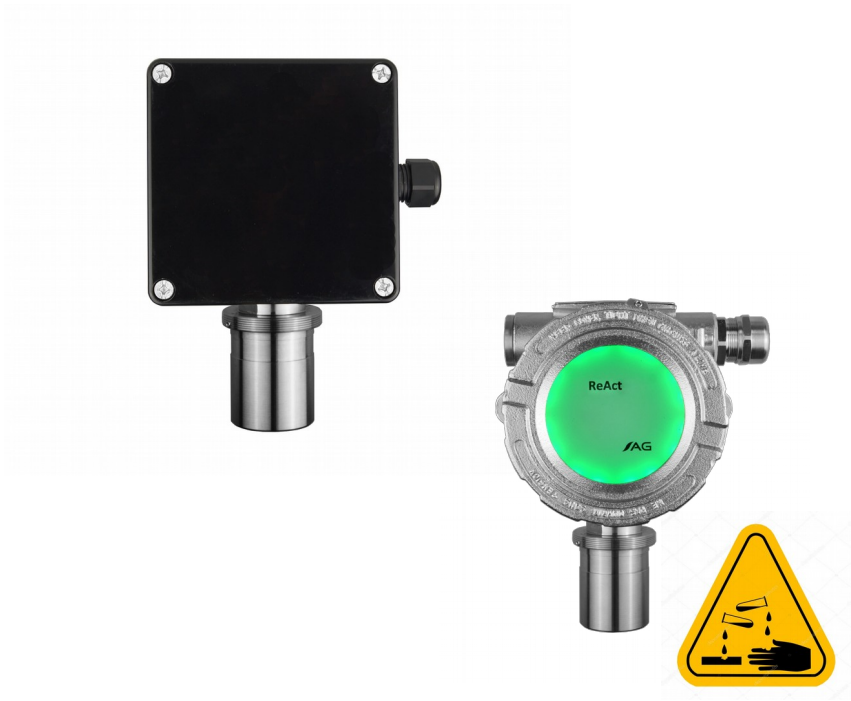
Gas Detector

ReAct 4

Product code: PW-093-RA4-X



Reliability

Innovations

A wide range of sensors

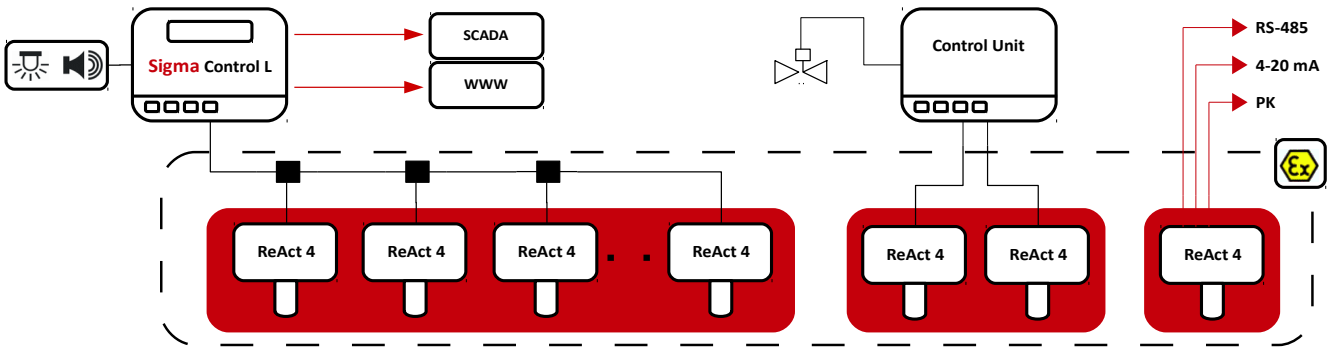
Information about the Product

The ReAct 4 gas detector is specifically designed for critical functions such as measuring, monitoring and detecting **reactive** gases in the surrounding atmosphere, with particular emphasis on aggressive or corrosive atmospheres. It can be installed in a variety of ways:

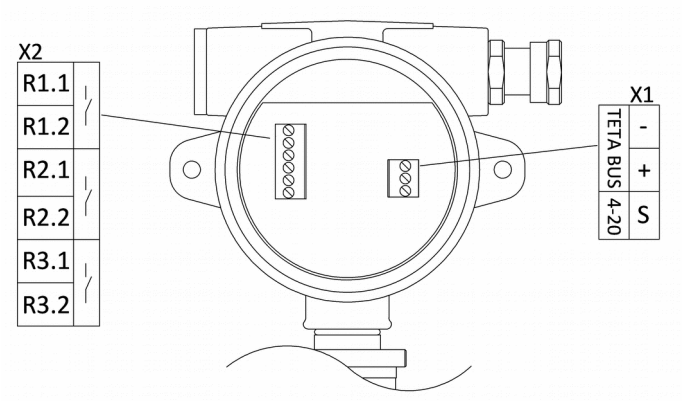
- either integrated into the Gas Safety System Sigma Gas,
- or installed as a stand-alone detector, integrated with supervisory systems (e.g. by means of its 4...20mA output signal or its RS-485 interface).

