

CM88-23OPTO



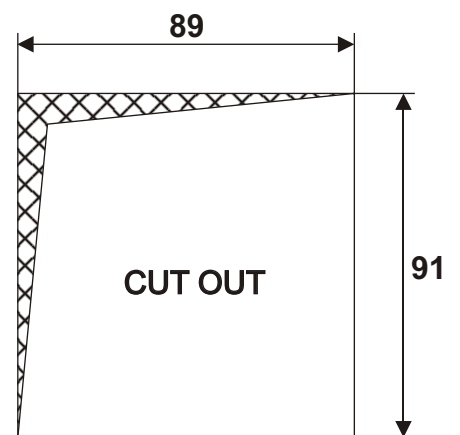
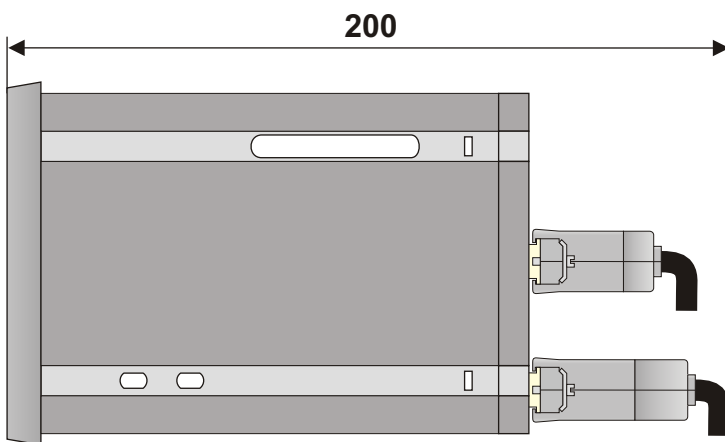
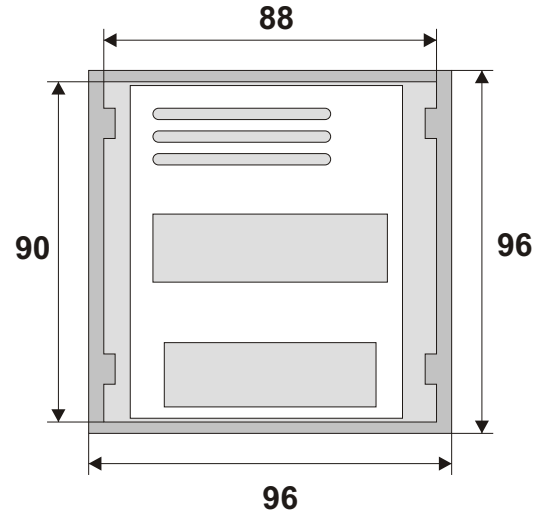
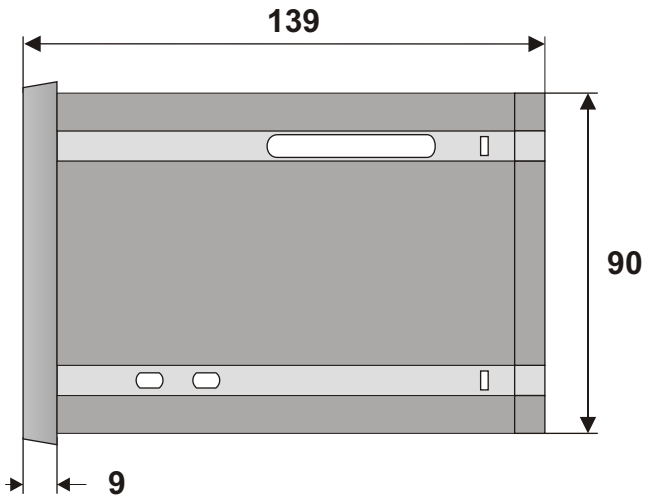
23 digitals optoinsulated inputs microprocessor

The CM88-23OPTO is a multichannel microprocessor instrument that accepts 23 digital inputs. The running logic of the instrument can be customized according to the customer's requirements.

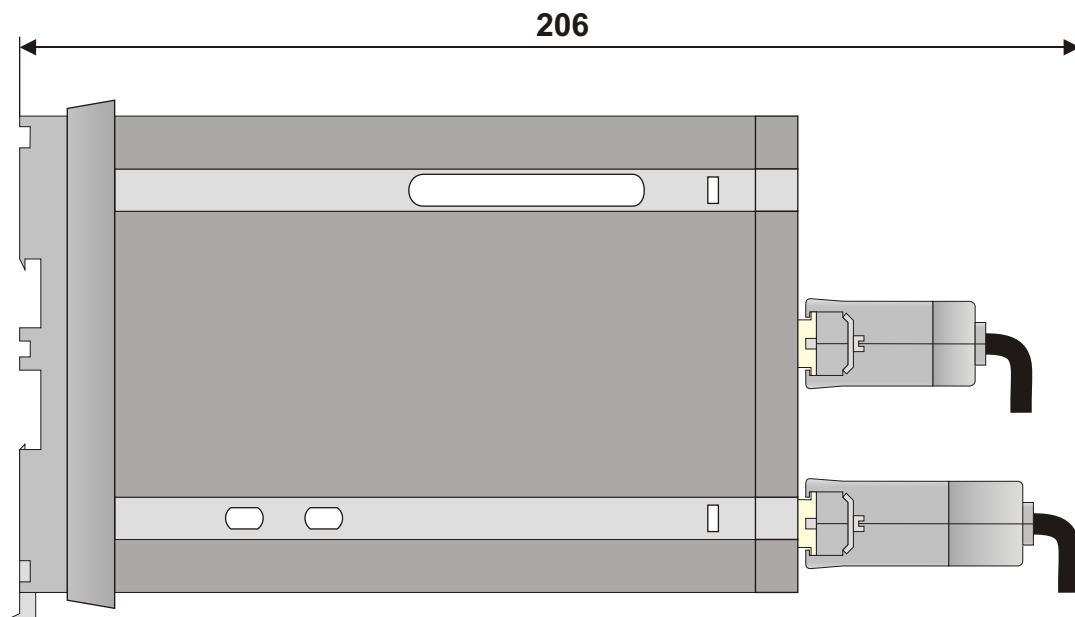
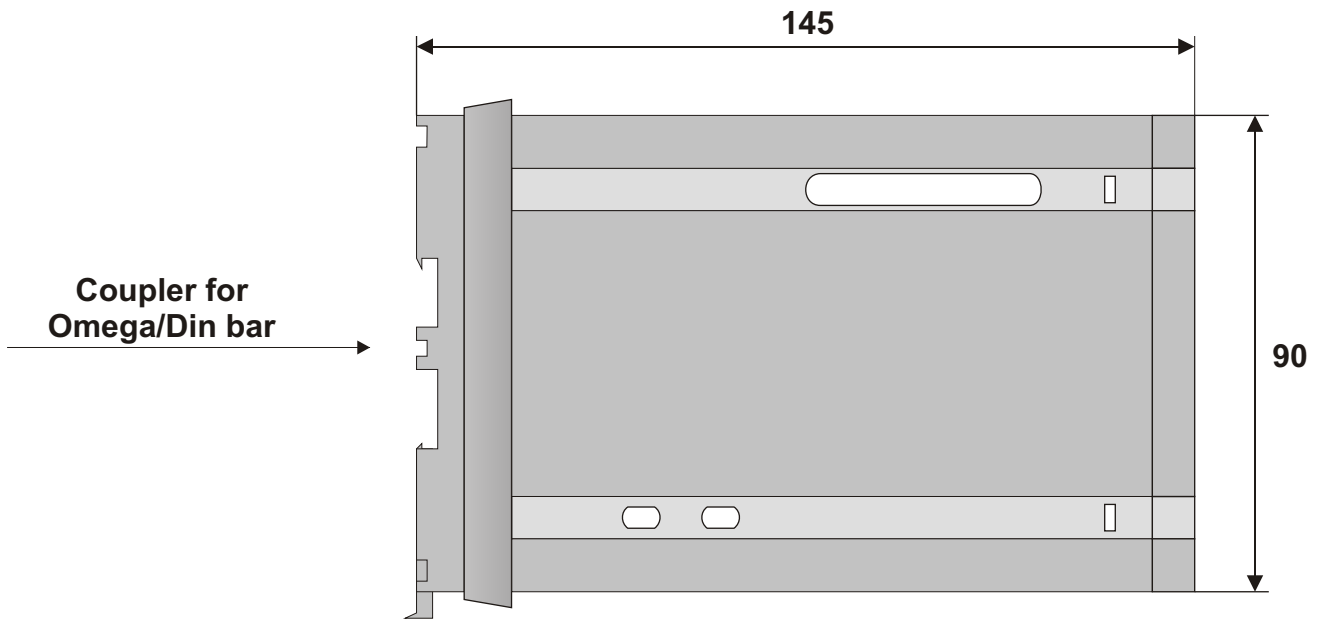
TECHNICAL FEATURES

Input:	23 digitals optoinsulated inputs
Measuring range:	5 Vdc or 24 Vdc
Outputs:	11 (24 Vdc) output for 11 relays control card, or 14 (24 Vdc) outputs for 14 relays control card
Operative temperature:	0 - 40 °C
Keyboard:	16 keys membrane keyboard, or 8 keys membrane keyboard, or 8 keys membrane keyboard with Start and Stop
Serial output:	Rs485, or Current-Loop
Supply:	230 Vac, 50 Hz, 15 W
Mounting:	Front panel with flasks, or On omega/din bar (instrument without display)
Dimensions:	96 x 96 x 210 mm (b x h x d)
Weight:	0,5 Kg (fittings excluded)

INSTRUMENT DIMENSIONS - PANEL MOUNTING



INSTRUMENT DIMENSIONS - OMEGA/DIN BAR MOUNTING

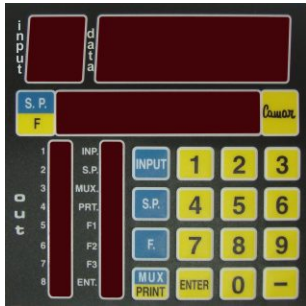


INSTRUMENT'S FRONT VIEW

The front panel of the CM88 is realized by a standard displayed card made up of 11 numeric displays and 8 or 16 led. Three displays files provide operator with these information: Operative channel number (1 display), Process variable value (4 displays) and Parameters laid out by the user (6 displays).

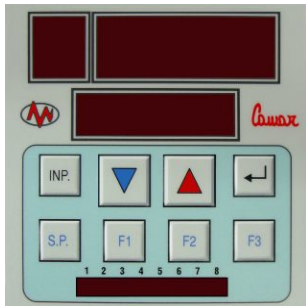
Upon the display is inserted the keyboard.

All the keyboards are realized on thermodrilled polycarbonate, with non-scratch silk-screen printing and membrane keys with steel cupola.



