REL/isp
Dual Channel Control Modules

Point to Point Gas and Fire Detection Modular Systems
SIL2 Compliant

REL/isp is a plug-in module which fit a standard 3U (51/4") 19 inches eurocard rack.

Each module REL/isp consists of dual input channels designed to operate with (4-20 mA) transmitters, LED's bar graph or graphic display, built in power supply, audio and visual alarms.

REL/isp performs redundant five programmable logic outputs with **I**n **S**ystem **P**rogrammable Technology.

ISP Technology allows us to realize programmable and reprogrammable logic functions for each alarm condition.

Reprogrammable capability enables fast and easy modifications of system design, will lead to a substantial reduction of developing, management and systems expansion costs, assuring users continuous updating process, preserving investments for a long time.

AR400 systems are particularly suitable for both small locations or large sites where it is preferable to have a number of small self-contained monitoring systems connected by a field bus to a remote Host System.

AR400 systems consist of one power unit, up to 4 REL/isp modules and 12 ISP alarms outputs with (SPDT) relay rated at 3A 250 Vac.
Driver for serial line RS-485 Modbus RTU.

All **REL/isp** units have a standard serial line RS-485 Modbus RTU allowing the connection with a remote master system (PC or PLC).

For **REL/isp** modules management, our company supplies a software package able to realise real-time supervision, remote control operations, historical trends analysis, as well as alarms management and applications library of ready-to-go configurations .

Wall mounting case AR600

For larger systems, multiple racks are used.

AR600 is the standard case for max. 8 REL/isp modules and 12 ISP alarms outputs with (SPDT) relay rated at 3A 110 Vac.
AR1200: up to 16 REL/isp modules and 24 ISP relays outputs.
AR1500: up to 24 REL/isp modules and 36 ISP relays outputs.
AR2000: up to 40 REL/isp modules and 60 ISP relays outputs.

All AR series cabinets are supplied fully wired, with one power unit, fan ventilation system, driver for serial line RS-485 Modbus RTU.

GENERAL SPECIFICATION

Three leds indicator for three different alarm levels (L1, L2 and L3).
Graphic display 128x64 Pixel with ICONS and full status visualization.
Fault led indicator (Fuse status, sensors fault, main power fail, battery fail).
Battery or main power supply led indicator.
Alarm and fault acoustic indicator (buzzer).
Reset and acknowledge alarm buttons.
Redundant logic for safety function (SIL2 compliant).

4-20mA analogue signal input (also available optional 0-5V input).
Three programmable alarm levels, independently settable in the range of
0-100% F.S.
Five alarm outputs configurable even with isp technology .
System watch-dog.

Bar graph indicator related to the analogue input or
graphic display with real time gas concentration visualization.
Safety function when analog signal imput exceeding 90% f.s.
This function automatically switch-off the power supply to the field sensor .
Automatic sensor ZERO drift compensation.

Sensor self-checking and average values algorithms for signal conditioning.
Digital calibration procedure, locally performed by a PC or by a remote
control device.
Standard RS-485 Modbus RTU serial line.

Graphic visualization of customer logo.
Graphical programming, VHDL and VERILOG language support.
Extensive libraries of ready-to-go configurations available.

Electrical Specification

Supply voltage	16Vac or 24Vdc
Supply current (norm. condition)	160 mA max.
Supply current (alarm condition)	200 mA max.
Supply fuse	1 A
Stabilized power supply output	13.75 0,5 mA
Overvoltage protection	± 50V.

Enviromental Specification

EMC	According to EN61000-4
Storage temperature	-40 to 85 °C
Operating temperature	-20 to 70 °C
Humidity range	90% R.H. n.c.

Mechanical Specification

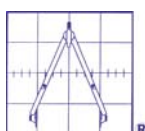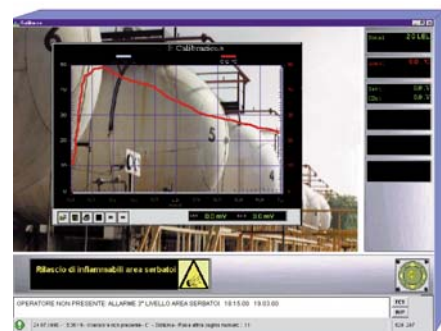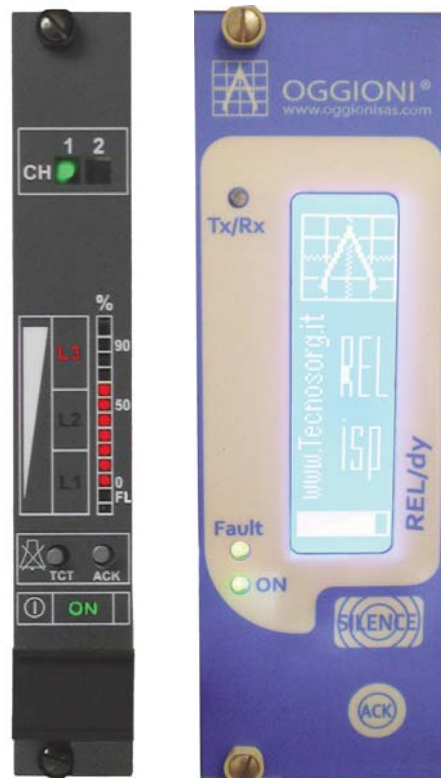|	
Overall dimensions	100x160 mm eurocard
Front Pannel	4TE (bar graph) / 8TE (display)
Mounting	3U - 19" Rack
Cabling	20 pin male ribbon connector

Part number description

REL/isp = Modular card with bar graph indication

REL/isp-dy = Modular card with graphic display