DURAN electrónica
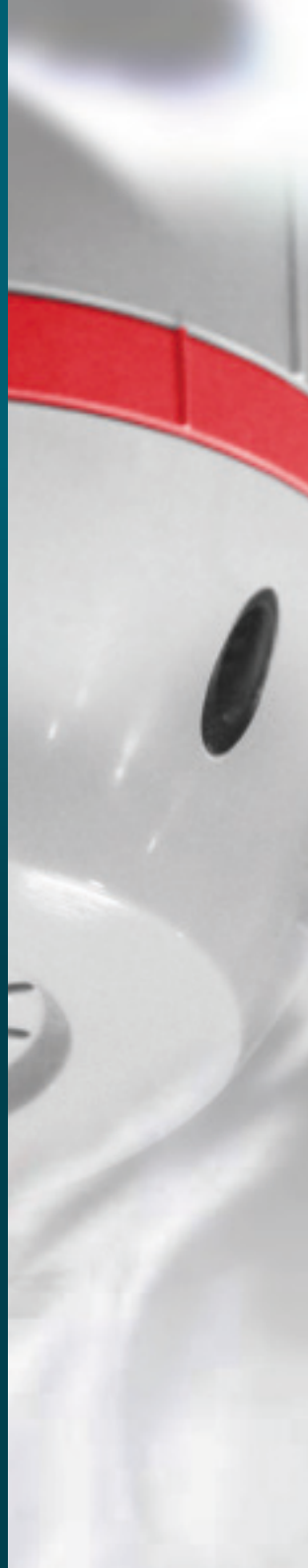
www.duranelectronica.com

DURGAS

Presentation
DURGAS

DETECTION AND MEASUREMENT
OF TOXIC AND EXPLOSIVE GASES

DURGAS

DURGAS 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.

- Possibility of selecting up to THREE DIFFERENT FULL SCALES PER GAS, and various ventilation and alarm levels.

- Three standards included, SPANISH, PORTUGUESE and GERMAN/SWISS.

- Includes four languages, SPANISH, ENGLISH, PORTUGUESE and GERMAN.

- 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

CONFIGURATIONS

CONNECTIONS

DETECTORS

DISPLAY INFORMATION IN **ON MODE**

GROUP NUMBER
INFORMATION
GR1-GR2 OR GR4

GROUP GAS
CO-H_2S-SO$_2$
HCN-NO$_2$-NO-
NH$_3$-CL$_2$-HCL-
CO$_2$-O$_2$-EXP

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.

