SN-SPCP-FDR1M

SPC PRO
INDOOR SHOCK AND SEISMIC (DUAL-TECH) DETECTORS

DEA SECURITY®

SHOCK DETECTOR FOR DOORS/WINDOWS WITH MAGNETIC CONTACT

RATE US!

P/N	SN-SPCP-FDR1M

DESCRIPTION

Stand-alone detector with DSF (**D**EA **S**ensor **F**usion) technology for the protection of doors and windows against **light impacts**, **strong impacts**, **breakthrough actions**, **continuous impacts** and **opening events**. It couples the robustness and reliability of the piezoelectric transducer, the accuracy of the MEMS technology with an integrated electronics which ensures Point identification and calibration of the sensor.To be fixed to the structure to be protected with any inclination and orientation, the sensor is equipped with anti-removal device and magnetic anti-masking. Configuration and calibration are performed by means of a special Wi-Fi dongle (DG-DEA-WF2) to be connected to the detector and a **mobile APP** (iOS/Android).

PACKAGE CONTENTS

In addition to the datasheet herein, the pack contains:
- 1 no SN-SPCP-FDR2 detector
- 2 no round head self-tapping screws 2.9 x 13 mm (for fixing the sensor)
- 2 no round head self-tapping screws 2.9 x 16 mm (for alternative fixing the sensor)
- 2 no round head self-tapping screws 2.9 x 13 mm (for magnet)
- 1 no retractable base magnet
- 1 no mini screwdriver

COVERAGE AREA

SN-SPC-FDR1M detector protects the whole structure, including glazed surface (if any), up to 4 sqm (see Application example). However, such value can decrease depending on the conditions and the features of the window/door.

APPLICATION EXAMPLE

DOWNLOAD APP

DOWNLOAD APP   DOWNLOAD APP

COMPLIANCE

- **DIRECTIVE 2014/30/EU**
  - EN 50130-4:2011
  - EN 61000-6-3:2007+A1:2011
- **DIRECTIVE 2011/65/EU**
  - EN 50581:2012
- **STANDARD EN-50131-1/A2:2017**
  - EN-50131-2-6:2008
  - EN-50131-2-8:2016

CE   Pb lead-free   RoHS

TECHNICAL FEATURES

|	
SECURITY GRADING:	Grade 3 certified (EN 50131-2-6 and EN 50131-2-8)
ENVIRONMENTAL CLASS:	Class II certified
DIMENSIONS:	sensor 89 x 26 x 20 mm (L x H x D)
	magnet 53 x 10 x 12 mm (L x H x D)
PACKAGING DIMENSIONS:	110 x 75 x 35 mm (L x H x D)
GROSS WEIGHT:	72 g
NET WEIGHT:	53 g
CASE MATERIAL:	ABS
COLOUR:	white
POWER SUPPLY:	12 V_{DC} (±25%) (nominal)
	8V (low supply voltage)
CURRENT:	20 mA
	60mA max (during calibration)
OPERATING TEMPERATURE:	-20 ºC ÷ +70 ºC (not certified)
	-10 ºC ÷ +40 ºC (75 % R.H.) - certified
RELATIVE HUMIDITY:	<95% non condensing
IP RATING:	IP40
FUNCTIONS AND DEVICES:	anti-removal, anti-opening and magnetic anti-masking tamper
INPUTS:	Reset and ARM (for alarm memory)
OUTPUTS (NC):	
	• alarm line (continuous impacts, low attacks, gross attacks and heavy attacks), magnetic contact opening, power fail
	• tamper line
COMMUNICATION:	connector for Wi-Fi dongle
AVERAGE COVERAGE AREA:	4 m²
CONFIGURATION VIA SPC PRO APP	
MOBILE APP LICENCE (IOS/ANDROID) INCLUDED	

DIMENSIONAL SCHEME
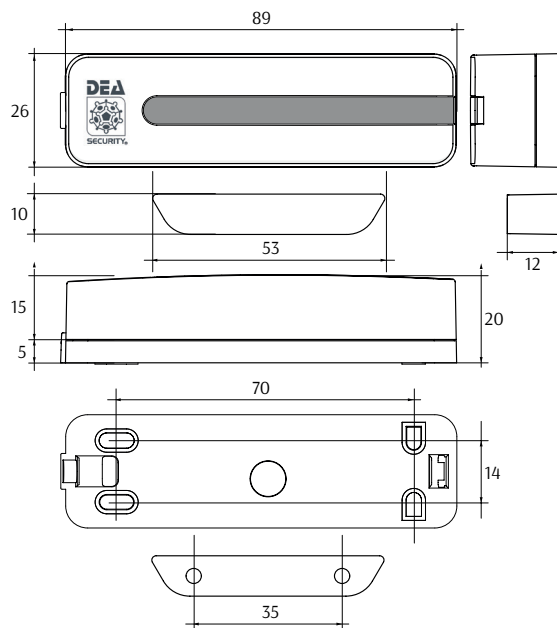
INSTALLATION

To open the detector, put off the light guide present on the cover (1), raise it from its right side (opposite to DEA Security brand); insert the screwdriver in the side hole (2) and prising the unlocking support.

