Line number 3 is used for connecting modules which are located in the racks to the right (viewed from the front) of the unit. Each Modbus line must be terminated with an end-of-the-line resistor.



Front view

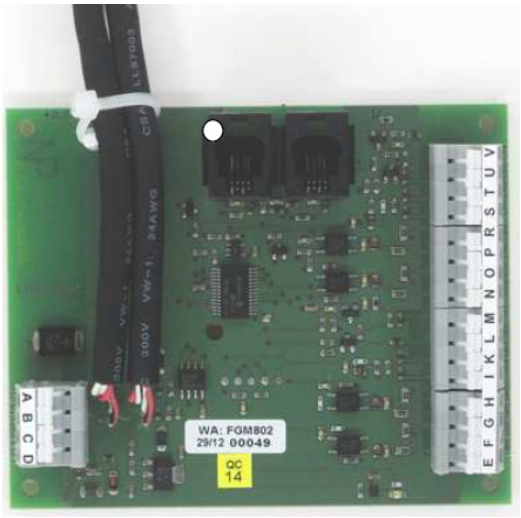
Example:
If you want to activate the door contact module in rack 1, you need to look under Port (Line) 2 for the module “Door contacts +AR1 A202”. See the first picture in the chapter “New sensor module activation” – below.



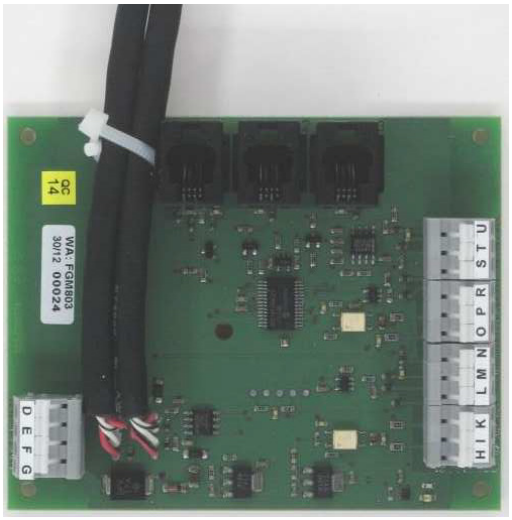
Sensor modules types

There are four different types of sensor boards (modules) available for the Knürr DCL.

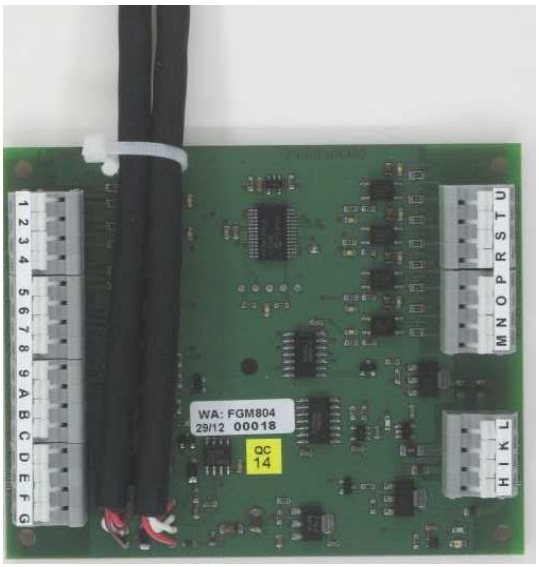
Fan module - This board collects temperature readings of supply and return air and the fan data of respective group of the fans. It is located on the board with fan circuit breaker.



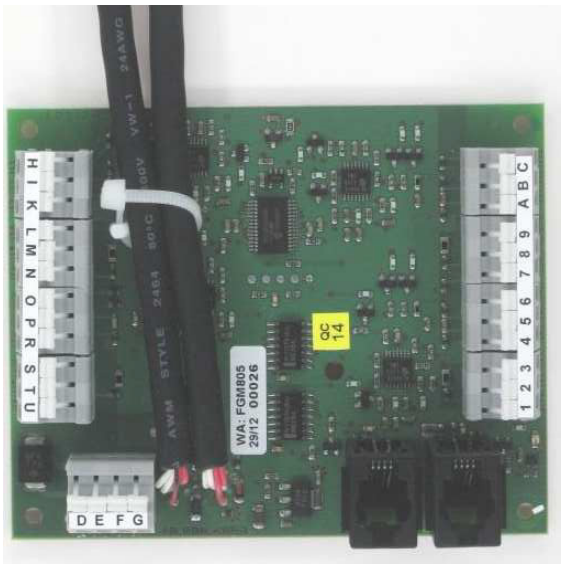
Valve module - This board controls the chilled water circuit valve and measures the chilled water temperature. It is located next to the middle fan circuit breaker.



Digital I/O module - This module is used for customer inputs and outputs (and rack door control and monitoring). It is optional and, if present, it is located in the back of the unit at the top, bolted to a metal bracket.



Analog module - This module is used for remote rack temperature measurement and also the bypass pipe temperature measurement. The bypass temperature measurement module is located at the top of the DCL next to the Gateway. When present as an option, it is located in the respective rack bolted to a metal bracket.

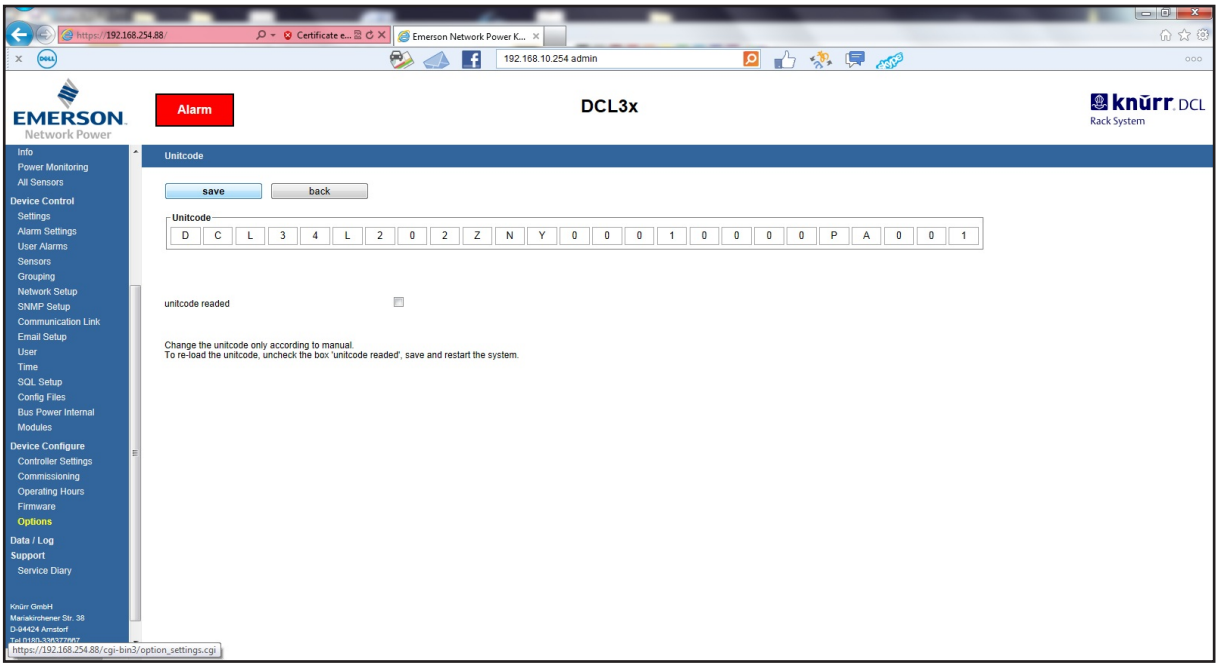


To activate any new / additional equipment

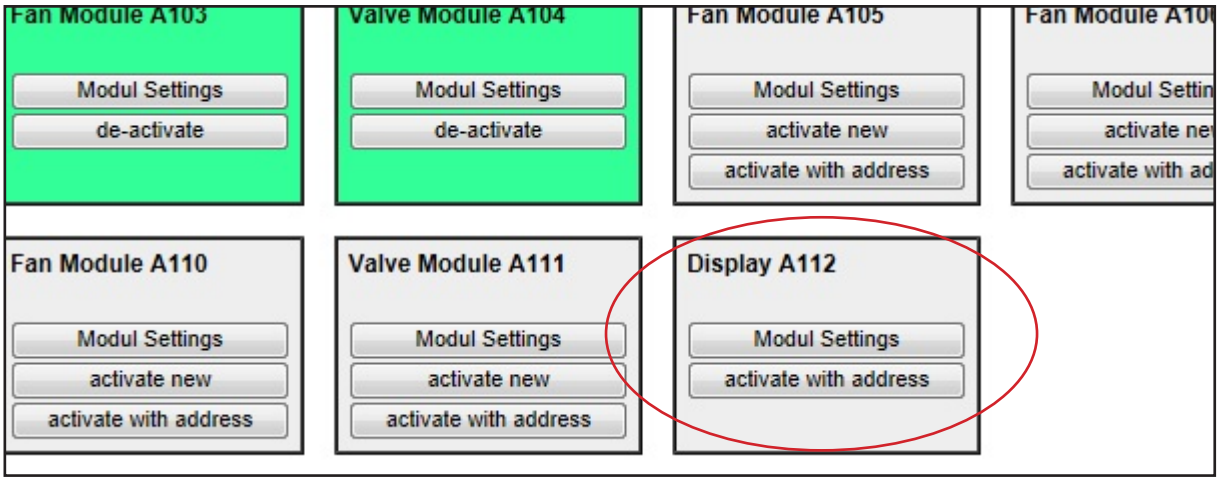
1 Login to the web interface using your service credentials.

Display installation

1 Connect the display as described in “Display installation” section. The display connects to Modbus line 1.
2 In the web interface, go to “Options” under “Device configure” and click on “Unit code”.
3 Now you need to alter the unit code in such a way that it reflects newly added features. In the case of installing a new display, changing digit 16 from “0” to “Y” is required.
4 Make sure the tick-box is not checked and press “Save”.
5 Go to “Firmware” under “Device Configure” and click “Restart”.



6 After some time (approx. 30-120 sec.), the changes will have been carried out.
7 Go to “Commissioning” under “Device configure”. Locate the display box (A112, under Port 1) and click “Activate with address”. The color of the box should go from grey to green.
8 The display is now ready to be used.



Digital module installation (e.g. customer I/Os, rack door control and monitoring, fire detection inside the rack)

1 Connect the module to respective Modbus line and mount it using the material provided with the module.

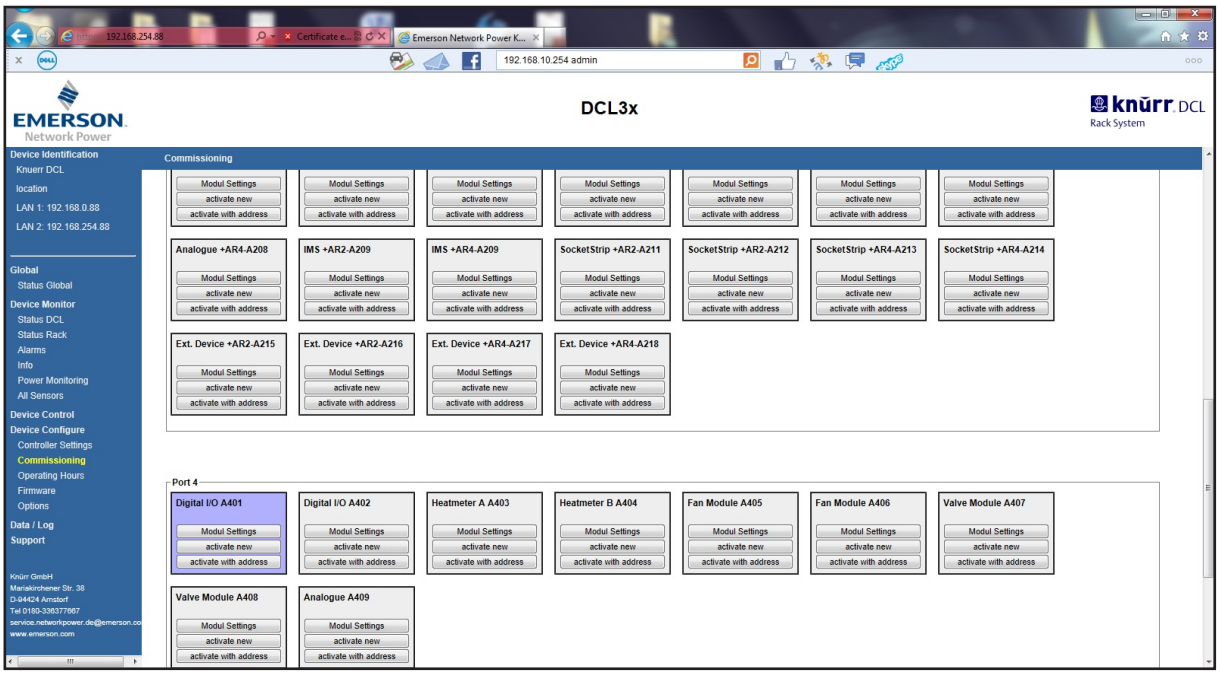
2 Next to the “H” terminal of the board, there is a Hall effect sensor. Use a magnet to activate the sensor. Sensor activation is signaled by rapid blinking of the LED. After 30s activation (LED flashing frequency increases) the board is set to address “247” and is now ready to be assigned.

3 In the web interface, go to “Options” under “Device configure” and click on “Unit code”.

4 Now you need to alter the unit code in such a way that it reflects newly added features. In case of installing user I/Os, changing digit 19 from “0” to “D” is required.

