



SINGLE-ZONE PROCESSING BOARD



P/N SC-SMCP50-Z1, SC-SMCP50-Z1AP, SC-SMCP50-Z1AP-DN, SC-SMCP50-Z1AP-SA

DESCRIPTION

Microprocessor electronic board which manages one SISMA CP 50 sensor-string. This board amplifies, digitizes and analyses the signals coming from the sensor-string, discriminating the typical signals of an intrusion attempt from the ones generated by environmental nuisances. The processing board exploits the power of a 16-bit CPU to manage a string of maximum 56 pre-wired underground detectors. Its embedded memory permits recording the events detected by the sensor strings, by creating the conditions to accurately identify the cause of each possible alarm, as well as monitoring the general behaviour of the zone. The settings and the calibrations are executed with a series connected PC by using the special software SW SISMA CP MZ1, provided with the processing board. The software has a user-friendly interface to maximize the capability of the system, and a graph which views the signals coming from the sensor strings in real time. SC-SMCP50-Z1 has two relay outputs with NC functioning, so as to provide both the alarm signal and the tamper detection for the alarm zone. In addition, two OC outputs are available to signal pre-alarm and power-supply failure. SC-SMCP50-Z1 can be connected over DEA Net, which permits managing the whole security system from a unique station.

COMPLIANCE

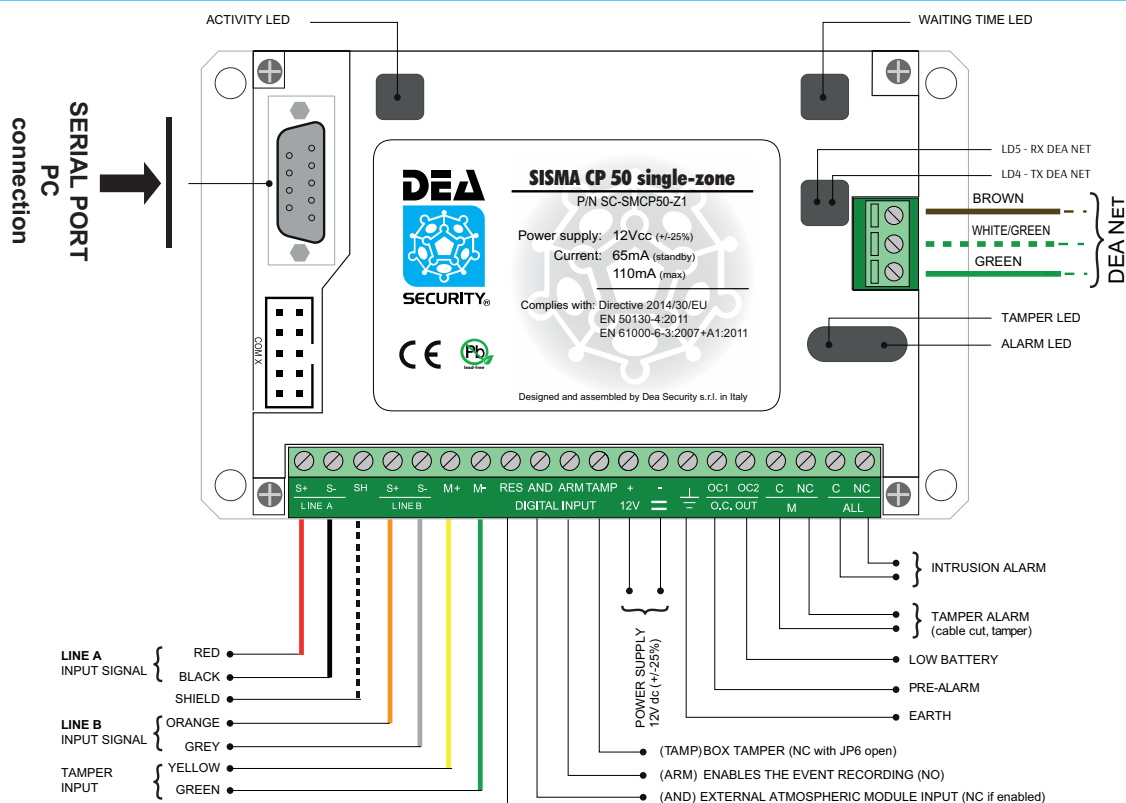
- DIRECTIVE 2014/30/EU
- EN 50130-4:2011
- EN 61000-6-3:2007+A1:2011