Make the cable (3) pass through the desired hole (on the base or on the sensor side) and fix to the structure (4) with the supplied screws.
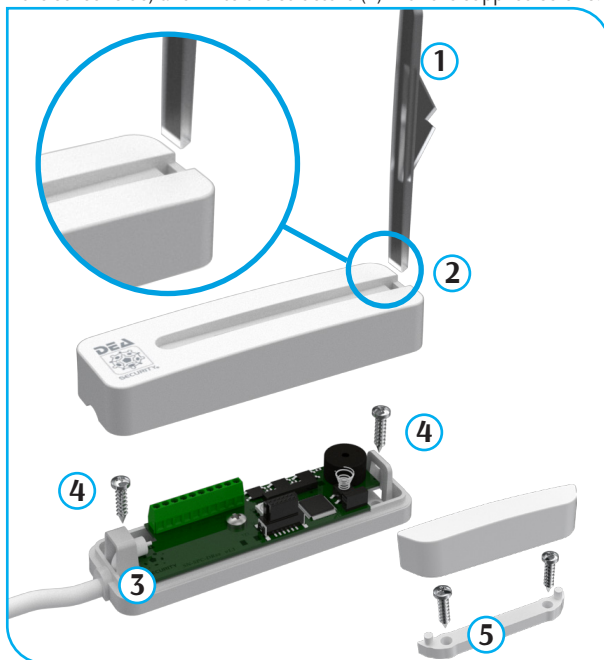
> ⚠ IT IS RECOMMENDED TO KEEP ABOUT 5MM IN SPACE OF TOLERANCE BETWEEN THE SENSOR AND THE BEARING STRUCTURE.

The magnet (5) must be placed in mid-position in relation to the sensor, by fixing its base with the screws supplied and closing it with its cover.
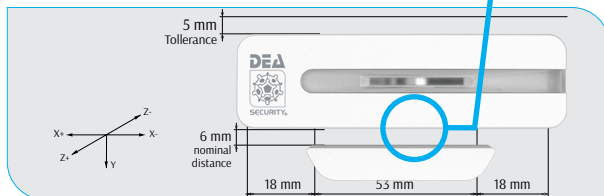
Magnetic contact distance / approach table.

Ref. axis	Event	Distance		Signal
		in air	ferromagnetic	
Z+	Moving away	8 mm	9 mm	Intrusion
	Moving close	7 mm	7 mm	Stand-by
Z-	Moving away	7 mm	7 mm	Intrusion
	Moving close	6 mm	5 mm	Stand-by
Y	Moving away	7 mm	10 mm	Intrusion
	Moving close	5 mm	8 mm	Stand-by
X+	Moving away	16 mm	19 mm	Intrusion
	Moving close	14 mm	18 mm	Stand-by
X-	Moving away	20 mm	25 mm	Intrusion
	Moving close	19 mm	24 mm	Stand-by

> ⚠ THE NOMINAL DISTANCE BETWEEN THE MAGNET AND THE SENSOR MUST BE 6 MM.

> N.B. OPENING DETECTION OF THE STRUCTURE IS NOT PERFORMED THROUGH REED BUT BY MEANS OF AN ELECTRONIC TRANSDUCER WHICH ALSO DETECTS MASKING EVENTS.
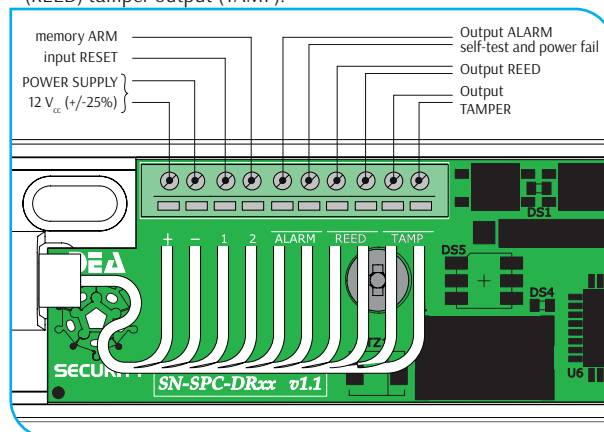
> ⚠ AFTER INSTALLING THE MAGNET, WITH THE DOOR CLOSED, GO TO THE APP (OTHER OPTIONS) AND PRESS "CALIBRATION".