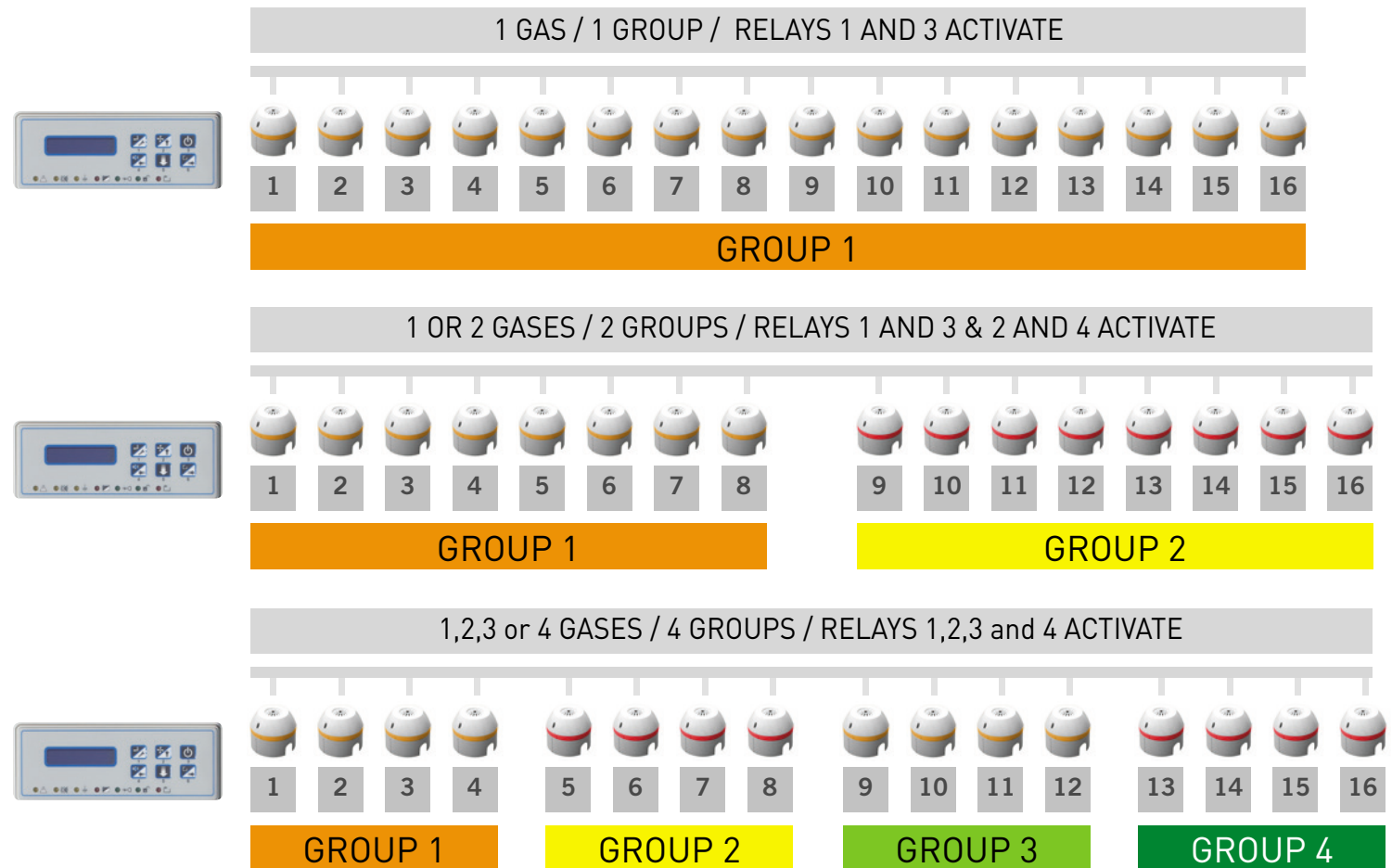GR1   CO   AUTO

D01   000PPM   NVE1

DETECTOR NUMBER
FROM 01 TO 16.

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

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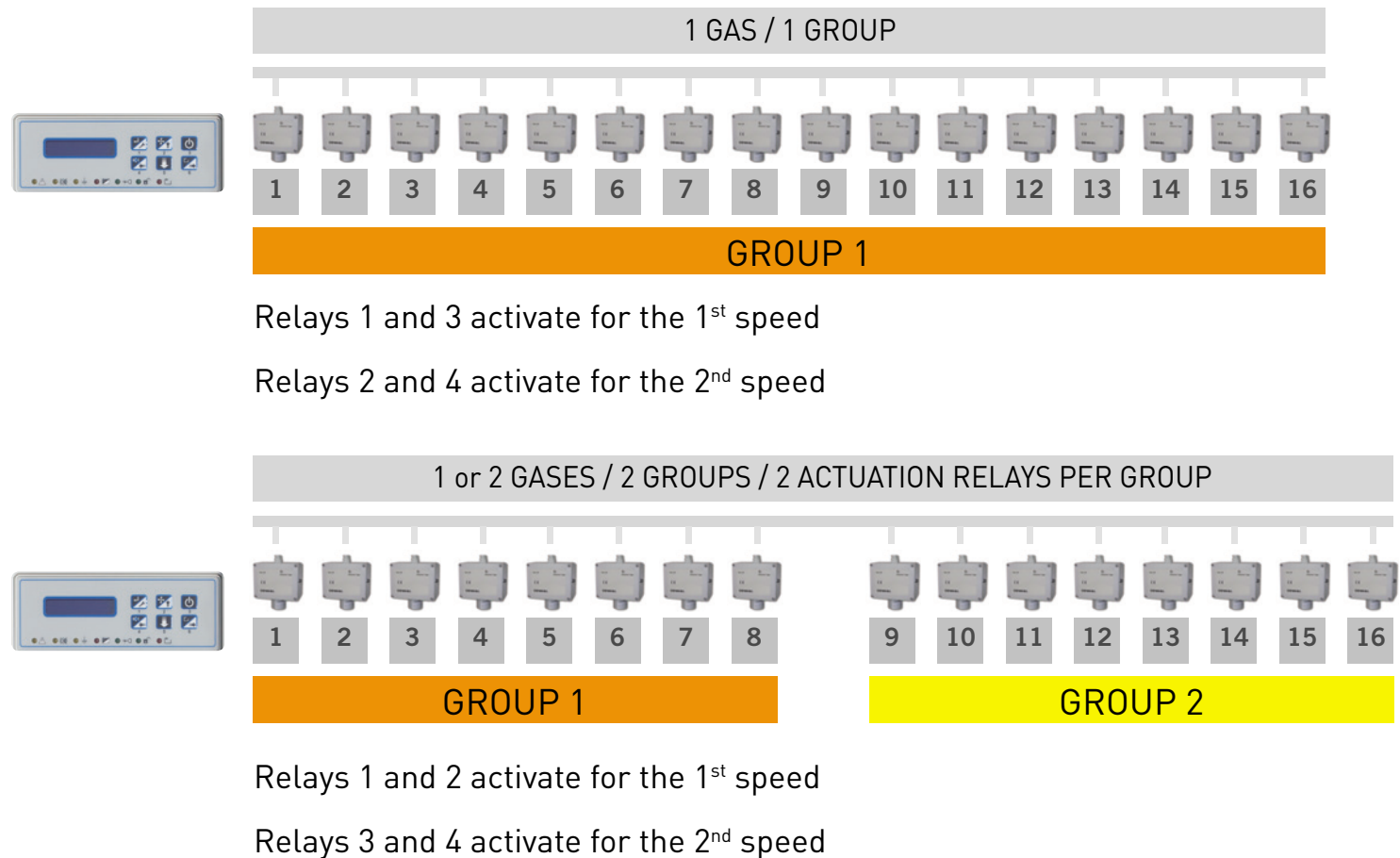
Each group can only be composed of detectors for the same gas (plastic or ATEX housing). The Durpark RS485 detectors are not compatible with the rest of detectors.