The ReAct 4 detector has been developed to replace our earlier Sigma ReAct device. ReAct 4 is based on a completely new electronic design. It has a new measuring head HR with significantly improved measuring properties. It also is equipped with self diagnostics properties - user is immediately informed about the failure states.

Location and role of the device in Gas Safety System

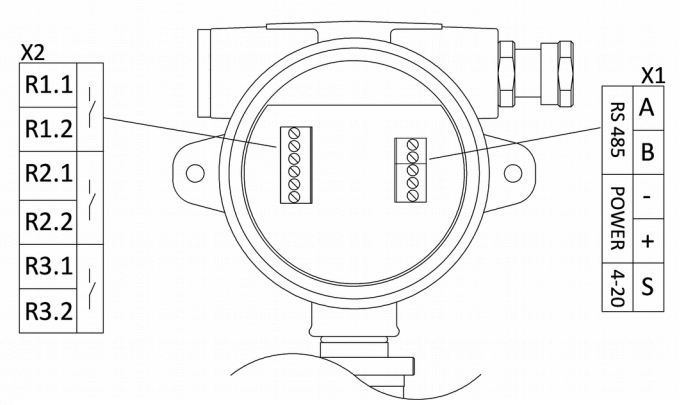


Electrical interface



1. Digital port RS-485

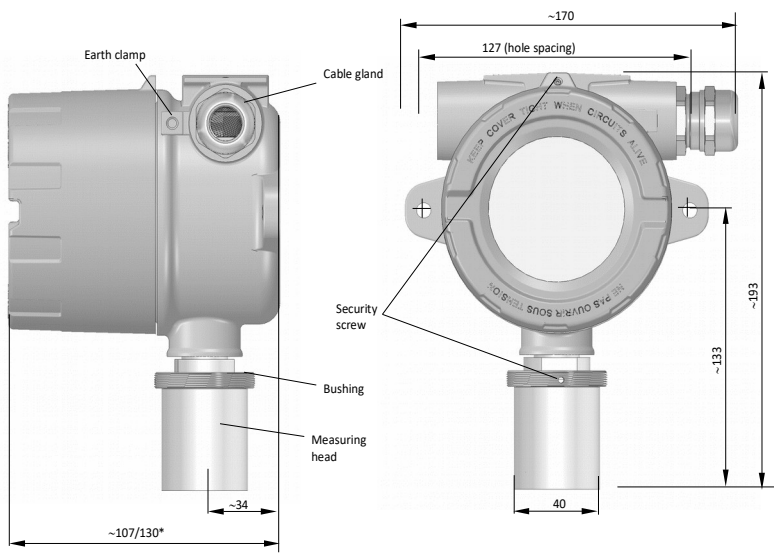
Symbol	Name	Pin	Description
X1	RS-485	A, B	Signal line RS-485 port
	POWER	-, +	Supply
	4-20	S	Current output 4 – 20 mA
X2	R1.1 – R3.2		Relays terminals

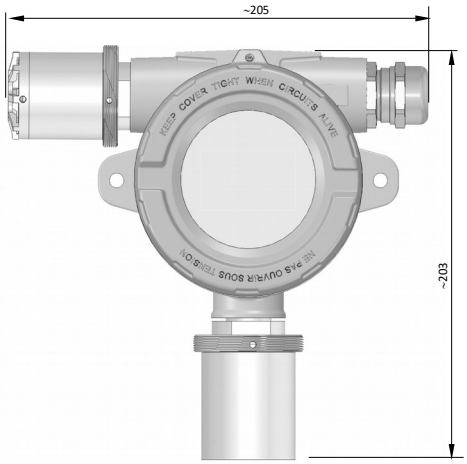


2. Digital port Teta Bus (option not available)

Symbol	Name	Pin	Description
X1	TETA BUS	-, +	Signal and supply line Teta Bus port
	4-20	S	Current output 4 – 20 mA
X2	R1.1 – R3.2		Relays terminals

