

Salvavita STOP & GO**Cat.Nos:** F80SG, F80SGB, F80SGPN

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1. DESCRIPTION - USE

- . STOP & GO motor driven unit is an automatic resetting device for MCB's, RCBO's (1P+N or 2P) and RCCB's (2P).
- . STOP & GO automatic resetting main functions are:
 - In case of tripping due to earth leakage or short circuit, it detects the presence of an insulation fault in the system before to reset.
 - In case of transient fault, it automatically resets the electrical circuit.
 - In case of permanent fault, (earth leakage or short circuit), it keeps the circuit open and notifies the user by a visual signal and, if necessary, by an acoustic signal (by an integrated contact)
- . These functions allow the continuity of operation of the involved circuits.

Technology:

- . DC electric motor with permanent magnets

2. RANGE

- . **F80SG:** Stop&Go Standard, it checks the system insulation and closes back the general circuit breaker that may have tripped for reasons not connected with a fault.
- . **F80SGB:** Stop&Go BTEST, as F80SG + "self-test" function (BTEST), it checks automatically every 56 days the correct operation of the RCD associated with the device (day and time of the test can be programmed).
- . **F80SGPN:** Stop&Go PLUS, as F80SG + monitoring function on the persistence of a fault within 24 hours.

Width:

- . 2 modules (1 module = 17,7mm)

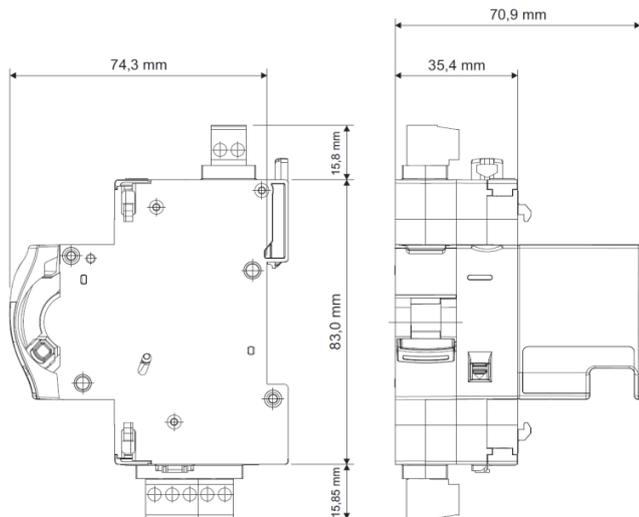
Rated Voltage/Frequency:

- 230 VAC, 50 / 60 Hz.
- 230 VDC

Operating voltages:

- . Min (0,85 x Un): 195,5 V
- . Max (1,1 x Un): 253 V

3. OVERALL DIMENSIONS



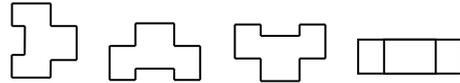
4. PREPARATION - CONNECTION

Fixing:

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

Operating positions:

- . Vertical, Horizontal, backwards, on the side



Supply:

- . 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.

List of possible associations:

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

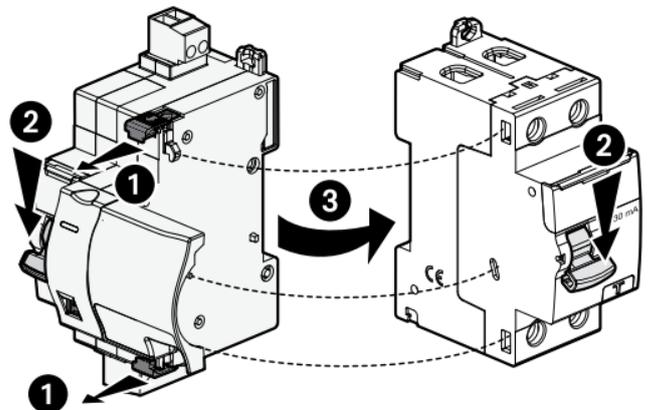
F80SG F80SGPN	FA81N... FA82... FN81N... FN82... FH81N... FH82... FT81N... (<63A) FT82... (<63A) FV82... (<25A)	FA81N...+ G2... FA82...+ G2... FN81N...+ G2... FN82...+ G2... FH81N...+ G2... FH82...+ G2... FT81N...+ G2... (<63A) FT82...+ G2... (<63A) FV82...+ G2... (<25A)	GA8812... GA8813... GC8230... GN8813... GN8814... GN823... GC8813...	G72... GC72...



