

Power Distribution Unit

Compact power distributor for use in IT servers and network enclosures. Please observe the relevant product dimensions and check whether the PDU can be installed in your preferred rack. You can find the PDU dimensions and the minimum height of the required rack in the technical documentations of the PDU basic, PDU metered and PDU metered plus, PDU switched and PDU managed on the respective websites. The technical specifications listed below apply wholly or partially to the following PDU products:

- PDU metered (power measurement at the infeed or per phase. Without switching function)
- PDU metered plus (power measurement per individual outgoing slot. Without switching function)
- PDU switched (power measurement at the infeed or per phase. With switching function)
- PDU managed (power measurement per individual outgoing slot. With switching function)

Equipment		
Input voltage range (L – N)	230 V (400 V, 3~), 50 – 60 Hz	
Input current	16 A/32 A (depending on product variant)	
No. of phases	1 or 3 depending on product variant	
PDU inherent supply	Integral long-range SMPS, error-tolerant from all phases	
PDU power consumption	approx. 10 W	
Redundant power supply via PoE	Yes (with PDU switched, PDU managed)	
Marking of phases (3-phase PDUs only: L1, L2, L3)	Rittal Power Pink, black, white	
Slots type EN 60 320/C13	Quantity depends on version	
Slots type EN 60 320/C19	Quantity depends on version	
No. of circuit-breakers	2 (single-phase) or 6 (3-phase) with 32 A version	
Hydraulic-magnetic protective circuit-breaker	16 A (Carling)	
Slots individually switchable	Yes, only for PDU switched, PDU managed (bistable relay, minimal inherent consumption)	
Connector, PDU input	EN 60 309/CEE or EN 60 320-C20 (depending on product variant)	
Length of connection cable	3 m	
Connection cable type	H05-VV	
No. of wires	3/5 (single-phase/3-phase PDU)	
Cable cross-section	2.5 mm ² /4.0 mm ² (for 16 A/32 A versions)	
PDU enclosure width	44 mm (1 U)	
PDU enclosure depth	70 mm	
PDU enclosure height (length)	Depends on product variant	
PDU material	Aluminium, anodised in RAL 9005 (black, other colours may be configured)	
PDU mounting adaptor	Plastic, black	
PDU mounting options	On the enclosure frame, at the side of the 482.6 mm (19") mounting frame (zero-U space) as well as on the cable route (push-button attachment)	
Measurement functions (input/phase or output slot)	Values recorded (standard configuration)	Voltage (V), phase current (A), frequency (Hz), active power (kW), active energy (kWh), apparent power (VA), apparent energy, reactive power, power factor, neutral-conductor measurement / load imbalance detection, crest factor, THDU/THDI, fuse monitoring (with 32 A versions) and operating hours meter
	Acquired values (individually configurable)	Differential current measurement (RCM type B), measurement range: 0 - 100 mA AC, max. 6 measuring points per PDU supported, input per phase/per fuse
	Overvoltage protection (type 3, replaceable with the system operational)	Electronic monitoring with PDU metered, metered plus, switched, managed, with PDU basic via floating alarm contact
	Voltage measurement range	90 V – 260 V
	Voltage resolution	0.1 V
	Current measurement range	0 – 16/32 A (depending on product variant)
	Current resolution	0.1 A
	Measurement accuracy	Typ. 1%
Freely settable limit values for warning/alarm	Yes	
Operating hours meter	Yes	
Display	TFT colour display, RGB 128 x 128 pixels, LED per slot (for PDU switched, PDU managed)	
Network interface	2 x RJ45, 10/100/1000 Mbit/s	
Supported protocols	TCP/IP v4 and v6, HTTP, HTTPS, SSL, SSH, NTP, Telnet, DHCP, DNS, NTP, Syslog, SNMP v1, v2c and v3, XML, FTP/SFTP (update/file transfer), e-mail forwarding (SMTP), OPC-UA server, Modbus/TCP	
User administration including rights management	Yes	
LDAP(S)/Radius/Active Directory connection	Yes	
Interfaces		
USB port for firmware update, data logging function, mass configuration	Yes	
Serial interface	RS232 (RJ12) for LTE unit, scripting, CLI	
Digital input	Floating contact	
Alarm (acoustic)	Piezo beeper	
CAN bus interface	RJ45, for connecting sensors	
CAN sensor types	Temperature, temperature/humidity (combined), infrared access sensor, vandalism sensor, handle systems (except wireless) and automatic door opening	
Max. number of sensors per PDU	16, sensor configuration freely selectable	
Plug & play drivers in the Rittal RiZone DCIM software	Yes	
Conformity	CE, EAC	

