SATEST GAZ
Reliable and Innovative Gas Detection & Safety Systems

Gas Detector

ProGas 4

Product code: PW-017-PG4-X

Reliability

Innovations

A wide range of sensors

Information about the product

The ProGas 4 gas detector is specifically designed for critical functions such as measuring, monitoring and detecting hazardous gases in industrial installations.It can operate under harsh industrial conditions where environmental parameters may vary widely (high temperatures, mist and dust). It can be installed in a variety of ways:

- either integrated into the Gas Safety System Sigma Gas,
- or installed as a stand-alone detector, integrated with supervisory systems (e.g. by means of its 4..20 mA output signal or its RS-485 interface).
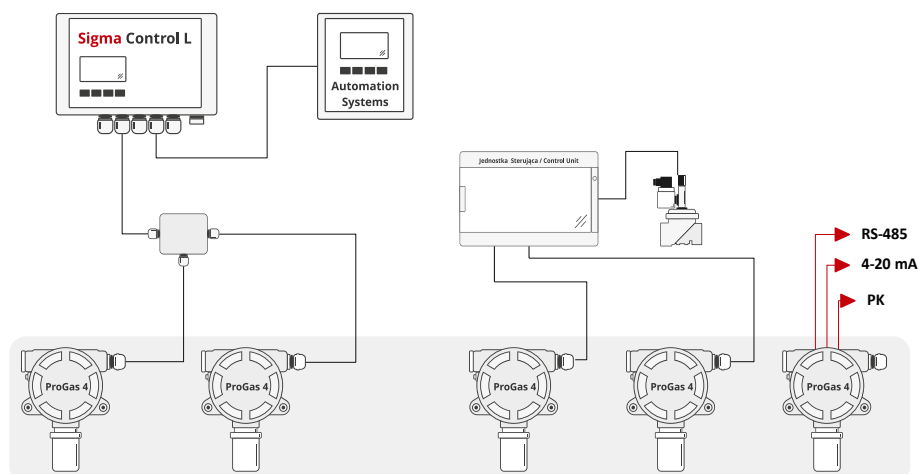
The ProGas 4 has a new measuring head (either 'FL' or 'FH') which is the fruit of a three year development process. This new product offers greatly improved detection capabilities. A ProGas 4 detector equipped with a pellistor sensor now offers a halved response time (T90)* and is rated among the fastest devices available. In order to prevent the condensation of moisture and its harmful effects on the sensor, the inside of the gas measuring head ‚FH', including the sensor, is maintained at a controlled temperature of 10 °C above ambient.

Other enhancements incorporated into the ProGas 4 detector include:
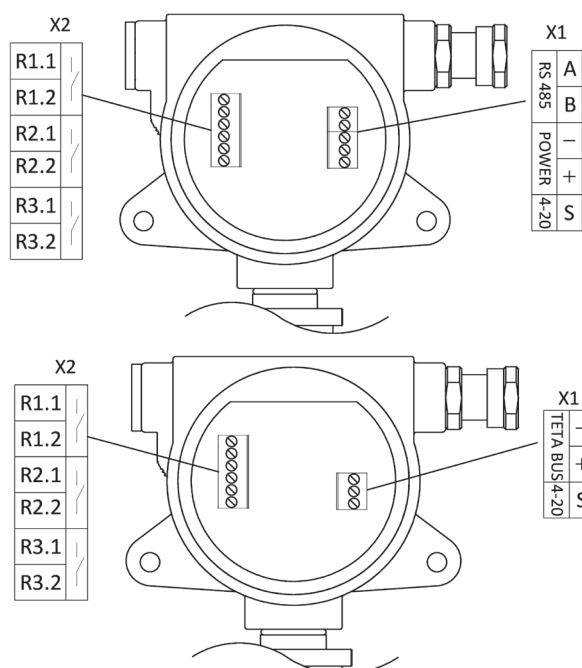
- upon request, optional upgrade to IP66/67 protection class (provided that a suitable membrane is applied)
- advanced interface for external connections,
- power voltage range up to 50 V,
- mitigation of the long-term drift of catalytic sensors,
- wide selection of communication interfaces and HMI panels: Modbus ASCII 4..20 mA, potential-free relay outputs, LCD/FLED displays, wireless interface (Bluetooth).

* detector with the HL head with a pellistor sensor

Atest Gaz A. M. Pachole sp. j.
ul. Spokojna 3, 44-109 Gliwice, Poland
VAT NO.: 969-143-32-31

tel.: +48 32 238 87 94
fax: +48 32 234 92 71
e-mail: contact@atestgaz.pl

Datasheet: KK114-ENG R06   s. 1|4

Location and role of the device in Gas Safety System

Electric interface

1. Digital port RS-485

Designation	Name	Pin	Description
X1	**RS-485**	A,B	Signal lines for the RS-485 port
	POWER	-, +	Power supply
	4-20	S	4 – 20 mA current output
X2	**R1.1 - R3.2**	⎯⌐	Relays terminals

2. Digital port Teta Bus (option not available)

Designation	Name	Pin	Description
X1	**TETA BUS**	-, +	Combined transmission and power supply lines
	4-20	S	4 – 20 mA current output
X2	**R1.1 - R3.2**	⎯⌐	Relays terminals

