

Electronic Controller for Electromagnetic Vibrator

**▶ ALIM01** 230V  
400V SIND1 SIND2

**General**

The ALIM01 circuit feeds the amplitude sensor SIND1 or SIND2 and makes it therefore possible to manage its reaction to the vibration so that any anomalous functioning can be detected (a too high or insufficient vibration). It is possible to regulate the level where the intervention will be required through a trimmer (T2 and T3). Moreover, thanks to the T1 trimmer it is possible to adapt the circuit to different types of vibrations. When the maximum vibration level is exceeded, the red Led indicator switches itself on (LD1) and the relay RL1 also goes off (such alarm can be kept in auto retention by closing the contacts number 4 and 5 of the connector number 3; the system is reset by opening said contacts again). When the vibration is too low the green Led (LD2) switches itself off and the RL2 net stops being excited. The circuit is designed to function with tensions of 230V; if required, however, it can also be designed for tensions of 400V/115V. The whole of the control section is isolated from the electrical network. An (optional) instrument capable of indicating vibrations can be connected to contacts 4 and 5 of the connector. This output V 0/10V can also be used for other purposes.

**Usage instructions**

Connect the amplitude sensor SIND1 to terminal 1 (+/green cable) and 2 (S/ black cable) and 3 (-/brown cable) of connector 2. Feed the circuit and bring the vibrator up to the maximum level of vibrations. Adjust trimmer T1 until the tension at terminal 4 and 5 of connector number 2, as measured with the voltmeter, reaches 10V+/-100mV (should the maximum vibration of 10V not be achievable, move bridge Y1 on High Gain), and check again that the tension is 10V+/-100mV. By adjusting trimmer T2, you should notice that, at a certain point, led LD1 (red) either switches itself on or turns itself off, if it was already on. Position the trimmer so that the led is switched off but near enough to the ignition level. Bring the vibrator at the minimum vibration level. By adjusting trimmer T3 you will find an area where, by rotating in both directions, the green led LD2 will switch on and off. Position the trimmer so that the green led is switched on but near enough to the area where it switches itself off. Connect the (optional) indicating instrument, respecting the +/- priorities, to be able to visualise the width of the vibrations in %.

**Electrical Characteristics**

Supply voltage:	230V (400V optional) 50/60 Hz
Power consumption:	1 watt
Fuses:	1A F 250V 5x20 H 1500A
Allarm max (RL1):	contact NO/NC 10A 250Vca max
Allarm ok vib:	contact NO/NC 10A 250Vca max
Altitude:	till to 2000 meters.
Degree of pollution:	2
Range of relat.humid.:	80% till to 31 °C
Installation class:	II
Degree protection:	IP 54
Temp. of operation:	-5°C / +55°C
Temp. of storage:	-15 °C / + 80 °C
Vibrazion Max:	Led red ON
Vibrazion Min:	Led green OFF
European norms:	EMC CE
Guarantee:	1 year (from date on circuit)

**Available Versions**

Type	Box	Colour	Dimensions	Code	Price €
ALIM01	Aluminium	RAL 7035	165 x 140 x 80	PV ALIM1 Z2 STD	
SIND1	Aluminium	Gray	45 x 45 x 35	PV SIND1 ZX STD	
SIND2	Resinated	Black	60 x 25 x 15	PV SIND2 ZX STD	



**METALLIC BOX**  
PV ALIM1 Z2 STD  
165x140x80



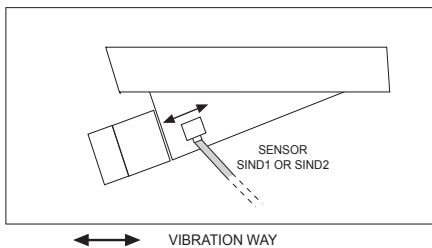
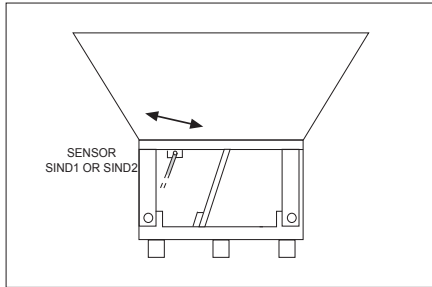
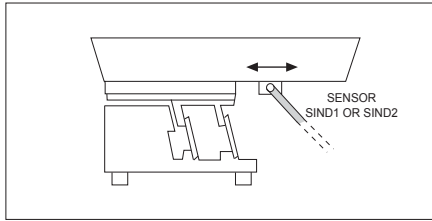
**SENSOR SIND1**  
PV SIND1 ZX STD



**SENSOR SIND2**  
PV SIND2 ZX STD

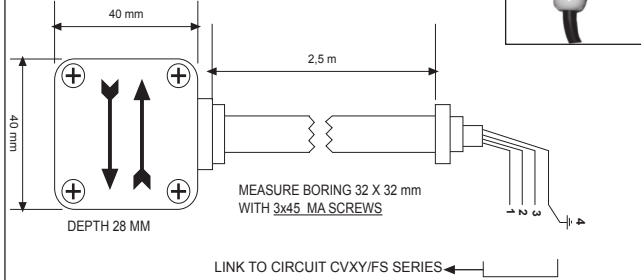
The sensor is put in manner such that the sensitive part is disposed according to the sense of the vibration in such position from hear again totally of the vibration.  
In compatible way with the demands constructive of each vibrator are in fact possible other solutions provided that satisfy the conditions in said precedence.