CONNECTIONS

The detector is equipped with a 10-way terminal block: 12 V_{DC} power supply (+ e -), RESET input (1), ARM alarm memory (2), alarm output (ALARM), self-test or power fail signal, magnetic contact output (REED) tamper output (TAMP).

The RESET and ARM inputs are optional. In case of use, they must be referred to the negative power supply.

> ⚠ CONNECTIONS BETWEEN OUTPUTS AND ALARM CONTROL PANEL MU BE EXECUTED WITH SHIELDED CABLE.

> ⚠ AFTER POWERED THE SENSOR, WAIT FOR THE INITIALIZATION FUNCTIONAL CHECKS. AT THIS STAGE THE SENSOR MUST BE FIXED. ONCE INITIALIZATION IS COMPLETE, THE LED SIGNALS CORRECT OPERATION (BLUE FLASHES) OR MALFUNCTIONS (PURPLE FLASHES).

CALIBRATION

Calibration and configuration of the system occur by means of the SPC PRO mobile APP and the Wi-Fi dongle connected to the detector

(please see DG-DEA-WF2 technical datasheet).
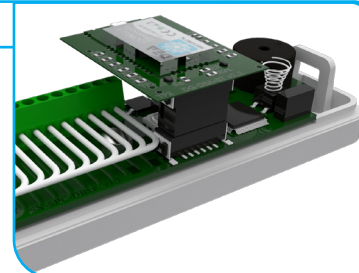
▪ **WI-FI CONNECTION**

To establishcommunication between device (smartphone, tablet) and sensor, you need to follow these steps:

· insert DG-DEA-WF2 dongle in the detector;
· activate a Wi-Fi communication on the device used;
· connect to DEA SECURITY network;
· execute SPC PRO application;
· connect to detector by clicking on **Connection**;
· insert password "**123456**".

▪ **App Home**

In home you can check the information about the detector status (1,2,3 and 5) and/or start calibration actions (4):

1. firmware version and parameters;
2. save configuration;
3. monitor power supply;
4. modify configuration and various options;
5. sensor status icons.

By clicking on the icon **Settings**, it is possible to enter configuration and calibration sections.

▪ **Calibration EN 50131-2-8**

It is possible to choose three presets corresponding to three **settings EN50131-2-8 compliant**:

· window (general structure with glass, default set);
· wood (wooden plate);
· concrete (concrete plate).

After selecting the desired preset with the right arrow (see picture) you go to **Other options**.

> ⚠ TO ACTIVATE THE SIGNALING LEDS, WITH THE COVER REMOVED, THE COVER TAMPER MUST BE DISABLED
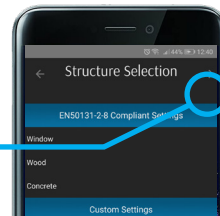
▪ **CUSTOM CALIBRATION**
Custom mode enables you to customize the calibration depending on the different intrusion techniques and to better fit the structure to protect. Afer selecting **Other options**, with the right arrow (see picture) you go to calibration.

▪ **CONTINUOUS IMPACTS**
Low intensity vibrations in a time lapse, typically generated by electric tools, such as circular saws.
1. enable detection **CONTINUOUS IMPACTS**;
2. set the event number desired (series of continuous impacts) to trigger the alarm;
3. set the memory time of the event counting;
4. the default sensitivity is suitable for the for most of the structures. If need, it can be adjusted from minimum (0) to maximum (100).
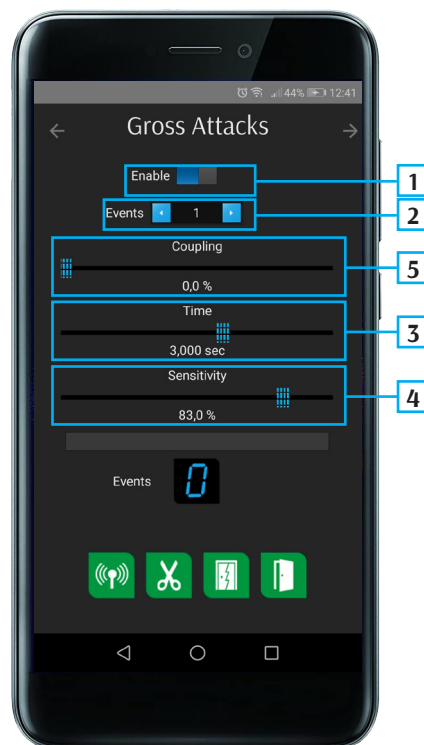
Continuous Impacts