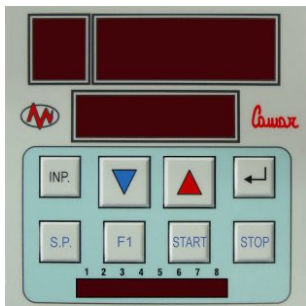
16 keys keyboard

Allows the parameters insertion in a quick manner thanks to its wide numerical little keyboard. This keyboard is indicated in those applications where it is frequently necessary to reprogram the parameters (example in lab instrumentation).



8 keys keyboard

This keyboard makes CM88 a versatile instrument simple to program. The data insertion is entrusted to two big indicators keys that allow to increase or reduce the wants value.



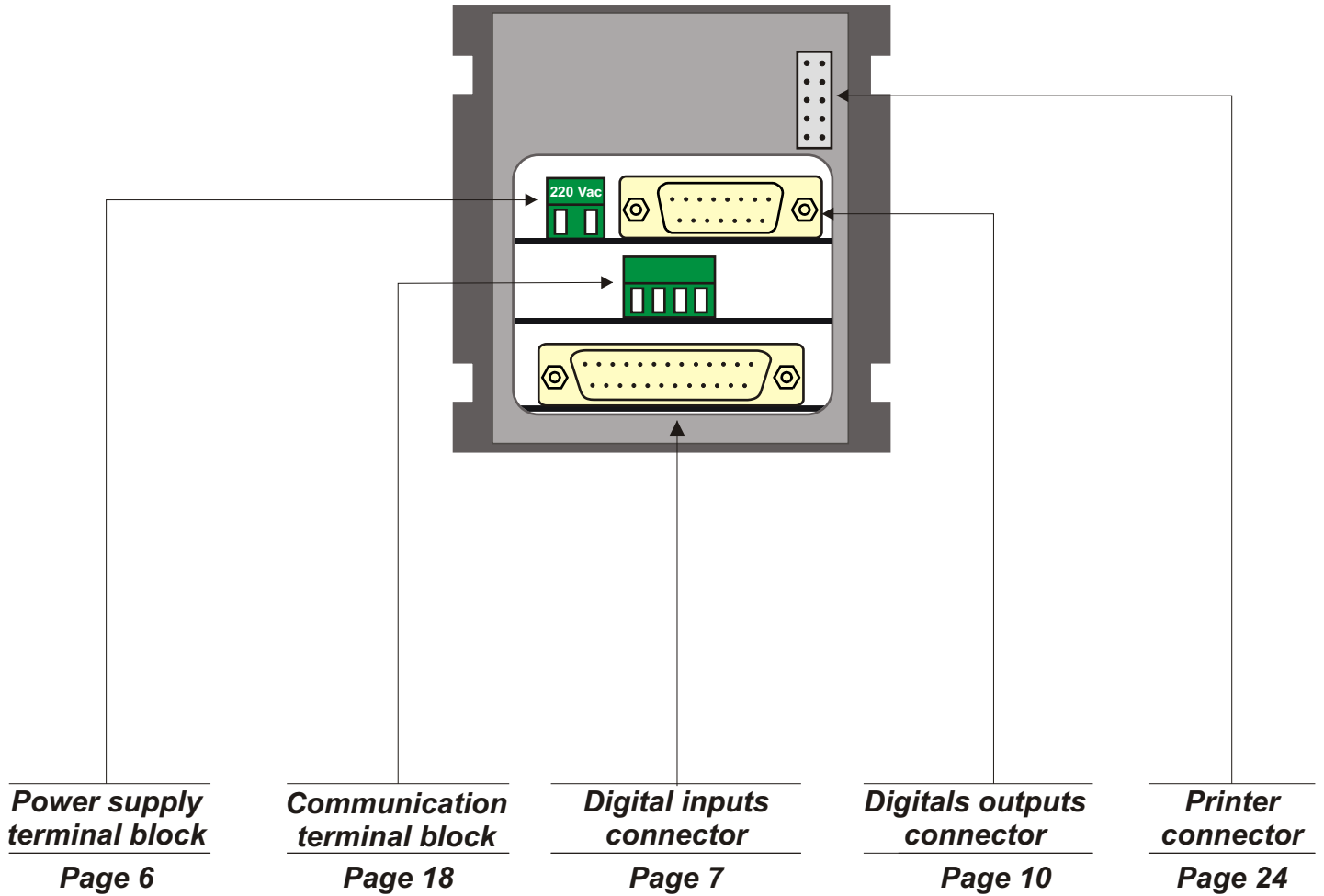
Start/Stop 8 keys keyboard

It is planned to be used in those applications where it is necessary to give a Start and a Stop to the process under control. In this keyboard we can find two distinct keys that realize these functions.

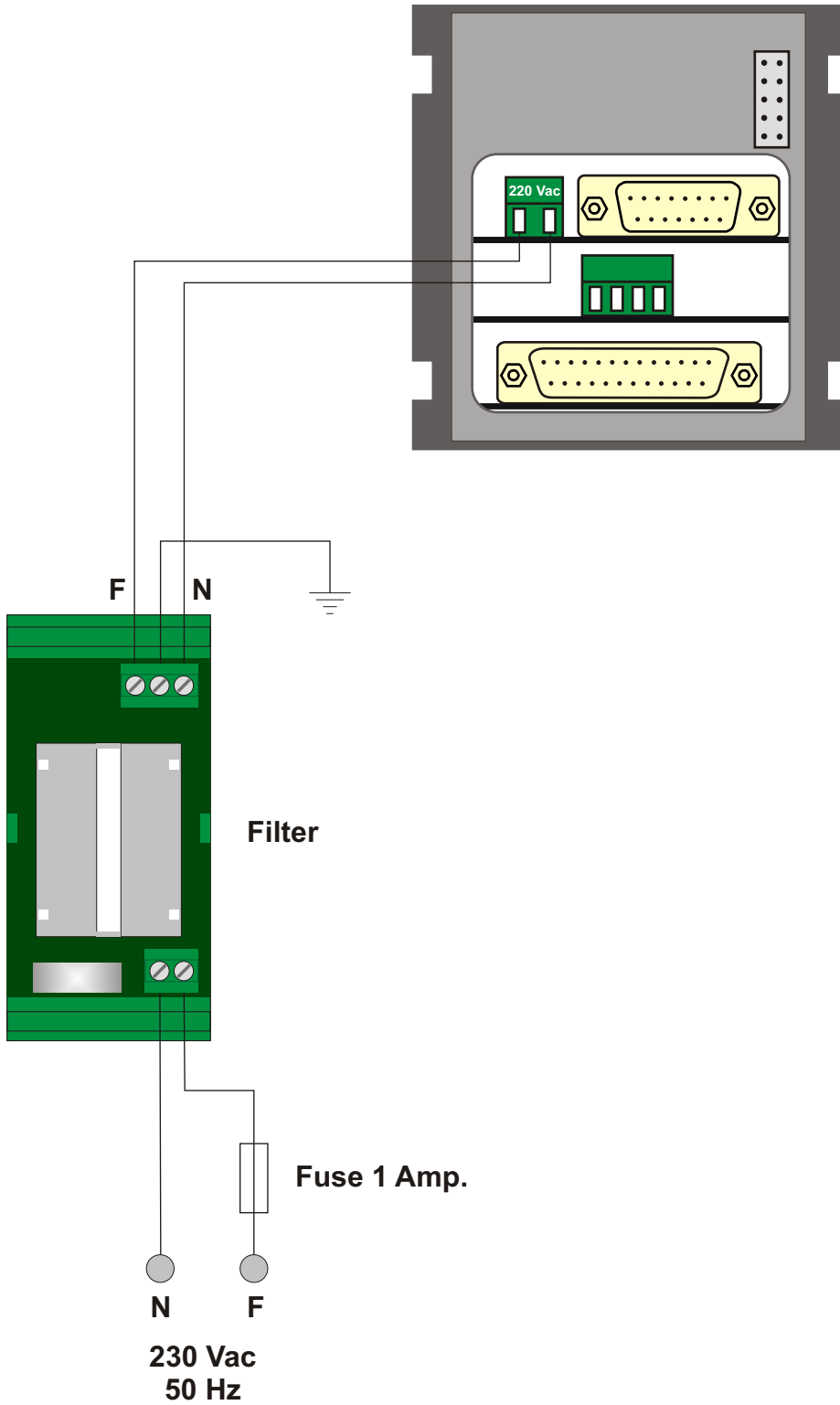
IP 54 transparent protection.