F80SGB IΔn = 30 mA

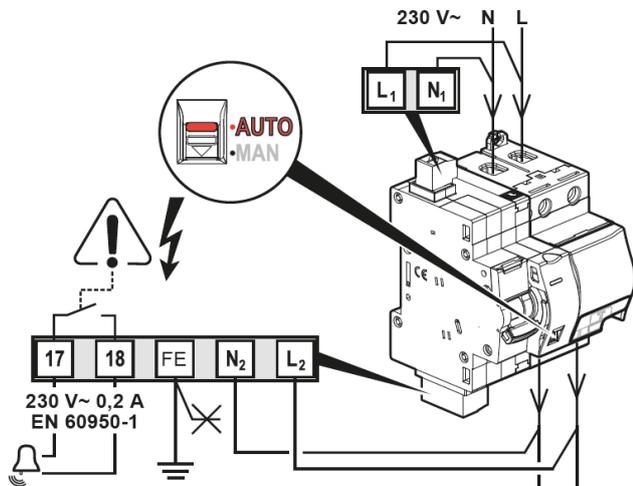
Association STOP & GO - Protection device:

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



4. PREPARATION - CONNECTION (continued)

Wiring diagrams:



Functional ground:

- . The STOP & GO performs measurements of ground insulation taking as reference the local ground of the electrical system.

Protection of the STOP&GO:

- . It is not necessary to install specific protections upstream of the STOP & GO because the device is self-protected

Connection:

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

Terminals:

- . Terminal depth: 8 mm.
- . Stripping length: 8 mm

Screw head:

- . Slotted, diameter 3.5 mm

Recommended tightening torque:

- . 0,4±0,5 Nm.

Recommended tools:

- . Flat screwdriver 3,5 mm.
- . For fixing: flat screwdriver 5.5 mm (6 mm maximum).

Conductor type:

- . Copper cables

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

4. PREPARATION - CONNECTION (continued)

On site information displayed by the STOP & GO:

STOP & GO lockout:

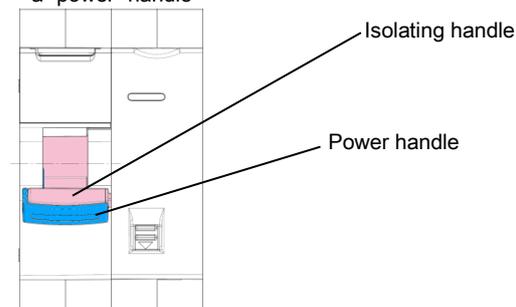
- . By the sliding front face.
 - Sliding front face downward: the associated device goes into OFF position and manual or automatic closing operations are disabled.
 - Sliding front face upward: the device is operating.
- . Lockout by padlock Φ 4mm, only when the sliding front face is down.
- Then mechanical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

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

- . By handle marking:
 - “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:

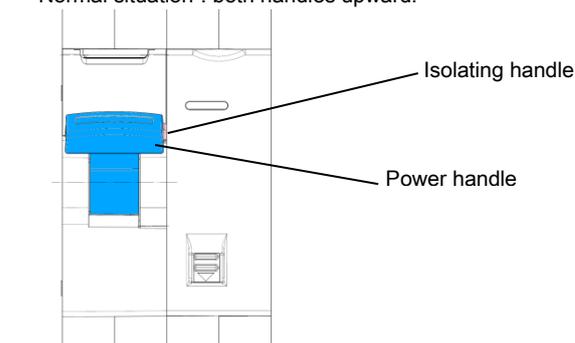
- . The handle of the STOP & GO, consists of two parts:
 - an “isolating” handle
 - a “power” handle



- . When the isolating handle is lowered, is guaranteed the galvanic isolation “upstream/downstream”

Operation sequences:

- “Normal situation”: both handles upward.