TECHNICAL DATA

- DIMENSIONS:** 133 x 81 x 24 mm (W x H x L)
- PACKAGE SIZE:** 165 x 70 x 90 mm (W x H x L)
- GROSS WEIGHT:** 308 g
- POWER SUPPLY:** 12 V_{CC} (+/-25%)
- CURRENT:** 65 mA (standby) – 110 mA (max)
- OPERATING TEMPERATURE:** -25 ÷ +80 °C
- RELATIVE HUMIDITY:** <95% (non condensing)
- ANALOG INPUT:** 1 sensor-string
- OPTOINSULATED DIGITAL AUXILIARY INPUTS FOR SUPPLEMENTARY COMMANDS**
 - Reset
 - AND (ATM atmospheric control)
 - ARM (event storage)
 - Tamper (cabinet)
- NC RELAY OUTPUTS (1 A):**
 - Manumission
 - Intrusion alarm
- OC OUTPUTS**
(which can be converted into C/NC/NO by means of 1-relay expansion board SC-ER1):
 - Prealarm
 - Low battery
- CONNECTIONS:**
 - PC (RS-232 port)
 - bus DEA NET
- CPU:** 16 bit, 16 MHz
- ANALYSIS CAPABILITY:** up to 56 SISMA CP 50 sensor-strings
- DIGITAL MEMORY:** more than 20.000 events
- CALIBRATION, SETTINGS, EVENT MANAGEMENT VIA SOFTWARE**
- Service software licence included**

CONNECTION SCHEME





PACKAGE CONTENTS

In addition to this datasheet, the package contains:

- No 1 mini-CD (with service software and technical documentation)
- No 2 ferrite cores
- No 1 mini screwdriver
- No 1 jumper (2 vie)



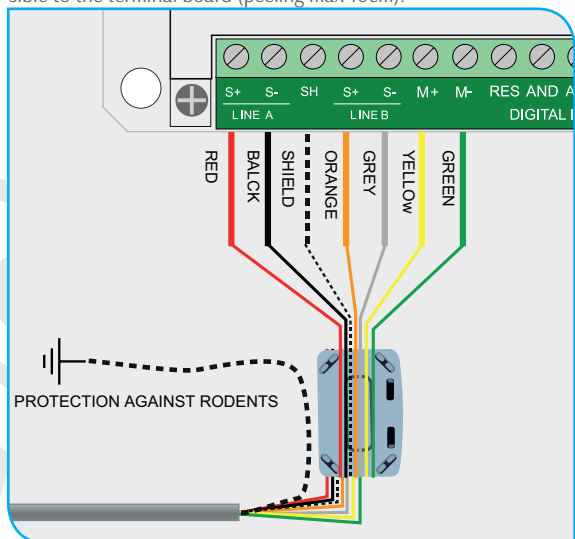
CONNECTIONS

• SENSOR-STRINGS

Use only DEA Security cable (CV-SMCP50) for connecting sensor-strings. The junctions must be sweet soldered, treated with epoxy and set inside a special box (JBX-SMCP50 or TBX-SMCP50).

The maximum distance between the processing board and the beginning of the string is 150m. The anti-rodent sleeve must be earthed. The anti-rodent sheath must be earth connected. The cable can be peeled off of the first sheath and the anti-rodent shield for the necessary length to easily work.

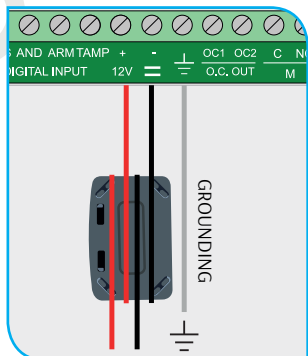
The anti-rodent shield must arrive in good condition as close as possible to the terminal board (peeling max 10cm).



• POWER SUPPLY

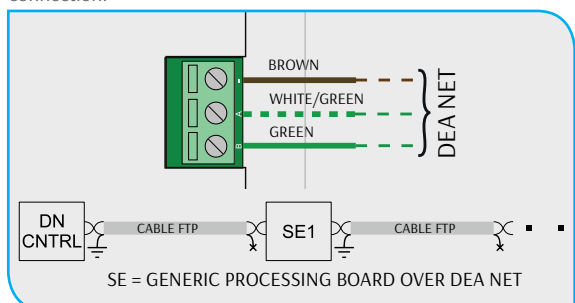
The SC-SMCP50-Z1 board is powered by a DC voltage of 12 Volt nominal. The two power conductors must pass twice inside the supplied ferrite before being connected to the dedicated terminal blocks.

The connection ends with the connection of the earth connection, connected to the appropriate terminal block.



• BUS DEA NET

The SC-SMCP50-Z1 processing board can be connected to DEA NET BUS through DEA NET port. In case of connections whose length exceeds 10 m, it is suggested using an FTP type connection cable, by using only one of the four pairs available, plus a wire for mass connection.

