



S M A R T L I N E



sistematica



A Company in constant evolution

HANDHELDS

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1987

..... SISTEMATICA S.r.l.
starts off as an Electronic
Engineering Office

1991

..... The business extends
to the industrial production
of Electronic Systems

1995

.... First SISTEMATICA radio control
created for the Agricultural sector

2002

..... The Company enters the register
of research labs accredited
by MIUR

2007

..... First radio-controlled system equipped
with Sistematica SAFETY POINT™
and TILTING HAND™ patents

2011

..... Sistematica creates CLOSELINK, a
bidirectional communication which
ensures constant dialogue between
handheld and controller

2016

..... Release of the CLASSIC line

2020

..... Creation and release of the SmartLine,
a 4.0 product meant to revolutionize
the world of radio remote controls by
managing software and diagnostics
online, through a specific APP for
tablets and smartphones

2021

..... Expansion of the WIRED range with
SIGNAL and BLAZE.
R&D of RADIUS and
ANGEL technologies

SmartLine

In an interconnected world, Sistematica introduces an INNOVATIVE SYSTEM in the interaction between remote control and machine. The electronic boards have been renewed and the professional radio controlled devices are officially becoming part of a GLOBAL CONNECTIVITY with countless operational advantages, a standard APP and preventive online diagnostics managed directly by the users (WEB TOOLS). Through BLUETOOTH® communication and the geolocation of your smartphone, the MOBILE APP makes it possible to update or download new software

REMOTELY and monitor vehicle parameters in REAL TIME without having to wait for a material intervention.

IT'S ALL ONLINE!

Thanks to these new technologies, encoding becomes a very simple procedure, allowing you to pair a handheld with a different SMARTBOX, without having to open them at all.

All instructions and manuals are available on www.sistematica.it website in the specific SMARTLINE section, and supplied with the products themselves.



Handhelds - SmartLine

The ergonomic and wear-resistant rubber shell is co-molded in a resistant plastic material that protects against falls or infiltrations. The serigraphs can be customized with logos or symbols and the 10 mm diameter keys (identifiable by touch) are backlit thanks to the twilight sensor.

EASY & TREND have GREEN (radio transmission and power supply), YELLOW (eventual SafetyPoint) and RED (low battery) LEDs. PAIRING with the SMARTBOX is automatic, as are software updates and diagnostics, which take place ONLINE by connecting to the Bluetooth® of a smartphone/tablet.



EASY SMART

SMART 4.0 remote control, pocket-size and customizable up to 6 keys (in addition to START & STOP). You can choose to configure the handheld with an OLED screen (to display anomalies and customized logos), or/ and the Emergency Button (also PL«D» Category 2), or/and to equip the keypad with backlighting for poor visibility. In the standard version, the 'Maintained' (= command is activated by keeping the key pressed down) and Master or Emergency Output functions are standard and can be modified as desired via the appropriate APP downloadable online.

TECHNICAL FEATURES

KEYS	Up to 6 (in addition to START & STOP)
POWER SUPPLY	n. 2 AAA 1.5V alkaline batteries n. 2 x 1.2V NIMH rechargeable AAA batteries (optional)
STAND-BY ABSORPTION	approx. 5 μ A
AVERAGE ABSORPTION DURING TRANSMISSION	25 mA
FREQUENCY (SELECTABLE)	ISM 868 MHZ - 2.4 GHZ
MODULATION	GFSK
CAPACITY	LBT + AFA
OPERATING TEMPERATURE	-20° C to + 55° C
DIMENSIONS (H x W x D) no mushroom	109 x 56 x 30 mm



NEMO SMART
specific for the nautical sector
U-LIFT
specific for the tail lift sector



TREND SMART

This 4.0 remote can have up to 14 keys on its keypad (in addition to the START & STOP functions). Its versatility consists in being able to manage through 'PAGE CHANGE' up to 56 commands for a maximum of 4 pages. It can also be configured with an OLED screen (keys reduce to 10 on the keypad and per page) and/or with the Emergency 'mushroom' Button which is also sold with PL«D» category 2 safety certification.