5 Make sure the tick-box is not checked and press “Save”.

6 Go to “Firmware” under “Device Configure” and click “Restart”.

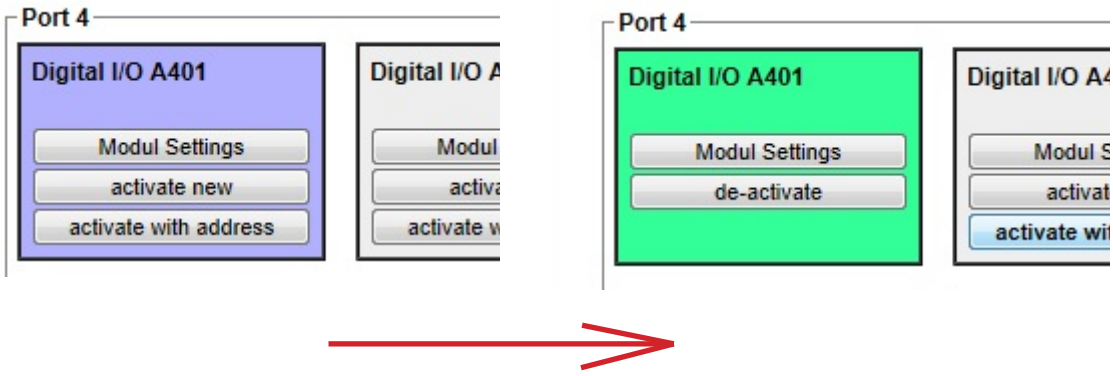


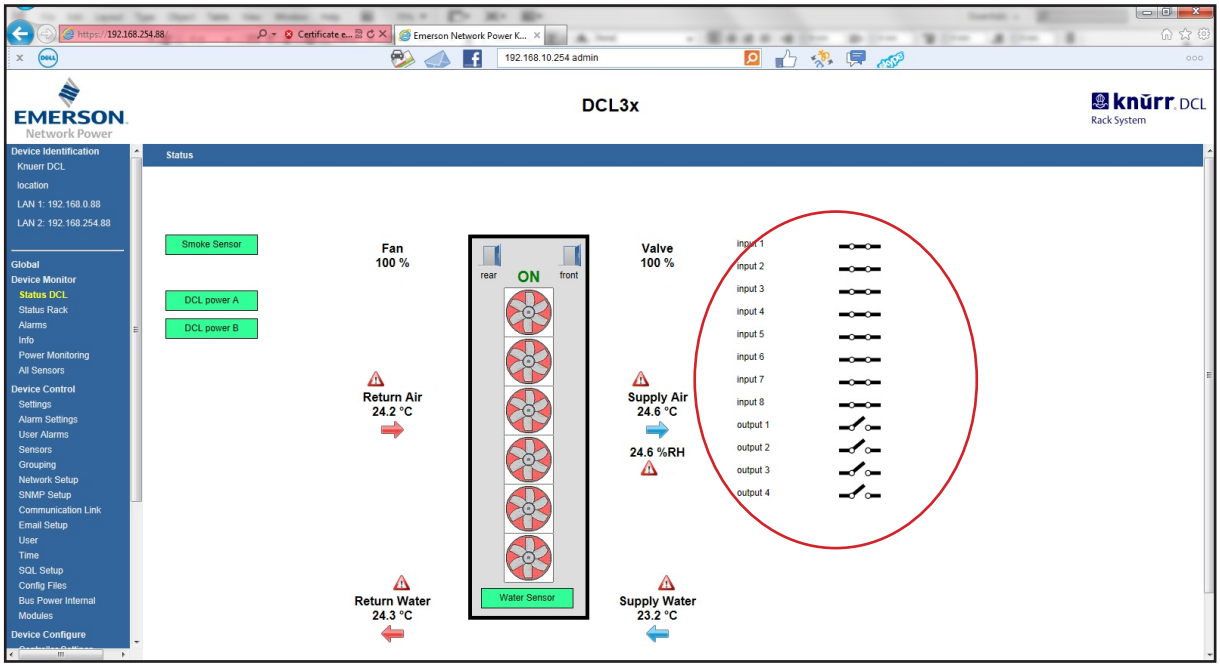
7 After some time (approx. 30-120 sec.) the changes will have been carried out.

8 Go to “Commissioning” under “Device configure”. Locate the I/Os box (A401, under Port 4). It should show in purple. Use a magnet to activate the Hall effect sensor once more (for approx. 1 sec.) and click on “Activate new”.

9 The color of the box should turn from purple via orange to green.

10 The module is now ready to be used. Also the status of the I/Os should be displayed on the “Status DCL” page in the web interface.





Analog module installation (e.g. Calorific flow meter)

1 Connect the module to respective Modbus line and mount it using the material provided with the module. Refer to the installation manual of the device.

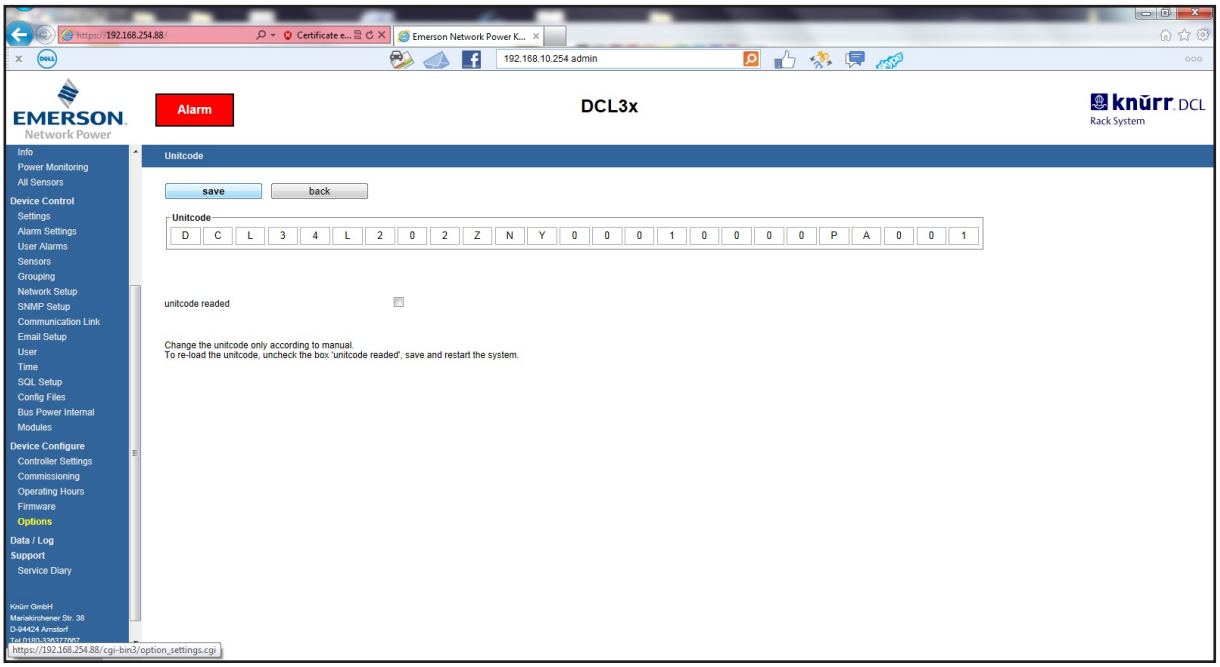
2 Next to the “H” terminal of the module board, there is a Hall effect sensor. Use a magnet to activate the sensor. Sensor activation is signaled by rapid blink- ing of the LED. After 30s activation (LED flashing frequency increases) the board is set to address “247” and is now ready to be assigned.

3 In the web interface, go to “Options” under “Device configure” and click “Unit code”.

4 Now you have to alter the unit code in such a way that it reflects newly added features.

5 Make sure the tick-box is not checked and press “Save”

6 Go to “Firmware” under “Device Configure” and click “Restart”.



7 After some time (approx. 30-120 sec.) the changes will have been carried out.

8 Go to “Commissioning” under “Device configure”. Locate the calorific flow meter (A403, under Port 4). It should show in purple. Use a magnet to activate the Hall effect sensor once more (for approx. 1 sec.) and click on “Activate new”.

9 The color of the box should turn from purple via orange to green.

10 The module is now ready to be used. Also the status of the flow meter should be displayed on the “Status DCL” page in the web interface.

Other equipment (not requiring module e.g. A/B transfer switch, condensate pump)

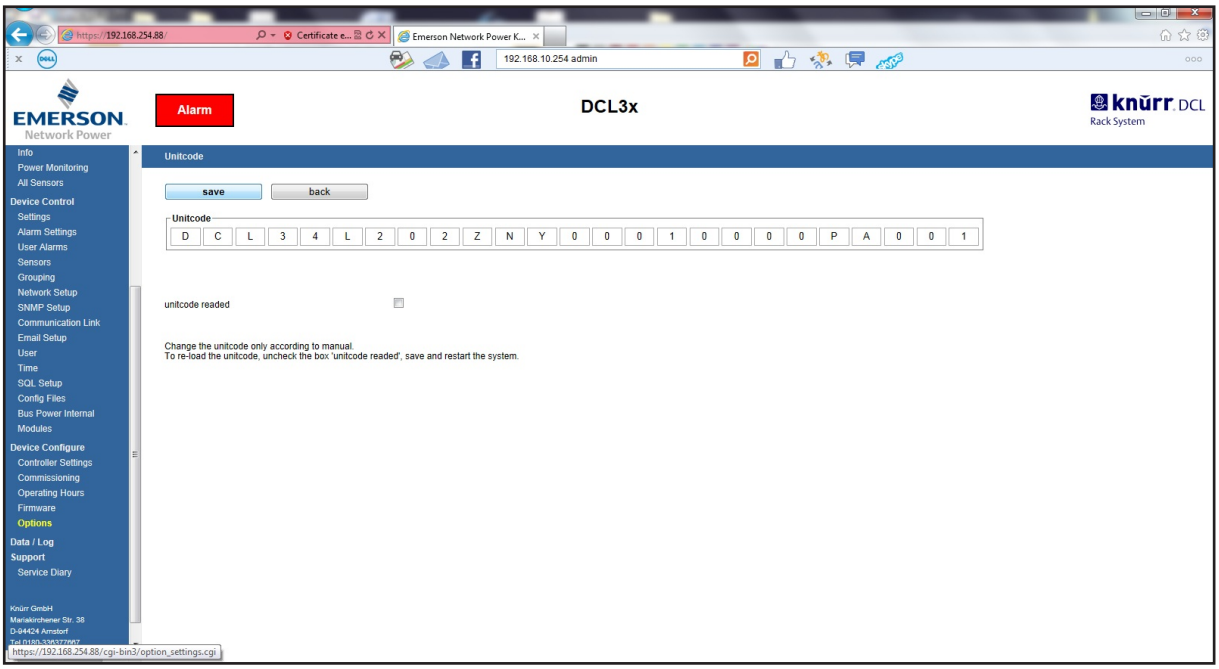
1 Connect the device switch according to the instructions provided and using the materials provided with the device shipment. The device needs to be connected to the respective terminals of the DCL unit (see table in the annex).

2 In the web interface, go to “Options” under “Device configure” and click “Unit code”.

3 Now you need to alter the unit code in such a way that it reflects newly added features (e.g., in case of installing a user transfer switch, changing digit 12 to the respective option is required).

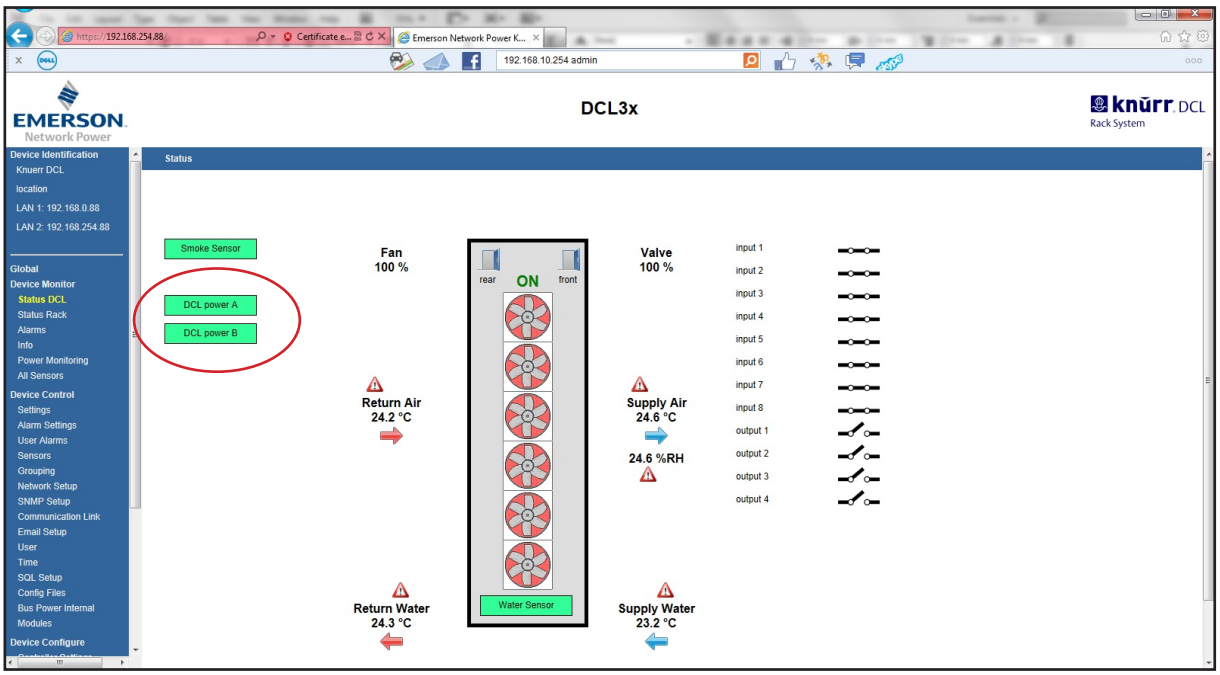
4 Make sure the tick-box is not checked and press “Save”.

5 Go to “Firmware” under “Device Configure” and click “Restart”.



6 After some time (approx. 30-120 sec.) the changes will have been carried out.

7 The device is now ready to be used. Also the status of the device should be displayed on the “Status DCL” page in the web interface.



Additional racks, installation procedure for modules

Preparation

1 Log in to the web interface using your service credentials.
2 In the web interface, go to “Options” under “Device configure” and click on “Unit code”.
3 Now you need to alter the unit code in such a way that it reflects newly added features. In case of installing a user transfer switch, changing digits 13 and 20 to their respective options (reflecting the number of racks, etc.) is required.
4 Make sure the tick-box is not checked and press “Save”.
5 Go to “Firmware” under “Device Configure” and click “Restart”.