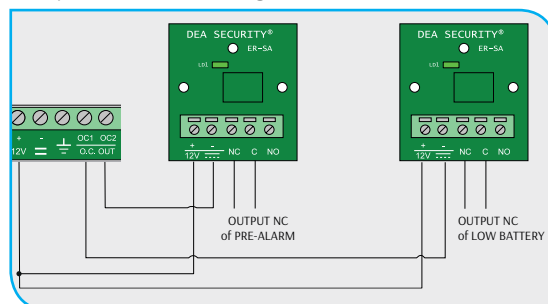


N.B.

THE SHIELD OF THE FTP CABLE USED FOR THE CONNECTION OVER DEANET MUST BE CONNECTED TO THE GROUND TERMINAL AT ONE OF THE TWO ENDS. THE OTHER END MUST BE LEFT UNCONNECTED.

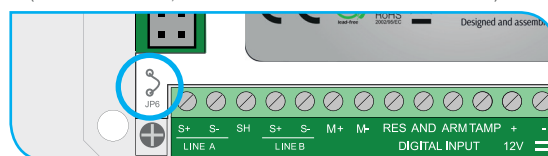
• SC-ER1 CONNECTION (OPTIONAL)

Through the SC-ER1 module it is possible to convert any OC output in NC-C-NO exchange contact.



• TAMPER (OPTIONAL)

The processing board can manage an external TAMPER contact, NC with not balanced line. The two terminals will have to be connected to TAMP terminal (DIGITAL INPUTS) and to the supply NEGATIVE. In addition, it is necessary to cut Jumper JP6 (under the carter, to the left of the main terminal board).



LEDs

• LD1 (red) - TAMPER

It goes to ON if the cables are tampered or if the TAMPER contact is interrupted (if used). While this LED goes to ON, the relative relay K1 gets open.

• LD2 (red) – ALARM

It goes to ON when an intrusion is detected according to the security levels set. If a second detector of confirmation is used (AND of DIGITAL INPUTS), the processing board does not signal the alarm status until the confirmation from the auxiliary control arrives.

• LD3 (green) – STAND BY

This LED indicates the waiting state of the electronic board: no processing is in progress.

• LD4 (verde) – DEA NET TX

Indicates a transmission to the DEA NET network.

• LD5 (rosso) – DEA NET RX

Indicates reception from the DEA NET network.

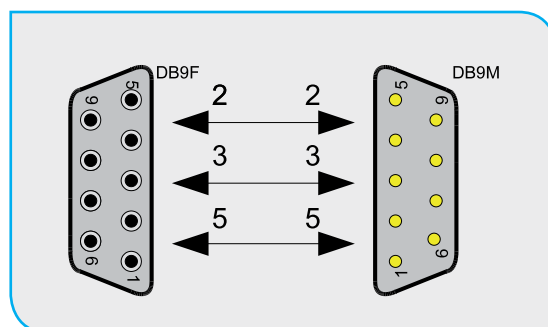
• LD6 (verde) – ACTIVITY LED

In case of regular operativeness of the board, this LED blinks slowly. If writing operations towards the memory of the system are in progress, the LED blinks quickly. We suggest not switching the processing board OFF while a writing operation is in progress.

CALIBRATION

• PRELIMINARY OPERATIONS

Connect the computer to the card (PC LINK port) through the use of a serial cable with standard male and female DB9 connectors. Verify that the processing card is switched on and start the SISMA CP50 Z1 software, supplied with the board.



• ACCESS TO THE CONFIGURATION

When the program is started, enter the login credentials in the authentication window (default username: installer, default password: dea).



• MAIN WINDOW

Options: set the connection parameters with the board (serial port, from COM1 to COM8) and the language (Italian or English). It can also change the password to access the program (instead of "dea"). Choosing this option will ask for the old password and then enter the new password twice.

Connect to board: Activate the connection to the SC-SMCP50-Z1 board. **Close:** to exit the program..

• CONNECTION TO BOARD

You will be asked for a new password (password board, default: 123456).

• SENSITIVITY SETTING

Once the access to the processing card has been obtained, the window visible to the side opens. If you do not open this window, check that you have entered the correct password, set the correct com port, or that the connection cable is correct according to the diagram above. Now it is possible to proceed with the calibration following the procedure:

