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FS82426



SIEDEGAS

Presentation

SIEMENS

SIEMENS

DETECTION AND MEASUREMENT
OF TOXIC AND EXPLOSIVE GASES



SIEDEGAS



SIEDEGAS MINI

- Expandable control panels from 1 to 4 module lines, with a capacity of up to **16 DETECTORS PER MODULE LINE**.
- A **MINI VERSION**, non expandable with a capacity of 16 detectors, is available.
- Digital communication with detectors through **FOUR WIRES** in RS 485 format.
- Maximum installation distance **1 KM PER MODULE LINE**.
- Simultaneous detection of up to **FOUR DIFFERENT GASES PER MODULE LINE**, in real time.
- **"PLUG AND PLAY"**, automatically detects the quantity, type and family of the detectors installed, auto-adjusting the adequate ranges and ventilation levels depending on the various TLVs.

CONTROL UNIT

CONFIGURATIONS

CONNECTIONS

DETECTORS

- Possibility of selecting up to **THREE DIFFERENT FULL SCALES PER GAS**, and various ventilation and alarm levels.
- Two standards included: **SPANISH & PORTUGUESE**.
- Includes five languages: **SPANISH, ENGLISH, PORTUGUESE, GERMAN & FRENCH**.
- Tension outputs **PROTECTED** with automatic rearm fuses.
- Optionally a **COMMUNICATIONS MODULE WITH DOUBLE OUTPUT**, RS232 and RS485, can be added, allowing integration of the system in OPC-SERVER or MODBUS format.

MAIN CHARACTERISTICS

- Intuitive and simplified use.
- Access to independent user and engineer menus, password protected.
- Specific menus for installation and control panel testing.
- Option allows setting detectors in test mode.
- System is backward compatible with earlier detector families, EUROSONDELCO, SIEMENS CC62P, DURTEX, DIREX & DURTOX.
- Up to 4 groups with single speed ventilation can be programmed or 2 double speed ventilation groups.
- Each module line includes 4 tension free outputs, one 12V bistable alarm tension output and a 12V auxiliary tension fixed output.

CONTROL UNIT

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DETECTORS

DISPLAY INFORMATION IN ON MODE

GROUP NUMBER
INFORMATION
GR1-GR2 OR GR4

GR1

D01

DETECTOR NUMBER
FROM 01 TO 16.

GROUP GAS
CO-H₂S-SO₂
HCN-NO₂-NO-
NH₃-CL₂-HCL-
CO₂-O₂-EXP

CO

000PPM

DETECTOR GAS
CONCENTRATION IN
REAL TIME, PPM- %
LEL- ERROR- FAULT
SENSOR- SATURATION
AND DETECTOR
GENERAL STATUS.

INFORMATION ON VENTILATION
STATUS PER GROUP. AUTO-STOP-
MANUAL-VENT-1 VENT.2 -G.OFF-
V.CICLI- AND MAX ALTERNATING
WITH THE OTHERS, ONLY WHEN THE
READING MODE IS PROGRAMMED TO
MAXIMUMS.