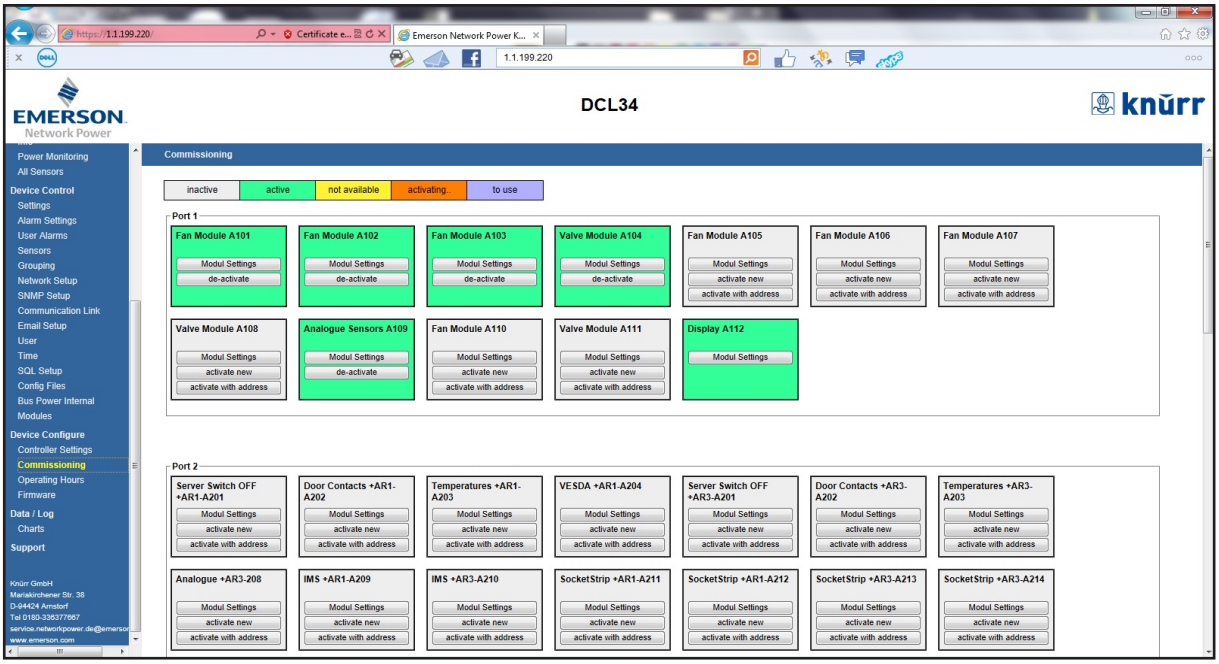
New sensor module activation

The first step is to “reset” the sensor to default address “247”. After that, the sensor can be assigned for different tasks. There are two types of modules available for the racks: digital and analogue. Analogue modules are used (mainly) for temperature measurement and are equipped with two ports for connecting temperature sensors. Digital modules are mainly used for door monitoring and door opening. Digital sensors do not have ports for connecting temperature sensors.

To activate the sensor module...

1 Mount the sensor to the desired position and plug the Modbus line in.
2 Use a magnet to activate the Hall sensor for 30s. The Hall sensor is located close to the “H” terminal, next to the blinking LED. (There are different types of sensor boards. However, the position of the Hall sensor is approximately the same.) This resets the module to address “247”.
3 Log in to the web interface with your log-in credentials – user name “admin”, password “knuerr”.
4 Use a magnet to activate the Hall sensor for 1s.
5 In section “Device configure”, click on “Commissioning”. Select the desired sensor and click on “Activate new”.
6 In the web interface, the color of the field should turn from grey to green (briefly showing orange).
7 The sensor is now ready to be used.

(If you need to reset the board to its default settings, hold the magnet close to the sensor for ~30 s. A successful reset is signaled by rapid flashing of the LED.)



10.5 Electrical box connectors description

Terminal	Pin	Function	Description
XTS	1	COM (+24V)	door contacts
	2	NC	door contact front door closed
	3	COM (+24V)	
	4	NC	door contact rear door closed
	5	free	
	6	free	

Terminal	Pin	Function	Description
XAB	1	COM (+24V)	A/B transfer switch
	2	NC	mains A powered ON
	3	COM (+24V)	
	4	NC	mains B powered ON
	5	free	
	6	free	

Terminal	Pin	Function	Description
XAI	1	free	
	2	free	
	3	free	
	4	free	
	5	COM (+24V)	water alarm
	6	NO	

Terminal	Pin	Function	Description
XSP1	1	+24V (supply)	power supply switch
	2	GND (supply)	
	3	free	
	4	free	
	5	free	
	6	free	

Terminal	Pin	Function	Description
XPFC	1	NC	Summary alarm
	2	NO	default: relay deactivated for failure (soft-ware invertable)
	3	COM	
	4	free	
	5	COM (+24V)	Remote standby
	6	NC	default: wire bridge

Terminal	Pin	Function	Description
XSP2	1	free	
	2	free	
	3	free	
	4	free	
	5	free	
	6	free	

Terminal	Pin	Function	Description
XSP3	1	free	
	2	free	
	3	free	
	4	free	
	5	free	
	6	free	

Terminal	Pin	Function	Description
XBLK	1	Out (1= ON)	beacon
	2	GND	

Terminal	Pin	Function	Description
XCPA	1	COM (+24V)	condensate pump failure
	2	NC	

Terminal	Pin	Function	Description
XSA	1	+24V (supply)	smoke alarm
	2	GND (supply)	
	3	COM (+24V)	
	4	NO	

Terminal	Pin	Function	Description
XHU	1	+24V (supply)	air monitoring humidity
	2	GND (supply)	
	3	0-10V(+)	temperature 0-100°C
	4	0-10V(+)	humidity 0-100%

Terminal	Pin	Function	Description
XCP	1	230V L	condensate pump power
	2	230V N	
	PE	PE	

X15, X16 (not on the rear of the e-box, cable ending near valve)

Terminal	Pin	Function	Description
X15	1	+24V (supply)	valve
	2	GND (supply)	
	3	0 – 10VDC	control valve position
	4	free	
	5	2 – 10VDC	feedback valve position
	6	free	

Terminal	Pin	Function	Description
X16	1	+24V (supply)	valve - redundant heat exchanger
	2	GND (supply)	
	3	0 – 10VDC	control valve position
	4	free	
	5	2 – 10VDC	feedback valve position
	6	free	

10.6 Performance charts

DCL 30kW Single Feed			
	EWT 7°C, 5°C Water temp. increase	**EWT 10°C, 5°C Water temp. increase**	**EWT 13°C, 5°C Water temp. increase**
40°C - 20% RH			
Total Cooling Capacity - kW	37,7	34,1,	30,4
Sensible Cooling Capacity - kW	37,7	34,1	30,4
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	1,80	1,63	1,46
Water Side Pressure Drop - kPa	105	86	69
Supply Air Temperature - °C	16,8	19,1	21,4
37°C - 24% RH			
Total Cooling Capacity - kW	34,1	30,5	26,8
Sensible Cooling Capacity - kW	34,1	30,5	26,8
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	1,63	1,46	1,28
Water Side Pressure Drop - kPa	88	70	55
Supply Air Temperature - °C	16,3	18,6	20,9
35°C - 26% RH			
Total Cooling Capacity - kW	31,7	28	24,3
Sensible Cooling Capacity - kW	31,7	28	24,3
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	1,51	1,34	1,16
Water Side Pressure Drop - kPa	77	61	46
Supply Air Temperature - °C	15,9	18,2	20,5
32°C - 29% RH			
Total Cooling Capacity - kW	28	24,3	20,6
Sensible Cooling Capacity - kW	28	24,3	20,6
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	1,34	1,16	0,98
Water Side Pressure Drop - kPa	61	47	34
Supply Air Temperature - °C	15,4	17,6	19,9
30°C - 34% RH			
Total Cooling Capacity - kW	25,5	21,8	18
Sensible Cooling Capacity - kW	25,5	21,8	18
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	1,22	1,04	0,86
Water Side Pressure Drop - kPa	52	39	27
Supply Air Temperature - °C	15,0	17,3	19,6
28°C - 38% RH			
Total Cooling Capacity - kW	23	19,2	15,4
Sensible Cooling Capacity - kW	23	19,2	15,4
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	1,1	0,92	0,74
Water Side Pressure Drop - kPa	43	31	20
Supply Air Temperature - °C	14,6	16,9	19,2

25°C - 40% RH			
Total Cooling Capacity - kW	19,2	15,3	11,4
Sensible Cooling Capacity - kW	19,2	15,3	11,4
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	0,91	0,73	0,54
Water Side Pressure Drop - kPa	31	20	12
Supply Air Temperature - °C	14,0	16,4	18,7
22°C - 50% RH			
Total Cooling Capacity - kW	15,2	11,2	6,9
Sensible Cooling Capacity - kW	15,2	11,2	6,9
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	0,73	0,54	0,33
Water Side Pressure Drop - kPa	21	12	5
Supply Air Temperature - °C	13,5	15,9	18,5

Cooling capacities are net values. All capacities are nominal values; actual performance will be ±5%.

NOTE: Some options or combinations of options may result in reduced airflow. Consult factory for recommendations.

DCL 34 kW Single Feed			
	EWT 7°C, 5°C Water temp. increase	**EWT 10°C, 5°C Water temp. increase**	**EWT 13°C, 5°C Water temp. increase**
40°C - 20% RH			
Total Cooling Capacity - kW	42,1	38,0	33,9
Sensible Cooling Capacity - kW	42,1	38,0	33,9
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate - l/s	2,01	1,82	1,62
Water Side Pressure Drop - kPa	126	103	83
Supply Air Temperature - °C	18,5	20,7	22,8
37°C - 24% RH			
Total Cooling Capacity - kW	38,0	33,9	29,8
Sensible Cooling Capacity - kW	38,0	33,9	29,8
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate - l/s	1,82	1,62	1,43
Water Side Pressure Drop - kPa	105	84	66
Supply Air Temperature - °C	17,9	20,0	22,1
35°C - 26% RH			
Total Cooling Capacity - kW	35,3	31,2	27,1
Sensible Cooling Capacity - kW	35,3	31,2	27,1
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate - l/s	1,68	1,49	1,29
Water Side Pressure Drop - kPa	92	72	55
Supply Air Temperature - °C	17,4	19,5	21,6
32°C - 29% RH			
Total Cooling Capacity - kW	31,2	27,0	22,9
Sensible Cooling Capacity - kW	31,2	27,0	22,9
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate - l/s	1,49	1,29	1,09
Water Side Pressure Drop - kPa	73	56	41
Supply Air Temperature - °C	16,7	18,8	20,9
30°C - 34% RH			
Total Cooling Capacity - kW	28,4	24,2	20,0
Sensible Cooling Capacity - kW	28,4	24,2	20,0
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate - l/s	1,36	1,16	0,96
Water Side Pressure Drop - kPa	62	46	32
Supply Air Temperature - °C	16,2	18,3	20,5
28°C - 38% RH			
Total Cooling Capacity - kW	25,6	21,4	17,1
Sensible Cooling Capacity - kW	25,6	21,4	17,1
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate - l/s	1,22	1,02	0,82
Water Side Pressure Drop - kPa	51	37	24
Supply Air Temperature - °C	15,7	17,8	20,0

25°C - 40% RH			
Total Cooling Capacity - kW	21,3	17,0	12,6
Sensible Cooling Capacity - kW	21,3	17,0	12,6
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate - l/s	1,01	0,81	0,6
Water Side Pressure Drop - kPa	37	24	14
Supply Air Temperature - °C	15,0	17,1	19,3
22°C - 50% RH			
Total Cooling Capacity - kW	16,9	12,4	7,6
Sensible Cooling Capacity - kW	16,9	12,4	7,6
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate - l/s	0,81	0,59	0,36
Water Side Pressure Drop - kPa	24	14	6
Supply Air Temperature - °C	14,3	16,5	18,9

Cooling capacities are net values. All capacities are nominal values; actual performance will be ±5%.

NOTE: Some options or combinations of options may result in reduced airflow. Consult factory for recommendations.

DCL 30 kW Dual Feed (both feeds active)			
	EWT 7°C, 5°C Water temp. increase	**EWT 10°C, 5°C Water temp. increase**	**EWT 13°C, 5°C Water temp. increase**
40°C - 20% RH			
Total Cooling Capacity - kW	37,7	34,1	30,4
Sensible Cooling Capacity - kW	37,7	34,1	30,4
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate (total) - l/s	1,80	1,63	1,46
Water Side Pressure Drop - kPa	154	127	103
Supply Air Temperature - °C	16,8	19,1	21,4
37°C - 24% RH			
Total Cooling Capacity - kW	34,1	30,5	26,8
Sensible Cooling Capacity - kW	34,1	30,5	26,8
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate (total) - l/s	1,63	1,46	1,28
Water Side Pressure Drop - kPa	127	103	80
Supply Air Temperature - °C	16,3	18,6	20,9
35°C - 26% RH			
Total Cooling Capacity - kW	31,7	28	24,3
Sensible Cooling Capacity - kW	31,7	28	24,3
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate (total) - l/s	1,51	1,34	1,16
Water Side Pressure Drop - kPa	110	88	67
Supply Air Temperature - °C	15,9	18,2	20,5
32°C - 29% RH			
Total Cooling Capacity - kW	28	24,3	20,6
Sensible Cooling Capacity - kW	28	24,3	20,6
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate (total) - l/s	1,34	1,16	0,98
Water Side Pressure Drop - kPa	88	67	49
Supply Air Temperature - °C	15,4	17,6	19,9
30°C - 34% RH			
Total Cooling Capacity - kW	25,5	21,8	18
Sensible Cooling Capacity - kW	25,5	21,8	18
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate (total) - l/s	1,22	1,04	0,86
Water Side Pressure Drop - kPa	73	54	38
Supply Air Temperature - °C	15,0	17,3	19,6
28°C - 38% RH			
Total Cooling Capacity - kW	23	19,2	15,4
Sensible Cooling Capacity - kW	23	19,2	15,4
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate (total) - l/s	1,10	0,92	0,74
Water Side Pressure Drop - kPa	60	43	29
Supply Air Temperature - °C	14,6	16,9	19,2

25°C - 40% RH			
Total Cooling Capacity - kW	19,2	15,3	11,4
Sensible Cooling Capacity - kW	19,2	15,3	11,4
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate (total) - l/s	0,91	0,73	0,54
Water Side Pressure Drop - kPa	42	28	17
Supply Air Temperature - °C	14,0	16,4	18,7
22°C - 50% RH			
Total Cooling Capacity - kW	15,2	11,2	6,9
Sensible Cooling Capacity - kW	15,2	11,2	6,9
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate (total) - l/s	0,73	0,54	0,33
Water Side Pressure Drop - kPa	28	17	7
Supply Air Temperature - °C	13,5	15,9	18,5

Cooling capacities are net values. All capacities are nominal values; actual performance will be ±5%.