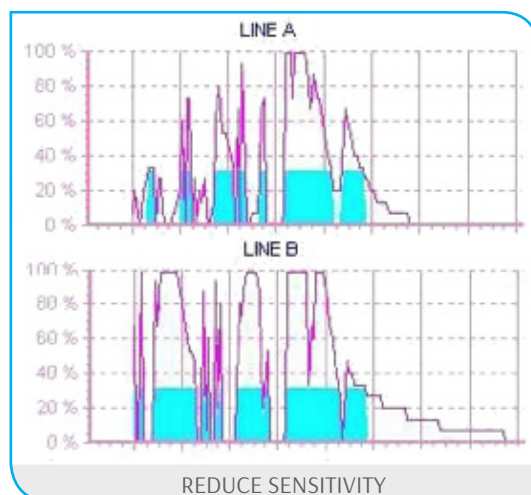
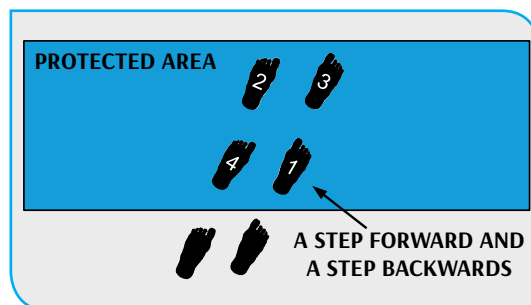
1. **Monitor** section, select **Automatic**.

2. Cross the sensor-string slightly obliquely to the direction of the section, taking normal steps and positioning the feet as shown in the figure below. The numerical sequence indicates the time sequence with which the feet must rest on the section.

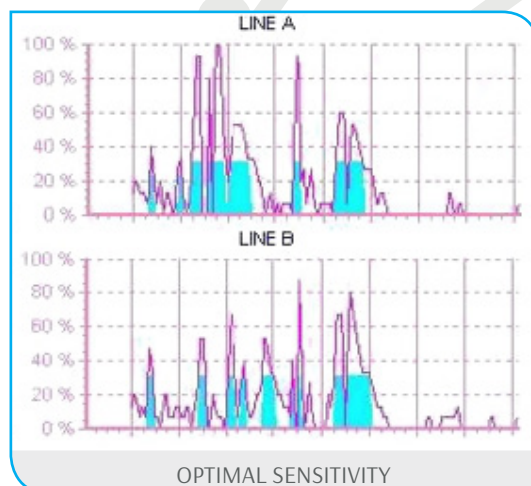
3. Compare the graph obtained with the figures below and adjust the sensitivity as indicated.

4. Repeat the procedure from point 1 until a graph similar to that of the central picture is obtained.

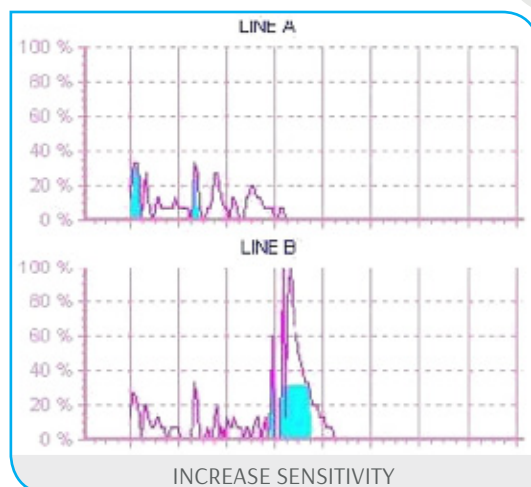
5. Press the Store Config button so that the settings are stored in the memory of the board.



REDUCE SENSITIVITY



OPTIMAL SENSITIVITY



INCREASE SENSITIVITY

N.B.

AT THE END OF THE MODIFICATIONS, IN ORDER FOR THESE TO BE MEMORIZED PERMANENTLY BY THE SC-SMCP50-Z1, PRESS THE SAVE CONFIG BUTTON AND PROCEED WITH THE SAVING. IN THE EVENT THAT THIS OPERATION IS NOT CARRIED OUT ALL THE CHANGES MADE WILL BE LOST IN CASE OF POWER FAILURE.

- **SAVING CONFIGURATION**

Once the final calibration of the system has been carried out, it is highly recommended to record in a file the optimal configuration that has been obtained. In this way you are protected from any future improper intervention on the board.

From the File menu, at the top left, click Save Configuration and in the File name box: write a meaningful name such as "Calibration-CantiereX-Data".

N.B.

THE PROCESSING BOARD MUST BE INSTALLED INSIDE THE BOX PROTECTED AGAINST OPENING THE INSTALLATION OF THE PROCESSING BOARDS OUTDOORS IS POSSIBLE ONLY INSIDE WATER PROOF BOXES. IN CASE OF OUT OF RANGE TEMPERATURE AND HUMIDITY IT IS NECESSARY TO AIR CONDITION THE BOX. DEA SECURITY SUGGESTS PERIODICALLY CHECKING ALL THE PRODUCTS USED IN THE SECURITY SECTOR TO GUARANTEE THEIR MAXIMUM EFFICIENCY IN TIME.

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