

THE EMB BOARD

This board is used when it is necessary to adjust encoder electronic features to control ones.

Main functions of EMB are output signal splitting and adaptation of output stages.

For instance, it happens to have an encoder with 5 V DC output and a control that accepts only 24 V DC data. It may also happen to use an encoder connected with a control with the same power supply, but different electronics.

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

On the board there can be up to 2 different voltages and it must be supplied through the X4 connector with the higher voltage used. Moreover it is possible to obtain up to 8 outputs from the same input by assembling several boards in a single support in order to reduce drastically wiring.

In this case the ordering code will contain information about all outputs. For example, a board with one 5 V DC NPN input and eight 5 V DC line driver outputs has the following ordering code: **EMB5N5L5L5L5L5L5L5L**.

The following example may explain better a typical EMB application:

an encoder with 5 V DC line driver output has to be connected to a 24 V DC push-pull input and also to an instrument having 5 V DC line driver input. The board you have to order will have the following code:

EMB5L8/24P5L where EMB5L indicates 5 V DC line driver input on X1 connector, EMB5L8/24P indicates 24 V DC push-pull output on X2 connector, and the last EMB5L8/24P5L indicates 5 V DC line driver output on X3 connector.

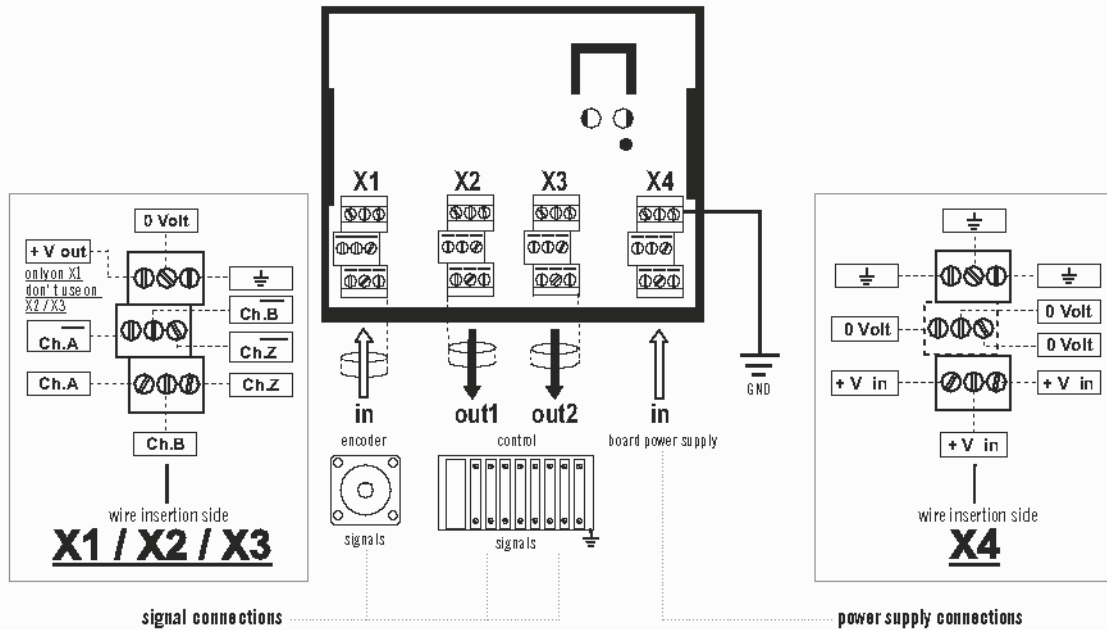
Power supply of this board is 24 V DC, because it is the highest used value, and it will be supplied through X4 connector.



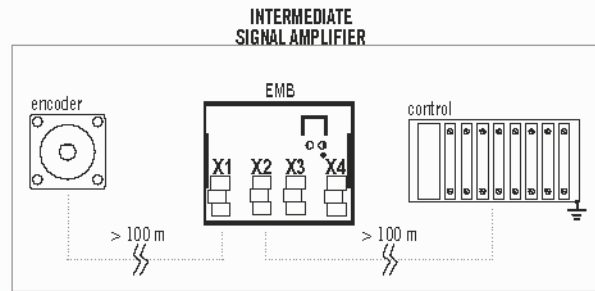
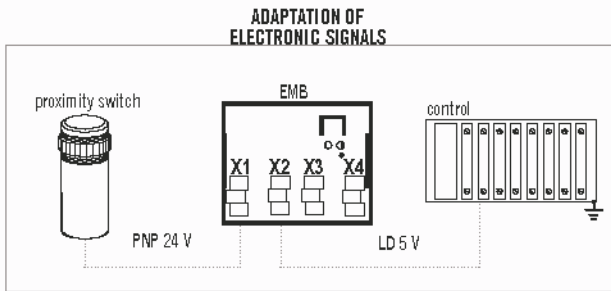
ORDERING CODE

	in	out1	out2 (optional output)	
	5	L	8/24	P
	8/24	P	8/24	P
	. XXX			
SERIES	signal splitter EMB			
INPUT VOLTAGE X1 CONNECTOR	5 V DC 5 8 ... 24 V DC 8/24			
INPUT ELECTRONICS X1 CONNECTOR	NPN N NPN open collector C push-pull P line driver L PNP R			
OUTPUT VOLTAGE (OUT1) X2 CONNECTOR	5 V DC 5 8 ... 24 V DC 8/24			
OUTPUT ELECTRONICS (OUT2) X3 CONNECTOR	NPN N C NPN open collector P push-pull L line driver			
OUTPUT VOLTAGE (OUT2) X3 CONNECTOR	5 5 V DC 8/24 8 ... 24 V DC			
OUTPUT ELECTRONICS (OUT1) X2 CONNECTOR	NPN N C NPN open collector P push-pull L line driver			
VARIANT	XXX custom version			

Operating diagram and terminal board connections



Examples



Electrical specifications

INPUT and OUTPUT voltages	5 V DC $\pm 10\%$ 8 ... 24 VDC $\pm 5\%$
Current consumption without load	70 mA max
Max load current	20 mA for channel (line driver) 40 mA for channel (push-pull)
Max input current	10 mA for channel
Max operating frequency	100 kHz
Current consumption in maximum operating conditions (A)	$I_{max} = 0,12 \cdot (VX1 + VX2 + \dots + VXn + VX4)$ where: VX1 = input voltage on X1 VX2, ... VXn = output voltage on X2, ... Xn VX4 = board power supply
Operating temperature	0° ... +50°C
Storage temperature	-10° ... +60°C
Fixing on panel	DIN 46277-3 rail (Omega) DIN 46277-2 rail (Omega)

Mechanical dimensions

