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ELIOT Kit STOP&GO Connected

Cat. N°: 4 149 54

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1. DESCRIPTION - USE

With a Smartphone, to remotely switch ON/OFF a circuit protected by a 1 module per pole DX³ RCCB or RCBO up to 63 A. *(not delivered with the kit).* Must be used with the app “POWER ON” available on Google Play and Play Store.
In case of unwanted tripping (temporarily electrical disturbances or other external events) and if no permanent fault is detected: it will send a message to the user in order to get an authorization to switch ON the associated device.
In case of permanent fault: the user will be informed about it without having the possibility to remotely switch on the power.

2. RANGE

. Cat. n° 4 149 54: Eliot Kit Stop&Go Connected, composed by:
Non-automatic resetting Stop and go (cat. no 4 149 54)
. During a “normal situation”:
- It permanently checks the status of the installation.
- It allows the user to remotely switch ON/OFF the associated device

. During an “unwanted tripping” due to a non permanent fault:
- It reports the information through the Smartphone app
- Allows the user to remotely switch it ON
- In case of recurrent non permanent faults, the Stop&Go will not allow some remote command *(see details on page 5)*

. During an “unwanted tripping” due to a permanent fault (earth leakage or short circuit):
- It reports the information through the Smartphone app
- It does not allow the use to remotely switch On the device and advises to contact an electrician to check the installation.

. Technology: DC electric motor with permanent magnets
. 2 modules (35,6 mm) width
. Rated Voltage & Frequency: 230 V ~ 50 / 60 Hz with standard tolerances.
. Operating voltages:
Minimum (0,85 x Un): 195,5 V
Maximum (1,1 x Un): 253 V

Wi-Fi interface module (cat. no 4 149 52)
To communicate with the Smartphone through a Wi-Fi Box
. 1 module (17,8 mm) width
. Supplied by the Power supply module via supply patch cord
. Equipped with a 1m length pre-cabled cable to connect with the Stop&Go

2. RANGE *(continued)*

Power Supplier Module for the Wi-Fi interface (cat. no 4 149 45)
. Primary voltage 95÷250 V~
. Secondary voltage 12 Vd.c. 500 mA
. 1 module (17,8 mm) width

Supply patch cord:
. Allows to connect the Power supply module with the Wi-Fi interface at the downstream through dedicated connectors.
. Length: 250 mm

Configuration & use:

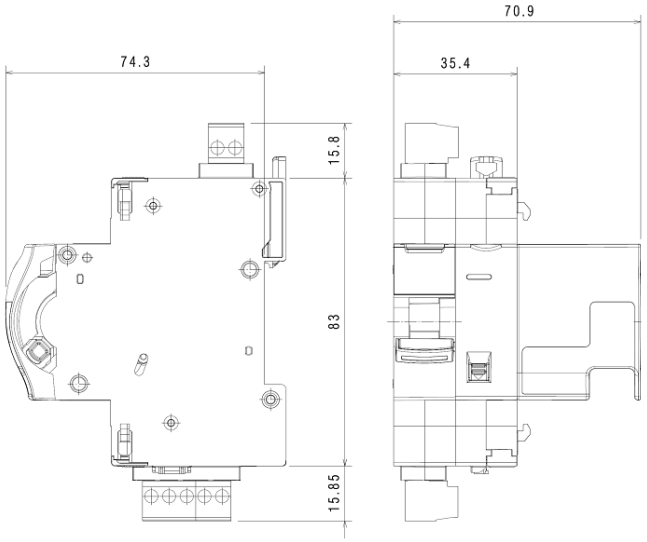
. Must be used with the app “POWER ON”
. To be downloaded for free on Google Play or Play Store

ANDROID APP ON Google play Available on the App Store

All the configurations steps are explained in the app.
Note: This part can be done without any ADSL Wi-Fi box thanks to the Wi-Fi module which allows to display its own network for this step.

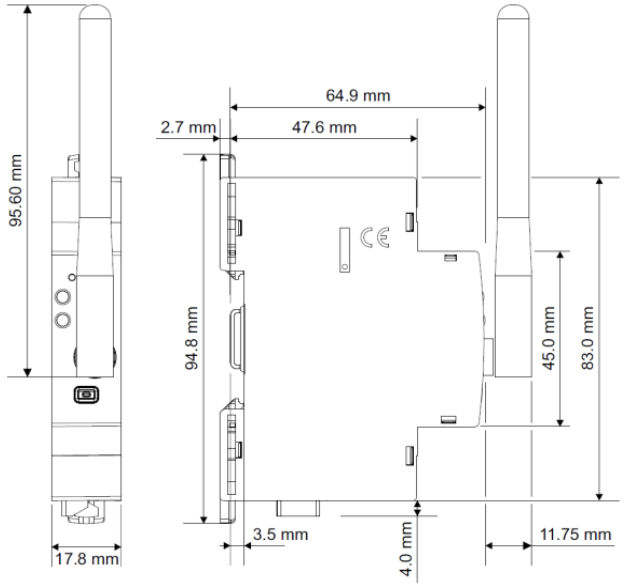
3. OVERALL DIMENSIONS

. Stop & Go

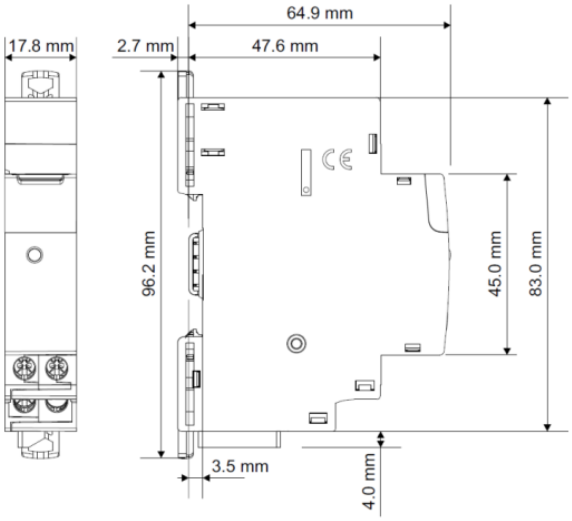


3. OVERALL DIMENSIONS *(continued)*

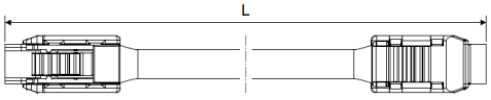
. Wi-Fi interface module (already equipped with an external Half Wave 2.4GHz Antenna With RP-SMA Connector):



. Power supply module:



. Supply patch cord:



L = 250 mm

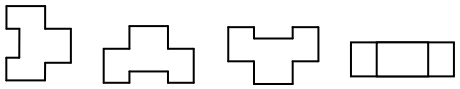
4. PREPARATION - CONNECTION

Fixing:

. On symmetric rail EN/IEC 60715 or DIN 35.

