



Headquarter

Address Via dei Pioppi,12 20090 OPERA MI

Phone: +39.02.57.60.48.41

Fax +39.02.57.60.44.08

e-mail info@proclea.com

website www.proclea.com

Contacts

Sales : corrado.colombo@proclea.net

riccardo.bianchedi@proclea.net

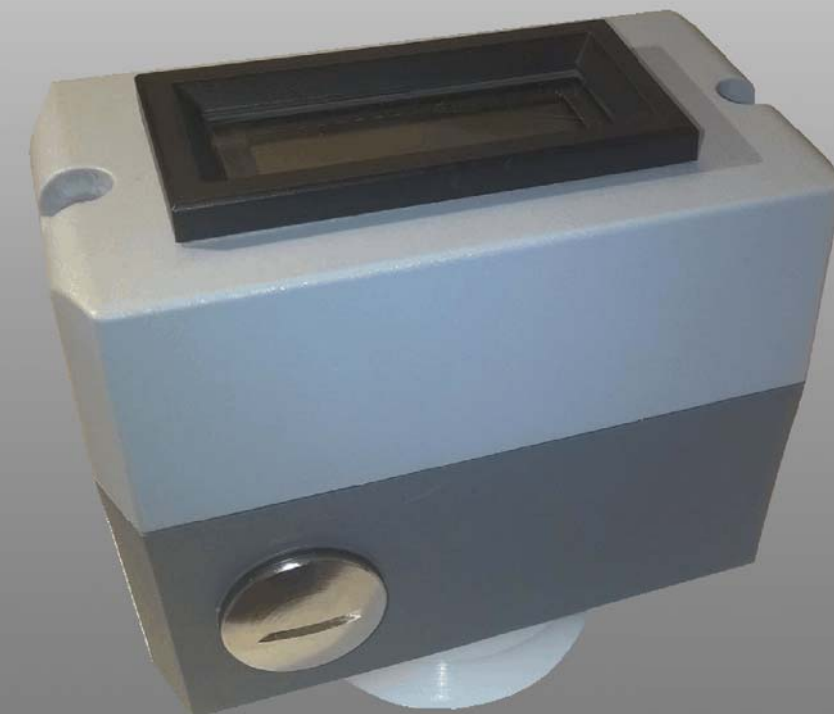
Technical : federico.colombo@proclea.net



ENGINEERING PRODUCTION
Proclea

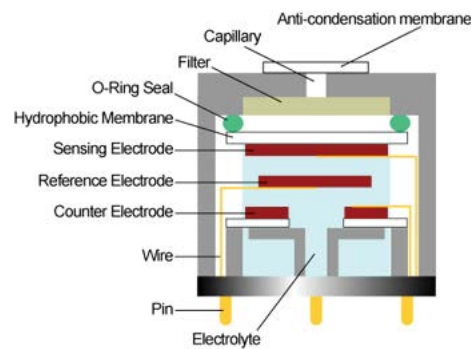
EMA 160

**ELECTROCHEMICAL
GAS ANALYZER**

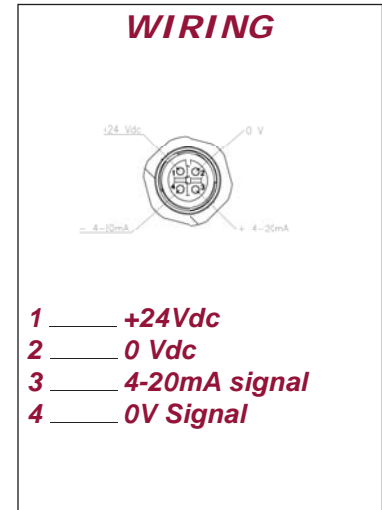
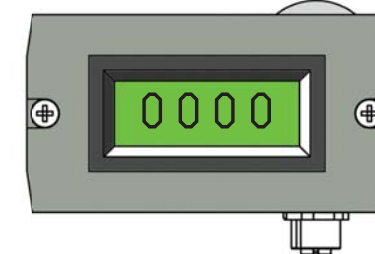
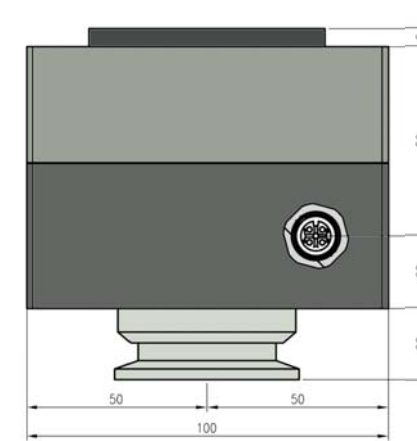
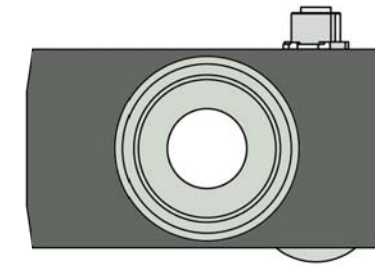
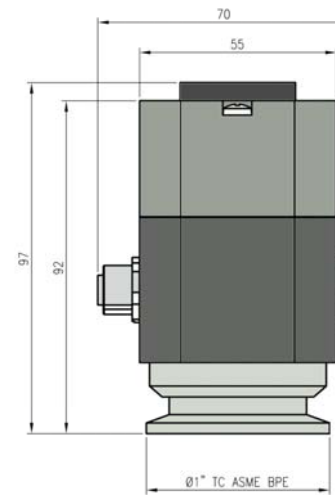


COMPACT ELECTROCHEMICAL GAS ANALYZER EMA160

Based on his process knowledge, Procled developed this smart, simple, reliable and cheap gas analyzer line.