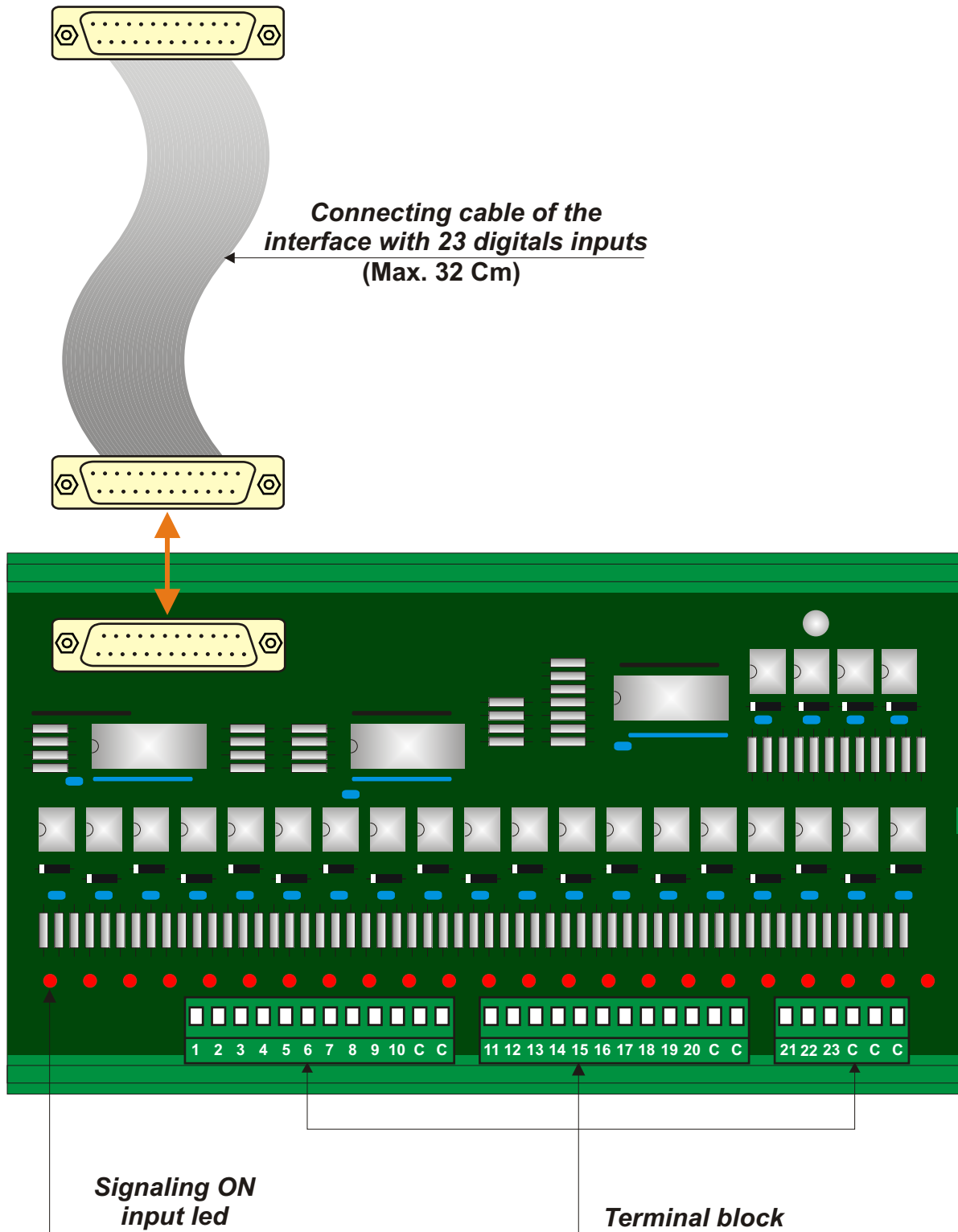
INSTRUMENT'S REAR VIEW



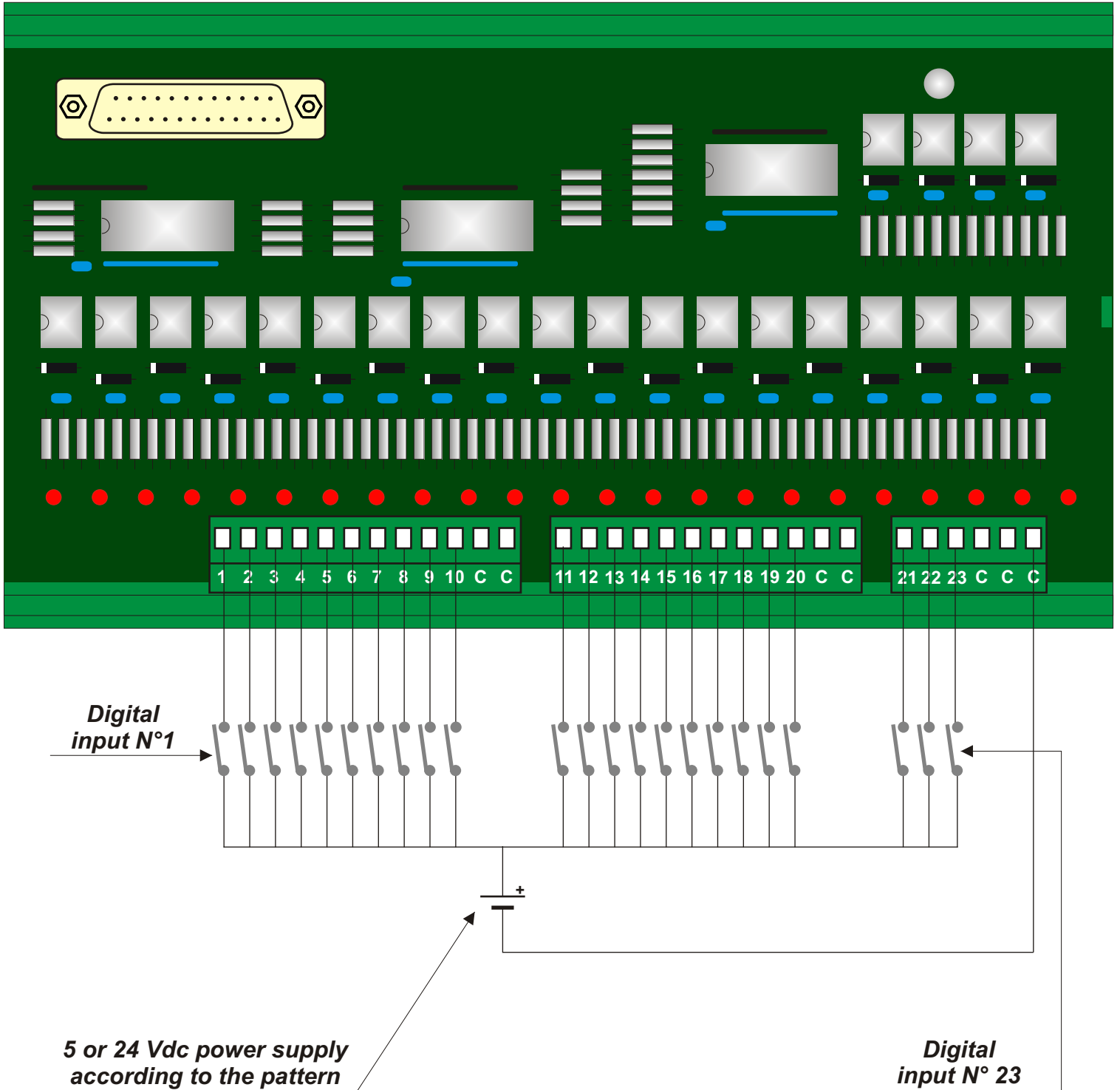
INSTRUMENT SUPPLY



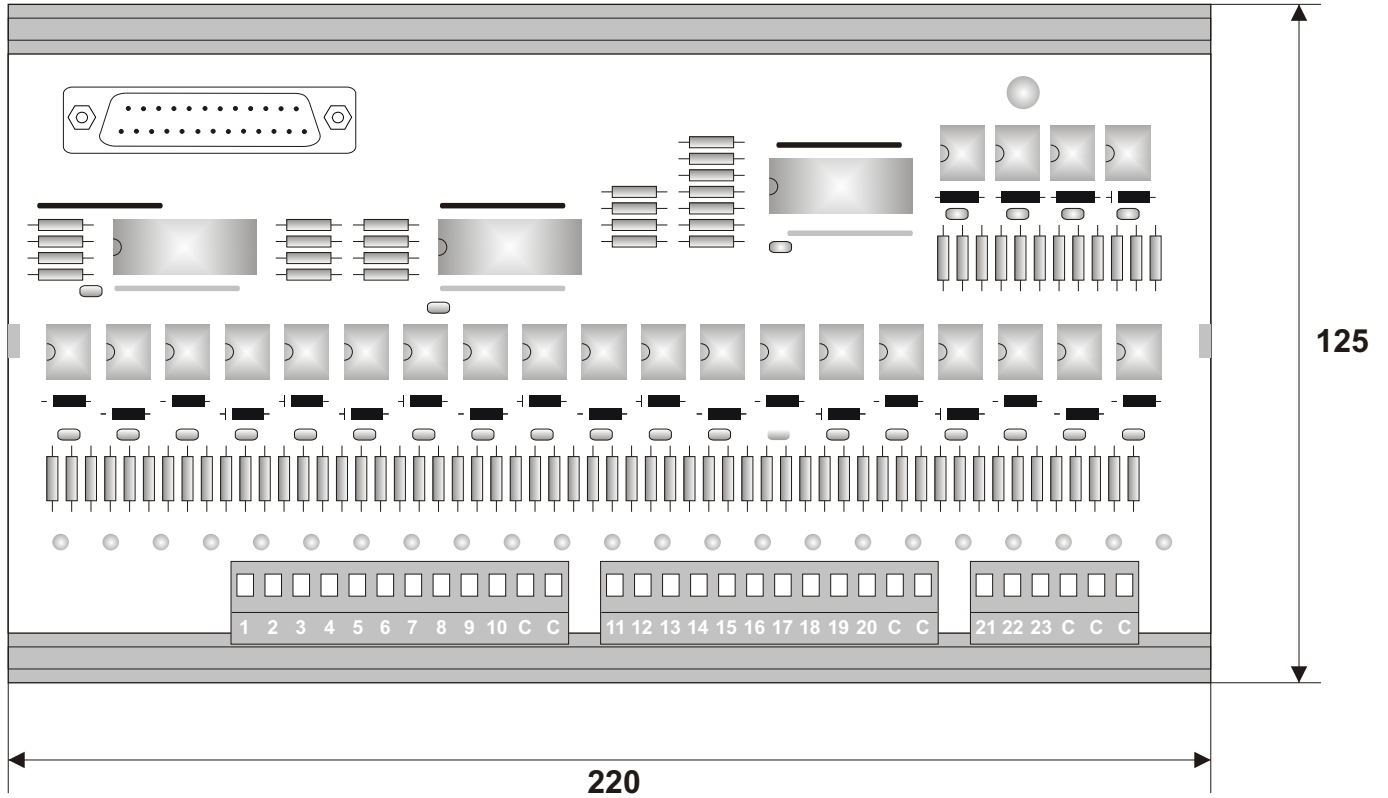
INTERFACE WITH 23 DIGITALS OPTOINSULATED INPUTS



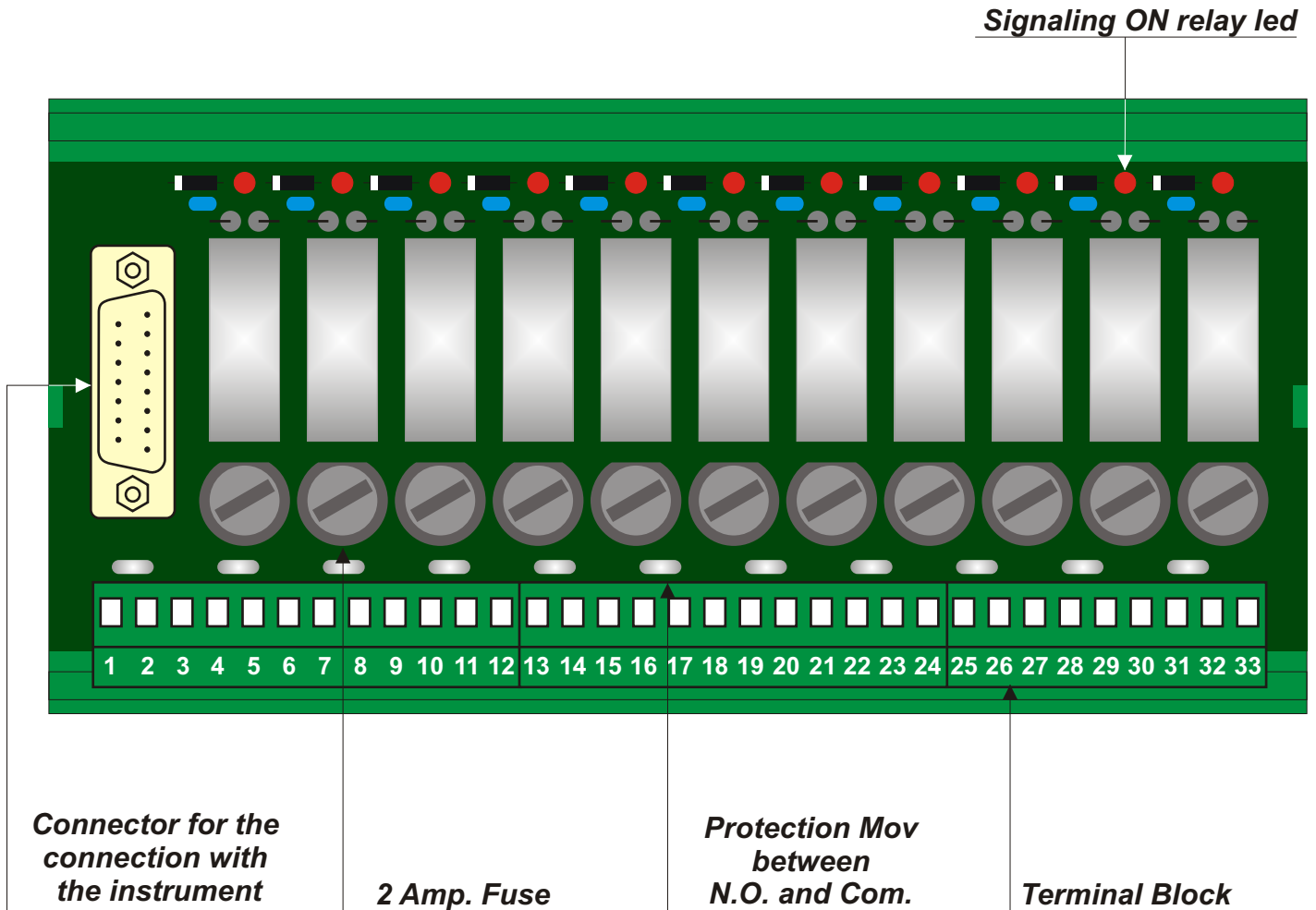
INTERFACE WITH 23 DIGITALS OPTOINSULATED INPUTS



