

## EX-I/O

### G13-R4



The EX-I/O can be used as Expansion Module for both N-DIN and MC line relays.

It is connected to the master relay via the CANbus communication channel.

With the EX-I/O module, 5 Digital Inputs and 5 Relay Outputs are available, 1 Input for UnderVoltage detection element.

The Digital Inputs are self-powered and their activation is made by cold contacts.

#### N-DIN - Line

The EX-I/O module can be programmed, by the master relay through one FFP unit, or by the PC connected to the FFP, or by the main supervision system through the RMB unit.

#### MC - Line

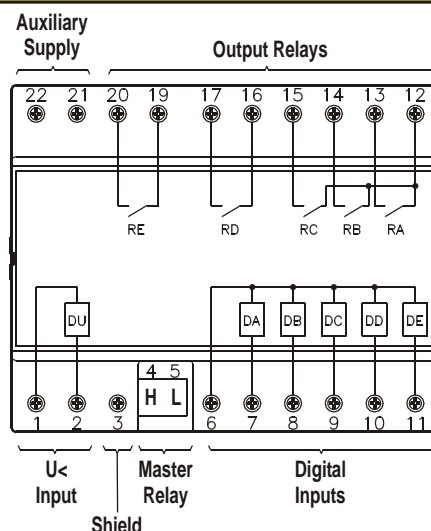
The EX-I/O, module can be programmed by the master relay through its keyboard or by the PC connected to the relay either through its RS232 front port or through its RS485 back port.

#### Auxiliary Power Supply

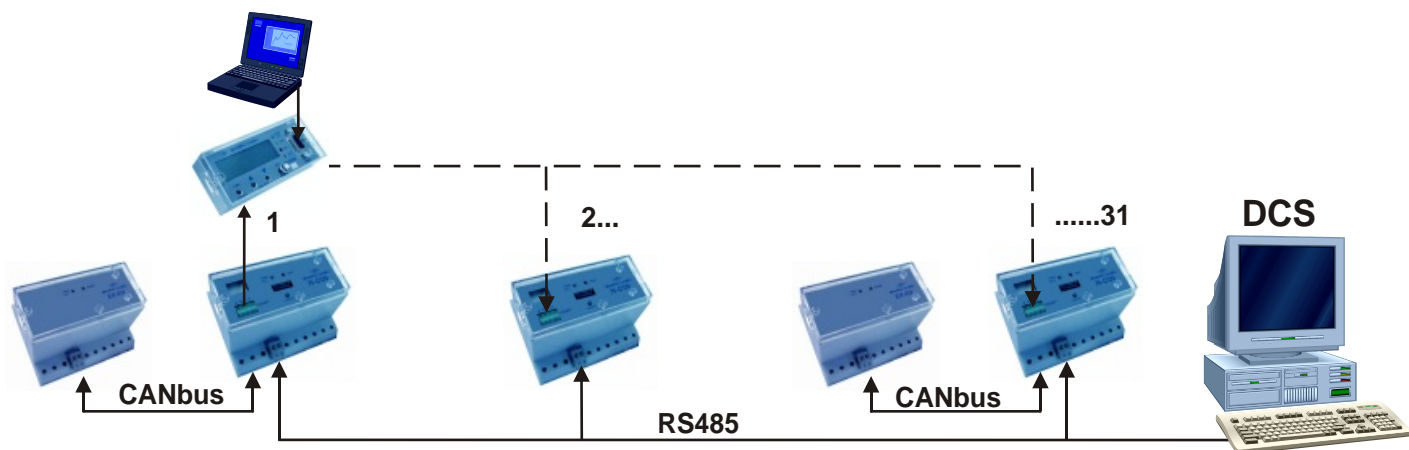
**Type 1** : 24V(-20%) / 110V(+15%) c.a. - 24V(-20%) / 125V(+20%) c.c.