Enable		1
Events ◄ 3 ►		2
Time — 3 m, 0 sec		3
Sensitivity — 52,0 %		4
Events **0**		
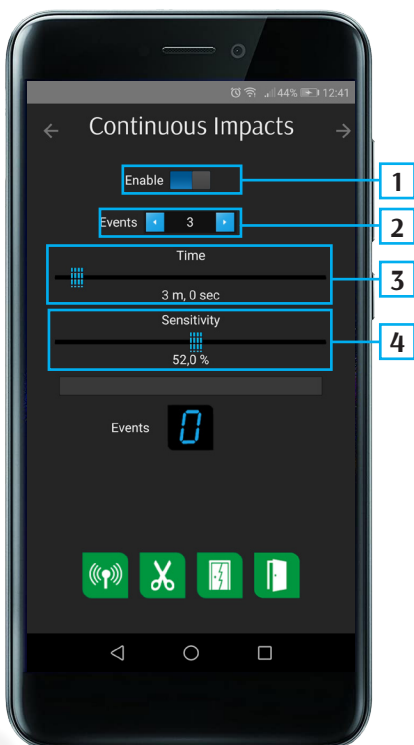
▪ **GROSS ATTACKS**
Significant intensity event but which does not compromise the intensity of the structure.
1. enable the detection of **GROSS ATTACKS**;
2. set the event number desired to trigger the alarm;
3. set the memory time of the evnt counting;
4. set the desired sensitivity, then check it on the structure by generating gross attacks on the latter until the progressing of the programmed event number in the counter.
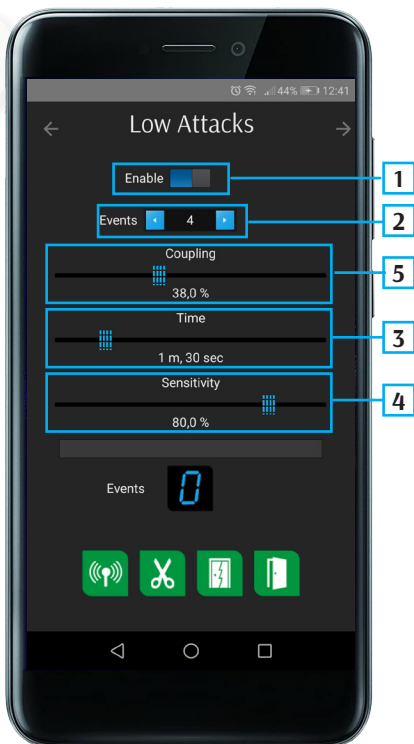
Gross Attacks

Enable		1
Events ◄ 1 ►		2
Coupling — 0,0 %		5
Time — 3,000 sec		3
Sensitivity — 83,0 %		4
Events **0**		

⚠️ *IF THE SENSITIVITY LEVELS DO NOT MEET THE CALIBRATION NEED, MODIFY THE ADAPTABILITY PARAMETER (5).*

▪ **LOW ATTACKS**
Contact between the protected structure and a rigid body but which does not compromise the integrity of the structure itself.
1. enable detetion of **LOW ATTACKS**;
2. set the event number desired to trigger an allarm;
3. set the memory time of the evnt counting;
4. adjust the sensitivity, then check it on the structure by simulating low attacks with a rigid body (for example with a screwdriver handle) until the programmed number of events progresses in the counter.
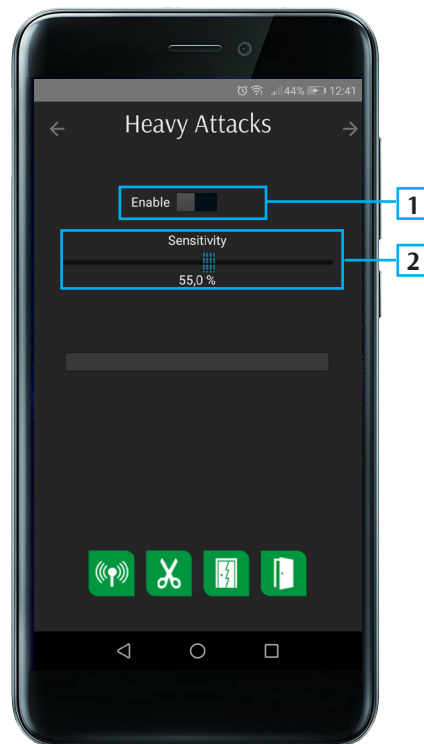
Low Attacks

Enable		1
Events ◄ 4 ►		2
Coupling — 38,0 %		5
Time — 1 m, 30 sec		3
Sensitivity — 80,0 %		4
Events **0**		

▪ **HEAVY ATTACKS**
Very high intensity attack which compromises the integrity of the structure and which must trigger an immediate alarm.
1. enable the detection of **HEAVY ATTACKS**;
2. the default sensitivity is suitable for most structures. If needed, it can be calibrated from minimum (0) to maximum (100).