POSSIBLE MODULE LINE CONFIGURATIONS

1 GAS / 1 GROUP / RELAYS 1 AND 3 ACTIVATE

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

GROUP 1

1 OR 2 GASES / 2 GROUPS / RELAYS 1 AND 3 & 2 AND 4 ACTIVATE

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

GROUP 1   GROUP 2

1,2,3 or 4 GASES / 4 GROUPS / RELAYS 1,2,3 and 4 ACTIVATE

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

GROUP 1   GROUP 2   GROUP 3   GROUP 4

# 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).

POSSIBLE MODULE LINE CONFIGURATIONS

1 GAS / 1 GROUP

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

GROUP 1

Relays 1 and 3 activate for the 1st speed

Relays 2 and 4 activate for the 2nd speed

1 or 2 GASES / 2 GROUPS / 2 ACTUATION RELAYS PER GROUP

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

GROUP 1   GROUP 2

Relays 1 and 2 activate for the 1st speed

Relays 3 and 4 activate for the 2nd speed

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

• 1 Interface for 8 4-20mA detectors + 8 detectors compatible with DURGAS
   (except Durpark RS485)
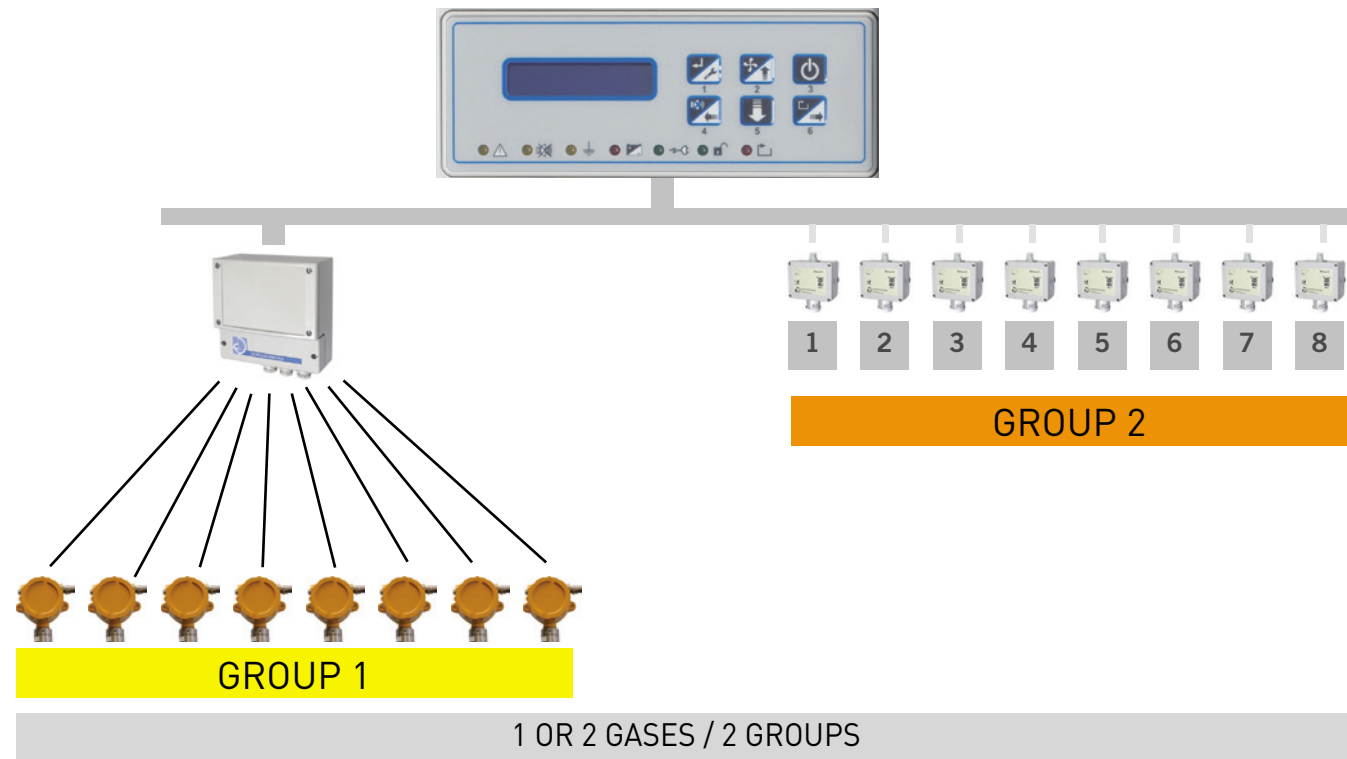
GROUP 2