NOTE: Some options or combinations of options may result in reduced airflow. Consult factory for recommendations.

DCL 30 kW Dual Feed (only one feed active)			
	EWT 7°C, 5°C Water temp. increase	EWT 10°C, 5°C Water temp. increase	EWT 13°C, 5°C Water temp. increase
40°C - 20% RH			
Total Cooling Capacity - kW	24,7	22,4	19,9
Sensible Cooling Capacity - kW	24,7	22,4	19,9
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	1,15	1,04	0,93
Water Side Pressure Drop - kPa	246	203	163
Supply Air Temperature - °C	25,4	26,9	28,3
37°C - 24% RH			
Total Cooling Capacity - kW	22,4	20,0	17,6
Sensible Cooling Capacity - kW	22,4	20,0	17,6
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	1,04	0,93	0,82
Water Side Pressure Drop - kPa	203	163	129
Supply Air Temperature - °C	24,0	25,4	26,9
35°C - 26% RH			
Total Cooling Capacity - kW	20,8	18,4	15,9
Sensible Cooling Capacity - kW	20,8	18,4	15,9
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	0,96	0,85	0,74
Water Side Pressure Drop - kPa	174	138	106
Supply Air Temperature - °C	23,0	24,4	25,9
32°C - 29% RH			
Total Cooling Capacity - kW	18,4	15,9	13,5
Sensible Cooling Capacity - kW	18,4	15,9	13,5
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	0,85	0,74	0,62
Water Side Pressure Drop - kPa	138	106	76
Supply Air Temperature - °C	21,6	23,0	24,4
30°C - 34% RH			
Total Cooling Capacity - kW	16,7	14,3	11,8
Sensible Cooling Capacity - kW	16,7	14,3	11,8
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	0,78	0,66	0,55
Water Side Pressure Drop - kPa	117	85	60
Supply Air Temperature - °C	20,6	22,0	23,5
28°C - 38% RH			
Total Cooling Capacity - kW	15,1	12,6	10,1
Sensible Cooling Capacity - kW	15,1	12,6	10,1
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	0,70	0,59	0,47
Water Side Pressure Drop - kPa	95	69	45
Supply Air Temperature - °C	19,6	21,0	22,5

25°C - 40% RH			
Total Cooling Capacity - kW	12,6	10,0	7,5
Sensible Cooling Capacity - kW	12,6	10,0	7,5
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	0,58	0,47	0,34
Water Side Pressure Drop - kPa	67	45	25
Supply Air Temperature - °C	18,1	19,6	21,0
22°C - 50% RH			
Total Cooling Capacity - kW	10,0	7,3	4,5
Sensible Cooling Capacity - kW	10,0	7,3	4,5
Unit Power Input - kW	0,83	0,83	0,83
Water Flow Rate - l/s	0,47	0,34	0,21
Water Side Pressure Drop - kPa	45	25	11
Supply Air Temperature - °C	16,7	18,2	19,8

Cooling capacities are net values. All capacities are nominal values; actual performance will be ±5%.

NOTE: Some options or combinations of options may result in reduced airflow. Consult factory for recommendations.

DCL 34 kW Dual Feed (both feeds active)			
	EWT 7°C, 5°C Water temp. increase	EWT 10°C, 5°C Water temp. increase	EWT 13°C, 5°C Water temp. increase
40°C - 20% RH			
Total Cooling Capacity - kW	42,1	38,0	33,9
Sensible Cooling Capacity - kW	42,1	38,0	33,9
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	2,0	1,8	1,6
Water Side Pressure Drop - kPa	184,8	152,1	123,9
Supply Air Temperature - °C	18,5	20,7	22,8
37°C - 24% RH			
Total Cooling Capacity - kW	38,0	33,9	29,8
Sensible Cooling Capacity - kW	38,0	33,9	29,8
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,8	1,6	1,4
Water Side Pressure Drop - kPa	151,5	123,6	96,0
Supply Air Temperature - °C	17,9	20,0	22,1
35°C - 26% RH			
Total Cooling Capacity - kW	35,3	31,2	27,1
Sensible Cooling Capacity - kW	35,3	31,2	27,1
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,7	1,5	1,3
Water Side Pressure Drop - kPa	131,4	103,9	80,1
Supply Air Temperature - °C	17,4	19,5	21,6
32°C - 29% RH			
Total Cooling Capacity - kW	31,2	27,0	22,9
Sensible Cooling Capacity - kW	31,2	27,0	22,9
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,5	1,3	1,1
Water Side Pressure Drop - kPa	105,3	79,8	59,1
Supply Air Temperature - °C	16,7	18,8	20,9
30°C - 34% RH			
Total Cooling Capacity - kW	28,4	24,2	20,0
Sensible Cooling Capacity - kW	28,4	24,2	20,0
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,4	1,2	1,0
Water Side Pressure Drop - kPa	87,0	63,7	45,0
Supply Air Temperature - °C	16,2	18,3	20,5
28°C - 38% RH			
Total Cooling Capacity - kW	25,6	21,4	17,1
Sensible Cooling Capacity - kW	25,6	21,4	17,1
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,2	1,0	0,8
Water Side Pressure Drop - kPa	71,2	51,3	34,8
Supply Air Temperature - °C	15,7	17,8	20,0

25°C - 40% RH			
Total Cooling Capacity - kW	21,3	17,0	12,6
Sensible Cooling Capacity - kW	21,3	17,0	12,6
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,0	0,8	0,6
Water Side Pressure Drop - kPa	50,1	33,6	19,8
Supply Air Temperature - °C	15,0	17,1	19,3
22°C - 50% RH			
Total Cooling Capacity - kW	16,9	12,4	7,6
Sensible Cooling Capacity - kW	16,9	12,4	7,6
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	0,8	0,6	0,4
Water Side Pressure Drop - kPa	32,0	19,8	8,4
Supply Air Temperature - °C	14,3	16,5	18,9

Cooling capacities are net values. All capacities are nominal values; actual performance will be ±5%.

NOTE: Some options or combinations of options may result in reduced airflow. Consult factory for recommendations.

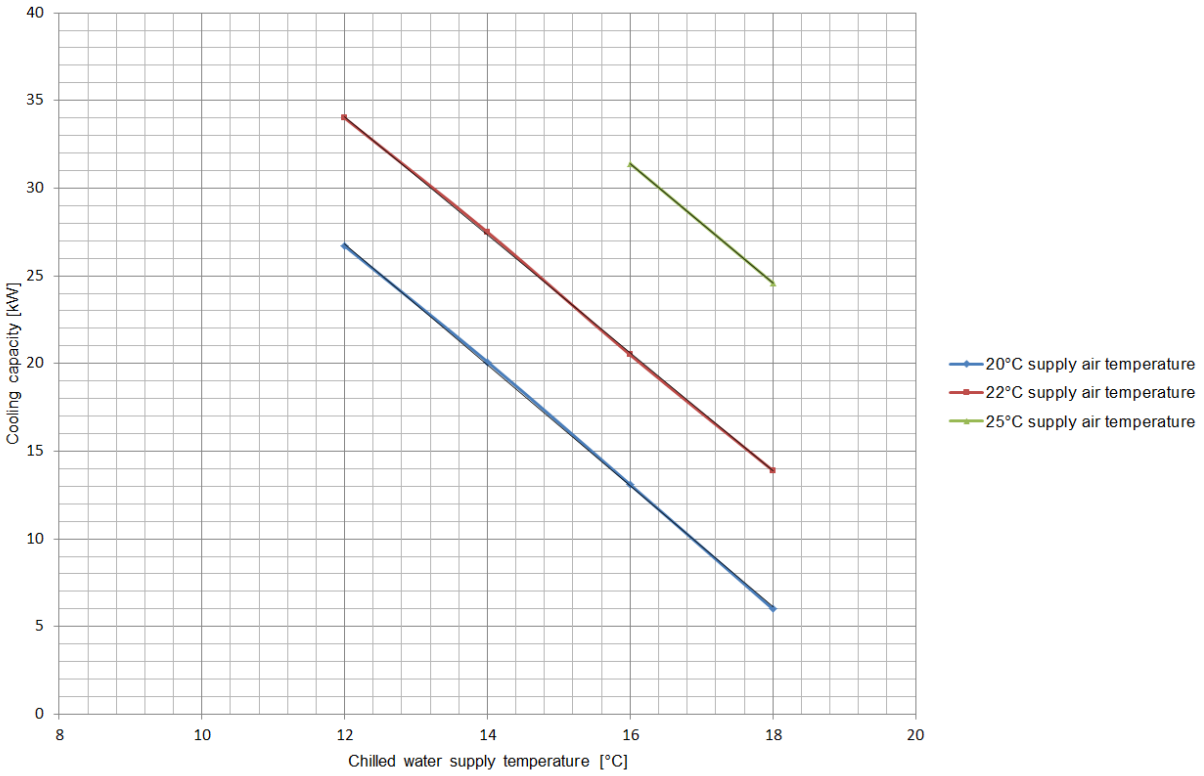
DCL 34 kW Dual Feed (one feed active)			
	EWT 7°C, 5°C Water temp. increase	EWT 10°C, 5°C Water temp. increase	EWT 13°C, 5°C Water temp. increase
40°C - 20% RH			
Total Cooling Capacity - kW	27,6	25,0	22,2
Sensible Cooling Capacity - kW	27,6	25,0	22,2
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,3	1,2	1,0
Water Side Pressure Drop - kPa	295,2	243,1	196,1
Supply Air Temperature - °C	28,0	29,2	30,2
37°C - 24% RH			
Total Cooling Capacity - kW	25,0	22,2	19,6
Sensible Cooling Capacity - kW	25,0	22,2	19,6
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,2	1,0	0,9
Water Side Pressure Drop - kPa	242,2	195,6	154,8
Supply Air Temperature - °C	26,4	27,3	28,4
35°C - 26% RH			
Total Cooling Capacity - kW	23,2	20,5	17,7
Sensible Cooling Capacity - kW	23,2	20,5	17,7
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	1,1	0,9	0,8
Water Side Pressure Drop - kPa	207,9	162,9	126,7
Supply Air Temperature - °C	25,2	26,1	27,3
32°C - 29% RH			
Total Cooling Capacity - kW	20,5	17,7	15,0
Sensible Cooling Capacity - kW	20,5	17,7	15,0
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	0,9	0,8	0,7
Water Side Pressure Drop - kPa	165,1	126,3	91,6
Supply Air Temperature - °C	23,4	24,6	25,6
30°C - 34% RH			
Total Cooling Capacity - kW	18,6	15,9	13,1
Sensible Cooling Capacity - kW	18,6	15,9	13,1
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	0,9	0,7	0,6
Water Side Pressure Drop - kPa	139,5	100,3	71,1
Supply Air Temperature - °C	22,2	23,3	24,6
28°C - 38% RH			
Total Cooling Capacity - kW	16,8	14,0	11,2
Sensible Cooling Capacity - kW	16,8	14,0	11,2
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	0,8	0,7	0,5
Water Side Pressure Drop - kPa	112,7	82,4	54,0
Supply Air Temperature - °C	21,1	22,1	23,4

25°C - 40% RH			
Total Cooling Capacity - kW	14,0	11,1	8,3
Sensible Cooling Capacity - kW	14,0	11,1	8,3
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	0,6	0,5	0,4
Water Side Pressure Drop - kPa	80,0	54,0	29,2
Supply Air Temperature - °C	19,4	20,4	21,7
22°C - 50% RH			
Total Cooling Capacity - kW	11,1	8,1	5,0
Sensible Cooling Capacity - kW	11,1	8,1	5,0
Unit Power Input - kW	1,1	1,1	1,1
Water Flow Rate (total) - l/s	0,5	0,4	0,2
Water Side Pressure Drop - kPa	51,4	29,2	13,2
Supply Air Temperature - °C	17,7	18,9	20,2

Cooling capacities are net values. All capacities are nominal values; actual performance will be ±5%.

NOTE: Some options or combinations of options may result in reduced airflow. Consult factory for recommendations.

