DATA COMMUNICATION SOLUTIONS





solutions for connections



50 years of design, manufacturing and integration for industries

ZPAS milestones

- 2016 opening of an electrical assembly plant with an area of 9 000 m² in Nowa Ruda at Piłsudskiego Street
 - 2007 opening of a production plant with an area 3 500 m² in Nowa Ruda at Górnicza Street
 - 2007 opening of a 10 000 m² serial production plant in Nowa Ruda Słupiec
 - 2003 the Przygórze plant expanded with new production halls and automatic powder coating plant
 - 1991 transformation of the experimental plant into the Network Automation Manufacturing Plant (ZPAS) and privatization of the company joint stock company established
 - 1973 the former steelworks "Barbara" and buildings of the Przygórze mine "Bolesław" become the seat for the Experimental Department of the Wrocław Power Systems Institute

ZPAS bases its development on investments in human potential and modern machinery. From a small experimental plant located in Przygórze, we have turned into a big company that employs 700 people in four production facilities.

The mission of ZPAS is to be a world leader in the production of ICT enclosures, data centers, industrial and outdoor cabinets. We are an innovative company that provides customers with comprehensive solutions from design to on site implementation.

We put our effort on getting the satisfaction of our customers, employees and suppliers. We care for the environment and the local community by supporting cultural, sports and social development institutions.

We build our success based on values that are important to us: respect, honesty, not-to-blame and uniqueness. In the goals we set for the company, we pay attention to employee satisfaction, teamwork, as well as productivity and profit. In 2023, we celebrate 50 years of our activity.

Piotr Baranowski CEO of ZPAS S.A.

People power – the real engine of any business. Good people are not just crucial to a business. They are the business themselves!

Richard Branson



ZPAS PRODUCTION PLANTS



Przygórze
ZPAS S.A. Management Board Office, administration and design production plant





Nowa Ruda, Piłsudskiego Street Manufacturing plant – electrical assembly





Nowa Ruda, Górnicza Street Outdoor Enclosures Production Plant

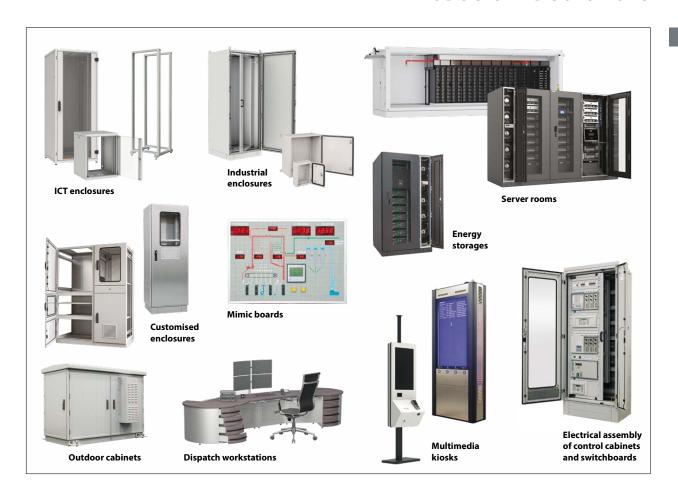




Nowa Ruda – Słupiec, Spacerowa Street Serial production plant and warehouse for finished products



PRODUCTS AND SOLUTIONS



QUALITY AND ENVIRONMENTAL MANAGEMENT SYSTEM

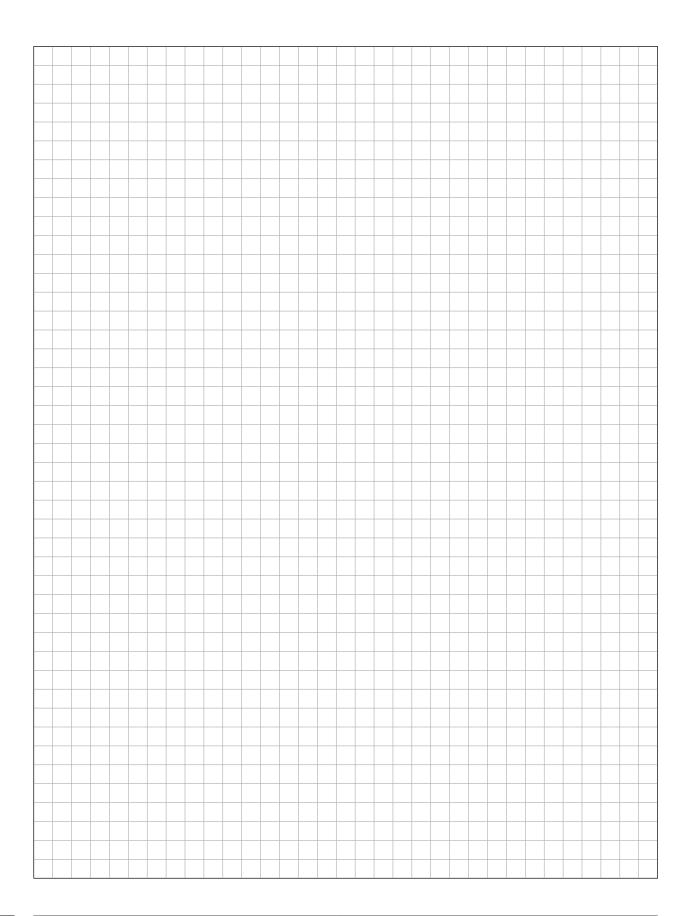




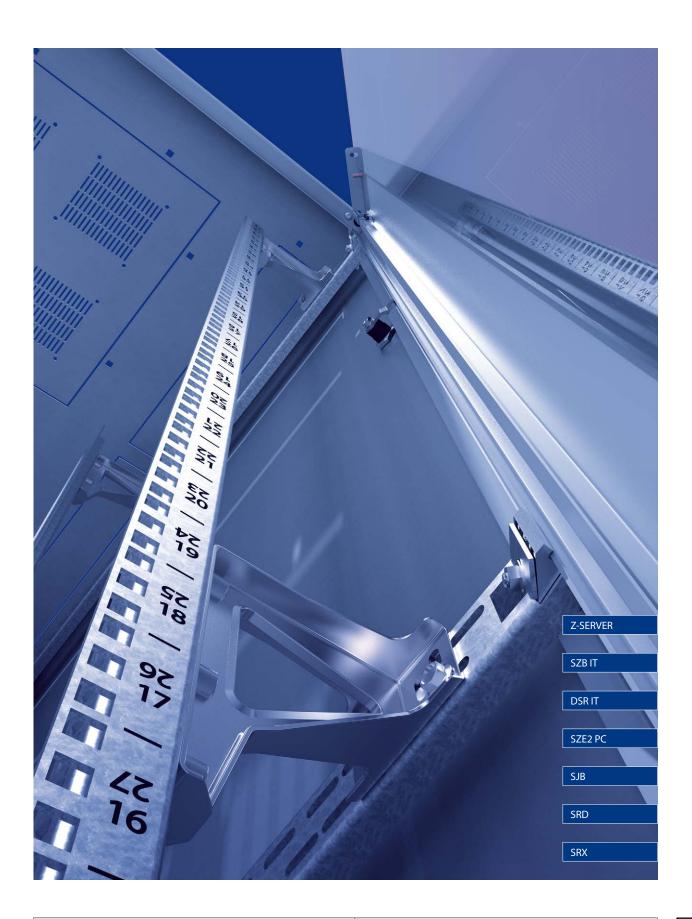


DATA COMMUNICATION Floor-standing cabinets and open racks9-49 **SOLUTIONS** SZB IT - network/server cabinets24 DSR IT - collocation server cabinets......32 SZE2 PC - computer cabinet IP54......42 SJB - small network cabinet44 Wall-mounted cabinets 51-58 Z-CUBE - single-section and double-section cabinets54 Accessories for cabinets and open racks 59-86 Base60 Shelves......64 Baying cabinets in rows, lighting, pockets72 Roof......74 Cable management......78 Monitoring and access control85 Ventilation and air-conditioning 87-93 Air-conditioning systems92 Power supply systems 95-110 Power distribution units96 Comprehensive solutions for data centres 111-114 Scope of offer112 Examples of server rooms projects113

FLOOR-STANDING CABINETS AND OPEN RACKS



FLOOR-STANDING CABINETS AND OPEN RACKS



Z-SERVER 'S" SERVER CABINETS

DESCRIPTION

CABINETS FOR DATA CENTERS

STURDY DESIGN

- Strong bolted frame made of steel closed profiles.
- Maximum load capacity:
 1500 kg for cabinet based on levelling feet,
 1750 kg for cabinet without feet,
 based directly on the floor.

MULTIPURPOSE

- Smooth tool-free adjustment of 19" mounting profiles.
- Mounting profiles are U-marked to simplify installation.
- The width can be changed from 19" to 21" with no need to use additional mounting elemens (in 800 mm wide cabinets).
- Door opening angle up to 270 degrees, adjustable direction of opening.
- Easy installation thanks to split side panels.
- Optional mounting of partition panels between cabinets at any time of their operation.
- Tool-free mounting of the top plate of cabinet.
- The frame includes holes for mounting accessories.

SAFETY

- Multi-point cabinet locking system:
 5-point locking system in single-leaf doors;
 3-point locking system in double-leaf doors (5-point locking system as an option if adapting set is used).
- Locks with access control are available.

PERFORMANCE

- Doors with optimum perforation clearance of 80%.
- Up to 86% of the door area is perforated to provide adequate cooling for the installed devices.
- To optimise the flow of cold air we provide the following components to isolate cold and hot areas at the cabinet and Z-SERVER BOX server room.

Z-SERVER SYSTEM

The new Z-SERVER cabinet system represents innovative quality solutions for data-processing centres.

Scalable functionality and easy adaptation enabled by the available additional equipment:

- Z-SERVER BOX cold aisle installation,
- air flow guiding elements within a single cabinet,
- logical cabling arrangement elements,
- power supply system mounting elements.

REFERENCE CHART

Width W [mm]	Depth D [mm]	Reference number		
600	1000	426010	456010	476010
600	1200	426012	456012	476012
800	1000	428010	458010	478010
800	1200	428012	458012	478012
Usable heigh HU [U = 44.45		42 U	45 U	47 U
Frame height	Frame height H [mm] 2000 2100		2200	

SCOPE OF DELIVERY

Standard cabinet configuration:

- bolted frame,
- perforated single-leaf front door,
- perforated single-leaf or double-leaf rear door,
- top plate with ventilation perforation and knock-out blanking plates,
- two pairs of 19" mounting profiles, type PREMIUM,
- earthing conductors for doors, top plate and mounting profiles,
- levelling feet.

Accessories available separately:

- side panels and other Z-SERVER accessories,
- plinth, shelves, lighting kit, 19" blanking plates.

TECHNICAL DATA

Material

Sheet steel.

Protection degree

IP 20 in accordance with EN 60529 (does not apply to brush cable entries).

Surface finishing

Side panels, doors, top plate – powder paint, light grey (RAL 7035) or black (RAL 9005).

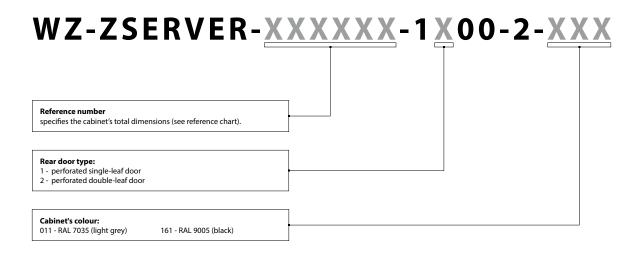
Mounting profiles and other metal parts - zinc-coated.



CONFIGURATOR



CATALOGUE NUMBER OF Z-SERVER CABINET



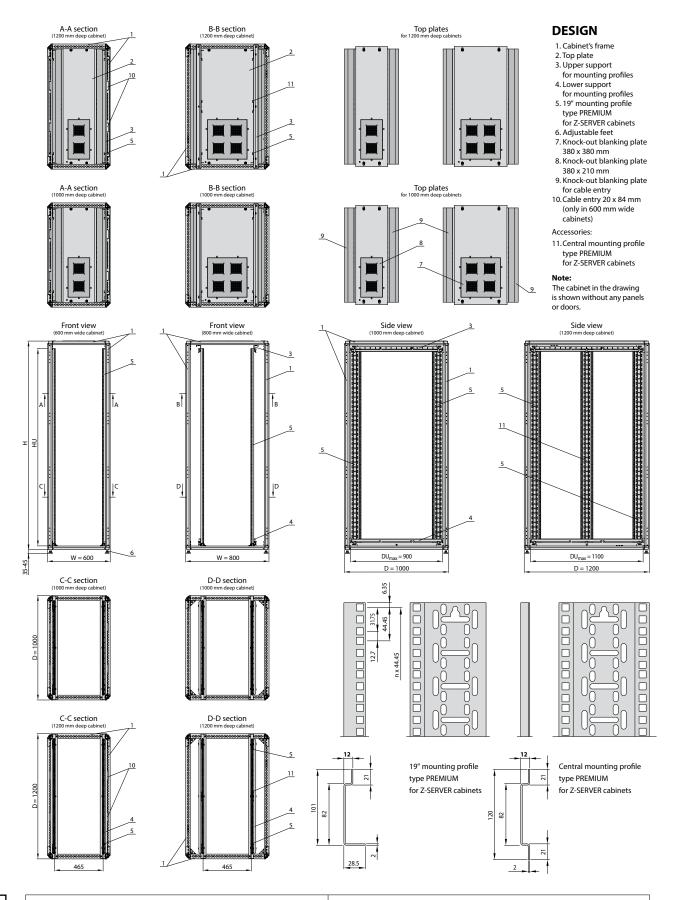
FLOOR-STANDING CABINETS AND OPEN RACKS

Z-SERVER cabinets

DATA COMMUNICATION SOLUTIONS

Z-SERVER 19" SERVER CABINETS

DESIGN



ACCESSORIES

Split side panels

Available in two types differing in depth.

Side panels type A (shallow):

- allow to open the door up to 270 degrees;
- increase the cabinet width by 3 mm on each side.

Side panels type **B** (deep):

- provides sufficient mounting space in 600 mm wide cabinets; enables the installation of a power strip between the side panel and the 19" mounting profile;
- increase the cabinet width by 11 mm on each side.

For cabinets'		Side panels	Catalogue number	
height	depth	type	RAL 7035	RAL 9005
	1000	Α	WZ-8477-08-01-011	WZ-8477-08-01-161
42 U	1000	В	WZ-8477-09-01-011	WZ-8477-09-01-161
42 0	1200	Α	WZ-8477-08-02-011	WZ-8477-08-02-161
	1200	В	WZ-8477-09-02-011	WZ-8477-09-02-161
	1000	Α	WZ-8477-08-03-011	WZ-8477-08-03-161
45 U		В	WZ-8477-09-03-011	WZ-8477-09-03-161
45 0	1200	Α	WZ-8477-08-04-011	WZ-8477-08-04-161
	1200	В	WZ-8477-09-04-011	WZ-8477-09-04-161
	1000	Α	WZ-8477-08-05-011	WZ-8477-08-05-161
47 U	1000	В	WZ-8477-09-05-011	WZ-8477-09-05-161
4/ 0	1200	Α	WZ-8477-08-06-011	WZ-8477-08-06-161
1200		В	WZ-8477-09-06-011	WZ-8477-09-06-161



Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Side panel split horizontally, consisting of upper and lower part, together with fixing accessories. The lower part is equipped with two sliding locks.





Package: 1 set (1 split side panel)

Partition panel

Designed for mounting between bayed cabinets.

It contains four 150 x 45 mm cable entries closed with knock-out blanking plates and four cutouts for cabinet frame connectors. The front and bottom edges of the partition panel, bent at an angle of 90 degrees, facilitate its installation between the frames of adjacent cabinets. The distance between the cabinets needed to install the partition panel is only 2 mm.

The partition panel is available in two types differing in height:

- partition panel type A for cabinets with feet;
- partition panel type B for cabinets without feet.

For cabinets'		Partition	Catalogue number		
height	depth	panel type	RAL 7035	RAL 9005	
	1000	Α	WZ-8477-35-01-011	WZ-8477-35-01-161	
42.11	1000	В	WZ-8477-35-07-011	WZ-8477-35-07-161	
42 U	1200	Α	WZ-8477-35-02-011	WZ-8477-35-02-161	
	1200	В	WZ-8477-35-08-011	WZ-8477-35-08-161	
	1000	Α	WZ-8477-35-03-011	WZ-8477-35-03-161	
45 U		В	WZ-8477-35-09-011	WZ-8477-35-09-161	
45 0	1200	Α	WZ-8477-35-04-011	WZ-8477-35-04-161	
	1200	В	WZ-8477-35-10-011	WZ-8477-35-10-161	
	1000	Α	WZ-8477-35-05-011	WZ-8477-35-05-161	
47.11	47 U	В	WZ-8477-35-11-011	WZ-8477-35-11-161	
4/0		Α	WZ-8477-35-06-011	WZ-8477-35-06-161	
	1200		WZ-8477-35-12-011	WZ-8477-35-12-161	

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Partition panel with fixing accessories.

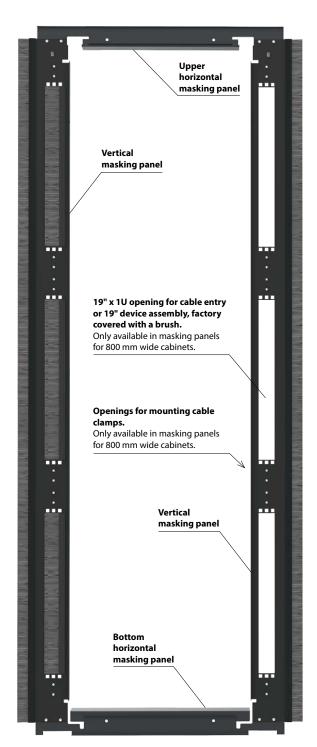
Note: Cabinet frame connectors are ordered separately - see page 19.



Package: 1 pc.

Z-SERVER 'S" SERVER CABINETS

ACCESSORIES



Vertical and horizontal masking panels for 800 mm wide cabinets

Vertical masking panels

For sealing the area between the 19" space and the cabinet side panel. The panels prevent the recirculation of hot air to the front area of the cabinet, and increase the efficiency of air conditioning systems.

In case of 800 mm wide cabinets the panels include openings for cable clamps mounting and 19" x 1U brush cable entries, to which, if necessary, 19" equipment can be installed instead of brush

Vertical masking panels are mounted on 19" mounting profiles without the use of tool.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Set of two vertical masking panels with fixing accessories.

For cabinets'		Catalogue number	
height width		RAL 7035	RAL 9005
42 U	600	WZ-8477-36-01-011	WZ-8477-36-01-161
42 0	800	WZ-8749-E1-01-011	WZ-8749-E1-01-161
45 U	600	WZ-8477-36-02-011	WZ-8477-36-02-161
43 0	800	WZ-8749-E1-02-011	WZ-8749-E1-02-161
47.11	600	WZ-8477-36-03-011	WZ-8477-36-03-161
47 U	800	WZ-8749-E1-03-011	WZ-8749-E1-03-161

Package: 1 set (right and left masking panels)

Horizontal masking panels

For sealing the area between the 19" space and the top and bottom plate of the cabine. The panels prevent the recirculation of hot air to the front area of the cabinet, and increase the efficiency of air conditioning systems.

Horizontal masking panels are attached to the vertical masking panels.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Set of two horizontal masking panels with fixing accessories.

For cabinets'		Catalogue number	
height	height width		RAL 9005
42 U	600	WZ-8477-37-01-011	WZ-8477-37-01-161
42 0	800	WZ-8749-E3-01-011	WZ-8749-E3-01-161
45 U	600	WZ-8477-37-02-011	WZ-8477-37-02-161
45 0	800	WZ-8749-E3-02-011	WZ-8749-E3-02-161
47 U	600	WZ-8477-37-03-011	WZ-8477-37-03-161
47 0	800	WZ-8749-E3-03-011	WZ-8749-E3-03-161

Package: 1 set (upper and lower masking panels)

ACCESSORIES

Brush strip for the top plate

Brush strip for attachment to a lateral edge of the upper plate after removing the knock-out blanking plate (see drawings of the top plates on page 12).

Material

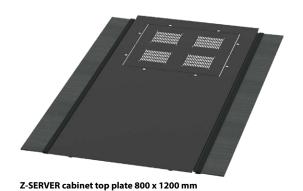
Black plastic.

Scope of delivery

Brush strip.

For cabinets' depth	Catalogue number
1000	WZ-8477-57-01-000
1200	WZ-8477-57-02-000





with brush strips

Bottom plate and side brush strips

Available in a few sizes suitable for width and depth of the cabinet.

Side brush strips are designed only for cabinet 800 mm wide.

Materia

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005), black plastic.

Scope of delivery

Depending on chosen version: plate with brush cable entry, solid steel plate, plate with knock-out cable entry, side brush strips.

For cabinets'		Catalogue number		
type width depth		RAL 7035	RAL 9005	
	600	1000	WZ-8477-D7-01-011	WZ-8477-D7-01-161
Cabinet	800	1000	WZ-8477-D7-02-011	WZ-8477-D7-02-161
without castors set	600	1200	WZ-8477-D7-03-011	WZ-8477-D7-03-161
custors set	800	1200	WZ-8477-D7-04-011	WZ-8477-D7-04-161
	600	1000	WZ-8477-D7-05-011	WZ-8477-D7-05-161
Cabinet	800	1000	WZ-8477-D7-06-011	WZ-8477-D7-06-161
with castors set	600	1200	WZ-8477-D7-07-011	WZ-8477-D7-07-161
custors set	800	1200	WZ-8477-D7-08-011	WZ-8477-D7-08-161

Package: 1 set





Z-SERVER 19" SERVER CABINETS

ACCESSORIES





WZ-8477-74-02-161 Locking castors set

Castors set

Designed for Z-SERVER cabinets to increase their mobility. Maximum load capacity: 1500 kg.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005), holders from zinc-coated steel, plastic castors.

Scope of delivery

Castors set with fixing accessories.

For cabinets'	Contains trums	Catalogue number		
width	Castors type	RAL 7035	RAL 9005	
600	non-locking	WZ-8477-71-03-011	WZ-8477-71-03-161	
600	locking	WZ-8477-71-04-011	WZ-8477-71-04-161	
900	non-locking	WZ-8477-73-02-011	WZ-8477-73-02-161	
800	locking	WZ-8477-74-02-011	WZ-8477-74-02-161	

Package: 1 pc.



Sealing masking strip for cabinet on feet

Sealing masking strip protects from getting cold air from the aisle to the space under the cabinet.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005), black plastic.

Scope of delivery

Sealing masking strip with fixing accessories.

For cabinets'	Catalogue number		
width	RAL 7035	RAL 9005	
600	WZ-8477-D4-01-011	WZ-8477-D4-01-161	
800	WZ-8477-D4-02-011	WZ-8477-D4-02-161	

Package: 1 pc.

Cabinet equipped with castors sets, feet and sealing masking strip

ACCESSORIES

Vertical cable comb

For 600 mm and 800 mm wide cabinets. To arrange cabling in the vertical direction. Mounted on 19" mounting profile without the use of tool.

Material

Black plastic;

sheet steel powder paintet in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Vertical cable comb with fixing accessories.

Fau ashin akal bai mba	Catalogue number		
For cabinets' height	RAL 7035	RAL 9005	
42 U	WZ-8477-39-01-011	WZ-8477-39-01-161	
45 U	WZ-8477-39-02-011	WZ-8477-39-02-161	
47 U	WZ-8477-39-03-011	WZ-8477-39-03-161	

Package: 1 pc.

Vertical cable tray with cover

For 800 mm wide cabinets. For arranging high-density cabling in the vertical direction. Mounted on a 19" mounting profile without the use of tools.

Material

Black plastic;

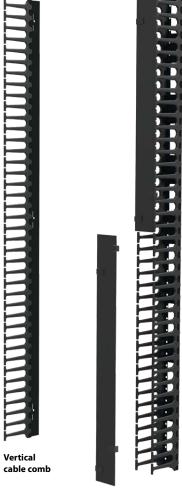
sheet steel powder painted light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Vertical cable tray with cover and fixing accessories.

Fau sahimatal haimht	Catalogue number		
For cabinets' height	RAL 7035	RAL 9005	
42 U	WZ-8477-38-01-011	WZ-8477-38-01-161	
45 U	WZ-8477-38-02-011	WZ-8477-38-02-161	
47 U	WZ-8477-38-03-011	WZ-8477-38-03-161	

Package: 1 pc.



Vertical cable tray with cover

19" cable trays

Mounted between 19" mounting profiles. Available in 1 U and 2 U heighs.

Material

Black plastic.

Scope of delivery

Cable tray without fixing accessories.

Height	Catalogue number
1 U	T-S0-900-614
2 U	T-S0-900-615
1 U double	T-SO-900-618

Package: 1 pc.

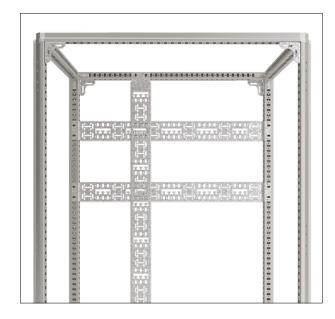


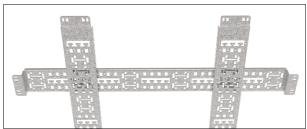
T-SO-900-615



Z-SERVER 197 **SERVER CABINETS**

ACCESSORIES





Vertical and horizontal organizers

Intended for:

- arrangement of logical cabling,
- arrangement of power supply cables,
- mounting of power distribution strips and other accessories. The organizers are mounted on the cabinet frame.

Material

Al-Zn coated sheet steel.