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8
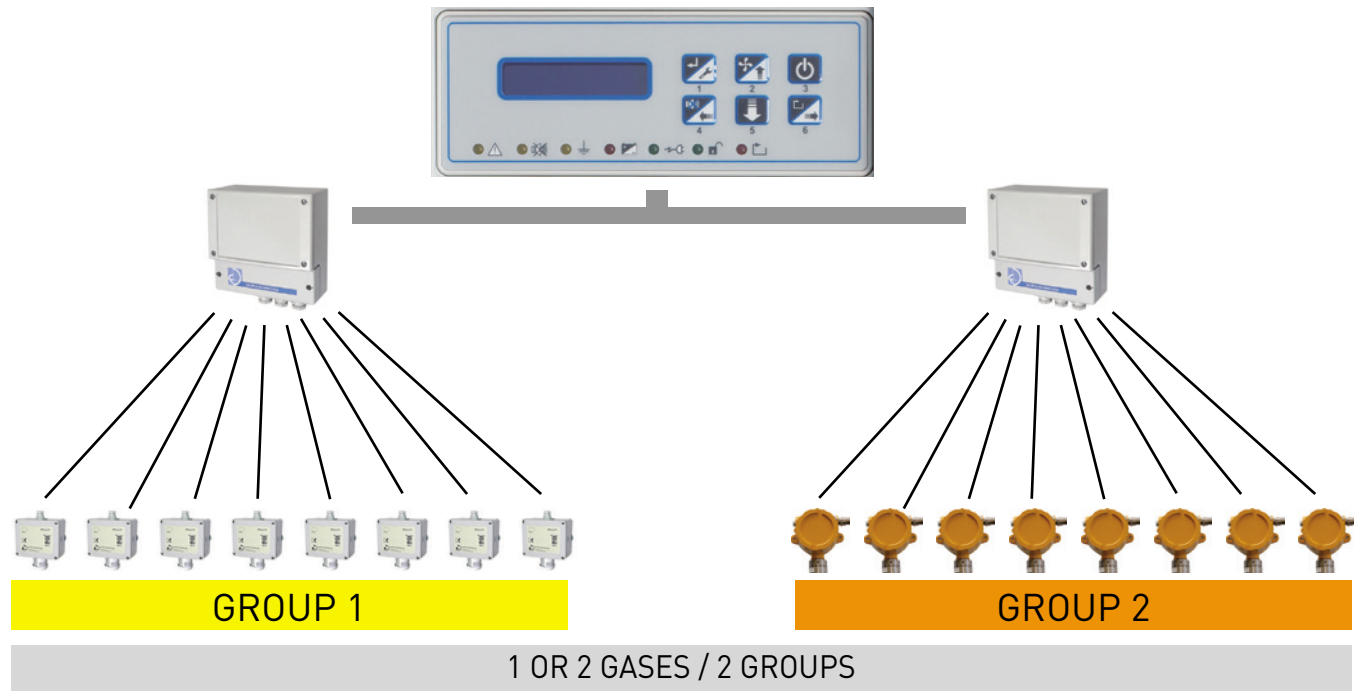
GROUP 1

1 OR 2 GASES / 2 GROUPS

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 DURGAS 4-20MA INTERFACES

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

GROUP 1

GROUP 2

1 OR 2 GASES / 2 GROUPS

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 maneouvre outputs + one fuse protected alarm relay.

