

CONTROLLER BOARD



P/N	SC-P2P-CTRL, SC-SRP2P-CTRLAP
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DESCRIPTION

Controller board which manages two communication buses and up to 250 SERIR P2P sensors on each bus. This board has several functions, among which the sensor automatic identification and sorting and the alarm signal processing.

SC-SRP2P-CTRL controller board allows, using P2P Service Software, the configuration and setting of the sensors belonging to a P2P system.

The Controller can manage up to 500 sensors connected on 2 communication bus (maximum 250 detectors per bus), to protect a perimeter of up to 1500 m (assuming the installation with a sensor-to-sensor distance of 3 meter).

During the starting up of the system, the Controller performs sensors identification and their sorting, placing them on up to 64 logical alarm lines. Logical lines can be assigned to a maximum of 128 output relays to signal alarms, tampers and failures.

COMPLIANCE

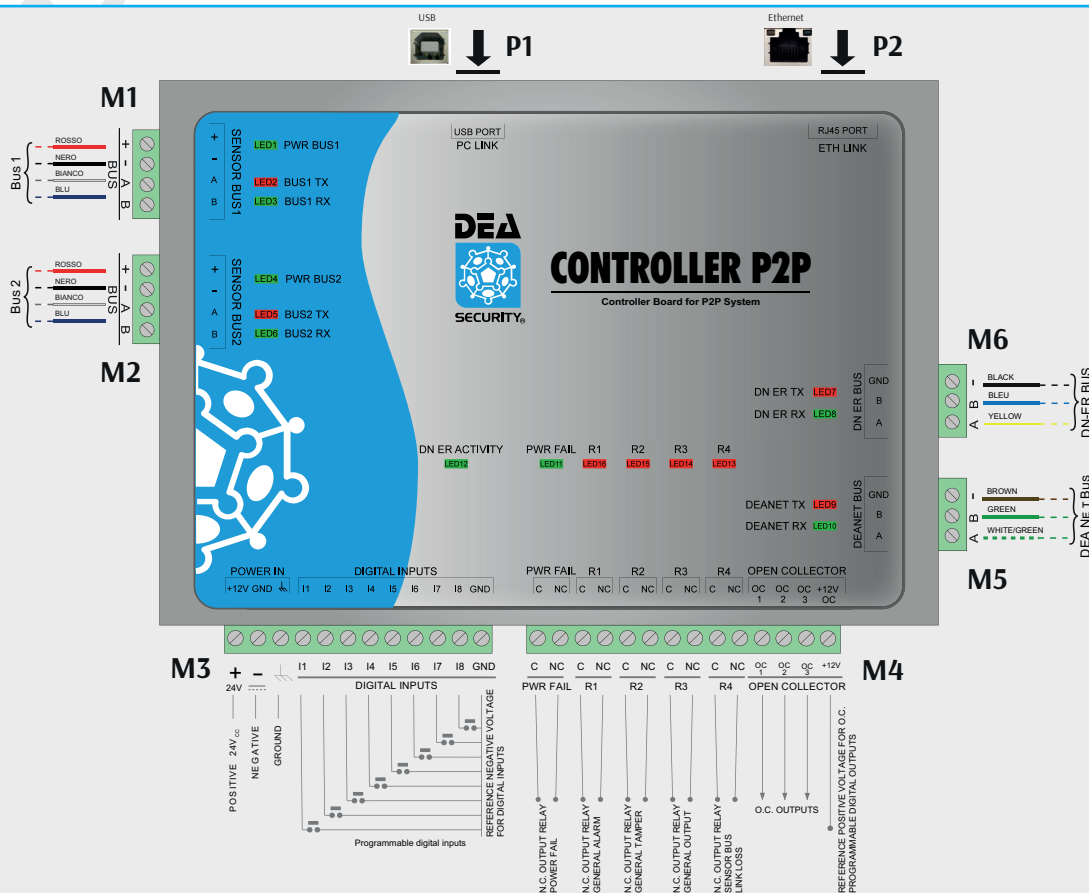
- DIRECTIVE 2014/30/EU
- EN 50130-4:2011 + A1:2014
- EN61000-6-3:2007 + A1:2011