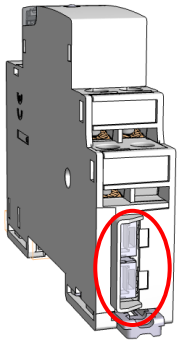
Operating positions:

. Vertical, Horizontal, backwards, on the side



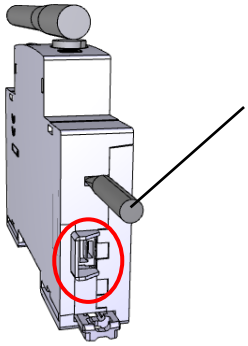
Power Supply:

Primary voltage 95÷250 V~
Secondary voltage 12 Vd.c. 500 mA
. Power distribution towards the interface via specific 250 mm supply patch cord (delivered with the kit) to connect at the downstream of the supplier indifferently in one of the two dedicated ports



Supply of the Wi-Fi Interface:

. Mandatory in 12 V d.c. via the specific Power supply module and specific supply patch cord 250 mm length (delivered with the kit) to connect at the downstream through dedicated port



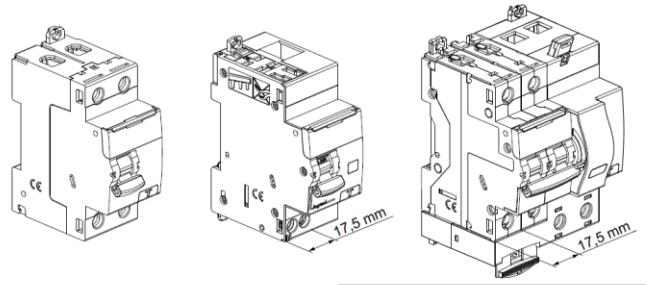
Supply of the Stop & Go:

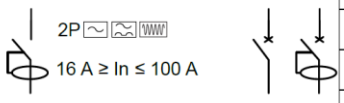
. Supply Phase and Neutral from the top on the extractable connector.
. It is mandatory to connect Phase and Neutral downstream of the associated device and the protection conductor to the connector at the bottom of this device. Stop & Go will not work correctly if the protection conductor is not connected.

4. PREPARATION - CONNECTION *(continued)*

List of possible associations:

. DX³ 2P RCCBs
. DX³ 2P RCBOs (2 poles protected or P+N, 1 pole protected)
. DX³ 2P MCBs (2 poles protected or P+N, 1 pole protected)

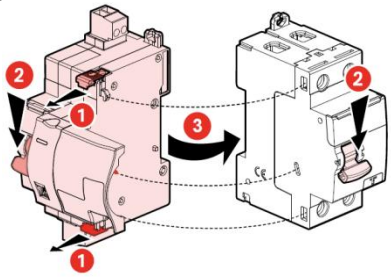




	1P + N ≤ DX³ 10000	2P ≤ DX³ 10000
B	32 A ≤ In ≤ 63 A	32 A ≤ In ≤ 63 A
C	16 A ≤ In ≤ 63 A	16 A ≤ In ≤ 63 A
D	8 A ≤ In ≤ 63 A	8 A ≤ In ≤ 63 A

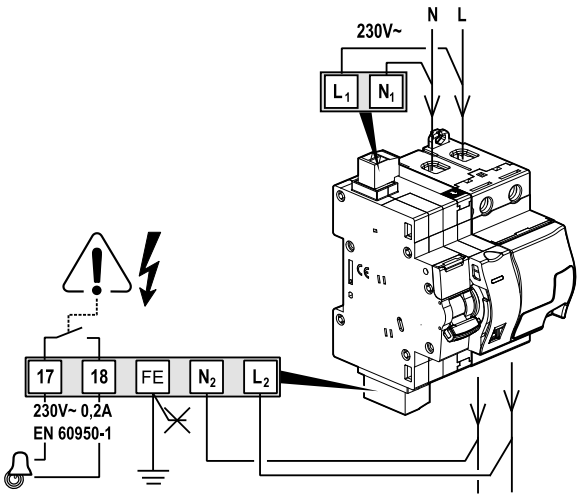
Association Stop &Go - Protection device:

. To be fitted to the left of 1 module per pole wide DX³ RCCB's 2P or DX³ RCBO's ≤ 10000A (1P+N et 2P ≤ 63 A)
. No tool required. Clipped to the associated device by mean of plastic clamps.



Wiring diagrams:

. Stop & Go

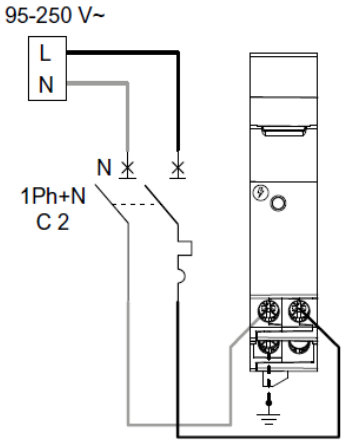


Note: It is not necessary to install a specific protections upstream of the Stop & Go because it is self-protected

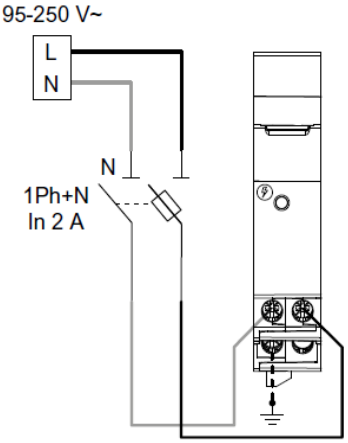
4. PREPARATION - CONNECTION *(continued)*

Wiring diagrams *(continued)*:

. Power supply module:
protected by an MCB:



protected by a Fuse holder:



Connection:

. Terminals protected against accidental contact (IP20, wired devices).

Terminals:

. Stop & Go
Terminal depth: 8 mm.
Stripping length: 8 mm

. Supply module
Terminal depth: 8 mm.
Stripping length: 8 mm

Screw head:

. Stop & Go
Slotted, diameter 3.5 mm

. Supply module
Mixed, slotted and Pozidriv n°1 (UNI7596 type Z1).

Recommended tightening torque:

. Stop & Go
0,4÷0,5 Nm.

. Supply module
1 Nm

4. PREPARATION - CONNECTION *(continued)*

Recommended tools:

. For the terminals of the Stop & Go: flat screwdriver 3,5 mm.
. For the terminals of the Supply modules: Pozidriv n°1 or flat screwdriver 4 mm.
. For fixing: flat screwdriver 5.5 mm (6 mm maximum).