Performance - 30kW version



10.7 MIB file structure description

Variables description

Trap port	162
Port for getting and setting values	161
Read community	public
Write community	private
Syntax of modules indexes (unless stated otherwise)	CoolCons (INTEGER) {coolcon1(1), coolcon2(2), coolcon3(3), coolcon4(4), coolcon5(5), coolcon6(6), coolcon7(7), coolcon8(8), coolcon9(9), coolcon10(10), coolcon11(11), coolcon12(12), coolcon13(13), coolcon14(14), oolcon15(15), coolcon16(16), coolcon17(17), coolcon18(18), coolcon19(19), coolcon20(20), coolcon21(21), coolcon22(22), coolcon23(23), coolcon24(24), coolcon25(25), coolcon26(26), coolcon27(27), coolcon28(28), coolcon29(29), coolcon30(30), coolcon31(31), coolcon32(32)}
Syntax of modules indexes (unless stated otherwise)	CoolCons (INTEGER)
CoolCons (INTEGER)	{coolcon1(1), coolcon2(2), coolcon3(3), coolcon4(4), coolcon5(5), coolcon6(6), coolcon7(7), coolcon8(8), coolcon9(9), coolcon10(10), coolcon11(11), coolcon12(12), coolcon13(13), coolcon14(14), oolcon15(15), coolcon16(16), coolcon17(17), coolcon18(18), coolcon19(19), coolcon20(20), coolcon21(21), coolcon22(22), coolcon23(23), coolcon24(24), coolcon25(25), coolcon26(26), coolcon27(27), coolcon28(28), coolcon29(29), coolcon30(30), coolcon31(31), coolcon32(32)}
Syntax of modules health	ModuleState (INTEGER) {inactive(0), toActivate(1), offline(2), online(3)}
Syntax of fan module states	FanState (BITS) {noFan(0), fan1(1), fan2(2), fan3(3), fan4(4), fan5(5), fan6(6), fan7(7), fan8(8), fan9(9), fan10(10), fan11(11), fan12(12), fanOk(13)}
Syntax of valve modules states	ValveState (BITS) {noValve(0), valve1Fault(1), valve2Fault(2), valveOk(4)}
Syntax of analogue modules states	ValveState (BITS) {noValve(0), valve1Fault(1), valve2Fault(2), valveOk(4)}
Syntax of temperature module states	ValveState (BITS) {noValve(0), valve1Fault(1), valve2Fault(2), valveOk(4)}
Syntax of State Inputs	DigitalInput (BITS) {input1(0), input2(1), input3(2), input4(3), input5(4), input6(5), input7(6), input8(7)}
Syntax of State Outputs	DigitalOutput (BITS) {output1(0), output2(1), output3(2), output4(3)}
Syntax of Ims (Power monitoring) module states	INTEGER {error(0), normal(1)}
Syntax of modules health	ModuleState (INTEGER)
Syntax of fan module states	FanState (BITS)

Syntax of valve modules states	ValveState (BITS)
Syntax of analogue modules states	ValveState (BITS)
Syntax of temperature module states	ValveState (BITS)
Syntax of State Inputs	DigitalInput (BITS)
Syntax of State Outputs	DigitalOutput (BITS)
ModuleState (INTEGER)	{inactive(0), toActivate(1), offline(2), online(3)}
FanState (BITS)	{noFan(0), fan1(1), fan2(2), fan3(3), fan4(4), fan5(5), fan6(6), fan7(7), fan8(8), fan9(9), fan10(10), fan11(11), fan12(12), fanOk(13)}
ValveState (BITS)	{noValve(0), valve1Fault(1), valve2Fault(2), valveOk(4)}
DigitalInput (BITS)	{input1(0), input2(1), input3(2), input4(3), input5(4), input6(5), input7(6), input8(7)}
DigitalOutput (BITS)	{output1(0), output2(1), output3(2), output4(3)}
dclGlobal SettingsLimitsIndex, dclGlobalSettingsDioNamesIndex	DclModules (INTEGER) {dclFanModuleA101(101), dclFanModuleA102(102), dclFanModuleA103(103), dclValveModuleA104(104), dclFanModuleA105(105), dclFanModuleA106(106), dclFanModuleA107(107), dclValveModuleA108(108), dclAnalogueA109(109), dclFanModuleA110(110), dclValveModuleA111(111), dclModuleA112(112), dclServerOffAR1A201(201), dclDoorsModuleAR1A202(202), dclTemperaturesAR1A203(203), dclVesdaAR1A204(204), dclServerOffAR3A201(205), dclDoorsModuleAR3A202(206), dclTemperaturesAR3A203(207), dclAnalogueModuleAR3A208(208), dclImsAR1A209(209), dclImsAR3A210(210), dclSocketStripAR1A211(211), dclSocketStripAR1A212(212), dclSocketStripAR3A211(213), dclSocketStripAR3A212(214), dclExternalDeviceAR1A215(215), dclExternalDeviceAR1A216(216), dclExternalDeviceAR3A215(217), dclExternalDeviceAR3A216(218), dclServerOffAR2A201(301), dclDoorsModuleAR2A202(302), dclTemperaturesAR2A203(303), dclVesdaAR2A204(304), dclServerOffAR4A201(305), dclDoorsModuleAR4A202(306), dclTemperaturesAR4A203(307), dclAnalogueModuleAR4A208(308), dclImsAR2A209(309), dclImsAR4A210(310), dclSocketStripAR2A211(311), dclSocketStripAR2A212(312), dclSocketStripAR4A211(313), dclSocketStripAR4A212(314), dclExternalDeviceAR2A215(215), dclExternalDeviceAR2A216(316), dclExternalDeviceAR4A215(317), dclExternalDeviceAR4A216(318), dclDigitalIOA401(401), dclDigitalIOA402(402), dclWaterMonitorAA403(403), dclWaterMonitorBA404(404), dclFanModule405(405), dclFanModule406(406), dclFanModule407(407), dclValveModule408(408), dclAnalogue409(409), dclGateway(500)}
dclGlobal SettingsLimitsIndex, dclGlobalSettingsDioNamesIndex	DclModules (INTEGER)

DclModules (INTEGER)	{dclFanModuleA101(101), dclFanModuleA102(102), dclFanModuleA103(103), dclValveModuleA104(104), dclFanModuleA105(105), dclFanModuleA106(106), dclFanModuleA107(107), dclValveModuleA108(108), dclAnalogueA109(109), dclFanModuleA110(110), dclValveModuleA111(111), dclModuleA112(112), dclServerOffAR1A201(201), dclDoorsModuleAR1A202(202), dclTemperaturesAR1A203(203), dclVesdaAR1A204(204), dclServerOffAR3A201(205), dclDoorsModuleAR3A202(206), dclTemperaturesAR3A203(207), dclAnalogueModuleAR3A208(208), dclImsAR1A209(209), dclImsAR3A210(210), dclSocketStripAR1A211(211), dclSocketStripAR1A212(212), dclSocketStripAR3A211(213), dclSocketStripAR3A212(214), dclExternalDeviceAR1A215(215), dclExternalDeviceAR1A216(216), dclExternalDeviceAR3A215(217), dclExternalDeviceAR3A216(218), dclServerOffAR2A201(301), dclDoorsModuleAR2A202(302), dclTemperaturesAR2A203(303), dclVesdaAR2A204(304), dclServerOffAR4A201(305), dclDoorsModuleAR4A202(306), dclTemperaturesAR4A203(307), dclAnalogueModuleAR4A208(308), dclImsAR2A209(309), dclImsAR4A210(310), dclSocketStripAR2A211(311), dclSocketStripAR2A212(312), dclSocketStripAR4A211(313), dclSocketStripAR4A212(314), dclExternalDeviceAR2A215(215), dclExternalDeviceAR2A216(316), dclExternalDeviceAR4A215(317), dclExternalDeviceAR4A216(318), dclDigitalIOA401(401), dclDigitalIOA402(402), dclWaterMonitorAA403(403), dclWaterMonitorBA404(404), dclFanModule405(405), dclFanModule406(406), dclFanModule407(407), dclValveModule408(408), dclAnalogue409(409), dclGateway(500)}
dclDioNamesSourceDevice	CoolCons (INTEGER) {coolcon1(1), coolcon2(2), coolcon3(3), coolcon4(4), coolcon5(5), coolcon6(6), coolcon7(7), coolcon8(8), coolcon9(9), coolcon10(10), coolcon11(11), coolcon12(12), coolcon13(13), coolcon14(14), coolcon15(15), coolcon16(16), coolcon17(17), coolcon18(18), coolcon19(19), coolcon20(20), coolcon21(21), coolcon22(22), coolcon23(23), coolcon24(24), coolcon25(25), coolcon26(26), coolcon27(27), coolcon28(28), coolcon29(29), coolcon30(30), coolcon31(31), coolcon32(32)}
dclDioNamesSourceDevice	CoolCons (INTEGER)

	aryAlarm(0), externalCoolingDevice(1), clogSwitch(2), overcurrentPort1(3), overcurrentPort2(4), overcurrentPort3(5), overcurrentPort4(6), overcurrentPower1(7), overcurrentPower2(8), overcurrentPower3(9), overcurrentDigiOutputs(10), powerSupplyADown(11), powerSupplyBDown(12), moduleFault(13), sensorFault(14), fan1Fault(100), fan2Fault(101), fan3Fault(102), fan4Fault(103), fan5Fault(104), fan6Fault(105), supplyAirTempLowAlarm(200), supplyAirTempHighAlarm1(201), supplyAirTempHighAlarm2(202), supplyAirTempHighAlarm3(203), supplyAirTempHighAlarm4(204), returnAirTempLowAlarm(205), returnAirTempHighAlarm1(206), returnAirTempHighAlarm2(207), returnAirTempHighAlarm3(208), returnAirTempHighAlarm4(209), supplyWater1LowAlarm(210), supplyWater1HighAlarm(211), returnWater1LowAlarm(212), returnWater1HighAlarm(213), supplyWater2LowAlarm(214), supplyWater2HighAlarm(215), returnWater2LowAlarm(216), returnWater2HighAlarm(217), temperatureAR11HighAlarm(218), temperatureAR12HighAlarm(219), temperatureAR13HighAlarm(220), temperatureAR14HighAlarm(221), temperatureAR15HighAlarm(222), temperatureAR16HighAlarm(223), temperatureAR21HighAlarm(224), temperatureAR22HighAlarm(225), temperatureAR23HighAlarm(226), temperatureAR24HighAlarm(227), temperatureAR25HighAlarm(228), temperatureAR26HighAlarm(229), temperatureAR31HighAlarm(230), temperatureAR32HighAlarm(231), temperatureAR33HighAlarm(232), temperatureAR34HighAlarm(233), temperatureAR35HighAlarm(234), temperatureAR36HighAlarm(235), temperatureAR41HighAlarm(236), temperatureAR42HighAlarm(237), temperatureAR43HighAlarm(238), temperatureAR44HighAlarm(239), temperatureAR45HighAlarm(240), temperatureAR46HighAlarm(241), humidityLowAlarm(300), humidityHighAlarm1(301), humidityHighAlarm2(302), humidityHighAlarm3(303), humidityHighAlarm4(304), waterSensor(400), leakageSensor(401), condensatePump(402), smokeSensor(500), fireDetectionPreAlarm1(501), fireDetectionPreAlarm2(502), fireDetectionMainAlarm1(503), fireDetectionMainAlarm2(504), fireDetectionFault(505), extinguishingReleased(506), powerMainsA(600), powerMainsB(601), doorCfront(700), doorCrear(701), doorLfront(702), doorLrear(703), doorRfront(704), doorRrear(705), flowMeter1Break(800), flowMeter2Break(801), userInput1(900), userInput2(901), userInput3(902), userInput4(903), userInput5(904), userInput6(905), userInput7(906), userInput8(907), userInput9(908), userInput10(909), userInput11(910), userInput12(911), userInput13(912), userInput14(913), userInput15(914), userInput16(915), userOutput1(916), userOutput2(917), userOutput3(918), userOutput4(919), dclOff(1000), dclStandby(1001), fanStop(1002), emergencyRun(1003), doorsOpen(1004), summaryAlarmPowerMon(1100), overCurrent-L1-mainsA(1101), overCurrent-L2-mainsA(1102), overCurrent-L3-mainsA(1103), lowVoltage-L1-mainsA(1104), lowVoltage-L2-mainsA(1105), lowVoltage-L3-mainsA(1106), activePowerExceeded-mainsA(1107), unbalance-mainsA(1108), overCurrent-L1-mainsB(1111), overCurrent-L2-mainsB(1112), overCurrent-L3-mainsB(1113), lowVoltage-L1-mainsB(1114), lowVoltage-L2-mainsB(1115), lowVoltage-L3-mainsB(1116), activePowerExceeded-mainsB(1117), unbalance-mainsB(1118), overCurrent-L1-mainsC(1121), overCurrent-L2-mainsC(1122), overCurrent-L3-mainsC(1123), lowVoltage-L1-mainsC(1124), lowVoltage-L2-mainsC(1125), lowVoltage-L3-mainsC(1126), activePowerExceeded-mainsC(1127), unbalance-mainsC(1128), overCurrent-L1-mainsD(1131), overCurrent-L2-mainsD(1132), overCurrent-L3-mainsD(1133), lowVoltage-L1-mainsD(1134), lowVoltage-L2-mainsD(1135), lowVoltage-L3-mainsD(1136), activePowerExceeded-mainsD(1137), unbalance-mainsD(1138), temperatureWarning(1141), noValueChange(1142), moduleFailure(1143), gatewayFailure(1144), measureDeviceA(1145), measureDeviceB(1146), measureDeviceC(1147), measureDeviceD(1148)}
AlarmTarget (INTEGER)	{internal-only(0), email(1), sms(2), trap-host-1(3), trap-host-2(4), trap-host-3(5), trap-host-4(6)}