Scope of delivery

Vertical or horizontal organizer with fixing accessories.

Vertical organizer

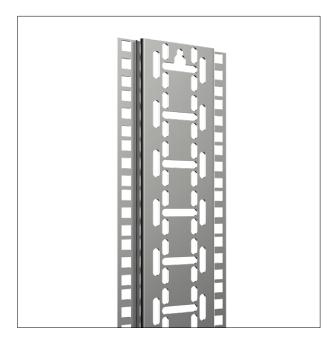
For cabinets'		Catalanua muunkau
width	height	Catalogue number
	42 U	WZ-8477-40-01-000
800	45 U	WZ-8477-40-02-000
	47 U	WZ-8477-40-03-000

Package: 1 pc.

Horizontal organizer

For cabinets'		Catala mua mumban
width	depth	Catalogue number
(00 ** 000	1000	WZ-8477-41-01-000
600 or 800	1200	WZ-8477-41-02-000

Package: 1 pc.



Central mounting profile type PREMIUM for Z-SERVER cabinets

Mounted to the upper and lower support of mounting profiles without the use of tool (see drawing on page 12).

Material

Al-Zn coated sheet steel.

Scope of delivery

Central mounting profile with fixing accessories.

Height	Catalogue number
42 U	WZ-8477-49-01-000
45 U	WZ-8477-49-02-000
47 U	WZ-8477-49-03-000

Package: 1 pc.

3 ZPAS	Z-SERVER cabinets

ACCESSORIES

Adapting set for double-leaf door

Designed for changing locking system in Z-SERVER double-leaf door cabinet from 3-point to 5-point locking system.

Material

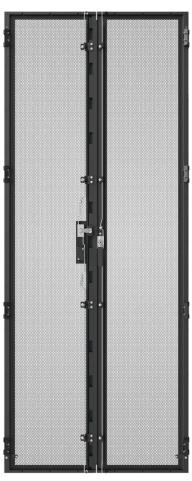
Zinc-coated steel, black plastic.

Scope of delivery

Lock cam, handle with gear, two rod-latches, plastic holders and fixing accessories.

For cabinets' height	Catalogue number
42 U	WZ-8477-91-01-000
45 U	WZ-8477-91-02-000
47 U	WZ-8477-91-03-000





Double-leaf door with adapting set

Cabinet connection set

For baying Z-SERVER cabinets in row. One set is intended for baying two cabinets.

Material

Al-Zn coated sheet steel.

Scope of delivery

Set: 4 external cabinet frame connectors with fixing accessories.

Package	Catalogue number	
1 set	WZ-8390-24-00-000/KPL	





FLOOR-STANDING CABINETS AND OPEN RACKS	Z-SERVER cabinets
	DATA COMMUNICATION SOLUTIONS

Z-SERVER SERVER CABINETS

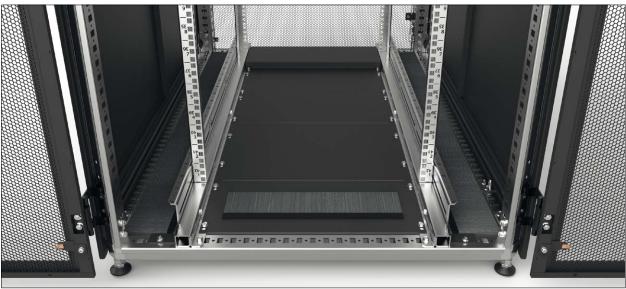
COLD AISLE INSTALLATIONS

Cold aisle installation

The **Z-SERVER BOX** solution physically separates the air distributed by air conditioners and the hot air generated by operating equipment.

Z-SERVER BOX optimises the usability of the data centre infrastructure.





COLD AISLE INSTALLATIONS

Cold aisle sliding door

Manual sliding glass doors without a lock. Opened along the entire width of the aisle. Supplied with a roof masking panel and cabinet side panels.

Designed for cold aisle 1200 mm wide.

Material

Aluminium profiles; safety glass; sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Two sliding door leaves with rails, runners and self-closer, two cabinet side panels, aisle roof masking panel, fixing accessories.

Automatic doors are also available.

For Data Box	cabinets'	inets' Catalogue number	
height	depth	RAL 7035	RAL 9005
42 U	1000	WZ-8477-42-02-011	WZ-8477-42-02-161
without feet	1200	WZ-8477-42-06-011	WZ-8477-42-06-161
45 U	1000	WZ-8477-42-10-011	WZ-8477-42-10-161
without feet	1200	WZ-8477-42-14-011	WZ-8477-42-14-161
47 U	1000	WZ-8477-42-18-011	WZ-8477-42-18-161
without feet	1200	WZ-8477-42-22-011	WZ-8477-42-22-161
42 U	1000	WZ-8477-42-04-011	WZ-8477-42-04-161
with feet	1200	WZ-8477-42-08-011	WZ-8477-42-08-161
45 U	1000	WZ-8477-42-12-011	WZ-8477-42-12-161
with feet	1200	WZ-8477-42-16-011	WZ-8477-42-16-161
47 U	1000	WZ-8477-42-20-011	WZ-8477-42-20-161
with feet	1200	WZ-8477-42-24-011	WZ-8477-42-24-161





Cold aisle raised roof

Roof module with internal height 150 mm, designed for cold aisle 1200 mm wide. The top transparent element of the module is tilt-mounted and can be installed without the use of tool. Modular design simplifies expansion.

Material

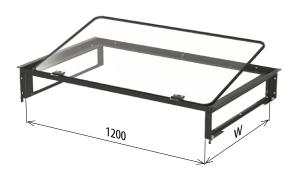
Transparent plastic (polycarbonate); sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Roof module with fixing accessories.

Module width	Catalogue number	
W [mm]	RAL 7035	RAL 9005
300	WZ-8744-C4-01-011	WZ-8744-C4-01-161
600	WZ-8477-C4-02-011	WZ-8477-C4-02-161
800	WZ-8477-C4-03-011	WZ-8477-C4-03-161

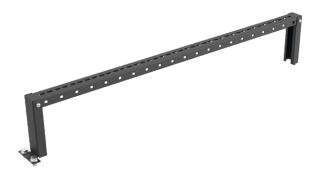




FLOOR-STANDING CABINETS AND OPEN RACKS	Z-SERVER cabinets
	DATA COMMUNICATION SOLUTIONS

Z-SERVER 19" SERVER CABINETS

COLD AISLE INSTALLATIONS



Cable tray bracket

Designed for cables organization on Z-SERVER cabinets roofs. It is mounted by depth on two cabinets baying in row. From one side it is bolted to back corners of the cabinet, from another it is set on frame.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Cable tray bracket with fixing accessories.

Cou cabinate! danth	Catalogue number	
For cabinets' depth RAL 7035		RAL 9005
1000	WZ-8749-45-01-011	WZ-8749-45-01-161
1200	WZ-8749-45-02-011	WZ-8749-45-02-161

Package: 1 pc.



Side cable tray bracket

Designed for cables organization on Z-SERVER cabinets roofs. It is mounted on side cabinet. From one side it is bolted to cable tray bracket, from another it is set on frame.

Material

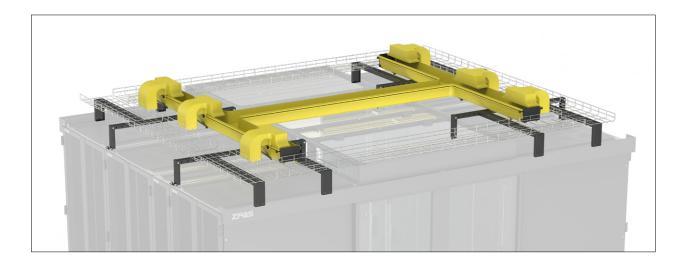
Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Cable tray bracket with fixing accessories.

	For cabinets' width	Catalogue number			
	For Cabillets Width	RAL 7035	RAL 9005		
Г	600	WZ-8477-D6-01-011	WZ-8477-D6-01-161		
	800	WZ-8477-D6-02-011	WZ-8477-D6-02-161		

Package: 1 pc.



COLD AISLE INSTALLATIONS

Aisle lightening

Light fitting is for assembling under the aisle roof. Dimensions: 26.2×24.5 mm. The length shall be chosen by 200 mm less then the width of the aisle.

Material

Aluminium body silver or black, frosted plexiglass.

Scope of delivery

Electric light fitting with 12 V LEDs, power supply cable without plug, fixing accessories.

Power supply and control components are ordered separately.



Product name	Catalogu	e number
Light fittings	Silver	Black
Light fitting, 1000 mm long	WN-8477-Z1-02-011	WN-8477-Z1-02-161
Power supply components	RAL 7035	RAL 9005
Main PS-3U 19" panel with powering elements for light fittings	WN-8477-Z1-04-011	WN-8477-Z1-04-161
Additional PS-3U 19" panel with powering elements for light fittings	WN-8477-Z1-05-011	WN-8477-Z1-05-161
Bracket for assembling PS-3U 19" panel on Z-SERVER cabinet roof	WZ-8848-A5-01-011	WZ-8848-A5-01-161
Control components	White	Black
Microwave motion detector	WN-8477-Z1-06-011	WN-8477-Z1-06-161
Touch light switch (one button)		WN-8477-Z1-07-000

Package: 1 pc.

Power strip brackets

Intended for vertical mounting power strips onto mounting profiles type PREMIUM.

Tool-free mounting.

Materia

Zinc-coated sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

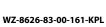
Bottom and top bracket with fixing accessories.

Product name	Catalogue number			
Product name	RAL 7035	RAL 9005		
Set of brackets for mounting two power strips	WZ-8626-83-00-011-KPL	WZ-8626-83-00-161-KPL		
Set of brackets for mounting one power strip	WZ-8626-83-01-011-KPL	WZ-8626-83-01-161-KPL		













WZ-8626-83-01-161-KPL



DESCRIPTION

STANDARD CABINETS WITH FRONT GLASS DOOR WITH METAL SIDES available in constant supply from warehouse

SCOPE OF DELIVERY

- Bolted frame (bottom plate, top plate, four posts).
- Front glass door with metal sides and lock with swing handle; cabinets 45 or 42 U high have a three-point lock, cabinets 24 U high have a single-point lock.
- Rear solid metal, shortened door with single-point locks without handle; 3U cable entry panel with a brush strip, mounted under the shortened door.
- Two solid metal side panels with single-point locks.
- Two pairs of 19" mounting profiles, type STANDARD, stepless adjustable.
- Earthing bar and earthing conductors for doors and side panels.
- Four levelling feet.

TECHNICAL DATA

Material

Frame, side panels, solid metal door, mounting profiles, C-profiles - sheet steel.

Door with glass - sheet steel, clear mineral safety glass Outriggers - zamak casting.

Protection degree

IP 20 in accordance with EN 60529 (does not apply to brush cable entries).

Surface finishing

Frame, doors, side panels

- powder paint, light grey (RAL 7035).

Mounting profiles, C-profiles

- Al-Zn coated.

Maximum load capacity

See page 30

REFERENCE CHART

	Height [V]	Width [mm]	Depth [mm]	RAL colour	Catalogue number
		600	600	7035	WZ-IT-246060-69AA-2-011
	24 U	800	800	7035	WZ-IT-246080-69AA-2-011
	24 0		600	7035	WZ-IT-248060-69AA-2-011
			800	7035	WZ-IT-248080-69AA-2-011
	42 U	800	600	7035	WZ-IT-426060-69AA-2-011
			800	7035	WZ-IT-426080-69AA-2-011
			600	7035	WZ-IT-428060-69AA-2-011
			800	7035	WZ-IT-428080-69AA-2-011
	45 U	600	600	7035	WZ-IT-456060-69AA-2-011
	43 U	800	800	7035	WZ-IT-458080-69AA-2-011

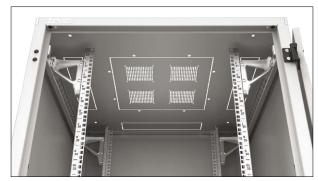
Other available configurations are presented on pages 30-31

ADVANTAGES

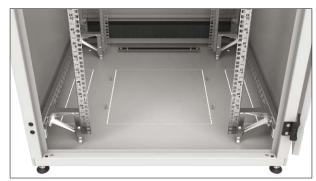
- Cable openings in the top and bottom plates, 71 mm wide, what allows to put thought the power cords with three-phase plug.
- All openings in the top and bottom plates blanked with knock-out blanking plates.
- U-marking on the mounting profiles.
- Maximum opening angle for front door 270°
- Possibility to change door opening's direction.
- Possibility to put the cabinet directly on the floor (no protruding elements under the cabinet).
- Adaptation for bying the cabinets in the rows.

ACCESSORIES from page 59

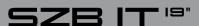
- Roof page 74
- Plinth, castors page 60
- Fan units page 88
- Blanking and cable entry plates page 75
- **Power strips** page 96
- Shelves page 64
- Mounting guides page 71
- Cable trays page 83
- Masking panels page 77



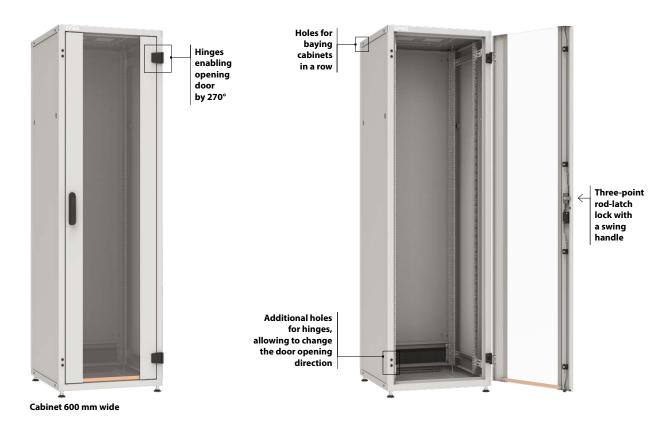
View on the top plate



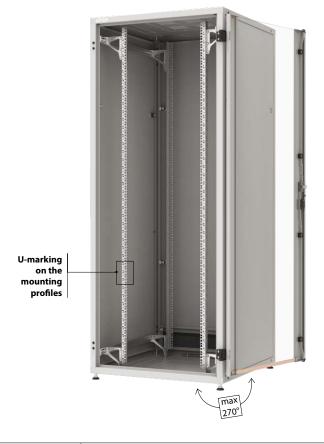
View on the bottom plate. Under the rear door is mounted 3U cable entry panel with a brush strip.



DESCRIPTION









See the video: zpas.pl/qr/f10



DESCRIPTION

STANDARD CABINETS WITH PERFORATED DOOR available in constant supply from warehouse

SCOPE OF DELIVERY

- Bolted frame (bottom plate, top plate, four posts).
- Front and rear perforated metal door (clearance 80%, proportion of the perforated area in total door area up to 86%) with three-point lock with swing handle.
- Two solid metal side panels with single-point locks.
- Two pairs of 19" mounting profiles, type STANDARD, stepless adjustable.
- Earthing bar.
- Earthing conductors for doors and side panels.
- Four levelling feet.

TECHNICAL DATA

Material

Frame, side panels, doors, mounting profiles, C-profiles - sheet steel. Outriggers - zamak casting.

Protection degree

IP 20 in accordance with EN 60529 (does not apply to brush cable entries).

Surface finishing

Frame, doors, side panels

- powder paint, light grey (RAL 7035) or black (RAL 9005). Mounting profiles, C-profiles

- Al-Zn coated.

Maximum load capacity

See page 30

ACCESSORIES from page 59

- Roof page 74
- Plinth, castors page 60
- Fan units page 88
- Blanking and cable entry plates page 75
- **Power strips** page 96
- Shelves page 64
- **Mounting guides** page 71
- Cable trays page 83
- Masking panels page 77

REFERENCE CHART

	Height [V]	Width [mm]	Depth [mm]	RAL colour	Catalogue number
		600	1000	7035	WZ-IT-426010-44AA-2-011
	42 U		1000	9005	WZ-IT-426010-44AA-2-161
	42 0	900	1000	7035	WZ-IT-428010-44AA-2-011
		800		9005	WZ-IT-428010-44AA-2-161

Other available configurations are presented on pages 30-31

ADVANTAGES

- Cable openings in the top and bottom plates, 71 mm wide, what allows to put thought the power cord with three-phase plug.
- All openings in the top and bottom plates blanked with knock-out blanking plates.
- U-marking on the mounting profiles.
- Maximum opening angle for front and rear door 270°
- Possibility to change door opening's direction.
- Possibility to put the cabinet directly on the floor (no protruding elements under the cabinet).
- Adaptation for bying the cabinets in the rows and Data Box creation (cold/hot aisle).



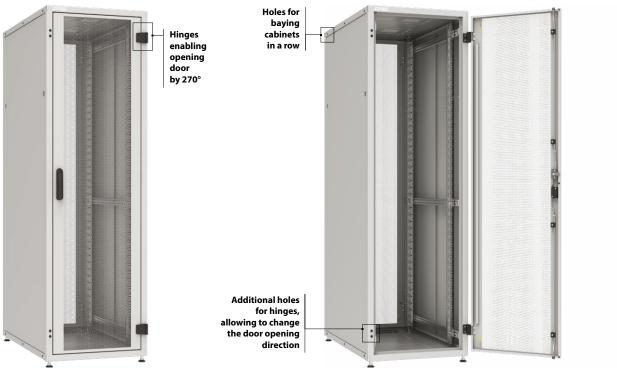
View on the top plate



View on the bottom plate



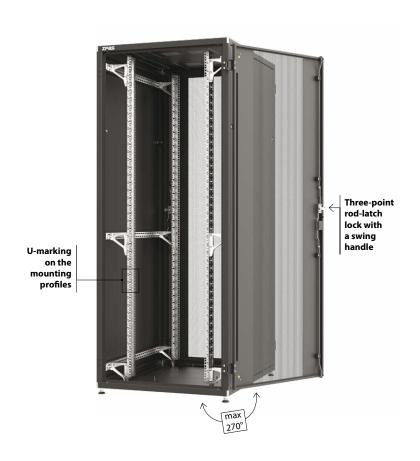
DESCRIPTION

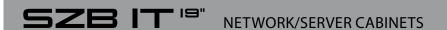


Cabinet 600 mm wide

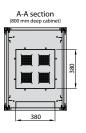


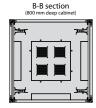
Cabinet 800 mm wide





DESIGN





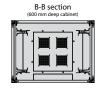
DESIGN

- Frame's post
 Frame's bottom plate
 Frame's top plate

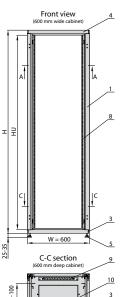
- 5. Adjustable feet 6. C-profile for 15 mm deep mounting profiles
- 7. Outrigger 8. 19" mounting profile, type STANDARD, 15 mm deep
- 9. Earthing bar 10. Knock-out blanking plate 380 x 380 mm
- 12. Knock-out blanking plate 380 x 71 mm

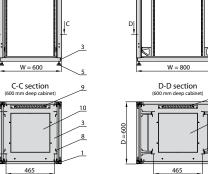
The cabinet in the drawing is shown without any panels or doors.

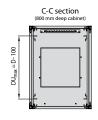


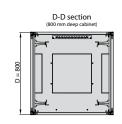


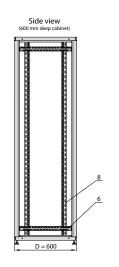
Front view 00 mm wide cabinet)

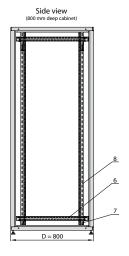


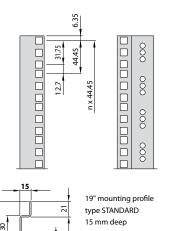








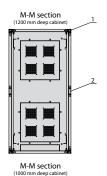




32.5



DESIGN



Front view (600 mm wide cabinet)

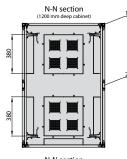
W = 600

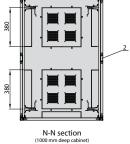
O-O section

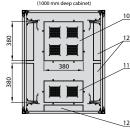
₽

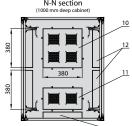
25-35

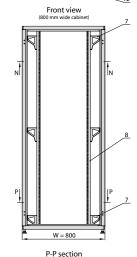
9

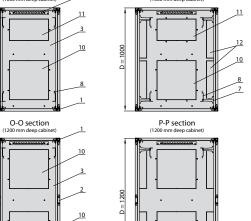










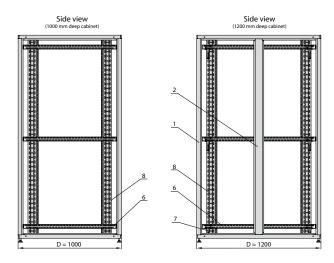


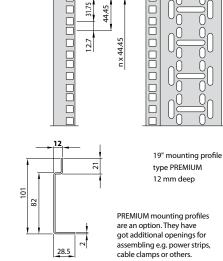
DESIGN

- 1. Frame's post
- 2. Frame's middle post
- Frame's bottom plate
 Frame's top plate
- 5. Adjustable feet
 6. C-profile for 12 mm deep mounting profiles
- 7. Outrigger
- 8. 19" mounting profile, type PREMIUM*, 12 mm deep
- 9. Earthing bar
- 10. Knock-out blanking plate 380 x 380 mm 11. Knock-out blanking plate 380 x 210 mm
- 12. Knock-out blanking plate 380 x 71 mm

The cabinet in the drawing is shown without any panels or doors.

*) Cabinets in standard configuration (see pages 26-27) are equipped with STANDARD type of mounting profiles.





6.35



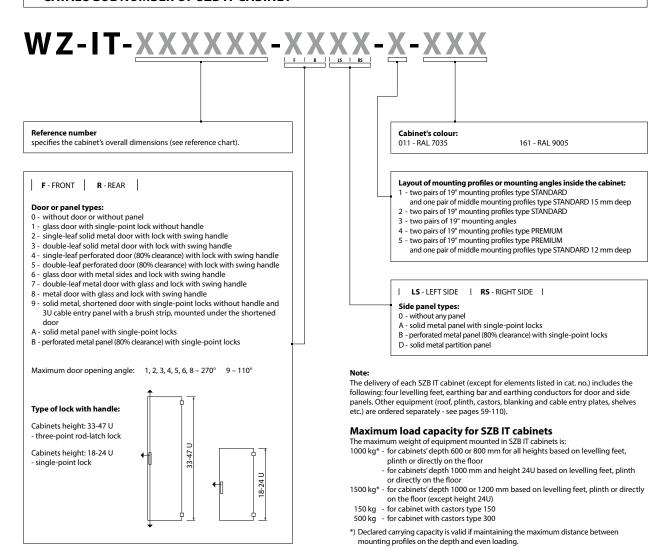
CONFIGURATOR

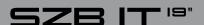
REFERENCE CHART

Width W [mm]	Depth D [mm]			Referenc	e number		
	600	186060	246060	336060	426060	456060	_
600	800	186080	246080	336080	426080	456080	_
000	1000	_	246010	_	426010	456010	476010
	1200	_	1	_	426012	456012	476012
	600	188060	248060	338060	428060	458060	_
800	800	188080	248080	338080	428080	458080	_
800	1000	_	248010	_	428010	458010	478010
	1200	_		_	428012	458012	478012
Usable height HU [U =	44.45 mm]	18 U	24 U	33 U	42 U	45 U	47 U
Frame height H [mm]		896	1163	1563	1963	2096	2186

Note: Cabinets available in constant supply from warehouse are listed and described on pages 24-27.

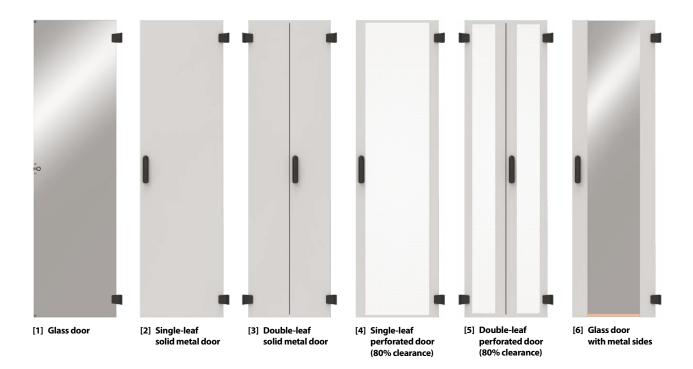
CATALOGUE NUMBER OF SZB IT CABINET

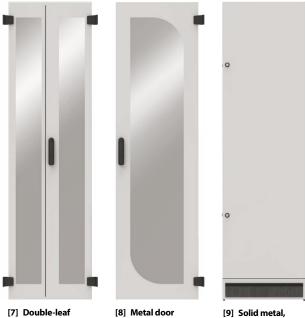




CONFIGURATOR

AVAILABLE DOOR TYPES AND PANELS





with glass

metal door

with glass





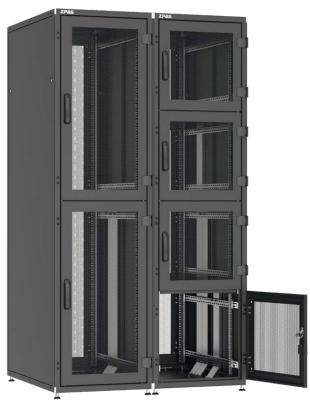




[B] Perforated [D] Solid metal metal panel partition panel (80% clearance)



DESCRIPTION



DSR IT cabinets 47 U, 600 x 1000 mm



DSR IT 47 U, 800 x 1200 mm

CHARACTERISTIC

- The interior of the cabinet is divided by horizontal partitions for two or four compartments. Each compartment is equipped with: an independent 19" rack, cable trays routed on both sides of the cabinet, a door.
- A different key code for each compartment of the cabinet.
- Cable entry from the bottom or from the top.
- Cable openings in the top and bottom plates with knock-out blanking plates.
- U-marking on the mounting profiles.
- Maximum opening angle for front and rear door 270°.
- Possibility to change door opening's direction.
- Possibility to put the cabinet directly on the floor (no protruding elements under the cabinet).
- Adaptation for baying the cabinets in row and Data Box creation (cold/hot aisle).