Conductor type:

. Copper cables

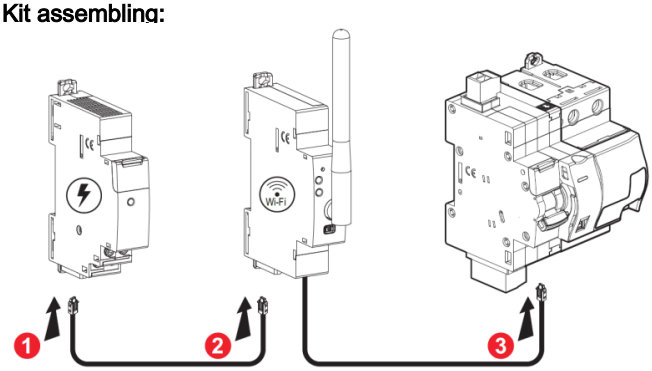
. Stop & Go

	Without ferrule	With ferrule
Rigid cable	**1 x 2,5 mm²** **2 x 1,5 mm²**	-
Flexible cable	**1 x 2,5 mm²** **2 x 1,5 mm²**	**1 x 2,5 mm²** **2 x 1,5 mm²**

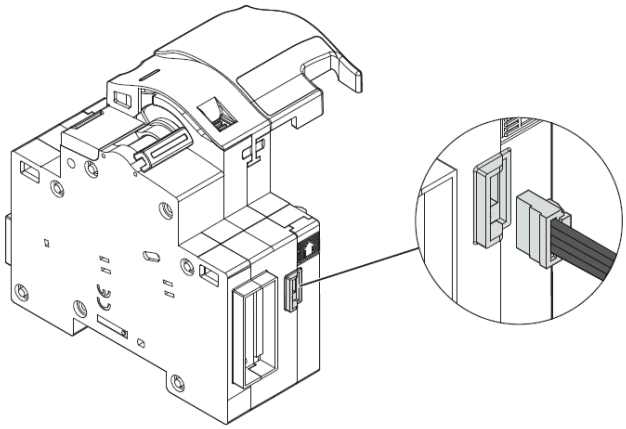
. Supply module

	Without ferrule	With ferrule
Rigid Cable	**1 x 1,5 mm²** **2 x 1,5 mm²**	-
Flexible Cable	**1 x 1,5 mm²** **2 x 1,5 mm²**	**1 x 1,5 mm²** **2 x 1,5 mm²**

Kit assembling:



1. - 2. Connect Power supply module and Wi-Fi interface with the 250 mm Supply patch cords.
3. Connect Wi-Fi interface and Stop & Go with the pre-cabled 1 m length cable in the dedicated port of the Stop & Go
Note: the length of 1m allows to clip the Wi-Fi module (and the power supply) on a different DIN row, than the Stop&Go module.



4. PREPARATION - CONNECTION *(continued)*

On site information displayed by the Stop&Go:

Stop & Go lockout:

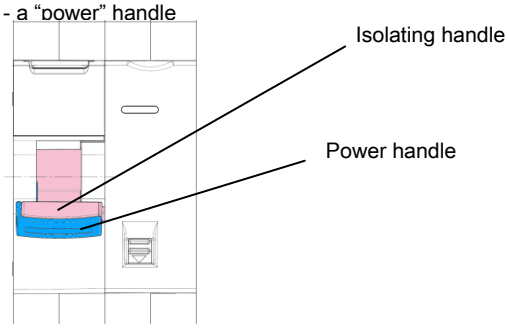
. By the sliding front face.
Sliding front face downward: the associated device goes into OFF position and manual or automatic closing operations are disabled.
Sliding front face upward: the device is operating.
. Lockout by padlock Φ 4mm, only when the sliding front face is down. Then mechanical and electrical controls are not possible.

Display of the device status and the status of the contacts of the associated device:

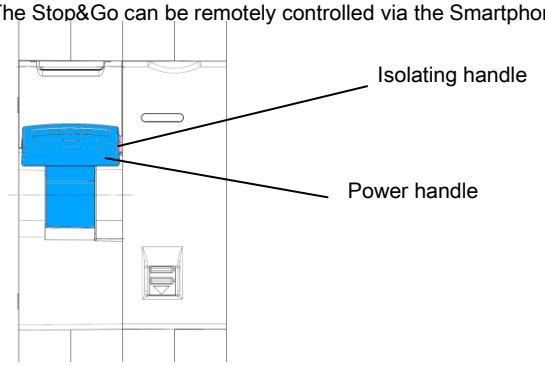
. By handle mark:
"O-Off" white on a green background = device switched-off and contacts opened.
"I-On" white on a red background = device powered-on and contacts closed.

Device handle status:

. The handle of the Stop & Go, consists of two parts:
- an "isolating" handle
- a "power" handle



. Operation sequences:
- "Normal situation": both handle upward.
➔The Stop&Go can be remotely controlled via the Smartphone app



4. PREPARATION - CONNECTION *(continued)*

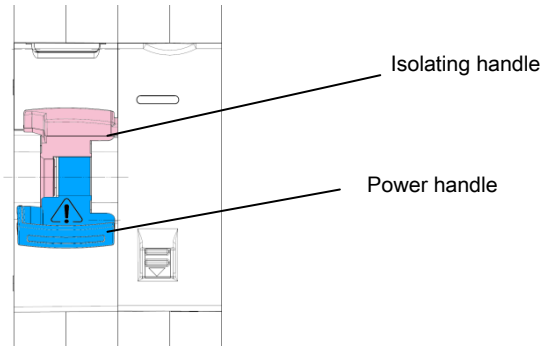
On site information displayed by the Stop&Go *(continued)*:

Device handle status *(continued)*:

. Operation sequences *(continued)*:

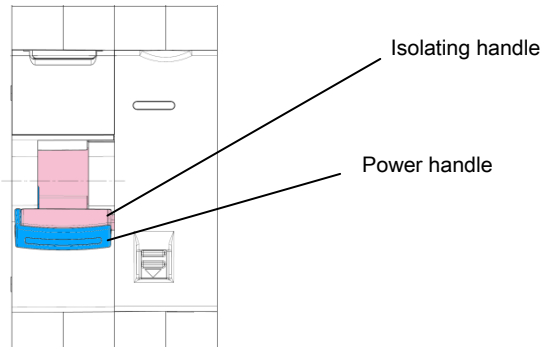
- In case of an “Unwanted tripping” of the associated device and during the verification of the state of the electric circuit:
  the power handle is down.
  the isolating handle is up.

➔The Stop&Go can be remotely controlled via the Smartphone app



- If the Stop & Go detects a permanent fault after a tripping or a too recurrent non-permanent fault (3 faults and 3 remote closing operations in a time of 5 minutes), the isolating handle goes down

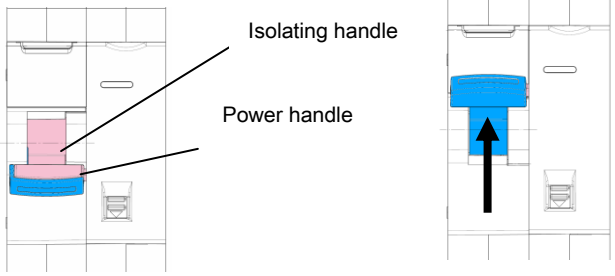
➔The Stop&Go cannot be anymore remotely controlled via the Smartphone app



Note: Refer to the § Details for “too recurrent” non-permanent faults” for all details on recurrent faults

Resetting by the Stop & Go handle:

. The local resetting of the Stop&Go and of the associated device can be carried out by the Stop & Go handle (isolating and power handles together)



4. PREPARATION - CONNECTION *(continued)*

On site information displayed by the Stop&Go *(continued)*:

Details for “too recurrent” non-permanent faults:

. During its functioning, the Stop & Go memorises the numbers of faults and consequent numbers of remote/manual resetting operations.

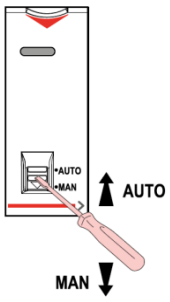
. When an event occurs, the Stop & Go analyzes the event and in case of fault (short-circuit or ground fault) it starts the recurring fault procedure.