Heavy Attacks

Enable		1
Sensitivity — 55,0 %		2

⚠️ *IF THE SENSITIVITY LEVELS DO NOT MEET THE CALIBRATION NEED, MODIFY THE ADAPTABILITY PARAMETER (5).*

⚠️ *SHOULD 1 EVENT IN GROSS ATTACKS BE SELECTED, THE HEAVY ATTACKS MUST NOT BE ENABLED.*

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OTHER OPTIONS
- View alarms on LED
- View prealarms on LED
- Enable Activity LED
- Enable cover tamper
- Enable sensor removal tamper
- Enable magnetic tamper
- Enable magnetic contact
- Enable Reset
- Enable Memory
- Enable Audio
- Upgrade firmware
- Save configuration
- Default
- Selftest
- Password
- Calibration
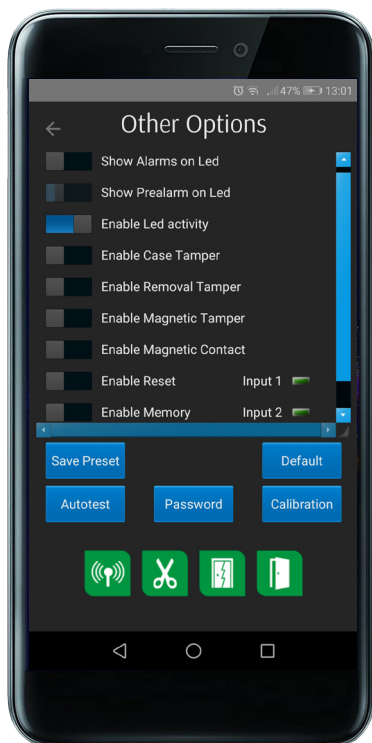
STATUS LED

The sensor is equipped with signalling LED.
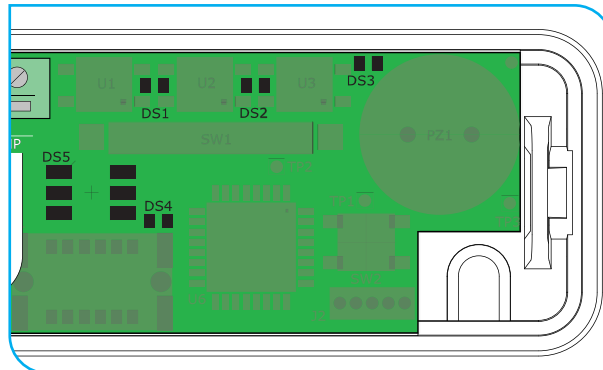
During installation (open sensor):

LED	SIGNAL	COLOUR
DS1	Alarm	RED
DS2	Alarm Opening Reed	RED
DS3	Tamper	RED
DS4	Dongle inserted	GREEN

Quando il sensore è chiuso con il suo coperchio, l'unico led di stato (multicolore) visibile dalla lente centrale:

LED	SIGNAL	COLOUR
DS5	Activity ok	BLUE
	Prealarm	WHITE
	Alarm	RED
	Tamper	MAGENTA
	Initial error	PURPLE

STATUS ICONS

The SPC PRO APP communicates the sensor status in real time, through the status icons, according to the tables:

	(RED) COMMUNICATION DISABLED
	(GREEN) COMMUNICATION ENABLED

	(ORANGE) PREALARM
	(RED) ALARM LOW ATTACKS
	(RED) ALARM GROSS ATTACKS
	(RED) ALARM HEAVY ATTACKS
	(RED) ALARM CONTINUOUS IMPACTS

	(MAGENTA) POWER FAIL
	(MAGENTA) SELF-TEST FAILED
	(MAGENTA) MEMS SELF-TEST FAILED
	(MAGENTA) SENSOR REMOVAL TAMPER
	(MAGENTA) COVER REMOVAL TAMPER

	(GRIGIO) OPENING UNDETECTED
	(VERDE) OPENING OK
	(ROSSO) ALARM OPENING

SCAN ME