We reserve the right to make technical modifications

Power Distribution Unit

Equipment		
Standards	Security	EN 62 368-1
	EMC	EN 55 022/B, EN 61 000-4-2, EN 61 000-4-3, EN 61 000-6-2, EN 61 000-6-3
Low Voltage Directive		2014/35/EU
EMC Directive		2014/30/EU
MTBF (at 40 °C)		100,000 hours
Protection category		IP 20 (IEC 60 529)
Protection class		1
Contamination level		2
Overvoltage category		II
Environmental properties		RoHS 2 (2011/65/EU)
Storage temperature		-20 °C...+70 °C
Ambient temperatures		+5 °C...+ 50 °C
Ambient humidity (non-condensing)		10 – 95% rel. humidity
Connector lock C14/C20		1 x (optional additional locks 7979.020)
Covers C13		Optional 7955.010
Covers C19		Optional 7955.015

IT Infrastructure

IT power

Power Distribution Unit

Overview

PDU version ¹⁾	managed	switched	metered plus	metered	basic
Mechanical					
Compact extruded aluminium section, black anodised (other enclosure colours optionally available), W x D: 1 U x 70 mm, various lengths depending on number of slots	■	■	■	■	■
May be fitted in the the zero-U-space in the 600 mm wide Rittal IT rack, (2 PDUs per side, up to 4 in 800 mm wide Rittal IT racks)	■	■	■	■	■
Special PDU versions available for 482.6 mm (19") mounting	■	■	■	■	■
Colour coding of phases and fuse circuits (L1 = pink, L2 = black, L3 = white)	■	■	■	■	■
Universal mounting kit and assembly parts included with the supply	■	■	■	■	■
Tool-free installation kit especially for Rittal VX IT rack included with the supply	■	■	■	■	■
Display/controller unit in the PDU enclosure rotatable through 180° and replaceable	■	■	■	■	–
Connection cable, static, 3 m, with CEE (IEC 60 309) or IEC C20 input connector (customised modification available)	■	■	■	■	■
Compact circuit-breaker, 16 A, Carling type (only for 32 A PDU versions)	■	■	■	■	■
Output slots IEC 60 320 C13 available	■	■	■	■	■
Output slots IEC 60 320 C19 available	■	■	■	■	■
Output slots CEE 7/3 (earthing-pin socket) available	■	■	■	■	■
Output slots BS 1363 (UK plug) available	–	–	–	■	■
Connector lock for C13 and C19 sockets (optionally as accessories)	■	■	■	■	■
Lockable cover for unneeded C13/C19 slots (optional accessory)	■	■	■	■	■
Electrical					
Rated operating voltage 230 V (400 V, 3–), 50 – 60 Hz	■	■	■	■	■
PDUs for rated current 16 A/32 A, single-phase/3-phase	■	■	■	■	■
Integral, fully-redundant power pack, power supply from all phases	■	■	■	■	–
Power-saving design, minimal intrinsic power consumption	■	■	■	■	–
PDU with own power supply, no external power supply required	■	■	■	■	–
Error-tolerant PDU power supply redundant across all phases (with 3-phase PDUs)	■	■	■	■	–
Emergency power supply to PDU web server via PoE (Power over Ethernet) and sequential relay circuit (PoE+ to IEEE 802.3at), remains accessible even in the event of a mains failure	■	■	–	–	–
Optional: Type 3 overvoltage protection with interchangeable arresters while operational, with status monitoring, suitable for integration into PDU enclosure)	■	■	■	■	■
Switching function per output slot	■	■	–	–	–
Sequential activation of the outputs once the power is resumed (avoids overload peaks)	■	■	–	–	–
Relay states are saved even in the event of a power failure	■	■	–	–	–
Bistable relays/low current consumption/high switching capacity also for higher starting currents (max. 300 A)	■	■	–	–	–
Grouping (joint switching of several outputs)	■	■	–	–	–
Programmable startup response following voltage recovery (on/off/last status)	■	■	–	–	–
Programmable startup response (time and programmable logic)	■	■	–	–	–
Measurement functions					
Voltage (V), current (A), frequency (Hz)	■	■	■	■	–
Active power (kW), active energy (kWh), apparent power (VA), apparent energy (kVA)	■	■	■	■	–
Power factor (cosPhi) and phase angle	■	■	■	■	–
Neutral conductor measurement to identify unbalanced loads (3-phase PDUs only)	■	■	■	■	–
Optional: Differential current measurement (type B) per infeed/phase/fuse	■	■	■	■	–
Fuse monitoring for PDUs with integral fuse (32 A PDUs)	■	■	■	■	–
Monitoring of the optionally available overvoltage protection	■	■	■	■	–
Alarm contact for optional overvoltage protection on terminals	–	–	–	–	■
Measurement per phase or infeed	■	■	■	■	–
Measurement per output slot	■	–	■	–	–
Measurement accuracy ±1% to IEC/EN 62 053-21	■	■	■	■	–

¹⁾ In addition to the defined products, customised modifications are also possible.