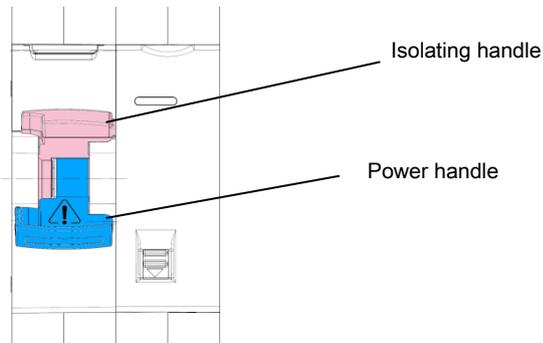
4. PREPARATION - CONNECTION *(continued)*

On site information displayed by the STOP & GO *(continued)*:

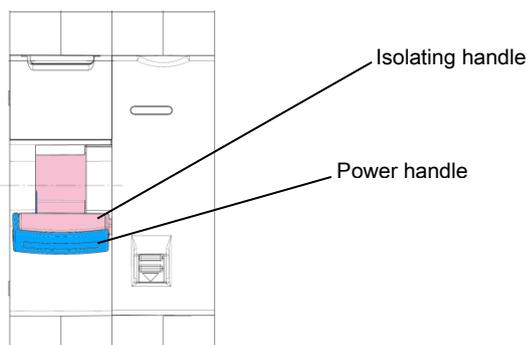
Device handle status *(continued)*:

. 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.



- If the STOP & GO detects a permanent fault after a tripping the isolating handle goes down and the block signalling contact is activated



- If the STOP & GO doesn't detect a permanent fault, it returns to normal operation (reset of the associated device): both handles are upward.

ATTENTION: STOP & GO carries-out three reclosing attempts.

Re-closing cycle length:

- . Between 2 and 3 sec.
- . Before performing reclosing attempt, the device verifies that there are no residual stresses downstream (e.g. Inverters with large capacitors). If the voltage downstream persists for more than ten seconds, the system shuts down and does not restore

Lockout condition:

There are two conditions that bring the STOP & GO into the lockout condition:

1) Number of reclosing attempts

In automatic mode, the device enters the lockout condition if, within 6 seconds from the last reset, the circuit breaker trips again. This condition is valid for any reclosing attempt.

4. PREPARATION - CONNECTION *(continued)*

Lockout condition *(continued)*:

2) Permanent fault

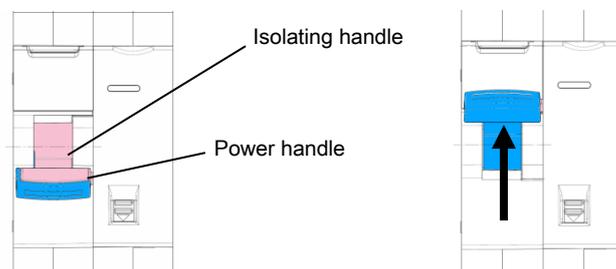
The Stop & GO considers "Permanent" a fault if its recovery phase exceeds the expected times:

- STOP & GO and STOP & GO BTEST: about 3 seconds.
- STOP & GO PLUS: the device continues to check if the fault has been resolved. If 24 hours are exceeded, the device disconnects, and the fault is considered a permanent fault.

Note: In both cases it will be necessary to manually reset the STOP & GO after having the electrical system checked by qualified personnel.

Resetting by the STOP & GO handle:

When the permanent fault has disappeared, the reset of the STOP & GO and of the associated device is carried by the STOP & GO Handle (one-piece assembly of two handles: isolating and power)

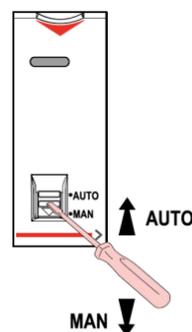


Selector AUTO / MAN:

. Enables and disables the automatic resetting of the STOP & GO.