SKETCH AND CHARACTERISTIC TECHNIQUES SUBJECT TO MODIFICATIONS WITHOUT WARNING



**SENSOR MOD. SIND1**  
BOX LEAGUE ALUMINIUM  
STANDARD CABLE 2,5 METERS 4x0.75 MMQ black  
UTILIZATION: **HEAVY USE**

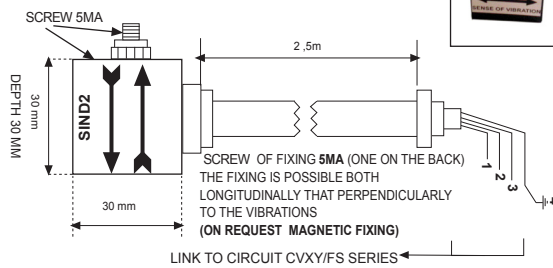
CODE : PV SIND2 ZX STD (25G)  
CODE : PV SIND2 ZX 50G (50G)



STANDARD MODELS: MAX ACCELERATION 25G, I.E. MAX AMPLITUDE 5 MM AT 3000 VIB./MIN OR 1.2 MM AT 6000 VIB./MIN ON THE FASTENING POINT OF THE SENSOR. IF EXCEEDING THESE DATA, THERE WILL BE NO PROBLEMS WITH THE FUNCTION OF THE SENSOR, HOWEVER THE OUTPUT SIGNAL SATURATES ITSELF AND COMPENSATION OF VARIATIONS THEREFORE WILL BE IMPERFECT. IN CASE OF HIGHER VIBRATIONS MOD. 50G: MAX. ACCELERATION 50G, I.E. MAX. AMPLITUDE 10 MM AT 3000 VIB./MIN OR 2.5 MM AT 6000 VIB./MIN ON THE FASTENING POINT OF THE SENSOR. IF EXCEEDING THESE DATA, THE SENSOR MAY BE SUBJECT TO IRREPARABLE ELECTRICAL DAMAGES. THE VIBRATION AMPLITUDE CAN BE MEASURED APPROXIMATELY BY USING APPROPRIATE PLATES HAVING A SPREAD MILLIMETER SCALE.



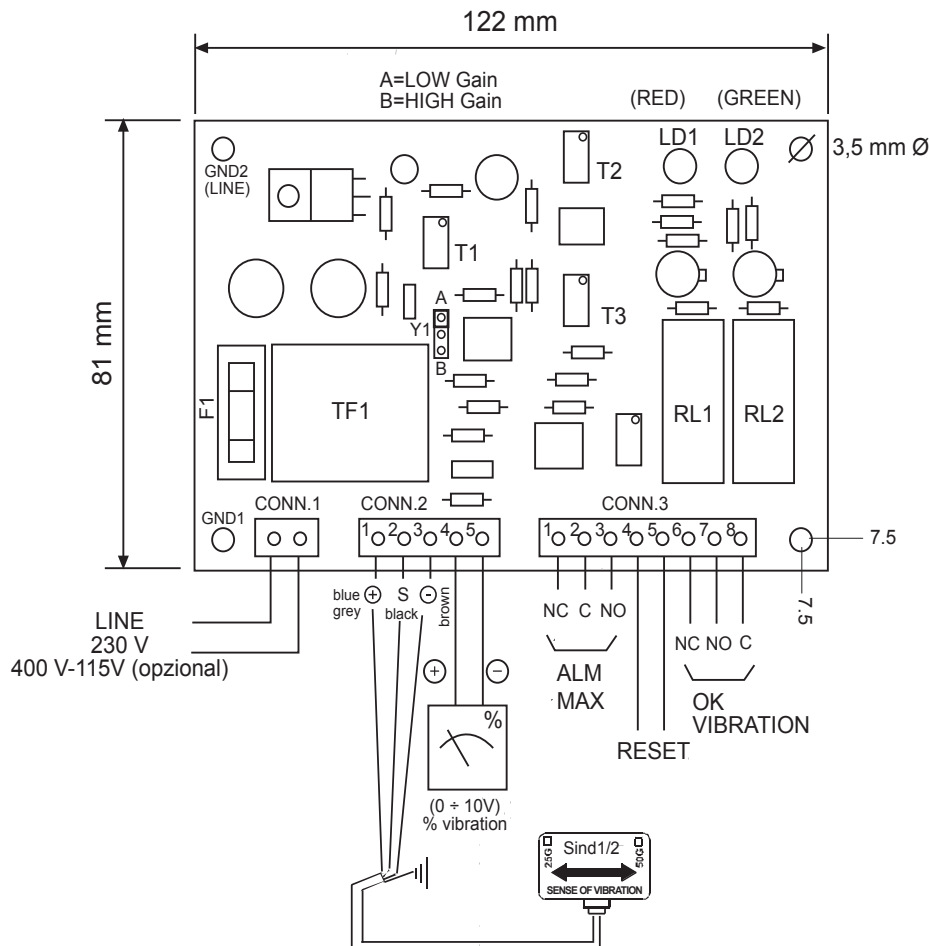
**SENSOR MOD. SIND2**  
PLASTIC BOX WITH SCREW TO FIX  
STANDARD CABLE 2,5 mt - 4X0.75 MMQ black  
UTILIZATION: **GENERAL INDUSTRIAL USE**  
CODE : PV SIND2 ZX STD (25G)  
CODE : PV SIND2 ZX 50G (50G)



Description: VIBRATION SENSOR SIND1-SIND2



SHEET	1/1
DRAFTSMAN	E. PEDRAZZI
DATE	04/09
REV	01
CODE	DTSINDYSTD



Each responsibility from a wrong use of the electronic circuit is declined

Description: Electronic assembling circuit for electromagnetic and mechanical vibrators with amplitude sensor



SHEET	1/1
DRAFTSMAN	E. PEDRAZZI
DATE	09/09
REV	01
CODE	DTALIM01