- Individual optical indication of maneouvre 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:
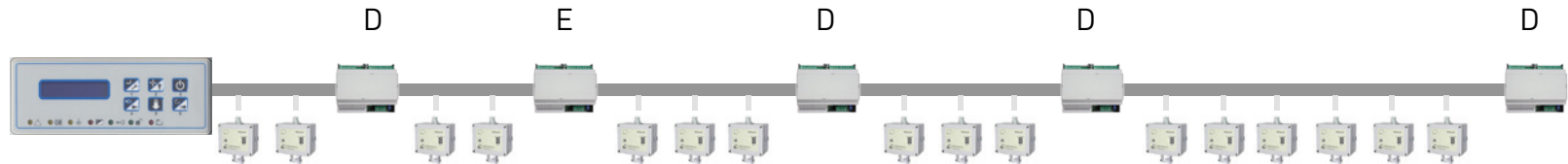
The module line allows programming of any kind of association between the module line relays, the remote module relays and the detectors allowing for example the association of 1 relay to each detector.
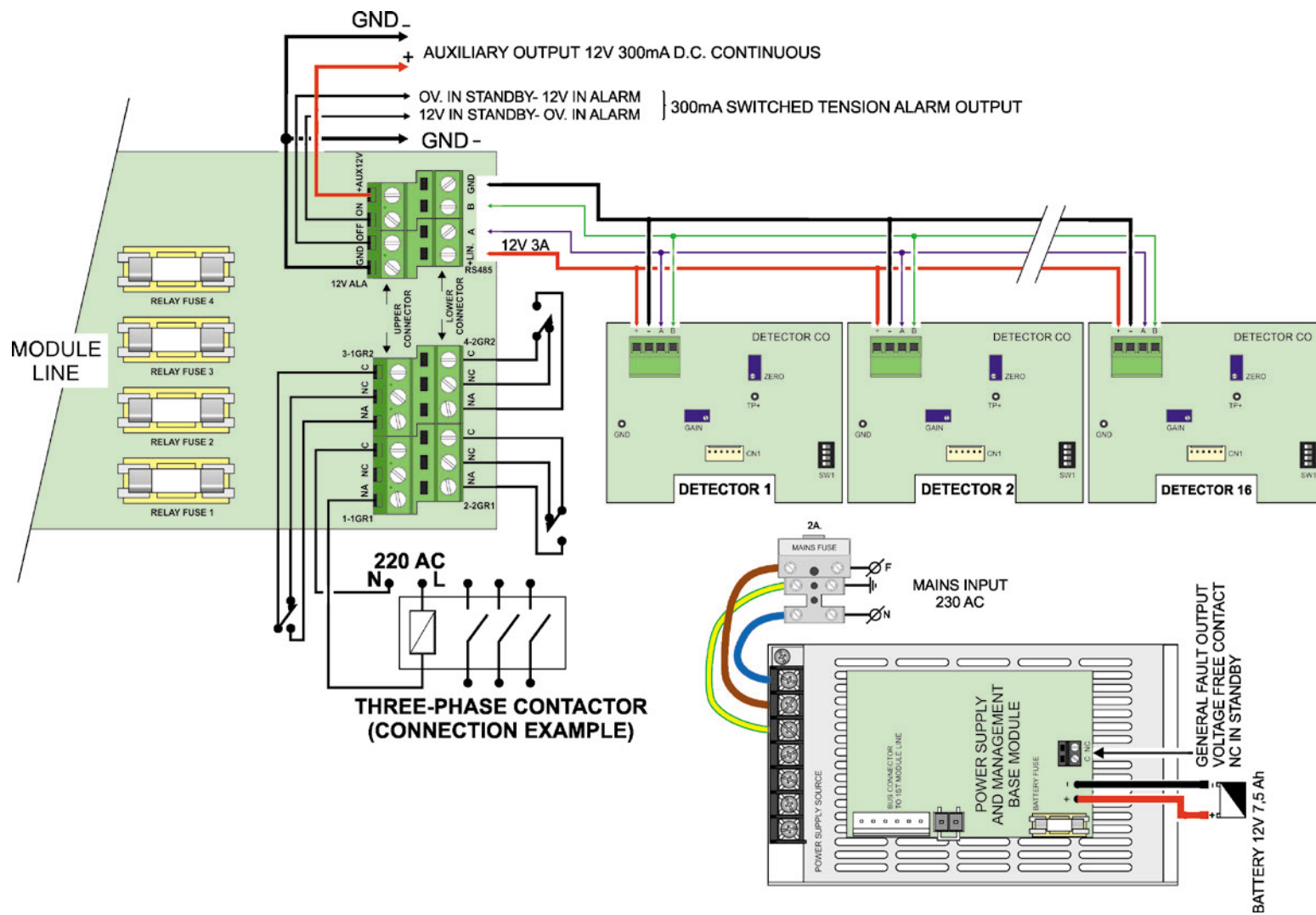
GENERAL CONNECTION AND EURODETECTORS