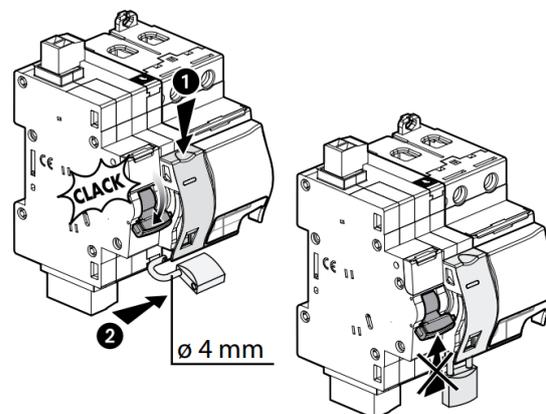
. Possible states:

- AUTO: allows the automatic resetting of the STOP & GO.
- MAN: on-site manual control only by the handle of the Stop & go (isolating and power handles together)



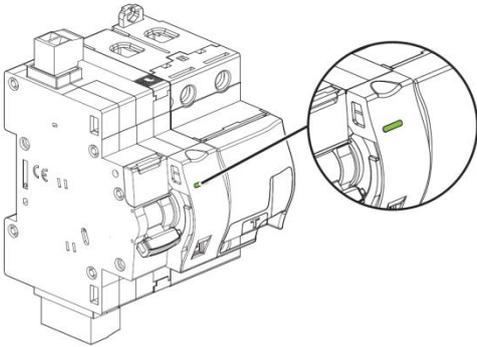
Note: in case of on-site maintenance, to put the selector on MAN is not enough.

Lowering the sliding faceplate and using a padlock makes maintenance safe.



4. PREPARATION - CONNECTION *(continued)*

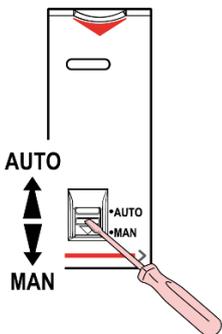
Signalling Led:



Possible states:

Led colour	State	Meaning
 red	Fast blinking	Waiting for reset after a tripping of the associated protection device
	Steady	STOP & GO has detected a permanent fault in the system after a trip (overload, short circuit or differential fault). Automatic resetting is disabled
 green	Fast blinking	Stop&Go in MAN mode.
	Steady	"Normal situation": STOP & GO is powered and in "AUTO" mode. Automatic resetting is enabled (and BTEST function is activated (cat.no F8SGB)
 yellow	Fast blinking	Only for BTEST version. Indication that the associated protection device has not tripped following a Residual current test performed by the STOP & GO ($I_{\Delta} > 30\text{mA}$).
	Switched-off	STOP & GO not supplied or sliding front face downward

Programming BTEST function (cat.no F80SGB):



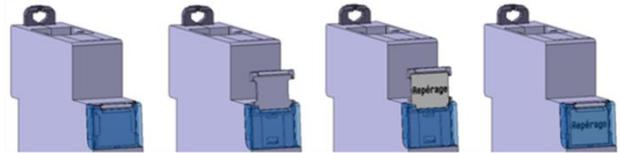
. After connecting item F80SGB to 230V ~ network, move the handle to the ON position, then move the selector from the "AUTO" position to the "MAN" position, and back again to the "AUTO" position.

The first residual current test is instantaneous, while the following ones will be performed every 56 days (8 weeks), but 8 hours after the programming procedure has been performed.