TECHNICAL FEATURES

COMMANDS	Up to 56 functions managed with "page change"
POWER SUPPLY	n. 2 AA 1.5V alkaline batteries n. 2 x 1.2V NIMH rechargeable AA batteries (optional)
STAND-BY ABSORPTION	approx. 9 µA
AVERAGE ABSORPTION DURING TRANSMISSION	30 mA
FREQUENCY (selectable)	ISM 868 MHZ - 2.4 GHZ
MODULATION	GFSK
CAPACITY	LBT + AFA
OPERATING TEMPERATURE	-20° C to + 55° C
DIMENSIONS (H x W x D) no mushroom	165 x 80 x 40 mm

EGO

EGO is a hybrid generation remote that can be combined with both ClassicLine Controllers and SmartBoxes or other options of the SmartLine range (but it is not equipped with Bluetooth communication so it cannot be reprogrammed remotely). The dimensions of its LCD graphic screen are designed to adequately manage the countless functions that the user can recall and view with great simplicity.

The handheld has rechargeable Li-Ion batteries that ensure its operativity, including the backlighting of screen and keypad, and has a specific charger that acts as a support.

TECHNICAL FEATURES

COMMANDS	On demand
FREQUENCY	868 MHz
POWER SUPPLY	Li-Ion 3,7 V 1100 mAh battery
STAND-BY ABSORPTION	approx. 150 μ A
AVERAGE ABSORPTION DURING TRANSMISSION	127 mA
OPERATING TEMPERATURE	-20° C to +55° C
DIMENSIONS (H x W x D) with mushroom	180 x 78 x 40 mm



Handheld Options

SMARTLINE handhelds can be equipped with some options on demand including a support (CRADLE), the BUZZER, the VIBRACALL or the TORCH LED; all SERIGRAPHS and KEYS can be customized with colours, pictograms or symbols, while SOFTWAREs, which can also be modified with respect to those supplied as standard, can be downloaded online through the appropriate APP. The Safety configurations apply Sistematica technologies such

as the SafetyPoint™ (determines the position of the operator) or the RADIUS (reduces transmission range by limiting the operating area), while the Emergency 'mushroom' Button can also be provided with a PL«D» category 2 certification.

All SmartLine devices have the ability to visualise preselected parameters or the 3 standard warnings on the OLED screen that communicates in real time with APP and Web Portal.



EMERGENCY BUTTON (IP65)

This option helps to ensure complete control of operations, whenever an emergency stop of the application is required. To reactivate the system you need to release the red button before pressing the START function. Absolutely new, on demand, the MUSHROOM option can be equipped with the PL«D» Cat. 2 safety requirement, both on the handheld and on its specific SMARTBOX.

SAFETYPOINT™

The handheld device equipped with SafetyPoint™ carries out the commands related to the safety function only if it is near its SafetyPointPlate, which can also be applied directly to the support (CRADLE) of the handheld.

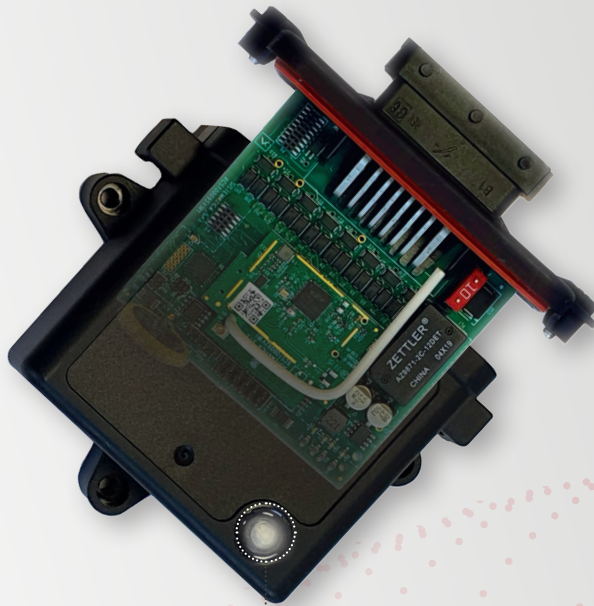


RADIUS

This technology reduces the risk of accidents, avoiding damage to people or things near the moving parts, and to the operator himself, by limiting the range of action of the remote control to a configurable distance that allows maneuvering in great safety.