Note:

- Select plausibility-checked enclosures and components easily with the "RiPanel", plan machining and place your order, www.rittal.com/Configurator

Power Distribution Unit

Overview

PDU version ¹⁾	managed	switched	metered plus	metered	basic
Connectivity/management functions	managed	switched	metered plus	metered	basic
Powerful CPU (ARM Cortex A8)	■	■	■	■	–
Integral real-time clock with battery buffering (max. 10 years, battery replaceable)	■	■	■	■	–
Integral piezo beeper	■	■	■	■	–
Digital input (floating contact)	■	■	■	■	–
Additional alarm output/relay output (changeover contact)	■	■	■	■	–
Bright TFT display, 128 x 128 pixels (RGB) with back-lighting and energy-saving mode (display of 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	■	■	■	–	–
Multi-colour LEDs (green/amber/red) to indicate switching states and limits per individual output slot	■	–	■	–	–
Power LED, indicates presence of voltage	■	■	■	■	–
Adjustable limit values (warning/alarm) for voltage, current, output	–	■	–	■	–
Adjustable limit values (warning/alarm) for current, voltage, output, individually setting for each output slot	■	–	■	–	–
Operating hours meter, total and cyclical (resettable)	■	■	■	■	–
Fully redundant Ethernet interface 10/100/1000 Mbit/s (2 x RJ45)	■	■	■	■	–
USB 2.0 port (USB-A) for mass configuration, firmware update and data logging	■	■	■	■	–
CAN bus interface (RJ 45) for a maximum of 16 ambient sensors	■	■	■	■	–
Serial interface RS232 (RJ12) for CMC III LTE unit, scripting, CLI	■	■	■	■	–
Web server (HTTP, HTTPS, SSL, SSH) Telnet, NTP	■	■	■	■	–
TCP/IP v4 and v6, DHCP, DNS	■	■	■	■	–
SNMP v1, v2c and v3, Modbus/TCP, OPC-UA	■	■	■	■	–
MIB for linking into 3rd party DCIM software	■	■	■	■	–
FTP/SFTP (update/file transfer)	■	■	■	■	–
Rest API	■	■	■	■	–
Use of own certificates/TLS 1.3	■	■	■	■	–
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)	■	■	■	■	–
Fully redundant monitoring via 2nd network	■	■	■	■	–
CMC III CAN bus sensors may be connected for ambient monitoring (max. 16 sensors)	■	■	■	■	–
CMC III sensors: Temperature, humidity, smoke detector, VX IT handle systems, infrared access sensor, vandalism sensor, airflow, differential pressure, etc.	■	■	■	■	–
Ambient conditions	managed	switched	metered plus	metered	basic
Operating temperature	+5...+50 °C @100% load				
Storage temperature	-25 °C...+70 °C				
Ambient humidity (non-condensing)	10 – 95% rel. humidity				
Protection category (IEC 60 529)	IP 20				
Approvals and standards	managed	switched	metered plus	metered	basic
Approvals and standards	CE/EAC/RoHS/WEEE				
Low Voltage Directive	2014/35/EU				
EMC Directive	2014/30/EU				
Standards (excerpt)	EN 62 368-1/EN 62 053-21/EN 61 000-3/EN 61 000-4/ EN 61 000-6				

¹⁾ In addition to the defined products, customised modifications are also possible.