AUTO

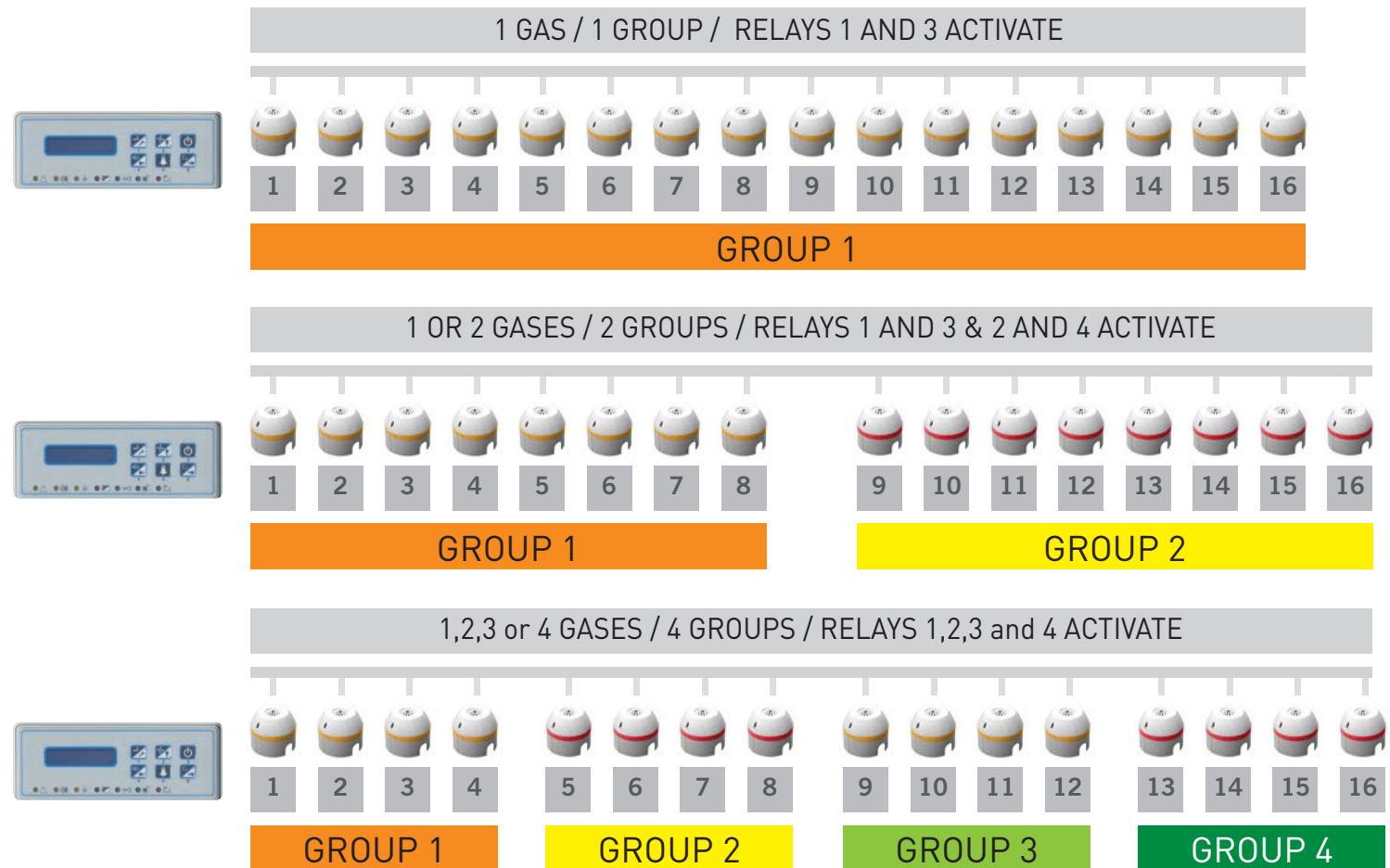
NVE1

INFORMATION REGARDING
MANEUVRE LEVELS REACHED OR
INHIBITED DETECTORS.
LVe1-LVe2-NANa-INH

MODULE LINE CONFIGURATIONS: SPANISH STANDARD

Each module line can be divided into 1, 2 or 4 groups/gases (each of which has available 1 relay for actuation) controlling 1, 2 or 4 actuation groups independently.

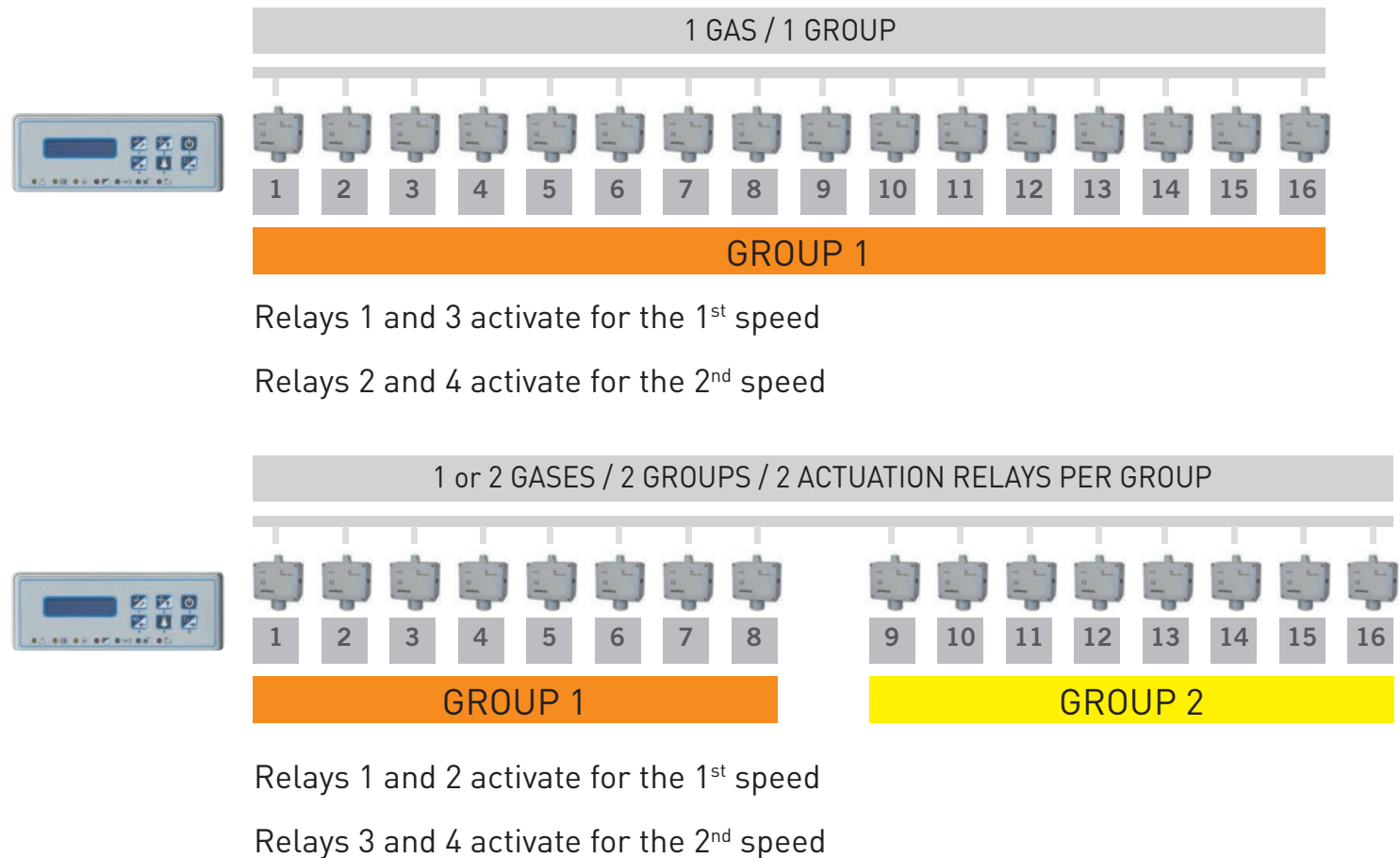
Each group can only be composed of detectors for the same gas (plastic or ATEX housing). The SIEDEPAR RS485 detectors are not compatible with the rest of detectors.



