**BTicino SpA**
Viale Borri 231,21100 Varese - Italy

# Smart load shedder

**Cat. number : FC80GCS**



**Requires prior installation of a "with Netatmo" connected starter pack or a Gateway module and at least one connected power outlet, contactor and/or cable outlet in order to be able to use the offloading function.**

## 1. DESCRIPTION - USE

### Use:

Enables you to measure the total electricity consumption of your home via the included closed current transformer, and to view it in the Home + Control smartphone app.
The load shedder is thus able to detect when the subscribed power (or the maximum consumption threshold defined in the App) is about to be exceeded and to intelligently offload your connected loads (connected cable outlets, connected contactors, or connected power outlets) in accordance with predefined priorities which can be easily customized.

The user can thus reduce the value of his electrical contract and save money while maintaining his/her level of comfort by avoiding cutting the power supply of priority equipment.

This connected version offers the functions of:
· Real-time measurement: automatically reads the total electrical consumption of the home.
· History of electricity consumption available in the Home + Control app.
· Setting of the subscribed power / maximum consumption threshold (which act as a load shedding threshold) and customization of load shedding priorities between loads via the Home + Control app.
· Allows to individually offload the electrical appliances of the home (and not by circuit) for a very precise management of the load shedding function.

### Technology:

. Single-phase current measurement, by field effect using a closed current transformer (delivered with the smart load shedder) and data transmission by radio frequency to the connected network.

## 2. RANGE

### Width:
. 1 module. 17,7 mm wide.

### Rated primary current:
. Ipn = 80A AC

### Power consumption:
. 0.3W Max

## 1. DESCRIPTION – USE *(continued)*

### Rated voltage:
. 100V to 240V AC

### Rated frequency:
. 50Hz / 60Hz
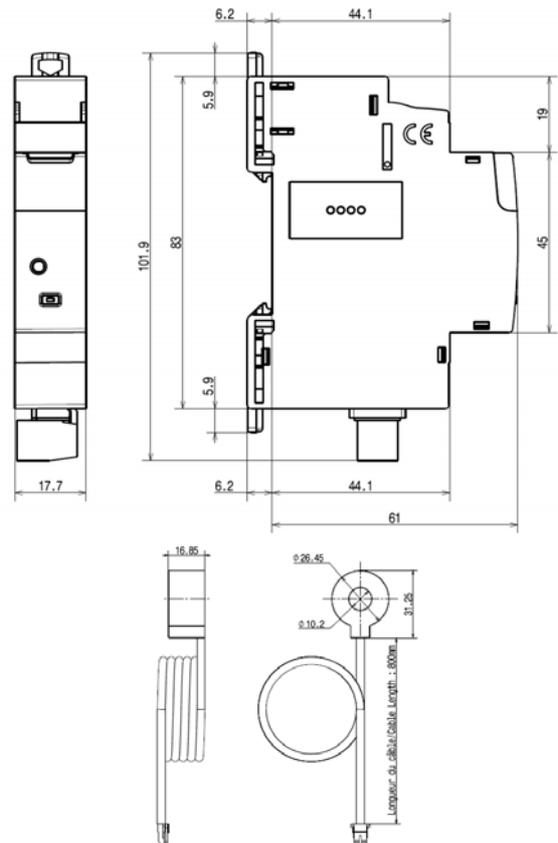
### Configuration and use:

Can be used with:

- Legrand smartphone **a**pp

« HOME + CONTROL»

