

Control Unit

EcoAlpa5

Product code: PW-090-X



Reliability



Valve control



Cost efficiency

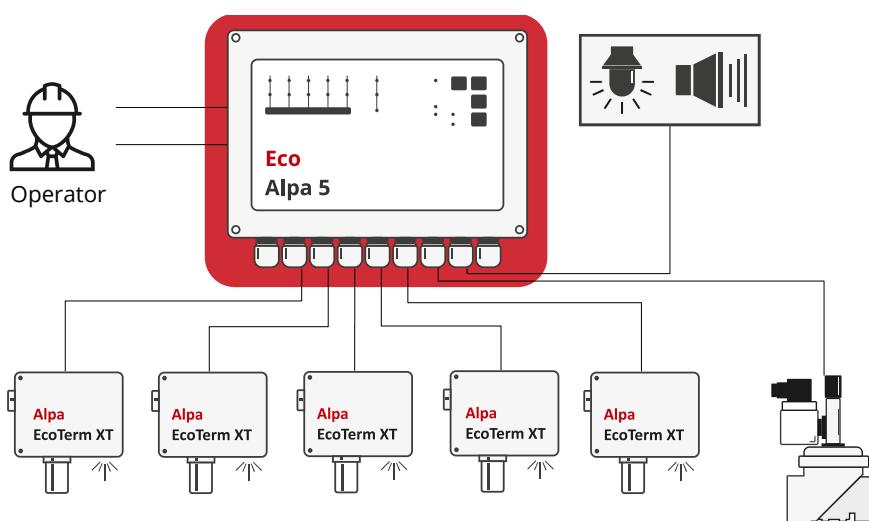


Information about the product

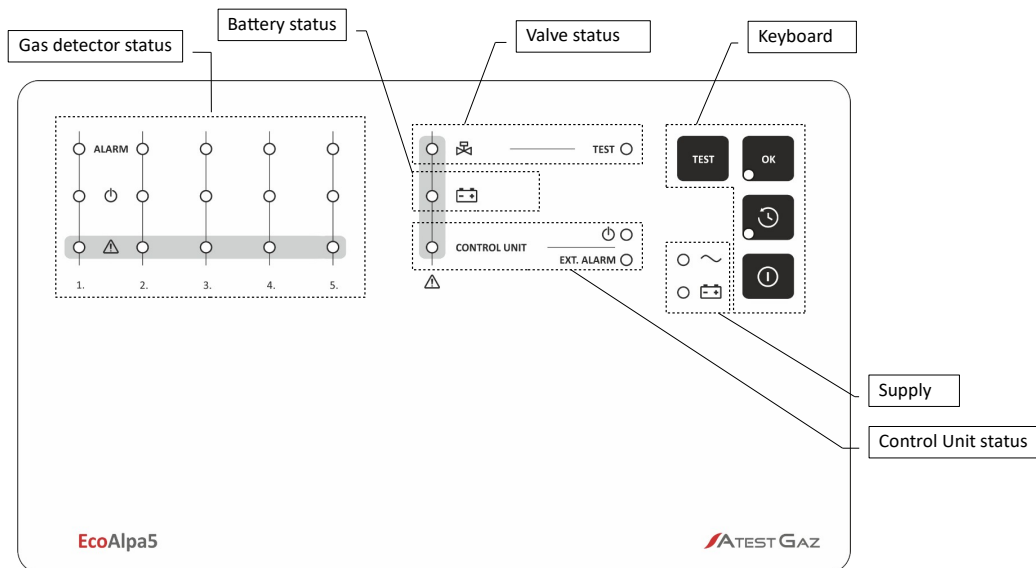
The EcoAlpa5 Control Unit enables visualization of the entire Gas Safety System and provides appropriate output signals for the system control.

The device is a five-channel control unit designed for collaboration with gas detectors of the XT series. It has outputs to connect light and sound warning devices as well as binary lines for transmission of information about the system status. In addition, the control unit can be integrated with an external system for plant automation, e.g. BMS. Depending on the design option the unit can also actuate the gas shut off valve to isolate supply of gas to monitored facilities.