MODULE LINE CONFIGURATIONS: PORTUGUESE STANDARD

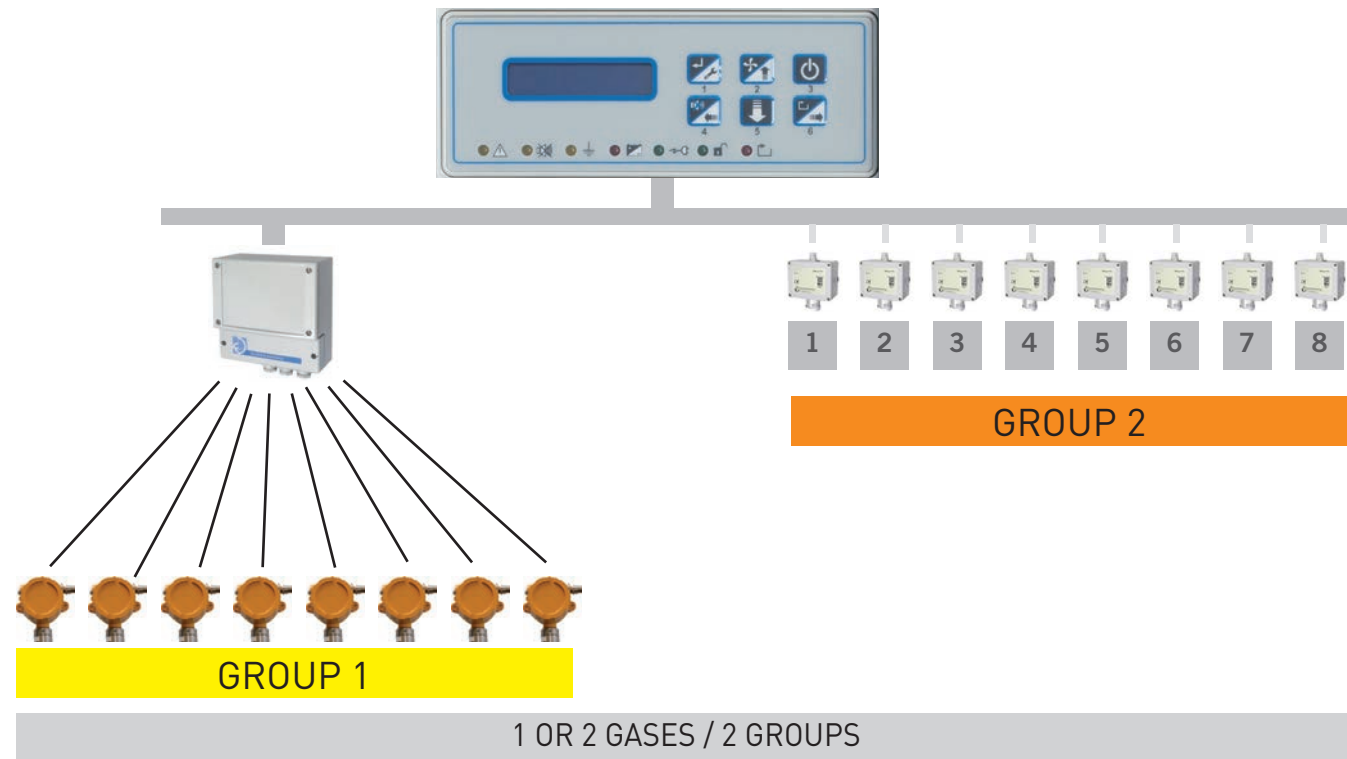
Each module line can be divided into 1 or 2 groups. Each group has 2 relays assigned that make it possible to carry out two actuations at two different levels.

Each group can only be composed by detectors for the same gas (plastic or ATEX housing).



INSTALLATION EXAMPLE WITH 1 SIEDEGAS 4-20MA INTERFACE AND RS485 DETECTORS

- 1 Interface for 8 4-20mA detectors + 8 detectors compatible with SIEDEGAS (except SIEDEPAR RS485)