SCOPE OF DELIVERY

- Bolted frame (bottom plate, top plate, four posts).
- One or three horizontal partitions (depending on the cabinet's configuration).
- Perforated metal front and rear doors (80% perforation clearance) for each compartment of the cabinet.
- Side panels or partitions (depending on the cabinet's configuration).
- Two pairs of 19" mounting profiles type STANDARD for each compartment of the cabinet.
- Cable channels (depending on the cabinet's configuration).
- Earthing bar.
- Earthing conductors for doors and side panels.
- Four levelling feet.

TECHNICAL DATA

Material

Frame, side panels, partitions, doors, mounting profiles, C-profiles, cable trays

- sheet steel.

Outriggers (in 800 mm wide cabinets)

- zamak casting.

Protection degree

IP 20 in accordance with EN 60529.

Surface finishing

Frame, side panels, doors, partitions - powder paint, light grey (RAL 7035) or black (RAL 9005).

Mounting profiles, C-profiles, cable trays - Al-Zn coated.

Maximum load capacity

1500 kg

WYPOSAŻENIE DODATKOWE od str. 59

- Plinth page 60
- Blanking and cable entry plates page 75
- **Power strips** page 96
- Shelves page 64
- Mounting guides page 71

032 ZPAS

DSR IT cabinets

FLOOR-STANDING CABINETS AND OPEN RACKS

COLLOCATION SERVER CABINETS



DESCRIPTION





DSR IT 47 U, 800 x 1000 mm, 4 compartments 11 U, cable trays routed from below

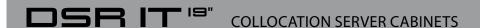


DSR IT 600 x 1200 mm, top plate

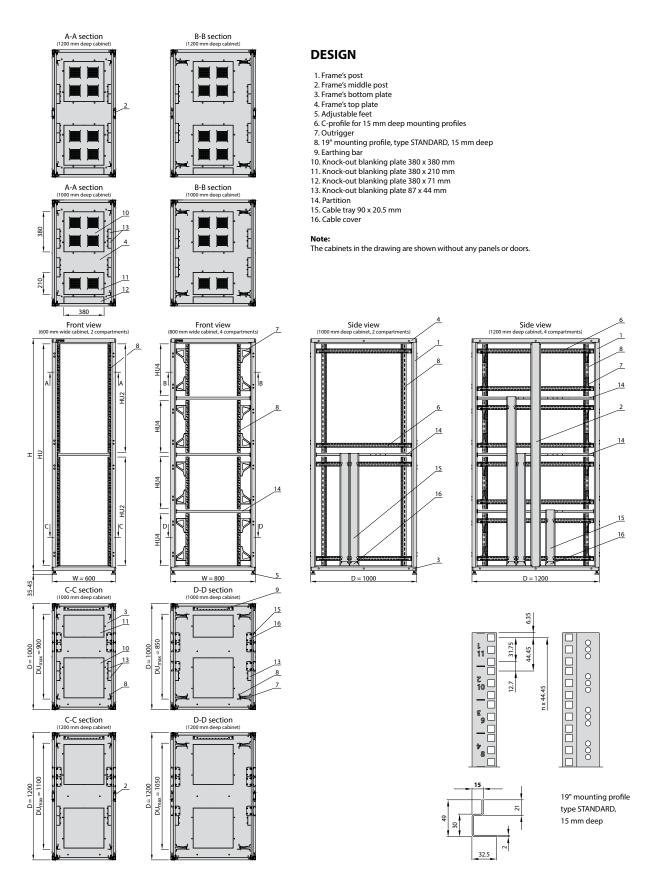


DSR IT 600 x 1200 mm, bottom plate





DESIGN



COLLOCATION SERVER CABINETS

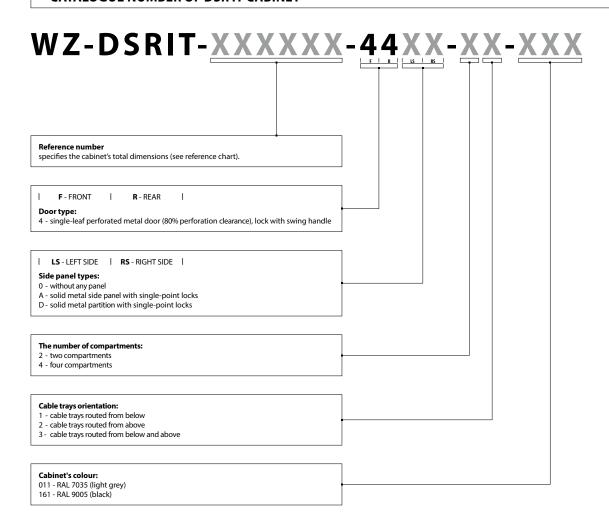


CONFIGURATOR

REFERENCE CHART

Width W [mm]	Depth D [mm]	Referenc	e number
600	1000	426010	476010
600	1200	426012	476012
000	1000	428010	478010
800	1200	428012	478012
Total frame height H [mm]		1963	2186
Usable frame height HU [U = 44.45 mm]		42 U	47 U
Usable	2 compartments: 2 x HU2	2 x 20 U	2 x 23 U
compartments height	4 compartments: 4 x HU4	4 x 10 U	4 x 11 U

CATALOGUE NUMBER OF DSR IT CABINET



	DATA COMMUNICATION SOLUTIONS
FLOOR-STANDING CABINETS AND OPEN RACKS	DSR IT cabinets



COLD AISLE INSTALLATIONS

Cold aisle installation

The **SZB IT Data Box** solution physically separates the air distributed by air conditioners and the hot air generated by operating equipment.

SZB IT Data Box optimises the usability of the data centre infrastructure.





Example of Data Box set consists of: 4 pcs of SZB IT 42 U, 800 x 1000 mm, 2 pcs of DSR IT 42 U, 800 x 1000 mm with 2 compartments, 2 pcs of DSR IT 42 U, 800 x 1000 mm with 4 compartments, sliding doors, flat aisle roof. Cabinets on 100 mm plinth.

SERVER CABINETS **SZB/DSR**

COLD AISLE INSTALLATIONS

Cold aisle sliding door

Manual sliding glass doors without a lock. Opened along the entire width of the aisle. Supplied with a roof masking panel and cabinet side panels.

Designed for cold aisle 1200 mm wide.

Material

Aluminium profiles; safety glass; sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Two sliding door leaves with rails, runners and self-closer, two or four cabinet side panels (depending on the depth of the cabinets), aisle roof masking panel, fixing accessories.



Cold aisle sliding door for Data Box 47 U, 1200 mm, without feet or plinth, with raised roof



WZ-8848-01-06-161 Cold aisle sliding door for Data Box 42 U, 1000 mm, with plinth and flat roof



For Data Box		Catalogue number			
cabinets'		Sliding door for aisle with raised roof		Sliding door for aisle with flat roof	
height depth		RAL 7035	RAL 9005	RAL 7035	RAL 9005
42.11	1000	WZ-8848-20-01-011	WZ-8848-20-01-161	WZ-8848-30-01-011	WZ-8848-30-01-161
42 U without feet or plinth	1200	WZ-8848-01-01-011	WZ-8848-01-01-161	WZ-8848-45-01-011	WZ-8848-45-01-161
47.11	1000	WZ-8848-20-03-011	WZ-8848-20-03-161	WZ-8848-30-03-011	WZ-8848-30-03-161
47 U without feet or plinth 1200	1200	WZ-8848-01-03-011	WZ-8848-01-03-161	WZ-8848-45-03-011	WZ-8848-45-03-161
42.11	1000	WZ-8848-20-04-011	WZ-8848-20-04-161	WZ-8848-30-04-011	WZ-8848-30-04-161
42 U with feet	1200	WZ-8848-01-04-011	WZ-8848-01-04-161	WZ-8848-45-04-011	WZ-8848-45-04-161
A7 Hardala Cara	1000	WZ-8848-20-06-011	WZ-8848-20-06-161	WZ-8848-30-06-011	WZ-8848-30-06-161
47 U with feet	1200	WZ-8848-01-06-011	WZ-8848-01-06-161	WZ-8848-45-06-011	WZ-8848-45-06-161
42 Househoultrak	1000	WZ-8848-20-07-011	WZ-8848-20-07-161	WZ-8848-30-07-011	WZ-8848-30-07-161
42 U with plinth	1200	WZ-8848-01-07-011	WZ-8848-01-07-161	WZ-8848-45-07-011	WZ-8848-45-07-161
	1000	WZ-8848-20-09-011	WZ-8848-20-09-161	WZ-8848-30-09-011	WZ-8848-30-09-161
47 U with plinth	1200	WZ-8848-01-09-011	WZ-8848-01-09-161	WZ-8848-45-09-011	WZ-8848-45-09-161

Package: 1 set

FLOOR-STANDING CABINETS AND OPEN RACKS	SZB/DSR IT cabinets
	DATA COMMUNICATION SOLUTIONS

SZB/DSR IT " SERVER CABINETS

COLD AISLE INSTALLATIONS



Cold aisle flat roof

Flat roof module for 1200 mm wide cold aisle. The transparent part of the module is tiltable. The modular design allows easy expansion and installation of lighting.

Material

Transparent plastic (polycarbonate); sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Roof module with fixing accessories.

Width	Catalogu	e number
W [mm]	RAL 7035	RAL 9005
300	WZ-8848-60-04-011	WZ-8848-60-04-161
400	WZ-8848-60-05-011	WZ-8848-60-05-161
600	WZ-8848-60-02-011	WZ-8848-60-02-161
800	WZ-8848-60-01-011	WZ-8848-60-01-161

Package: 1 pc.



Cold aisle raised roof

Roof module with internal height of 150 mm for 1200 mm wide cold aisle. The top transparent element of the module is tiltable. The modular design allows easy expansion and installation of lighting.

Material

Transparent plastic (polycarbonate); sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Roof module with fixing accessories.

Width	Catalogu	e number
W [mm]	RAL 7035	RAL 9005
300	WZ-8848-40-04-011	WZ-8848-40-04-161
400	WZ-8848-40-05-011	WZ-8848-40-05-161
600	WZ-8848-40-02-011	WZ-8848-40-02-161
800	WZ-8848-40-01-011	WZ-8848-40-01-161

Package: 1 pc.

SERVER CABINETS SZB/DSR IT 19"

COLD AISLE INSTALLATIONS

Partition panel for cabinets baying in row

Side panel of the cabinet adapted as partition between cabinets baying in row. It is with four openings for clamp connectors bolts.

Material

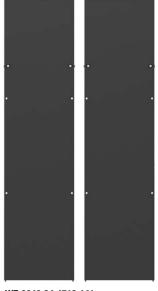
Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

One-piece or two-piece complete partition panel with locks, fixing pins and an earthing conductor.

For cabinets'		Catalogue number		
height	neight depth RAL 7035		RAL 9005	
42.11	1200	WZ-8848-24-4212-011	WZ-8848-24-4212-161	
42 U	1000	WZ-8848-24-4210-011	WZ-8848-24-4210-161	
47 U	1200	WZ-8848-24-4712-011	WZ-8848-24-4712-161	
4/ U	1000	WZ-8848-24-4710-011	WZ-8848-24-4710-161	

Package: 1 pc.



WZ-8848-24-4712-161 Two-parts partition panel for cabinet SZBIT 47 U , 1200 mm deep



WZ-8848-24-4210-161 Partition panel for SZB IT 42 U, 1000 mm deep

Set for baying SZB IT cabinets in rows

Set of elements for baying SZB IT cabinets. One set is intended for baying two cabinets.

Material

Al-Zn coated sheet steel.

Scope of delivery

4 clamp connectors, 4 bolts M8 with nut.

Package	Catalogue number
1 set	WZ-8848-23-00-000





Baying frame posts without partition panel



Baying frame posts with partition panel

SZB/DSR IT " SERVER CABINETS

COLD AISLE INSTALLATIONS



WZ-8848-50-06-161 Cold aisle cover for Data Box set 47 U with feet and raised roof

Cold aisle cover

It is an optional solution instead of sliding doors. Designed for cold aisle **1200 mm** wide.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Cold aisle cover, aisle roof masking panel, sealing (for set on feet only), fixing accessories.



Data Box set 47 U with feet, raised roof and cold aisle cover

		Catalogu	e number		
For Data Box with cabinets' height	Cover for aisle	Cover for aisle with raised roof		Cover for aisle with flat roof	
with tubilities intight	RAL 7035	RAL 9005	RAL 7035	RAL 9005	
42 U without feet or plinth	WZ-8848-50-01-011	WZ-8848-50-01-161	WZ-8848-50-10-011	WZ-8848-50-10-161	
47 U without feet or plinth	WZ-8848-50-03-011	WZ-8848-50-03-161	WZ-8848-50-12-011	WZ-8848-50-12-161	
42 U with feet	WZ-8848-50-04-011	WZ-8848-50-04-161	WZ-8848-50-13-011	WZ-8848-50-13-161	
47 U with feet	WZ-8848-50-06-011	WZ-8848-50-06-161	WZ-8848-50-15-011	WZ-8848-50-15-161	
42 U with plinth	WZ-8848-50-07-011	WZ-8848-50-07-161	WZ-8848-50-16-011	WZ-8848-50-16-161	
47 U with plinth	WZ-8848-50-09-011	WZ-8848-50-09-161	WZ-8848-50-18-011	WZ-8848-50-18-161	

Package: 1 set

SZB/DSR IT cabinets	FLOOR-STANDING CABINETS AND OPEN RACKS
DATA COMMUNICATION SOLUTIONS	

SERVER CABINETS SZB/DSR IT 19"

COLD AISLE INSTALLATIONS

Sealing masking strip for cabinet on feet

Sealing masking strip protects from getting cold air from the aisle to the space under the cabinet.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005), black plastic.

Scope of delivery

Sealing masking strip with fixing accessories.

For cabinets' width	Catalogue number		
[mm]	RAL 7035	RAL 9005	
800	WZ-8848-27-01-011	WZ-8848-27-01-161	
600	WZ-8848-27-02-011	WZ-8848-27-02-161	

Package: 1 pc





Cabinet equipped with sealing masking strip

Aisle lightening

Aisle can be equipped with modular lightening. Available on request.

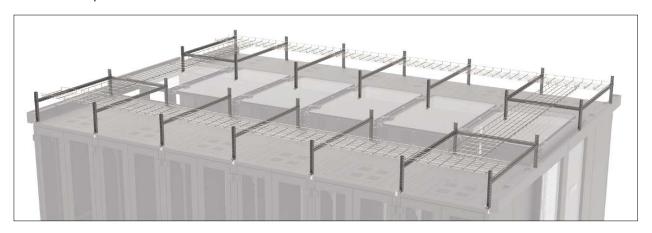




Example of light fittings mounted under the roof of the aisle $\,$

Cable trays systems

Data Box set can be equipped with cable trays system assembled on cabinets. Available on request.



FLOOR	R-3 IAINDING CABINE 13 AIND OF EN RACKS	DATA COMMUNICATION SOLUTIONS
FLOOR	R-STANDING CABINETS AND OPEN RACKS	SZB/DSR IT cabinets

COMPUTER CABINET IP54



CABINET DESIGNED FOR COMPUTER EQUIPMENT IN ROOMS WITH HEAVY DUST CONCENTRATIONS

- Designed for protection of computer equipment used in industrial areas.
- The design enables selective admission of access to each section of the cabinet through use of locks with different cylinders.
- Design based on modified frame of the SZE2 cabinet.
- Easy baying in rows with SZE2 and SZE2 PC cabinets.
- Possibility of using supplementary accessories designed for SZE2 cabinets (see catalogue ZPAS Industrial Enclosures) and equipment for 19" installations.
- Possibility to manufacture cabinet frame, door, panels, supplementary roof and plinth of stainless sheet steel (on individual request).
- Non-standard versions on customer's request.

SCOPE OF DELIVERY

- cabinet's frame set on 100 mm plinth,
- 2 pairs of 19" mounting profiles,
- 2 flushed side panels,
- double front door with 3-point (rod-lath) lock and patent cylinder (upper door with glass, lower door solid),
- door for keyboard part with single-point lock (cam lock),
- rear panel,
- universal drawer for keyboard,
- solid blanking plate for top including sealing gasket,
- sliding gland plates for adjustable cable entry.



TECHNICAL DATA

Material

Frame, side panels, solid metal door, plinth, mounting profiles

- sheet steel

Door with glass - sheet steel, acrylic glass

Protection degree

IP 54 in accordance with EN 60529

Surface finishing

Frame, door, panels, plinth - powder painted in light grey (RAL 7035). All other colour options on request. Mounting profiles – Al-Zn coated.

Maximum load capacity

The maximum weight of equipment mounted in SZE2 PC cabinets is:

600 kg - for cabinet with plinth,

500 kg - for cabinet with castors type 300 (page 63)



Roof - supplementary accssesories (see page 74)



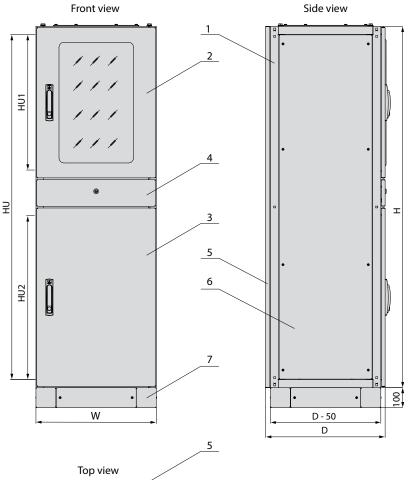
REFERENCE CHART

٥

380

380

Width W [mm]	Depth D [mm]		Catalogue number	
600	600	WZ-3004-00-06-011	WZ-3004-00-04-011	WZ-3004-00-02-011
000	800	WZ-3004-00-05-011	WZ-3004-00-03-011	WZ-3004-00-01-011
	complete cabinet HU	33 U	38 U	42 U
Usable height of cabinet HU [U = 44.45 mm]	upper part HU1	10 U	15 U	19 U
	lower part HU2	18 U	18 U	18 U
Total height of cabinet witho	ut plinth H [mm]	1600	1800	2000



8



DESIGN

- 1. Cabinet's frame
 2. Upper door with glass
 3. Lower door solid
 4. Door for keyboard
 5. Rear panel
 6. Flushed side panel
 7. Modular plinth
 8. Solid blanking plate

Note:

The opening in the bottom plate of the SZE2 PC cabinet is identical as in the SZE2 cabinet (see catalogue ZPAS Industrial Enclosures).

FLOOR-STANDING CABINETS AND OPEN RACKS	SZE2 PC computer cabinet IP54
	DATA COMMUNICATION SOLUTIONS

SJB " NETWORK CABINET





SJB 15 U cabinet finished in RAL 7035, without desktop

View of the bottom plate in the SJB cabinet. On the back of the cabinet there are cable openings covered with knock-out blanking plate which can be replaced with a brush strip (one brush strip is factory-mounted on the top plate, the other one can be ordered as supplementary accessories).

CABINET FOR OFFICE APPLICATIONS

- SJB cabinets are perfect solution for small network systems installed in offices.
- The design of the cabinet is based on a self-supporting body with no frame.
- The cabinet can have a desktop made of furniture board to easily blend in with the existing interior décor.

TECHNICAL DATA

Material

Body, rear panel, mounting angles - sheet steel Door - safety glass

Protection degree

IP 20 in accordance with EN 60529

Surface finishing

Body and rear panel – powder painted in light grey (RAL 7035) or black (RAL 9005).

Mounting angles – Al-Zn coated.

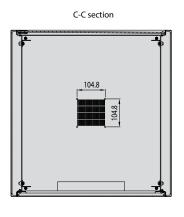
SCOPE OF DELIVERY

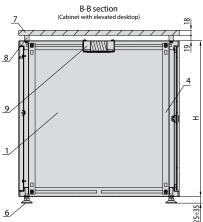
- cabinet body with safety glass door and removable rear panel.
- 2 pairs of mounting angles spaced at 19",
- 4 levelling feet,
- rear panel earthing conductor,
- brush strip for the cable opening.

SUPPLEMENTARY ACCESSORIES (ordered separately)

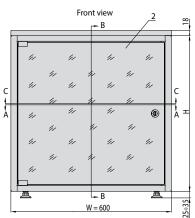
- desktop available in three different colours (page 47),
- desktop elevation kit spacing sleeves (page 47),
- castors (page 46),
- earthing bar (page 58),
- brush strip for the cable opening (page 47),
- shelves, blanking plates, fan, power strips etc. (pages 58, 64-65, 76, 79-81, 96).

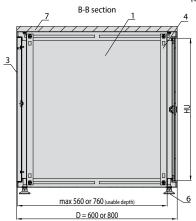






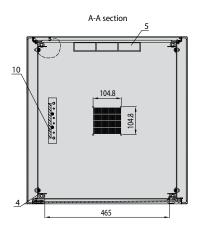


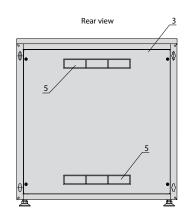






SJB 15 U cabinet finished in RAL 9005, with desktop made of Calvados-laminated MDF board





DESIGN

- 1. Cabinet's body 2. Glass door
- 3. Rear panel
- 4. Mounting angle 5. Knock-out blanking plate 6. Levelling feet

- Supplementary accessories ordered separately:
 7. Desktop (page 47)
 8. Spacing sleeve for roof elevation (page 47)
- 9. Fan (page 58) 10. Earthing bar (page 58)

REFERENCE CHART

Takal midsh	Total depth D [mm]	Body height Usable height HU H [mm] [U = 44.45 mm]	Heabla baimbe IIII	Maximum load	Catalogue number of cabinet without desktop*		
Total width W [mm]			capacity [kg]	Cabinet finished in RAL 7035	Cabinet finished in RAL 9005		
	600	604	12 U	30	WZ-3987-01-02-011-BBL	WZ-3987-01-02-161-BBL	
		737	15 U	38	WZ-3987-01-03-011-BBL	WZ-3987-01-03-161-BBL	
600		871	18 U	45	WZ-3987-01-04-011-BBL	WZ-3987-01-04-161-BBL	
	800	737	15 U	38	WZ-6729-01-03-011-BBL	WZ-6729-01-03-161-BBL	
		871	18 U	45	WZ-6729-01-04-011-BBL	WZ-6729-01-04-161-BBL	

*) The desktop is ordered separately - see page 47

	DATA COMMUNICATION SOLUTIONS
FLOOR-STANDING CABINETS AND OPEN RACKS	SJB network cabinet

SUPPLEMENTARY ACCESSORIES



 ${\it SJB~15~U~cabinet~finished~in~RAL~9005,~equipped~with~black~desktop,~castors~and~other~accessories}$



Castors for SJB cabinet

Plastic castors, mounted on a steel bolt M8. Height of the castors (without fixing bolt): 62 mm

Scope of delivery

Set: 4 screws M6x30, 4 washers, 4 spacing sleeves

Package	Catalogue number		
1 set	WZ-3987-20-00-000		



SUPPLEMENTARY ACCESSORIES

Desktop

18 mm thick furniture desktop for mounting on the top plate of SJB cabinet.

Available in three color versions.

MaterialScope of deliveryLaminated MDF board.Desktop with
fixing accessories.

Colour	Dimensions [mm]	Catalogue number	
Calvados	600 x 600	WZ-3987-07-00-000	
Calvados	600 x 800	WZ-6455-06-00-000	
Black	600 x 600	WZ-3987-07-00-161	
Light grey	600 x 800	WZ-6455-06-00-U112	

Package: 1 pc.



Desktop elevation kit

The kit makes it possible to elevate the desktop by 19 mm over the top plate, thus increasing air flow through the cabinet, and enables fan mounting to the top plate.

Scope of delivery

Set: 4 screws M6x30, 4 washers, 4 spacing sleeves.

Package	Catalogue number
1 set	WZ-3987-90-00-000



Brush strip for cable opening

For blinding cable openings in SJB cabinet following the removal of blanking plates.

MaterialScope of deliveryPlastic.Brush strip, 250 mm long.

Package	Catalogue number		
1 pc.	WZ-3504-22-00-000		



Cross profile

Horizontally mounted to the rear wall of SJB cabinet.

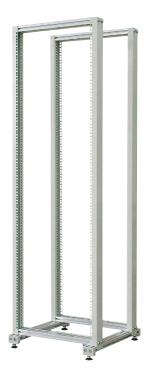
MaterialScope of deliveryAl-Zn coated sheet steel.Cross profile

with fixing accessories.

Package	Catalogue number
1 pc.	WZ-2048-24-01-000





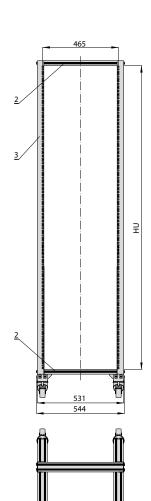


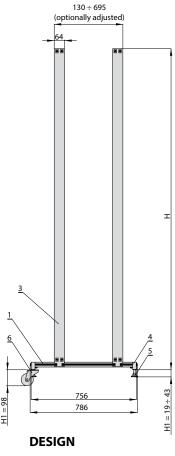
OPEN RACK WITH FULLY ADJUSTABLE 19" RACK FRAMES

- Modular design based on horizontal aluminium profiles and vertical steel posts.
- Open racks are set on levelling feet.
- Various supplementary accessories are available as for data telecom cabinets - castors, shelves, drawers, power strips etc.