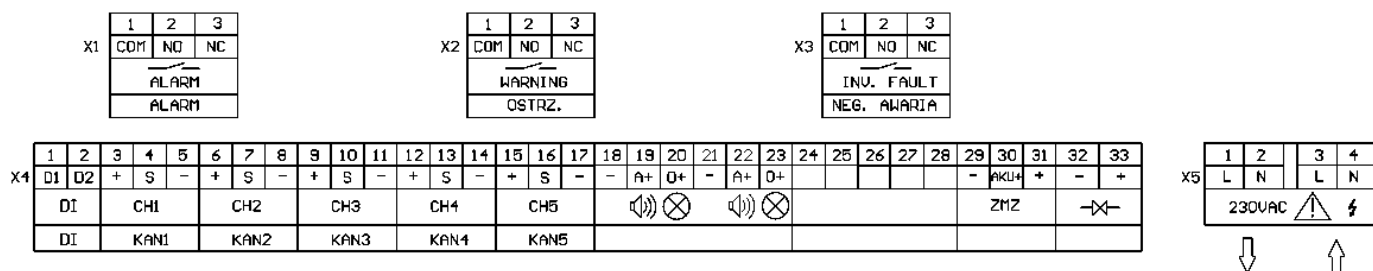
Location and role of the device in Gas Safety System








User interface



Electrical interface

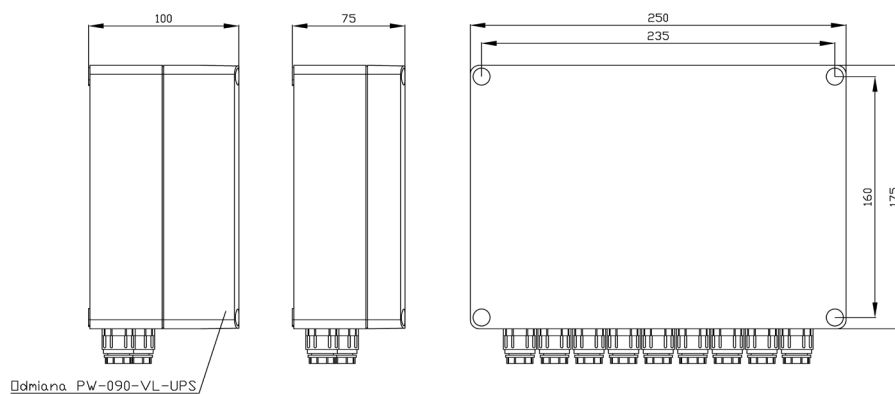


Port designation	Name	No.	Pin	Description
ALARM	X1	1	COM	Alarm relay output Common
		2	NO	Normally open
		3	NC	Normally close
WARNING	X2	1	COM	Warning relay output Common
		2	NO	Normally open
		3	NC	Normally close
INV. FAULT	X3	1	COM	Failure relay output (inverted) Common
		2	NO	Normally open
		3	NC	Normally close

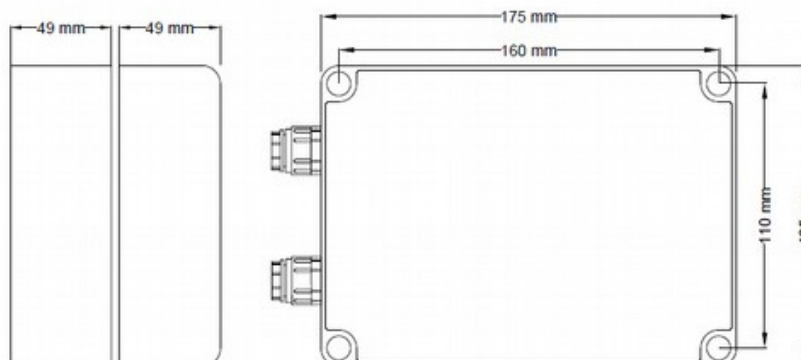
Port designation	Name	No.	Pin	Description
DI				External alarm inputs
		1-2	D1, D2	Input 1 and 2
CH1-5				Gas detector ports 1 – 5
		3, 6, 9, 12, 15	+	Positive
		4, 7, 10, 13, 16	S	Signal inputs
	X4			Port with output voltage of 12V for connection of warning devices
		18, 21	-	Negative
		19, 22	A+	Positive – for a sound warning device (siren)
		20, 23	O+	Positive – for a light warning beacon
ZMZ (only for PW-090-VR-X)				ZMZ (Remote Valve Control Module) port
		29	-	ZMZ negative port
		30	AKU+	ZMZ battery positive port
 (only for PW-090-VL-X)				Port with output voltage of 12V for connection of a shutoff valve
		32	-	Negative
230VAC   	X5			Power supply 230 V
		1	L	Output voltage of 230V to supply other terminals
		2	N	Neutral
		3	L	230 V power supply input
		4	N	Neutral