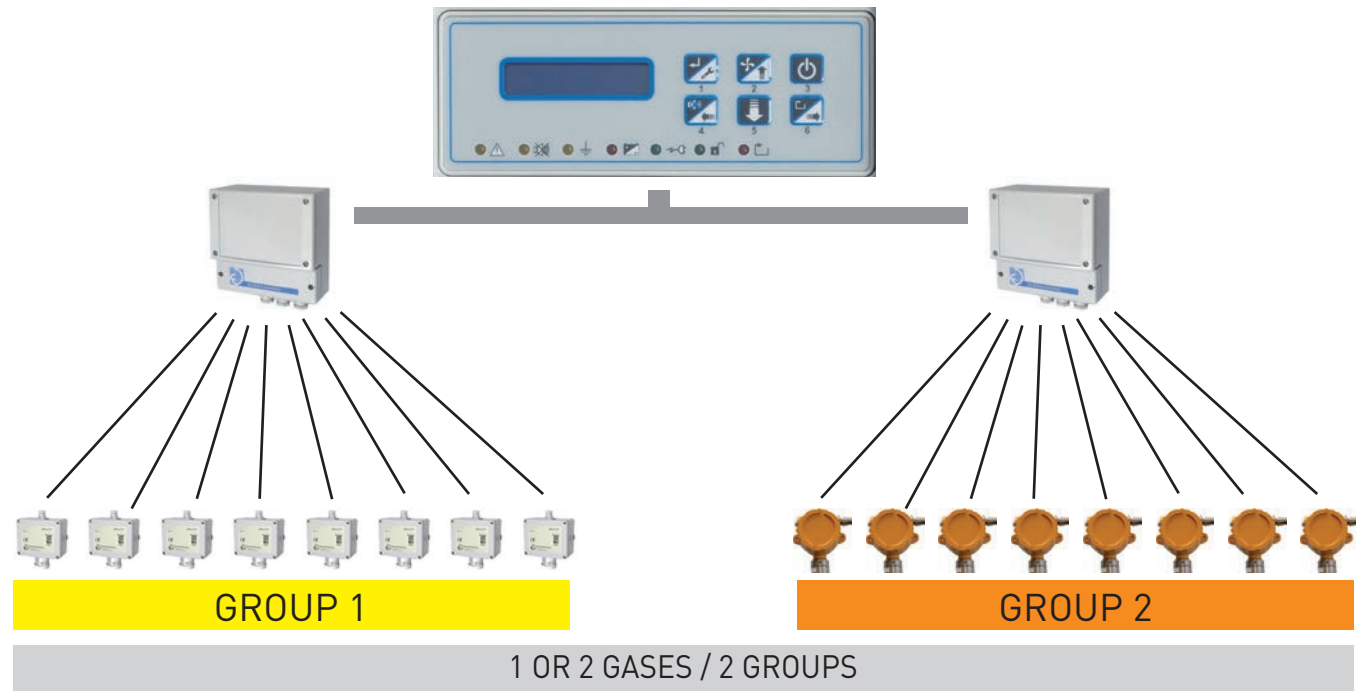


The detectors connected to the interfaces are automatically addressed in accordance to the number of the input to which they are connected.

Connection of the 4-20mA detectors is point to point.

INSTALLATION EXAMPLE WITH 2 SIEDEGAS 4-20MA INTERFACES

- 1 Interface for 8 standard 4-20mA detectors + 1 interface for 8 standard 4-20mA detectors



The detectors connected to the interfaces are automatically addressed in accordance to the number of the input to which they are connected.

Connection of the 4-20mA detectors is point to point.

REMOTE RELAY OPTIONAL MODULES

- To be connected in the module line loops, in whichever point of the installation desired.
- Very flexible programming and association modes.
- Mirror mode association.
- Associated to detectors (one relay output per detector).
- Combined mode, for example up to 4 modules associated to detectors+1 in mirror mode.
- Four manoeuvre outputs + one fuse protected alarm relay.
- Individual optical indication of manoeuvre status and communication status.



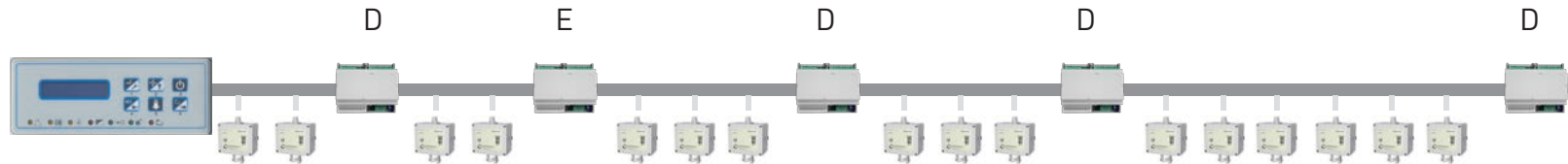
REMOTE RELAYS MODULE

They are connected in the module line loops, in whichever point of the installation desired, up to a maximum of 5 per loop.

They can act in two ways:

- Associated to detectors, with a relay output per detector (D)
- Associated in Mirror Mode, as clones of the module line relays. (E)

Combination example:



The module line allows programming of any kind of association between the module line relays, the remote module relays and the detectors allowing for example the association of 1 relay to each detector.