. See table for details:

# of faults	Period	Consequence
3	≤ 5 minutes	- **Remote resetting is disabled.** - The application shows this state with the following message:
3	≤ 1 hour	- The application shows this condition with a message indicating the number of faults within the time frame and the indication to check the electrical installation on site. - **Remote resetting remains enabled.**
5	≤ 1 day	
7	≤ 7 days	
15	≤ 30 days	

Selector AUTO / MAN:

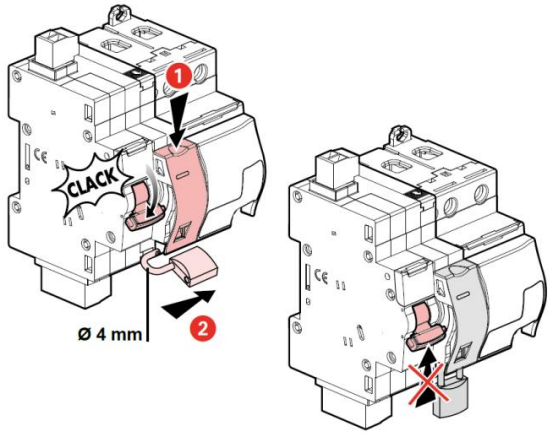
. Enables and disables the remote command of the Stop&Go.



. Possible states:

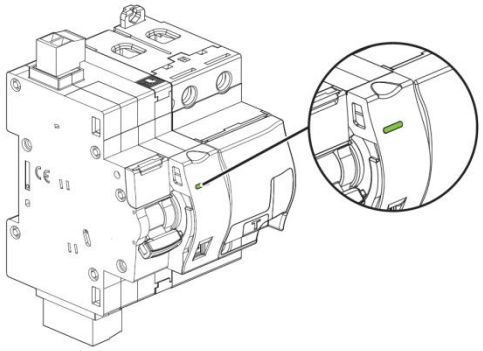
- AUTO: allows to remotely control the Stop&Go via the Smartphone app.
- MAN: on-site manual control only by the handle of the Stop&Go (isolating and power handles together)

Note: in case of on-site maintenance, to put the selector on MAN is not enough. The use of a padlock is the only secured way



4. PREPARATION - CONNECTION *(continued)*

Stop & Go signalling led:

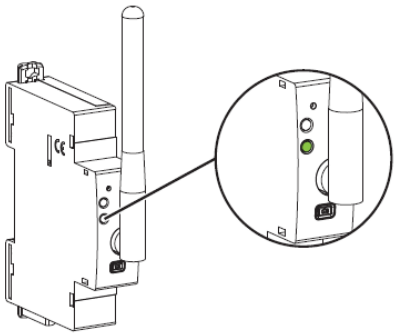


Possible states:

Led color	State	Meaning
red	Fast blinking	Waiting for manual or remote reset command after: - a remote opening command - a temporary fault If the Stop&Go detects a too recurrent fault, remote actuation is disabled
	Steady	“Unwanted tripping” : Stop&Go has detected a permanent default in the system Remote actuation is disabled
green	Fast blinking	Stop&Go in MAN mode
	Steady	“Normal situation”: associated device is powered and Stop&Go in AUTO mode.
	Switched-off	Stop & Go not supplied or sliding front face downward

Wi-Fi module signalling led:

. **Power led:** indicates the status of operation of the interface:

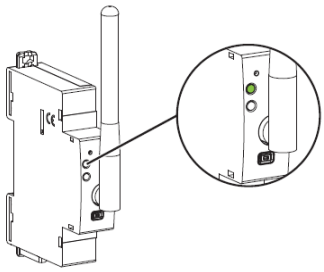


- Steady green → interface supplied
- Steady off → interface not supplied

4. PREPARATION - CONNECTION *(continued)*

Wi-Fi module signalling led *(continued):*

. **Wi-Fi led:** indicates the status of the Wi-Fi Network:

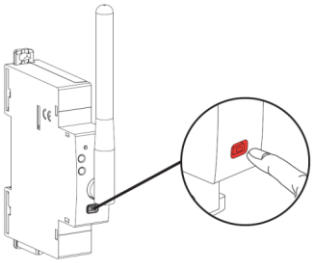


Possible states:

Led color	State	Meaning
red	Slow blinking	No Wi-Fi- network detected or connection problems
	Fast blinking *(pressing the multi function button longer than 30 sec.)*	Total reset *[any firmware updates are preserved]*
	Steady	Wi-Fi signal ≤ 25%
green	Slow blinking	Scanning for Wi-Fi network *(during association procedure)*
	Fast blinking	Programming via WPS button of the Wi-Fi router
	Steady	Wi-Fi signal ≥ 50%
orange	Slow blinking	Interface not associated to any network *(Factory configuration)*
	Fast blinking	Manual Programming mode
	Steady	Wi-Fi signal between 25% and 50%

Wi-Fi module front face button:

. It is used to put the Wi-Fi interface in programming mode or to restore factory settings:



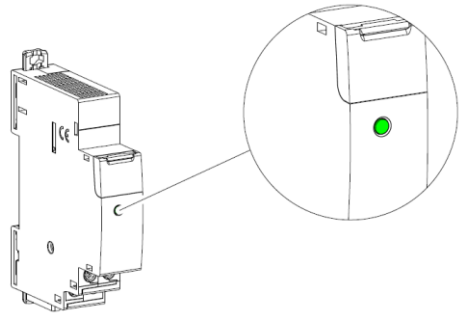
Possible states:

Pressing time	Action
t ≈ 3 sec.	Wi-Fi interface put in configuration mode via WPS button
t ≈ 7 sec.	Wi-Fi interface put in configuration mode via “Manual procedure”
t > 30 sec.	Wi-Fi interface total reset *[any firmware updates are preserved]*

4. PREPARATION - CONNECTION *(continued)*:

Power supply module signalling led:

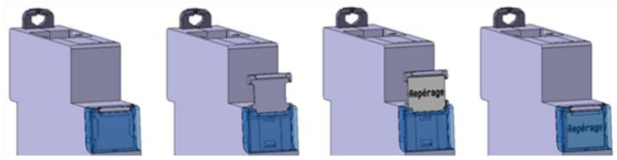
. Indicates the status of operation of the supplier:



- Steady green → system OK
- Steady off → supplier malfunctioning

Labelling:

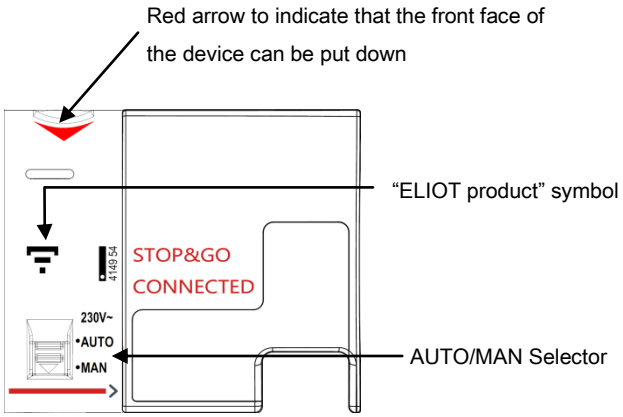
. Circuit identification by way of a label inserted in the label holder situated on the front of the Stop & Go and of the Power supplier.



