EXPLORER RTC SERIES

Sensors / Transmitters for combustible gases

- *Ex Aluminum Case for ¾" NPT* cable gland
- *For ATEX 94/9/EC Security Systems*
- *For ABS – RINA - MED marine applications*
- *Sensor case in INOX steel*
- *Accessories complete series*
- *Very good price-quality relationship*
- *Very fast response*

The RTC sensors series permit the monitoring in continuous, in Exd classified Areas, of combustible gas (%LEL). The die-cast aluminium tin container is done according with the ATEX directions.
The interior display, mounted on the transmitter PCB card, get easy the control recurring procedures, check and calibration, through the easy 3 buttons use.
The sensors are approved for applications in the naval field: RI.NA, MED e ABS Type approval.
These sensors are available in the standard version (VQ-01 type) and also in the "poison resistant" version (VQ-21 type) to endure to the chemical aggression such as for example solvents.
The RTC sensor range is complete with the thermoconductivity sensor (VQ-06 type) for measurements till 100% vol.
The outlet signal is 4-20mA with 3 conductors.
All the RTC series sensors are compatible with the Explorer control units and with any control unit admitting the signal 4-20mA.
The transmitters are supplied with a specific circuit balancing automatically the zero point drifts.
Through the buttons and the display you can access a list of combustible gas with the referred correction factors, respect to the standard gas calibration (CH_4).

RTC Series is made of the following sensors :

- **RTC 1001:** Sensor with transmitter of combustible gas at 0-100%LEL, VQ-01, standard applications, CH_4 calibration
- **RTC 1002:** Sensor with transmitter for combustible gas at 0-100 %LEL, VQ-21 PR, inside environments rich of silicones, lead, Sulphur-containing compounds, and halogen hydrocarbons.
- **RTC 1003:** Sensor with transmitter at 0-100 %VOL thermal conductivity, VQ-06, for measurement in % volume of Methane, Carbon Dioxide, Helium, etc.
- **RTC 1004:** Sensor plus transmitter for combustible gas at 0-100%LEL, VQ-01, standard applications , calibration different from CH_4 (to be specified during the Purchase Order)
- **RTC 1005:** Sensor plus transmitter for combustible gas at 0-100%LEL, VQ-21 PR, calibration different from the CH_4 (to be specified during the Purchase Order)

Purchase Order Details	RTC 1001	1001700
	RTC 1002	1001710
	RTC 1003	1001730
	RTC 1004	1001705
	RTC 1005	1001715

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Cap. Soc.€.110.000,00 int.Vers.
C.C.I.A.A. 38999 GE
RE.A. 365226 GE
P.IVA e C.F. 03618890101

Technical Specifications	
Mechanical Details	
Enclosure	Die-cast aluminum
Dimensions	71 (H) x 40 (P) x 53 (L)
Weight	620 gr.
Enclosure rating	IP-6X
Electric Details	
Display	Internal with 7-segments, 4-digit LCD
Power Supply	12- 24 Vcc
Absorption	5 – 25 W
Connection	4-20mA, 3 conductors
Sensitivity	1%
Linearity	100%
Sensors	
Measurement range	▪ 0 – 100 % LEL ▪ 0 – 100 % vol.
Sensor	▪ Catalytic VQ-01 ▪ Catalytic VQ-21 PR ▪ Thermal conductivity VQ-06
Response Act	T_{90} < 25 sec.
Working operative conditions	
Temperature	-20°C / + 55°C
Humidity	0% - 95% low levels of humidity (not condensing)
Pression	Atmospheric +/- 10%

Certifications	CE – Electromagnetic Compatibility **ATEX II G Ex D IIC T6 Gb** **RINA ELE 272113CS** **MED 272113CS** **ABS 13-GE975317-PDA**

Set-up parameters	▪ Language (Italian, English) ▪ Gain, offset, and range for each channel ▪ Alarm levels ▪ Channel sample time

Gas	Range	Gas	Range
Methane CH_4	0 ÷ 100% LEL	**Helium He**	0 ÷ 100% LEL
Propane C_3H_8	0 ÷ 100% LEL	**Chlorobenzene C_6H_5Cl**	0 ÷ 100% LEL
n-Butane C_4H_{10}	0 ÷ 100% LEL	**Ethanol C_2H_6O**	0 ÷ 100% LEL
Iso- Butane C_4H_{10}	0 ÷ 100% LEL	**Ethane C_2H_6**	0 ÷ 100% LEL
n-Pentane C_5H_{12}	0 ÷ 100% LEL	**Ethyl Acetate $C_4H_8O_2$**	0 ÷ 100% LEL
Gasoline Gas	0 ÷ 100% LEL	**Ethylene C_2H_4**	0 ÷ 100% LEL
n-Eptane C_7H_{16}	0 ÷ 100% LEL	**Ethylmercaptane C_2H_6S**	0 ÷ 100% LEL
n-Hexane C_6H_{14}	0 ÷ 100% LEL	**Iso-Butyl alcohol $C_4H_{10}O$**	0 ÷ 100% LEL
n-Optane C_8H_{18}	0 ÷ 100% LEL	**Isopropyl alcohol C_3H_8O**	0 ÷ 100% LEL
Toluene C_7H_8	0 ÷ 100% LEL	**Isobutylene C_4H_8**	0 ÷ 100% LEL
Nitrogen NH_3	0 ÷ 100% LEL	**Methanol CH_4O**	0 ÷ 100% LEL
Acetone C_3H_6O	0 ÷ 100% LEL	**Methyl Mercaptane CH_3SH**	0 ÷ 100% LEL
Acetylene C_2H_2	0 ÷ 100% LEL	**Methil Ethyl ketone C_4H_8O**	0 ÷ 100% LEL
Acetic Acid $C_2H_4O_2$	0 ÷ 100% LEL	**Xylene C_8H_{10}**	0 ÷ 100% LEL
Benzene C_6H_6	0 ÷ 100% LEL	**Methyl Amine CH_5N**	0 ÷ 100% LEL
Ethyl Benzene C_8H_{10}	0 ÷ 100% LEL		0 ÷ 100% LEL