SMARTBOX - SmartLine

Sistematica SMARTBOX's has a LIGHT GUIDE and the integrated INTERNAL ANTENNA as a standard. Each device is also identified by a unique code defined at origin which prevents its interaction with other systems. More devices can therefore operate in the same area, without interfering with each other. The system's PAIRING (encoding between handheld and receiver) takes place automatically and without having to open the products.



THE LIGHT GUIDE HAS 4 COLORS

Green= power and radio reception

Yellow= pairing and system coding

Red= anomaly warning

White= Bluetooth® active (with smartphone to update software or transmission of parameters/alarms/ calendar clock/operation log).

TECHNICAL FEATURES

DEGREE OF PROTECTION	IP67
OPERATING TEMPERATURE	-20°C to +55°C
POWER SUPPLY	10/30V ±10%
MAXIMUM CURRENT DELIVERED FOR EACH CHANNEL	5A
TYPICAL ABSORPTION IN STDBY	30 mA
MAIN CONNECTOR	FCI SICMA 24 Header pin
RECEIVER CATEGORY	(EN 300-220-1) 2
FREQUENCY BAND	ISM 868 MHZ - 2.4 GHZ
MODULATION	GFSK
DATA SPEED	50 KBAUD/S
MAX OUTPUT POWER	10 NOMINAL DBM



SMARTBOX 8

TECHNICAL FEATURES

N. OUTPUTS	8 (6 + MO + EO on START)
N. DIGITAL INPUTS	1 (1 output is lost)
MAXIMUM TOTAL CURRENT	10A
DIMENSIONS (H X W X D)	108 x 110 x 44 mm



SMARTBOX 20

TECHNICAL FEATURES

N. OUTPUTS	20 (18 + MO + EO on START)
N. DIGITAL INPUTS	1 (1 output is lost)
N. PROPORTIONAL OUTPUTS	1 (2 outputs are lost)
MAXIMUM TOTAL CURRENT	20A
DIMENSIONS (H X W X D)	133 x 154 x 44 mm

CANBOX OPTION

A SMARTBOX can manage CANBUS communication (J1939 or CUSTOM) within its hardware configuration. The peculiarity is to be able to receive the radio signal from a handheld and to communicate via CANBUS bidirectionally with an external device (ECU, PLC, etc).



While the TECHNICAL CHARACTERISTICS of CANBOX 8 remain unchanged, CANBOX 20 loses 2 outputs in this mode (16 instead of 18).

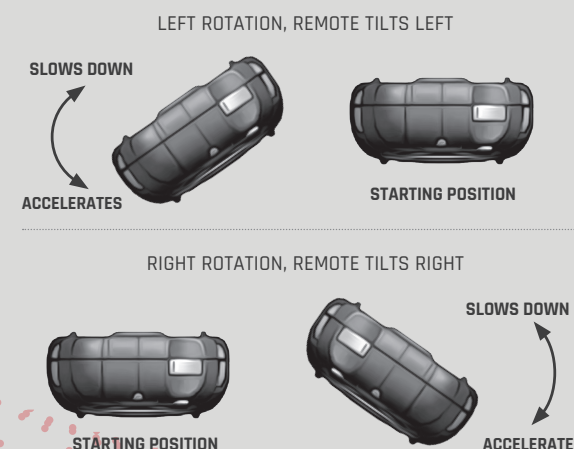
OPTIONS

INPUT EXPANSION PLUG

SMARTBOXes can be equipped with an input expansion plug that adds a total of 14 digital inputs + 2 analog inputs 0-10V + 2 analog inputs 4-20 A. In some cases the inputs are to be considered as an alternative to the outputs.

TILTING HAND (PROPORTIONAL OUTPUT)

The SMARTBOX 20 can control an output proportionally: by pressing the desired button on the handheld while rotating the wrist and tilting to the left or to the right to adjust, for example, the velocity of the operation.