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Sample application

PDU cascading

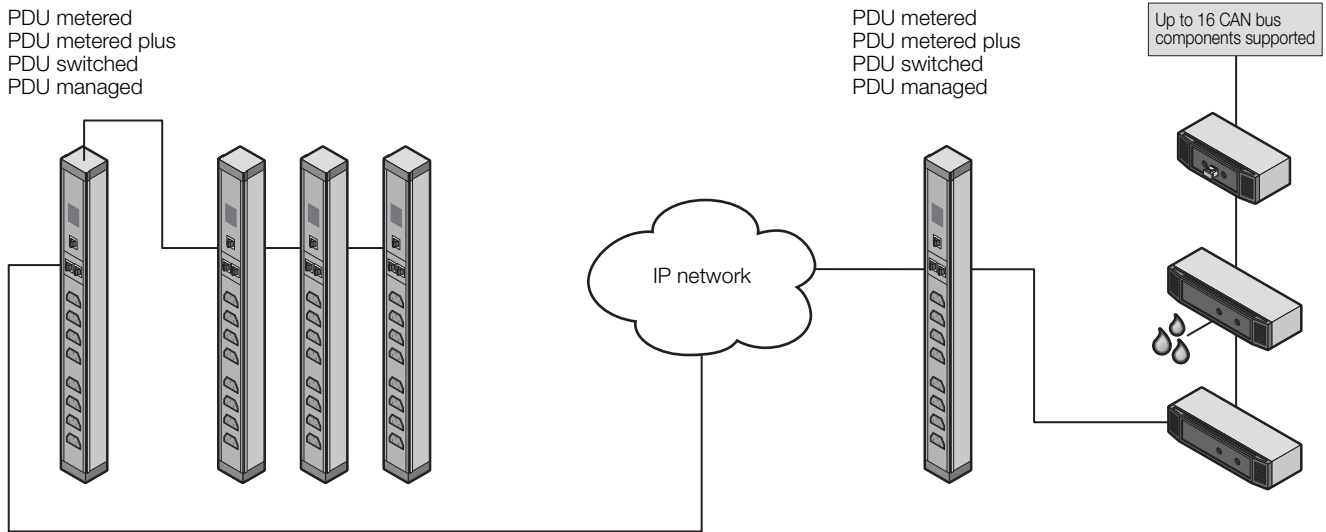
Cascading of up to 16 PDUs in series is supported via the network interface.

Master/slave operating mode

Each PDU may also be used individually as a master or slave PDU. The master PDU controls up to three slave PDUs.

Connection of CAN bus sensors

Up to 16 CMC III CAN bus sensors may be connected to a PDU for ambient monitoring (temperature, humidity, access).



Allocation of fuses, phases, slots

Model No. DK	Infeed PDU	Fuse (type C16 A)	Phase 1		Phase 2		Phase 3	
			String 1 (F1)	String 1 (F2)	String 2 (F1)	String 2 (F2)	String 3 (F1)	String 3 (F2)
7979.X02	230 V/1~/16 A	-	6 (8) x C13	-	-	-	-	-
7979.X03	230 V/1~/16 A	-	4 (8) x earthing-pin	-	-	-	-	-
7979.X04	230 V/1~/32 A	2 x	2 x C13 + 1 x C19	2 x C13 + 1 x C19	-	-	-	-
7979.X10	230 V/1~/16 A	-	12 x C13 + 1 x C19	-	-	-	-	-
7979.X11	230 V/1~/16 A	-	10 x earthing-pin	-	-	-	-	-
7979.X12	230 V/1~/32 A	2 x	8 x C13 + 1 x C19	8 x C13 + 1 x C19	-	-	-	-
7979.X13	230 V/1~/32 A	2 x	6 x C13 + 2 x C19	6 x C13 + 2 x C19	-	-	-	-
7979.X14	230 V/1~/32 A	2 x	8 x earthing-pin	8 x earthing-pin	-	-	-	-
7979.X15	230 V/1~/16 A	-	24 x C13 + 4 x C19	-	-	-	-	-
7979.X16	230 V/1~/32 A	2 x	12 x C13 + 2 x C19	12 x C13 + 2 x C19	-	-	-	-
7979.X17	230 V/1~/16 A	-	12 x C13 + 1 x C19	-	-	-	-	-
7979.X18	230 V/1~/16 A	-	18 x C13 + 2 x C19	-	-	-	-	-
7979.X30	400 V/3~/16 A	-	3 x C19	-	3 x C19	-	3 x C19	-
7979.X31	400 V/3~/32 A	6 x	2 x C19	2 x C19	2 x C19	2 x C19	2 x C19	2 x C19
7979.X32	400 V/3~/16 A	-	2x C13 + 2 X C19	-	2x C13 + 2 X C19	-	2x C13 + 2 X C19	-
7979.X33	400 V/3~/16 A	-	6 x earthing-pin	-	6 x earthing-pin	-	6 x earthing-pin	-
7979.X34	400 V/3~/32 A	6 x	4 x earthing-pin	4 x earthing-pin	4 x earthing-pin	4 x earthing-pin	4 x earthing-pin	4 x earthing-pin
7979.X35	400 V/3~/16 A	-	6 x C13 + 1 x C19	-	6 x C13 + 1 x C19	-	6 x C13 + 1 x C19	-
7979.X36	400 V/3~/16 A	-	8 x C13 + 2 x C19	-	8 x C13 + 2 x C19	-	8 x C13 + 2 x C19	-
7979.X37	400 V/3~/32 A	6 x	8 x C13	2 x C19	8 x C13	2 x C19	8 x C13	2 x C19
7979.X38	400 V/3~/16 A	-	6 x C13 + 4 x C19	-	6 x C13 + 4 x C19	-	6 x C13 + 4 x C19	-
7979.X39	400 V/3~/32 A	6 x	2 x C13 + 2 x C19	2 x C13 + 2 x C19	2 x C13 + 2 x C19	2 x C13 + 2 x C19	2 x C13 + 2 x C19	2 x C13 + 2 x C19
7979.X40	400 V/3~/16 A	-	12 x C13 + 2 x C19	-	12 x C13 + 2 x C19	-	12 x C13 + 2 x C19	-
7979.X42	400 V/3~/16 A	-	14 x C13	-	14 x C13	-	14 x C13	-
7979.141	400 V/3~/32 A	6 x	6 x C13 + 1 x C19	6 x C13 + 1 x C19	6 x C13 + 1 x C19	6 x C13 + 1 x C19	6 x C13 + 1 x C19	6 x C13 + 1 x C19
7979.143	400 V/3~/32 A	6 x	8 x C13	8 x C13	8 x C13	8 x C13	8 x C13	8 x C13
7979.X75	400 V/3~/16 A	-	6 x C13 + 2 x earthing-pin	-	6 x C13 + 2 x earthing-pin	-	6 x C13 + 2 x earthing-pin	-
7979.X76	400 V/3~/16 A	-	8 x C13 + 2 x C19	-	8 x C13 + 2 x C19	-	8 x C13 + 2 x C19	-