INTERFACE WITH 23 DIGITALS OPTOINSULATED INPUTS DIMENSIONS



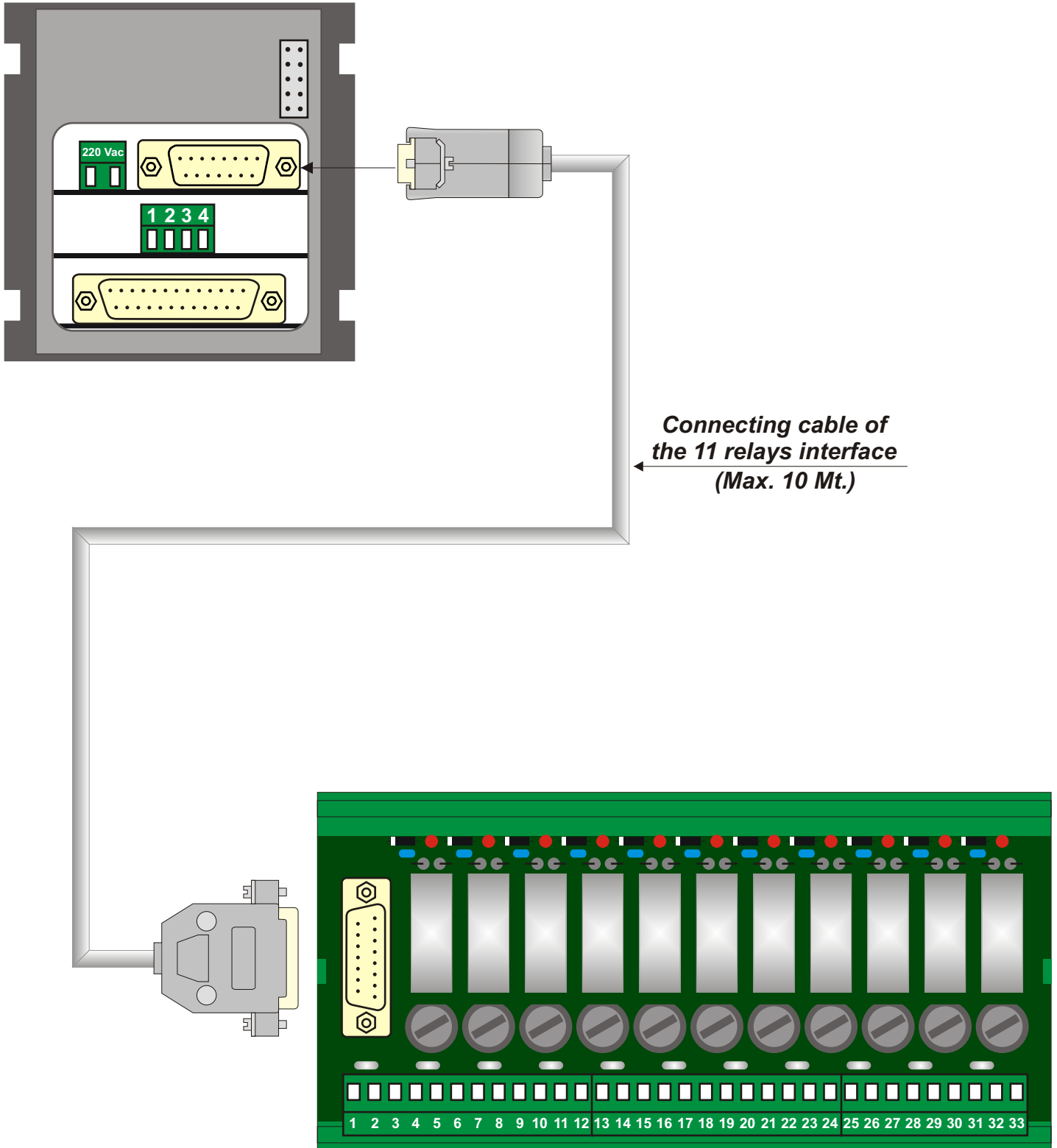
11 RELAYS INTERFACE



TECHNICAL FEATURES

Outputs number:	11 relays (SPDT), 250 Vac, 2 Amp.
Supply:	The card is supplied and driven through the instrument
Connections:	Extractable screw terminal block for cables till 2,5 mmq
Protections:	2 Amp. fuse on the contact Com. Protection Mov between Com. and N.O.
Dimensions:	180 x 90 x 70 mm (b x h x d)
Mounting:	On Omega/Din bar
Sundries:	Instrument connecting cable interface Max. 10 Mt.

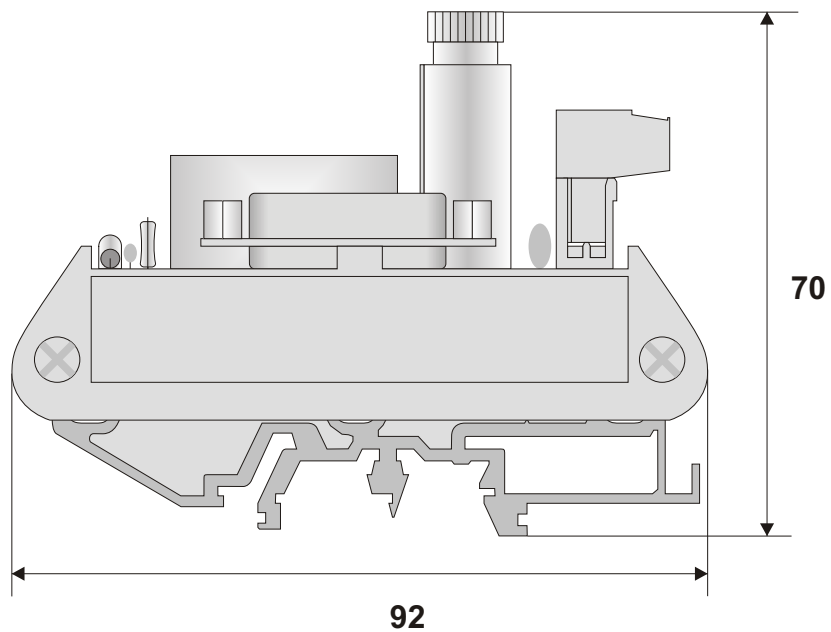
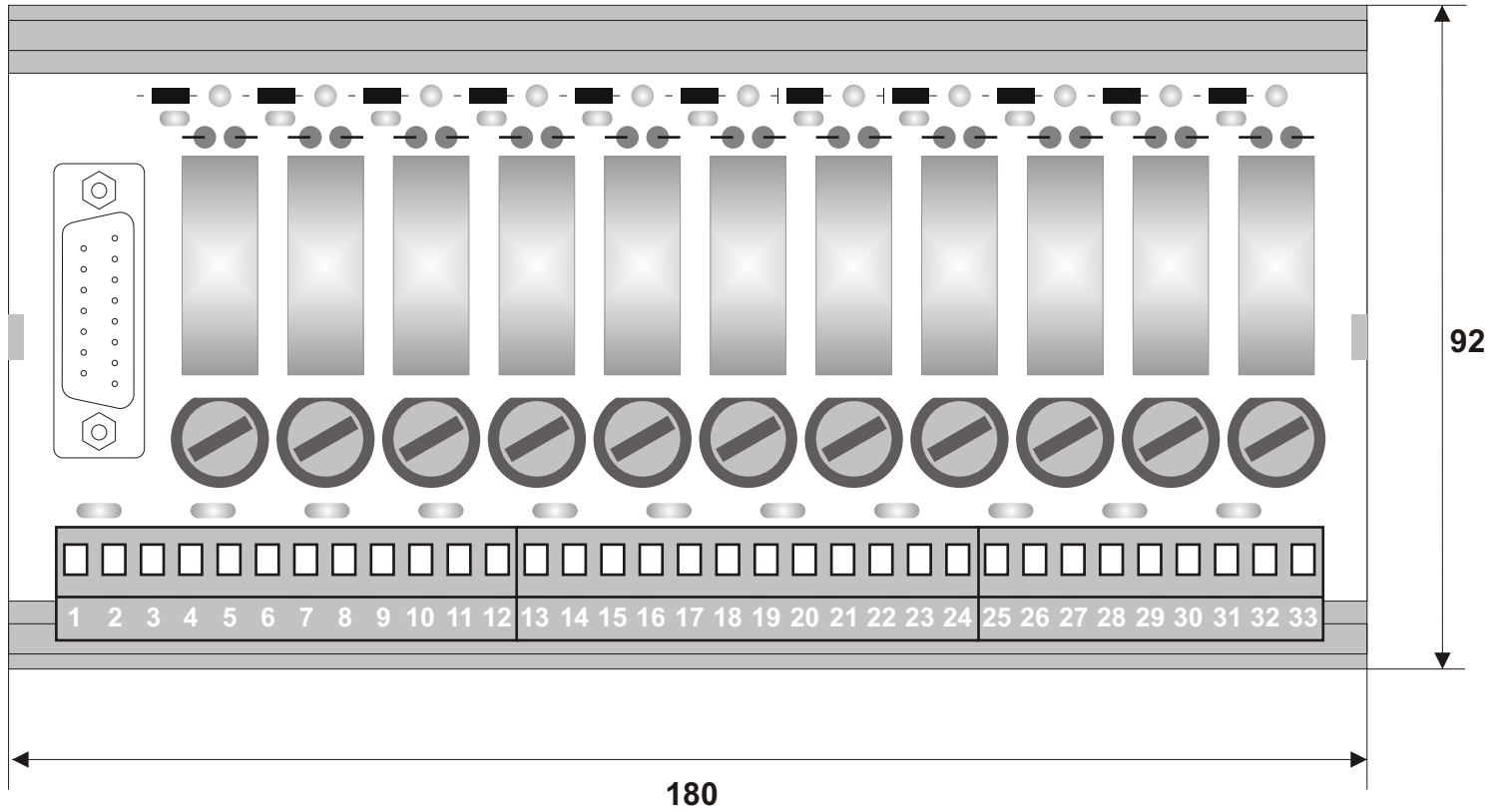
11 RELAYS INTERFACE CONNECTION