Modbus line 1

		Address	Name	Access	Type
dclModulesPort1 1.3.6.1.4.1.2769.2.4.1	dclFanModuleA101Table 1.3.6.1.4.1.2769.2.4.1.1.1	.1.3.6.1.4.1.2769.2.4.1.1.1.1.1	dclFanModuleA101Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.1.1.1.2	dclFanModuleA101Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.1.1.1.3	dclFanModuleA101Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.1.1.1.4	dclFanModuleA101State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.1.1.1.5	dclFanModuleA101Speed1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.1.1.1.6	dclFanModuleA101Speed2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.1.1.1.7	dclFanModuleA101SupplyAir	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.1.1.1.8	dclFanModuleA101ReturnAir	ro	INTEGER32
	dclFanModuleA102Table 1.3.6.1.4.1.2769.2.4.1.2.1	.1.3.6.1.4.1.2769.2.4.1.2.1.1.1	dclFanModuleA102Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.2.1.1.2	dclFanModuleA102Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.2.1.1.3	dclFanModuleA102Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.2.1.1.4	dclFanModuleA102State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.2.1.1.5	dclFanModuleA102Speed1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.2.1.1.6	dclFanModuleA102Speed2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.2.1.1.7	dclFanModuleA102SupplyAir	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.2.1.1.8	dclFanModuleA102ReturnAir	ro	INTEGER32
	dclFanModuleA103Table 1.3.6.1.4.1.2769.2.4.1.3.1	.1.3.6.1.4.1.2769.2.4.1.3.1.1.1	dclFanModuleA103Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.3.1.1.2	dclFanModuleA103Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.3.1.1.3	dclFanModuleA103Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.3.1.1.4	dclFanModuleA103State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.3.1.1.5	dclFanModuleA103Speed1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.3.1.1.6	dclFanModuleA103Speed2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.3.1.1.7	dclFanModuleA103SupplyAir	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.3.1.1.8	dclFanModuleA103ReturnAir	ro	INTEGER32

dclModulesPort1 1.3.6.1.4.1.2769.2.4.1	dclValveModuleA104Table 1.3.6.1.4.1.2769.2.4.1.4.1	.1.3.6.1.4.1.2769.2.4.1.4.1.1.1	dclValveModuleA104Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.4.1.1.2	dclValveModuleA104Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.4.1.1.3	dclValveModuleA104Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.4.1.1.4	dclValveModuleA104State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.4.1.1.5	dclValveModuleA104Position1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.4.1.1.6	dclValveModuleA104Position2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.4.1.1.7	dclValveModuleA104Temperature1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.4.1.1.8	dclValveModuleA104Temperature2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.4.1.1.9	dclValveModuleA104Temperature3	ro	INTEGER32
	dclFanModuleA105Table 1.3.6.1.4.1.2769.2.4.1.5.1	.1.3.6.1.4.1.2769.2.4.1.5.1.1.1	dclFanModuleA105Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.5.1.1.2	dclFanModuleA105Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.5.1.1.3	dclFanModuleA105Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.5.1.1.4	dclFanModuleA105State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.5.1.1.5	dclFanModuleA105Speed1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.5.1.1.6	dclFanModuleA105Speed2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.5.1.1.7	dclFanModuleA105SupplyAir	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.5.1.1.8	dclFanModuleA105ReturnAir	ro	INTEGER32
	dclFanModuleA106Table 1.3.6.1.4.1.2769.2.4.1.6.1	.1.3.6.1.4.1.2769.2.4.1.6.1.1.1	dclFanModuleA106Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.6.1.1.2	dclFanModuleA106Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.6.1.1.3	dclFanModuleA106Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.6.1.1.4	dclFanModuleA106State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.6.1.1.5	dclFanModuleA106Speed1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.6.1.1.6	dclFanModuleA106Speed2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.6.1.1.7	dclFanModuleA106SupplyAir	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.6.1.1.8	dclFanModuleA106ReturnAir	ro	INTEGER32
	dclFanModuleA107Table 1.3.6.1.4.1.2769.2.4.1.7.1	.1.3.6.1.4.1.2769.2.4.1.7.1.1.1	dclFanModuleA107Index	ro	INTEGER

dclModulesPort1 1.3.6.1.4.1.2769.2.4.1		.1.3.6.1.4.1.2769.2.4.1.7.1.1.2	dclFanModuleA107Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.7.1.1.3	dclFanModuleA107Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.7.1.1.4	dclFanModuleA107State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.7.1.1.5	dclFanModuleA107Speed1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.7.1.1.6	dclFanModuleA107Speed2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.7.1.1.7	dclFanModuleA107SupplyAir	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.7.1.1.8	dclFanModuleA107ReturnAir	ro	INTEGER32
	dclValveModuleA108Table 1.3.6.1.4.1.2769.2.4.1.8.1	.1.3.6.1.4.1.2769.2.4.1.8.1.1.1	dclValveModuleA108Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.8.1.1.2	dclValveModuleA108Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.8.1.1.3	dclValveModuleA108Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.8.1.1.4	dclValveModuleA108State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.8.1.1.5	dclValveModuleA108Position1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.8.1.1.6	dclValveModuleA108Position2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.8.1.1.7	dclValveModuleA108Temperature1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.8.1.1.8	dclValveModuleA108Temperature2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.8.1.1.9	dclValveModuleA108Temperature3	ro	INTEGER32
	dclAnalogueA109Table 1.3.6.1.4.1.2769.2.4.1.9.1	.1.3.6.1.4.1.2769.2.4.1.9.1.1.1	dclAnalogueA109Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.2	dclAnalogueA109Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.3	dclAnalogueA109Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.4	dclAnalogueA109State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.5	dclAnalogueA109Value1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.6	dclAnalogueA109Value2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.7	dclAnalogueA109Value3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.8	dclAnalogueA109Value4	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.9	dclAnalogueA109Value5	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.9.1.1.10	dclAnalogueA109Value6	ro	INTEGER32
	dclFanModuleA110Table 1.3.6.1.4.1.2769.2.4.10.1	.1.3.6.1.4.1.2769.2.4.1.10.1.1.1	dclFanModuleA110Index	ro	INTEGER

dclModulesPort1 1.3.6.1.4.1.2769.2.4.1		.1.3.6.1.4.1.2769.2.4.1.10.1.1.2	dclFanModuleA110Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.10.1.1.3	dclFanModuleA110Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.10.1.1.4	dclFanModuleA110State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.10.1.1.5	dclFanModuleA110Speed1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.10.1.1.6	dclFanModuleA110Speed2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.10.1.1.7	dclFanModuleA110SupplyAir	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.10.1.1.8	dclFanModuleA110ReturnAir	ro	INTEGER32
	dclValveModuleA111Table 1.3.6.1.4.1.2769.2.4.11.1	.1.3.6.1.4.1.2769.2.4.1.11.1.1.1	dclValveModuleA111Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.11.1.1.2	dclValveModuleA111Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.1.11.1.1.3	dclValveModuleA111Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.1.11.1.1.4	dclValveModuleA111State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.1.11.1.1.5	dclValveModuleA111Position1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.11.1.1.6	dclValveModuleA111Position2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.1.11.1.1.7	dclValveModuleA111Temperature1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.11.1.1.8	dclValveModuleA111Temperature2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.1.11.1.1.9	dclValveModuleA111Temperature3	ro	INTEGER32
	dclModuleA112	1.3.6.1.4.1.2769.2.4.1.12.1.0	dclModuleDisplay	ro	OBJECT IDENTIFIER

Modbus line 2

dclModulesPort2 1.3.6.1.4.1.2769.2.4.2	dclServerOffAR1A201Table 1.3.6.1.4.1.2769.2.4.2.1.1	.1.3.6.1.4.1.2769.2.4.2.1.1.1.1	dclServerOffAR1A201Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.1.1.1.2	dclServerOffAR1A201Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.1.1.1.3	dclServerOffAR1A201Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.1.1.1.4	dclServerOffAR1A201StateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.2.1.1.1.5	dclServerOffAR1A201StateOutput	ro	BITS
	dclDoorsModuleAR1A202Table .1.3.6.1.4.1.2769.2.4.2.2.1	.1.3.6.1.4.1.2769.2.4.2.2.1.1.1	dclDoorsModuleAR1A202Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.2.1.1.2	dclDoorsModuleAR1A202Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.2.1.1.3	dclDoorsModuleAR1A202Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.2.1.1.4	dclDoorsModuleAR1A202StateInput	ro	BITS

dclModulesPort2 1.3.6.1.4.1.2769.2.4.2		.1.3.6.1.4.1.2769.2.4.2.2.1.1.5	dclDoorsModuleAR1A202StateOutput	ro	BITS
	dclTemperaturesAR1A203Table .1.3.6.1.4.1.2769.2.4.2.3.1	.1.3.6.1.4.1.2769.2.4.2.3.1.1.1	dclTemperaturesAR1A203Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.2	dclTemperaturesAR1A203Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.3	dclTemperaturesAR1A203Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.4	dclTemperaturesAR1A203State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.5	dclTemperaturesAR1A203Value1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.6	dclTemperaturesAR1A203Value2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.7	dclTemperaturesAR1A203Value3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.8	dclTemperaturesAR1A203Value4	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.9	dclTemperaturesAR1A203Value5	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.3.1.1.10	dclTemperaturesAR1A203Value6	ro	INTEGER32
	dclVesdaAR1A204Table .1.3.6.1.4.1.2769.2.4.2.4.1	.1.3.6.1.4.1.2769.2.4.2.4.1.1.1	dclVesdaAR1A204EntryIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.4.1.1.2	dclVesdaAR1A204EntryName	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.4.1.1.3	dclVesdaAR1A204EntryHealth	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.4.1.1.4	dclVesdaAR1A204EntryStateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.2.4.1.1.5	dclVesdaAR1A204EntryStateOutput	ro	BITS
	dclServerOffAR3A201Table 1.3.6.1.4.1.2769.2.4.2.5.1	.1.3.6.1.4.1.2769.2.4.2.5.1.1.1	dclServerOffAR3A201Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.5.1.1.2	dclServerOffAR3A201Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.5.1.1.3	dclServerOffAR3A201Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.5.1.1.4	dclServerOffAR3A201StateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.2.5.1.1.5	dclServerOffAR3A201StateOutput	ro	BITS
	dclDoorsModuleAR3A202Table .1.3.6.1.4.1.2769.2.4.2.6.1	.1.3.6.1.4.1.2769.2.4.2.6.1.1.1	dclServerOffAR3A202Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.6.1.1.2	dclServerOffAR3A202Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.6.1.1.3	dclServerOffAR3A202Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.6.1.1.4	dclServerOffAR3A202StateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.2.6.1.1.5	dclServerOffAR3A202StateOutput	ro	BITS

dclModulesPort2 1.3.6.1.4.1.2769.2.4.2	dclTemperaturesAR3A203Table .1.3.6.1.4.1.2769.2.4.2.7.1	.1.3.6.1.4.1.2769.2.4.2.7.1.1.1	dclTemperaturesAR3A203Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.2	dclTemperaturesAR3A203Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.3	dclTemperaturesAR3A203Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.4	dclTemperaturesAR3A203State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.5	dclTemperaturesAR3A203Value1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.6	dclTemperaturesAR3A203Value2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.7	dclTemperaturesAR3A203Value3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.8	dclTemperaturesAR3A203Value4	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.9	dclTemperaturesAR3A203Value5	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.7.1.1.10	dclTemperaturesAR3A203Value6	ro	INTEGER32
	dclAnalogueModuleAR3A208T-able .1.3.6.1.4.1.2769.2.4.2.8.1	.1.3.6.1.4.1.2769.2.4.2.8.1.1.1	dclTemperaturesAR3A208Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.2	dclTemperaturesAR3A208Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.3	dclTemperaturesAR3A208Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.4	dclTemperaturesAR3A208State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.5	dclTemperaturesAR3A208Value1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.6	dclTemperaturesAR3A208Value2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.7	dclTemperaturesAR3A208Value3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.8	dclTemperaturesAR3A208Value4	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.9	dclTemperaturesAR3A208Value5	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.8.1.1.10	dclTemperaturesAR3A208Value6	ro	INTEGER32
	dclImsAR1A209Table .1.3.6.1.4.1.2769.2.4.2.9.1	.1.3.6.1.4.1.2769.2.4.2.9.1.1.1	dclImsAR1A209Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.2	dclImsAR1A209Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.3	dclImsAR1A209State	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.4	dclImsAR1A209CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.5	dclImsAR1A209CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.6	dclImsAR1A209CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.7	dclImsAR1A209VoltageL1	ro	INTEGER32

dclModulesPort2 1.3.6.1.4.1.2769.2.4.2		.1.3.6.1.4.1.2769.2.4.2.9.1.1.8	dclImsAR1A209VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.9	dclImsAR1A209VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.10	dclImsAR1A209ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.11	dclImsAR1A209AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.12	dclImsAR1A209ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.13	dclImsAR1A209Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.9.1.1.14	dclImsAR1A209Energy	ro	INTEGER32
	dclImsAR3A210Table .1.3.6.1.4.1.2769.2.4.2.10.1	.1.3.6.1.4.1.2769.2.4.2.10.1.1.1	dclImsAR3A210Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.2	dclImsAR3A210Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.3	dclImsAR3A210State	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.4	dclImsAR3A210CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.5	dclImsAR3A210CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.6	dclImsAR3A210CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.7	dclImsAR3A210VoltageL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.8	dclImsAR3A210VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.9	dclImsAR3A210VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.10	dclImsAR3A210ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.11	dclImsAR3A210AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.12	dclImsAR3A210ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.13	dclImsAR3A210Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.10.1.1.14	dclImsAR3A210Energy	ro	INTEGER32
	dclSocketStripAR1A211Table .1.3.6.1.4.1.2769.2.4.2.11.1	.1.3.6.1.4.1.2769.2.4.2.11.1.1.1	dclImsAR1A211Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.2	dclImsAR1A211Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.3	dclImsAR1A211State	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.4	dclImsAR1A211CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.5	dclImsAR1A211CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.6	dclImsAR1A211CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.7	dclImsAR1A211VoltageL1	ro	INTEGER32

dclModulesPort2 1.3.6.1.4.1.2769.2.4.2		.1.3.6.1.4.1.2769.2.4.2.11.1.1.8	dclImsAR1A211VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.9	dclImsAR1A211VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.10	dclImsAR1A211ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.11	dclImsAR1A211AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.12	dclImsAR1A211ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.13	dclImsAR1A211Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.11.1.1.14	dclImsAR1A211Energy	ro	INTEGER32
	dclSocketStripAR1A212Table .1.3.6.1.4.1.2769.2.4.2.12.1	.1.3.6.1.4.1.2769.2.4.2.12.1.1.1	dclImsAR1A212Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.2	dclImsAR1A212Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.3	dclImsAR1A212State	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.4	dclImsAR1A212CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.5	dclImsAR1A212CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.6	dclImsAR1A212CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.7	dclImsAR1A212VoltageL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.8	dclImsAR1A212VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.9	dclImsAR1A212VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.10	dclImsAR1A212ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.11	dclImsAR1A212AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.12	dclImsAR1A212ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.13	dclImsAR1A212Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.12.1.1.14	dclImsAR1A212Energy	ro	INTEGER32
	dclSocketStripAR3A211Table .1.3.6.1.4.1.2769.2.4.2.13.1	.1.3.6.1.4.1.2769.2.4.2.13.1.1.1	dclImsAR3A211Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.2	dclImsAR3A211Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.3	dclImsAR3A211State	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.4	dclImsAR3A211CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.5	dclImsAR3A211CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.6	dclImsAR3A211CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.7	dclImsAR3A211VoltageL1	ro	INTEGER32

dclModulesPort2 1.3.6.1.4.1.2769.2.4.2		.1.3.6.1.4.1.2769.2.4.2.13.1.1.8	dclImsAR3A211VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.9	dclImsAR3A211VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.10	dclImsAR3A211ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.11	dclImsAR3A211AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.12	dclImsAR3A211ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.13	dclImsAR3A211Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.13.1.1.14	dclImsAR3A211Energy	ro	INTEGER32
	dclSocketStripAR3A212Table .1.3.6.1.4.1.2769.2.4.2.14.1	.1.3.6.1.4.1.2769.2.4.2.14.1.1.1	dclImsAR3A212Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.2	dclImsAR3A212Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.3	dclImsAR3A212State	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.4	dclImsAR3A212CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.5	dclImsAR3A212CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.6	dclImsAR3A212CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.7	dclImsAR3A212VoltageL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.8	dclImsAR3A212VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.9	dclImsAR3A212VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.10	dclImsAR3A212ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.11	dclImsAR3A212AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.12	dclImsAR3A212ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.13	dclImsAR3A212Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.2.14.1.1.14	dclImsAR3A212Energy	ro	INTEGER32
	dclExternalDeviceAR1A215Table .1.3.6.1.4.1.2769.2.4.2.15.1	.1.3.6.1.4.1.2769.2.4.2.15.1.1.1	dclExternalDeviceAR1A215Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.15.1.1.2	dclExternalDeviceAR1A215Name	ro	DISPLAYSTRING
	dclExternalDeviceAR1A216Table .1.3.6.1.4.1.2769.2.4.2.16.1	.1.3.6.1.4.1.2769.2.4.2.16.1.1.1	dclExternalDeviceAR1A216Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.16.1.1.2	dclExternalDeviceAR1A216Name	ro	DISPLAYSTRING
	dclExternalDeviceAR3A215Table .1.3.6.1.4.1.2769.2.4.2.17.1	.1.3.6.1.4.1.2769.2.4.2.17.1.1.1	dclExternalDeviceAR3A215Index	ro	INTEGER