REFERENCE CHART

HU [U = 44.45 mm]	H [mm]	Maximum load capacity [kg]	Catalogue number
24 U	1177	150	WZ-6170-01-05-011
36 U	1709	150	WZ-6170-01-06-011
42 U	1975	150	WZ-6170-01-07-011





TECHNICAL DATA

Material

Sheet steel, aluminium profile 60 x 30 mm

Surface finishing

Powder paint, light grey (RAL 7035). All other colour options on request.

- 1. Base profile
- 2. Cross profile 3. Rack's post
- 4. Chassis of levelling feet or castors
 5. Levelling feet

Supplementary accessories:

6. Castors (see page 62)

048 ZPAS

SRD open rack

FLOOR-STANDING CABINETS AND OPEN RACKS

OPEN RACK SRX 19"

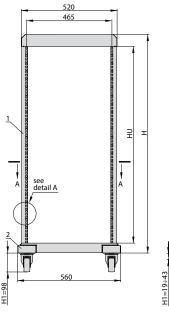
OPEN RACK WITH STEP ADJUSTABLE 19" RACK FRAMES

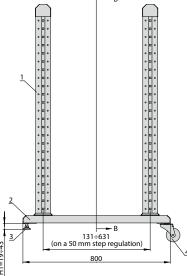
- Made of two 19" welded frames that are fastened to the doublepart chasis with screws.
- Positioning of the frames is based on a 50 mm pitch pattern.
- Standard rack is placed on levelling feet.
- Possibility for using some elements of supplementary equipment for data telecom cabinets - castors, shelves, drawers, power strips etc.

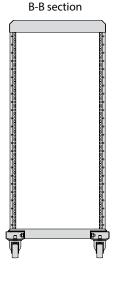
REFERENCE CHART

HU [U = 44.45 mm]	H [mm]	Maximum load capacity [kg]	Catalogue number
24 U	1185	250	WZ-6026-01-01-011
36 U	1719	250	WZ-6026-01-02-011
42 U	1985	250	WZ-6026-01-04-011









TECHNICAL DATA

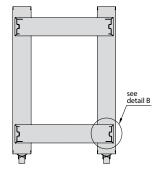
Material

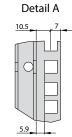
Sheet steel

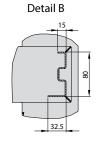
Surface finishing

Powder paint, light grey (RAL 7035). All other colour options on request.

A-A section





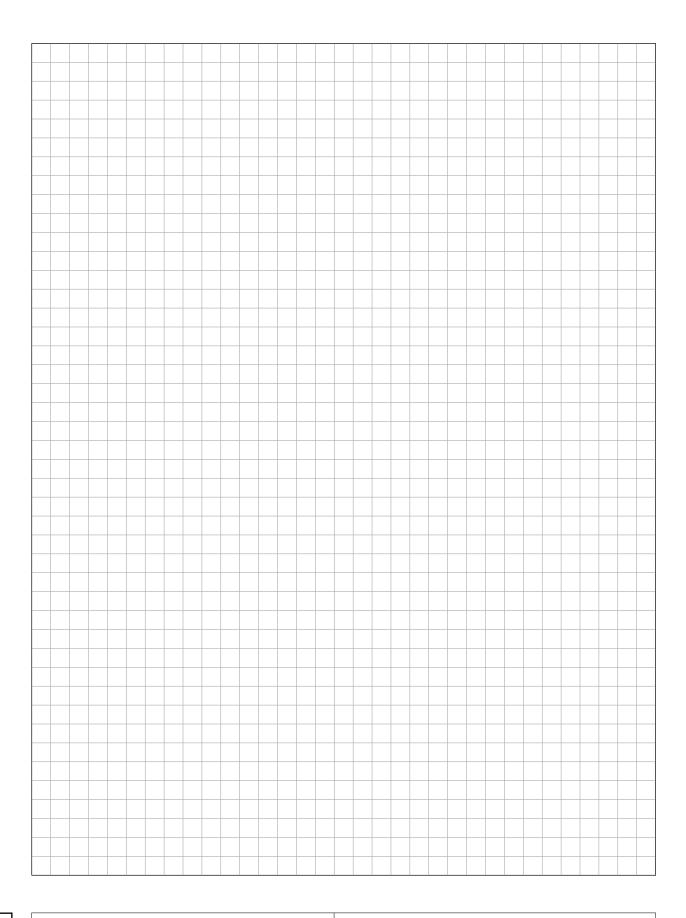


DESIGN

- 1. 19" welded frame
- Rack base
 Levelling feet
- Supplementary accessories: 4. Castors (see page 62)

ZPAS 049

WALL-MOUNTED CABINETS



050 ZPAS

WALL-MOUNTED CABINETS

DATA COMMUNICATION SOLUTIONS

WALL-MOUNTED CABINETS



WALL-MOUNTED CABINETS

DATA COMMUNICATION SOLUTIONS

Z-BOX 19" WALL-MOUNTED NETWORK CABINET



Cabinet with glass door



Cabinet with metal door

SINGLE-SECTION CABINET WITH REMOVABLE SIDE PANELS

- Designed for indoor applications.
- Available in 1 depth (600 mm) and 5 usable heights (from 6 to 18 U).
- The cabinet is made of bolted framework (composed of 3 frames), top plate, bottom plate, side panels, rear panel and front door.
- Cabinet is equipped with two adjustable 19" mounting profiles.
- Top and bottom plates have cable openings covered with knock-out blanking plates, and 3 venting holes for each plate.
- Door, side panels and mounting profiles can be installed without tools.
- The entire weight of the devices installed inside the cabinet is transferred onto its framework.
- Side panels can be removed after opening the door.

TECHNICAL DATA

Protection degree

IP 20 in accordance with EN 60529

Maximum load capacity

100 kg

Material

sheet steel, safety glass, aluminium profiles

Surface finishing

frame, metal door, panels, top and bottom plates, glass door side profiles – powder paint, light grey (RAL 7035). Mounting profiles – Al-Zn coated.

SCOPE OF DELIVERY

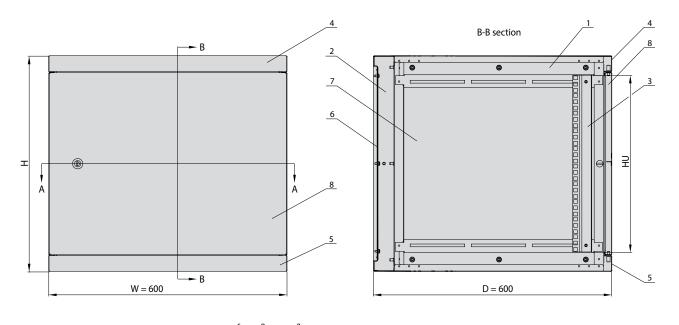
Frame, bottom plate, top plate, door, 2 side panels, rear panel, 2 mounting profiles, template for drilling holes in the wall.

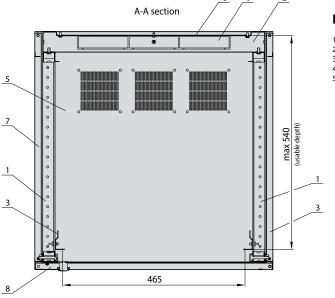
REFERENCE CHART

	External dimension	s	Usable height HU [U = 44.45 mm]	Catalogue number		
Width W [mm]	Depth D [mm]	Height H [mm]		Cabinet with glass door	Cabinet with metal door	
	600		365	6 U	WZ-7240-20-A1-011	WZ-7240-20-M1-011-BNP
		543	10 U	WZ-7240-20-A2-011	WZ-7240-20-M2-011-BNP	
600		600	632	12 U	WZ-7240-20-A3-011	WZ-7240-20-M3-011-BNP
		765	15 U	WZ-7240-20-A4-011	WZ-7240-20-M4-011-BNP	
		899	18 U	WZ-7240-20-A5-011	WZ-7240-20-M5-011-BNP	

Z-BOX cabinet	WALL-MOUNTED CABINETS	
DATA COMMUNICATION SOLUTIONS		



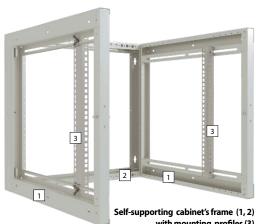


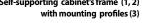


DESIGN

- Side part of cabinet's frame
 Rear part of cabinet's frame
 Mounting profile

- 4. Top plate 5. Bottom plate
- 6. Rear panel 7. Side panel 8. Door
- 9. Knock-out blanking plate









See the video: zpas.pl/qr/f11

Z-CUBE 197

WALL-MOUNTED NETWORK CABINET



Z-CUBE 600, 21 U with glass door



Z-CUBE 600, 15 U with glass door



Z-CUBE 450, 6 U with rear panel (additional element)



SINGLE OR DOUBLE-SECTION WALL-MOUNTED CABINETS WITH REMOVABLE SIDE PANELS

- Designed for indoor applications.
- Available in two depths (450 and 600 mm) and six usable heights (from 6 to 21 U).
- The cabinet 450 mm deep can be equipped with an additional body, fixed to its rear wall with two or three hinges and a lock.
 This creates a double-section cabinet 600 mm deep.
- The design of the cabinet is based on a welded body, glass or metal front door and two removable side panels.
- The cabinet is equipped with two adjustable 19" mounting angles with depth regulation.
- Top and bottom plates have cable openings covered with knock-out blanking plates and venting grids with holes for fan assembling.
- Door and side panels can be installed without tools.
- It is possible to change door opening direction and opening of the additional rear body direction.
- Bodies, door and side panels are equipped with earthing pins.
- Rear panel available as an additional element.

TECHNICAL DATA

Protection degree

IP 20 in accordance with EN 60529

(if the cabinet is mounted on the solid flat wall or equipped with rear panel).

Maximum load capacity

60 kg for Z-CUBE 600 and Z-CUBE 450 single-section cabinets, 30 kg for Z-CUBE 450+150 double-section cabinet.

Material

Sheet steel, clear mineral safety glass.

Surface finishing

Body, side panels, side elements of glass door – powder paint, light grey (RAL 7035).

Mounting angles – Al-Zn coated.

SCOPE OF DELIVERY

Z-CUBE 600 or 450 single-section cabinet:

body, door with a lock, 2 side panels with one lock each, 2 mounting angles.

Z-CUBE 150 rear body for Z-CUBE 450 cabinet:

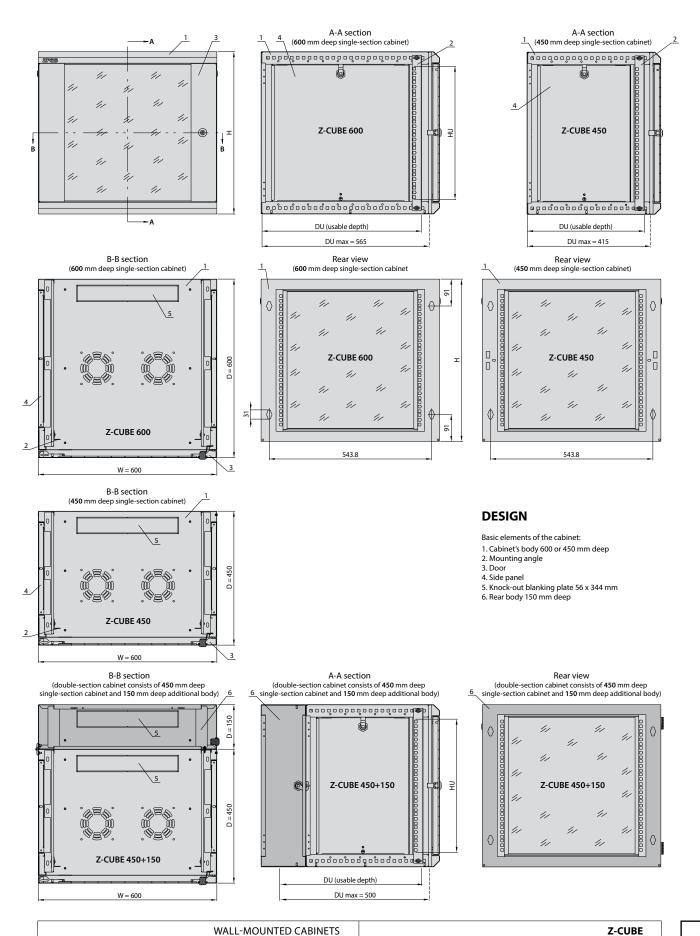
body, 2 or 3 hinges, 1 lock.

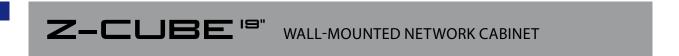


054 ZPAS **Z-CUBE**

DATA COMMUNICATION SOLUTIONS

WALL-MOUNTED NETWORK CABINET Z-CUBE 19"







REFERENCE CHART

Product name	With W [mm]	Depth D [mm]	Height H [mm]	Usable height HU [U = 44.45 mm]	Catalogue number
			368	6 U	WZ-8180-30-01-011
			546	10 U	WZ-8180-30-02-011
Z-CUBE 600 wall-mounted cabinet	600	600	634	12 U	WZ-8180-30-03-011
with glass door	000	000	767	15 U	WZ-8180-30-04-011
J 3			900	18 U	WZ-8180-30-05-011
			1033	21 U	WZ-8180-30-06-011
			368	6 U	WZ-8180-30-M1-011
			546	10 U	WZ-8180-30-M2-011
Z-CUBE 600 wall-mounted cabinet	600	600	634	12 U	WZ-8180-30-M3-011
with metal door	000	000	767	15 U	WZ-8180-30-M4-011
			900	18 U	WZ-8180-30-M5-011
			1033	21 U	WZ-8180-30-M6-011
		450	368	6 U	WZ-8180-20-01-011
			546	10 U	WZ-8180-20-02-011
Z-CUBE 450 wall-mounted cabinet	600		634	12 U	WZ-8180-20-03-011
with glass door	600		767	15 U	WZ-8180-20-04-011
J			900	18 U	WZ-8180-20-05-011
			1033	21 U	WZ-8180-20-06-011
		450	368	6 U	WZ-8180-20-M1-011
			546	10 U	WZ-8180-20-M2-011
Z-CUBE 450 wall-mounted cabinet	600		634	12 U	WZ-8180-20-M3-011
with metal door	600		767	15 U	WZ-8180-20-M4-011
			900	18 U	WZ-8180-20-M5-011
			1033	21 U	WZ-8180-20-M6-011
			368	6 U	WZ-8180-16-01-011
Z-CUBE 150			546	10 U	WZ-8180-16-02-011
rear body	600	150	634	12 U	WZ-8180-16-03-011
(for Z-CUBE 450	600	150	767	15 U	WZ-8180-16-04-011
wall-mounted cabinet)			900	18 U	WZ-8180-16-05-011
			1033	21 U	WZ-8180-16-06-011

Z-CUBE	WALL-MOUNTED CABINETS
DATA COMMUNICATION SOLUTIONS	

SUPPLEMENTARY ACCESSORIES FOR WALL-MOUNTED CABINETS

Rear panel

To close the rear of the **Z-CUBE** cabinet.

Material

Sheet steel powder painted in light grey (RAL 7035).

Scope of delivery

Rear panel with fixing accessories.

Product name	Height [U = 44.45 mm]	Catalogue number
	6 U	WZ-8180-17-01-011
Rear panel for Z-CUBE wall-mounted cabinet	10 U	WZ-8180-17-02-011
	12 U	WZ-8180-17-03-011
	15 U	WZ-8180-17-04-011
	18 U	WZ-8180-17-05-011
	21 U	WZ-8180-17-06-011





Mounting profiles, mounting angles

Additional pair of 19" mounting profiles or mounting angles.

Material

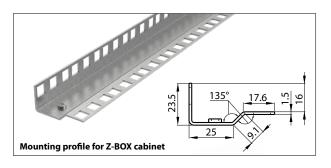
Sheet steel, Al-Zn coated.

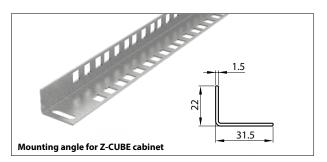
Scope of delivery

Two mounting angles/profiles with fixing accessories.

Product name	Height [U = 44.45 mm]	Catalogue number
	6 U	WZ-7240-31-02-000
	10 U	WZ-7240-31-03-000
Set of mounting profiles for Z-BOX cabinet	12 U	WZ-7240-31-04-000
	15 U	WZ-7240-31-05-000
	18 U	WZ-7240-31-06-000
	6 U	WZ-8180-40-01-000
	10 U	WZ-8180-40-02-000
Set of mounting angles	12 U	WZ-8180-40-03-000
for Z-CUBE cabinet	15 U	WZ-8180-40-04-000
	18 U	WZ-8180-40-05-000
	21 U	WZ-8180-40-06-000







Wall-fastening brackets

Designed for **Z-BOX** and **Z-CUBE** cabinets.

Material

Zinc-coated sheet steel.

Scope of delivery

Set of 4 brackets with fixing accessories.

Product name	Package	Catalogue number
Brackets 20 mm deep	1 set = 4 pcs	WZ-2048-50-01-000
Brackets 40 mm deep	1 set = 4 pcs	WZ-2048-50-02-000



SUPPLEMENTARY ACCESSORIES FOR WALL-MOUNTED CABINETS



Fan kit

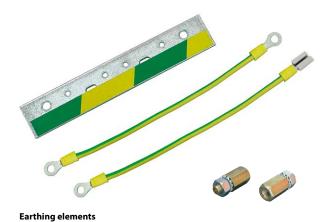
Fan kit

Mounted it the top or bottom plate of **Z-BOX**, **Z-CUBE** or **SJB** cabinets. Power supply: 230 V, 50 Hz; power: 22 W; capacity: 165 m³/h.; noise level: ca 40 dB

Scope of delivery

Set: 1 fan with protection grid, power lead 1.0 m long, fixing accessories.

Package	Catalogue number	
1 set	WN-0200-04-00-000	



Earthing elements

Earthing bar

- With threaded M5 openings for fixing conductors.
- Material: zinc coated steel bar 30 x 4 x 170 mm

Earthing conductors

- Insulated copper conductors with contact eyes for M5 screws.
- Material: copper wires, cross-section 6 mm².

Scope of delivery

Earthing elements are supplied with fixing accessories for installation inside the cabinet.

Product name	Catalogue number	
Earthing set for Z-BOX cabinet	WZ-7240-A0-00-000	
Earthing set for Z-CUBE cabinet	WZ-2733-13-00-000	

Package: 1 set



Brush strip for cable opening

For blinding cable opening following the removal of blanking plate.

Material

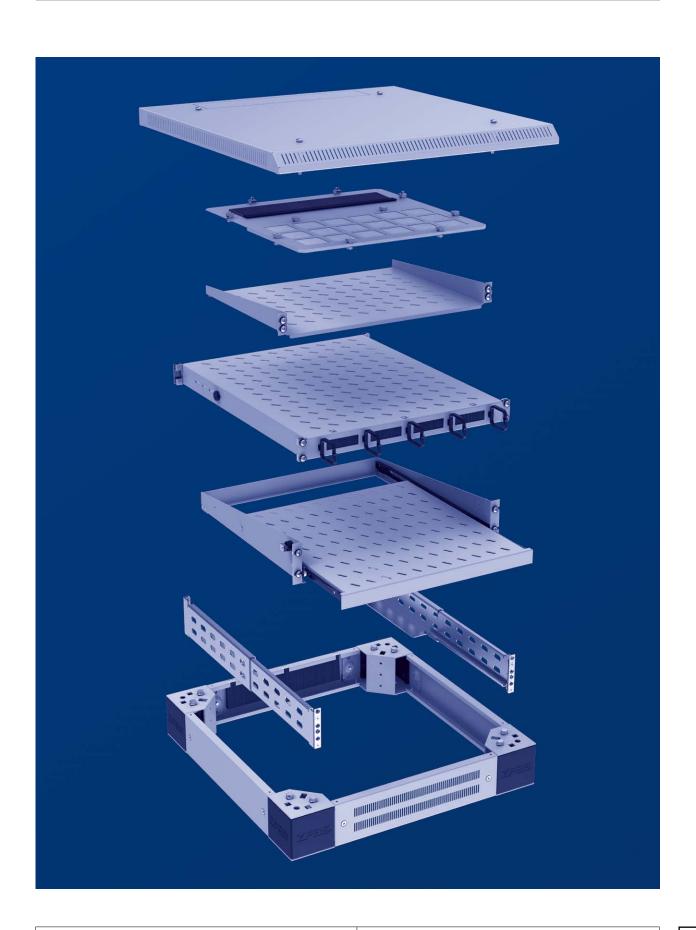
Plastic.

Scope of delivery

Brush strip without fixing accessories.

Product name	Catalogue number	
Brush strip for Z-CUBE cabinet	WZ-8180-19-00-000	

Package: 1 pc.



BASE





Solid side panel



Perforated side panel



Side panel with brush opening



Corner with fixing elements for SZB IT and DSR IT cabinets

060 ZPAS



Corner with fixing elements for Z-SERVER cabinet

Plinth

Plinth consists of corners and side panels.

Each part shall be ordered separately.

For cabinets: **Z-SERVER**, **SZB IT**, **DSR IT**.

Possibility of connecting the plinths in rows or stacked.

Plinth side panels

There are three types of plinth side panels available. Side panels can be removed even when the cabinet is loaded with equipment.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Panel with fixing elements.

	Length	Length of	Catalogue	number
Product name	of side panel [mm]	plinth's side [mm]	RAL 7035	RAL 9005
	400	600	WZ-6935-46-05-011	WZ-6935-46-05-161
Solid	600	800	WZ-6935-46-03-011	WZ-6935-46-03-161
side panel	800	1000	WZ-6935-46-02-011	WZ-6935-46-02-161
	1000	1200	WZ-6935-46-01-011	WZ-6935-46-01-161
	400	600	WZ-6935-92-05-011	WZ-6935-92-05-161
Perforated side panel	600	800	WZ-6935-92-03-011	WZ-6935-92-03-161
	800	1000	WZ-6935-92-02-011	WZ-6935-92-02-161
	1000	1200	WZ-6935-92-01-011	WZ-6935-92-01-161
	400	600	WZ-6935-94-05-011	WZ-6935-94-05-161
Side panel	600	800	WZ-6935-94-03-011	WZ-6935-94-03-161
with brush opening	800	1000	WZ-6935-94-02-011	WZ-6935-94-02-161
opening	1000	1200	WZ-6935-94-01-011	WZ-6935-94-01-161

Package: 1 pc

Plinth corners

Corners are equipped with removable plates that ease the access to assembling and levelling elements.

Corners can be equipped with levelling set or vibro-shock absorbers.

Material

Body: sheet steel powder painted

in light grey (RAL 7035) or black (RAL 9005).

Covers: black plastic.

Scope of delivery

Set of 4 corners include fixing accessories for SZB IT, DSR IT and Z-SERVER cabinets.

Product	Height [mm]	Catalogue number	
name		RAL 7035	RAL 9005
Set of 4 plinth corners	100	WZ-6935-74-00-011	WZ-6935-74-00-161

Package: 1 set

Accessories for cabinets and open racks

BASE

BASE

Vibro-shock absorbers

Vibro-shoch absorbers reduce the transmission of possible vibrations between the floor and the cabinet (e.g. in industrial buildings). Plinth with vibro-shock absorbers should be fixed into the room's floor.

Material

10 mm thick rubber.

Scope of delivery

Set of 4 vibro-shock absorbers.

Package	Catalogue number	
1 set	WZ-M1Z-00-0048-000-4	



Vibro-shock absorber



Plinth corner with vibro-shock absorber

Sets for plinth levelling

Plinth corners can be equipped with additional levelling bolts, that enable stable setting of the cabinet on uneven floor.

Adjustment range: 0-10 mm

Product name	Package	Catalogue number
Set of 4 plinth levelling bolts for SZB IT or DSR IT cabinet	1 set	WZ-6935-Z1-02-000
Set of 4 plinth levelling bolts for Z-SERVER cabinet	1 set	WZ-6935-Z1-01-000







Plinth corner equipped with levelling bolt for SZB IT or DSR IT cabinet

In order to fasten the levelling bolt in the corner and join the corner with the cabinet, 2 pcs. of M8 bolts with washers are used (delivered with the plinth corner).



Plinth corner equipped with levelling bolt for Z-SERVER cabinet

Top part of levelling bolt is used for join the corner with the cabinet.

Set of elements for connecting plinths

Plinths can be joined in row or stacked.

Joining in rows

In order to join two plinths, one connecting set is needed.

Stacking

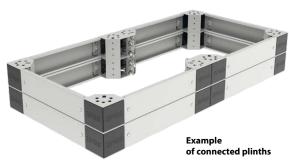
In order to stack two plinths, two connecting sets are

Maximum allowed height: 4 plinths x 100 mm

Product description	Package	Catalogue number
4 bolts M10x20 4 washers 10,5 4 flange nuts M10	1 set	WZ-6935-Z1-03-000



Set of elements for connecting plinths



BASE



Levelling feet for cabinets and racks

Levelling feet

Levelling feet for cabinets and racks. Thread: M12x38 Ways of adjustment:

- with 19 mm open ended spanner,
- with 5 mm wrench spanner (imbus).

Adjustable screw – zinc-coated steel. Base - plastic.

Scope of delivery

Adjustable feet with lock nuts

- set of 4 pcs.

Package	Catalogue number
1 set = 4 pcs	WZ-5571-42-00-000



Locking castor 150



Non-locking castor 150

Castors 150

For cabinets **SZB IT**, as well as for open racks **SRD** and **SRX**. One cabinet or open rack requires 2 locking and 2 non-locking castors.