EXTERNAL ANTENNA

The external antenna has the function of increasing the SMARTBOX's reception capacity in cases where the latter must be mounted in a position that is not ideal for operating applications based on radio transmission. It is connected to the SMARTBOX via an SMA screw connector. The material required for fixing is supplied in the kit.

EMERGENCY KEYBOARD (IP66)

Positioned on the SMARTBOX, it allows to operate when it is not possible to use the handheld (e.g. dead batteries, loss of remote). Through the emergency keyboard it is also possible to carry out the pairing procedure without having to open the SMARTBOX. It is not possible to use it together with a handheld!



CABLES

The standard cable has three types of wiring (12, 17 and 25 conductors) all 1 meter long with, on one end a SICMA FCI Header 24-pole female connector and on the other, free wires. This type of connector has a retaining slide which ensures quick and easy installation or maintenance operations, ensuring a robust and long-lasting connection. It allows a quick release of the cable from the SMARTBOX without having to disassemble it.

The following tables show the wire colours according to the standard applications.



! For the U-Lift KIT please refer to its specific instruction manual (7 custom wires)

SmartBox 8 - 20

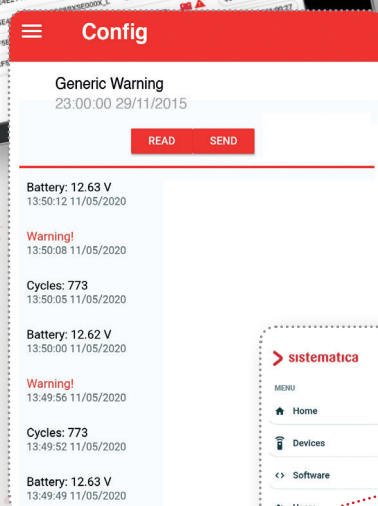
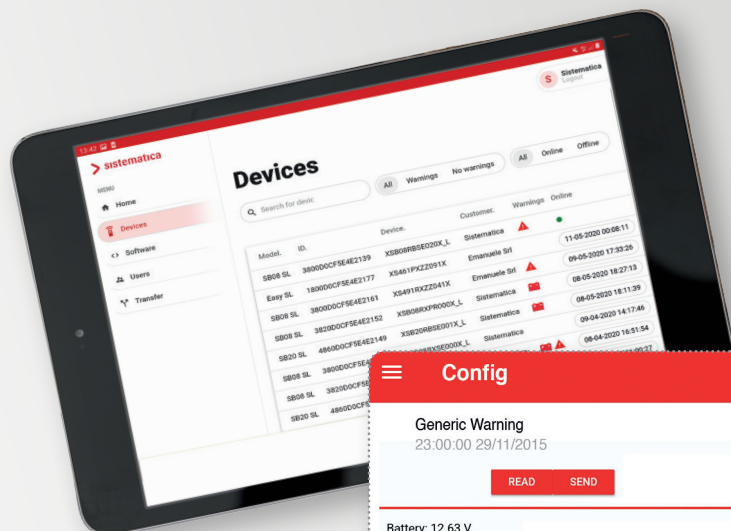
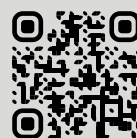
CABLE 12 CONDUCTORS: XCBLSEC12RXX_L					
COLOUR OF EACH CONDUCTOR	PIN	STD	OPT PLUG INPUTS	SB08	SB20
RED	B8	+BATT	+BATT	✓	✓
BLACK	B1	-BATT	-BATT	✓	✓
WHITE	A8	MO	MO	✓	✓
GREEN/WHITE	A7	EO	EO	✓	✓
GREEN	B7	OUT1	OUT1	✓	✓
YELLOW	C7	OUT2	OUT2	✓	✓
GREY	A6	OUT3	OUT3	✓	✓
PINK	B6	OUT4	OUT4	✓	✓
ORANGE	A5	OUT5	OUT5	✓	✓
VIOLET	B5	OUT6	OUT6	✓	✓
BROWN	C8	+BATT	+BATT	✓	✓
BLUE	C1	-BATT	-BATT	✓	✓