5. GENERAL CHARACTERISTICS

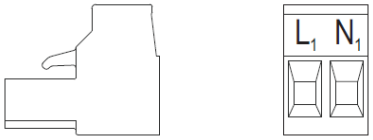
Stop & Go marking:

. Front side marking: by permanent pad printing

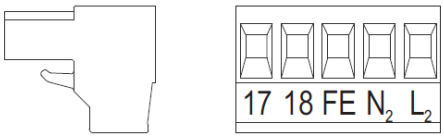


Terminals marking:

. Upstream terminal-block: by permanent ink pad printing.



. Downstream terminal-block: by permanent ink pad printing.

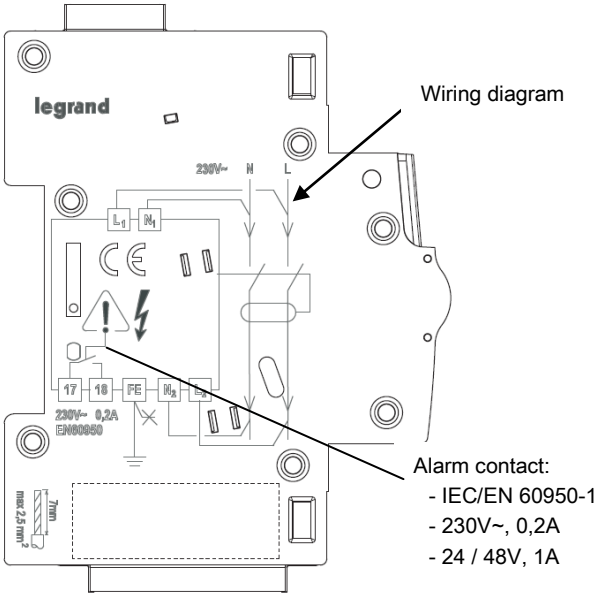


5. GENERAL CHARACTERISTICS *(continued)*

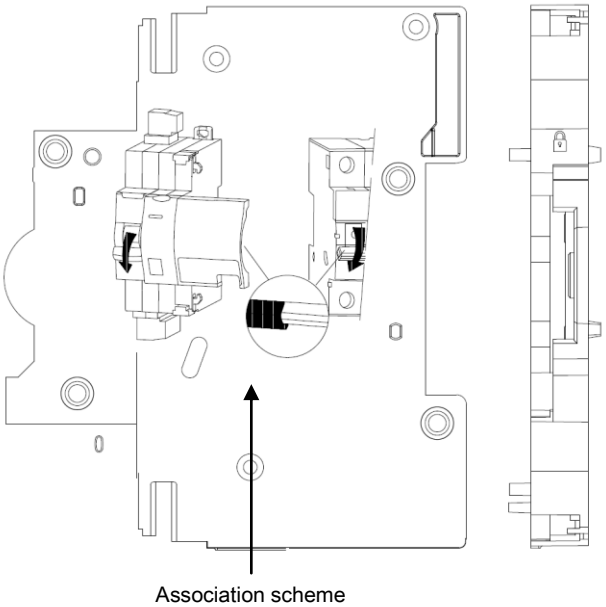
Stop & Go marking *(continued)*:

. Lateral side marking: by laser.

left side



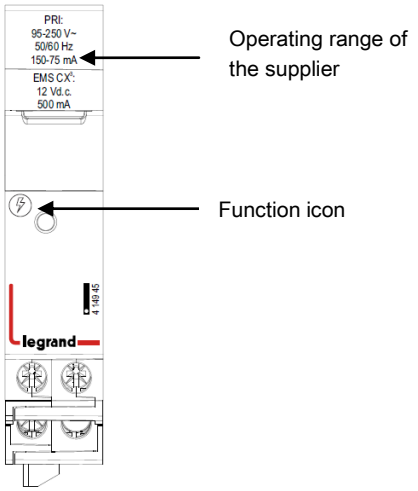
right side



5. GENERAL CHARACTERISTICS *(continued)*

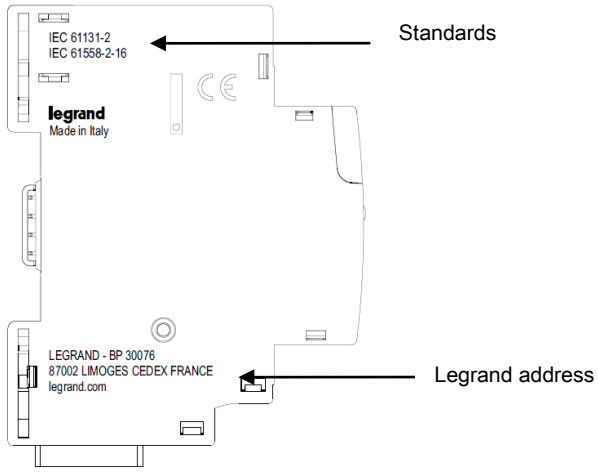
Supply module marking:

. Front side marking: by permanent ink pad printing (red line) and laser marking

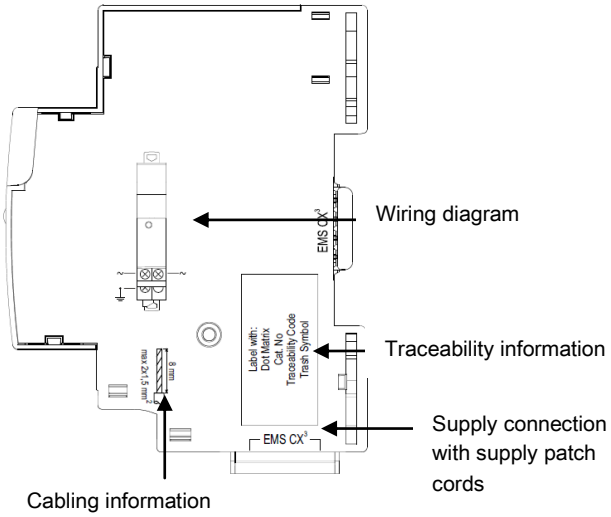


. Lateral side marking: by laser.

left side: Standard and programming information



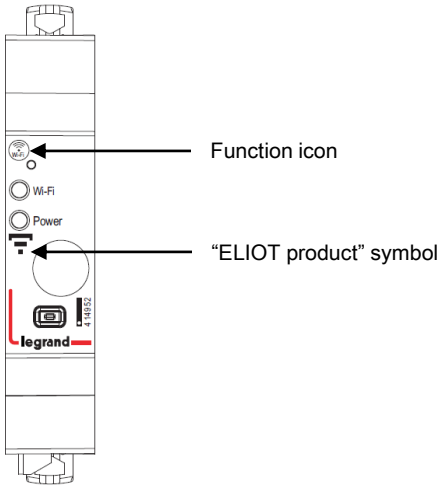
right side: cabling and traceability information