Maximum load capacity of 4 castors: 400 kg*

Scope of delivery

Set of 2 castors (locking or non-locking type) with screws and washers for fixing into the cabinet or rack.

Product name	Package	Catalogue number
Locking castor 150	1 set = 2 pcs	WZ-SB72-00-01-000-2
Non-locking castor 150	1 set = 2 pcs	WZ-SB72-00-02-000-2

^{*} Applicable to castors only. Loading capacity of the cabinet (or open rack) is specified in the description.

BASE

Castors 300

For cabinets: SZB IT, DSR IT, SZE2 PC.

One cabinet requires 2 locking, 2 non-locking castors and 2 strengthening bars. One bar with locking castors is fixed at the cabinet's front, and the other bar with non-locking castors at the rear.

Maximum load capacity of 4 castors: 600 kg*

Surface finishing

Strengthening bar for castors powder painted in light grey (RAL 7035).

Scope of delivery

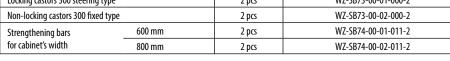
These are available in sets:

- 2 castors (locking or non-locking type) with screws and washers for fixing into the strengthening bar,

 $\hbox{*-} Applicable to castors only. Loading capacity of the cabinet is specified in the description.}\\$

2 strengthening bars for castors with screws and washers for fixing into the bottom plate of the cabinet.

Product name		Package	Catalogue number
Locking castors 300 steering ty	ype	2 pcs	WZ-SB73-00-01-000-2
Non-locking castors 300 fixed type		2 pcs	WZ-SB73-00-02-000-2
Strengthening bars	600 mm	2 pcs	WZ-SB74-00-01-011-2
for cabinet's width	800 mm	2 pcs	WZ-SB74-00-02-011-2





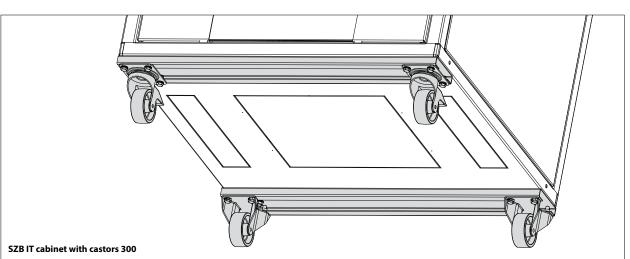
Locking castor 300 steering type



Non-locking castor 300 fixed type



Strengthening bar for castors 300



SHELVES



Fixed shelf II/2U

Shelves fixed on two mounting profiles - 19" assembly

Available in fixed and pull-out version.

Material

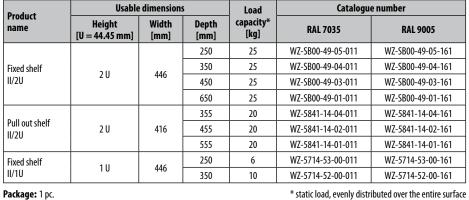
Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Fixed or pull out shelf with fixing accessories.



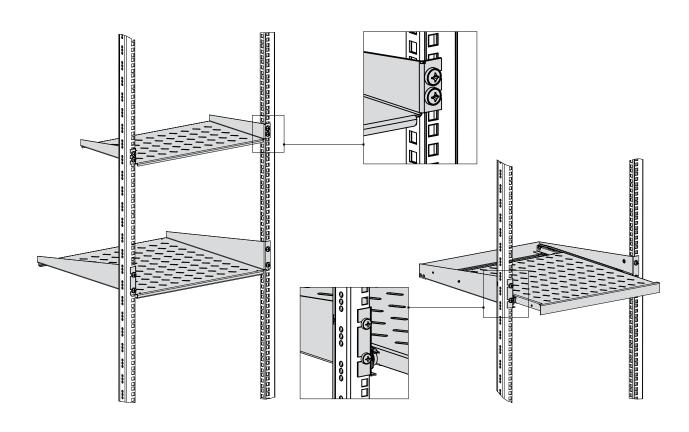
Pull out shelf II/2U





Fixed shelf II/1U

* static load, evenly distributed over the entire surface



SHELVES

Shelves fixed on four mounting profiles

- 19" assembly, adjustable length of the rear mounting brackets

Available in fixed and pull-out version.

Fixed on two pairs of 19" mounting profiles.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005), anti-dust brushes and cable clamps made of plastic.

Scope of delivery

Fixed or pull out shelf with fixing accessories.

Product		Dimens	ions [m	m]	Fo cabinet	Load	Catalogu	number	
name	Н	W	D	D1	depth** [mm]	capacity*** [kg]	RAL 7035	RAL 9005	
			350*	350-450	600		WZ-8264-80-02-350-011	WZ-8264-80-02-350-161	
Fixed shelf	22	450	450	450-550	000	70	WZ-8264-80-03-450-011	WZ-8264-80-03-450-161	
IS/0.5U	(0.5 U)	450	550*	550-650	800	70	WZ-8264-80-04-550-011	WZ-8264-80-04-550-161	
			650	650-750	000		WZ-8264-80-05-650-011	WZ-8264-80-05-650-161	
5	44 (1 U)		350*	350-450	600	600		WZ-5841-20-02-350-011	WZ-5841-20-02-350-161
Fixed shelf ISU/1U		1 450	450	450-550	600	120	WZ-5841-20-03-450-011	WZ-5841-20-03-450-161	
with cable			550*	550-650	000		WZ-5841-20-04-550-011	WZ-5841-20-04-550-161	
clamps and			650	650-750	800 12		WZ-5841-20-05-650-011	WZ-5841-20-05-650-161	
brush cable entries			750*	750-850	1000		WZ-5841-20-06-750-011	WZ-5841-20-06-750-161	
Citales			850	850-950	1000 V	WZ-5841-20-07-850-011	WZ-5841-20-07-850-161		
		14	305*	350-450	600		WZ-5841-25-01-350-011	WZ-5841-25-01-350-161	
Pull-out shelf IR/1U	44		405	450-550	000	30	WZ-5841-25-02-450-011	WZ-5841-25-02-450-161	
	(1 U)	414	505*	550-650	000	30	WZ-5841-25-03-550-011	WZ-5841-25-03-550-161	
			605	650-750	800	800	WZ-5841-25-04-650-011	WZ-5841-25-04-650-161	



Fixed shelf IS/0.5U



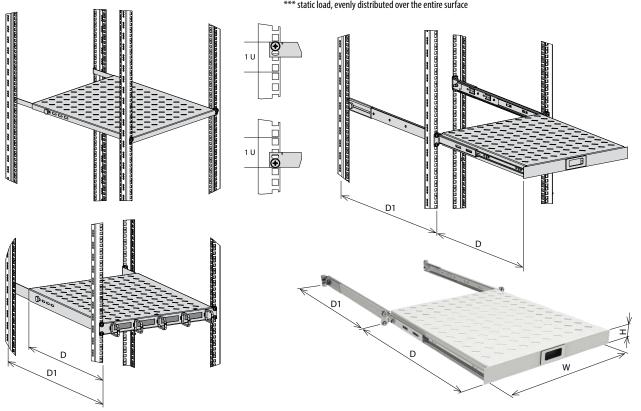
Fixed shelf ISU/1U with cable clamps and brush cable entries



Pull-out shelf IR/1U



* dedicated for ZPAS cabinets with original position of mounting profiles *** minimum depth of the cabinet to which the shelf can be mounted *** static load, evenly distributed over the entire surface



SHELVES



Shelf with adjustable depth 1 U, 500-900 mm

Shelves fixed on four mounting profiles - 19" assembly, adjustable depth

Fixed on two pairs of 19" mounting profiles or mounting angles.

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

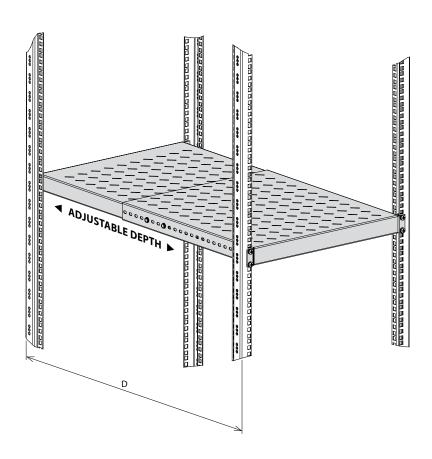
Shelf with fixing accessories.



Shelf with adjustable depth 1 U, 350-600 mm

Product	Usable dimensions			Load	Catalogue number	
name	Height [U = 44.45 mm]	Width [mm]	Depth [mm]	capacity* [kg]	RAL 7035	RAL 9005
Shelf with	1 U (44 mm)	440	350-600	150	WZ-3074-83-04-011	WZ-3074-83-04-161
adjustable depth	1 U (44 mm)	440	500-900	150	WZ-3074-83-00-011	WZ-3074-83-00-161

Package: 1 pc.



^{*} static load, evenly distributed over the entire surface

High-load fixed shelf

ACCESSORIES FOR CABINETS AND OPEN RACKS

SHELVES

Shelves fixed on six 19" mounting profiles

- fixing to the side openings

For cabinets 1000 and 1200 mm deep (SZB IT, DSR IT, Z-SERVER).

Available in fixed and telescopic versions.

Assembling on three pairs of 19" mounting profiles (fastening to side openings).

Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

Scope of delivery

Fixed or telescopic shelf with fixing accessories.

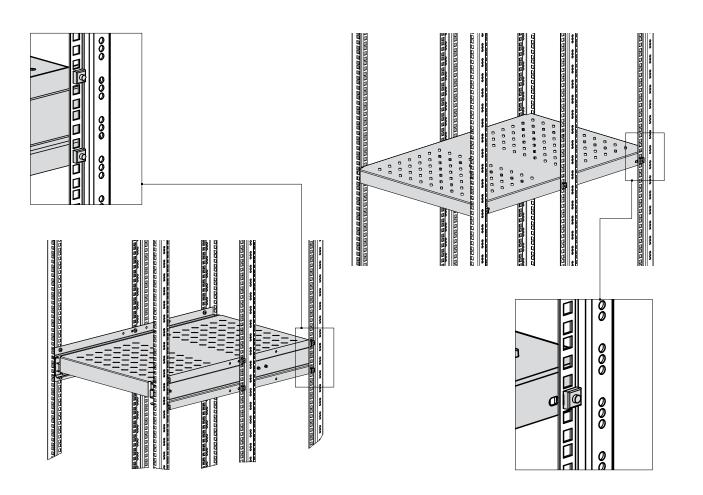
Product	Usable dimensions			Load	Catalogue number	
name	Height [mm]	Width [mm]	Depth [mm]	capacity* [kg]	RAL 7035	RAL 9005
High-load fixed shelf	38	483	700	200	WZ-5841-06-00-011	WZ-5841-06-00-161
High-load telescopic shelf	50 (shelf) 110 (fixing rails)	392	700	140	WZ-5841-08-00-011	WZ-5841-08-00-161



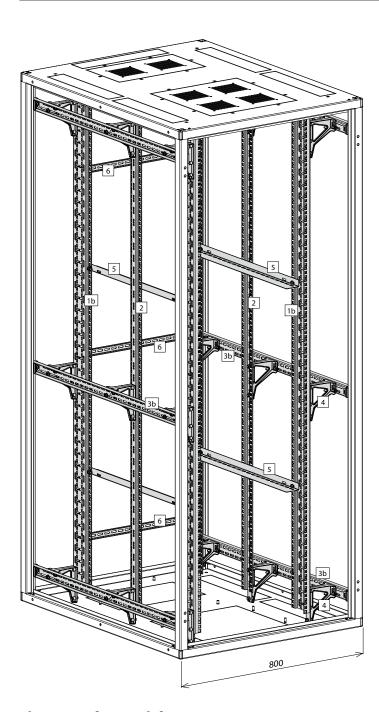
High-load telescopic shelf

Package: 1 pc.

^{*} static load, evenly distributed over the entire surface

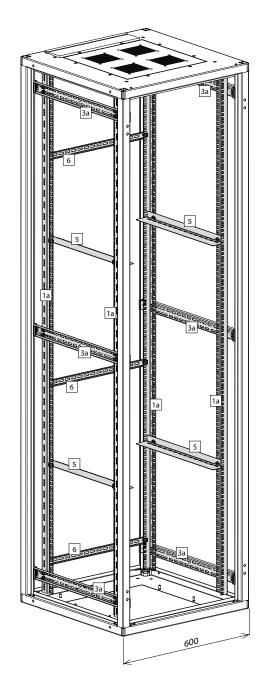


19" FRAME AND FIXING ACCESSORIES



Elements of 19" rack frame

- 1a. 19" mounting profile (rack rail), type STANDARD, 15 mm deep
- 1b. 19" mounting profile (rack rail), type PREMIUM, 12 mm deep
- 2. Middle mounting profile, type STANDARD, 12 mm deep
- 3a. C-profile for 15 mm deep mounting profiles
- 3b. C-profile for 12 mm deep mounting profiles
- 4. Outrigger
- 5. Guide bar
- 6. Cross bar



19" FRAME AND FIXING ACCESSORIES

Mounting profiles

For installing 19" equipment in cabinets: **SZB IT, DSR IT, SZE2 PC**. In cabinets 600 mm wide, mounting profiles are fixed directly to the C-profiles; in cabinets 800 mm wide, in order to achieve 19" spacing, it is necessary to use outriggers.

Notes: Only 15 mm deep mounting profiles may be used in SZE2 PC cabinets.

Mounting profiles for wall-mounted cabinets are described on page 57.

Material

Al-Zn coated sheet steel.

Scope of delivery

Mounting bar or mounting angle without fixing accessories. (Fixing accessories should be ordered separately.)

II.:he	Catalogue number						
Height [U = 44.45 mm]	19" mounting profile Middle mounting pr type STANDARD, 15 mm deep type STANDARD, 15 mm		19" mounting profile type PREMIUM, 12 mm deep	Middle mounting profile type STANDARD, 12 mm deep			
12.7 31.75 6.35 HUx 44.45	21 21 21 21 21 21 21 21 21 21	21 21 21 30 68	21 21 21 82 101	21 21 21 30 68			
18 U	WZ-1718-97-09-000	WZ-1718-98-09-000	WZ-7209-02-09-000	WZ-7782-02-19-000			
24 U	WZ-1718-97-08-000	WZ-1718-98-08-000	WZ-7209-02-08-000	WZ-7782-02-15-000			
33 U	WZ-1718-97-14-000	WZ-1718-98-15-000	WZ-7209-02-14-000	WZ-7782-02-09-000			
38 U	WZ-1718-97-04-000	WZ-1718-98-04-000	WZ-7209-02-04-000	WZ-7782-02-07-000			
42 U	WZ-1718-97-02-000	WZ-1718-98-02-000	WZ-7209-02-02-000	WZ-7782-02-04-000			
45 U	WZ-1718-97-01-000	WZ-1718-98-01-000	WZ-7209-02-01-000	WZ-7782-02-03-000			
47 U	WZ-1718-97-20-000	WZ-1718-98-13-000	WZ-7209-02-20-000	WZ-7782-02-02-000			

Package: 1 pc.

C-profiles

For fixing mounting profiles, mounting angles, cable ducts and cable trays in SZB IT and DSR IT cabinets.

Available in two versions with different depths:

- 18 mm deep C-profiles for fixing mounting profiles with a depth of 15 mm,
- 21 mm deep C-profiles for fixing mounting profiles with a depth of 12 mm.

Material

Scope of delivery

Al-Zn coated sheet steel.

Set of 2 C-profiles with fixing accessories for assembling into the cabinet.

	Catalogue number			
For cabinet depth [mm]	C-profiles for 15 mm deep mounting profiles	C-profiles for 12 mm deep mounting profiles		
(mm)	<u>=</u>	21		
600	WZ-5507-16-01-000	WZ-7782-06-06-000		
800	WZ-5507-16-02-000	WZ-7782-06-05-000		
1000	WZ-5507-16-03-000	WZ-7782-06-03-000		
1200	WZ-5507-16-08-000	WZ-7782-06-01-000		



Package: 2 pcs

19" FRAME AND FIXING ACCESSORIES



Outrigger

For fixing mounting profiles in **800 mm** wide **SZB IT**, **DSR IT** and **SZE2 PC** cabinets, in order to achieve 19" spacing.

Depending on the cabinet design, two or three outriggers are required for assembling one mounting profile.

Material

zamak casting

Scope of delivery

One outrigger with fixing accessories to install the outrigger to mounting profile/angle and to C-profile.

Package	Catalogue number
1 pc.	WZ-5205-90-00-C12



Elements for fixing one mounting profile to 600 mm wide SZB IT, DSR IT or SZE2 PC cabinet (without outrigger)







Elements for fixing appliances to the mounting profiles

Fixing accessories

Set description	Package	Catalogue number
Elements for fixing one mounting profile to 600 mm wide SZB IT, DSR IT or SZE2 PC cabinet (without outrigger): Flange bolt M6x12 - 3 pcs Flange nut M6 - 3 pcs	1 set	WZ-8059-Z1-01-000
Elements for fixing appliances to the mounting profiles: Screw M6x16 - 10 pcs. Cage nut M6 - 10 pcs. Plastic washer - 10 pcs.	1 set	T1Z-00-0002



19" cross bar

Fixed to the rear mounting profiles in 19" cabinets. For installing cables or supporting appliances in the cabinet. With holes for M6 bolts.

Material

Zinc-coated sheet steel

Scope of delivery

Cross bar with fixing accessories.

