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DK 7979.318 PDU switched

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DK 7979.318 - PDU switched

High-end IT rack power distribution: Smart PDU with measurement function per phase and individually switchable output slots.







Features

Model No.	DK 7979.318
Product description	High-end power distribution in a compact design for IT network and server racks. With switching function and power measurement at the infeed or per phase.
Benefits	For vertical mounting, it may be attached in the zero-U space of the Rittal VX IT or TS IT rack with no need for tools
	Colour coding of phases and fuse circuits (L1=pink, L2=black, L3=white)
	Tool-free divider kit for VX IT
	PDU self-supplied, no external power supply required
	Measurement accuracy ± 1% (kWh) to EN 62 053-21
	Programmable startup behaviour following voltage recovery (on/off/last status)
	Programmable switching behaviour (time/programmable logic)
	Integral real-time clock with battery buffering (max. 10 years, battery replaceable)
	Integral electromagnetic buzzer for acoustic alarms
	Adjustable limit values (warning/alarm) for voltage, current, output
	Operating hours meter, total and cyclical, resettable

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Features

Technical specifications	Display/controller unit in the PDU enclosure rotatable through 180° and replaceable
	Integral, fully-redundant power pack, power supply from all phases
	Error-tolerant PDU power supply redundant across all phases
	Voltage V, current A, frequency Hz
	Active power, active energy, apparent power, apparent energy
	Power factor (cosPhi) and phase angle
	Zero conductor current measurement/load imbalance detection
	Fuse monitoring for PDUs with integral fuse
	Monitoring of the optionally available overvoltage protection
	Bright TFT display, 128 x 128 pixels (RGB) with back-lighting and
	energy-saving mode to display output data and basic PDU
	configuration
	Position sensors for display rotation and correct PDU representation
	on the website
	Multi-colour LEDs (green/amber/red) to indicate switching states
	and warning/alarm limits per phase or infeed
	Power LED to indicate voltage
	Power-saving design, minimal intrinsic power consumption
Material	Aluminium section, black anodised
	Slots: Plastic
Supply includes	Assembly parts
Options	CMC III CAN bus sensors may be connected for ambient
	monitoring, max. 16 sensors
	Other enclosure colours are available
Measurement functions,	Emergency power supply to PDU web server via PoE, sequential
description	disconnection of the outputs
	Switching function per output slot
	Avoids overload peaks: Sequential activation of the outputs
	following voltage recovery
	Relay states are saved even in the event of a power failure
	Bistable relays: Low current consumption and high switching
	capacity, also suitable for higher starting currents up to max. 300 A
	Grouping: Joint switching of multiple outputs
	Powerful CPU (ARM Cortex A8)
	Digital input (floating contact)
	Additional alarm output/relay output (changeover contact)

Features

Dimensions	Width: 44 mm Depth: 70 mm Length: 1,095 mm
No. of sockets and type	18 x C13 / 2 x C19
Sockets	18 2
Rated operating voltage	230 V (AC)
Rated current (max.)	16 A
Power consumption	3,7 kW
Infeeds	Phases per infeed: 1~
Type of electrical connection	IEC C20
Interfaces	Fully redundant Ethernet interface 10/100/1000 Mbit/s (2x RJ45, 1x with PoE) USB 2.0 port (USB-A) for mass configuration, firmware updates & data logging CAN bus interface (RJ 45) for a maximum of 16 ambient sensors Serial interface RS232 (RJ12) for LTE unit, scripting, CLI Use of own certificates/TLS 1.2 E-mail forwarding in case of alarm (SMTP) User administration including rights management LDAP(S)/Radius/Active Directory connection Syslog server connection (max. 2 servers)
Directives	EMC Directive 2014/30/EU Low Voltage Directive 2014/35/EU
Standards	EN 62368-1 EN 61000-3 EN 61000-4 EN 61000-6 EN 62053-21
Protocols	Web server (HTTP, HTTPS, SSL) SSH, Telnet, NTP TCP/IP v4 & v6, DHCP, DNS SNMP v1, v2c & v3, Modbus/TCP, OPC-UA MIB for linking into 3rd party DCIM software FTP/SFTP (update/file transfer)
Operating temperature range	5 °C50 °C

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Features

Ambient humidity (non-condensing)	1095 %
Storage temperature range	-20 °C70 °C
To fit	Enclosure type: VX IT enclosure frame: ≥ 1,200 mm Enclosure type: VX IT 19" mounting angles: ≥ 1,800 mm
Packs of	1 pc(s).
Net weight	2
Gross weight	2.5
Customs tariff number	85366990
EAN	4028177973480
ETIM 9	EC002762
ETIM 8	EC002762
ECLASS 8.0	27142604

Approvals

Approvals	TÜV
Explanations	Declaration of conformity

Tender text

Rittal PDU switched Model No.: DK 7979.318 PDU switched 16A/1P IEC C20 18 x C13, 2 x C19 Compact power distributor for deployment in IT server and network enclosures. Vertical installation in the Zero-U space using the supplied universal brackets for common IT racks. Suitable for tool-free guick assembly in the Rittal VX IT and TS IT racks using the special supplied plug-%-play fastener. Robust aluminium housing with permanently mounted output slots, IEC 60320/C13 or IEC 60320/C19 as well as CEE 7/3 (earthing-pin) and BS 1363 (UK), depending on the type (see below for details). The IEC C13 / C19 output slots can be protected with a lock against unintentional removal of the connectors. Unused slots can be closed with slot covers available as accessories. This precludes an unintentional overloading of individual phases an circuits. The fuse circuits and phases are colour-coded for multiphase PDU variants. A connection cable with IEC C20 or CEE connector appropriate for the variant makes the PDU available for immediate deployment.

