PRODUCT CATALOG



OUTDOOR CABINETS
SMARTCAB™ SAP 4

SMARTCAB™ SAP 4

EN 60 529 - IP55 | EN 62 262 - IK10 | EN 62 208 ed.2:2012

The SMARTCAB™ SAP 4 series of outdoor cabinets represents a modern and reliable solution for protecting technological equipment in demanding climatic conditions.

The cabinets are made of durable 1.5 mm thick aluzinc sheet metal, which ensures excellent mechanical strength and long-term corrosion resistance. The construction is complemented by 30 mm thick internal insulation, which significantly reduces thermal fluctuations inside the cabinet and protects sensitive technologies from weather extremes. Thanks to these properties, the SMARTCAB™ SAP 4 series is suitable for a wide range of applications – from urban environments to free-standing installations in the open countryside.

SMARTCAB™ SAP 4 is designed with versatility and customization in mind. All commonly used cooling options are available – including industrial fans and door air conditioners – as well as heating systems for winter operation. These options ensure a stable and controlled environment inside the cabinet regardless of the external temperature conditions. This ensures trouble-free operation of sensitive electronics and extends their service life.

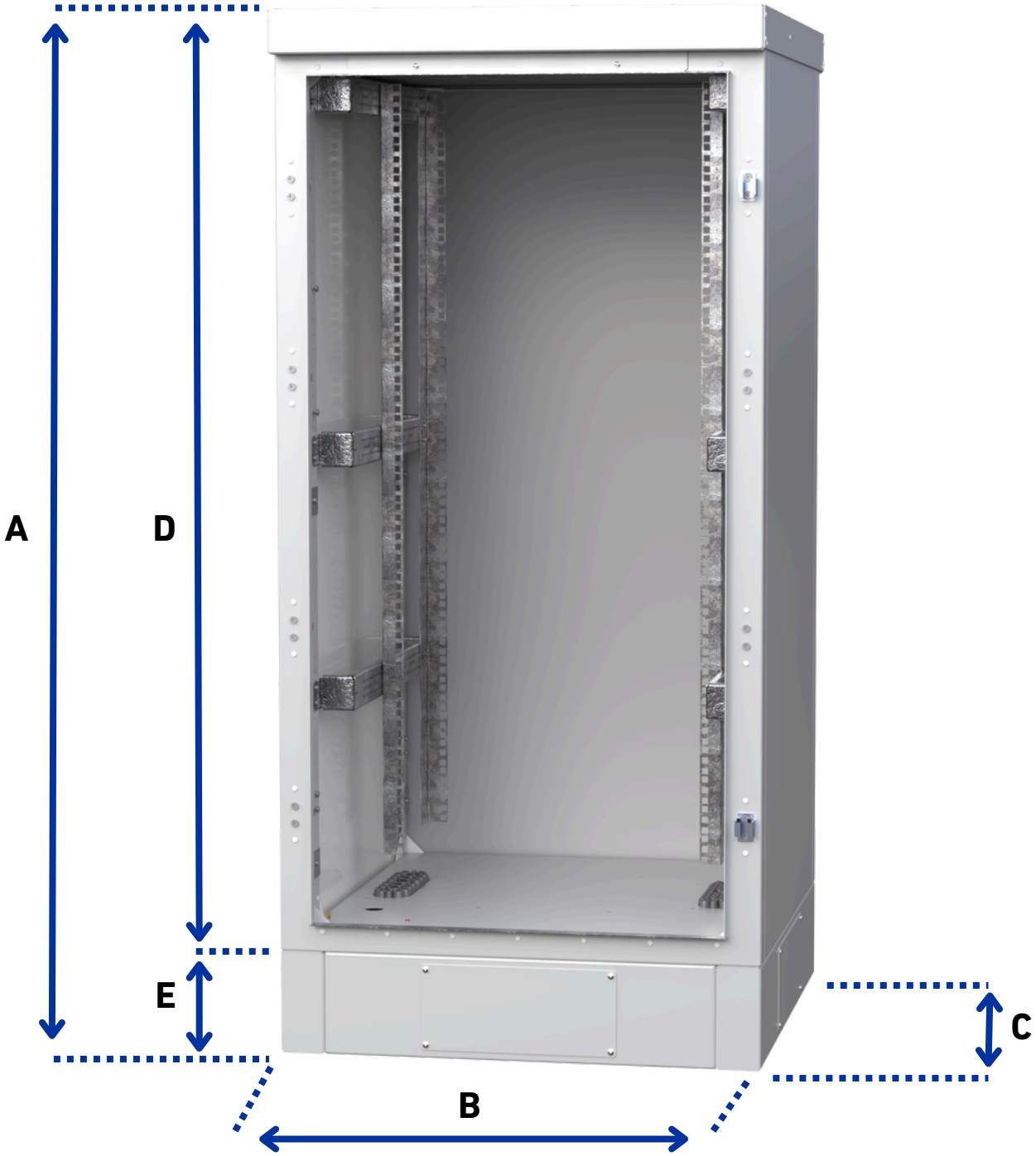
Building on our experience with outdoor installations, the SMARTCAB™ SAP 4 solution combines quality materials, thoughtful design and extensive customization options. It is the ideal choice for those looking for a robust yet flexible solution for outdoor telecommunications, energy or other technology applications.