Length [mm]	Package	Catalogue number
500	1 pc.	WZ-SB00-28-01-000

~~~	7046
0/0	ZPAS

Accessories for cabinets and open racks	19" FRAME AND FIXING ACCESSORIES

19" FRAME AND FIXING ACCESSORIES

#### **Guide bar**

Fixed horizontally to the front and rear 19" mounting profiles, parallel to the cabinet's side.

For supporting appliances in the cabinet.

With oblong holes measuring 6.5 x 22 mm.

#### Material

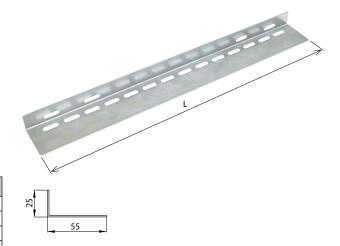
Zinc-coated sheet steel.

#### Scope of delivery

Guide bar with fixing accessories.

Length L [mm]	Catalogue number
250	WZ-SB00-27-05-000
350	WZ-SB00-27-04-000
450	WZ-SB00-27-03-000
550	WZ-SB00-27-02-000
650	WZ-SB00-27-01-000





#### Adjustable guides

Fixed horizontally to the front and rear 19" mounting profiles, parallel to the cabinet's side.

For supporting appliances in the cabinet.

With oblong holes measuring 12.5 x 25 mm.

#### Material

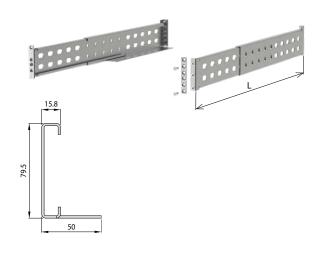
AL-Zn-coated sheet steel.

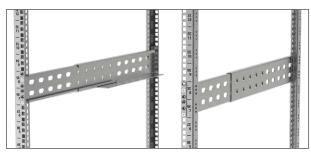
#### Scope of delivery

Set of two adjustable guides with fixing accessories for mounting in the cabinet.

Length L [mm]	Catalogue number
350-600	WZ-8672-20-01-000
550-900	WZ-8672-20-02-000
850-1150	WZ-8672-20-03-000

Package: 1 set





Adjustable guides fixed on 19" mounting profiles

BAYING CABINETS IN ROWS • LIGHTING • POCKETS



#### Elements for baying cabinets in rows

Sets of elements for baying **SZB IT** or **DSR IT** cabinets.

One set is intended for baying two cabinets.

The cabinets are connected by means of holes in the sides of the bottom and top plates.

In the case of cabinets with high load, a set including clamp connectors is recommended - see page 39.

Set contents	Package	Catalogue number
Flange bolt M8 - 4 pcs Flange nut M8 - 4 pcs	1 set	WZ-2565-13-03-000



Lighting kit with fixing bracket in light grey (RAL 7035) colour



Power cord with a door switch for SZB IT and DSR IT cabinets

#### **Lighting kit**

For floor-standing and wall-mounted cabinets. 19" assembly, usable height 1 U.

#### Material of mounting bracket

Sheet steel, powder painted in light grey (RAL 7035) or black (RAL 9005).

#### Scope of delivery

Electric light fitting with a LED lamp 230 V, 5 W and a switch, a bracket for fixing the electric light fitting on the 19" mounting profiles, power cord, fixing accessories.

Power cord with a door switch is ordered separately.

Product name	Package	Colour	Catalogue number
Linksin n bis	1 set	RAL 7035	WN-0208-05-01-011-02
Lighting kit		RAL 9005	WN-0208-05-01-161-02
Power cord with a door switch for SZB IT and DSR IT cabinets	1 set	-	WN-0208-04-05-000



#### **Document pocket**

For fixing on the cabinet's door. A4 size, light grey (RAL 7035) colour.

#### Material

Plastic

## Scope of delivery

Pocket with self-adhesive fixing tape.

Package	Colour	Catalogue number
1 pc.	RAL 7035	WZ-SB00-40-00-011

072 ZPAS

Accessories for cabinets and open racks

BAYING CABINETS IN ROWS • LIGHTING • POCKETS

**EARTHING ELEMENTS** 

## **Earthing conductor set**

Insulated copper conductors for joining removable elements of the cabinet with earthing bar.

Equipped with contact eyes Ø 6 mm.

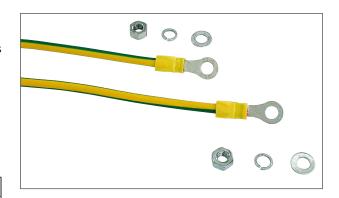
## Material

Copper conductor, cross-section 6 mm².

## Scope of delivery

Earthing conductors are sold in sets in accordance with the chart below.

Description of set	Package	Catalogue number
Conductor 300 mm long - 4 pcs. Conductor 400 mm long - 2 pcs. Conductor 600 mm long - 1 pc. Fixing accessories	1 set	WZ-SB12-00-01-000
Conductor 300 mm long - 2 pcs. Conductor 400 mm long - 2 pcs. Conductor 600 mm long - 1 pc. Fixing accessories	1 set	WZ-SB12-00-02-000



## **Copper earthing bar**

For **SZB IT** or **DSR IT** cabinets, as an alternative for the factory-installed galvanized steel earthing bar.

## Material

Copper.

## Scope of delivery

Earthing bar with bolts for assembling in the cabinet.

Product name	Package	Catalogue number
Earthing bar Cu 15x5x375 mm	1 pc.	WZ-3393-11-00-000



ROOF



Roof for SZB IT cabinet 800 x 1000 mm



Roof for SZB IT cabinet 600 x 600 mm

## **Roof for SZB IT cabinet**

It improves the aesthetics of the cabinet and protects the ventilation openings in the top plate of the cabinet. Increases the total height of the cabinet by 40 mm.

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

## Scope of delivery

Roof with fixing accessories.

For SZB I	For SZB IT cabinet		Catalogue number		
width [mm]	depth [mm]	RAL 7035	RAL 9005		
	600	WZ-8059-50-6060-011	WZ-8059-50-6060-161		
	800	WZ-8059-50-6080-011	WZ-8059-50-6080-161		
600	1000	WZ-8059-50-6010-011	WZ-8059-50-6010-161		
	1200	WZ-8059-50-6012-011	WZ-8059-50-6012-161		
	600	WZ-8059-50-8060-011	WZ-8059-50-8060-161		
000	800	WZ-8059-50-8080-011	WZ-8059-50-8080-161		
800	1000	WZ-8059-50-8010-011	WZ-8059-50-8010-161		
	1200	WZ-8059-50-8012-011	WZ-8059-50-8012-161		

Package: 1 pc.



## **Roof for SZE2 PC cabinet**

It improves the aesthetics of the cabinet and, in the case of a cabinet equipped with a roof fan unit, protects the ventilation openings in the top plate of the cabinet.

Increases the total height of the cabinet by 41,5 mm.

#### Material

Sheet steel powder painted in light grey (RAL 7035).

## Scope of delivery

Roof with 4 fixing/spacer bolts for mounting. (Assembly screws M12 are delivered with the cabinet.)

For SZE2 PC cabinet		Catalogue
width [mm]	depth [mm]	number
600	600	WZ-1951-27-12-011
600	800	WZ-1951-27-11-011

Package: 1 pc.

	DATA COMMUNICATIO	N SOLUTIONS
074 ZPAS	Accessories for cabinets	and open racks

**MASKING ITEMS** 

## Blanking and cable entry plates and strips for bottom plate, top plate and roof

For cabinets: **Z-SERVER**, **SZB IT**, **DSR IT**.

#### Material

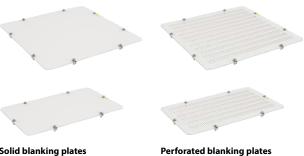
Sheet steel, powder painted in light grey (RAL 7035) or black (RAL 9005), plastic.

#### Scope of delivery

Blanking/cable entry plate or strip with fixing accessories.

	For	Catalogu	e number
Product name	opening [mm]	RAL 7035	RAL 9005
Solid	380 x 380	WZ-1718-38-01-011	WZ-1718-38-01-161
blanking plate	380 x 210	WZ-1718-38-02-011	WZ-1718-38-02-161
Perforated	380 x 380	WZ-1718-39-01-011	WZ-1718-39-01-161
blanking plate	380 x 210	WZ-1718-39-02-011	WZ-1718-39-02-161
Blanking plate with a fabric filter	380 x 380	WZ-1718-42-01-011	WZ-1718-42-01-161
	380 x 210	WZ-1718-42-02-011	WZ-1718-42-02-161
Cable entry plate	380 x 380	WZ-5271-10-00-011	WZ-5271-10-00-161
with a brush strip	380 x 210	WZ-5271-14-00-011	WZ-5271-14-00-161
Brush strip	380 x 71	WZ-8059-54-00-000	WZ-8059-54-00-000
Cable entry plate	380 x 380	WZ-1718-40-01-011	WZ-1718-40-01-161
with a foam strip	380 x 210	WZ-1718-40-02-011	WZ-1718-40-02-161
Cable entry plate with a fabric filter and a brush strip	380 x 380	WZ-SB76-00-00-011	WZ-SB76-00-00-161





Solid blanking plates



a brush strip





MASKING ITEMS Accessories for cabinets and open racks **DATA COMMUNICATION SOLUTIONS** 

a foam strip

MASKING ITEMS



Blanking plates assembled with screws



Tool-free assembled blanking plate

## 19" blanking plates

For covering empty 19" space.

#### Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

## Scope of delivery

Blanking plate with fixing accessories.

Product name	Height	Catalogue number		
rioductilalile	[U = 44.45  mm]	RAL 7035	RAL 9005	
	1 U	WZ-SB00-33-01-011	WZ-SB00-33-01-161	
	2 U	WZ-SB00-33-02-011	WZ-SB00-33-02-161	
Blanking plate assembled with screws	3 U	WZ-SB00-33-03-011	WZ-SB00-33-03-161	
	4 U	WZ-SB00-33-04-011	WZ-SB00-33-04-161	
	5 U	WZ-SB00-33-05-011	WZ-SB00-33-05-161	
	6 U	WZ-SB00-33-06-011	WZ-SB00-33-06-161	
Tool-free assembled 1 U blanking plate		WZ-4687-75-01-011	WZ-4687-75-01-161	

Package: 1 pc.

**MASKING ITEMS** 

## **Horizontal brush strips**

The horizontal brushes are fitted on vertical masking panels under and over the working surface of the mounting profiles in **SZB IT** server cabinets. They are intended for limiting cold air circulation outside the working zone of the mounting profiles and preventing recirculation of hot air into the cold air inlet.

#### Material

Black plastic brush strip, steel holder powder painted in light grey (RAL 7035) or black (RAL 9005).

## Scope of delivery

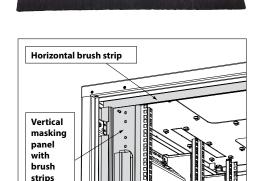
For 600 mm wide cabinets:

brush strip with holder and fixing accessories.

For 800 mm wide cabinets:

brush strip without holder and fixing accessories.

For cabinet width	Dadrage	Catalogue number		
[mm]	[mm] Package		RAL 9005	
600	1 рс.	WZ-5367-45-01-011	WZ-5367-45-01-161	
800	1 рс.	WZ-5367-45-02-000		





## Vertical masking panels with brush strips

The vertical masking panels are intended for sealing the space between the mounting profiles and the side panel in **SZB IT** server cabinets. They prevent hot air from being fed back into the cold air inlet.

## **AVAILABLE OPTIONS**

#### For cabinets wide 800 mm:

- 1. Vertical masking panels with cable entries and openings for fixing cable clamps
- 2. Vertical solid masking panels with openings for fixing cable clamps

## For cabinets wide 600 mm:

3. Vertical solid masking panels

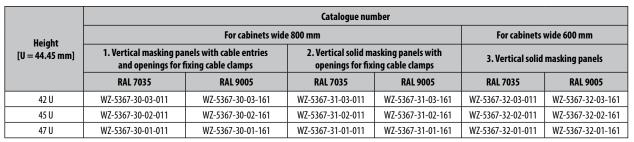
The cable entries in masking panels for 800 mm cabinets are covered with a brush and their edges are protected with an edge seal. All three masking panels types are provided with a brush that, once assembled to the cabinet, fits tight to the side wall.

#### Material

Sheet steel powder painted, plastic.

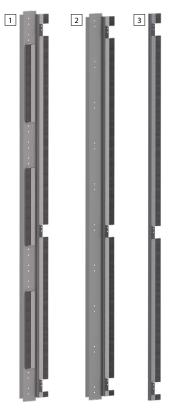
#### Scope of delivery

A set of 2 vertical masking panels of a given type with fixing accessories.

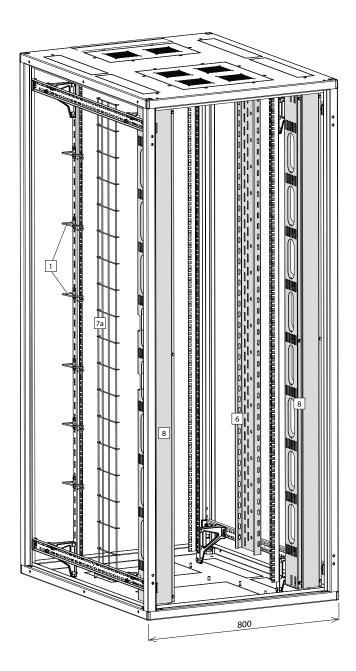


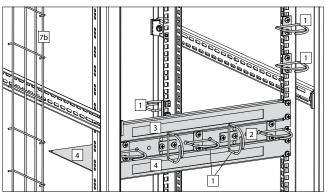
Package: 1 set = 2 pcs

	DATA COMMUNICATION SOLUTIONS
MASKING ITEMS	Accessories for cabinets and open racks



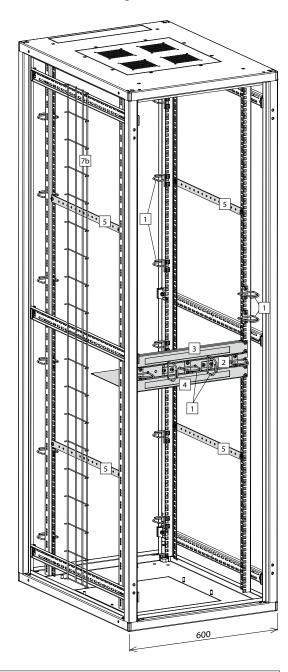
**CABLE MANAGEMENT** 





## **Cable management elements**

- 1. Cable clamps
- 2. Cable management bar
- 3. Brush panel without support plate
- 4. Brush panel with support plate
- 5. Cable holder
- 6. Perforated cable tray, 30 mm deep
- 7. Wire cable tray, 15 mm deep 7a - installation on the inside 7b - installation on the outside
- 8. Vertical cable management



CABLE MANAGEMENT

## **Cable clamps**

## Intended for fixing

- on cable management bars,
- on mounting profiles.

#### Material

Zn coated steel.

## Scope of delivery

The cable clamps are sold in sets: 5 pcs of clamps and fixing accessories.

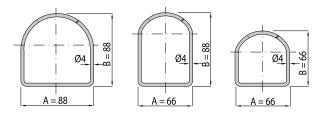
#### Note:

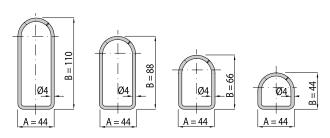
It is possible to order on demand cable clamps painted in black (RAL 9005).

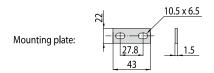
Type of cable clamp	Package	Dimensions A x B [mm]	Catalogue number
		88 x 88	WZ-SB52-00-01-000
( )		66 x 88	WZ-SB52-00-02-000
1 1		66 x 66	WZ-SB52-00-03-000
0.6	5 pcs	44 x 110	WZ-SB52-00-04-000
		44 x 88	WZ-SB52-00-05-000
		44 x 66	WZ-SB52-00-06-000
		44 x 44	WZ-SB52-00-07-000
		88 x 88	WZ-SB53-00-01-000
	5 pcs	66 x 88	WZ-SB53-00-02-000
		66 x 66	WZ-SB53-00-03-000
		44 x 110	WZ-SB53-00-04-000
		44 x 88	WZ-SB53-00-05-000
		44 x 66	WZ-SB53-00-06-000
		44 x 44	WZ-SB53-00-07-000
		88 x 88	WZ-SB54-00-01-000
		66 x 88	WZ-SB54-00-02-000
		66 x 66	WZ-SB54-00-03-000
	5 pcs	44 x 110	WZ-SB54-00-04-000
		44 x 88	WZ-SB54-00-05-000
		44 x 66	WZ-SB54-00-06-000
		44 x 44	WZ-SB54-00-07-000



Way of fastening cable clamps on cable management bar







## **Cable management bar**

19" assembly, height: 1 U. With slots for mounting cable clamps.

#### Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

#### Scope of delivery

Cable management bar, 8 rubber covers for not used slots, fixing accessories.

#### Note:

Cable clamps should be ordered separately.



Height [U = 44.45 mm]	Package	Colour	Catalogue number
1 U	1	RAL 7035	WZ-SB55-00-00-011
	1 pc.	RAL 9005	WZ-SB55-00-00-161

**CABLE MANAGEMENT** 



T-SO-900-614



## Cable management panels, finger type

Designed for horizontal cable organization inside the 19" cabinets.

Available in 1 U and 2 U heights.

Two slots for cable entry in the back side.

Removable front cover.

#### Material

Plastic in black or sheet steel powder painted in black.

## Scope of delivery

 $Cable\ management\ panel\ without\ fixing\ accessories.$ 

Externa	External dimensions [mm]		Upper and lower slots		Material	Catalogue
Width	Height	Depth	Number	Width [mm]	materiai	number
483	44 (1 U)	87	12	15	plastic	T-S0-900-614
483	88 (2 U)	87	12	15	plastic	T-SO-900-615
483	44 (1 U)	174	12 + 12	15	plastic	T-SO-900-618
483	44 (1 U)	71	12	10	metal	T-SO-900-613
483	44 (1 U)	48	24	6	metal	T-S0-900-616

Package: 1 pc.



CABLE MANAGEMENT

## Cable management panels with clamps

Designed for horizontal cable organization inside the 19" cabinets.

Height 1 U.

T-SO-900-008 panel includes four brush cable entries.

#### Materia

Sheet steel panel powder painted in black (RAL 9005) or light grey (RAL 7035) - see photos, plastic cable clamps in black, plastic brush (in the T-SO-900-008 panel).

#### Scope of delivery

Cable management panel without fixing accessories.

Exte	rnal dimensions	Number	Catalogue		
Width	Height	Depth	of clamps	number	
483	44 (1 U)	90	5	T-SO-900-617	
483	44 (1 U)	75	5	T-SO-900-008	
483	44 (1 U)	80	9	WNK-811-000	

Package: 1 pc.



T-SO-900-617



T-SO-900-008



WNK-811-000

## **Cable holder**

Fixed horizontally to the front and rear mounting profiles, parallel to the cabinet's side. For installing cable bundle. With holes for M6 bolts.

#### Material

Zinc-coated sheet steel

## Scope of delivery

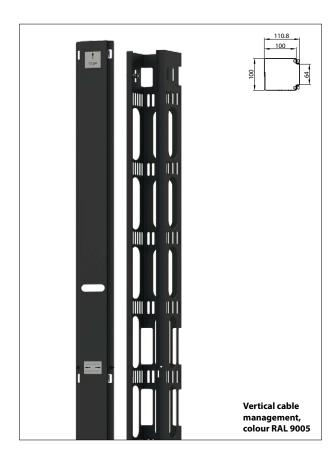
Cable holder with fixing accessories.

Length [mm]	Catalogue number
210	WZ-SB00-29-05-000
310	WZ-SB00-29-04-000
335	WZ-SB00-29-03-000
410	WZ-SB00-29-02-000
500	WZ-SB00-29-01-000

Package: 1 pc.



**CABLE MANAGEMENT** 



## Vertical cable management

Designed for vertical organization of cables inside the **800 mm** wide **SZB IT** cabinets. Fixed to horizontal C-profiles at the cabinet's side walls. Equipped with a removable front cover.

#### Material

Sheet steel powder painted in black (RAL 9005).

## Scope of delivery

Vertical cable management with fixing accessories for assembling into the cabinet.

For cabinet	Dimensions [mm]		Colour	Catalogue	
height	Width	Depth			
42.11	100	111	RAL 7035	WZ-6186-22-03-011	
42 U	100		RAL 9005	WZ-6186-22-03-161	
AF II	100	111	RAL 7035	WZ-6186-22-02-011	
45 U	100		RAL 9005	WZ-6186-22-02-161	
47.11	100	111	RAL 7035	WZ-6186-22-01-011	
47 U	100 11	111	RAL 9005	WZ-6186-22-01-161	

Package: 1 pc.



Brush panel without support plate



Brush panel with support plate

## **Brush panels**

Make easier to organise cables in data cabinets. 19" assembly, height 1 U. With 341 x 21.5 mm brush opening. Support plate can be used in order to keep patch cords

## Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

#### Scope of delivery

which are in excess.

Brush panel with fixing accessories for assembling into the 19" mounting profiles.

Panel type	Depth [mm]	Package	Colour	Catalogue number
Without	50	1 pc.	RAL 7035	WZ-SB63-00-01-011
support plate			RAL 9005	WZ-SB63-00-01-161
With	200	1	RAL 7035	WZ-SB63-00-02-011
support plate	300	1 pc.	RAL 9005	WZ-SB63-00-02-161

**CABLE MANAGEMENT** 

## **Perforated cable tray**

Designed for vertical cable management inside the cabinet. Fixed to horizontal C-profiles at the cabinet's side walls. Width 150 mm, depth 30 mm.

**Note:** In 600 mm wide **SZB IT** cabinets, 30 mm deep cable tray can be fitted to the C-profiles only from the inner side (it does not fit in the space between the C-profile and cabinet's side panel.).

#### Material

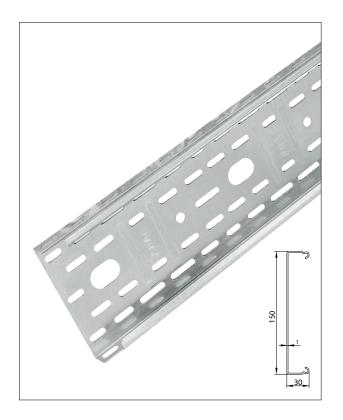
Sheet steel zinc coated.

#### Scope of delivery

Cable tray with fixing accessories.

Cable tray lenght [mm]	For cabinet height [U = 44.45 mm]	Catalogue number
1100	24 U	WZ-4755-20-08-000
1200	27-28 U	WZ-4755-20-07-000
1300	30 U	WZ-4755-20-06-000
1400	32-33 U	WZ-4755-20-05-000
1600	36 U	WZ-4755-20-04-000
1700	38-39 U	WZ-4755-20-03-000
1800	40-42 U	WZ-4755-20-02-000
2000	45-47 U	WZ-4755-20-01-000





## Wire cable tray

Designed for vertical cable management inside the cabinet. Fixed to horizontal C-profiles at the cabinet's side walls. Width 150 mm, depth 15 mm. In 600 mm wide **SZB IT** cabinets, wire cable tray can fit in the space between the C-profile and cabinet's side panel.

## Material

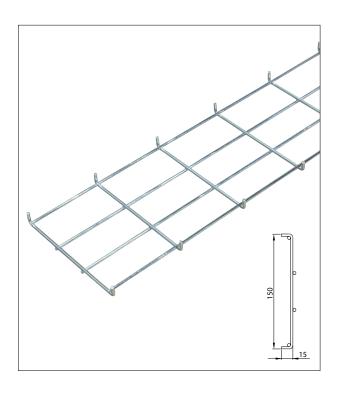
Galvanized steel.

## Scope of delivery

Cable tray with fixing accessories.

Cable tray lenght [mm]	For cabinet height [U = 44.45 mm]	Catalogue number
1100	24 U	WZ-4755-25-08-000
1200	27-28 U	WZ-4755-25-07-000
1300	30 U	WZ-4755-25-06-000
1400	32-33 U	WZ-4755-25-05-000
1600	36 U	WZ-4755-25-04-000
1700	38-39 U	WZ-4755-25-03-000
1800	40-42 U	WZ-4755-25-02-000
2000	45-47 U	WZ-4755-25-01-000

Package: 1 pc.



**CABLE MANAGEMENT** 



**PVC** cable ducts

C-profile for stiffening PVC cable ducts



 $\ensuremath{\mathsf{PVC}}$  cable duct fastened to the C-profile for cable duct stiffening



 ${\bf PVC\ cable\ duct\ with\ a\ C-profile\ for\ cable\ duct\ stiffening,\ installed\ in\ the\ SZB\ cabinet}$ 

#### **PVC CABLE DUCT**

	Height [mm]	Width [mm]	Depth [mm]	Catalogue number
		00 60	40	M10-02-1428
	2000		60	M10-02-1424
	2000		80	M10-02-1438
			100	M10-02-1442

Package: 1 pc.

## **PVC cable ducts**

Designed for vertical organization of cables inside the **SZB IT** cabinets.

Fixed to horizontal C-profiles at the cabinet's side walls with help of the stiffening C-profile.

Cable duct and stiffening C-profile are ordered separately.

#### Material

Cable duct - PVC

Stiffening C-profile - sheet steel Al-Zn coated

## Scope of delivery

Cable ducts - sold in lengths of 2 m.

Stiffening C-profile - sold in lengths given in the table below; C-profile scope of delivery includes fixing accessories for cabinet installation.

## **C-PROFILE FOR STIFFENING PVC CABLE DUCTS**

[U = 44.45 mm]  15 U  18 U  21 U  24 U  27 U  28 U  30 U	40 60 40 60 40	WZ-SB00-31-22-000 WZ-SB00-31-10-000 WZ-SB00-31-21-000 WZ-SB00-31-21-000 WZ-SB00-31-09-000
21 U 24 U 27 U 28 U	60 40 60	WZ-SB00-31-10-000 WZ-SB00-31-21-000
21 U 24 U 27 U 28 U	40	WZ-SB00-31-21-000
21 U ———————————————————————————————————	60	
21 U		W7_SR00_31_00_000
24 U	40	VVZ-3D00-31-03-000
24 U		WZ-SB00-31-36-000
27 U	60	WZ-SB00-31-30-000
27 U	40	WZ-SB00-31-20-000
28 U	60	WZ-SB00-31-08-000
28 U	40	WZ-SB00-31-35-000
	60	WZ-SB00-31-29-000
	40	WZ-SB00-31-19-000
30 U	60	WZ-SB00-31-07-000
300	40	WZ-SB00-31-34-000
i	60	WZ-SB00-31-28-000
22.11	40	WZ-SB00-31-18-000
32 U	60	WZ-SB00-31-06-000
22.11	40	WZ-SB00-31-33-000
33 U	60	WZ-SB00-31-27-000
2611	40	WZ-SB00-31-17-000
36 U	60	WZ-SB00-31-05-000
2011	40	WZ-SB00-31-16-000
38 U	60	WZ-SB00-31-04-000
2011	40	WZ-SB00-31-32-000
39 U	60	WZ-SB00-31-26-000
40 U	40	WZ-SB00-31-15-000
40 0	60	WZ-SB00-31-03-000
42 U	40	WZ-SB00-31-14-000
42 0	60	WZ-SB00-31-02-000
45.11	40	WZ-SB00-31-13-000
45 U	60	WZ-SB00-31-01-000
47.11	40	W7 6000 24 24 657
47 U	40	WZ-SB00-31-31-000

Package: 1 pc.

Accessories for cabinets and open racks

CABLE MANAGEMENT

MONITORING AND ACCESS CONTROL

## **AKCP** - Monitoring of device operating conditions and access control

#### Measurement of any environmental parameters and detection of alarm conditions

Continuous control of temperature, humidity, flooding, airflow, smoke, motion, vibration, power consumption, door opening and other parameters depending on the sensors used.

#### Video surveillance system

Possibility of connecting cameras and continuous recording of images on the server.

## In-line Power Meter control and monitoring of power supply parameters

Power management for the connected power strips via AKCess Pro Server. Possibility of configuring notifications for exceeding the defined thresholds, automatic power off in emergency situations.

## Software for managing equipment and collected data

The data from the connected devices can be viewed by the administrator using clear, configurable software and can be used as a basis for further actions.

## SensorProbeX+ (SPX+) and SensorProbe2+ (SP2+) data hubs

Choice of two types of data hubs for smaller installations and complex monitoring networks.

#### Easy to set up, expand and use

The modular configuration of the SPX+ data hub ensures easy customization according to your needs and requirements.

#### **Intelligent ports** - right-away readiness

Hubs are equipped with intelligent ports that automatically recognize the type of connected AKCP sensor.

#### **Modbus communication** - ideal for industrial applications

Thanks to the EXP port in the SPX+ data hub, it is possible to connect to sensors using Mod bus RTU-TCP communication.

#### **Access control** - protection for cabinets and rooms

The AKCP system allows you to secure any door with remotely controlled lock and proximity card reader.