TECHNICAL FEATURES

- **DIMENSIONS:** 185 x 135 x 41 mm (L x H x D)
- **GROSS WEIGHT:** 296 g
- **POWER SUPPLY:** 24 V_{cc} (+/-25%)
- **CURRENT:** 2 A (max)
- **OPERATING TEMPERATURE:** -25 ÷ +70 °C
- **RELATIVE HUMIDITY:** <95% non condensing
- **DIGITAL INPUTS:** No 8 optoisolated inputs (service software programmable)
- **NC RELAY OUTPUTS (1 A):**
 - ▶ General Alarm
 - ▶ General Tamper
 - ▶ Watchdog
 - ▶ Sensor failure
 - ▶ Bus link loss
 - ▶ up to 128 external on SC-DN-ER16 optional expansion boards
- **OC OUTPUTS:** No 3 programmable
- **CONNECTIONS:**
 - ▶ Ethernet (RJ45)
 - ▶ USB
 - ▶ DEA NET
- **MANAGEMENT CAPABILITY:** up to 250 SERIR P2P sensors each bus
- **CALIBRATIONS and CONFIGURATIONS by MEANS of SERVICE SOFTWARE**
- **CPU:** 32 bit
- **DIGITAL MEMORY:** more than 20.000 events
- **Service software licence included**

GENERAL SCHEME





PACKAGE CONTENTS

In addition to this datasheet, the package contains:

- No 1 controller board SC-P2P-CTRL, No 1 mini-CD (with service software and technical documentation)
- No 3 ferrite cores

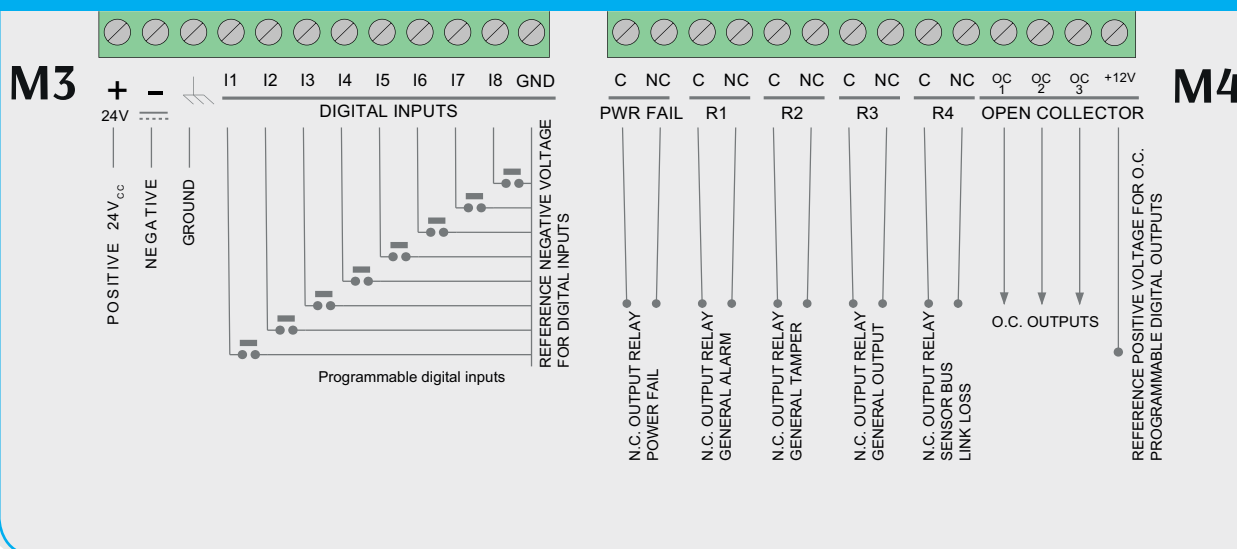


CONNECTIONS

The connections board are made via terminal blocks M1 (bus1), M2 (bus2), M3 (inputs) M4 (outputs), M5 (DEA NET bus), M6 (relay expansions), USB port (PC connection) and Ethernet port (ethernet connection - IP).

• INPUTS/OUTPUTS (M3 AND M4)