. Available for free on Google Play or App Store

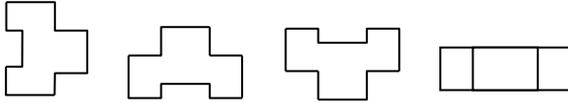## 3. OVERALL DIMENSIONS



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# Smart load shedder

## 4. PREPARATION - CONNECTION

### Mounting:
. On symmetrical rail EN / IEC 60715 or DIN 35.

### Operating position:
. Vertical, Horizontal, Flat.

### Row positioning:
. The product shape and the positioning of the terminals allow the passage of single-line, three-lines and plug-in supply busbars in the upper part of the product. Then, it is possible to freely choose the position of the Smart load shedder in the row and to connect by supply busbar the other devices put on the same DIN rail.
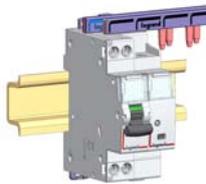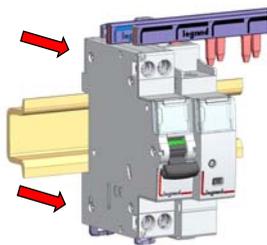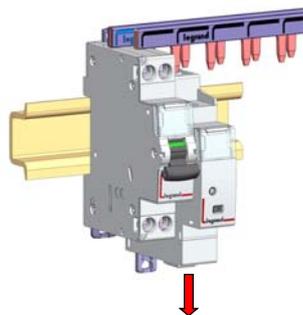
### Module maintenance:
. It is possible to switch a Smart load shedder in the middle of a row supplied with an upstream busbar without disconnecting the other devices on the same DIN rail.
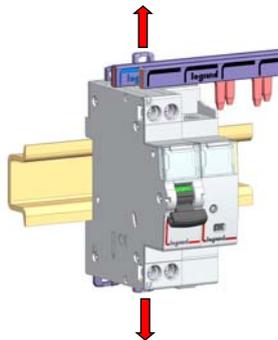
*1. Unclip the clamps to put it in open position*

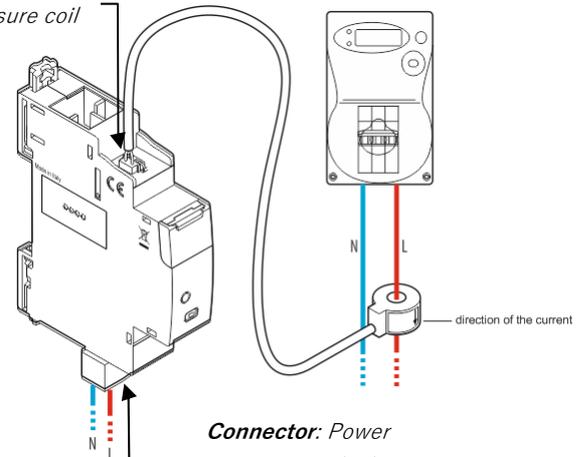*2. Pull the device forward in order to release it from the DIN rail*

*3. Pull the device downward in order to completely release it from the prongs of the busbar*
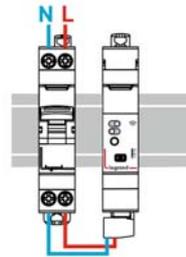
## 4. PREPARATION - CONNECTION *(continued)*

*Connector :*

*Measure coil*

*Connector: Power cabling Line (V1) and Neutral (N)*

Wire the Smart load shedder after a circuit breaker.
The connection between the smart shedder and the current transformer is made via a locking connector.

### Recommended tools:
. For the terminals:
Screwdriver flat-blade 3.5 mm
. For clamping:
Screwdriver flat-blade (5,5 mm or less).

### Connection:
. Power screw terminals:
  - Terminal type: cage
  - Depth: 9 mm
  - Stripping length recommended: 8 mm
  - Screw head: slotted 3.5 mm
  - Type of screw: M3
  - Tightening torque: 0.5 Nm

### Conductor type:
. Copper cables

|  | Without ferrule | With ferrule |
|---|---|---|
| Rigid cable | 1x (1 to 2.5mm²)<br>2 x (1 to 1.5mm²) | - |
| Flexible cable | 1x (1 to 2.5mm²)<br>2 x (1 to 1.5mm²) | 1 x (1 to 1.5mm²) |

# Smart load shedder
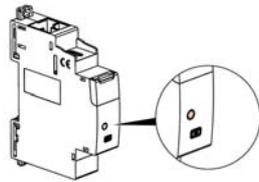
## 4. PREPARATION - CONNECTION *(continued)*

### Real-time and historical data visualization:
. Via smartphone with the Home+Control app.

### Visualization of the setup of the device:
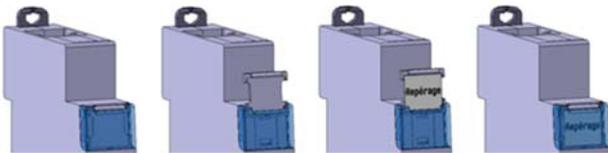. Via the LED on the front face

| Color | Status | Signification |
|-------|--------|---------------|
| Red | Fixed | Temporary status. Device not connected to the radio network |
| Green | Fixed | Temporary status. Device correctly paired to the radio network (when the radio network is still open) |
| OFF | OFF | Normal status. Device paired to the radio network (when the radio network is closed) |