5. GENERAL CHARACTERISTICS *(continued)*

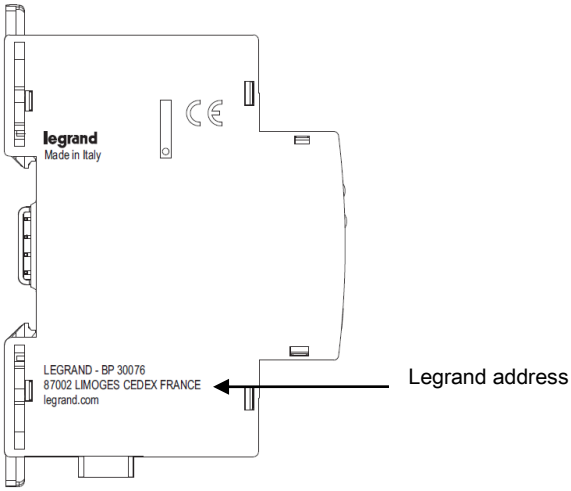
Wi-Fi module marking:

. Front side marking: by permanent ink pad printing (red line) and laser marking

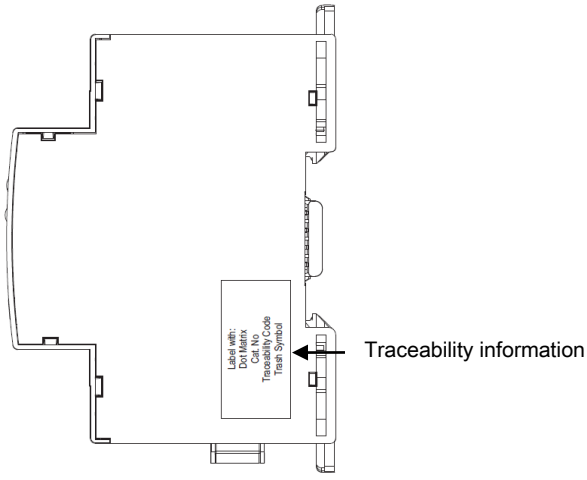


. Lateral side marking: by laser.

left side: Standard and programming information



right side: cabling and traceability information



5. GENERAL CHARACTERISTICS *(continued)*

Wi-Fi Interface Radio-Frequency characteristics:

. Supported frequencies:

	Min	Max.
Channel	1	11
Frequency	2412 MHz	2462 MHz

. Supported modulations

Standard	Supported bit rates (Mbps)
802.11b	**1 - 2 - 5,5 - 11**
802.11g	**6 - 9 - 12 - 18 - 24 - 36 - 48 - 54**
802.11n, HT, 20MHz, 800ns	**6,5 - 13 - 19,5 - 26 - 39 - 52 - 58,5 - 65**
802.11n, HT, 20MHz, 400ns	**7,2 - 14,4 - 21,7 - 28,9 - 43,3 - 57,8 - 65 - 72,2**

. Transmitter output power at maximum setting (antenna gain included)

Modulation type	Measurement type	Value (dBm)
802.11b (1Mbps)	RMS	+18,2
802.11g (54Mbps)	RMS	+16,2
802.11n (72.2Mbps)	RMS	+16,2

Characteristics of the fault detection:

. Rd0 (operating rated resistance between the live parts and the earth): 50 kΩ
. Rd (non operating rated resistance between the live parts and the earth): 100 kΩ
. Rcc0 (operating rated resistance between the live parts): 1,5 Ω
. Rcc (non operating rated resistance between the live parts): 2,5 Ω
. The Stop & Go device **can be used in TT and TN earth systems**

Impulse withstand voltage:

. Uimp: 4 kV

Insulation rated voltage:

. Ui: 400 V

Pollution degree :

. 2 according to IEC/EN 60898-1.

Overvoltage category :

. III

Dielectric strength:

. 2500 V

Mechanical endurance of Stop & Go:

. 20000 operations.

Electrical endurance of Stop & Go:

. In accordance with the requirements of the standards of the associated protection device.

5. GENERAL CHARACTERISTICS *(continued)*

Plastic materials:

. Self-extinguishing polycarbonate.
. Heat and fire resistant according to IEC/EN 60695-2-12, glow-wire test at 960°C.
. Classification UL 94 / IECEN 60695-11-10: V1

Ambient operating temperature:

. Min. = - 5 °C / Max. = + 60 °C.

Ambient storage temperature:

. Min. = - 25 °C / Max. = + 60 °C.

Protection Index:

. Protection index of terminals against direct contacts: IP2X (IEC/EN 60529).
. Protection index of terminals against solid and liquid bodies (wired device): IP 20 (IEC/EN 60529).
. Protection index of the front face against solid and liquid bodies: IP 40 (IEC/EN 60529).
. Class II, front panel with faceplate.

Resistance to sinusoidal vibrations:

. According to IEC 60068-2-6.
. Axis : x, y, z.
. Frequency range: 5÷100 Hz ; duration 90 min.
. Displacement (5÷13.2 Hz) : 1mm
. Acceleration (13.2÷100 Hz) : 0.7g (g=9.81 m/s^2).

Average weight per device:

	Weight (kg)
Stop & Go	**0,174**
Wi-Fi Interface with external antenna	**0,081**
Power Supply module	**0,069**
Supply patch cord 250 mm	**0,005**

Volume when packed :

. 1,00 dm^3.

Consumption:

. Stop & Go
Values at 230 Va.c.
Standby power consumption: <1,5 VA
Maximum power consumption: <20 VA rms (<80VA peak) during resetting

. Wi-Fi Interface
Value at 12 Vd.c.
0,236 W

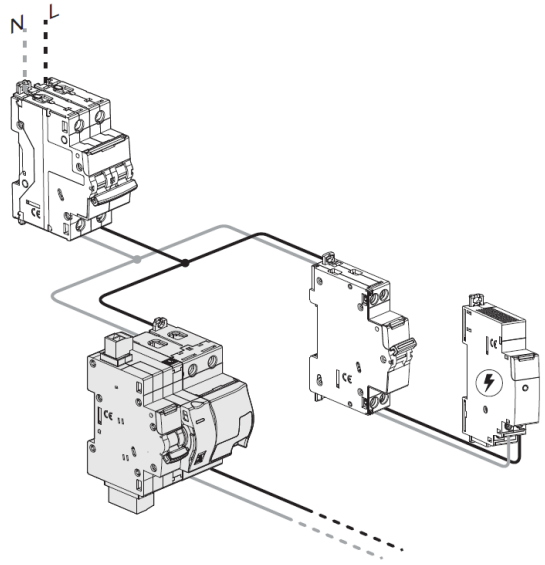
. Power supplier
Value at 230 Va.c.
Maximum power consumption: <20 VA rms

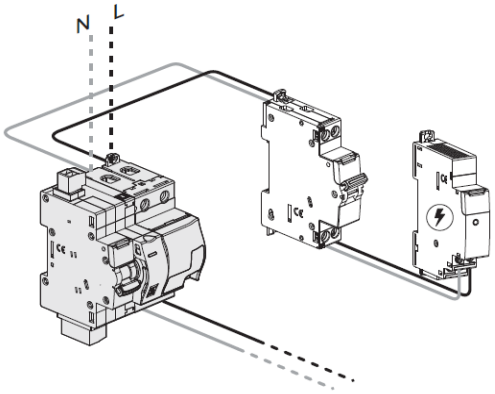
6. SYSTEM ARCHITECTURE

The Stop & Go ELIOT system requires that the Wi-Fi interface and the ADSL Wi-Fi box *(not delivered with the kit)* are always supplied.
To do this can be implemented various system structures.