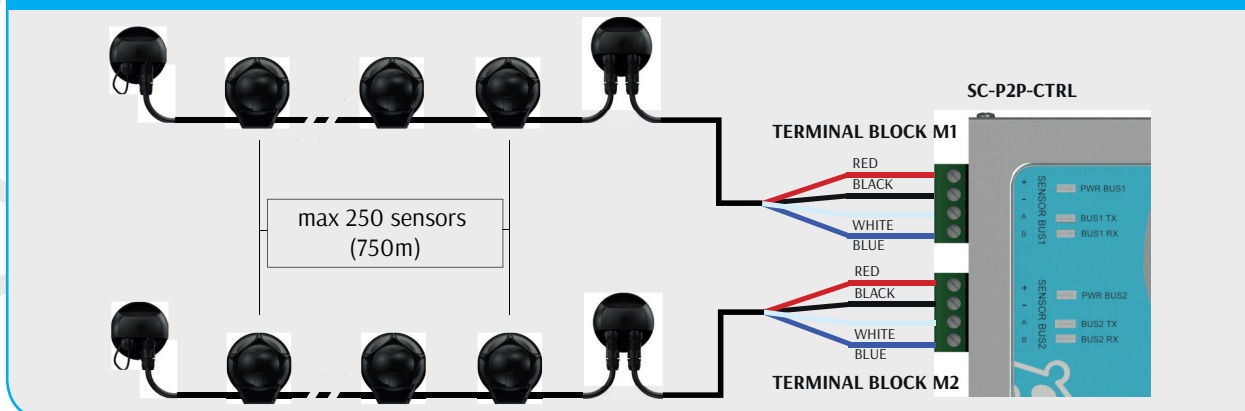
TERMINAL BLOCK M3 AND M4



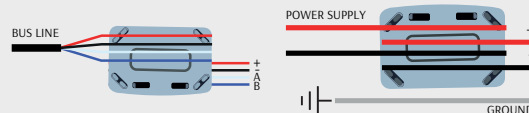
• CONNECTION SENSORS (M1 E M2)

P2P sensor lines must be connected to terminal boards M1 and M2 as shown in the following picture. Each bus can manage up to a maximum of 250 sensors, guaranteeing a maximum perimeter protection of 750 m.

TERMINAL BLOCK M1 AND M2



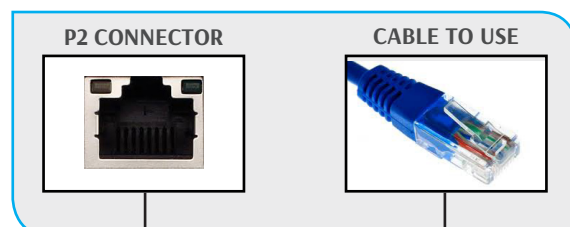
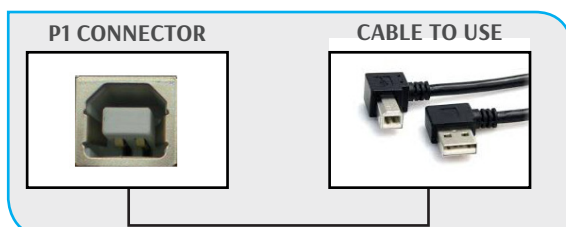
IN THE BUS SENSORS THE FERRITE INCLUDED IN THE PACKAGE MUST BE INSERTED. THE CABLE MUST PERFORM A RIDE INSIDE THE FERRITE IS ILLUSTRATED IN FIGURE. FERRITE MUST ALSO BE USED FOR THE POWER CABLES OF THE ELECTRONIC BOARD.



• PC AND NET WAN/LAN CONNECTION

SC-SRP2P-CTRL controller board has available two different connectors:

- **P1 port** (type B USB) is for service activity (configuration and setting up of the system) using the provided service software.
- **P2 port** (Ethernet) port allows connection of the SERIRP2P system to a LAN / WAN network, using TCP / IP protocols:
 1. integration with **management systems of a graphic map** (DEA MAP supervision software);
 2. communication with integrated and integrated third-party **video surveillance systems** (Ethernet Sharer software);
 3. integration, through the **SW-DM-DLL** dynamic library, of the signals coming from the CONTROLLER in a third-party software.



• CONNECTION DEA NET BUS

To connect SC-SRP2P-CTRL controller to DEA NET communication network, use terminal board M5 as shown in the following picture.

• CONNECTION RELAYS EXPANSION

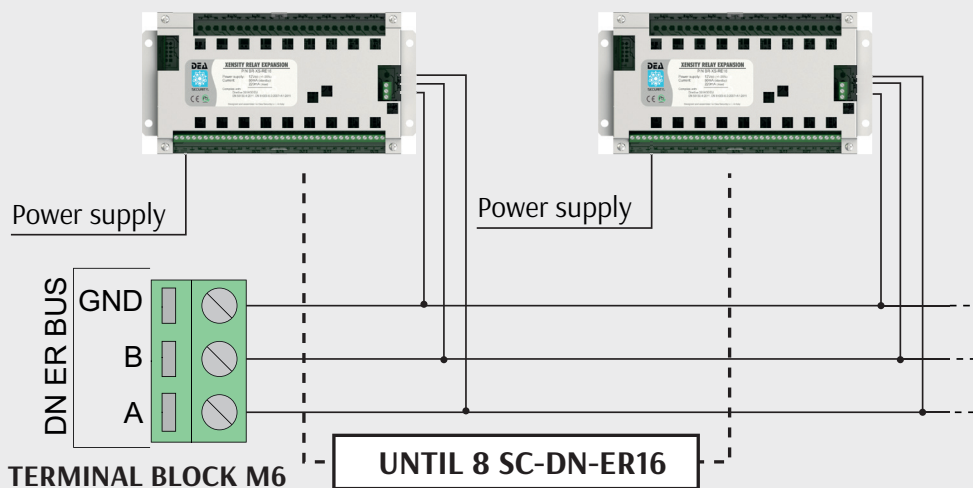
SC-DN-ER16 board is used to convert alarm, tamper or failure signals to dry contacts (C/NC/NO). Expansion relay modules must be connected to SC-SRP2P-CTRL controller board using terminal board M6.

