

## Control Unit

# Sigma Control L

Product code: PW-072-A



**Reliability**



**Innovative**



**Easy installation**

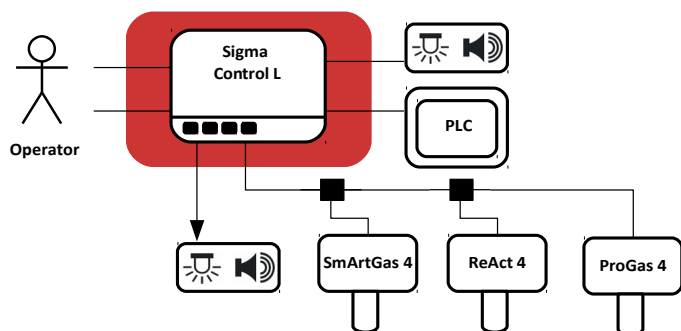


## Information about the product

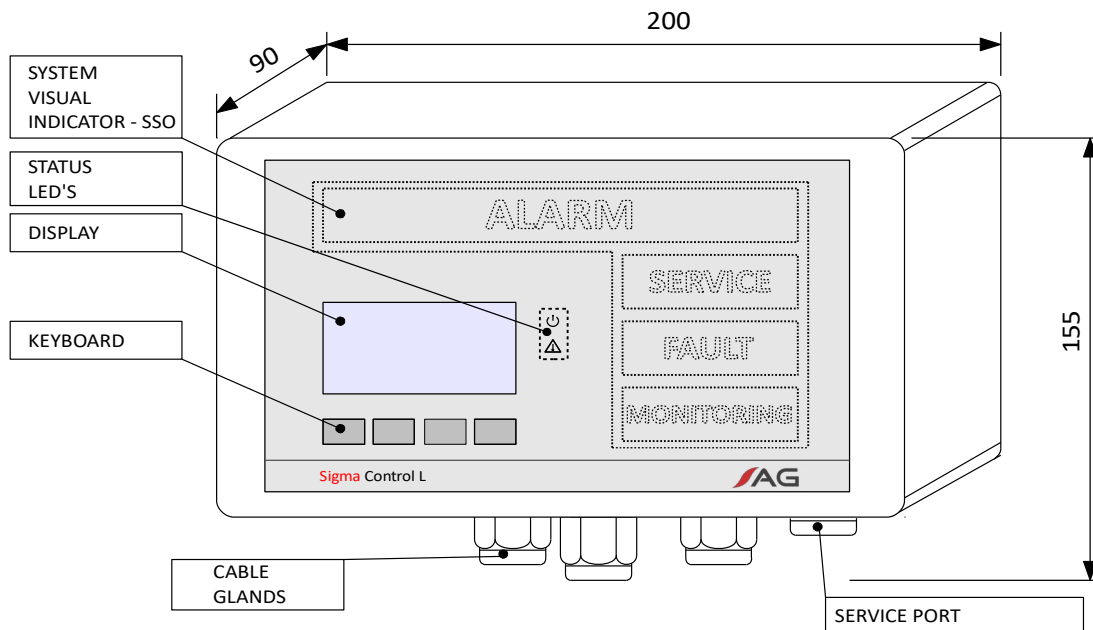
The Sigma Control L is an advanced Control Unit for use with small size Gas Safety Systems. It controls all the devices connected and integrates them to create a single Sigma Gas system.

The Sigma Control L Unit supports from 1 to 20 detectors – depends on the type (detailed information are included in the User Manual). Its task is to read the status of detectors connected to the system and this information is presented on the display and the built-in Visual System Indicator. Based on gas concentration measured and other special statuses (e.g. failures), it controls outputs for visual and acoustic indicators as well as for dual outputs. Control Unit reads the status of dual input and depending on its status, controls system operation (enables or disables outputs). During operation, the unit runs cyclic self-diagnostic procedures used to detect any damage to Sigma Control L Unit and detectors. In addition, it is possible to control the NC valve.