CABLE 17 CONDUCTORS: XCBLSEC17RXX_L					
COLOUR OF EACH CONDUCTOR	PIN	STD	OPT PLUG INPUTS	SB08	SB20
RED	B8	+BATT	+BATT	✓	✓
BLACK	B1	-BATT	-BATT	✓	✓
WHITE	A8	MO	MO	✓	✓
GREEN/WHITE	A7	EO	EO	✓	✓
GREEN	B7	OUT1	OUT1	✓	✓
YELLOW	C7	OUT2	OUT2	✓	✓
GREY	A6	OUT3	OUT3	✓	✓
PINK	B6	OUT4	OUT4	✓	✓
ORANGE	A5	OUT5	OUT5	✓	✓
VIOLET	B5	OUT6	OUT6	✓	✓
GREY/WHITE	A4	OUT7	OUT7	✓	✓
RED/WHITE	B4	OUT8	OUT8	✓	✓
VIOLET/WHITE	C2	IN DIG	IN DIG	✓	✓
BROWN/WHITE	C4	CANH	CANH	✓	✓
YELLOW/WHITE	C3	CANL	CANL	✓	✓
BROWN	C8	+BATT	+BATT	✓	✓
BLUE	C1	-BATT	-BATT	✓	✓

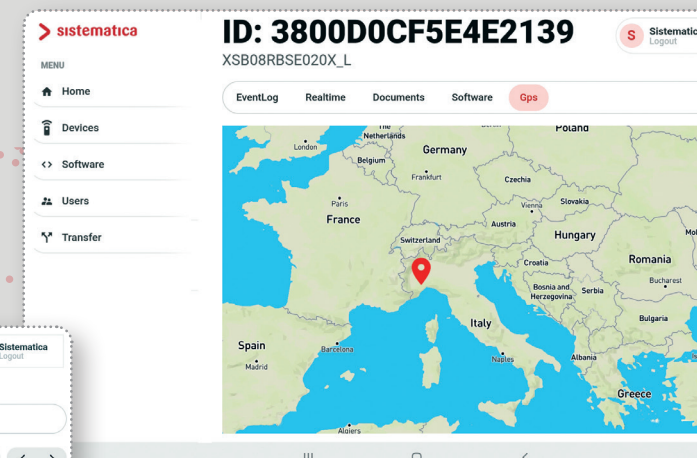
CABLE 25 CONDUCTORS: XCBLSEC25RXX_L					
COLOUR OF EACH CONDUCTOR	PIN	STD	OPT PLUG INPUTS	SB08	SB20
RED	B8	+BATT	+BATT	✓	✓
BLACK	B1	-BATT	-BATT	✓	✓
WHITE	A8	MO	MO	✓	✓
GREEN/WHITE	A7	EO	EO	✓	✓
GREEN	B7	OUT1	OUT1	✓	✓
YELLOW	C7	OUT2	OUT2	✓	✓
GREY	A6	OUT3	OUT3	✓	✓
PINK	B6	OUT4	OUT4	✓	✓
ORANGE	A5	OUT5	OUT5	✓	✓
VIOLET	B5	OUT6	OUT6	✓	✓
GREY/WHITE	A4	OUT7	OUT7	✓	✓
RED/WHITE	B4	OUT8	OUT8	✓	✓
BEIGE/WHITE	C6	OUT9	OUT9	✓	✓
LIGHT BLUE	C5	OUT10	OUT10	✓	✓
BLACK/WHITE	A2	OUT11	OUT11	✓	✓
BLUE/WHITE	A1	OUT12	OUT12	✓	✓
LIGHT BLUE/WHITE	A3	OUT13	OUT13	✓	✓
ORANGE/WHITE	B3	OUT14	OUT14	✓	✓
VIOLET/WHITE	C2	OUT15	OUT15	✓	✓
PINK/WHITE	B2	OUT16	OUT16	✓	✓
BROWN/WHITE	C4	OUT17	OUT17	✓	✓
YELLOW/WHITE	C3	OUT18	OUT18	✓	✓
BROWN	C8	+BATT	+BATT	✓	✓
BLUE	C1	-BATT	-BATT	✓	✓
BEIGE		NOT USED			