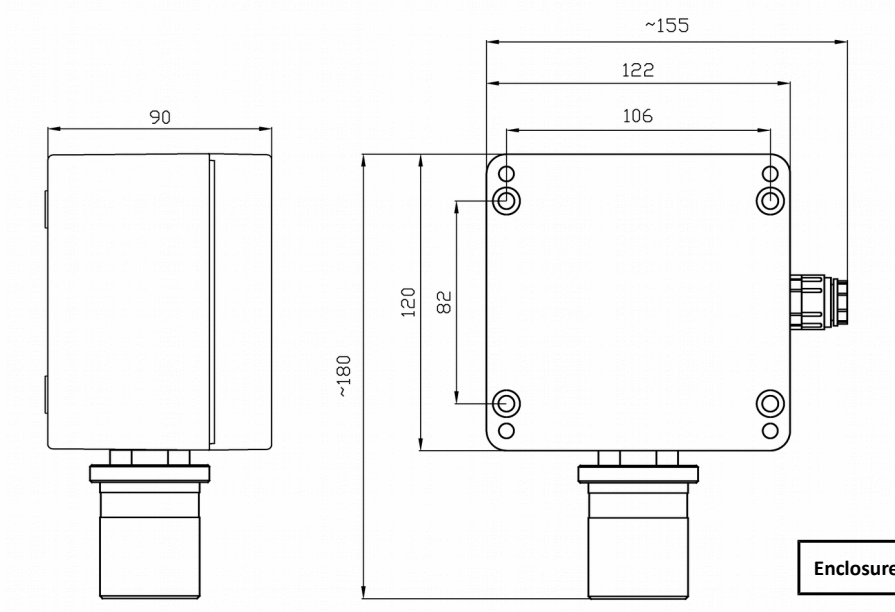
Dimension





*with display

Stainless steel enclosure (E=SS)	Stainless steel enclosure, with acoustic (E=SS, FLED.A)



Enclosure : Polyester reinforced with fiberglass (E=PE)

Technical specification

Power supply • Voltage V_{CC} • Power	15 – 50 V ⎓ 0.48 – 4 W	
Environment	In operation	Storage
• Ambient temperatures	Specified depending on: • the temperature class of the device (see ATEX below), • device configuration, including the sensor used	0 – 40°C
• Humidity	10 – 90% long term 0 – 99% short term without condensation	30 – 90% long term
• Pressure	1013 ± 10% hPa	
ATEX	Ⓔx II 3G Ex nA IIC T3 Gc -40 ≤ Ta ≤ 50°C	
IP	IP 63	
Analog output 4 – 20 mA • Output type • R_{load_MAX} (source mode) • U_{S_MAX} (sink mode)	Ang: sink / source 300 Ω 30 V (max. voltage between pins „S" and „-")	
Digital output parameters • Relays	3 x Floating contacts, 24 V ⎓ / 0.2 A Not protected	

Digital communication parameters • RS-485 • Teta	• RS-485, Modbus ASCII/RTU, Sigma Bus, from 19200 Bd 7E1 • Teta Bus
Integrated signalling equipment (optical)	• Alphanumeric display 2x8 of the LCD type with LED indicators • Multicolour status display FLED
Integrated signalling equipment (audible)	70 dB 1 m distance
Protection class	III
Cable glands • Cable diameter range • External thread	See the configurator below 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)
Enclosure material	• SS316L • Polyester reinforced with fiberglass
Measuring head material	Stainless steel + PTFE
Weight	3.5 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 4 mm, hole spacing 127 mm • We recommend using mounting brackets

Product marking

Product code	Device
PW-093-RA4-X	Gas Detector ReAct 4

Gas Detector ReAct 4

PW-093-RA4- 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)
D **Display**	**0**	Without
	LCD	LCD display and LED controls (only for E=SS)
	FLED	Bright, multi-colour display **(Ta: -40 – 60°C)** (only for E=SS)
	FLED.A	Bright, multi-colour display equipped with an acoustic signaller (only for E=SS) – *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	
	HR	Sensor cover without sinter, made of stainless steel and plastic PTFE (measuring head for reactive gases e.g. Cl_2, HCl, NO_x)
E **Enclosure**	**SS**	Stainless steel
	PES	Polyester reinforced with fiberglass *(only for D=0) – under development*
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 – *under development*
MC **Measurement parameters configuration**	-	See details and **Ta** in DOK-6073 „Measurement parameters configuration”
G **Cable gland**	-	See details in POD-066-PL „Cable glands used in gas detectors produced by Atest Gaz”