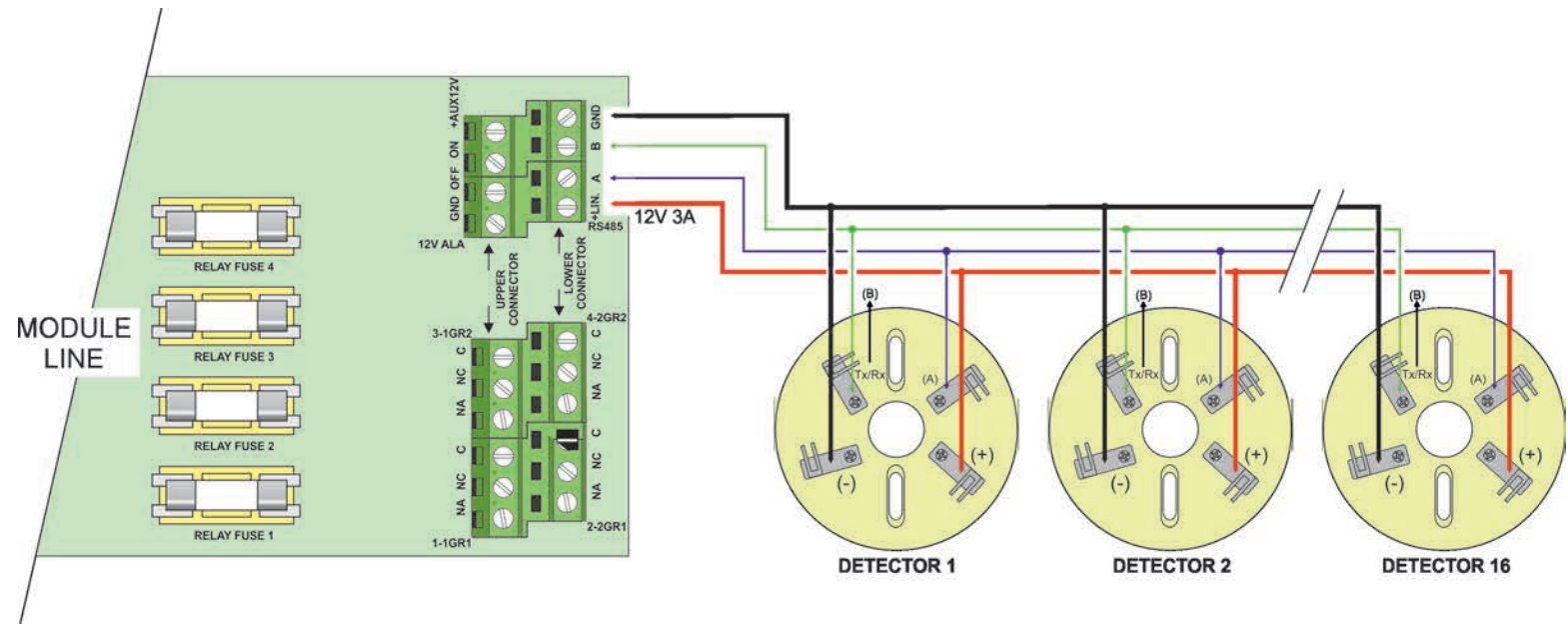
CONTROL UNIT

CONFIGURATIONS

CONNECTIONS

DETECTORS

SIEDEPAR RS485 DETECTORS CONNECTION



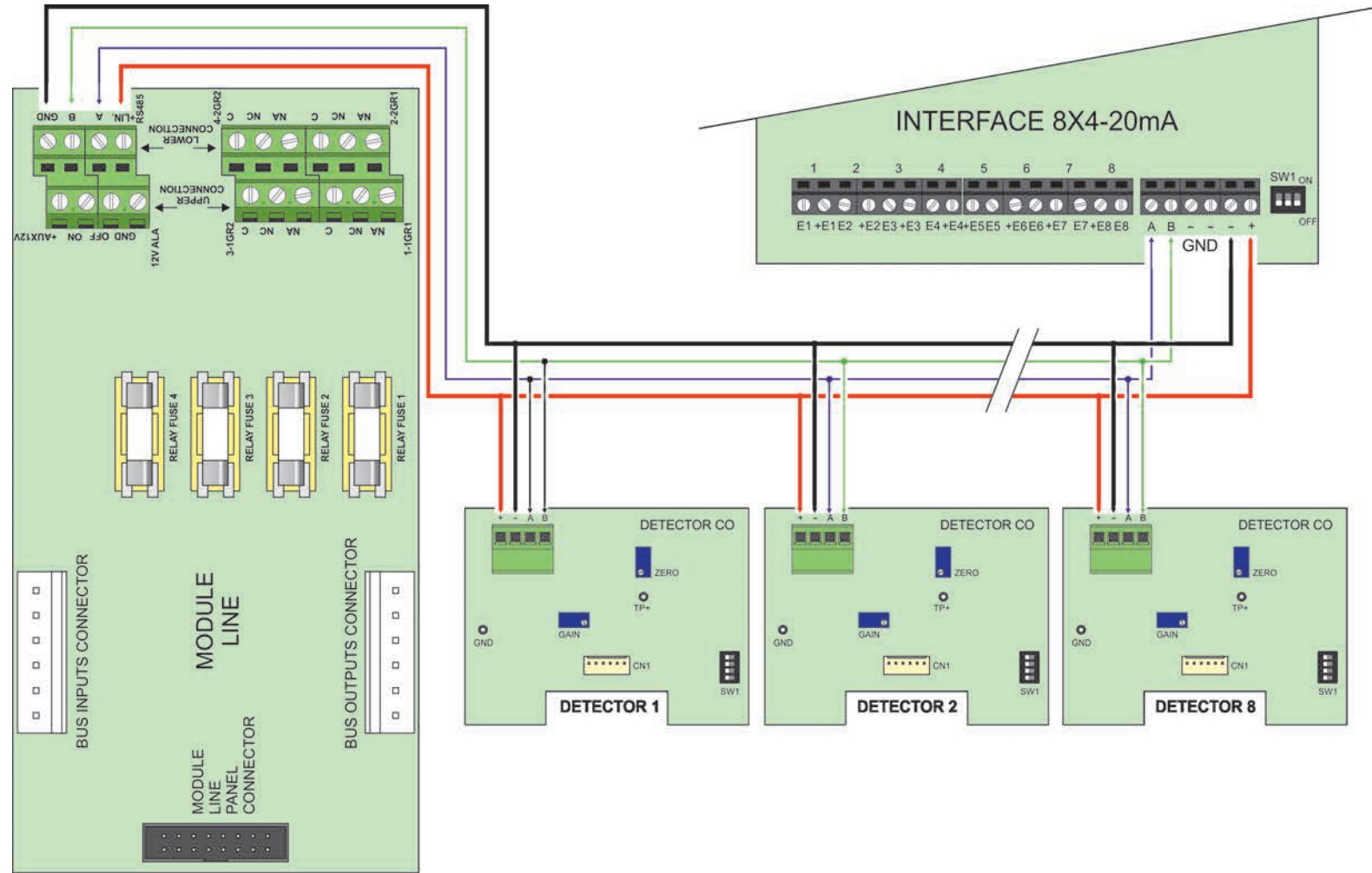
CONTROL UNIT

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8 EURODETECTORS + 1 SIEDEGAS 4-20mA INTERFACE CONNECTION



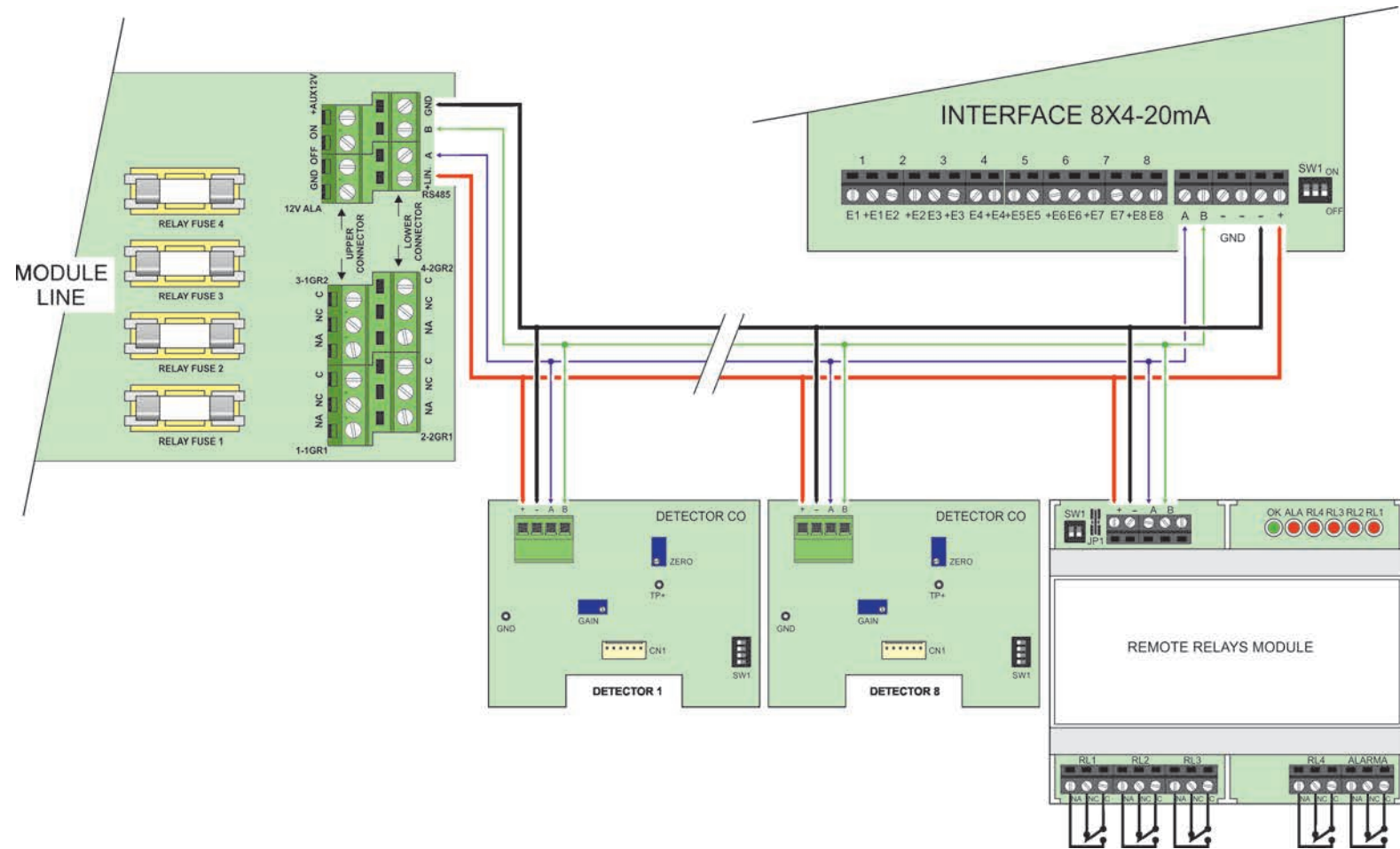
CONTROL UNIT

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DETECTORS

8 EURODETECTORS + 1 SIEDEGAS 4-20MA INTERFACE + 1 REMOTE RELAY MODULE CONNECTION



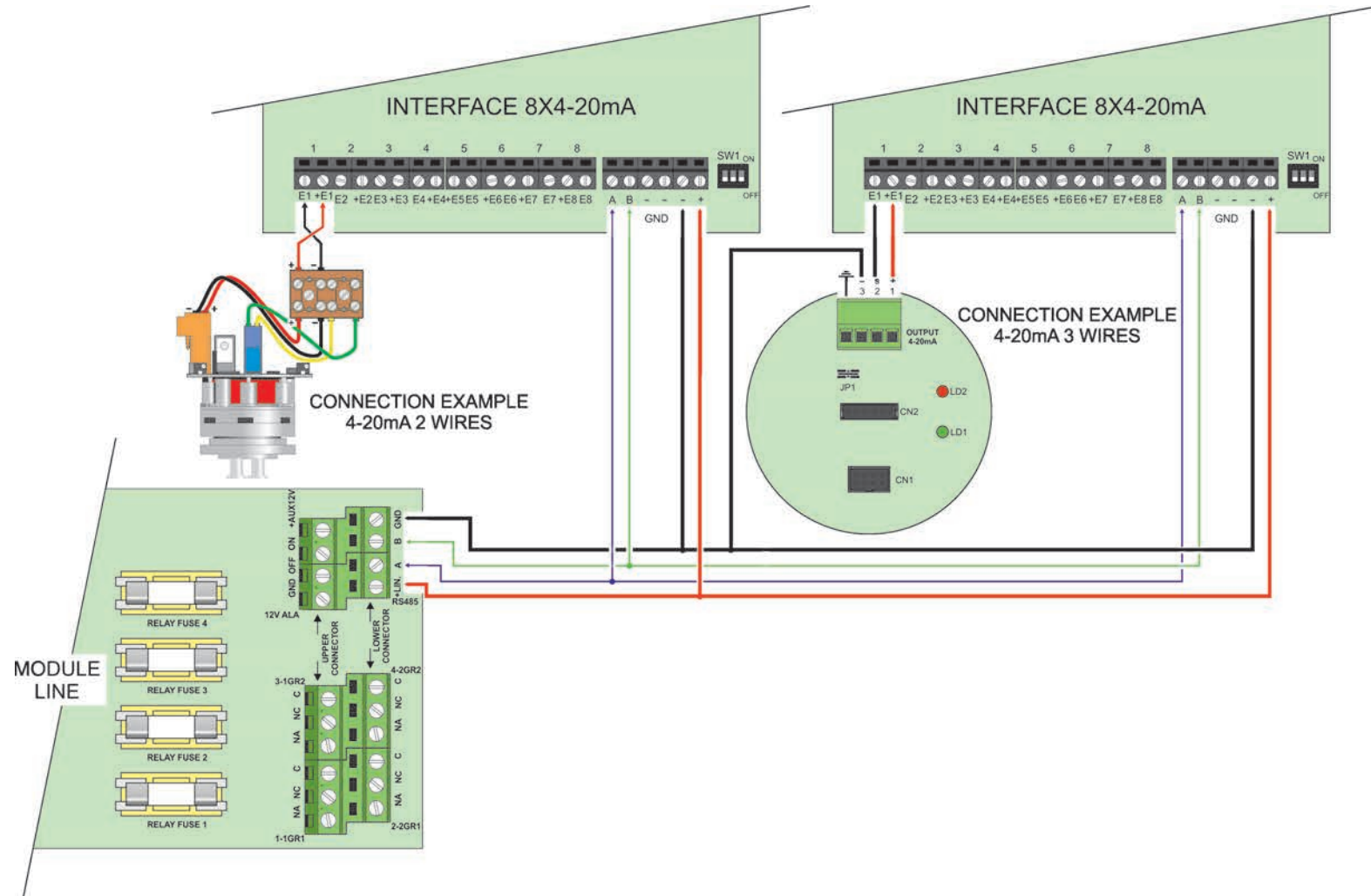
CONTROL UNIT

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TWO SIEDEGAS INTERFACES WITH 4-20mA DETECTORS CONNECTION



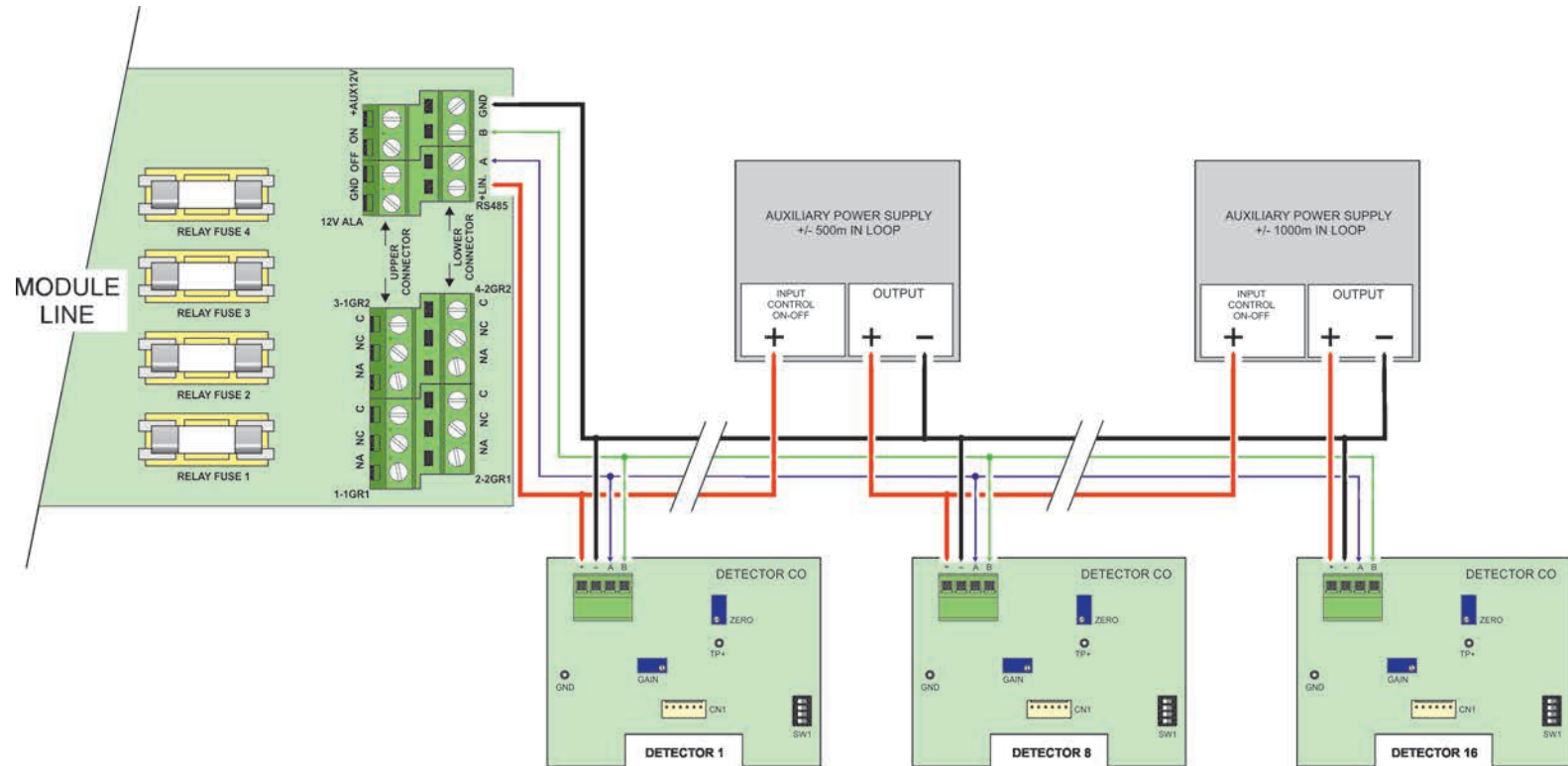
CONTROL UNIT

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DETECTORS

INSTALLATION OF AUXILIARY POWER SUPPLIES



COMPATIBLE DETECTORS