Power Distribution Unit

Type 3 overvoltage protection modules, with replaceable arresters and alarm contact

Compact overvoltage protection module for terminal unit protection (Type 3) with alarm contact for fastening on the enclosure frame.

Connection type	Connection cable/length	Phases	Phase current A	Output kW	Packs of	Model No.
CEE connector/coupling	H05VV-F3G2.5, 1 m	1~	16	3.7	1 pc(s).	7979.721
CEE connector/coupling	H05VV-F3G4.0, 1 m	1~	32	7.4	1 pc(s).	7979.722
CEE connector/coupling	H05VV-F5G2.5, 1 m	3~	16	11.0	1 pc(s).	7979.723
CEE connector/coupling	H05VV-F5G4.0, 1 m	3~	32	22.0	1 pc(s).	7979.724

PDU accessories

	Packs of	Model No.
Slot cover for C13 jack, lockable	10 pc(s).	7955.010
Slot cover for C19 jack, lockable	10 pc(s).	7955.015
Connector lock for C14/C20 connector	20 pc(s).	7979.020
PDU mounting adaptor for TE 7000/TE 8000	2 pc(s).	7000.688
PDU accessory pack	1 pc(s).	7979.001

CMC III/PDU Sensoren

CMC III/PDU sensor type	Packs of	Model No.
Temperature sensor	1 pc(s).	7030.110
Temperature/humidity sensor (combi-sensor)	1 pc(s).	7030.111
Infrared access sensor	1 pc(s).	7030.120
Vandalism sensor	1 pc(s).	7030.130
Analogue airflow sensor	1 pc(s).	7030.140
Analogue differential pressure sensor	1 pc(s).	7030.150
Universal sensor (digital inputs)	1 pc(s).	7030.190
Smoke detector	1 pc(s).	7030.400
Leak sensor	1 pc(s).	7030.430
Leak sensor, 15 m	1 pc(s).	7030.440
CMC III CAN bus connection cable RJ 45 (length: 0.5 m, 1x required for each sensor)	1 pc(s).	7030.090
CMC III CAN bus connection cable RJ 45 (length: 1.0 m, 1x required for each sensor)	1 pc(s).	7030.091
CMC III CAN bus connection cable RJ 45 (length: 1.5 m, 1x required for each sensor)	1 pc(s).	7030.092
CMC III CAN bus connection cable RJ 45 (length: 2.0 m, 1x required for each sensor)	1 pc(s).	7030.093

VX IT handle system

VX IT handle system (2 handles may be connected per PDU)	Packs of	Model No.
CMC III online comfort handle VX	1 pc(s).	7030.611
Coded lock for CMC III	1 pc(s).	7030.223
Transponder reader for CMC III	1 pc(s).	7030.233
CMC III Access Control (1x required for each handle system)	1 pc(s).	7030.202