DIMENSIONAL DRAWINGS



HOW IT WORKS

Electrochemical sensors work in a way similar to batteries.

When the target gas is present, a small electrical charge is generated chemically between two electrodes, and displayed in the measuring head. The signal strength is proportional to the concentration.

One fundamental requirement is to achieve a stable sensitivity and good selectivity under all relevant ambient conditions.

The sensors must be able to reliably withstand the tough conditions prevailing in an industrial setting, and do this 24 hours a day, all year round.

FOCUS ON

The ease of use is a must for Proclea : the EMA160 gas reader needs only a 4 wire M12 connector with a typical 24Vdc supply to be ready to use.

The LCD display allows you to read immediately the concentration value.

The instrument provide a linearized 4-20mA signal, directly proportional to the gas range, to be used In a remote system, like safe area reader or PLC

Basically, EMA160 is provided with an 1"1/2 ASME BPE TriClamp connection to the process or to the ambient.

Optionally, it can be provided with screwed or fastened terminals (see table 1)

All the components of the instrument are engineered, manufactured, assembled and calibrated in EU.

ORDER CODE COMPOSITION

EMA160-A-B-C

A: Gas type, see Table 2 for reference codes

B: Range code, see Table 2 for reference codes

C: process connections, see table 1 for reference codes.

CONNECTION TYPE (Table 1)

TYPE OF CONNECTION	CODE
TC 1/2" - 1" 1/2 ASME BPE	A
Ø 2" Gas	B
Direct air housing	C

ORDER CODE EXAMPLE : Analyzer for H₂O₂ , range 0-100ppm, process connection TC : EMA160-01-B1-A

CALIBRATION

EMA130 are provided calibrated by factory.

NIST or traceable calibration service is available on request, yearly calibration is a service provide at Proclea factory.

GAS LIST AND RANGES (Table 2)

	Gas code	Range code			Overload	Sensitivity			Response time	Operational lifetime	
		A	B1	B2		B3	B1	B2			B3
Bromine	Br	21	20 ppm	5000 ppm	-	500%	0,1 ppm	25 ppm	-	< 90 sec	up to 2 years
Formaldehyde	CH ₂ O	03	10 ppm	-	-	500%	0,01 ppm	-	-	< 40 sec	up to 2 years
Ethylene	C ₂ H ₄	11	10 ppm	200 ppm	1500 ppm	500%	0,1 ppm	0,5 ppm	4 ppm	< 60 sec	up to 2 years
Ethylene Oxide	ETO	02	20 ppm	100 ppm	5000 ppm	200%	0,1 ppm	1 ppm	15 ppm	< 140 sec	up to 2 years
Carbon Monoxide	CO	06	200 ppm	2000 ppm	40000 ppm	200%	0 ppm	1 ppm	10 ppm	< 40 sec	up to 2 years
Chlorine	Cl ₂	13	20 ppm	5000 ppm	-	500%	0,1 ppm	25 ppm	-	< 90 sec	up to 2 years
Hydrogen	H ₂	14	1000 ppm	5000 ppm	20000 ppm	200%	2 ppm	6 ppm	3 ppm	< 45 sec	up to 2 years
Hydrogen Peroxide	H ₂ O ₂	01	100 ppm	500 ppm	2000 ppm	200%	0,2 ppm	1 ppm	4 ppm	< 60 sec	up to 2 years
Hydrogen Sulfide	H ₂ S	15	50 ppm	500 ppm	10000 ppm	200%	0,05 ppm	0,5 ppm	10 ppm	< 35 sec	up to 2 years
Hydrogen Bromide	HBr	16	20 ppm	200 ppm	3000 ppm	200%	0 ppm	1 ppm	6 ppm	< 60 sec	up to 2 years
Hydrogen Chloride	HCl	17	20 ppm	200 ppm	1000 ppm	200%	0,2 ppm	1 ppm	5 ppm	< 60 sec	up to 2 years
Hydrogen Cyanide	HCN	10	100 ppm	-	-	200%	0,2 ppm	-	-	< 20 sec	up to 2 years
Ammonia	NH ₃	09	100 ppm	1000 ppm	10000 ppm	200%	1 ppm	4 ppm	50 ppm	< 50 sec	up to 2 years
Nitric Oxide	NO	08	1 ppm	100 ppm	2000 ppm	200%	0,02 ppm	0,5 ppm	1 ppm	< 40 sec	up to 2 years
Nitrogen Dioxide	NO ₂	07	1 ppm	20 ppm	500 ppm	200%	0,05 ppm	0,1 ppm	0,5 ppm	< 60 sec	up to 2 years
Oxygen	O ₂	04	On request								
Ozone	O ₃	05	2 ppm	100 ppm	5000 ppm	200%	0,03 ppm	0,06 ppm	2 ppm	< 60 sec	up to 2 years
Phosphine	PH ₃	18	5 ppm	500 ppm	2000 ppm	200%	0,03 ppm	0,5 ppm	2 ppm	< 25 sec	up to 2 years
Silane	SiH ₄	19	50 ppm	-	-	ND	0 ppm	-	-	< 60 sec	up to 2 years
Sulfur Dioxide	SO ₂	20	1 ppm	100 ppm	10000 ppm	200%	0 ppm	1 ppm	5 ppm	< 20 sec	up to 2 years

For some gases, other ranges are available. Please to ask more information to Proclea's commercial service