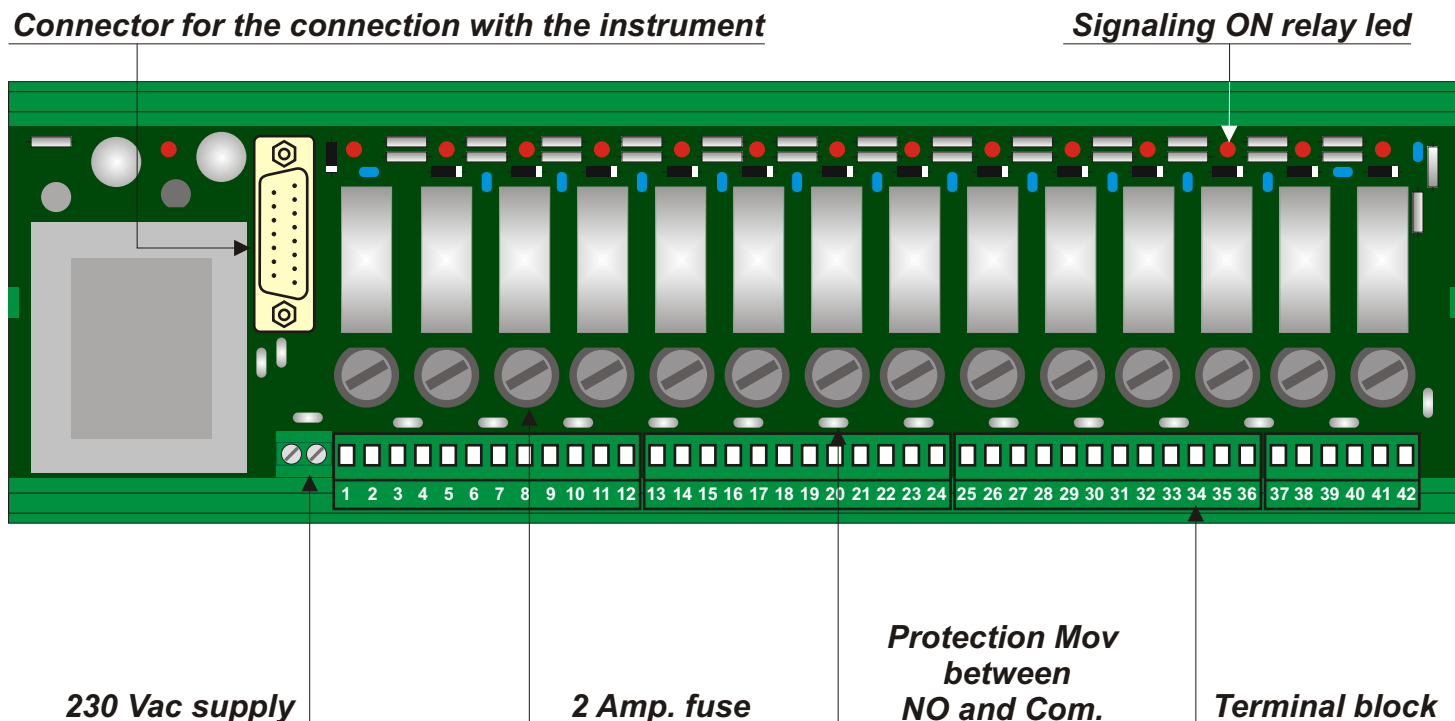
TERMINAL BLOCK LEGEND

Number	Contact	Relay	Number	Contact	Relay
1	N.O.	Relay n° 1	19	N.O.	Relay n° 7
2	Com.		20	Com.	
3	N.C.		21	N.C.	
4	N.O.	Relay n° 2	22	N.O.	Relay n° 8
5	Com.		23	Com.	
6	N.C.		24	N.C.	
7	N.O.	Relay n° 3	25	N.O.	Relay n° 9
8	Com.		26	Com.	
9	N.C.		27	N.C.	
10	N.O.	Relay n° 4	28	N.O.	Relay n° 10
11	Com.		29	Com.	
12	N.C.		30	N.C.	
13	N.O.	Relay n° 5	31	N.O.	Relay n° 11
14	Com.		32	Com.	
15	N.C.		33	N.C.	
16	N.O.	Relay n° 6			
17	Com.				
18	N.C.				

11 RELAYS INTERFACE DIMENSIONS



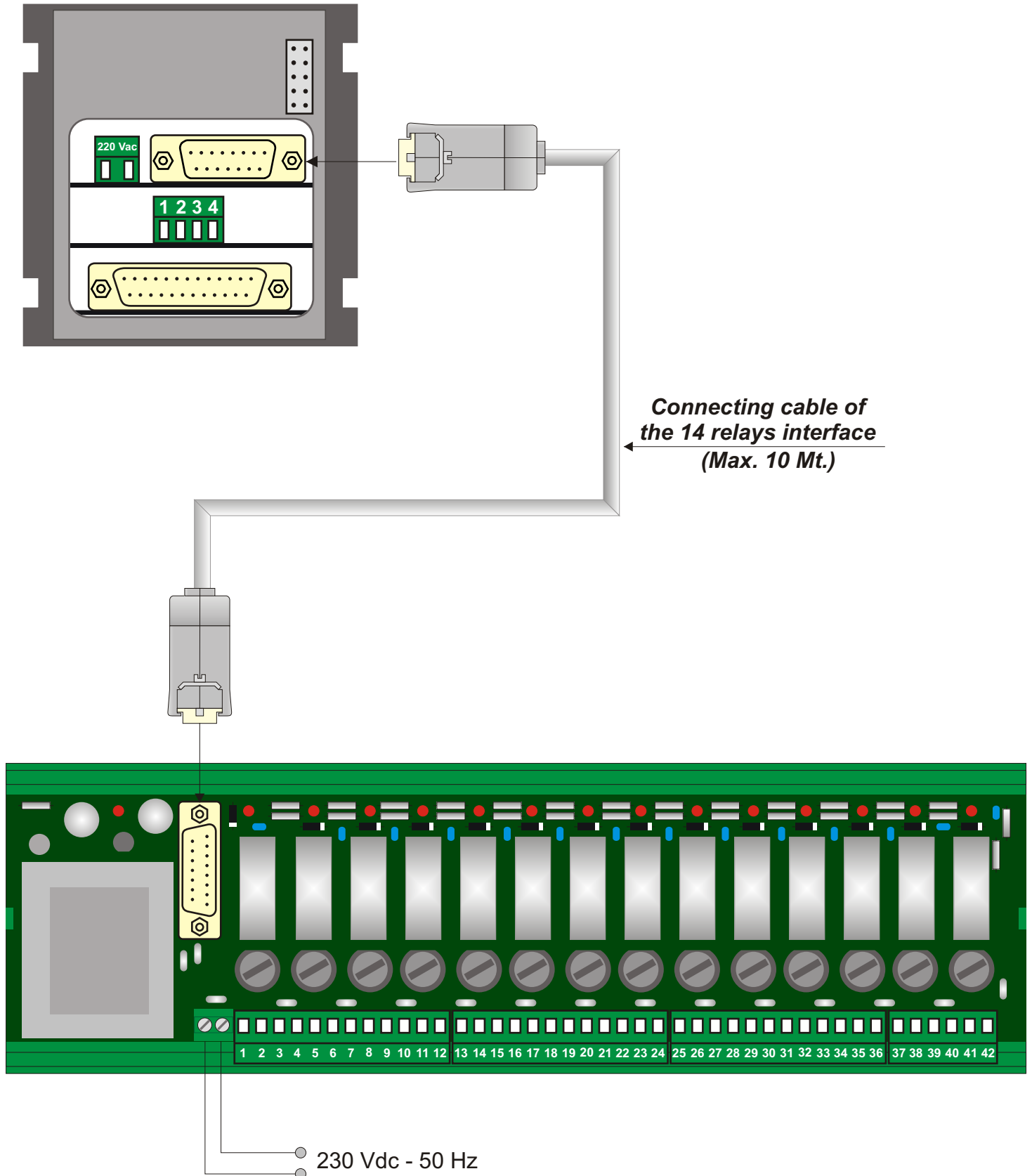
14 RELAYS INTERFACE



TECHNICAL FEATURES

Outputs number:	14 relays (SPDT), 250 Vac, 2 Amp.
Supply:	230 Vac, 50 Hz
Connections:	Extractable screw terminal block for cables till 2,5 mmq
Protections:	2 Amp. fuse on the contact C. Clamp Protection Mov between C. And N.A.
Dimensions:	290 x 92 x 80 mm (B x H x P)
Mounting:	On Omega/Din bar
Sundries:	Instrument connecting cable interface Max. 10 Mt.