## **ELEMENTS OF THE SYSTEM**

# SensorProbeX+ modular data hub



Advanced data hub, designed for horizontal 19" or vertical mounting. Modularly built, it allows for custom configuration. Examples of modules include: an internal communication modem, a potential-free contact module or an intelligent sensor ports module. SPX+ is ideally suited for monitoring applications in data centres and industrial production areas.

# SensorProbe2+ basic data hub



Data hub, equipped with 4 RJ-45 sockets and Ethernet socket, optionally also with GSM module. Supports 4 intelligent sensors or up to 20 potential-free inputs. It is possible to connect expansion modules.

## Programmable display



## Power control



Sensors and detectors



Access control handle



Software



MONITORING AND ACCESS CONTROL

# **AKCP** - Monitoring of device operating conditions and access control

# AKCess Pro Server = monitoring of environmental conditions power management video surveillance access control

## Full supervision and prevention of accidents

Combines environmental monitoring, access control, and video surveillance functionality.

#### **Automatic recognition of connected devices**

Cameras, sensors, access control elements – just connect and start up.

#### Compatibility with other manufacturers' equipment

Possibility of connecting any cameras and sensors.

## Monitoring and control of all devices on one screen

Easy configuration of the desktop and customisation of the control panel (dashboard) according to user's needs.

#### Creating scalable maps that contain data from connected sensors and cameras

Visualization of data on geographic maps, building plans and other monitored spaces.

#### Supervision from anywhere

Possibility of installing the software on any computer with Windows and Internet access.

#### **Event notification system**

Immediate notification of alarms and other defined events via e-mail, Skype or SMS.

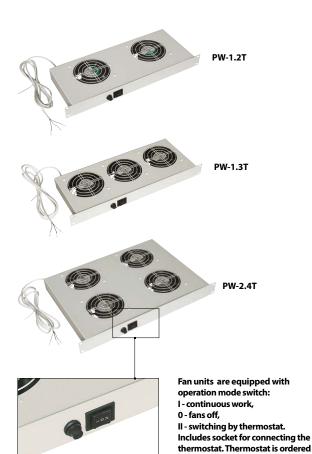
## Time schedules

Creating different automatically triggered event scenarios.



# **VENTILATION AND AIR-CONDITIONING**









## PW fan units

Fan units 1 U high, intended for assembly on 19" mounting profiles or in 19" swing frames.

In the standard version, the units are equipped with 2, 3 or 4 fans, operating mode switch, fuse, power cord (without plug) and socket for thermostat connection.

## **TECHNICAL DATA**

Davamatav		Type of fan unit			
Parameter	PW-1.2T	PW-1.3T	PW-2.4T		
Power supply voltage		220-240 V~ 50 Hz	7		
Rated current [A]	0.28	0.42	0.56		
Number of fans	2	3	4		
Power rating [W]	44	66	88		
Capacity [m ³ /h]	330	495	660		
Ambient temperature [°C]		from -10 to +70			
Relative humidity [%]		from 20 to 80			
Protection degree		IP 20			
Electric shock protection		neutralization			

#### **Enclosure material**

Sheet steel powder painted.

## **Enclosure colour**

Light grey (RAL 7035) or black (RAL 9005).

## Scope of delivery:

Fan unit with power cord (without plug) and fixing accessories.

Thermostat is ordered separately - see below.

Type of fan	Number	Depth	Catalogue number	
of fan unit	of fans	[mm]	RAL 7035	RAL 9005
PW-1.2T	2	180	WZ-5606-25-01-011	WZ-5606-25-01-161
PW-1.3T	3	180	WZ-5606-05-01-011	WZ-5606-05-01-161
PW-2.4T	4	350	WZ-5606-35-01-011	WZ-5606-35-01-161

Package: 1 pc.

## Thermostat for PW fan units

Thermostat with power cord and plug. Adapted for mounting on DIN rails. Detailed description of the thermostat: see page 91.

Package	Catalogue number	
1 pc.	WN-0201-12-00-000	

## **PWD** and **PD** roof fan units

Roof fan units are intended for assembly to  $380 \times 380$  and  $380 \times 210$  mm openings which are located in the top plates of **SZB IT, SZE2 PC** and **Z-SERVER** cabinets.

In the standard version, the units are equipped with 2 or 4 fans, an illuminated switch, fuse, power cord (without plug) and integrated thermostat (optional, depending on panel type).

# PWD-4W

## **TECHNICAL DATA**

D		Type of fan unit			
Parameter	PWD-4W	PWD-2W	PD-2W		
Power supply voltage		220-240 V~ 50 Hz			
Rated current [A]	0.56	0.28	0.28		
Number of fans	4	2	2		
Power rating [W]	88	44	44		
Capacity [m³/h]	660	330	330		
Ambient temperature [°C]		from -10 to +70			
Relative humidity [%]		from 20 to 80			
Protection degree	IP 20 (refers to	IP 20 (refers to fan units mounted in the cabinet)			
Electric shock protection		neutralization			

#### **Enclosure material**

PWD-4W and PWD-2W fan units - plastic. PD-2W fan unit - sheet steel.

## **Enclosure colour**

Light grey (RAL 7035) or black (RAL 9005)

## Scope of delivery

Fan unit with power cord (without plug) and fixing accessories.

## Fans used in fan units:

PW, PWD and PD fan units are provided with high quality fans with ball bearings.

## **TECHNICAL DATA OF ONE FAN:**

- voltage rating
- frequency50 Hz
- power rating
- rated current0.14 A
- rotation speed2850 1/min
- noise level
- pressure
- air flow 165 m³/h
- durabilitymin. 50 000 h
- dimensions









Туре	Number	For opening's	Catalogue number		
of fan unit	of fans	dimensions [mm]	RAL 7035	RAL 9005	
PWD-4W	4	380 x 380	WN-0200-06-01-011	WN-0200-06-01-161	
PWD-4W with integrated thermostat	4	380 x 380	WN-0200-06-04-011	WN-0200-06-04-161	
PWD-2W	2	380 x 380	WN-0200-07-01-011	WN-0200-07-01-161	
PWD-2W with integrated thermostat	2	380 x 380	WN-0200-07-04-011	WN-0200-07-04-161	
PD-2W	2	380 x 210	WN-0200-03-00-011	WN-0200-03-00-161	

Package: 1 pc.

VERTILE MICH STSTEMS	DATA COMMUNICATION SOLUTIONS
VENTILATION SYSTEMS	Ventilation and air-conditioning



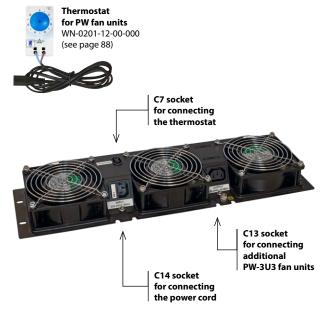


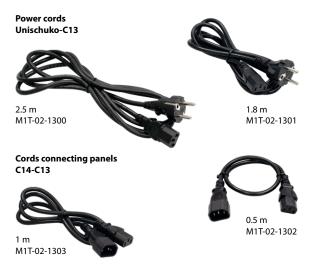
## Operation mode switch:

- I continuous work
- 0 fans off
- II switching by thermostat

External thermostat in position II switches on the fans and power up additional C13 socket.

It is possible to connect with one thermostat up to 3 panels to common power supply or control next panels with additional thermostats.





### PW-3U3 fan unit

Fan unit 3 U high, intended for assembly on 19" mounting profiles or in 19" swing frames.

In the standard version, the unit is equipped with 3 fans, operation mode switch, fuse, socket for connecting the thermostat and socket for connecting additional PW-3U3 fan units (the maximum number of panels connected to the common power supply are 3 pieces).

Rectangular openings to fasten thermostats are on front, back and top of the panel.

#### **TECHNICAL DATA**

Parameter	PW-3U3 fan unit
Power supply voltage	220-240 V∼ 50 Hz
Rated current	0.42 A
Fuse type	WTA-T 5x20 250 V
Fuse protection	1.6 A
Number of fans	3
Rated power	66 W
Air flow	490 m³/h
Noise level	55 dBA
Current and power consumption tolerance	+/-15%
Working temperature	from -10 to +70 °C
Relative humidity	20–80% (without condensing)
Protection degree	IP 20
Protection class	I
Net weight	2.45 kg

#### **Enclosure material**

Sheet steel powder painted.

#### **Enclosure colour**

Black (RAL 9005).

## Scope of delivery

PW-3U3 fan unit with fixing accessories. Thermostat, power cord and connecting cords are ordered separately.

Product name	Catalogue number
PW-3U3 fan unit	WN-3050-00-161
Power cord 1.8 m Unischuko-C13	M1T-02-1300
Power cord 2.5 m Unischuko-C13	M1T-02-1301
Cord connecting panels 0.5 m C14-C13	M1T-02-1302
Cord connecting panels 1 m C14-C13	M1T-02-1303
Thermostat for PW fan units	WN-0201-12-00-000

Package: 1 pc

Ventilation and air-conditioning VENTILATION SYSTEMS

DATA COMMUNICATION SOLUTIONS

## **Thermostat**

Thermostats are used for controlling fan units, heaters and heat exchangers; they can also be used as signal generators for monitoring the internal temperature of the enclosure.

## **TECHNICAL DATA**

Parameter	Thermostat
Sensor element	thermal bimetal
Temperature range	0-60°C, hysteresis ca. 7 °C
Contact type	snap action contact
Power carrying capacity	6 A (1) 250 V AC
Radio frequency interference	N (according to VDE 0875)

## Scope of delivery

Thermostat, DIN rail, cable without plug, 2 holders, 2 terminal blocks.

Product name	Knob colour	Catalogue number
Thermostat NO - normally open Switches on ventilation system (e. g. fans) at selected temperature limit.	•	WN-0201-01-00-000/A
Thermostat NC - normally closed Switches off devices (e. g. heaters) at selected temperature limit.	•	WN-0201-02-00-000/A





## Hygrostat

Electric regulator of humidity controls air humidity, switches on fans, heaters or air conditioning units.

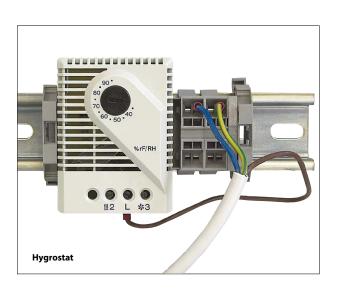
## **TECHNICAL DATA**

Parameter	Hygrostat
Measuring range	35-95% of relative humidity
Hysteresis referred to 50 % RH	about 4% of relative humidity
Maximum voltage	250 V AC
Minimum load	100 mA, 20 V DC/AC
Maximum resistive load	5 A, 230 V
Maximum inductive load cos q = 0,8	0.2 A, 230 V AC
Maximum inductive load L/R = 3 ms	1 A to 50 V DC
	0.5 A to 75 V DC

## Scope of delivery

Hygrostat, DIN rail, cable without plug, 2 holders, 2 terminal blocks.

Packege	Catalogue number
1 рс	WN-0201-03-00-000/A



## **AIR-CONDITIONING SYSTEMS**



- cooling with side heat exchanger



In Data Center facilities the right temperature, humidity and quality of air delivered by precision cooling devices are the most important factors ensuring operational continuity of computational units. Precision air conditioning is essential for providing proper microclimate 24 hours a day throughout the year.

ZPAS air conditioning portfolio can be divided according to air flow concepts and cooling agent. Our offer encompasses both air conditioners for single cabinets, side and row heat exchangers, as well as precision air-conditioning cabinets for server rooms.

## Side and row heat exchangers

Nowadays, data centres are usually cooled by means of cool air inlets running under the access floor or through direct blow of cold air into the room, which can lead to mixing of cold and hot air, thus, compromising the air conditioning efficiency. Uneven distribution of equipment in terms of generated heat can also create hot spots. By using row or side heat exchangers, you can avoid these problems and provide an optimal environment for electronic equipment.

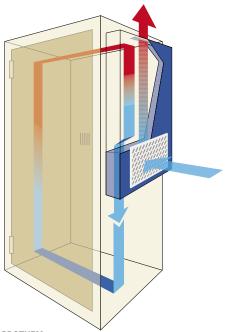
## **KEY FEATURES AND FUNCTIONAL PROPERTIES**

- Easy mounting without any interference inside the cabinet.
- Constant, even flow of air.
- Shortening the path that cold air travels to active devices.
- Direct removal of hot air from active devices.
- Exchanger redundancy N+1 easily achieved.
- Cooling agent supply from the top or from the bottom of the heat exchanger.
- Heat exchangers suitable for 42, 45 and 47 U cabinets as well as for cabinets of 1000 mm and 1200 mm in depth.
- Possibility to replace filters "on the fly".
- Allows for collecting condensate and removing it outside mechanically using a condensate extraction pump.
- Inputs for hydraulic connections making it possible to connect at the top or at the bottom of the heat exchanger.
- Temperature and humidity measurement.
- Advanced controller that controls various modes of exchanger operation.
- Communication via Ethernet.

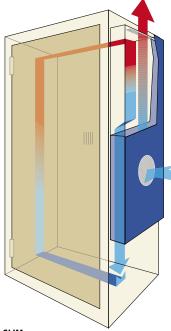
## **AIR-CONDITIONING SYSTEMS**

## Separate air-conditioning units

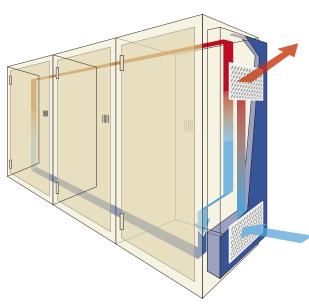
Separate air-conditioning units make up a group of air-conditioning equipment designed for RACK type cabinets. Separate air-conditioning units make additional devices delivering air into the cabinet unnecessary. Selection of the air conditioner should be consulted with ZPAS customer service.



PROTHEM
Air-conditioning unit mounted on the cabinet's side panel. Cooling capacity ranging from 360 to 5600 W

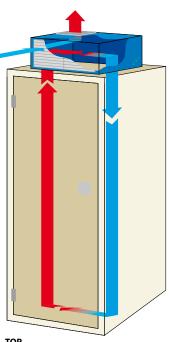


Air-conditioning unit mounted on the cabinet's door or side panel.
Cooling capacity: from 500 to 3000 W

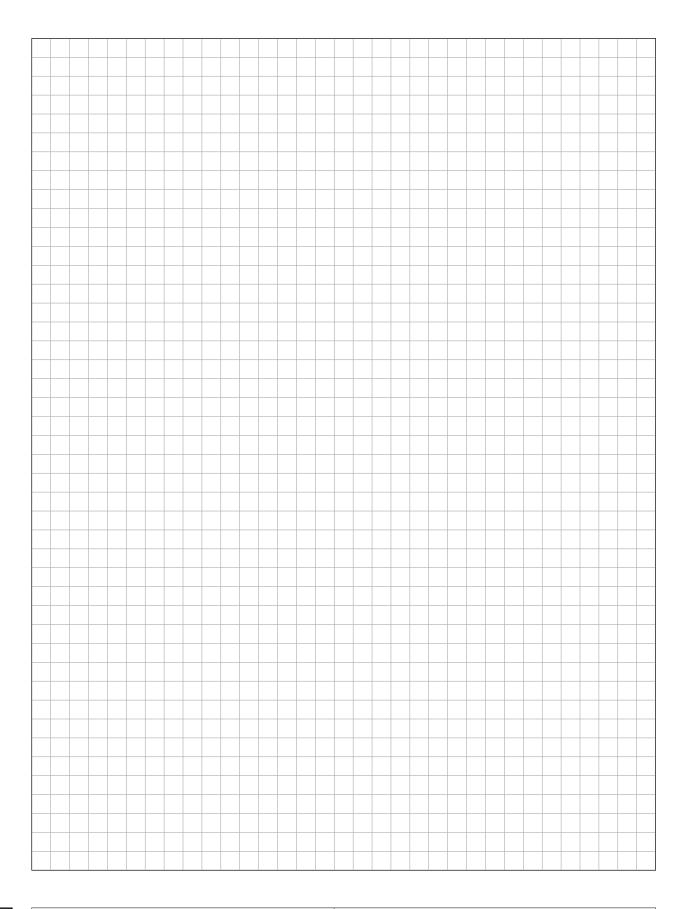


#### MODULE

Air-conditioning unit intended for cooling more than one cabinet. Mounted on the side of a system of combined cabinets. Cooling capacity ranging from 5800 to 10000 W



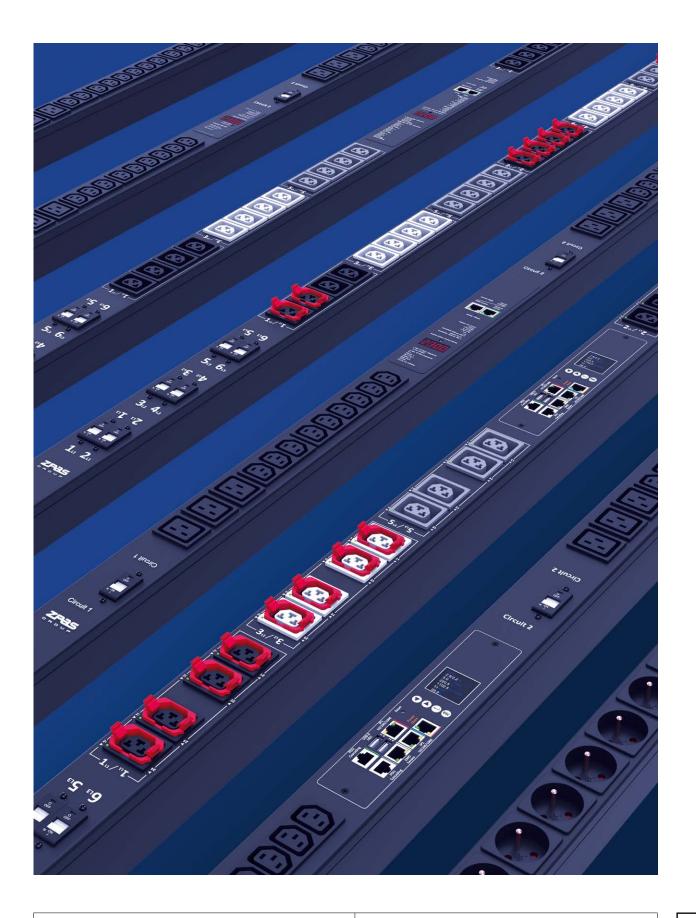
Rooftop air-conditioning unit.
Cooling capacity ranging from 330 to 5200 W



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POWER SUPPLY SYSTEMS

DATA COMMUNICATION SOLUTIONS



POWER SUPPLY SYSTEMS



## **Characteristics**

Anodized aluminium body, in natural colour. Plastic elements: light-grey similar to RAL 7035. Removable metal mounting brackets. Possibility to mount the strip on 4 positions.

## **Technical data**

Nominal voltage: 230 V AC Maximum load: 16 A / 3680 W Protection degree: IP 20

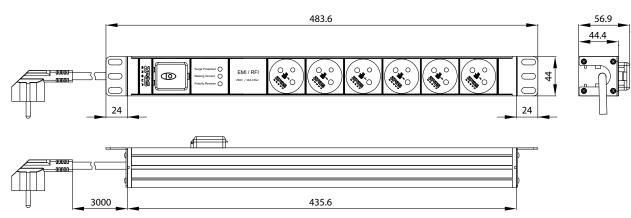
Power cord: 3 m, black, conductor section 1,5 mm² (other lengths within of 1-5 m scope,

available on request)

## Scope of delivery

Power strip with brackets, set of fixing accessories.





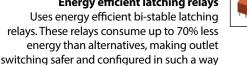
				Equipment					
Maximum load	Installation	Туре	Body dimensions [mm]	Illuminated switch	Surge protection	RFI noise filter	Number of O.	Number of Schuko sockets	Catalogue number
		LZ-30/9	435.6 x 44 x 44.4				9		WZ-LZI30-09-00-000
		LZ-30/9 Schuko	435.6 x 44 x 44.4					9	WZ-LZI30-09-SU-000
16 A 230 V	19 inch	LZ-30F	435.6 x 44 x 56.9	•	•	•	6		WZ-LZ30-F0-00-000
1 phase	19 111011	LZ-30F Schuko	435.6 x 44 x 56.9	•	•	•		6	WZ-LZ30-F0-SU-000
Pilase		LZ-211	435.6 x 44 x 56.9	•			6		WZ-LZ21-10-00-000
		LZ-211 Schuko	435.6 x 44 x 56.9	•				6	WZ-LZ21-10-SU-000

Power supply systems	POWER DISTRIBUTION UNITS
DATA COMMUNICATION SOLUTIONS	

## ADVANCED POWER STRIPS Smart PDU

## **Advantages and functions**

#### **Energy efficient latching relays**





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## **OLED display**

maintained.

Shows input power parameters and scroll individual outlet (V, A, PF, W, kWh). Screen turns its orientation according PDU position.

that the outlet power distribution is always



## **Accurate environment** monitoring cascading sensors EMD

The sensors benefit from the latest, most high-tech metering components, delivering the highest metering accuracy for temperature and relative humidity. Each sensor is built with 2 additional digital input contacts for water leak, door contact, motion, vibration, smoke and any other sensor with normally open or closed. Sensors can be deployed in cascade up to 8 EMD sensors



## **PDU** cascading option

using network cables.

In order to save on network ports and manage multiple devices from one IP adress we offer the opportunity to daisy chain up to 16 PDUs using Cat5/6 cable.



#### kWh metering accuracy

Enabling precise allocation of data centre expenses with +/- 1% billing grade accuracy.



## High outlet flexibility and alternating phase

IEX socket is a UL and IEC tested combination of C13 and C19 outlet that accommodates either a C14 and or C20 plug. Alternating phase set up helps on power balance for three phase systems.



## **RCM residual current monitoring option**

By measuring current flowing in the ground wire, our residual current monitoring reduces the risk of electric shock. PDUs equipped with residual current monitoring dramatically reduce the burden of regulatory auditing.



#### Secure locking outlets

ZPAS intelligent rack PDUs are equipped with lockable outlets preventing power cords accidently coming unplugged due to human error or vibration.



#### Interoperability with third party software

If you need to centrally manage all PDUs in your data centre we offer all communication protocols. Our solutions offer the option to communicate the status of rack-level power and environmental information to any third party datacentre infrastructure management (DCIM) solution.



## Field-replaceable controller

The hot-swappable onboard controller, ensures that servers will never experience downtime when maintenance in the Data Centre is required and ensuring the infrastructure will never be obsolete being update ready.



#### **Redundant network connection**

World's first double Gigabit ethernet port PDU ensures monitoring reliability and allowing to be shared with data centre management and end clients in one or two separate networks.



#### Security

PDUs support the most stringent security protocols in the market in order to prevent unauthorized access (256 bit AES encryption, Radius, SNMP v3, user permissions, SSH v2, SSL, HTTPS).



## **Hydraulic-magnetic** circuit breakers monitoring

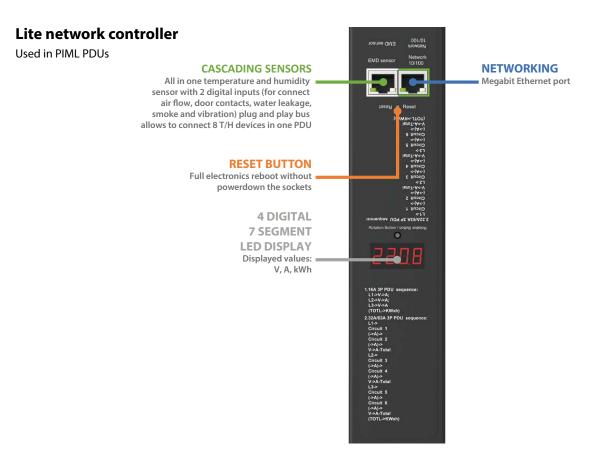
Built with highly reliable hydraulic-magnetic circuit breakers which are not affected by ambient temperature and support delay curves appropriate for IT-equipment. The PDU proactively monitoring the status of the breakers in order to prevent downtime due to server power supply failure or overloads, sending an alert for any high load that risk a tripped circuit.



#### Full colour range

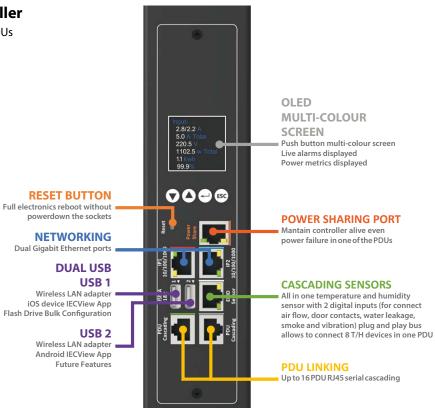
Coloured PDUs make it easier to reduce human errors, identify power feeds, lowering the risk of unplanned downtime, PDUs are available in any RAL-colour.

# Smart PDU ADVANCED POWER STRIPS



## Advanced network controller

Used in PIM, POM, POS and POMS PDUs



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Power supply systems

POWER DISTRIBUTION UNITS

# ADVANCED POWER STRIPS SMARE POU

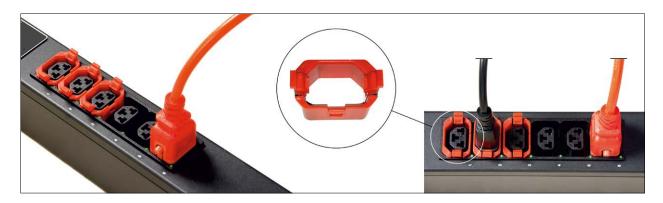
## IEX - full flexibility of socket types during long operation

The new IEX socket is a combination of the C13 and C19 outlet standards that gives the maximum flexibility with the ability to hold both C14 and C20 plugs.

Fully patented and backed by IEC/EN and UL safety certifications it brings reliability in design.

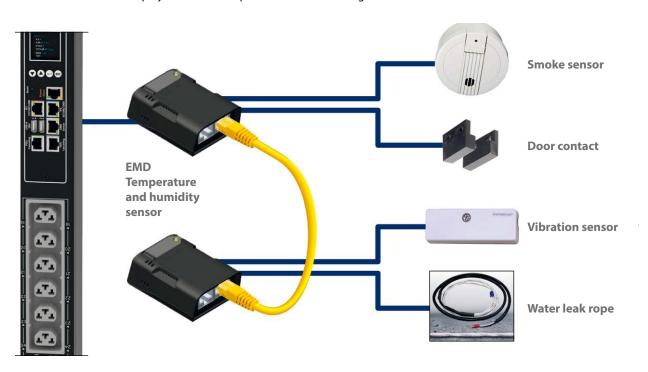
## IEX removable locker for C14 plugs and lockable power cords for C20 plugs

The IEX Lock-VP is a removable component that makes standard C14 plugs lock securely. The C20 Socket design has built in locking compatibly as standard with P-LOCK and V-LOCK plugs.



## Flexible environmental monitoring with smart sensors

The EMD is an environmental monitoring device that allows you to monitor temperature and humidity and status for 2 digital input sensors such as water leakage, door contact, motion, vibration, smoke and any other sensor with normally open or closed. Sensors can be deployed in cascade up to 8 EMD sensors using network cables.



1, 51, 51, 51, 51, 51, 51, 51, 51, 51, 5	DATA COMMUNICATION SOLUTIONS
POWER DISTRIBUTION UNITS	Power supply systems

# Smart PDU ADVANCED POWER STRIPS

#### Characteristics and technical data

The housing is made of an ultra-light aluminum or stainless steel profile, painted in black RAL 9004. Possibility of painting in any RAL colour. Available sockets: C13, C19, IEX, Schuko, UTE (with a pin). Universal IEX socket operates with IEC 320 C14 and IEC 320 C20 from servers, UPS and other devices.

The sockets are available in white, gray and black colour. The C14 plug adapters are red or in the colour of the sockets.

Fully regulated assembling options by three included sets of brackets. Possibility of assembling in 4 positions.

Protection degree: IP 20. Power cord: 3 m, black, with IEC 60309 plug.

Conductor section: 1 phase 16 A - 1.5 mm², 3 phase 16 A - 2.5 mm², 1/3 phase 32 A - 4.0 mm².

The above characteristics apply to the basic power distribution units and the types described below.

#### **Power Meter PDU**

Built-in energy meter with 4 digital - 7 segment LED display and the changing switch of displayed parameters. Energy metering: voltage [V], current [A], active power [W], power factor [%], energy consumption [kWh].

#### **Smart PDU - common features**

Energy metering: voltage [V], current [A], active power [W], apparent power [VA], reactive power [VAR], frequency [Hz], power factor [%], energy consumption [kWh]. Residual Current Monitoring - optional.

Networking Protocols: DHCP, Ipv4 and Ipv6, DNS, http/https, SSHv.2, SNMP v1/v2c/v3, SNMP TRAPS/SETS/GETS, SMTP, Modbus, Telnet, TCP, RADIUS, Syslog, TLS 1.2, SNTP, ARP, ICMP, ICMP, V6, UDP, NDP.

Reset button - full electronics reboot without power down the sockets.

## **Per Inlet Monitoring Lite Smart PDU**

Built-in lite network controller with 4 digital - 7 segment LED display and the changing switch of displayed parameters: voltage [V], current [A], energy consumption [kWh]. Other measured parameters are available after connection with the power strip in users interface. Ports: 1x Ethernet 1 Megabit, 1x Environmental Sensors.

#### Smart PDU with an advanced controller - common features

Replaceable Hot Swappable controller with 4 button OLED display.

Ports: 2x Ethernet 1 Gigabit, 2x USB, 2x Daisy Chain, 1x Power Share, 1x Environmental Sensors.

#### **Possible functions:**

## • Per Inlet Monitoring Smart PDU

Monitoring at the level of each phase circuit and 16 A of hydraulic-magnetic switches (applies to PDUs with a maximum load of 32 A).

## • Per Outlet Monitoring Smart PDU

Monitoring per input line and individual sockets.