Dimension
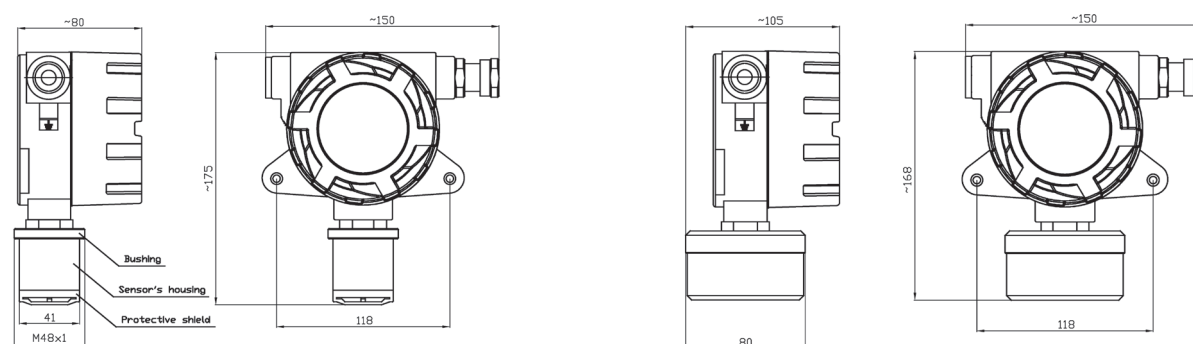
Device dimensions	Device dimensions - option with HW measuring head

Technical specification

Power supply • Voltage V_{CC} • Power P_{CC}	$15 - 50$ V $=$ $0.1 - 4$ W	

Environment	In operation	Storage
• Ambient temperatures Ta	Specified depending on device configuration, including the sensor used $10 - 90\%$ long term, $0 - 99\%$ short term Without condensation $1013 \pm 10\%$ hPa	$0 - 40^{\circ}C$
• Humidity		$30 - 90\%$ long term
• Pressure		

Time parameters	For catalytic sensor		
	• Hydrogen	$T_{90} \leq 9$ s	$T_{Alarm}(T20) \leq 3$ s
	• Methane	$T_{90} \leq 13$ s	$T_{Alarm}(T20) \leq 4$ s
	• Propane	$T_{90} \leq 17$ s	$T_{Alarm}(T20) \leq 4$ s
	• Ethanol	$T_{90} \leq 18$ s	$T_{Alarm}(T20) \leq 5$ s

IP	• IP66/IP67 (measuring head with membrane FL.M, FH.M) • IP63 (other)

Analog output $4 - 20$ mA • Output type • R_{OBC_MAX} (source mode) • U_{S_MAX} (sink mode)	Sink / source $300\ \Omega$ 30 V (max. voltage between pins „S" and „-")

Digital output parameters • Relays	3 x Floating contacts, 24 V / 0.3 A, Not protected against overloading

Digital communication parameters • RS-485 • Teta	• RS-485, Modbus ASCII, Sigma Bus, od 19200 Bd 7E1 • Teta Bus

Radio communication parameters	Bluetooth 4.2
Protection class	III
Cable glands • Cable diameter range • External thread	See Product marking M20 x 1.5
Acceptable cables	$0.5 - 2.5$ mm^2 (cable lugs 2 x 1 mm^2 or 2 x 0.75 mm^2 should be used for double wires)
Parameters of the hose coupling to the FL.C head	6 / 4 mm
Enclosure material	Aluminium spray epoxy
Measuring head material	SS316L / SS316L + PTFE
Weight	1.3 kg
Mandatory periodic inspection	Every 12 months (Calibration Certificate validity) – time can be shortened due to difficult working conditions
Mounting	• To the supporting structure, 2 screw holes M6, hole spacing 118 mm with a minimum distance from the wall • We recommend using mounting brackets WM8

Product marking

ProGas 4 Gas Detector

PW-017-PG4- M – D – H – E – T – DI – AI – WI – MC – G

M	Converter module	X	Selected by the manufacturer depending on the chosen MC – field value does not matter when ordering the product (when ordering, please specify X, available EC, PEL, IR, PID options show the used sensor type – see DOK-6073-ENG)
D	Display	0	Without
		LCD	LCD display and LED controls **(Ta: -20 – 50°C)** – *under development*
		FLED	Bright, multi-colour display **(Ta: - 40 – 60°C)** – *under development*
		FLED.A	Bright, multi-colour display equipped with an acoustic signaller **(Ta: -40 – 60°C)** – *under development*
H	Measuring Head		Type of the measuring head installed in the detector is associated with the MC – the head specification is determined by gas to be detected and its parameters
		FL	With sinter (fast – reduced T90), made of stainless steel
		FL.C	With sinter (fast – reduced T90), made of stainless steel, with remote test gas supply and calibration
		FL.M	With sinter (fast – reduced T90) and membrane, made of stainless steel
		FH	With sinter (fast – reduced T90), made of stainless steel, warmed
		FH.M	With sinter (fast – reduced T90) and membrane, made of stainless steel, warmed
		HL	With sinter, made of stainless steel
		HH	With sinter, made of stainless steel, warmed
		HR	Without sinter, made of stainless steel and PTFE plastic (for reactive gases e.g. Cl_2, HCl, NO_x)
		HW	Without sinter, made of stainless steel (for SF_6/R_x gases)
E	Enclosure	AL	Aluminium, spray epoxy
T	Temperature	0	Standard **(Ta: -30 – 50°C)**
		T	Extended temperature range for gas detector **(Ta: -40 – 85°C)**
DI	Digital interface	485	RS-485
		Teta	Teta Bus – *under development*
AI	Analog interface	0-0	Without
		420-PK	4 – 20 mA (sink/source) + 3 x relay
WI	Wireless interface	0	Without
		BT	Wireless interface allowing remote sensor calibration
MC	Measurement parameters configuration	-	See details and **Ta** in DOK-6073-ENG „Measurement parameters configuration"
G	Cable gland	-	See details in POD-066-ENG „Cable glands used in offered devices"