The design of the cabinet allows for easy disassembly and subsequent assembly into blocks, enabling it to pass through narrow spaces, such as tight shafts for penetrating the roofs of apartment buildings and similar areas.

Surface protection – polyester powder coating with UV protection, RAL 7035.

The underground base is designed for outdoor use without the need for a concrete foundation. Its five-part modular structure allows for easy handling and installation without crane equipment. The hot-dip galvanized surface ensures long-term durability, while the robust construction is engineered to withstand high load from the cabinet.



Outdoor Cabinet									
Maximum Occupancy		**26U**		**26U**		**37U**		**37U**	
Height	D	1,350 mm		1,350 mm		1,850 mm		1,850 mm	
Width	B	700 mm		800 mm		700 mm		800 mm	
Depth	C	700 mm		800 mm		700 mm		800 mm	
Identification		**SAP2677**		**SAP2688**		**SAP3777**		**SAP3788**	
Base									
Base Height	**E**	**150 mm**	**250 mm**	**150 mm**	**250 mm**	**150 mm**	**250 mm**	**150 mm**	**250 mm**
Total Height	A	1,500 mm	1,600 mm	1,500 mm	1,600 mm	2,000 mm	2,100 mm	2,000 mm	2,100 mm
Identification		**Z15077**	**Z25077**	**Z15088**	**Z25088**	**Z15077**	**Z25077**	**Z15088**	**Z25088**

- Other dimensions on request.

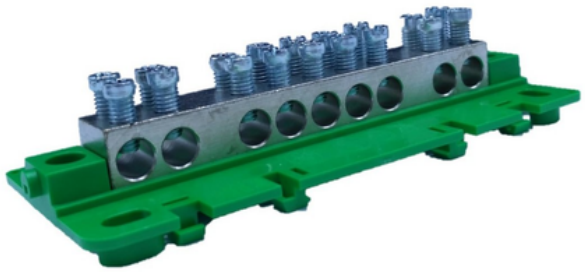
LIFTING EYE BOLTS	
Number	4
Surface Treatment	galvanized



- Set of 4 pcs of M10 lifting eye bolts for optional transport of the cabinet by crane.
- The cabinet can only be transported empty (not equipped with technology).
- Always included with the cabinet.

EARTHING BARS	
Number of Clamping Units / Max. Cable Cross-section	18× 16 mm^2
Rated Current	76 A
Rated Insulation Voltage	1,000 V
Rated Impulse Withstand Voltage	6,000 V

- Always included with the cabinet.