4. PREPARATION - CONNECTION *(continued)*

Labelling:

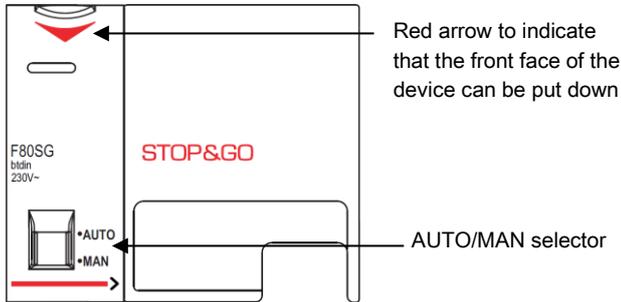
. Circuit identification by way of a label inserted in the label holder situated on the front of the STOP & GO.



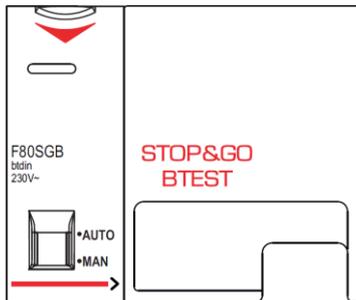
5. GENERAL CHARACTERISTICS

Front side marking:

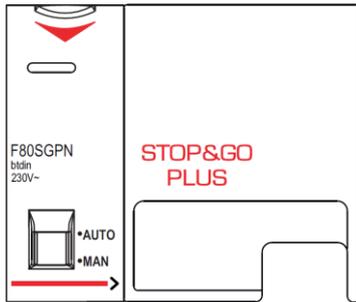
- Front side marking: by permanent pad printing
- F80SG



F80SGB

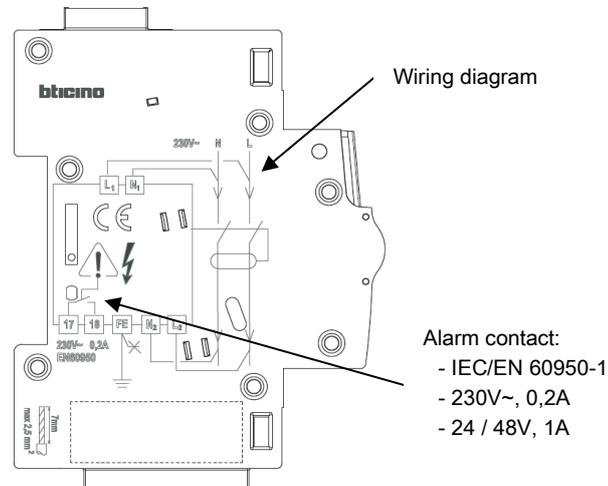


F80SGPN



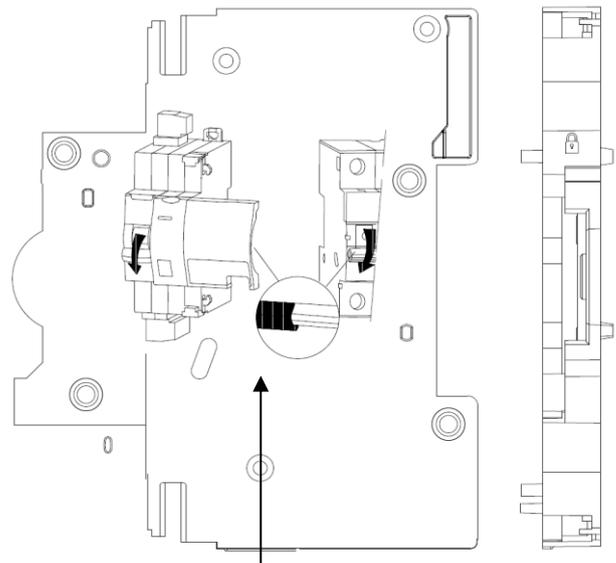
Lateral side marking:

- Lateral side marking: by laser
- left side



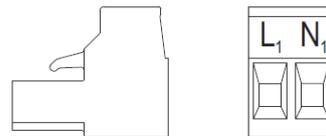
5. GENERAL CHARACTERISTICS (continued)

- Lateral side marking (continued):
right side

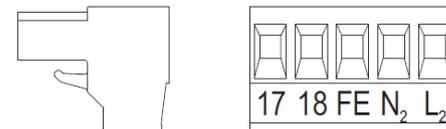


Terminals marking:

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



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



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

Note: The STOP & GO can be used in TT and TN earth systems

Impulse withstand voltage:

- U_{imp}: 4 kV

Insulation rated voltage:

- U_i: 400 V

Pollution degree:

- 2 according to IEC/EN 60898-1.