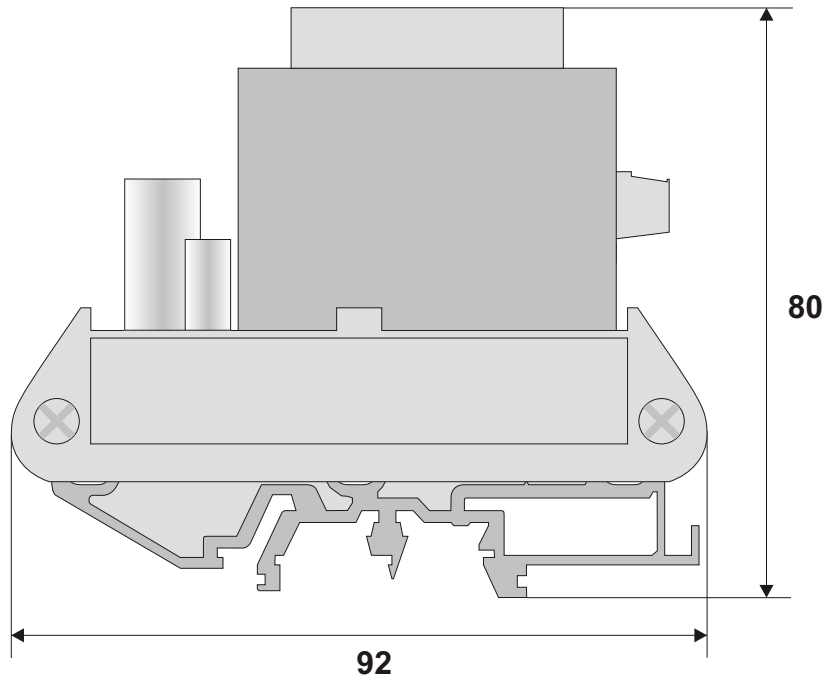
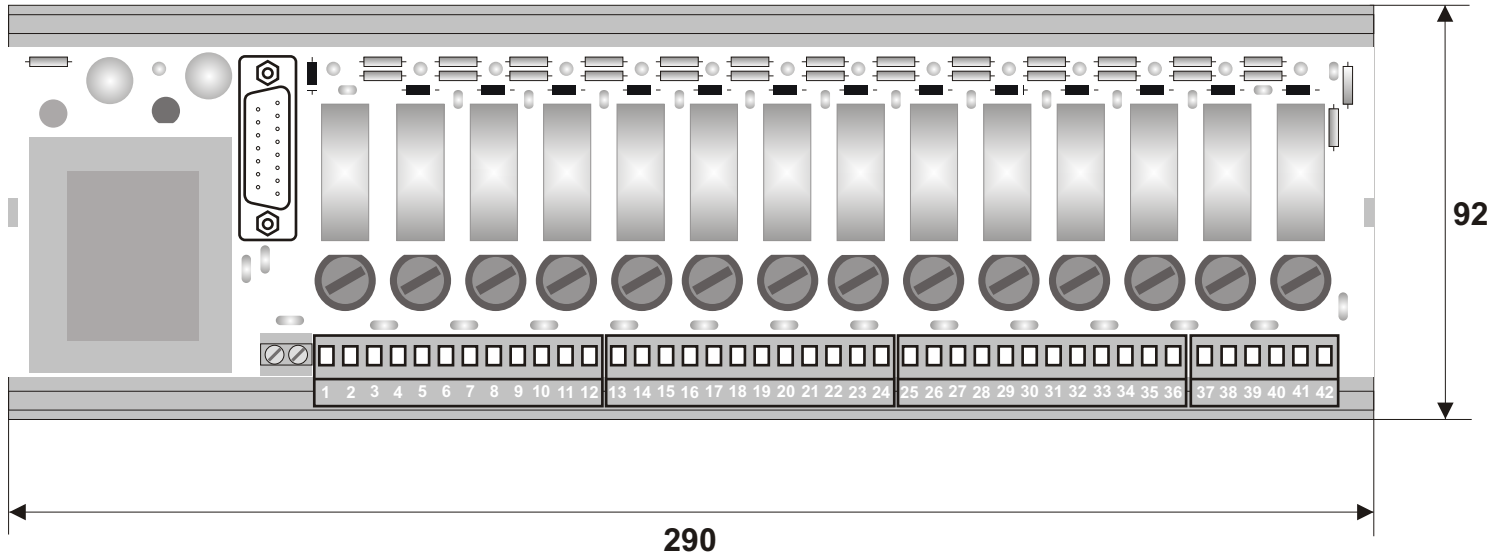
14 RELAYS INTERFACE CONNECTION



TERMINAL BLOCK LEGEND

Number	Contact	Relay	Number	Contact	Relay
1	N.O.	Relay n° 1	22	N.O.	Relay n° 8
2	Com.		23	Com.	
3	N.C.		24	N.C.	
4	N.O.	Relay n° 2	25	N.O.	Relay n° 9
5	Com.		26	Com.	
6	N.C.		27	N.C.	
7	N.O.	Relay n° 3	28	N.O.	Relay n° 10
8	Com.		29	Com.	
9	N.C.		30	N.C.	
10	N.O.	Relay n° 4	31	N.O.	Relay n° 11
11	Com.		32	Com.	
12	N.C.		33	N.C.	
13	N.O.	Relay n° 5	34	N.O.	Relay n° 12
14	Com.		35	Com.	
15	N.C.		36	N.C.	
16	N.O.	Relay n° 6	37	N.O.	Relay n° 13
17	Com.		38	Com.	
18	N.C.		39	N.C.	
19	N.O.	Relay n° 7	40	N.O.	Relay n° 14
20	Com.		41	Com.	
21	N.C.		42	N.C.	

14 RELAYS INTERFACE DIMENSIONS



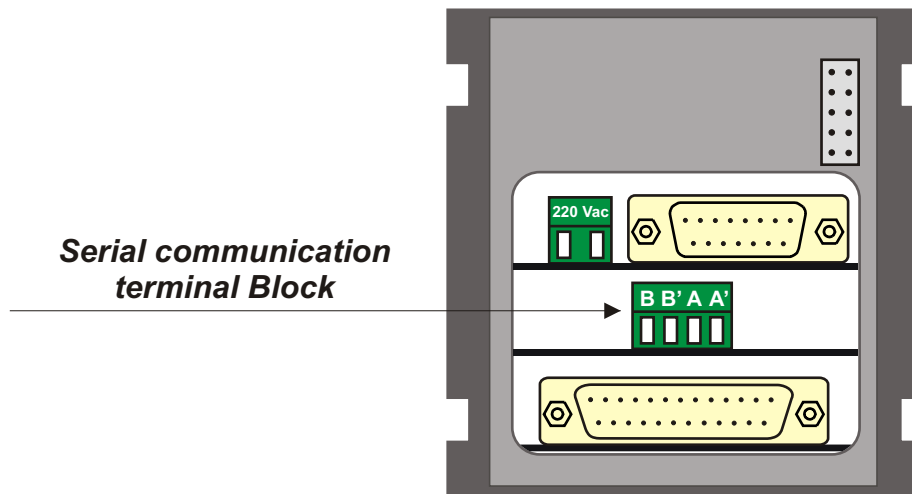
Rs485 SERIAL COMMUNICATION

Series Cm88 instruments can be equipped with RS-485 serial interface that allows to connect a maximum of 30 unities at a master.

The RS-485 serial interface is based on a differential communication line balanced with a typical 120 ohm impedance. The maximum length of the connection isn't defined but depends on the communication velocity, on the inconvenience signal report and on the cable quality.

In general the maximum length is fixed at 1200 meters. The connecting cable can be shieldless if there is a few meters distance and the environment isn't electrically noisy. For distances between 15 and 100 meters exists the possibility to use a twisted and screened cable without particular features while for connection beyond 100 meters is recommended to use for instance the CEAM CPR 6003 or BELDEN 9841 cable.

Preferably the communication line has to be a chain type one, avoiding star configurations and limiting the few meters shunts.

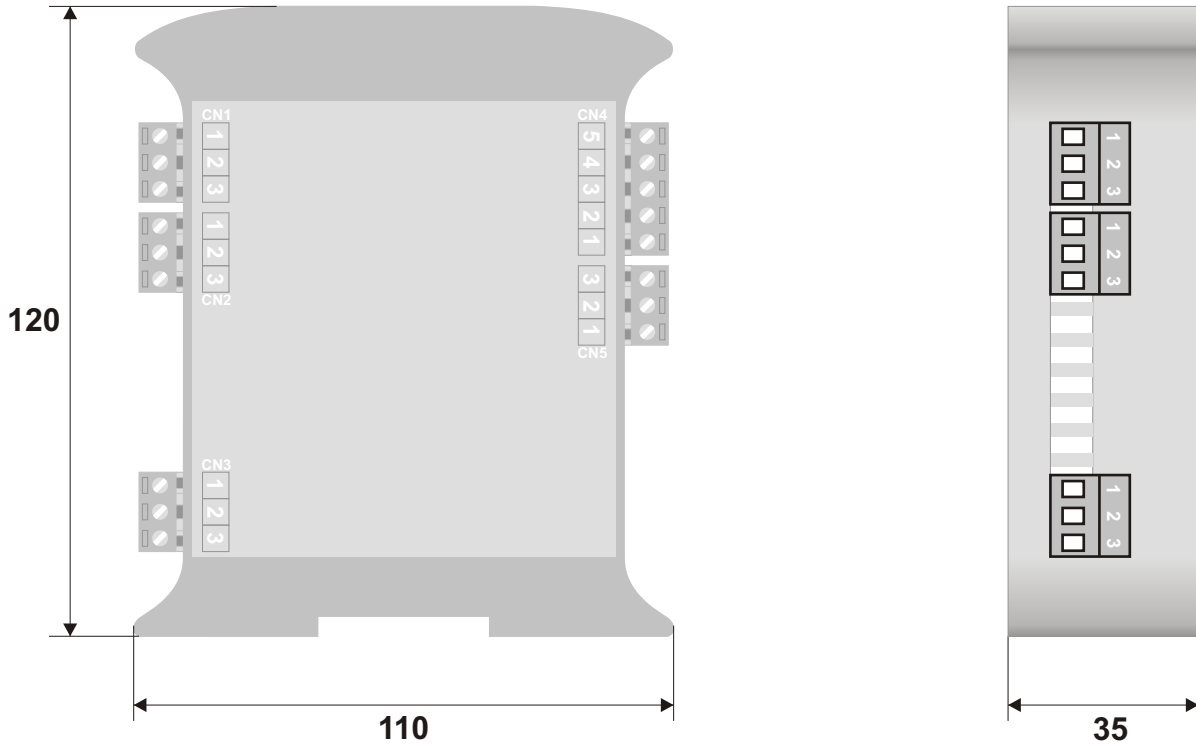


We report here the definition of the RS485 interfaces, that is given by EIA norms, about the meaning and the tension direction present on the terminal block.

A) The terminal block "A" of the generator has to be negative in comparison with terminal block "B" for binary state 1.