SIEDEGAS uses the following detectors

■ **RS485:**

- New SIEDEPAR RS485 detectors (do not combine with other detector families)
- Eurodetectors (toxic gases and O₂ using electrochemical technology)
- SIDETOX/ DURTOX (toxic gases and O₂ using electrochemical technology)
- SIDETEX/DURTEX (explosive gases using catalytic technology)
- SIDETIR/DIREX (explosive gases and CO₂ using infrared technology)

■ **4-20mA** Any standard model (using interface)

CONTROL UNIT

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DETECTORS

SIEDEPAR RS485



CO DETECTOR



NO₂ DETECTOR

CO AND NO₂ DETECTORS USING LOW COST ELECTROCHEMICAL SENSOR

FOR UNDERGROUND CAR PARKS AND GARAGES

- Designed with a new type of electrochemical sensor without electrolyte.
- Useful life of up to 5 years (CO) and 3 years (NO₂) with almost no maintenance.
- Two models available, CO with a range of 0-300 ppm and a resolution of 1 ppm. NO₂ with a range of 0-20 ppm and a resolution of 0,5 ppm.
- RS 485 four-wire addressable communication.
- Simple calibration and maintenance procedures, incorporating software with special algorithms that interacts with the detectors and the module line to automatically calibrate zero and gain.
- Special hardware allows verifying CO sensor sensitivity without the need to apply gas.
- Low sensitivity to interfering gases.

A P P L I C A T I O N S G U I D E C H A R T

	O ₂	CO	H ₂ S	SO ₂	NO	NO ₂	Cl ₂	H ₂ TOX	CO ₂	HCl	NH ₃	EXP
RESIDUAL WATERS	●	●	●						●		●	●
CAR PARKS		▲				▲						●
WINERIES	●★			●★					●★			
BOILERS	●★	●★				▲★						●★
AIR QUALITY	●★	●★		●★	●	▲★			●★		●★	
PRINTED CIRCUIT BOARDS				●			●			●		
BATTERY ROOMS								■				●★
TANNING INDUSTRY							●			●		
FUEL TANKS												●
FERTILIZERS	●		●						●		●	●
FUMIGATION	●						●		●	●		