## Location and role of the Control Unit in Gas Safety System



## User interface and dimension



## Electrical interface

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
L	N	PE	R1.1	R1.2	R2.1	R2.2	R3.1	R3.2	F1	F2	D1	D2	-	+	-	O+	A+	-	+	E	A	B
230V AC IN			—			—			FAULT		DI		24V DC IN		⊗		⊞		DETECTORS BUS			

Port symbol	Terminal No.	Terminal name	Description
230V AC IN 			<b>Device 230 V AC power supply port</b>
	1	L	Phase wire
	2	N	Neutral wire
3 x	3	PE	Protective earth wire
			<b>All-purpose relay port</b>
	4	R1.1	Relay 1 terminals
	5	R1.2	
	6	R2.1	Relay 2 terminals
	7	R2.2	
	8	R3.1	Relay 3 terminals
9	R3.2		
FAULT 			<b>Fault relay</b>
	10,11	F1, F2	Fault relay NC terminals
DI			<b>External signal dual input</b>
	12,13	D1, D2	Digital input terminals – bidirectional polarity

Port Symbol	Terminal No.	Terminal name	Description
24V DC IN			<b>24 V DC power supply port</b>
	14	-	Negative power supply pole
	15	+	Positive power supply pole
⊗ ⊞			<b>24 V DC indicator port</b>
	16	-	Negative indicator power supply terminal
	17	⊗	Visual indicator power supply output
DETECTORS BUS	18	⊞	Acoustic indicator power supply output
			<b>Bus detector port</b>
	19	-	Negative indicator power supply terminal
	20	+	Positive indicator power supply terminal
	21	E	Cable shielding
	22	A	Signal line A
	23	B	Signal line B

## Technical specification

Power supply • Voltage $V_{cc}$ , power consumption	230 V $\sim \pm 10\%$ , 60 W 21 – 29 V $\overline{\overline{}}$ , 60 W	Digital communication parameters • Port “DETECTORS BUS” • Electric standard • Communication protocol • Service port • Electric standard • Connector type	RS-485 non-isolated Sigma BUS  USB non-isolate, class V2.0 Mini-B
Environment • Ambient temperatures • Humidity	• For power supply 230 V $\sim$ : -10 – +40°C • For power supply 24 V $\overline{\overline{}}$ : -10 – +50°C 10 – 90% long term, 0 – 99% short term	Integrated signalling equipment (visual)	LCD display, monochromatic, approx. 2.4” LED indicator
IP	IP65	Integrated signalling equipment (audible)	60 dB from 1 m
Output capacity	• For power supply 230 V $\sim$ : 1.5 A • For power 24 V $\overline{\overline{}}$ : 2.3 A • For signaller output, independent of the power, max 1.15 A	Protection class	I – for 230 V $\sim$ power supply III – for 24 V $\overline{\overline{}}$ power supply Unit design according to class II
Digital input parameters • $R_{in}$ • Inactive • Active • Time parameters	10 k $\Omega$ 0 – 1 V $\overline{\overline{}}$ any polarization 10 – 30 V $\overline{\overline{}}$ any polarization The shortest pulse duration noticeable by the system is 0.2 s	Required protection • 230 V $\sim$ power supply • 24 V $\overline{\overline{}}$ power supply	Over-current breaker type C2 on L and N wires Over-current breaker type B6 on one of the poles
Digital output parameters • Relays	3 pcs, current carrying capacity DC1: 230 V $\overline{\overline{}}$ / 0.25 A DC1: 24 V $\overline{\overline{}}$ / 3 A AC1: 230 V $\sim$ / 3 A Total current for all contacts not to exceed 3 A	Cable glands (cable diameter range)	4 x 5 – 10 mm 1 x 6 – 12 mm (cable gland of detector line)
• Indicator outputs	Active, 24 V / 1.15 A, fused	Acceptable cables	0.2 – 2.5 mm <sup>2</sup> (cable lugs 2 x 1 mm <sup>2</sup> or 2 x 0.75 mm <sup>2</sup> should be used for double wires)
		Enclosure material	Polycarbonate
		Weight	1.5 kg
		Mounting	4 holes for 4 mm dia. screws, spacing 189.3 x 90 mm

## Product marking

Product code	Device
PW-072-A	Sigma Control L Control Unit



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