		.1.3.6.1.4.1.2769.2.4.2.17.1.1.2	dclExternalDeviceAR3A215Name	ro	DISPLAYSTRING
	dclExternalDeviceAR3A216Table .1.3.6.1.4.1.2769.2.4.2.18.1	.1.3.6.1.4.1.2769.2.4.2.18.1.1.1	dclExternalDeviceAR3A216Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.2.18.1.1.2	dclExternalDeviceAR3A216Name	ro	DISPLAYSTRING

Modbus line 3

dclModulesPort3 1.3.6.1.4.1.2769.2.4.3	dclServerOffAR2A201Table 1.3.6.1.4.1.2769.2.4.3.1.1	.1.3.6.1.4.1.2769.2.4.3.1.1.1.1	dclServerOffAR2A201Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.1.1.1.2	dclServerOffAR2A201Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.1.1.1.3	dclServerOffAR2A201Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.1.1.1.4	dclServerOffAR2A201StateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.1.1.1.5	dclServerOffAR2A201StateOutput	ro	BITS
	dclDoorsModuleAR2A202Table .1.3.6.1.4.1.2769.2.4.3.2.1	.1.3.6.1.4.1.2769.2.4.3.2.1.1.1	dclDoorsModuleAR2A202Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.2.1.1.2	dclDoorsModuleAR2A202Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.2.1.1.3	dclDoorsModuleAR2A202Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.2.1.1.4	dclDoorsModuleAR2A202StateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.2.1.1.5	dclDoorsModuleAR2A202StateOutput	ro	BITS
	dclTemperaturesAR2A203Table .1.3.6.1.4.1.2769.2.4.3.3.1	.1.3.6.1.4.1.2769.2.4.3.3.1.1.1	dclTemperaturesAR2A203Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.3.1.1.2	dclTemperaturesAR2A203Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.3.1.1.3	dclTemperaturesAR2A203Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.3.1.1.4	dclTemperaturesAR2A203State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.3.1.1.5	dclTemperaturesAR2A203Value1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.3.1.1.6	dclTemperaturesAR2A203Value2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.3.1.1.7	dclTemperaturesAR2A203Value3	ro	INTEGER32

		.1.3.6.1.4.1.2769.2.4.3.3.1.1.8	dclTemperaturesAR2A203Value4	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.3.1.1.9	dclTemperaturesAR2A203Value5	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.3.1.1.10	dclTemperaturesAR2A203Value6	ro	INTEGER32
	dclVesdaAR2A204Table .1.3.6.1.4.1.2769.2.4.3.4.1	.1.3.6.1.4.1.2769.2.4.3.4.1.1.1	dclVesdaAR2A204EntryIndex	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.4.1.1.2	dclVesdaAR2A204EntryName	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.4.1.1.3	dclVesdaAR2A204EntryHealth	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.4.1.1.4	dclVesdaAR2A204EntryStateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.4.1.1.5	dclVesdaAR2A204EntryStateOutput	ro	BITS
	dclServerOffAR4A201Table 1.3.6.1.4.1.2769.2.4.3.5.1	.1.3.6.1.4.1.2769.2.4.3.5.1.1.1	dclServerOffAR4A201Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.5.1.1.2	dclServerOffAR4A201Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.5.1.1.3	dclServerOffAR4A201Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.5.1.1.4	dclServerOffAR4A201StateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.5.1.1.5	dclServerOffAR4A201StateOutput	ro	BITS
dclModulesPort3 1.3.6.1.4.1.2769.2.4.3	dclDoorsModuleAR4A202Table .1.3.6.1.4.1.2769.2.4.3.6.1	.1.3.6.1.4.1.2769.2.4.3.6.1.1.1	dclServerOffAR4A202Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.6.1.1.2	dclServerOffAR4A202Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.6.1.1.3	dclServerOffAR4A202Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.6.1.1.4	dclServerOffAR4A202StateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.6.1.1.5	dclServerOffAR4A202StateOutput	ro	BITS
	dclTemperaturesAR4A203Table .1.3.6.1.4.1.2769.2.4.3.7.1	.1.3.6.1.4.1.2769.2.4.3.7.1.1.1	dclTemperaturesAR4A203Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.7.1.1.2	dclTemperaturesAR4A203Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.7.1.1.3	dclTemperaturesAR4A203Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.7.1.1.4	dclTemperaturesAR4A203State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.7.1.1.5	dclTemperaturesAR4A203Value1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.7.1.1.6	dclTemperaturesAR4A203Value2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.7.1.1.7	dclTemperaturesAR4A203Value3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.7.1.1.8	dclTemperaturesAR4A203Value4	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.7.1.1.9	dclTemperaturesAR4A203Value5	ro	INTEGER32

dclModulesPort3 1.3.6.1.4.1.2769.2.4.3		.1.3.6.1.4.1.2769.2.4.3.7.1.1.10	dclTemperaturesAR4A203Value6	ro	INTEGER32
	dclAnalogueModuleAR4A208T-able .1.3.6.1.4.1.2769.2.4.3.8.1	.1.3.6.1.4.1.2769.2.4.3.8.1.1.1	dclTemperaturesAR4A208Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.2	dclTemperaturesAR4A208Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.3	dclTemperaturesAR4A208Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.4	dclTemperaturesAR4A208State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.5	dclTemperaturesAR4A208Value1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.6	dclTemperaturesAR4A208Value2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.7	dclTemperaturesAR4A208Value3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.8	dclTemperaturesAR4A208Value4	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.9	dclTemperaturesAR4A208Value5	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.8.1.1.10	dclTemperaturesAR4A208Value6	ro	INTEGER32
	dclImsAR2A209Table .1.3.6.1.4.1.2769.2.4.3.9.1	.1.3.6.1.4.1.2769.2.4.3.9.1.1.1	dclImsAR2A209Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.2	dclImsAR2A209Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.3	dclImsAR2A209State	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.4	dclImsAR2A209CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.5	dclImsAR2A209CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.6	dclImsAR2A209CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.7	dclImsAR2A209VoltageL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.8	dclImsAR2A209VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.9	dclImsAR2A209VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.10	dclImsAR2A209ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.11	dclImsAR2A209AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.12	dclImsAR2A209ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.13	dclImsAR2A209Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.9.1.1.14	dclImsAR2A209Energy	ro	INTEGER32
	dclImsAR4A210Table .1.3.6.1.4.1.2769.2.4.3.10.1	.1.3.6.1.4.1.2769.2.4.3.10.1.1.1	dclImsAR4A210Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.2	dclImsAR4A210Name	ro	DISPLAYSTRING

dclModulesPort3 1.3.6.1.4.1.2769.2.4.3		.1.3.6.1.4.1.2769.2.4.3.10.1.1.3	dclImsAR4A210State	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.4	dclImsAR4A210CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.5	dclImsAR4A210CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.6	dclImsAR4A210CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.7	dclImsAR4A210VoltageL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.8	dclImsAR4A210VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.9	dclImsAR4A210VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.10	dclImsAR4A210ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.11	dclImsAR4A210AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.12	dclImsAR4A210ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.13	dclImsAR4A210Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.10.1.1.14	dclImsAR4A210Energy	ro	INTEGER32
	dclSocketStripAR2A211Table .1.3.6.1.4.1.2769.2.4.3.11.1	.1.3.6.1.4.1.2769.2.4.3.11.1.1.1	dclImsAR2A211Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.2	dclImsAR2A211Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.3	dclImsAR2A211State	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.4	dclImsAR2A211CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.5	dclImsAR2A211CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.6	dclImsAR2A211CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.7	dclImsAR2A211VoltageL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.8	dclImsAR2A211VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.9	dclImsAR2A211VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.10	dclImsAR2A211ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.11	dclImsAR2A211AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.12	dclImsAR2A211ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.13	dclImsAR2A211Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.11.1.1.14	dclImsAR2A211Energy	ro	INTEGER32
	dclSocketStripAR2A212Table .1.3.6.1.4.1.2769.2.4.3.12.1	.1.3.6.1.4.1.2769.2.4.3.12.1.1.1	dclImsAR2A212Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.12.1.1.2	dclImsAR2A212Name	ro	DISPLAYSTRING

			.1.3.6.1.4.1.2769.2.4.3.12.1.1.3	dclImsAR2A212State	ro	INTEGER
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.4	dclImsAR2A212CurrentL1	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.5	dclImsAR2A212CurrentL2	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.6	dclImsAR2A212CurrentL3	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.7	dclImsAR2A212VoltageL1	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.8	dclImsAR2A212VoltageL2	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.9	dclImsAR2A212VoltageL3	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.10	dclImsAR2A212ActPower	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.11	dclImsAR2A212AppPower	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.12	dclImsAR2A212ReactPower	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.13	dclImsAR2A212Cos	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.12.1.1.14	dclImsAR2A212Energy	ro	INTEGER32
		dclSocketStripAR4A211Table .1.3.6.1.4.1.2769.2.4.3.13.1	.1.3.6.1.4.1.2769.2.4.3.13.1.1.1	dclImsAR4A211Index	ro	INTEGER
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.2	dclImsAR4A211Name	ro	DISPLAYSTRING
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.3	dclImsAR4A211State	ro	INTEGER
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.4	dclImsAR4A211CurrentL1	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.5	dclImsAR4A211CurrentL2	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.6	dclImsAR4A211CurrentL3	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.7	dclImsAR4A211VoltageL1	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.8	dclImsAR4A211VoltageL2	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.9	dclImsAR4A211VoltageL3	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.10	dclImsAR4A211ActPower	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.11	dclImsAR4A211AppPower	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.12	dclImsAR4A211ReactPower	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.13	dclImsAR4A211Cos	ro	INTEGER32
			.1.3.6.1.4.1.2769.2.4.3.13.1.1.14	dclImsAR4A211Energy	ro	INTEGER32
		dclSocketStripAR4A212Table .1.3.6.1.4.1.2769.2.4.3.14.1	.1.3.6.1.4.1.2769.2.4.3.14.1.1.1	dclImsAR4A212Index	ro	INTEGER
			.1.3.6.1.4.1.2769.2.4.3.14.1.1.2	dclImsAR4A212Name	ro	DISPLAYSTRING

dclModulesPort3
1.3.6.1.4.1.2769.2.4.3

dclModulesPort3 1.3.6.1.4.1.2769.2.4.3		.1.3.6.1.4.1.2769.2.4.3.14.1.1.3	dclImsAR4A212State	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.4	dclImsAR4A212CurrentL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.5	dclImsAR4A212CurrentL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.6	dclImsAR4A212CurrentL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.7	dclImsAR4A212VoltageL1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.8	dclImsAR4A212VoltageL2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.9	dclImsAR4A212VoltageL3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.10	dclImsAR4A212ActPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.11	dclImsAR4A212AppPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.12	dclImsAR4A212ReactPower	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.13	dclImsAR4A212Cos	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.3.14.1.1.14	dclImsAR4A212Energy	ro	INTEGER32
	dclExternalDeviceAR2A215Table .1.3.6.1.4.1.2769.2.4.3.15.1	.1.3.6.1.4.1.2769.2.4.3.15.1.1.1	dclExternalDeviceAR2A215Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.15.1.1.2	dclExternalDeviceAR2A215Name	ro	STRING
	dclExternalDeviceAR2A216Table .1.3.6.1.4.1.2769.2.4.3.16.1	.1.3.6.1.4.1.2769.2.4.3.16.1.1.1	dclExternalDeviceAR2A216Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.16.1.1.2	dclExternalDeviceAR2A216Name	ro	STRING
	dclExternalDeviceModule317Table .1.3.6.1.4.1.2769.2.4.3.17.1	.1.3.6.1.4.1.2769.2.4.3.17.1.1.1	dclExternalDeviceModule317Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.17.1.1.2	dclExternalDeviceModule317Name	ro	STRING
	dclExternalDeviceModule318Table .1.3.6.1.4.1.2769.2.4.3.18.1	.1.3.6.1.4.1.2769.2.4.3.18.1.1.1	dclExternalDeviceModule318Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.3.18.1.1.2	dclExternalDeviceModule318Name	ro	STRING

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dclModulesPort4 1.3.6.1.4.1.2769.2.4.4	dclDigitalIOA401Table .1.3.6.1.4.1.2769.2.4.4.1.1	.1.3.6.1.4.1.2769.2.4.4.1.1.1.1	dclDigitalIOA401Index	ro	INTEGER