#### • Per Outlet Switching Smart PDU

Monitoring per input line. Remote sockets switching with LED socket status indicator.

## Per Outlet Metering and Switching Smart PDU

Monitoring per input line and individual sockets. Remote sockets switching with LED socket status indicator.

#### **SELECTED PDU CONFIGURATIONS**

		Equip	ment					
Maximum load	Hydraulic-magnetic circuit brakers	IEX sockets	C13 sockets	C19 sockets	Catalogue number	PDU functions  shortcut to insert in the index in an empty space e.g. WZ-LZ11618IEX → WZ-LZ-POMS11618IEX		
1 phase		18			WZ-LZ11618IEX	B – basic (no electronics)		
230 V, 16 A			20	4	WZ-LZ11620C134C19	PM – built-in power meter		
1 phase 230 V, 32 A	2	24			WZ-LZ13224IEX	PIML – remote monitoring per input line - Lite version		
3 phase 380-415 V, 16 A		24			WZ-LZ31624IEX	PIM – remote monitoring per input line - advanced POM – remote monitoring per input line and individual sockets		
3 phase	6	36			WZ-LZ33236IEX	POS – remote monitoring per input line + sockets switching		
380-415 V, 32 A	6		30	6	WZ-LZ33230C136C19	<b>POMS</b> — remote monitoring per input line and individual sockets + sockets switching		

In order to select a different configuration, please contact the ZPAS sales department.

Power supply systems	POWER DISTRIBUTION UNITS	
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# ADVANCED POWER STRIPS Smart PDU



	DATA COMMUNICATION SOLUTIONS
POWER DISTRIBUTION UNITS	Power supply systems



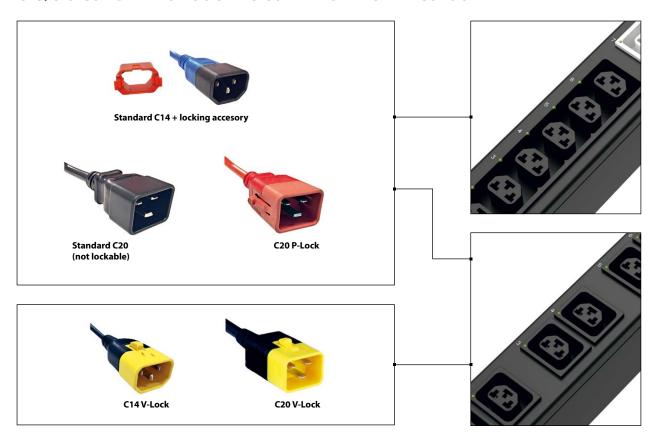
## **POWER STRIPS COMPARISON**

	PDU types						
Characteristics	BASIC	PM built-in power meter	PIML remote monitoring per input line Lite version	PIM remote monitoring per input line Advanced	POM remote monitoring per input line and individual sockets	POS remote monitoring per input line + sockets switching	POMS remote monitoring per input line and individual sockets + sockets switching
Mechanical features - ultra light aluminium or stainless steel profile, - full adjustable mounting options, - low profile hydraulic magnetic breakers 10 kA lcn, - sockets: C13, C19, IEX, UTE, Schuko	<b>~</b>	~	~	~	~	~	~
Inlet energy metering - PDU input enery metering (kWh), - PDU input power measurements (W, VA, VAR), - PDU input (A, V, PF Hz) measurments, - circuit breaker monitoring, - residual current monitoring (optional), - 3 phase balance indicator.		<b>~</b>	<b>~</b>	<b>~</b>	<b>~</b>	~	<b>~</b>
Security management - memory logs for historical data and graphics, - user and alarms tresholds customizable.			<b>~</b>	~	~	<b>*</b>	~
SNMP controler - PDU cascading (up to 16 PDUs), - hot swappable and replaceable controller, - double Gigabit Ethernet port, - controller power share.				~	~	~	~
Outlet control - remote On/Off by individual outlet or groups, - power On/Off delay, - sequential startup, - user level security assignable, - individual LED x outlet status indicator.					~		~
Outlet metering - PDU ouput energy metering (kWh), - PDU output power measurements (W, VA, VAR), - PDU output (A, V, PF, Hz) measurments.						~	~
Environmental metering  - Environmental sensor (themperature & humidity),  - cascading (up to 8),  - door contact,  - smoke detection,  - vibration,  - motion sensor,  - water leakage,  - user and alarms tresholds customizable.			~	~	~	~	<b>~</b>
Network and security DHCP, IPv4 and IPv6, DNS, http/https, SSH v.2, SNMP v1/v2c/v3, SNMP TRAPS/SETS/GETS, SMTP, Modbus, Telnet, TCP, RADIUS, Syslog, TLS 1.2, SNTP.			<b>~</b>	~	~	~	<b>~</b>

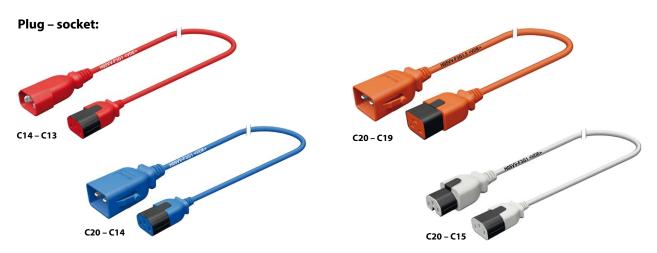
Power supply systems	POWER DISTRIBUTION UNITS	
DATA COMMUNICATION SOLUTIONS		

# ADVANCED POWER STRIPS Smart PDU

## C13/C19 COMBINATION SOCKETS COMPATIBLE POWER CORDS



## **AVAILABLE CORDS**



## The cords are available in the following lengths and colors:

0.5 m, 1 m, 2 m, 3 m, 4 m, white, black, red, blue, orange.

For more information, please contact the ZPAS sales department.

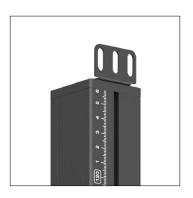
POWER DISTRIBUTION UNITS	Power supply systems
	DATA COMMUNICATION SOLUTIONS

# Smart PDU ADVANCED POWER STRIPS

## Sets of brackets for power strips assembly

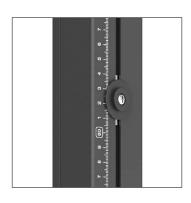


**Slip-on toolless brackets** Possibility to assemble in 4 positions



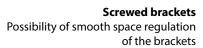


**Toolless brackets with hooks** Possibility of smooth space regulation of the brackets



**Hooks for toolless assembly** Possibility of smooth space regulation of the hooks





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# **POWER STRIPS**

ACCESSORIES FOR VERTICAL INSTALLATION OF POWER STRIPS

## LZ fixing profile

Fixing profile for vertical installation of power strips in 800 mm wide **SZB IT** cabinets.

#### Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

## Scope of delivery

LZ fixing profile with fixing accessories.

For solings hairbs	Catalogue number			
For cabinet height	RAL 7035	RAL 9005		
42 U	WZ-5367-52-03-011	WZ-5367-52-03-161		
45 U	WZ-5367-52-02-011	WZ-5367-52-02-161		
47 U	WZ-5367-52-01-011	WZ-5367-52-01-161		

Package: 1 pc.



installed to LZ fixing profiles

## LZ brackets

Brackets for vertical installation of power strips in **SRD** or **SRX** open racks.. Available in short version for 1 power strip

and long for 2 power strips.

## Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

## Scope of delivery

LZ bracket with fixing accessories.

LZ bracket	Catalogue number			
version	RAL 7035	RAL 9005		
short	WZ-5367-53-01-011	WZ-5367-53-01-161		
long	WZ-5367-53-02-011	WZ-5367-53-02-161		

Package: 1 pc.







Open rack with power strips installed to LZ brackets



## MPSM-S1 Microprocessor Power Control Panel

The most important factors that determine the correct operation of modern automation, electronics, industrial computers and other devices are the correct power supply and the appropriate climatic conditions. These are necessary to ensure ongoing operation of priority infrastructure equipment – server room, data communication, power engineering.

MPSM-S1 is a programmable 19" panel for power supply, control, monitoring and recording. It provides voltage, power and current measurement for each socket, and also temperature and humidity measurement. The device is equipped with an unparalleled set of features that make it indispensable in data communication infrastructure. Also, MPSM-S1 is equipped with a 8 GB internal memory used for storing the measurement results, events, alarms which lasts for about 24 months of continuous recording.

#### **USABLE FEATURES**

#### SOFT-START – soft start of servers, cabinets, automation components, etc.

Allows for defining individual power-up delays for individual panel sockets after power supply recovery or after activation of the SLAVE sockets. This allows you to set a dedicated power-up scenario for the entire set of devices powered from the MPSM-S1 panel.

#### • MASTER-SLAVE - energy conservation

Automatic shut-off of SLAVE sockets (devices) when the MASTER device (socket) is powered down. The level of energy consumption for the MASTER socket is constantly monitored by the power supply panel and when it exceeds the user-defined threshold, the SLAVE sockets are re-powered up. Powering up and down has also user-defined time delay. Each socket in MPSM-S1 panel can work in MASTER, SLAVE or NONE mode (excluding MASTER-SLAVE functionality). With this solution, you can change the configuration of the set powered from the MPSM-S1 panel without having to physically plug the devices to dedicated sockets (continuity of operation).

## PDU-THERMOSTAT – multi-stage control of fans, heaters and air conditioners

Each panel socket can be activated by the temperature on the basis of being above or below the user-defined value. Individual socket can also be activated by a signal below or above different set temperatures.

## PDU-HYGROSTAT – multi-stage control of humidifiers and air dryers

Each panel socket can be activated by humidity levels on the basis of being above or below the user-defined value. Individual socket can also be activated by a signal below or above set values.

#### Output control

Allows for powering down any panel socket regardless of its mode and time.

#### • Indication of alarm states:

- exceeded set value for current or underload of individual sockets
- exceeded set value for current or underload of the entire set of connected receivers
- grid voltage above or below the setpoints
- ambient temperature above or below the setpoints
- humidity above or below the setpoints

## • Device settings:

- hysteresis (ΔT) for thermostat
- hysteresis (ΔH) for hygrostat
- time delay for the MASTER-SLAVE function
- load display mode power (VA) or current (A)
- reset to factory defaults

### On-line monitoring of:

- current and power for individual slots
- current and overall joined power
- mains voltage
- temperature and humidity

#### • Internal database for:

- recording of measurements, events, alarms
- clock, calendar with battery backup
- even 24 months of continuous recording

#### • Ethernet Interface:

- data read and write via network (LAN/WAN)
- remote on-line management and monitoring
- SNMP, SNTP, DHCP
- Windows® management application

#### Display settings

Choosable content of display.

Thanks to the special technique used for creating the device software, all functions are executed in parallel. It means that while we're in menu editing settings, the device is working in the background, performing its status tasks and immediately responds to changes which have just be done or received measurements. After a power loss, the device will rememer the last saved configuration. The clock and the calendar work even during prolonged power failure.

106 ZPAS Power supply systems POWER DISTRIBUTION UNITS

MPSM-S1 MICROPROCESSOR POWER CONTROL PANEL

#### **SCOPE OF DELIVERY**

Product name	Package	Catalogue number
MPSM-S1 Microprocessor Power Control Panel		
Accessories supplied with the panel: power cord, temperature and humidity sensor with 1.8 m cable, two brackets for mounting the panel in a 19" cabinet along with fixtures (screws, washers, cage nuts), four rubber feet, cable management tray with a complete set of cable clips and fasteners, software with operating manual on a CD.	1 set	WZ-4994-01-00-161
Temperature and humidity sensor with 1.8 m cable (spare part)	1 pc.	T1Z-01-0045

#### **TECHNICAL SPECIFICATIONS**

Power input	Supply voltage	85-260 V AC				
	Power consumption	30 W				
	Frequency	50 Hz				
	Maximum overall sockets current	16 A				
Power output	Output voltage	85-260 V AC (supply voltage dependent)				
	Maximum current for a single socket	10 A				
Protections	Current	i(max) = 20 A continuous				
		for 150 % i(max) shut-down in 1 h, for 200 % i(max) shut-down in 5–25 sec.				
		for 300 % i(max) shut-down in 1.6–4.8 sec., parameters for the working temperature of 25 °C				
Measurements	Voltage	Measuring range: 85-260 V AC	Class: 2.5% (for sine waves)			
		Resolution: 1 V	Frequency of measurements: 1/sec.			
	Socket currents 1-8	Measuring range: 0-16 A (sum), 0-10 A (socket)				
		Resolution: 0.01 A				
		Class: 5 % (for sine waves) ± 100 mA				
		Frequency of measurements: series of 8 measurements/sec.				
	Temperature	Measuring range: 0–85 °C	Measuring error: typical $\pm$ 0.3 °C			
		Resolution: 0.1 °C	Frequency of measurements: 1/sec.			
	Humidity	Measuring range: 0-100 %RH	Measuring error: typical ±2 % RH			
		Resolution: 0.1 % RH	Frequency of measurements: 1/sec.			
	Frequency of measurements	One series of measurements/sec. (11 measurements/sec.)				
Working conditions	Working temperatures	5-45 °C				
	Working humidity	10-85 % (no condensation)				
Casing	Dimensions	19" x 1U x 190 mm				
	Weight	2.5 kg				
	Protection class	IP 20				

#### Note:

Due to the continuous construction development and changes of technical requirements, ZPAS S.A. reserves the right to change these parameters.

## **SOFTWARE FEATURES**

In the era of globalization, data communication devices and people who manage them are often miles apart, while the devices themselves are scattered over great areas, creating locally smaller and larger systems. To make remote managing of data communication infrastructure with MPSM-51 devices as convenient as possible, we created Windows-dedicated software. Using a built-in address book, the software connects to a specific MPSM-S1 device to perform configuration, retrieve and save data. This way, you can manage and control large systems from a single location. The application consists of tabs containing all the functions of the MPSM-S1. The first tab – DASHBOARD – is the instrument panel which contains the

key parameters measured by the device. The panels include also the ARCHIVE tab with filters that you can Muturefront | 1864 (III - Gellete O Grad om Stoffe) se use to download and view historical data, such as measurements, events, alarms, configuration changes. Sture 2004 Step 2004 Marc N/A Avg N/A Mile N/A

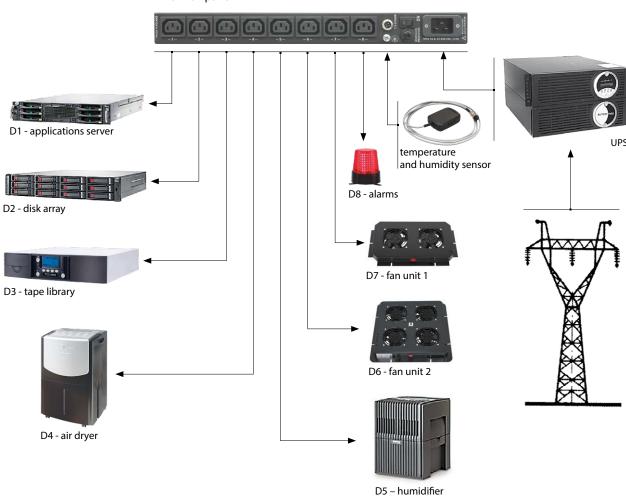
You can generate as many windows with historical data as you want so you can compare the data in various configurations based on selected filters. Data can also be exported to a CSV file and then imported into Excel, for example. The application has a "back to the past" feature where you can select any point on the archives diagram to go back to that moment in time to see measurements, events, alarms and configuration. The data will be presented in the main application as if they were happening right at this moment. MPSM-S1 supports SNMP protocol in read mode. The software comes with an SNMP tree model as a MIB file which can be imported into your control systems. The device also supports TRAP, meaning it sends alarm and event notifications to predefined servers. Codes and descriptions of TRAPs are included with the software.

	DATA COMMUNICATION SOLUTIONS
POWER DISTRIBUTION UNITS	Power supply systems

MPSM-S1 MICROPROCESSOR POWER CONTROL PANEL

## **APPLICATION SCENARIO**

## MPSM-S1 panel



## Example of programming the panel functions:

SOF	Γ-START	MASTER-SLAVE
Scen	ario for starting	Scenario for powering
the c	levices after power	up Slave devices after
supp	ly recovery:	powering up the Master
Time Action		device:
0 s	Power start	D1 - Master
2 s	D6	D2, D3, D4 - Slave
4 s	D7	T = 5 s (delay time for
6 s	D8	powering down
8 s	D4	and up the Slave devices)
10 s	D5	I = 0,5 A (current drawn from
12 s	D3	the Master slot; below this
14 s	D2	value, the Master device is
90 s	D1	regarded as powered-down)

## or powering evices after up the Master - Slave ay time for down Slave devices) urrent drawn from slot; below this Master device is

I MEKWIOSTAT/		
HYGROSTAT		
Scenario for		
powering up cooling,		
humidifying and		
drying devices in the		
case of exceeding		
programmed		
temperature and		
humidity thresholds:		
D4: $RH_{max} = 80 \%$		
D5: $RH_{min}^{max} = 20 \%$		
D6: t _{max} = 25 °C		
D7: t _{max} = 27 °C		
D8: t _{max} = 32 °C		
RH _{min} = 15 %		

THEDMOSTAT/

## **INTERNAL ALARMS**

Load alams D1:  $I_{min} = 0.1 A$ Temperature alams T_{max} = 35°C Voltage alams  $U_{\text{max}} = 250 \text{ V}$  $U_{\text{min}} = 207 \text{ V}$ 

If the current, temperature or voltage values are outside preset thresholds, the internal panel alarm will be signalled (sound signal and a flashing message on the display).

Power supply syster

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MPSM-S1 MICROPROCESSOR POWER CONTROL PANEL

#### **SCENARIO DESCRIPTION**

The MPSM-S1 device supports the cabinet holding set of devices operating within one logical solution, UPS, main ventilation panel, auxiliary ventilation panel, humidifier, air dryer and alarms. The logical solution should be understood as a set of interdependent devices, each of which is necessary for proper operation of the whole. In such a case, the appropriate set power-up scenario is extremely important. For example, when the server is turned on faster than the disk array, then it will not detect the disk array at the time of checking the readiness of individual devices and thus the entire system may fail to start. In this scenario, the server is switched on as the last the device



with an additional time delay. Then you can be sure that all of its peripherals (disk array, tape library, etc.) are ready to work and will return ready-to-use during data bus scanning. Furthermore, when the main device of the system is turned off, the other devices do not have to be working any longer.

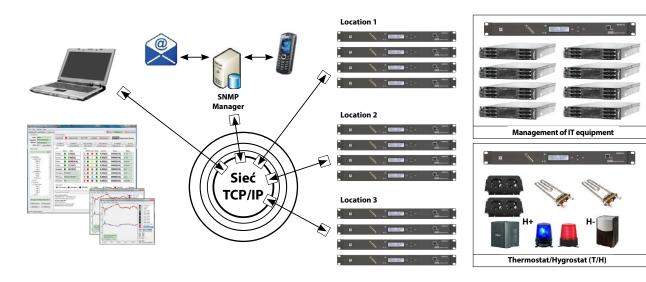
#### In this configuration, the MPSM-S1 ensures the following:

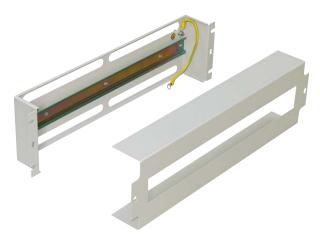
- correct scenario for powering up the devices
- a device dependent on the master server is disconnected after the DeltaMS time, when the server is remotely or physically switched off
- maintaining constant temperature by controlling the ventilation panel, and in the next step, when the temperature continues to rise, powering up the auxiliary ventilation panel
- maintaining constant humidity in a room by switching the humidifier on when RH humidity drops below 20 %, and switching the air dryer on when RH humidity rises above 80 %
- MPS M-S1 alarm and external alarm (alarm lamp) when the MPS M-S1 have exhausted all measures and is no longer able to maintain the correct ambient temperature or humidity
- MPSM-S1 alarm when the server is disconnected or shuts down by itself due to a failure or other actions
- supply voltage level control and MPSM-S1 alarm when the value of this voltage exceeds the allowable limits
- on-line visualization of temperature, humidity, supply voltage or currents on each of the slots, and their overall values from all slots; all on the LC D display

## Note:

The parameter values used in the scenario are merely illustrative and may vary from those in specific real systems.

## MONITORING AND CONTROL SYSTEM BASED ON MPSM-S1 DEVICES





Package	Colour	Catalogue number
1 pc.	RAL 7035	WZ-PS3U-00-00-011
	RAL 9005	WZ-PS3U-00-00-161

## **Voltage distribution panel**

Universal 19" enclosure for modular devices. In the standard version equipped with DIN rail and housing with 402.5 x 45.5 mm opening.

## Dimensions

- height:......133 mm (3 U),

- width:.....19" (internal width: 446 mm),

- depth: . . . . . . . . . 60 mm

**Capacity of panel** - maximum number of built-in S-type modules (width of module 17.5 mm): 22 pcs.

#### Material

Sheet steel powder painted in light grey (RAL 7035) or black (RAL 9005).

#### Scope of delivery

In the standard version, panels are sold as empty enclosures, complete with: mounting base, DIN rail, housing, fixing accessories.

## Voltage distribution panels equipped with electrical equipment

On special order, we also produce panels of other overall dimensions and equipped with electrical equipment according to the customer's wishes.



PS-3U panel equipped with 48 V circuit breakers







#### PRS-3U panel for supplying power to appliances requiring high reliability of 230 V power supply

It contains two three-phase sections, powered for each phase separately by Powercon NAC3 sockets with a maximum load capacity of 20 A. Each phase is equipped with a lamp indicating the presence of voltage from the power supply side. The number and power of the appliances can be adjusted to the customer's needs within the total allowable power of 4500 VA per phase. To connect appliances, you can use C13 sockets with an interlock in the maximum number of 24 pcs. A maximum of 15 S-type overcurrent circuit breakers can be used to protect the outgoing feeders.

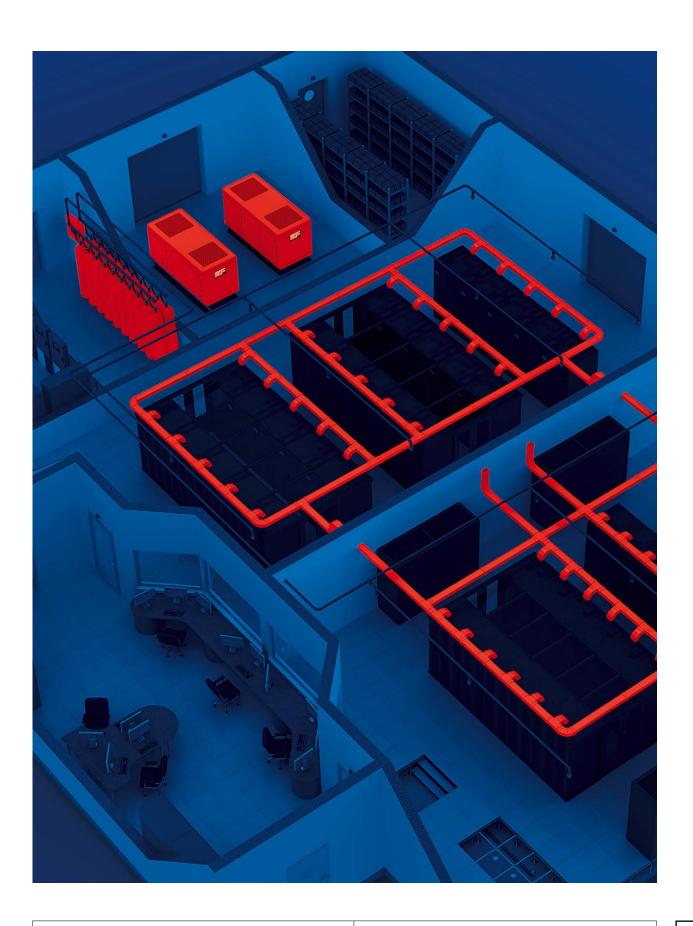
Technical parameters: rated voltage  $Un = 2 \times 400 / 230 \text{ V}$ 

rated current for ingoing feeders In = 20 A

number and rated current for outgoing feeders = max. 24 pcs. with current according to customer's needs, max 4500 VA/phase

Power supply systems	POWER DISTRIBUTION UNITS
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# **COMPREHENSIVE SOLUTIONS FOR DATA CENTRES**



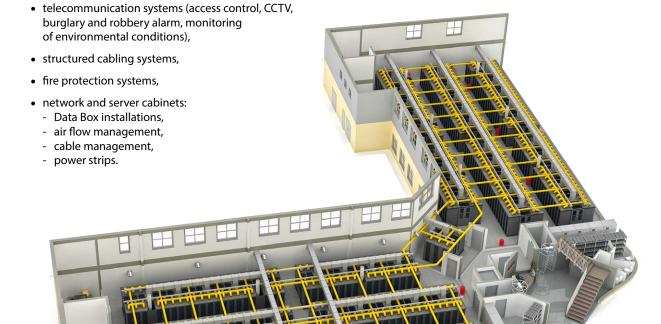
COMPREHENSIVE SOLUTIONS FOR DATA CENTRES

DATA COMMUNICATION SOLUTIONS

## **COMPREHENSIVE SOLUTIONS FOR DATA CENTRES**

## ZPAS provides data centres with comprehensive solutions, including:

- concepts (solution proposals including visualizations), basic and detailed designs (including all approvals and permits), project execution,
- primary and backed-up power supply systems,
- sanitary, air-conditioning and ventilation systems,







Example of visualisation included in the data centre concept design

## **EXAMPLES OF SERVER ROOMS PROJECTS WITH ZPAS CABINETS**















## **EXAMPLES OF SERVER ROOMS PROJECTS WITH ZPAS CABINETS**



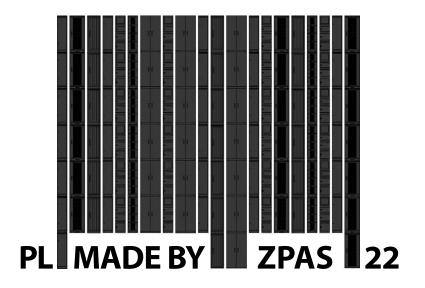












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	ZPAS S.A.
	PRZYGÓRZE 209 · 57-431 WOLIBÓRZ · POLAND
INFO@ZPAS.PL • WWW.ZPAS.PL	PHONE: +48 74 872 01 00