LOCK	
Cylinder Lock Insert	A1/03.507
Key	1333

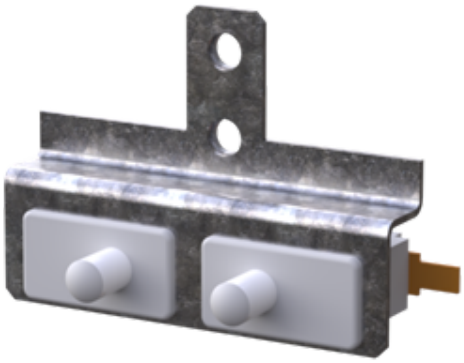
- Set of half-cylinder lock with universal key for temporary locking.
- Always included with the cabinet.



Optional Accessories

CONSOLE WITH DOOR SWITCHES	
Number of Switches	2
Max. Load	250 V / 10 A
Identification	**2DS**

- Set of 2 switches including a console for mounting in a control cabinet.
- Switch with COM / NO / NC connectors.



LED LIGHTING	
Supply Voltage	24–240 V AC/DC
Power Consumption	±4.5 W
Luminous Flux	560 lm at 120°
Lifespan	60,000 hours at 20 °C
Mounting	ceiling space of the cabinet
Connection	dual terminal block
Dimensions	351 × 34 × 32 mm
Weight	0.2 kg
Working / Storage Temperature	–40 to +60 °C / –40 to +80 °C
Ingress Protection	IP20
Certifications	EAC, UL E234324, VDE, CCC
Identification	**LED24240**



- Compact LED lighting, designed for all types of cabinets.
- Wide supply voltage range 24–240 V AC/DC, connection via a dual terminal block.

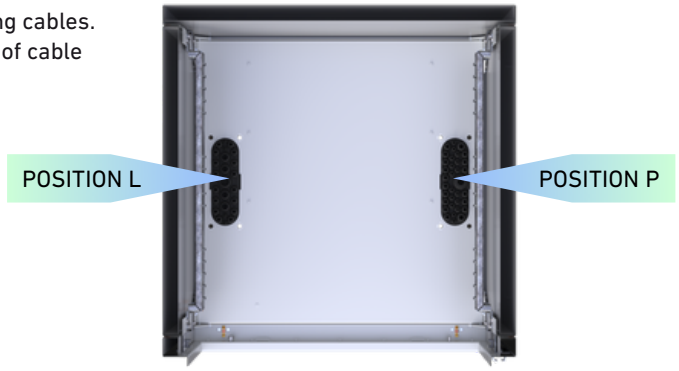
VERTICAL BARS						
Description	**19" rails (1 pair)**	**19" rails (2 pairs)**	**21" rails (1 pair)**	**21" rails (2 pairs)**	**ETSI strips (1 pair)**	**ETSI strips (2 pairs)**
Identification	**VL1x19**	**VL2x19**	**VL1x21**	**VL2x21**	**VL1xET**	**VL2xET**

- Material: 1.5 mm aluzinc sheet.
- Asymmetrical seating and other dimensions available (on request).