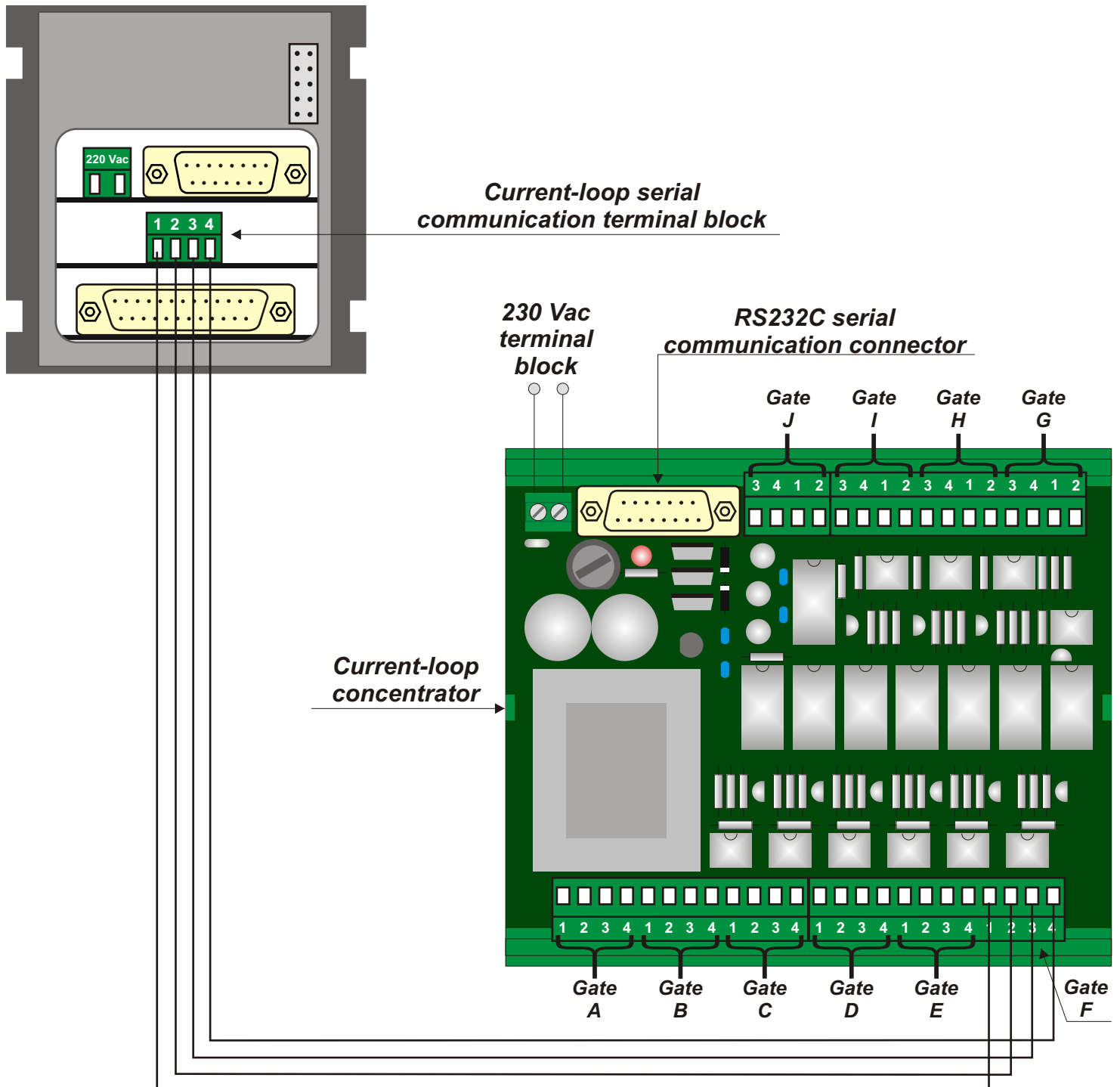
B) The terminal block "A" of the generator has to be positive in comparison with terminal block "B" for binary state 0.

RS485/RS232C CONVERTOR DIMENSIONS

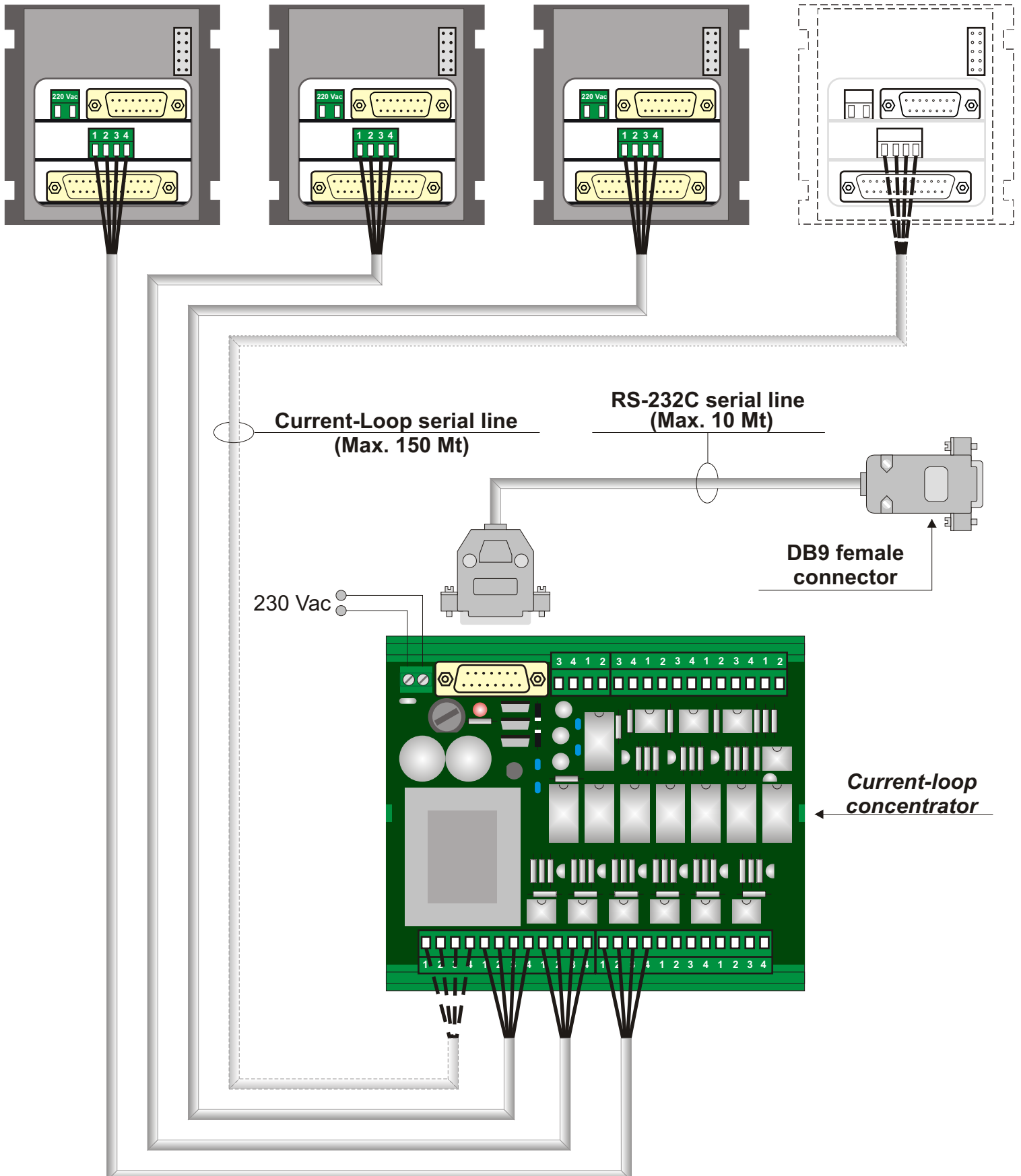


SERIAL COMMUNICATION IN CURRENT-LOOP

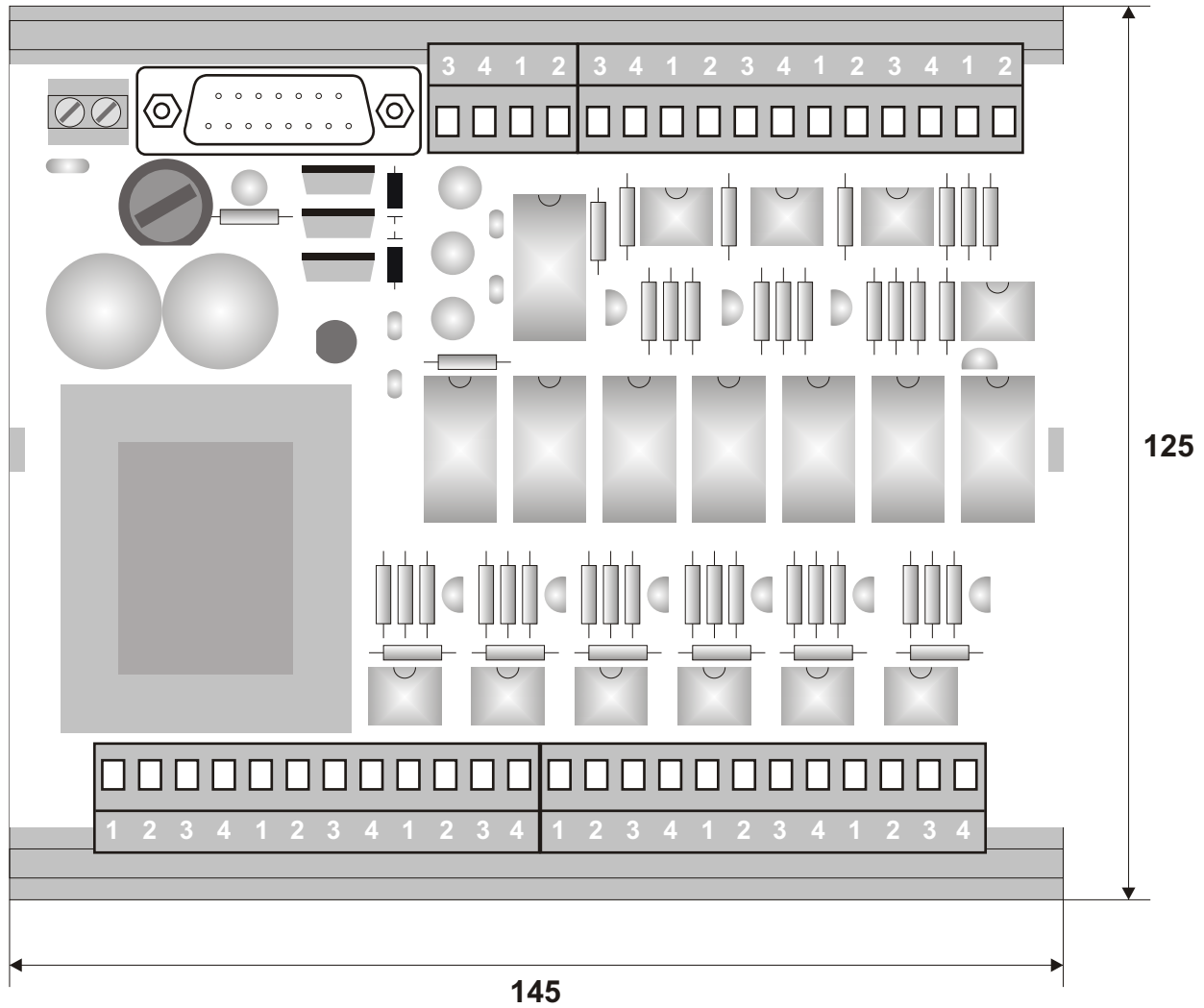
Series CM88 instruments can be equipped with Current-Loop serial interface. Each instrument is connected with the same concentrator which communicates with the master. The maximum distance between the instrument(i) and the concentrator can be fixed at 150 meters using a 4 poles screened cable with a section of 1,5 mm² in a non- noisy environment. The concentrator can collect the communication of 10 instruments in the respective A, J gate (free instrument/gate coupling).