SC-SRP2P-CTRL controller can manage up to 8 SC-DN-ER16 (128 programmable output relays).

TERMINAL BLOCK M5



TERMINAL BLOCK M6



LEDs

The table here below describes the SC-SRP2P-CTRL's LEDs and their meaning.

LED	Signal	Colour
PWR BUS 1	BUS1 Supply Voltage OK	GREEN
BUS1 TX	BUS1 TX activity	RED
BUS1 RX	BUS1 RX activity	GREEN
PWR BUS 2	BUS2 Supply Voltage OK	GREEN
BUS2 TX	BUS2 TX activity	GREEN
BUS2 RX	BUS2 RX activity	RED
DN ER ACTIVITY	Relay expansion activity	GREEN
PWR FAIL	Watchdog (Normally ON)	RED
R1	Alarm Relay ON	RED
R2	Tamper Relay ON	RED
R3	Failure Relay ON	RED
R4	Link Fail Relay ON	RED
DEANET TX	Bus DEA NET TX activity	RED
DEANET RX	Bus DEA NET RX activity	GREEN
DN ER TX	Bus DN ER TX activity	RED
DN ER RX	Bus DN ER RX activity	GREEN



SENSORS AND/OR RELAY ACQUISITION

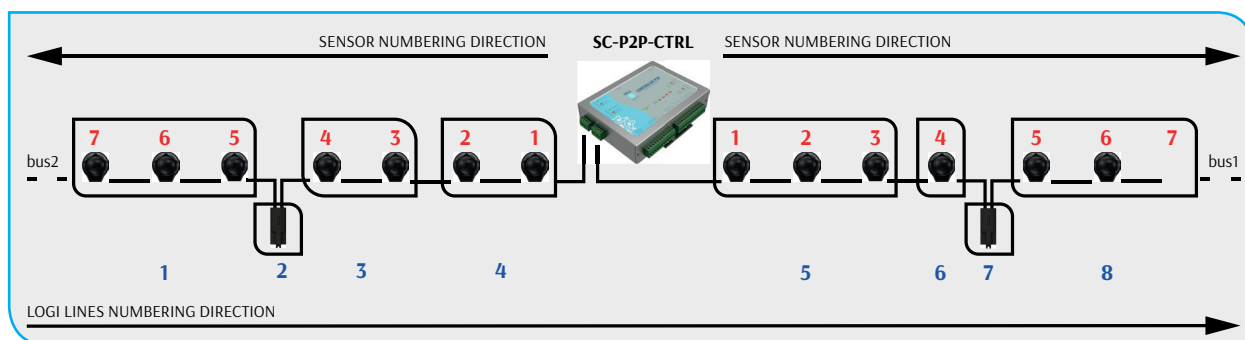
Once the installation of the sensors and their connection to the controller has been completed, the configuration of the system must be performed. Service software has a special section for the automatic configuration of the system which allows a quick P2P system configuration following a series of guided steps.

After the Service software has been started, from the Configuration page select the Auto setting button .

The Controller::

- acquires the sensors and the input modules (if any) connected to BUS1 and BUS2 (sensors and input modules are identified by their unique Serial Number)
- sorts sensor and input modules on a physical basis, using a patented sorting algorithm (sensor N.1 is the sensor nearest to the Controller)
- places the acquired sensors on logical lines (up to 64) following the selected procedure (see Service Software User Manual)
- detects relay expansion boards (if any) connected to it

- assigns logical lines to available output relays so to have, at least, an alarm relay and a tamper relay per line (if the relays are sufficient)
- Once the Auto setting procedure has been completed, all the sensors and input modules have been placed on logical lines and all the output relays have been configured.
- The configuration can also be completely customized according to particular install needs.
- Following picture show how sensors and lines are automatically numbered.



CALIBRATION

• MAGNETIC TAMPER

Once the lines/relays configuration has been completed, the first step to perform is the calibration of the sensor's magnetic tamper circuit.

From the line or sensor configuration page, select the Calibration button and wait until the procedure is complete.

• SENSITIVITY

From the line or sensor configuration page select Continuous in the Monitor section.

Perform a cut test on a fence panel protected by the selected line and modify the sensitivity level of the line until a graph like the one in the picture here below is obtained.



MAGNETIC TAMPER CALIBRATION MUST BE PERFORMED ON ALL THE CONFIGURED LINES.



DEA Security S.r.l.

Via Bolano, snc - 19037 Santo Stefano di Magra (SP) - tel. +39 0187 699233 - fax +39 0187 697615

VAT NO.: IT00291080455

www.deasecurity.com - dea@deasecurity.com