DURPARK RS485 DETECTORS CONNECTION
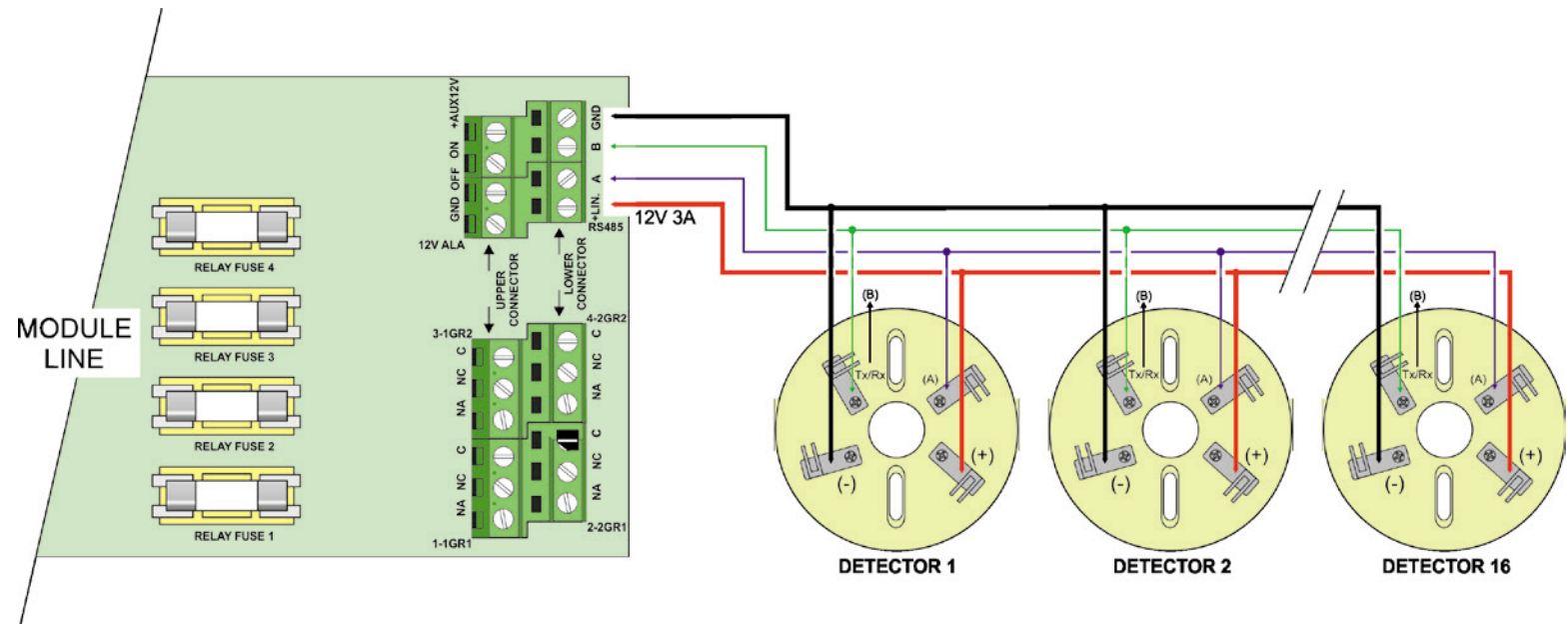
8 EURODETECTORS + 1 DURGAS 4-20MA INTERFACE CONNECTION
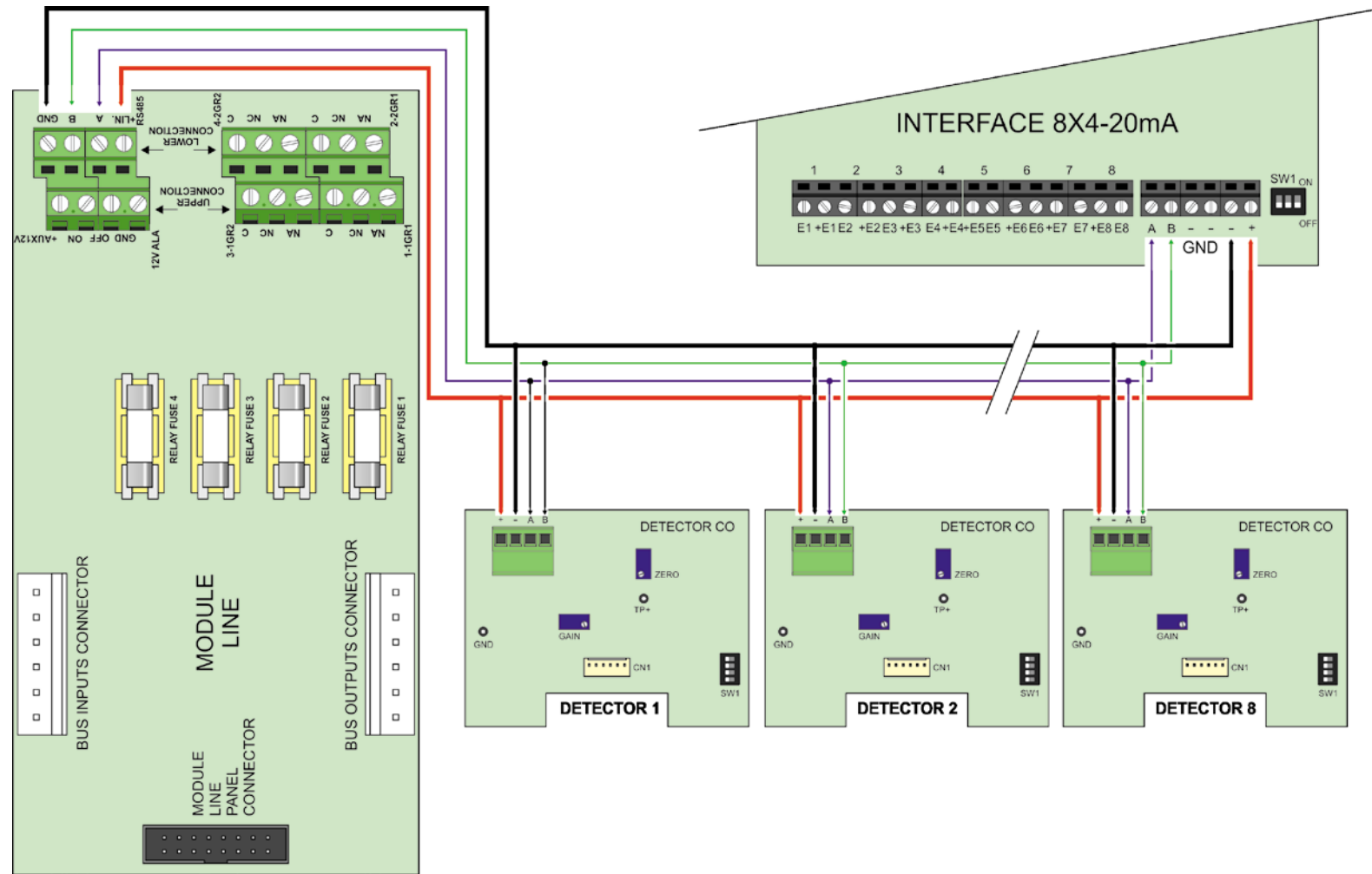
8 EURODETECTORS + 1 DURGAS 4-20MA INTERFACE +