WEB PORTAL

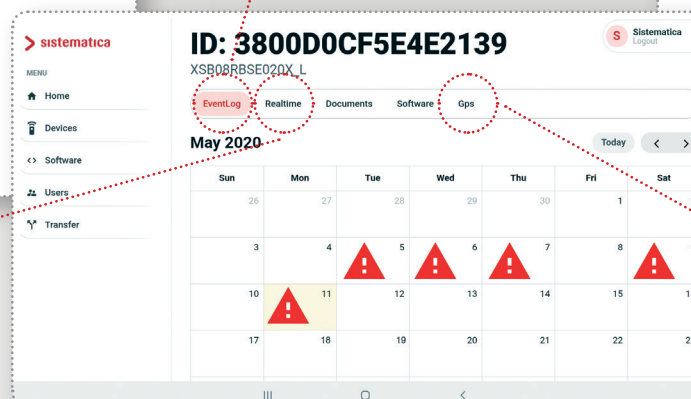
Sistematica's APP opens the sector of industrial remote controls to new horizons, including remote diagnostics for preventive maintenance options (through your Dealer's WEB TOOLS). The system is no longer just simple radio communication, but can also save all information in real time on the CLOUD, including operating anomalies! The handheld can be equipped with a screen to facilitate the display of alarms or parameterized info.



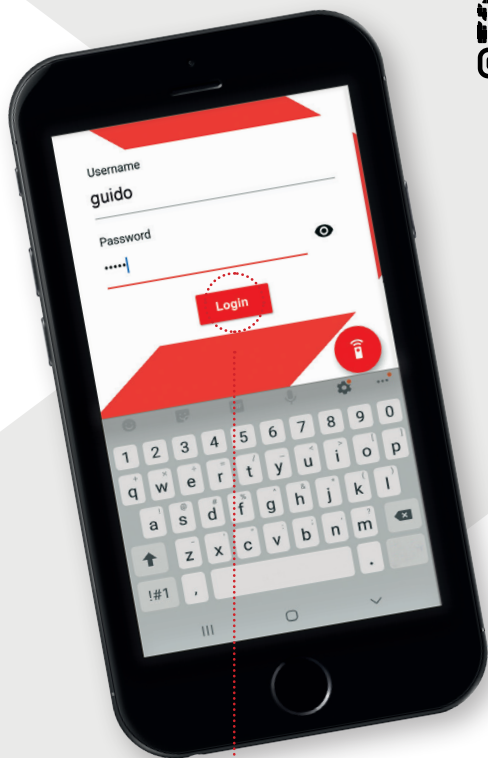
EVENT registration
on the Portal



REAL-TIME
identification of
the problem



Analysis of possible
ON-SITE resolution



After logging in with your email, you can access a whole range of ONLINE features and customizations without having to go through the Help Center!

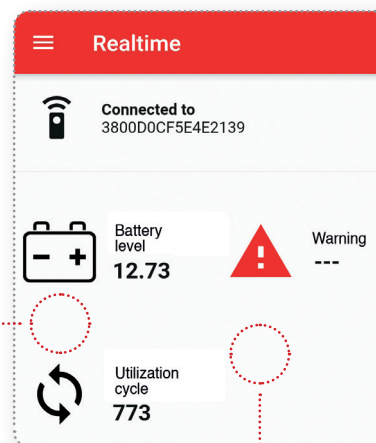
MOBILE APP

All SmartLine devices, in addition to radiofrequency transmission, are equipped with Bluetooth® wireless communication to access the App via smartphone or tablet.

To connect the SmartApp to your product correctly, activate **Bluetooth** on your mobile phone and search for the handheld or Smartbox through S/N or the QRcode on the label.