**Type 2** : 80V(-20%) / 220V(+15%) c.a. - 90V(-20%) / 250V(+20%) c.c.

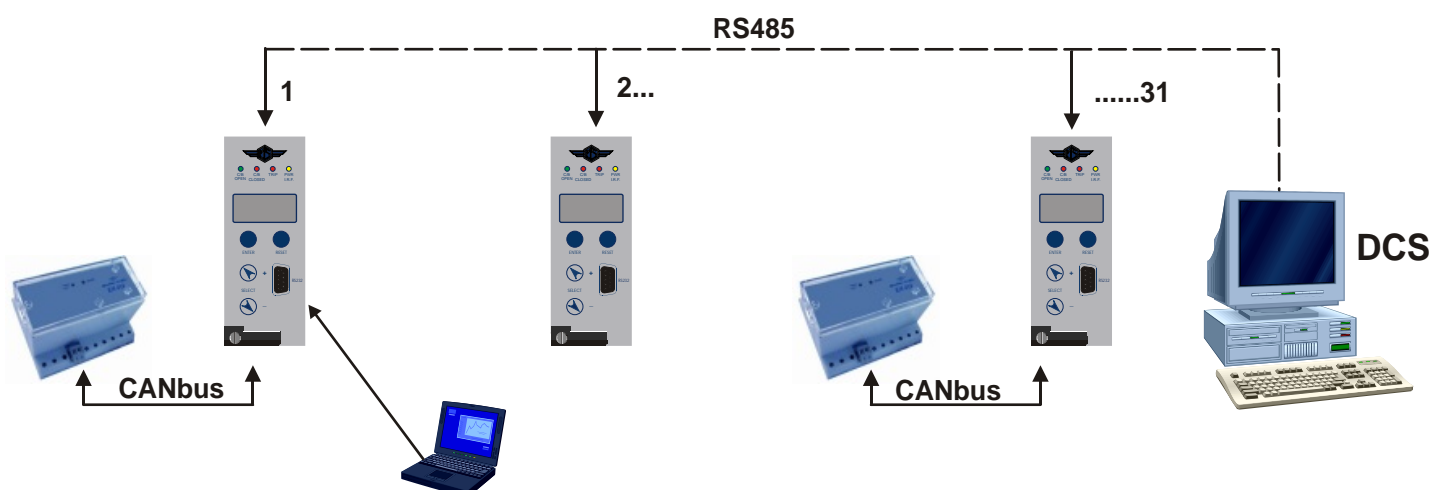
#### CONNECTION DIAGRAM



### N-DIN - Connection Example

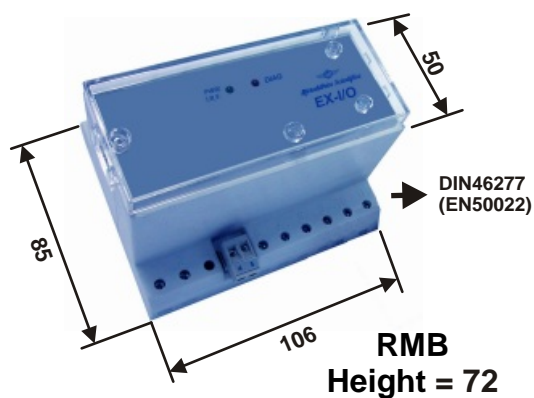


### MC Line - Connection Example



### OVERALL DIMENSIONS (mm)

**TRASPARENT COVER**  
**Dimension 45x108**  
**Height = 9**



**APPROVAL : CE**
**REFERENCE STANDARDS**
**IEC 60255 - EN50263 - CE Directive - EN/IEC61000 - IEEE C37**

Dielectric test voltage	IEC 60255-5	2kV, 50/60Hz, 1 min.
Impulse test voltage	IEC 60255-5	5kV (c.m.), 2 kV (d.m.) - 1,2/50ms
Insulation resistance	>100 M	

**Environmental Std. Ref. (IEC 68-2-1 - 68-2-2 - 68-2-33)**

Operation ambient temperature	-10°C / +55°C
Storage temperature	-25°C / +70°C

**CE EMC Compatibility (EN50081-2 - EN50082-2 - EN50263)**

Electromagnetic radiated and conducted emission	EN55022	industrial environment		
Radiated electromagnetic field immunity test	IEC61000-4-3 ENV50204	level 3	80-2000MHz 900MHz/200Hz	10V/m 10V/m
Conducted disturbances immunity test	IEC61000-4-6	level 3	0.15-80MHz	10V
Electrostatic discharge test	IEC61000-4-2	level 4	6kV contact / 8kV air	
Power frequency magnetic test	IEC61000-4-8		1000A/m, 50/60Hz	
Pulse magnetic field	IEC61000-4-9		1000A/m, 8/20ms	
Damped oscillatory magnetic field	IEC61000-4-10		100A/m, 0.1-1MHz	
Immunity to conducted common mode disturbance 0Hz-150Kz	IEC61000-4-16	level 4		
Electrical fast transient/burst	IEC61000-4-4	level 3	2kV, 5kHz	
HF disturbance test with damped oscillatory wave (1MHz burst test)	IEC60255-22-1	class 3	400pps, 2,5kV (m.c.), 1kV (d.m.)	
Oscillatory waves (Ring waves)	IEC61000-4-12	level 4	4kV(c.m.), 2kV(d.m.)	
Surge immunity test	IEC61000-4-5	level 4	2kV(c.m.), 1kV(d.m.)	
Voltage interruptions	IEC60255-4-11		50ms	

**Typical Characteristics**

Average power supply consumption	£7 VA
Output relays	rating 6 A; Vn = 250 V


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