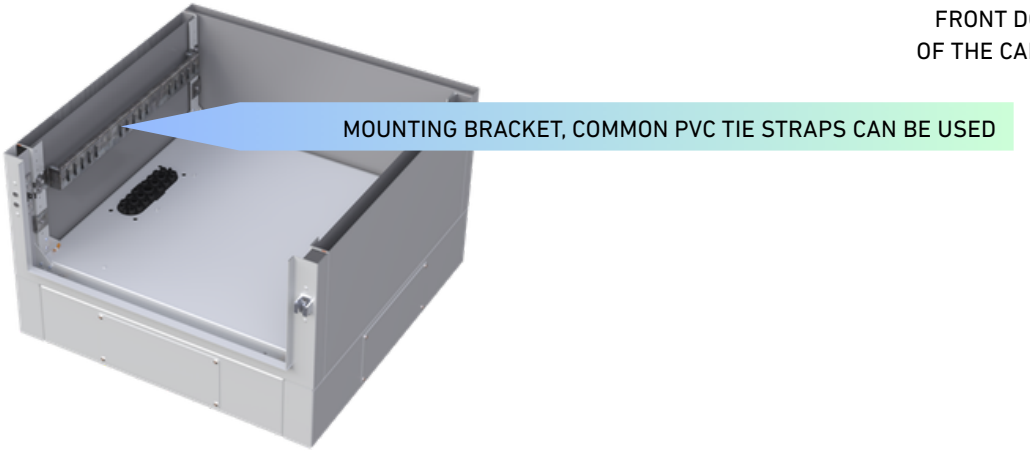


CABLE INPUTS, CABLE MOUNTING BRACKETS				
Quantity × Range	9× 18–30 mm / 10–14 mm 4× 10–15 mm 4× 5–10 mm	1× 20–26 mm / 12–15 mm 16× 8–14 mm / 7–10 mm 4× 14–20 mm / 5–10 mm 4× 5–7 mm	49× 7–13 mm 1× 15–25 mm	18× 6–13 mm 6× 13–28 mm 4× 3–11 mm
Identification – POSITION L	**C17L**	**C25L**	**C50L**	**KC28L**
Identification – POSITION P	**C17P**	**C25P**	**C50P**	**KC28P**
Identification – Mounting Bracket (2 pcs)	**FK2X**			

- There are basically always 2 grommets in the cabinet. The type and location can be defined.
- We recommend using a universal mounting bracket for incoming cables.
- Available on request: fire-protection solution or additional sets of cable inputs.



FRONT DOOR
OF THE CABINET



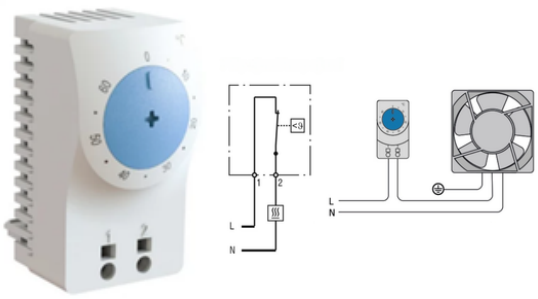
HEATING ELEMENT			
Thermal Power	**100 W**	**250 W**	**400 W**
Switching Power	12 A	9 A	15 A
Surface Temperature	+50 °C	+50 °C	+65 °C
Heating Element	thermistor (PTC)		
Voltage	AC 230 V 50/60 Hz		
Mounting	DIN rails		
Air Flow	13.8 m^3/h	45 m^3/h	
Dimensions	75 × 65 × 90 mm	90 × 85 × 113 mm	
Weight	0.3 kg	0.5 kg	
Ingress Protection	IP20		
Certifications	UL E150057, EAC, VDE		
Identification	**TT100**	**TT250**	**TT400**



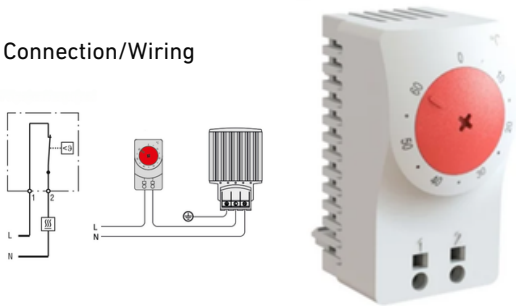
The heaters prevent moisture condensation inside the cabinet and ensure a stable working temperature of the electronic components. They are suitable for use in cold or variable environments and contribute to increasing the reliability and service life of the equipment. For proper operation of the heater, a combination with a thermostat, hygrostat or ideally a combined thermo-hygrostat is required.

THERMOSTAT		
Thermostat Type	**Normally Closed (NC)**	**Normally Open (NO)**
Setting Range	0 to +60 °C	
Switching Hysteresis	7 K (±4 K tolerance)	
Sensor	bimetal	
Contact Type	instant contact	
Lifespan	100,000 cycles	
Max. Switching Power	AC 250 V, 10 (2) A	
	DC 30 W	
Max. Current	AC 16 A for 10 s	
Connection	2× push-in terminal	
	solid conductor (wire) 2.5 mm^2 (AWG 14)	
	stranded wire 1.5 mm^2 (AWG 16)	
Mounting	DIN rails	
Working / Storage Temperature	–45 to +80 °C	
Working / Storage Humidity	max. 90 % (relative non-condensing humidity)	
Dimensions	60 × 33 × 41 mm	
Ingress Protection	IP20	
Identification	**TO60**	**TS60**

Connection/Wiring



Connection/Wiring



The thermostats are used to automatically regulate the temperature in cabinets and protect electronic devices from moisture or overheating.

