EMB
ADAPTER
SIGNAL SPLITTER

ISO 9001:2000

Electrical specifications

INPUT and OUTPUT voltage	5 Vdc / 8÷24 Vdc
Input current with no output load	70 mA
Max output current per channel	20 mA per LINE DRIVER 40 mA PUSH PULL
Max input current per channel	10 mA
Frequency response	100 KHz
Current absorbed in maximum operating conditions (A)	$I_{max} = \frac{0{,}12\,(Vx1+Vx2+...Vxn+Vx4)}{Vx4}$ where: Vx1= input voltage on X1 Vx2,...Vxn= output voltage on X2,...Xn Vx4= Board input voltage
Operating temperature	0° ÷ +50°C
Fixing on frame	DIN n. 46277 / 3 GUIDE (OMEGA) DIN n. 46277 / 2 GUIDE

The EMB board

This board is used when it is necessay to adapt the encoder electronic characteristics to the controller one

Main functions of the EMB are output signal splitting and adaption of output stages.

For instance, it happens to have an encoder with a 5 Vdc output and a control accepting only 24 Vdc data. It may also happen to use an encoder connected with a controller at the same voltage, but having different electronics.

It can solve a wide range of problems: check the ordering code in the back page to find further information.

On the board there can be present up to two different voltages and it must be supplied through the X4 connector with the higher voltage used. Moreover, it is possible to obtain up to eight outputs by assembling more than one board reducing drastically wiring by mounting boards in a single support.

In this case, the ordering code will contain information about all outputs. For example, a board with a 5 Vdc NPN and eight outputs line drivers at 5 Vdc has the following ordering code **EMB5N5L5L5L5L5L5L5L**.

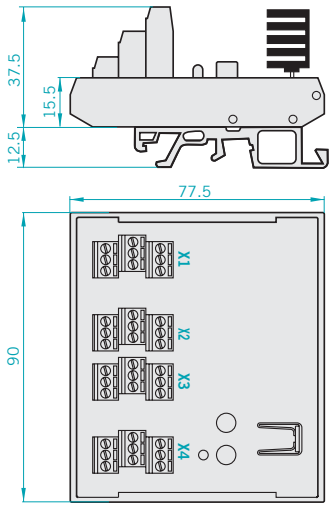
The following may give an example of a typical EMB application: an encoder with 5 Vdc LINE DRIVER output has to be connected to a PUSH-PULL 24 Vdc input and also to an instrument having a LINE DRIVER 5 Vdc input. The board to order has the following code:

EMB5L24P5L where **5L** indicates a 5 Vdc LINE DRIVER input on X1 connector, **24P** indicates the 24 Vdc PUSH-PULL output on the X2 connector, and the last **5L** indicates the 5 Vdc LINE DRIVER output on the X3 connector.

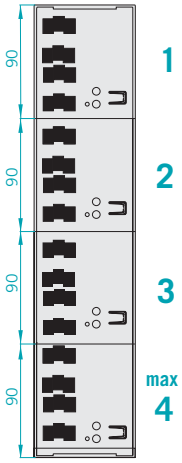
The input voltage of this board is the 24 Vdc one, because it is the highest used, and it will be supplied from the X4 connector.

Overall dimension

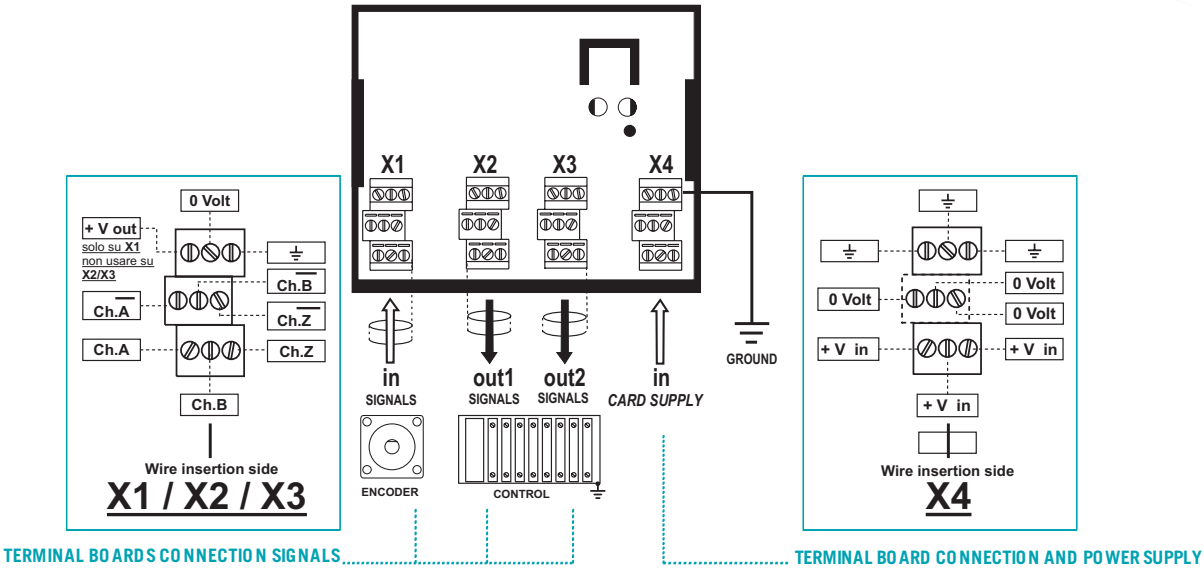
SIngular execution



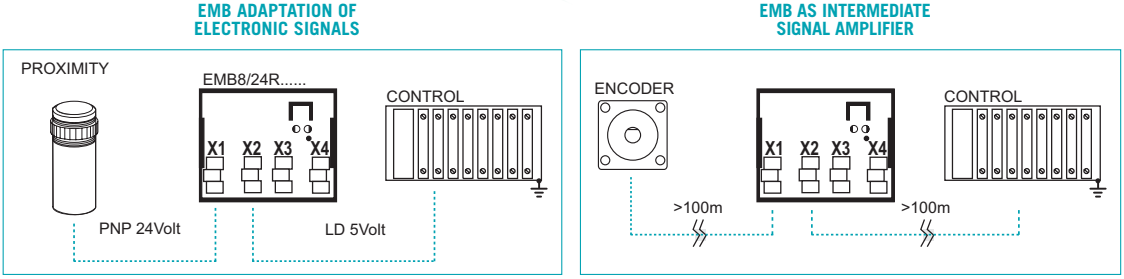
Multiple execution (max 4 modules / 8 out)



Working diagram and terminal board connection



Usage examples



Ordering code

Full stop to separate special versionss

		in		out1		out2 (optional output)		
EMB	5	L	8/24	P	8/24	P	.	XXX

Signal splitter adapter: EMB

Input voltage (Vdc) terminal board X1
- 5
- 8 ÷ 24

Electronic inputs terminal board X1
- NPN N
- NPN OPEN COLLECTOR C
- PUSH PULL P
- LINE-DRIVER L
- PNP R

Input voltage out1 (Vdc) terminal board X2
- 5
- 8 ÷ 24

Elettronics out1 (Vdc) terminal board X2
- N NPN
- C NPN OPEN COLLECTOR
- P PUSH PULL
- L LINE-DRIVER

Input voltage out2 (Vdc) terminal board X3
- 5
- 8 ÷ 24

Electronics out2 (Vdc) terminal board X3
- N NPN
- C NPN OPEN COLLECTOR
- P PUSH PULL
- L LINE-DRIVER

Special version code numbered from 001 to 999

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