CONNECTING TECHNIQUE OF THE CURRENT-LOOP SERIAL LINES

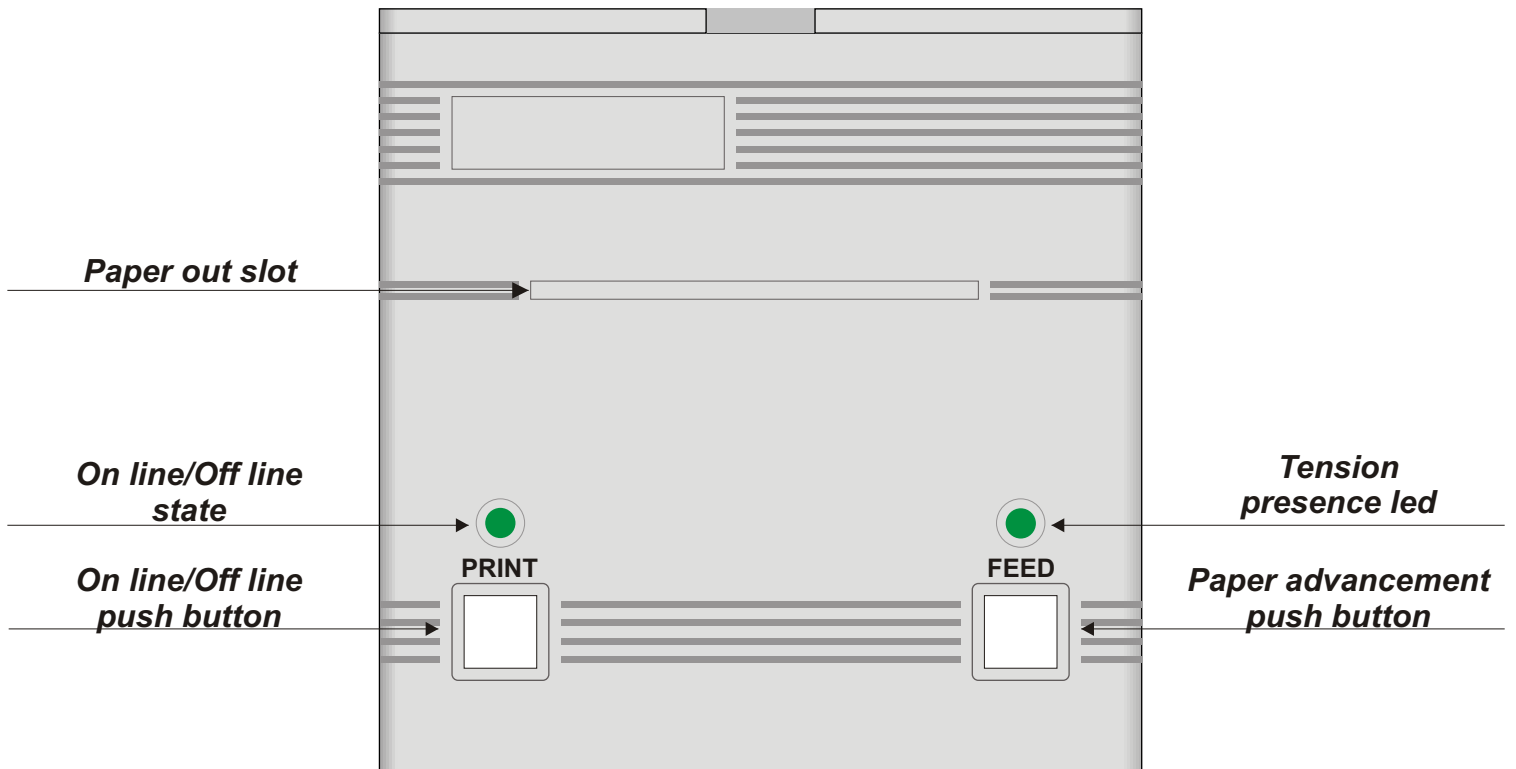


CURRENT-LOOP CONCENTRATOR DIMENSIONS



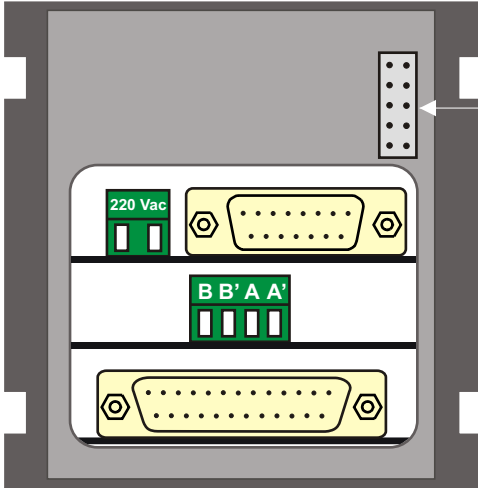
PRINTER

24 columns impact panel printer. Perfect in industrial applications.

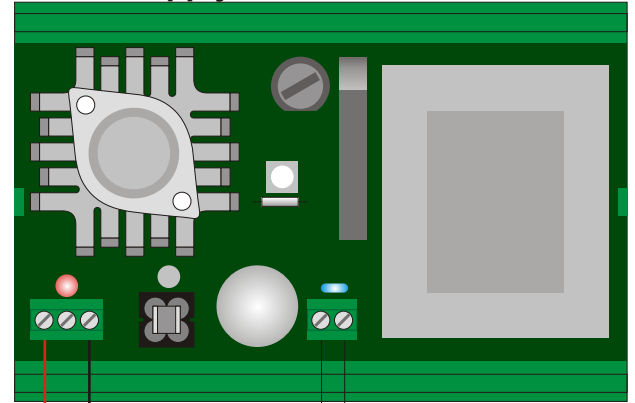


CONNECTION

Instrument



Power supply: ALMP150

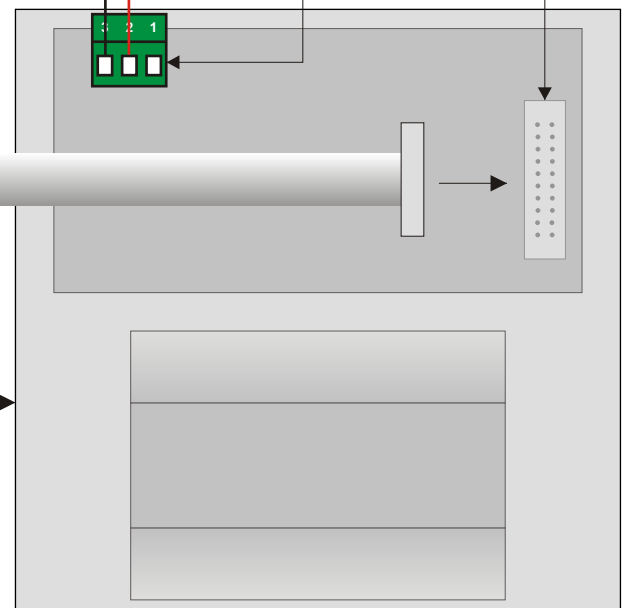


+ -
230 Vac
50 Hz

*Printer cable
Max. 80 Cm*

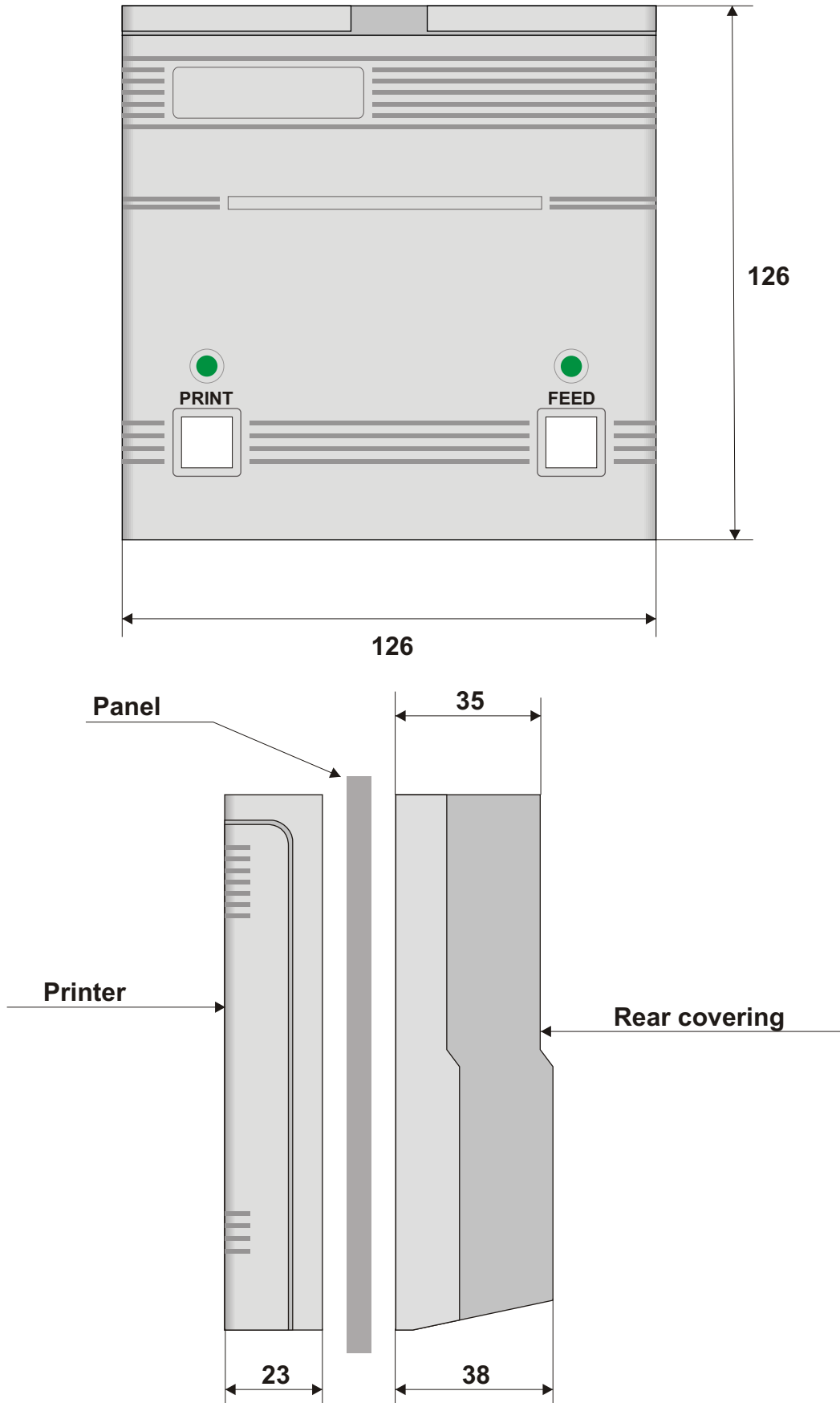
*Supply
terminal block*

*Printer
connector*



Rear printer

DIMENSION



DIMENSION