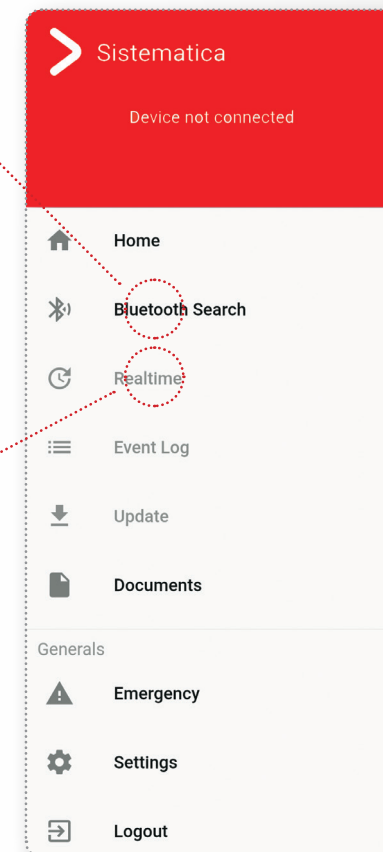


3 standard warnings

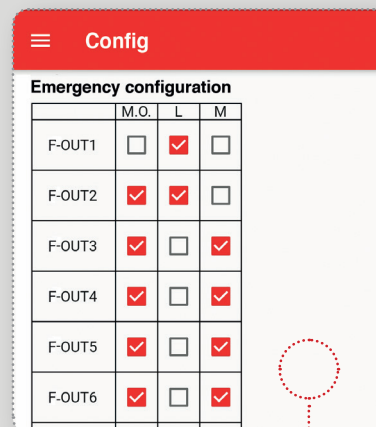
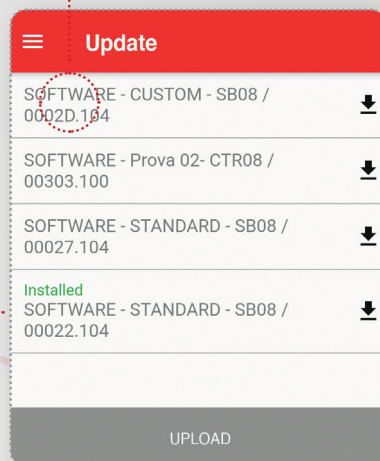
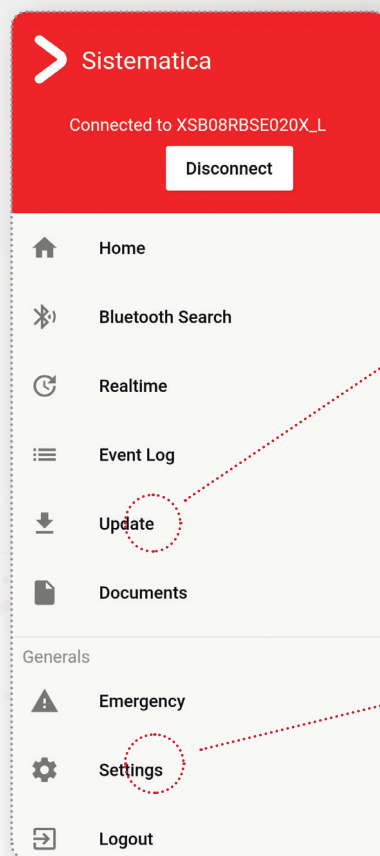


The APP saves on the portal (Web Tools) info, events or anomalies related to the standard digital input (expandable via Plug/CANBUS) such as:

- > hydraulic circuit pressure for loading measurements
- > counter of cycles, activities or operating hours
- > vehicle battery voltage
- > platform inclination, tyre pressure or any other parameter sent by eventual sensors present on the vehicle.



In case of operational needs the APP also allows you to **update the software**, view instructions or data sheets or use the **virtual emergency handheld** relative to the device in use, directly from a phone.



Here you can select:

- > the safety functions on the keys (M = Maintained and L = Latched)
- > configure Master Output (MO) and Emergency Output (EO)
- > decide the time of inactivity (TimeOut) after which the system switches to standby mode.



SISTEMATICA S.R.L. PRODUCTS COMPLY TO THE DIRECTIVE 2014/53/EU. THE DECLARATION OF CONFORMITY IS AVAILABLE AT THE FOLLOWING LINK

www.sistematica.it/docs/DeclarationOfConformitySmartLine.pdf



partnerscn.it

sistematica.it



SL-SSM-MAN-1.0001-1.2

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