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SK 3311.492

Liquid Cooling Unit

State: 2025.8.31 (Source: rittal.com/lt-en)

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FRIEDHELM LOH GROUP

SK 3311.492 - Liquid Cooling Unit LCU DX, single

Refrigerant-based enclosure cooling in single version for VX IT or Micro Data Center without heating up the installation room. With two output categories 3 kW and 6.5 kW, the ideal cooling solution for smaller IT applications.

Features

Model No.	SK 3311.492
Design	LCU DX 6.5 kW
Benefits	Space-saving solution by installing the internal unit in the VX IT server enclosure or the Micro Data Center Maximum energy efficiency due to EC fan technology and IT-based control Control of the server inlet temperature The inverter-controlled compressor adapts the cooling output to the current heat loss inside the enclosure Absorbed thermal energy is emitted directly to the ambient air at the (inverter-controlled) external unit's location, without heating up the installation room
Applications	Cooling unit for VX IT server racks and for Micro Data Centers
Function principle	The device supports front-to-back air routing typical of IT applications, and regulates the server inlet temperature to the set value
Material	Sheet steel, spray-finished
Colour	Internal unit: RAL 7035 External unit: white
Supply includes	Internal unit (evaporator coil) External unit (inverter-controlled) 482.6 mm (19") mounting trim panel with display and control components Condensate hose

Features

Installation options in VX	482.6 mm (19") mounting angles, standard or dynamic, must be offset in the width by 50 mm off-centre The front distance between the 482.6 mm (19") mounting angles and the front edge of the VX frame must be at least 100 mm Two punched sections with mounting flanges are required for attachment on the inner mounting level Air baffle plates are required to separate the hot/cold zones within an enclosure A base/plinth is required to route the cable downwards
Note	Below the operating limit, fluctuations in the air inlet temperature are possible The electrical connection is made on the external unit. The internal unit is supplied by the external unit.
IP protection category to IEC 60 529	Internal unit IP 20 External unit IP X4
Modulation range	3 - 6.5 kW
Max. cooling output	6.5 kW
Type of electrical connection	Connection clamp
Duty cycle	100 %
Operating temperature	The specified operating temperature refers to the external unit
To fit	Enclosure type: VX IT Width: = 800 mm Height: ≥ 1,800 mm Depth: ≥ 1,000 mm
Internal unit dimensions	Width: 105 mm Height: 1,550 mm Depth: 820 mm
External unit dimensions	Width: 845 mm Height: 700 mm Depth: 320 mm
Rated operating voltage	230 V, 1~, 50 Hz
Pre-fuse	20 A
Rated current	15.9 A
Packs of	1 pc(s).

Features

Net weight	111.5
Gross weight	126
Customs tariff number	84158200
EAN	4028177709300
ETIM 9	EC000855
ETIM 8	EC000855
ECLASS 8.0	27180704

Approvals

Certificates	EAC
Explanations	Declaration of conformity

Tender text

3311.492 LCU DX 6.5 kW

LCU DX, 6.5 kW split cooling unit consisting of an internal unit (evaporator) and an external unit (inverter controlled cooling unit).

The internal unit is designed so that it can be installed in a 800 mm wide VX IT server enclosure or in a Micro Data Centre.
It is constructed in IT-optimised design, so that the "front to back" air routing of the 19" components is ideally supported.
The preferred area of application is in small to medium-sized locations, in which the server racks are cooled directly - without cooling the entire room.
The LCU DX internal unit is mounted laterally in the server enclosure or in the Micro Data Centre and it forms a closed system with the latter.
The internal unit of the LCU DX extracts the warm server exhaust air directly from the rear part of the enclosure and blows the cooled air laterally in front of the 19" level.
The enclosure of the internal unit consists of powder coated sheet steel in RAL 7035, in which a direct evaporator, four EC radial fans, condensate tray and condensate discharge are integrated.
The condensation discharge has to be provided on-site.
The devices are constructed in such a way that assembly can be carried out in the IT server rack on the left or right.
In addition, a microprocessor controller is placed in the internal unit.
The reference variable that controls the device is the server air inlet temperature.
This can be set at between 17 and 30°C on the remote operating unit.
The operating unit is installed in a 19" trim panel (3 U). This is mounted on the rear 19" level of the VX IT rack or of the Micro Data Centre.
The external sensor that belongs to the device is placed near the front of the server.
The external unit with the inverter-controlled compressor permits stepless power adjustment, even in partial-load operation (3-6,5 kW).

The connection between the internal unit and the external unit is made by means of copper piping, a data line and the power supply.
The internal device is supplied with voltage by the external device.
R410a is used as a refrigerant.

The on-site installation and commissioning, the laying of refrigerant lines and the evacuation and filling of the system with refrigerant are not included in the range of goods and services supplied. This work must be performed by qualified personnel.
Technical specifications:
Useful cooling output 6.5 kW
Fans installed in the internal unit: 4
Reference variable: Server air inlet temperature pre-set at 22°C
Voltage supply: 230 V, 1~, N, PE, 50 Hz
Pre-fuse: 20 A
Refrigerant: R410a
Line length, max.: 50 m
Max. height difference (external unit): 12 m

Dimensions of the internal unit, W x H x D: 105 x 1550 x 820 mm
Dimensions of the external unit W x H x D: 845 x 700 x 320 mm

Weight of the internal unit: 48 kg
Weight of the external unit: 48 kg

Ambient temperature range of the external unit: -20°C to +45°C