- **TO60** is a thermostat with a normally closed contact (NC), designed for switching heating elements. When the set temperature is reached, the contact opens, which disconnects the heating and prevents overheating of the interior space.

- **TS60** is a thermostat with a normally open contact (NO), designed for controlling fans or cooling. When the set temperature is exceeded, the contact closes and activates ventilation.

HYGROSTAT	
Hygrostat Type	electromechanical
Setting Range	30–95 % relative humidity
Switching Hysteresis (at 50 % RH)	4 % RV (±1.5 % tolerance)
Permissible Air Flow	15 m/s
Contact Type	changeover contact
Max. Voltage	AC 250 V (VDE)
Max. Switching Current	16 A
Switching Capacity	AC 5 A, DC 20 W
Switching Current	0.1 A
Connection	3× stranded wire 1.0–2.5 mm^2 (with wire end) and solid wire 1.0–2.5 mm^2
Mounting	DIN rails
Working Temperature	0 to +60 °C
Storage Temperature	–40 to +60 °C
Dimensions	84 × 35 × 43 mm
Ingress Protection	IP30
Identification	**HGR**

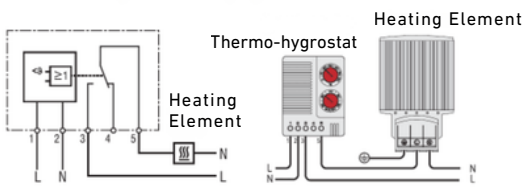


The electromechanical hygrostat is used to regulate built-in heaters, thereby preventing condensation. When the set relative humidity value is reached, the hygrostat switches on the heater, effectively preventing condensation and protecting the equipment in the cabinet.

COMBINED THERMO-HYGROSTAT	
Switching Hysteresis (temperature)	2 K (±1 K tolerance) at 25 °C (at 50 % relative humidity)
Switching Hysteresis (humidity)	4 % relative humidity (±1 % tolerance) at 25 °C (50 % RH)
Reaction Time (humidity)	about 5 seconds
Contact Type	changeover contact (relay)
Lifespan	VDE: NO/NC > 15,000 cycles UL: NO/NC > 30,000 cycles
Max. Switching Power (relay output)	AC 240 V, 10 (1.6) A, DC 60 V, 0.6 A (not UL certified)
Max. Switching Current	AC 30 A for 10 s
Operating Status Indicator	LED
Connection	five-pole terminal block, tightening torque 0.5 Nm, solid conductor (wire) 2.5 mm^2, stranded conductor (wire) 1.5 mm^2
Mounting	DIN rail clip, 35 mm, EN 60715
Dimensions	77 × 60 × 43 mm
Mounting Position	vertical
Working / Storage Temperature	–40 to +60 °C
Working / Storage Humidity	max. 95 % RH (non-condensing)
Identification	**THGR**



