

Control Unit

EcoAlpa

Product code: PW-054-X



Valve control



Cost efficiency



Simple assembly



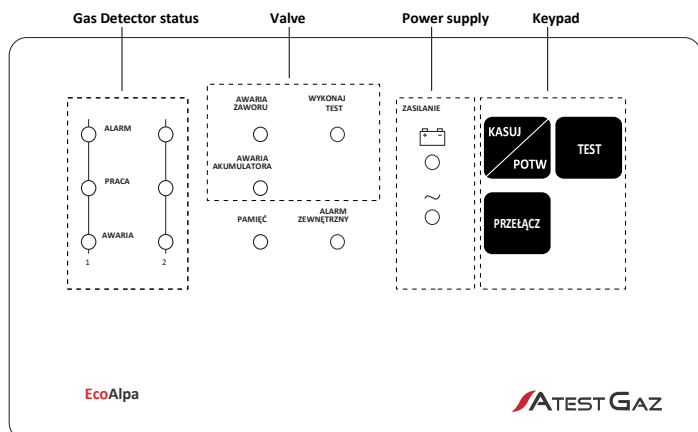
Information about the product

The **EcoAlpa Control Unit** is a dual port control device designed for collaboration with gas detectors communicating by means of 4..20 mA control signals. It has analog outputs to connect a sound and optic warning device and digital lines for transmission of the system status information. In addition, the control unit can be integrated with a superior automation system, for instance BMS. The EcoAlpa unit is available in several manufacturing options that are able to perform selected functionalities of the system, such as control for the gas shutoff valve (various gas types) or switching the system over to the backup power supply voltage to continue operation of the system when the mains voltage disappears.

The table below summarizes details of the types and options of the control unit:

Id.	Code	Valve type	Parameters of matching valves	Stand-by voltage	Battery	Number of channels
1	PW-054-0-0	-	-	-	-	1, 2
2	PW-054-0-UPS	-	-	Yes	12 V 1.3 Ah	1, 2
3	PW-054-VL-0	12 V, coil resistance $\geq 4 \Omega$, power consumption ≤ 36 W	Short	-	12 V 1.3 Ah	1, 2
4	PW-054-VR-UPS	12 V, coil resistance $\geq 1 \Omega$, power consumption ≤ 144 W	Long (ZMZ device is needed for valve connection)	Yes	12 V 5 Ah	1, 2
5	PW-054-V230-0	230 V	Long	-	-	1, 2

User interface



User interface comprises LEDs to indicate statuses of gas detectors, shutoff valve and power supply voltage as well as keypad buttons, the ‘Memory’ indicator, the ‘External Alarm’ indicator and an internal buzzer (internal sound warner). See the User Manual to get familiar with detailed description of the user interface.

Electrical interface

1	2	3	4	5	6	7	8	9	10	11
+	S	-	+	S	-	S1	S2	+	O-	A-
CH 1			CH 2			DI				

X1

12	13	14	15	16
-	+	-	Aku+	+
		ZMZ		

X2

17	18	19	20	21	22	23
COM	NO	COM	NO	COM	NO	NC
Alarm		Warning		Inv. Fault		

X3

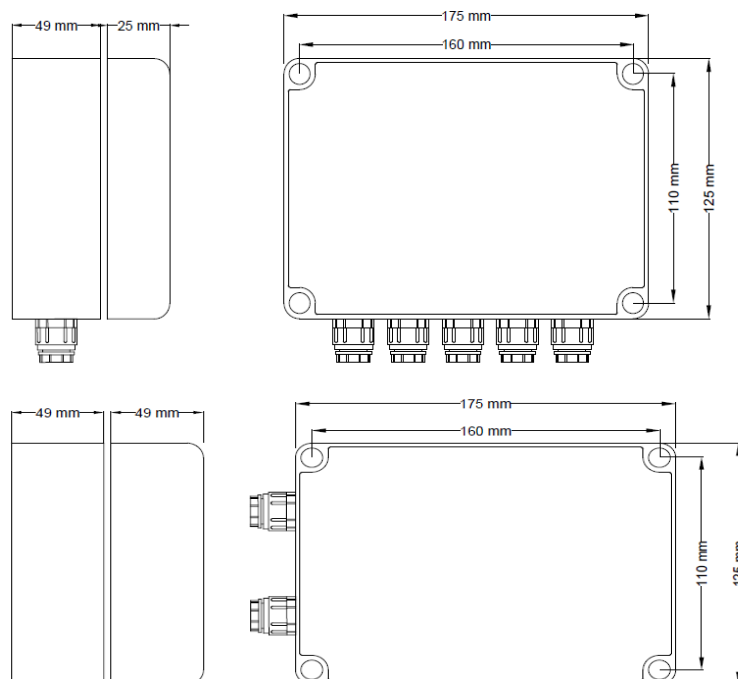
24	25	26	27
L	N	L	N
230VAC			

X4

Port	Pin	Description
CH 1		Gas detector port
	+	Positive
	S	Signal input
CH 2		Gas detector port
	+	Positive
	S	Signal input
DI		External alarm inputs
	S1	Input 1
	S2	Input 2
		Signaller port
	+	Positive
	O-	Optical output
		Valve port
	-	Negative
	+	Positive

Port	Pin	Description
ZMZ		ZMZ (Remote valve control module) port
	-	ZMZ power supply – negative
	Aku+	ZMZ battery
	+	ZMZ power supply – positive
Alarm		Alarm relay output
	COM	Common
Warning		Warning relay output /Valve controller 230V
	COM	Common
Inv. Fault		Failure relay output (negated)
	COM	Common
	NO	Normally open
230 VAC		Power supply 230 V port
	L	Phase
	N	Neutral
	N	Neutral

Dimensions



Control Unit

ZMZ module (Remote valve control module)

Technical specification

Power supply	<ul style="list-style-type: none"> Voltage Vcc Power 	
Environment	<ul style="list-style-type: none"> Ambient temperatures Humidity 	
IP	IP 65	
Analogue input parameters	<ul style="list-style-type: none"> R_{IN} U_z I_z 	
Number of analogue inputs	1 – 2	
Parameters of the input for an external alarm signal	Potential-free contact Below 10 Ω inactive Above 5000 Ω active Minimum duration of the switchover pulse > 1s	
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 	
Protection class	II	

Digital output parameters	<ul style="list-style-type: none"> Relay PK1 – PK3 Voltage outputs OC1, OC2 	
Integrated signalling equipment (visual)	LED controls	
Integrated signalling equipment (audible)	60 dB , 1 m distance	
Required protections	<ul style="list-style-type: none"> Power voltage 	
Duration of operation with backup voltage	1 h	
Cable glands	<ul style="list-style-type: none"> Cable diameter range Number of glands 	
Cross-section of wires for clamping terminals	1 – 2.5 mm ²	
Cross-section of wires for the valve connector	1.5 – 4 mm ²	
Enclosure material	ABS	
Lifetime	10 years	
Mandatory periodic inspection	Every year	

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