. Supply of the power supply module (cat. no 4 149 45)

It is recommended to take power directly downstream of the main protection device or, in the case it is not possible, upstream of the associated device to the Stop & Go and to protect the power supply module with a fuse holder or an MCB *(see § Wiring diagrams)*.

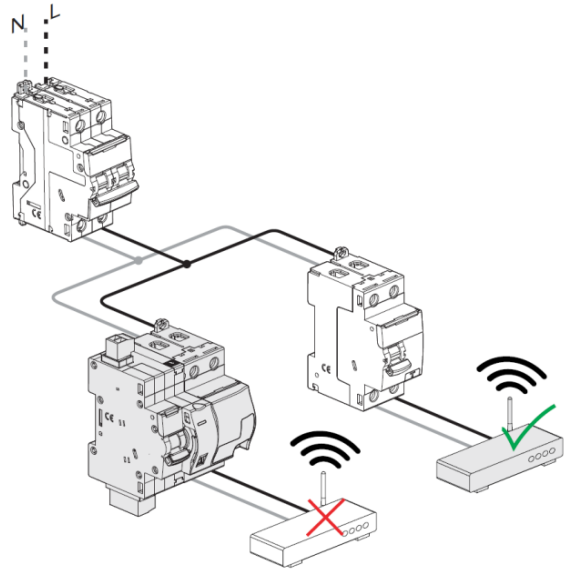


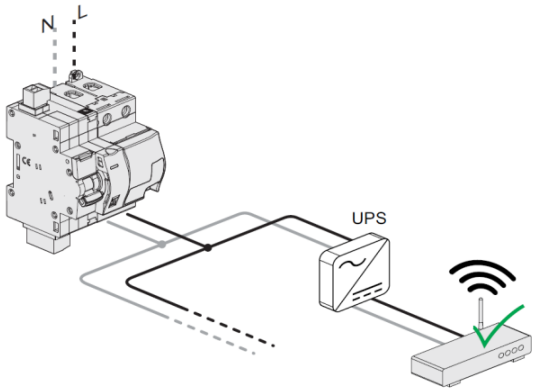


. Supply of the ADSL Wi-Fi Box

The Wi-Fi module communicates with an ADSL Wi-Fi box *(not delivered with the kit)*.

In order to prevent an “out of service” of the Wi-Fi box in case of remote/local command or in case of tripping due to failure, the power of Wi-Fi-box should be taken from a different line from the one on which you installed the Stop & Go or, in the case it is not possible, we recommend to backup the Wi-Fi box via UPS.





7. CONFORMITIES AND APPROVALS

Compliance to standards:

. Compliance with Directive on electromagnetic compatibility (**EMC**) n° 2014/30/EU

. Compliance with Radio Equipment Directive (**RED**) n° 2014/53/EU

. Compliance with low voltage directive n° 2014/35/EU.

. Electromagnetic Compatibility:

EN 55014-1:2006 + A1:2009, Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission (CISPR 14-1:2005 + A1:2008)

EN 61000-4-2:2009, Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques - Electrostatic discharge immunity test (IEC 61000-4-2:2008)

EN 61000-4-3:2006 + A1:2008 + A2:2010, Electromagnetic compatibility (EMC) - Part 4-3: Testing and measurement techniques - Radiated, radio-frequency, electromagnetic field immunity test (IEC 61000-4-3:2006 + A1:2007 + A2:2010)

EN 61000-4-4:2004 + A1:2010, Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/ burst immunity test (IEC 61000-4-4:2004 + A1:2010)

EN 61000-4-5:2006, Electromagnetic compatibility (EMC) - Part 4-5: Testing and measurement techniques - Surge immunity test (IEC 61000-4-5:2005)

EN 61000-4-6:2009, Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields (IEC 61000-4-6:2008)

EN 61000-4-16:1998 + A1:2004 + A2:2011, Electromagnetic compatibility (EMC) - Part 4-16: Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz (IEC 61000-4-16:1998 + A1:2001 + A2:2009)

EN 61189-2, Test methods for electrical materials, printed boSG-Es and other interconnection structures and assemblies - Part 2: Test methods for materials for interconnection structures (IEC 61189-2)

EN 61543:1995 + corr. Dec. 1997 + A11:2003 + A12:2005, Residual current-operated protective devices (RCDs) for household and similar use Electromagnetic compatibility (IEC 61543:1995 + A2:2005)

. EN 50557:2011, Requirements for automatic reclosing devices (ARDs) for circuit breakers-RCBOs-RCCBs for household and similar use

. EN 60898-1:2003 + corr. Feb. 2004 + A1:2004 + A11:2005 + A12:2008, Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations – Part 1: Circuit-breakers for a.c. operation (IEC 60898-1:2002, mod. + A1:2002, mod.)

. EN 60898-2:2006, Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 2: Circuit-breakers for a.c. and d.c. operation (IEC 60898-2:2000, mod. + A1:2003, mod.)

. EN 60947-5-1:2004 + corr. Jul. 2005 + A1:2009, Low-voltage switchgear and control gear - Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices (IEC 60947-5-1:2003 + A1:2009)

. EN 61008-1:2004 + A11:2007 + A12:2009, Residual current operated circuit-breakers without integral overcurrent protection for household and similar uses (RCCBs) – Part 1: General rules (IEC 61008-1:1996, mod. + A1:2002, mod.)

. EN 61009-1:2004 + A11:2008 + A12:2009 + A13:2009, Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) – Part 1: General rules (IEC 61009-1:1996, mod. + A1:2002, mod. + corr. May 2003)

. EN 61558 series, Safety of power transformers, power supply units and similar products (IEC 61558 series)

. EN 62019, Electrical accessories – Circuit-breakers and similar equipment for household use - Auxiliary contact units (IEC 62019)

. Legrand devices can be used under the conditions of use as defined by IEC / EN 60947.

Environment respect – Compliance with CEE directives:

. Compliance with Directive 2011/65/UE known as "RoHS II" which provides for a restriction on the use of dangerous substances such as lead, mercury, cadmium, hexavalent chromium and polybrominated biphenyl (PBB) and polybrominated diphenyl ether (PBDE) brominated flame retardants.

. Compliance with the Directive 91/338/EEC of 18/06/91 and decree 94-647 of 27/07/04.

. Compliant with regulation REACH

Plastic materials :

. Halogens-free plastic materials.

. Marking of parts according to ISO 11469 and ISO 1043.

. EN ISO 306:2004, Plastics – Thermoplastic materials – Determination of Vicat softening temperature (VST) (ISO 306:2004)

. ISO 7000:2004, Graphical symbols for use on equipment – Index and synopsis

Packaging :

. Design and manufacture of packaging compliant to decree 98-638 of the 20/07/98 and also to directive 94/62/CE.