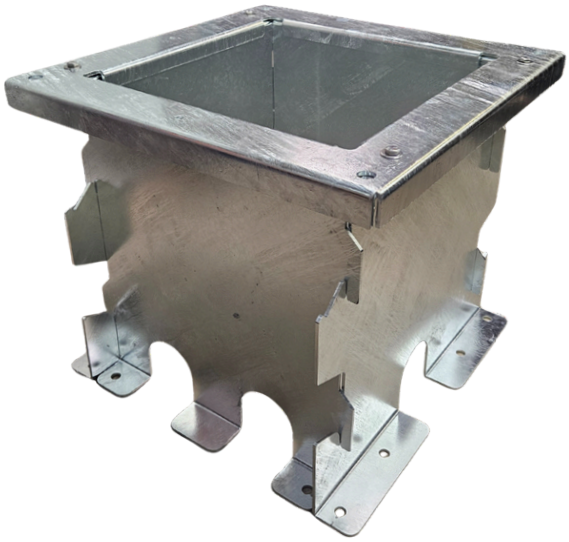
Wiring Diagram and Connection Example



The electronic thermo-hygrostat is designed for monitoring temperature and relative humidity in closed devices with electrical and electronic components. When the set humidity or temperature values are exceeded, the heating element switches on to prevent the formation of moisture condensation.

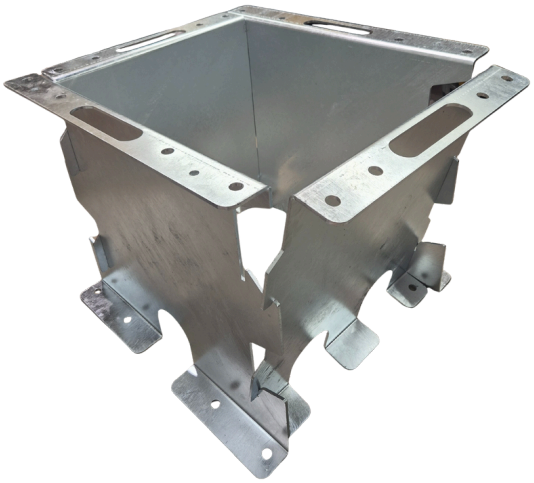
The thermostat and hygrostat control the relay independently of each other. LED indicators integrated into the operating elements show the function of the connected components.

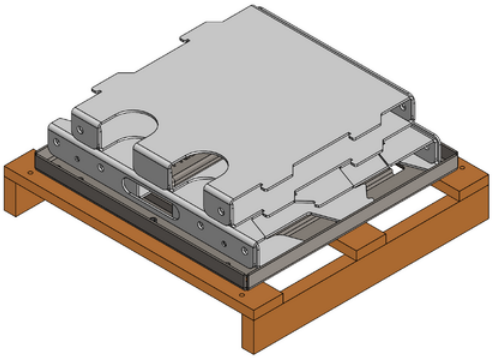
SMARTCAB™ UNDERGROUND BASE	
Inputs	6× in all directions
Surface Treatment	hot-dip zinc
Material	steel sheet, 6 mm thick
Dimensions	700 × 700/800 × 700/800 mm
Weight	5× 20 kg
Identification	**PZ7070, PZ8080**



The SMARTCAB™ Underground Base can be disassembled into 5 parts for better handling without the use of crane equipment. It provides long-term durability of the material guaranteed by hot-dip galvanizing technology. Its robust design allows for a high load on the distribution cabinet.

- Easy installation option in the trench
- Can be disassembled into 5 parts
- Manipulation without heavy equipment
- Installation lock system
- 6 entry holes in all directions to the base
- Cabinet fastening with 4 screws
- 50mm transition section between the underground base and switchgear for better terrain handling
- Handling holes for better field work





FAN – IP55			
	Low Power	**High Power with Potentiometer Control**	**High Power with Potentiometer Control**
Air Flow (for 100 Pa)	**~ 150 m^3/h**	**~ 500 m^3/h**	**~ 530 m^3/h**
Supply Voltage	230 V AC	230 V AC	48 V DC
Type	axial	radial	radial
Current Consumption	0.11 A	0.23 A	1.5 A
Power Consumption	25 W	52 W	72 W
Noise Level	51 dB(A)	max. 66 dB(A)	max. 72 dB(A)
Dimensions	171 × 151 × 51 mm	ø 190 × 70 mm	ø 175 × 68 mm
Identification	**V150AC**	**V500AC**	**V530DC**

The filter fans are used to ensure an optimal climate in cabinets. The internal temperature of the cabinet is reduced by exchanging warm air with cooler outside air. By drawing outside air into the cabinet, an air flow is created that prevents hot spots in the cabinet and expels warm air from the cabinet, thus protecting electronic and electrical equipment from overheating.