	.1.3.6.1.4.1.2769.2.4.4.1.1.1.2	dclDigitalIOA401Name	ro	DISPLAYSTRING
	.1.3.6.1.4.1.2769.2.4.4.1.1.1.3	dclDigitalIOA401Health	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.1.1.1.4	dclDigitalIOA401StateInput	ro	BITS
	.1.3.6.1.4.1.2769.2.4.4.1.1.1.5	dclDigitalIOA401StateOutput	ro	BITS
dclDigitalIOA402Table .1.3.6.1.4.1.2769.2.4.4.2.1	.1.3.6.1.4.1.2769.2.4.4.2.1.1.1	dclDigitalIOA402Index	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.2.1.1.2	dclDigitalIOA402Name	ro	DISPLAYSTRING
	.1.3.6.1.4.1.2769.2.4.4.2.1.1.3	dclDigitalIOA402Health	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.2.1.1.4	dclDigitalIOA402StateInput	ro	BITS
	.1.3.6.1.4.1.2769.2.4.4.2.1.1.5	dclDigitalIOA402StateOutput	ro	BITS
dclWaterMonitorAA403Table .1.3.6.1.4.1.2769.2.4.4.3.1	.1.3.6.1.4.1.2769.2.4.4.3.1.1.1	dclWaterMonitorAA403Index	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.2	dclWaterMonitorAA403Name	ro	DISPLAYSTRING
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.3	dclWaterMonitorAA403Health	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.4	dclWaterMonitorAA403State	ro	BITS
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.5	dclWaterMonitorAA403Value1	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.6	dclWaterMonitorAA403Value2	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.7	dclWaterMonitorAA403Value3	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.8	dclWaterMonitorAA403Value4	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.9	dclWaterMonitorAA403Value5	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.3.1.1.10	dclWaterMonitorAA403Value6	ro	INTEGER32
dclWaterMonitorAA404Table .1.3.6.1.4.1.2769.2.4.4.4.1	.1.3.6.1.4.1.2769.2.4.4.4.1.1.1	dclWaterMonitorAA404Index	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.4.1.1.2	dclWaterMonitorAA404Name	ro	DISPLAYSTRING
	.1.3.6.1.4.1.2769.2.4.4.4.1.1.3	dclWaterMonitorAA404Health	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.4.1.1.4	dclWaterMonitorAA404State	ro	BITS
	.1.3.6.1.4.1.2769.2.4.4.4.1.1.5	dclWaterMonitorAA404Value1	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.4.1.1.6	dclWaterMonitorAA404Value2	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.4.1.1.7	dclWaterMonitorAA404Value3	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.4.1.1.8	dclWaterMonitorAA404Value4	ro	INTEGER32

dclModulesPort4
1.3.6.1.4.1.2769.2.4.4

	.1.3.6.1.4.1.2769.2.4.4.4.1.1.9	dclWaterMonitorAA404Value5	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.4.1.1.10	dclWaterMonitorAA404Value6	ro	INTEGER32
dclFanModule405Table .1.3.6.1.4.1.2769.2.4.4.5.1	.1.3.6.1.4.1.2769.2.4.4.5.1.1.1	dclFanModule405Index	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.5.1.1.2	dclFanModule405Name	ro	DISPLAYSTRING
	.1.3.6.1.4.1.2769.2.4.4.5.1.1.3	dclFanModule405Health	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.5.1.1.4	dclFanModule405State	ro	BITS
	.1.3.6.1.4.1.2769.2.4.4.5.1.1.5	dclFanModule405Speed1	ro	INTEGER (0..1000)
	.1.3.6.1.4.1.2769.2.4.4.5.1.1.6	dclFanModule405Speed2	ro	INTEGER (0..1000)
	.1.3.6.1.4.1.2769.2.4.4.5.1.1.7	dclFanModule405SupplyAir	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.5.1.1.8	dclFanModule405ReturnAir	ro	INTEGER32
dclFanModule406Table .1.3.6.1.4.1.2769.2.4.4.6.1	.1.3.6.1.4.1.2769.2.4.4.6.1.1.1	dclFanModule406Index	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.6.1.1.2	dclFanModule406Name	ro	DISPLAYSTRING
	.1.3.6.1.4.1.2769.2.4.4.6.1.1.3	dclFanModule406Health	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.6.1.1.4	dclFanModule406State	ro	BITS
	.1.3.6.1.4.1.2769.2.4.4.6.1.1.5	dclFanModule406Speed1	ro	INTEGER (0..1000)
	.1.3.6.1.4.1.2769.2.4.4.6.1.1.6	dclFanModule406Speed2	ro	INTEGER (0..1000)
	.1.3.6.1.4.1.2769.2.4.4.6.1.1.7	dclFanModule406SupplyAir	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.6.1.1.8	dclFanModule406ReturnAir	ro	INTEGER32
dclValveModule407Table .1.3.6.1.4.1.2769.2.4.4.7.1	.1.3.6.1.4.1.2769.2.4.4.7.1.1.1	dclValveModule407Index	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.7.1.1.2	dclValveModule407Name	ro	DISPLAYSTRING
	.1.3.6.1.4.1.2769.2.4.4.7.1.1.3	dclValveModule407Health	ro	INTEGER
	.1.3.6.1.4.1.2769.2.4.4.7.1.1.4	dclValveModule407State	ro	BITS
	.1.3.6.1.4.1.2769.2.4.4.7.1.1.5	dclValveModule407Position1	ro	INTEGER (0..1000)
	.1.3.6.1.4.1.2769.2.4.4.7.1.1.6	dclValveModule407Position2	ro	INTEGER (0..1000)
	.1.3.6.1.4.1.2769.2.4.4.7.1.1.7	dclValveModule407Temperature1	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.7.1.1.8	dclValveModule407Temperature2	ro	INTEGER32
	.1.3.6.1.4.1.2769.2.4.4.7.1.1.9	dclValveModule407Temperature3	ro	INTEGER32

dclModulesPort4
1.3.6.1.4.1.2769.2.4.4

dclModulesPort4 1.3.6.1.4.1.2769.2.4.4	dclValveModule408Table .1.3.6.1.4.1.2769.2.4.4.8.1	.1.3.6.1.4.1.2769.2.4.4.8.1.1.1	dclValveModule408Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.4.8.1.1.2	dclValveModule408Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.4.8.1.1.3	dclValveModule408Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.4.8.1.1.4	dclValveModule408State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.4.8.1.1.5	dclValveModule408Position1	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.4.8.1.1.6	dclValveModule408Position2	ro	INTEGER (0..1000)
		.1.3.6.1.4.1.2769.2.4.4.8.1.1.7	dclValveModule408Temperature1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.4.8.1.1.8	dclValveModule408Temperature2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.4.8.1.1.9	dclValveModule408Temperature3	ro	INTEGER32
	dclAnalogueModule409Table .1.3.6.1.4.1.2769.2.4.4.9.1	.1.3.6.1.4.1.2769.2.4.4.9.1.1.1	dclAnalogueModule409Index	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.2	dclAnalogueModule409Name	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.3	dclAnalogueModule409Health	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.4	dclAnalogueModule409State	ro	BITS
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.5	dclAnalogueModule409Value1	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.6	dclAnalogueModule409Value2	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.7	dclAnalogueModule409Value3	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.8	dclAnalogueModule409Value4	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.9	dclAnalogueModule409Value5	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.4.9.1.1.10	dclAnalogueModule409Value6	ro	INTEGER32

Gateway

dclGateway .1.3.6.1.4.1.2769.2.4.5	dclGatewayDioTable .1.3.6.1.4.1.2769.2.4.5.1.1	.1.3.6.1.4.1.2769.2.4.5.1.1.1.1	dclGatewayDioIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.5.1.1.1.2	dclGatewayDioName	ro	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.5.1.1.1.3	dclGatewayDioHealth	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.5.1.1.1.4	dclGatewayDioStateInput	ro	BITS
		.1.3.6.1.4.1.2769.2.4.5.1.1.1.5	dclGatewayDioStateOutput	ro	BITS

dclGateway .1.3.6.1.4.1.2769.2.4.5	dclGatewayCtrlTable .1.3.6.1.4.1.2769.2.4.5.2.1	.1.3.6.1.4.1.2769.2.4.5.2.1.1.1	dclGatewayCtrlIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.5.2.1.1.2	dclGatewayCtrlSupplyAirTemperature	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.5.2.1.1.3	dclGatewayCtrlSupplyAirSetpoint	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.5.2.1.1.4	dclGatewayCtrlReturnAirTemperature	ro	INTEGER32
		.1.3.6.1.4.1.2769.2.4.5.2.1.1.5	dclGatewayCtrlReturnAirSetpoint	rw	INTEGER32

Global

dclGlobalSettings .1.3.6.1.4.1.2769.2.4.6.2	dclGlobalStateTable .1.3.6.1.4.1.2769.2.4.6.1.1	.1.3.6.1.4.1.2769.2.4.6.1.1.1.1	dclGlobalStateIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.1.1.1.2	dclGlobalStateName	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.1.1.1.3	dclGlobalStateActive	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.1.1.1.4	dclGlobalStateHealth	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.1.1.1.5	dclGlobalStateMode	rw	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.1.1.1.6	dclGlobalStateGroup	rw	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.1.1.1.7	dclGlobalStateSubGroup	rw	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.1.1.1.8	dclGlobalStateSlaveAddress	rw	INTEGER (2..254)
		.1.3.6.1.4.1.2769.2.4.6.1.1.1.9	dclGlobalStateCoolingPower	ro	INTEGER32
	dclGlobalSettingsLimitsTable .1.3.6.1.4.1.2769.2.4.6.2.1.1	.1.3.6.1.4.1.2769.2.4.6.2.1.1.1.1	dclGlobalSettingsLimitsIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.2.1.1.1.2	dclAnalogueModuleSensorIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.2.1.1.1.3	dclAnalogueSensorName	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.1.1.1.4	dclLowAlarmLimit	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.1.1.1.5	dclHighAlarmLimit1	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.1.1.1.6	dclHighAlarmLimit2	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.1.1.1.7	dclHighAlarmLimit3	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.1.1.1.8	dclHighAlarmLimit4	rw	INTEGER32
	dclGlobalSettingsDioNamesTable .1.3.6.1.4.1.2769.2.4.6.2.2.1	.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.1	dclGlobalSetingsDioNamesIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.2	dclDioNamesSourceDevice	ro	INTEGER

dclGlobalSettings .1.3.6.1.4.1.2769.2.4.6.2		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.3	dclDigitalInput1Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.4	dclDigitalInput2Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.5	dclDigitalInput3Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.6	dclDigitalInput4Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.7	dclDigitalInput5Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.8	dclDigitalInput6Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.9	dclDigitalInput7Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.10	dclDigitalInput8Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.11	dclDigitalOutput1Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.12	dclDigitalOutput2Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.13	dclDigitalOutput3Name	rw	DISPLAYSTRING
		.1.3.6.1.4.1.2769.2.4.6.2.2.1.1.14	dclDigitalOutput4Name	rw	DISPLAYSTRING
	dclGlobalSettingsPowerMonTable .1.3.6.1.4.1.2769.2.4.6.2.4.1	.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.1	dclGlobalSettingsPowerMonIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.4	dclSetLowVoltageL1	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.5	dclSetLowVoltageL2	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.6	dclSetLowVoltageL3	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.7	dclSetOverCurrentL1A	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.8	dclSetOverCurrentL2A	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.9	dclSetOverCurrentL3A	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.10	dclSetOverCurrentL1B	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.11	dclSetOverCurrentL2B	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.12	dclSetOverCurrentL3B	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.13	dclSetOverCurrentL1C	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.14	dclSetOverCurrentL2C	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.15	dclSetOverCurrentL3C	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.16	dclSetOverCurrentL1D	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.17	dclSetOverCurrentL2D	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.18	dclSetOverCurrentL3D	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.19	dclSetActivePowerExceededA	rw	INTEGER32

dclGlobalSettings .1.3.6.1.4.1.2769.2.4.6.2		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.20	dclSetActivePowerExceededB	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.21	dclSetActivePowerExceededC	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.22	dclSetActivePowerExceededD	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.23	dclSetUnbalance	rw	INTEGER32
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.26	dclSetDataSaving	rw	INTEGER
		.1.3.6.1.4.1.2769.2.4.6.2.4.1.1.27	dclSetGridNumber	rw	GridNumber

Alarms

alarmGroups .1.3.6.1.4.1.2769.2.4.7.1		.1.3.6.1.4.1.2769.2.4.7.1.0.0	alarmNotSpecified	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.1.0	alarmFan	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.2.0	alarmTemperature	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.3.0	alarmHumidity	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.4.0	alarmWaterSensor	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.5.0	alarmSmokeSensor	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.6.0	alarmPowerLoss	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.7.0	alarmDoorContacts	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.8.0	alarmFlowLoss	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.9.0	alarmDigitalIo	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.10.0	alarmUser	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.1.11.0	alarmPowerMon	na	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.1	alarmGlobalIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.2	alarmGlobalSource	ro	CoolCons
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.3	alarmGlobalPriority	ro	AlarmPriority
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.4	alarmGlobalType	ro	DclAlarms
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.5	alarmGlobalState	ro	EventState
alarmGlobal .1.3.6.1.4.1.2769.2.4.7.2	alarmGlobalTable .1.3.6.1.4.1.2769.2.4.7.2.1	.1.3.6.1.4.1.2769.2.4.7.2.1.1.1	alarmGlobalIndex	ro	INTEGER
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.2	alarmGlobalSource	ro	CoolCons
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.3	alarmGlobalPriority	ro	AlarmPriority
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.4	alarmGlobalType	ro	DclAlarms
		.1.3.6.1.4.1.2769.2.4.7.2.1.1.5	alarmGlobalState	ro	EventState
	moduleTableRef .1.3.6.1.4.1.2769.2.4.7.2.2.0			na	OBJECT-IDENTIFIER
alarmControl .1.3.6.1.4.1.2769.2.4.7.3	alarmControlTable .1.3.6.1.4.1.2769.2.4.7.3.1	.1.3.6.1.4.1.2769.2.4.7.3.1.1.1	alarmControlIndex	ro	AlarmTarget

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