### Other configurations & actions

. All other features and settings such as ; scenarios etc··· are directly explained step by step in the Home + Control app.
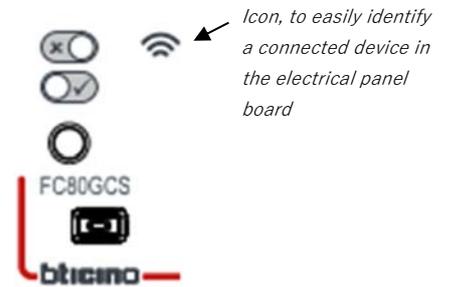
### Labelling:
. Circuit identification thanks to a label inserted in the label holder situated on the front face of the product.

## 5. GENERAL CHARACTERISTICS

### Marking of the Smart Load Shedder:
Markings of the front side:

*Icon, to easily identify a connected device in the electrical panel board*

FC80GCS

Connectors markings:

up                          down

COIL

V1   N

Lateral markings

100-240V~  50/60 Hz
Pmax = 0,3 W

ZLM01

max 2x1.5mm²   8 mm

V1   N

bticino
Made in Italy

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Viale Borri, 231
21100 Varese
ITALY

# Smart load shedder

## 5. GENERAL CHARACTERISTICS *(continued)*

**Characteristics of the measure coil:**

**Maxi measured primary current:**
. 80A AC

**Transformation ratio:**
1000 :1

**Rated short-time thermal current:**
. Ith = 3kA rms /1s

**Rated dynamic current:**
. Idyn = 9kA

**Rated insulation level:**
. 3KV rms 50Hz/1min

**Class of insulation:**
Class A following IEC61869-1 et IEC61869-2

**Rated Accuracy class:**
Class 1 following IEC61869-1   +/-1% at Ipn 63A

**Rated impulse withstand voltage (Uimp):**
4kv

**Overvoltage category:**
. II

**Degree of pollution:**
. 2

**Influence of altitude:**
. No influence up to 2 000 m

**Rated frequency :**
. 50 / 60Hz

**Rated voltage of use (Ue):**
. Ue = 100 to 240 V ~

**Recommandations:**
. For the device protection against short circuits according to the conditional current, it is recommended to use a circuit breaker or fuse gG.

**Characteristics of the radio interface:**
. Standard IEEE 802.15.4
. Frequencies 2,4 à 2,4835Ghz
. Transmitter output power <100mW

**Protection degree:**
. Protection index of terminals against direct contacts: IP2X.
. Protection index of the front face against direct contacts: IP3XD (IEC/EN 60529)
. Class II, front panel with faceplate.
. Class of protection against mechanical impacts IK04 (IEC/EN 62262)

**Plastic material:**
. Self-extinguishing polycarbonate.
. Classification UL 94: V0

**Ambient operating temperature:**
. Min. = + 5 ° C   Max. = + 45 ° C.

**Ambient storage temperature:**
. Min. = - 40 ° C   Max. = + 70 ° C.

## 5. GENERAL CHARACTERISTICS *(continued)*

**Average weight:**
. 91g

**Volume when packed:**
. 0,62 dm3.

## 6. COMPLIANCE AND APPROVALS
**Compliance to standards:**
 EN 61869-1:
 EN 61869-2
 EN 61010-1

**Environment respect – Compliance with European Union Directives:**
. Compliance with Directive 2002/95/EC of 27/01/03 known as "RoHS" 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 from 1st July 2006
. 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:**
. Halogen-free plastics.
. Marking of parts according to ISO 11469 and ISO 1043.
. ISO 7000: 2004, Graphical symbols to be used on equipment - Index and synopsis

**Packaging:**
. Design and manufacture of packaging in accordance with Decree 98-638 of 20/07/98 and Directive 94/62 / EC.