AIR CONDITIONING – 230 V AC, 50/60 Hz	
Cooling Capacity	1,500 W
Working Temperature	–20 to +55 °C
Ingress Protection	IP55
Refrigerant	R134a
Identification	**1500AC230**

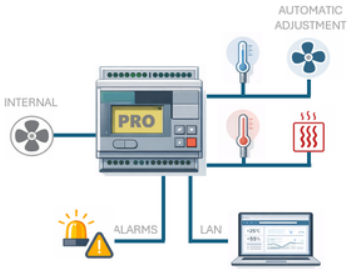
These air conditioning units are designed for outdoor use, where they maintain stable temperature conditions to extend the service life of the equipment housed in control cabinets. They are ready for operation immediately after being connected to the power supply-without complicated setup, offering high reliability and full functionality.
The air conditioners are equipped with a built-in display and keypad for immediate viewing of operating status, temperature, and any alarms. They allow for easy parameter changes. The desired temperature (Set Point) can be easily set and configured directly from the front panel without the need to connect an external computer. The quick diagnostic menu allows for immediate display of the values of individual temperature sensors and the percentage output of analog outputs without the need to enter deep programming.



MICS PRO – INTELLIGENT INTERNAL CLIMATE CONTROL SYSTEM FOR CABINETS		
Heating System Power Supply	230 V AC	
Fan (cooling) Power Supply	230 V AC	48 V DC
Sensors (heating and ventilation)	two sensors	
Remote Management via LAN	yes	
Internal Mixing Fan	yes	
Alarm Outputs	yes (door open, fan failure, temperature alarm)	
Day/Night Mode	yes	
Operating Hours Counter, Filter Replacement	yes	
Language	English, Czech	
Operation Temperature	0 to 55 °C / 90 % RH, without air conditioning	
Identification	**MICS PRO AC**	**MICS PRO DC**

MICS PRO is an intelligent internal climate control system designed for outdoor technological cabinets. The system continuously monitors the internal cabinet temperature and automatically regulates cooling and heating performance according to real operating conditions. Fan speed and heating operation are dynamically adjusted based on measured temperature values, ensuring optimal performance with minimal noise, reduced energy consumption and extended component lifetime. All operating parameters can be configured locally via the MICS display using integrated control buttons, allowing easy on-site adjustment without the need for external tools or software.

MICS PRO – advanced control and monitoring
It is designed for more demanding installations where higher control accuracy, monitoring and flexibility are required.



The system uses two independent temperature sensors:
- one dedicated to ventilation control,
- one dedicated to heating control.

This allows more precise temperature management inside the cabinet and improved thermal stability.

Key features of **MICS PRO** include:
- remote monitoring and configuration via web interface (LAN connection required),
- day and night operating modes with adjustable fan power limits,
- internal mixing fan for improved air circulation, especially during winter operation,
- alarm outputs (door open, fan failure, temperature alarm),
- operating hours counter and filter replacement indication.

The **MICS PRO** system is not supplied as a standalone product and is always delivered as an integral part of the complete cabinet power solution. For correct operation, the requirements for the incoming power supply branch must be defined as part of the project specification (required circuit breakers, OVPs, etc.).

Always select 1 option as below:

OUTDOOR CABINETS

X

CABINET SIZE		
A	SAP2677	1,350 × 700 × 700 mm
B	SAP2688	1,350 × 800 × 800 mm
C	SAP3777	1,850 × 700 × 700 mm
D	SAP3788	1,850 × 800 × 800 mm

X

BASE		
A	150 mm	Footprint 700 × 700 mm **Z15077** Footprint 800 × 800 mm **Z15088**
B	250 mm	Footprint 700 × 700 mm **Z25077** Footprint 800 × 800 mm **Z25088**