Overvoltage category:

- III

5. GENERAL CHARACTERISTICS *(continued)***Dielectric strength:**

- . 2500 V

Mechanical endurance:

- . 20000 operations.

Electrical endurance:

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

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/s²).

Average weight per device:

- . 0,174 kg.

Volume when packed:

- . 1,20 dm³.

Consumption:

- . Values at 230 VAC.
- Standby power consumption: <1,5 VA
- Maximum power consumption during resetting: <20 VA rms for 0,7 sec. (peak <80VA)

6. 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.
- . EN 50557:2011, Requirements for automatic reclosing devices (ARDs) for circuit breakers-RCBOs-RCCBs for household and similar use
- . BTicino devices can be used under the conditions of use as defined by IEC / EN 60947.
- . Performance of the devices can be affected by particular types of climate: dry heat, dry cold, humid heat, salt spray atmosphere.

Environment respect – Compliance with EU directives:

- . Compliance with Directive 2011/65/EU known as "RoHS 2" on the restriction of the use of certain hazardous substances in electrical and electronic equipment.
- . Compliance with REACH regulation: at the date of the publication of this document no substance from the candidate list is present in these products.

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.

7. AUXILIARIES AND ACCESSORIES

Signalling auxiliaries:

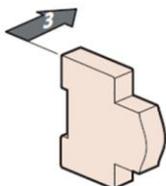
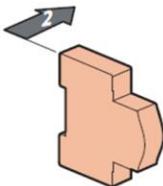
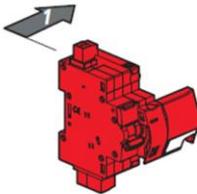
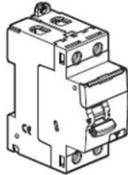
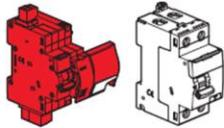
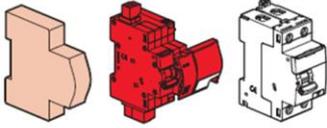
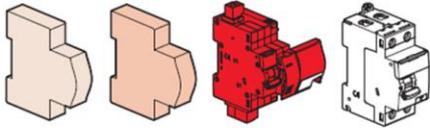
- . Auxiliary contact (½ module - cat n° F80CA05, 1 module - F80CA).
- . Fault signalling changeover switch (½ module - cat n° F80CR05).
- . Auxiliary contact modifiable in default signal (½ module - cat n° F80RC05, 1 module - F80RC).
- . Auxiliary contact + fault signalling switch - can be modified to 2 auxiliary contacts (1 module - F80CR).
- . Electronic EMS BT DIN Auxiliary contact + Fault signalling (½ module - cat n° F80BCR)

Control auxiliaries:

- . It is forbidden to associate control auxiliaries (cat. n° F80ST1/T2, F80SVP, F80SVE1/VE2) 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° F80CA05, F80CA, F80RC05, F80RC, F80CR05, F80CR, F80BCR).

				
			<p>F80SG F80SGB F80SGPN</p>	
		<p>F80... CA/CR/RC CA05/CR05/RC05 --- F80BCR</p>	<p>F80SG F80SGB F80SGPN</p>	
	<p>F80... CA05/CR05/RC05 --- F80BCR</p> <hr/> <p>F80... CA/CR/RC CA05/CR05/RC05 --- F80BCR</p>	<p>F80... CA05/CR05/RC05 --- F80BCR</p> <hr/> <p>F80... CA/CR/RC</p>	<p>F80SG F80SGB F80SGPN</p>	