The PDU switched has extensive measurement functions for the current and power monitoring of each phase. And switching functions for each output slot. The integral TFT colour display anables the basic configuration setting and quick access of the electrical consumption data. Two Gigabit network interfaces and the integrated Web server allow access and data transmission using various protocols. The consumption parameters can be forwarded to a DCIM software via SNMP, OPC-UA, Modbus/TCP. For monitoring the ambient parameters, up to 16 sensors (for example temperature / humidity / smoke / leakage / access) as well as VX IT and TS IT handle systems from the CMC accessories program can be connected to the CAN sensor interface.

Optinally, an overvoltage protection module (type3) can be placed on the PDU at the infeed; the overvoltage protection module is equipped with arrestors that can

be replaced during operation. For intelligent PDUs, the status is monitored via the network interface, the PDU basic has a floating alarm contact for monitoring the overvoltage protection. As option, intelligent PDU variants can be supplied with an AC/DC sensitive residual current measurement (RCM type B) with up to 6 measurement points. This changes the PDU length and the number of installed slots for each standard length.

The warranty for proper operation is 24 months.

Technical specifications switched

Input voltage range (L/N/PE): 230 VAC, 50-60Hz

input current: 16A No. of phases: 1

Marking of phases (3-phase PDUs only: L1, L2, L3):

Rittal Power Pink, black, white

Number of slots type IEC 60320/C13 (total): 18

Number of slots type IEC 60320/C13

(per phase/fuse): 18

Number of slots type IEC 60320/C19 (total): 2

Number of slots type IEC 60320/C19

(per phase/fuse): 2

Number of slots type CEE 7/3 (total): 0

Number of slots type CEE 7/3

(per phase/fuse): 0 No. of circuit brakers: -

Hydraulic-magnetic protective circuit-breaker: 16 A

Slots individually switchable: Yes

Connector PDU input: EN 60320 / IEC C20

PDU housing width: 44mm
PDU housing depth: 70mm
PDU housing height: 1095mm

PDU material: Aluminium, anodised, in RAL 9005 (black)<(>,<)>

other colours available on request

PDU mounting adaptor (VX IT / TS IT) – Mounting options:

Frame + Zero-U space + cable route

Measurement functions: Measurement per phase or infeed Values recorded (per phase): Voltage (V), current (A)<(>,<)> frequency (Hz), Active power (kW), active energy (kWh)

apparent power (kVA), power factor

THD (voltage and current) for 3 phases<(>,<)>

Crest factor for single-phase

Neutral conductor current measurement

fuse monitoring (at 32 A)

Optional: Residual current monitoring (RCM)

AC + DC (RCM Typ B)

max. 6 measurement points per PDU possible

(input / per phase / per fuse)

0 mA - 100 mA je RCM

Voltage measuring range: 90V - 255V

Voltage resolution 0.1V

Current measuring range 0 - 16A/32A

Current resolution 0.1A

Measuring accuracy typ. ± 1% according to IEC/EN 62 053-21

Freely adjustable limit values (warning/alarm) for

for voltage, current, power: Yes Operating hours counter: Yes Controllerboard: can be rotated and replaced during operation Display: TFT, RGB 128x128 pixels

Network interface: 2x RJ45, per 10/100/1000 MBit/s

Supported protocols:

IPv4 / IPv6, integral web server

HTTP, HTTPS, SSL, SSH, NTP, Telnet

TCP/IP v4 and v6, DHCP, DNS, NTP, Syslog

SNMP v1, v2c und v3, Traps<(>,<)>

FTP/SFTP (update/file transfer)

OPC-UA, Modbus/TCP<(>,<)>

FTP/SFTP (update/file transfer)<(>,<)>

E-mail forwarding (SMTP)

User administration including rights management: Yes

LDAP(S)/Radius/Active Directory connection: Yes

USB port for firmware update+data logging functions: Yes

Initial commissioning / mass configuration:

yes, with predefined CSV file

CAN bus interface: RJ45<(>,<)>

for connecting 16 sensors

CAN sensor types: Temperature<(>,<)>

temperature/humidity (combined), infrared access sensor

leakage<(>,<)> airflow<(>,<)> EFD, NH measurement module, smoke alarm

vandalism, differential pressure<(>,<)>

VX IT / TS IT handle system

Plug & play drivers - Rittal RiZone DCIM software: Yes

Digital input: 1

Alarm relay: 48 V DC/2 A

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Serial interface: RS232 (e.g. for LTE unit 7030.571)

Conformity: CE Standards:

Safety: EN 62368

EMV:

EN 55022 / B

EN 61000-4-2

EN 61000-4-3

EN 61000-6-2

EN 61000-6-3

Safety Directive: 2014/35/EU EMC Directive: 2014/30/EU MTBF (at 40°C) 100.000 hours

Protection category: IP20 (EN 60529)

Protection class: Class 1

Pollution degree: 2

Overvoltage category: II

Environmental properties: 2011/65/EU (RoHS 2), WEEE

Storage temperature: -20°C to +70°C Ambient temperature: +5°C to +50°C

Ambient humidity: 10-95% rel. humidity, non-condensing

Connector lock for C14 and C20 connectors: 1x (further connector locks optional - DK 7979.020) Covers C13 (optional accessory): DK 7955.010 Covers C19 (optional accessory): DK 7955.015

Warranty: 24 months

Type: Rittal PDU switched Model No.: DK 7979.318