1 REMOTE RELAY MODULE CONNECTION
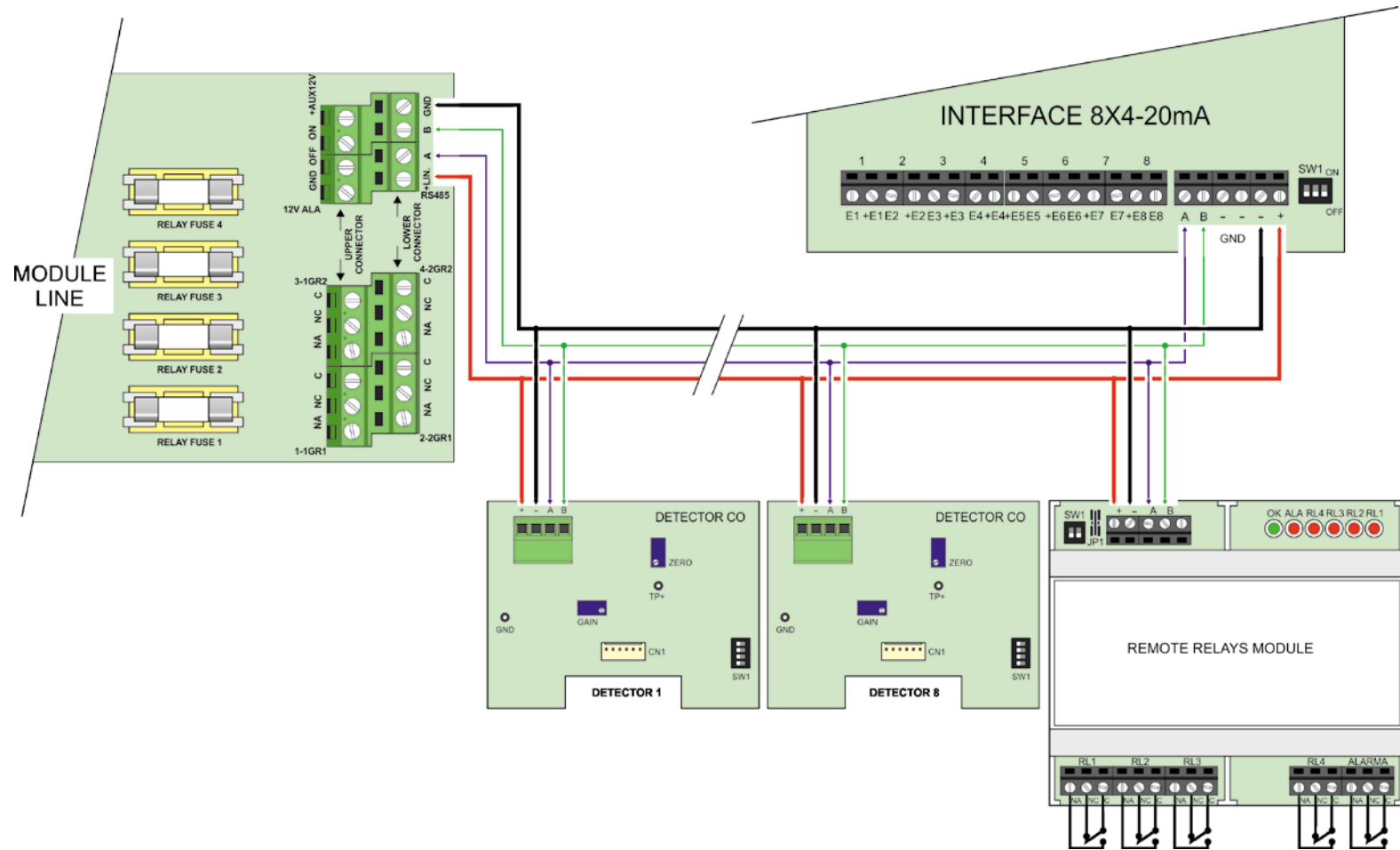
TWO DURGAS INTERFACES WITH 4-20MA DETECTORS CONNECTION
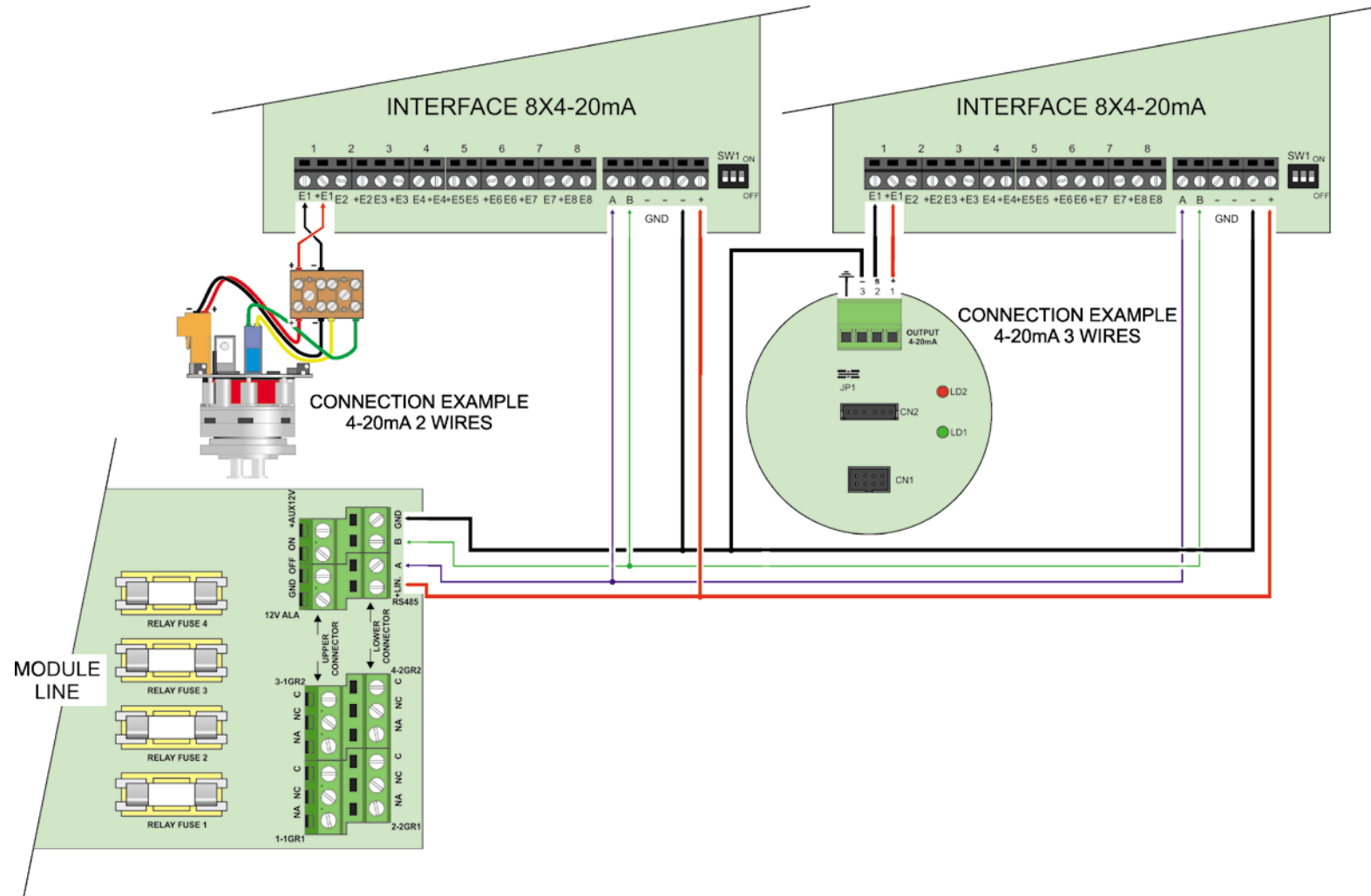
INSTALLATION OF AUXILIARY POWER SUPPLIES
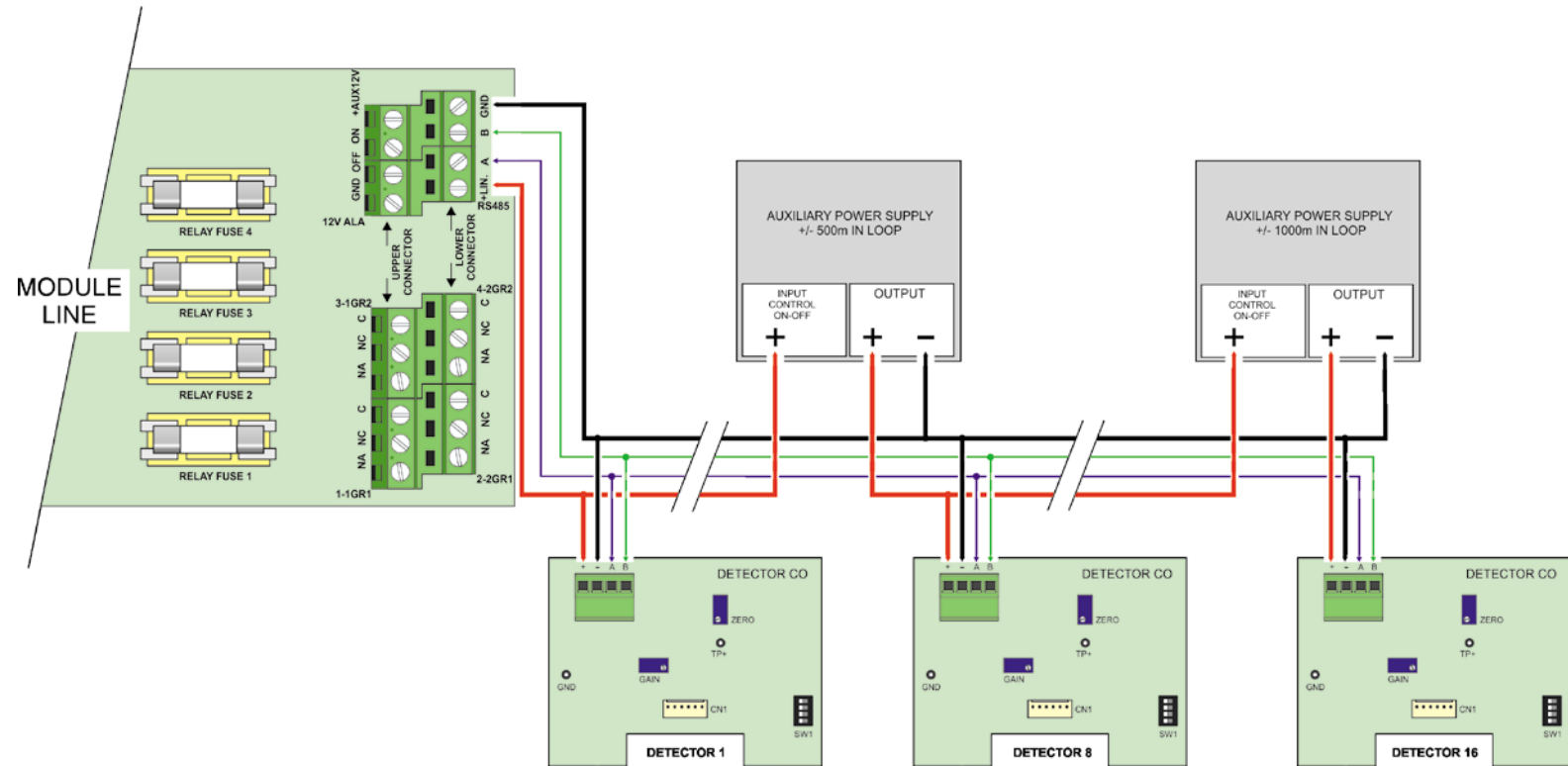
COMPATIBLE DETECTORS

DURGAS uses the following detectors

- **RS485**:

  - New DURPARK RS485 detectors (do not combine with other detector families)

  - Eurodetectors (toxic gases and O_2 using electrochemical technology)

  - DURTOX (toxic gases and O_2 using electrochemical technology)

  - DURTEX (explosive gases using catalytic technology)

  - DIREX (explosive gases and CO_2 using infrared technology)

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

DURPARK RS485

CO DETECTOR

NO$_2$ DETECTOR

CO AND NO$_2$ 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 with almost no maintenance.

- Two models available,CO with a range of 0-300 ppm and a resolution of 1 ppm. NO$_2$ 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 sensor sensitivity without the need to apply gas.

- Low sensitivity to interferring gases.

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	O_2	CO	H_2S	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	●	●				●			●			●

Legend:

- ● DURGAS EUROSONDELCO RS485 /4-20mA DTRS.
- ▲ DURPARK DURGAS EUROSONDELCO RS485 / 4-20mA DTRS.
- ■ EUROSONDELCO 4-20mA DTR.
- ★ STANDGAS PRO LCD (stand-alone)

DURAN®
electrónica