SERVICE GALLERIES / UNDERG. CONST. WORKS	●	●	●	●					●		●	●
FARMS	●★		●★						●		●★	●★
GASEOUS FIRE SUPPRESSION	●	●							●			
INCUBATORS	●★								●★			
CHEMICAL INDUSTRY & LABORATORIES	●★	●★	●★	●★	●	▲	●★	■	●	●	●★	●★
GREENHOUSES	●	●							●			
LAUNDRY	●★						●★			●		
METALLURGY	●	●		●			●		●	●	●	●
NUCLEAR	●								●			
PAPER INDUSTRY	●			●			●		●	●		●
SWIMMING POOLS	●★			●★			●★		●	●		
RECYCLING PLANTS	●											●
FOOD PROCESSING	●★	●★	●★	●★					●★	●	●★	●★
REFRIGERATION / AIR CONDITIONING							●★		●★		●★	
SILOS	●		●			●			●			●
MECHANICAL WORKSHOPS		▲				▲						●★
TEXTILES	●						●			●		
WATER TREATMENT	●		●	●			●	■	●	●		●
ROAD TUNNELS		●				●						●
RAIL TUNNELS	●	●				●			●			●

- SIEDEGAS RS485 / 4-20mA DTRS.
- ▲ SIEDEPAR SIEDEGAS RS485 / 4-20mA DTRS.
- 4-20mA DTR.
- ★ SIEDESTAN PRO LCD (stand-alone)



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