Dimension

The construction of the device and its dimensions



The construction of the Remote valve control module and its dimensions



Technical specification

Power supply <ul style="list-style-type: none"> Voltage V_{CC} Prąd I_{CC} 	230 V ~ 0.75 A	
Environment <ul style="list-style-type: none"> Ambient temperatures Humidity Pressure 	In operation	Storage
	0 – 40 °C 10 – 90% long term 0 – 99% short term 1013 ± 10% hPa	0 – 40 °C 30 – 90% long term
IP	IP65	
Parameters of the detector inputs <ul style="list-style-type: none"> Number of input lines Input resistance Power voltage for detectors Maximum consumption of current by detectors 	1 – 5 120 Ω 10.5 – 15 V 800 mA	
Digital output parameters <ul style="list-style-type: none"> Relay 	Floating contacts, NO/NC: AC1: 230 V ~ / 3 A DC1: 230 V = / 0.25 A DC1: 24 V = / 3 A Not protected	
Control output for the shutoff valve <ul style="list-style-type: none"> Range of load resistance / power Guaranteed limit of the shutoff voltage Maximum resistance of the power supply line Duration of the shutoff pulse 	PW-090-VL-X ≥ 4 Ω / ≤ 36 W PW-090-VR-X ≥ 2 Ω / ≤ 72 W 10.5 V See Section 8.2.4 in User Manual 0.5 s	
Control outputs for sound and visual warning devices <ul style="list-style-type: none"> Power voltage for warning devices Maximum consumption of current by warning devices 	10.5 – 13.2 V 500 mA	
Parameters of the input for an external alarm signal	Connection via a potential-free contact Inactive for resistance below 10 Ω Active for resistance above 5000 Ω Minimum duration of the switchover pulse > 1s	
Integrated signalling equipment (optical)	LED controls	
Integrated signalling equipment (audible)	About 70 dB, distance 1 m	
Protection class	II	
Required protections <ul style="list-style-type: none"> Power voltage 	Overcurrent fuse switch C2 in L and N lines	
Duration of operation with backup voltage	≤ 30 min	
Cable glands (cable diameter range)	5 – 10 mm	
Acceptable cables <ul style="list-style-type: none"> Relays output, valve 12 V Gas Detector, ZMZ, external alarm Power supply 	0.5 – 4 mm ² (cable lugs 2 x 1.5 mm ² or 2 x 1 mm ² should be used for double wires) 0.5 – 2.5 mm ² (cable lugs 2 x 1 mm ² or 2 x 0.75 mm ² should be used for double wires) 0.5 – 2.5 mm ² (cable lugs 2 x 1 mm ² or 2 x 0.75 mm ² should be used for double wires)	
Enclosure	ABS	
Weight	1.2 – 3.5 kg	
Mounting	4 holes for screw diameter 4 mm, holes spacing 235 mm x 160 mm	

Sposób oznaczania produktu

No.	Product code	Parameters of matching valves	Possible distance to the valve	Stand-by voltage
1	PW-090-0-0	-	-	-
2	PW-090-0-UPS	-	-	Yes
3	PW-090-VL-0	12 V, coil resistance ≥ 4 Ω, power consumption ≤ 36 W	Short	-
4	PW-090-VL-UPS	12 V, coil resistance ≥ 4 Ω, power consumption ≤ 36 W	Short	Yes
5	PW-090-VR-0	12 V, coil resistance ≥ 2 Ω, power consumption ≤ 72 W	Long (ZMZ device is needed for valve connection)	-
6	PW-090-VR-0	12 V, coil resistance ≥ 2 Ω, power consumption ≤ 72 W	Long (ZMZ device is needed for valve connection)	yes
7	PW-090-V230-0	230 V	Long	-

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