8. AUXILIARIES AND ACCESSORIES

Signalling auxiliaries:

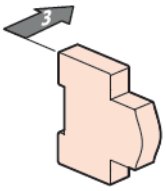
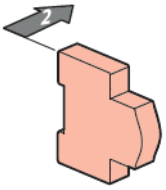
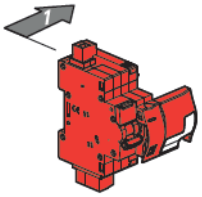
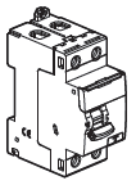
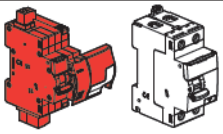
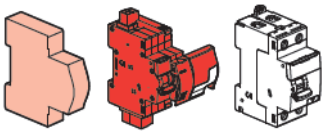
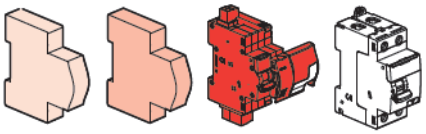
. Auxiliary contact (½ module – cat n° 4 062 58).
. Fault signalling changeover switch (½ module – cat n° 4 062 60).
. Auxiliary contact modifiable in default signal (½ module – cat n° 4 062 62).
. Auxiliary contact + fault signalling switch - can be modified to 2 auxiliary contacts (1 module - cat n° 4 062 66).
. Electronic EMS CX³ Auxiliary contact + Fault signalling (½ module – cat n° 4 149 29)

Control auxiliaries:

. It is forbidden to associate control auxiliaries (cat. n° 4 062 7x / 8x) to the Stop&Go.

Possible combinations with signalling auxiliaries:

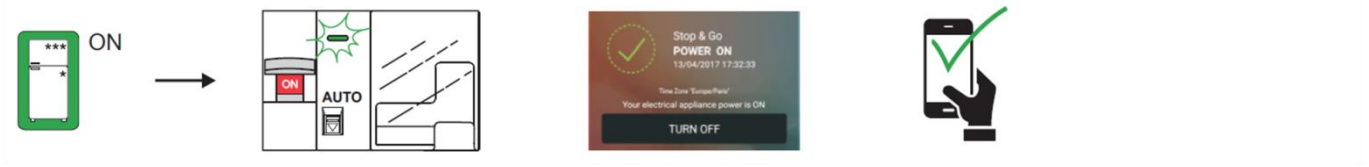
. Auxiliaries are clipped on the left side of the Stop & Go unit
. Two signalling auxiliaries max. (cat. n° 4 062 58/60/62/66, 4 149 29).

	CA - SD  	 
		4 149 54
	4 062 58 / 60 / 62 / 66 4 149 29	4 149 54
	4 062.58 / 60 / 62 4 149 29 4 062 58 / 60 / 62 / 66 4 149 29	4 062 58 / 60 / 62 4 149 29 4 062 66 4 149 54

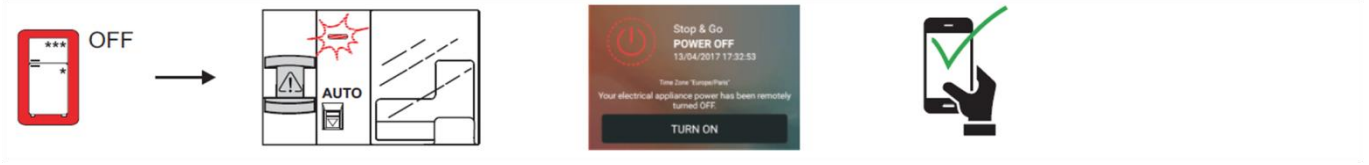
9. APPLICATION MESSAGES

. Hereunder are listed messages displayed by the Smartphone app, their meaning and possible actions to be done by the user

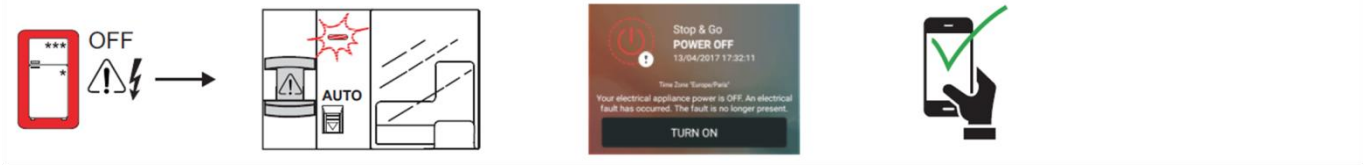
1.	Associated device is “ON” and Stop&Go in AUTO mode.	Remote command allowed



2.	Associated device is “OFF” and Stop& Go in AUTO mode.	Remote command allowed



3.	A non-permanent fault occurred	Remote command allowed



4.	Stop&Go has been open manually	Remote command not-allowed Close manually the Stop&Go

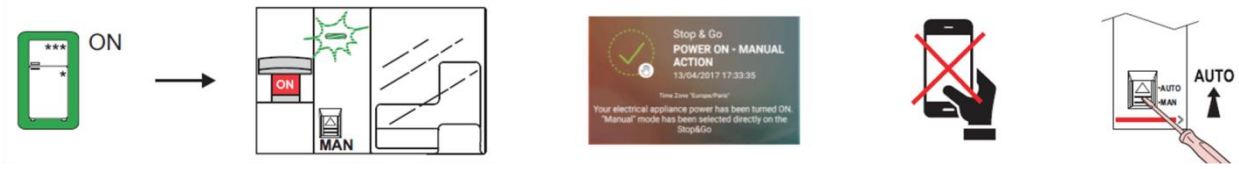
5.	A “too recurrent” non-permanent fault has been detected	Remote command not-allowed Contact your electrician to check your installation

6.	Stop&Go detects a permanent fault after an OFF remote operation or a tripping of the associated device	Remote command not-allowed Contact your electrician to check your installation

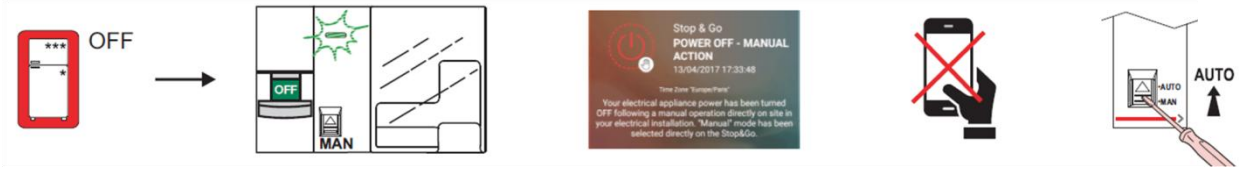
9. APPLICATION MESSAGES *(continued)*

. Hereunder are listed the messages furnished by the application, the meaning and possible actions done by the user

7	Stop&Go is in MAN mode	Remote command not-allowed Put selector in “AUTO” position



8.	Stop&Go is in MAN mode	Remote command not-allowed Put selector in “AUTO” position



9.	Stop&Go in locked position	Remote command not-allowed If it is possible, unlock the Stop&Go

10.	Installation status unknown	Remote command not-allowed Check ADLS box supply