X

VERTICAL BARS	
A	19" Vertical Rails (1 pair) **VL1x19**
B	19" Vertical Rails (2 pairs) **VL2x19**
C	21" Vertical Rails (1 pair) **VL1x21**
D	21" Vertical Rails (2 pairs) **VL2x21**
E	ETSI Vertical Strips (1 pair) **VL1xET**
F	ETSI Vertical Strips (2 pairs) **VL2xET**
N	NONE

X

LEFT CABLE INPUTS	
A	Grommet 9× 18–30 mm / 10–14 mm, 4× 10–15 mm, 4× 5–10 mm **C17L**
B	Grommet 1× 20–26 mm / 12–15 mm, 16× 8–14 mm / 7–10 mm, 4× 14–20 mm / 5–10 mm, 4× 5–7 mm **C25L**
C	Grommet 49× 7–13 mm, 1× 15–25 mm **C50L**
D	Grommet 18× 6–13 mm, 6× 13–28 mm, 4× 3–11 mm **KC28L**
N	NONE

X

RIGHT CABLE INPUTS	
A	Grommet 9× 18–30 mm / 10–14 mm, 4× 10–15 mm, 4× 5–10 mm **C17P**
B	Grommet 1× 20–26 mm / 12–15 mm, 16× 8–14 mm / 7–10 mm, 4× 14–20 mm / 5–10 mm, 4× 5–7 mm **C25P**
C	Grommet 49× 7–13 mm, 1× 15–25 mm **C50P**
D	Grommet 18× 6–13 mm, 6× 13–28 mm, 4× 3–11 mm **KC28P**
N	NONE

HEATING

X

HEATING ELEMENT	
A	Heating Element 150 W 230 V AC **TT150**
B	Heating Element 250 W 230 V AC **TT250**
C	Heating Element 400 W 230 V AC **TT400**
N	NONE

X

HEATING CONTROL	
A	Thermostat Opening 0–60 °C (switches off the heating when the set temperature is exceeded, does not monitor the RH) **TO60**
B	Mechanical Hygrostat MFR 012 NEW (switches on the heating when the set RH is exceeded, does not monitor the temperature) **HGR**
C	Electronic Thermo-Hygrostat ETF 012, 0–60 °C, 50–90 % RH (switches off the heating when the set temperature is exceeded, monitors the RH – switches on the heating when the RH is exceeded) **THGR**
D	Intelligent MICS PRO Control (part of a comprehensive solution including MICS cooling) **MICS PRO**
N	NONE (disabled if the Heating Element is selected)

COOLING

X

FAN + THERMOSTAT 0–60 °C	
A	Low Power AC 230 V ~ 100 m^3/h **V100AC**
B	High Power with Potentiometer Control AC 230 V ~ 500 m^3/h **V500AC**
H	High Power with Potentiometer Control DC 48 V ~ 530 m^3/h **V530DC**

AIR CONDITIONING 230 V	
D	Air Conditioning 1,500 W 230 V AC **1500AC230**

FAN WITH INTELLIGENT CONTROL	
F	MICS PRO AC, 230 V AC Fan (0–600 m^3/h) **MICS PRO AC**
G	MICS PRO DC, 48 V DC Fan (0–600 m^3/h) **MICS PRO DC**

N	NONE

ACCESSORIES

X

MOUNTING BRACKETS	
A	Mounting Bracket (2 pcs) **FK2X**
N	NONE

X

CONSOLE WITH DOOR SWITCHES	
B	Console with Door Switches (2 pcs) **2DS**
N	NONE

X

LED LIGHTING	
C	LED Lighting 24–240 V AC/DC **LED24240**
N	NONE

X

UNDERGROUND BASE	
D	Underground Base 700 × 700 mm **PZ7070**
E	Underground Base 800 × 800 mm **PZ8080**
N	NONE

Examples of creating a name: ABBCN – AC – B – ABCN

PLP Czech Republic (MICOS)
MICOS TELCOM s.r.o.

Háj 365
798 12 Kralice na Hané
Czech Republic

+ 420 582 307 511 (direct)
+ 420 582 307 688 (fax)
cz.telcom@plp.com
www.micostelcom.com

© 2025 MICOS TELCOM s.r.o.