

Connected Contactor

Cat. Number : FC80CC



Beforehand requires the installation of a "Connected Starter Pack" or a " Gateway Module".

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1. DESCRIPTION - USE

Use:

Allows to remotely control (ON / OFF) loads (like water heater swimming pool pump, heaters, charging plug for electric cars...) by smartphone with Home+Control app and/or by voice via a voice assistant. This connected version also offers functions as:

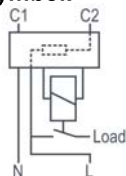
- Energy consumption: automatically energy consumption information is available for the circuit to whom the Connected Contactor is wired to.

- Scheduling: automatic opening and reclosing action scenarios based on a timeline. (daily/weekly/specific event such as "holidays")

Technology:

. Connected Contactor with control by single contact, via smartphone, voice assistants and / or by its own push button on the front.

Symbol:



2. RANGE

Noise level:

. Silent switch: <10 dB.

Width:

. 1 module. 17.8 mm wide.

Types of contact:

. Closing contact " NO "



Rated current:

. 20 A

Rated voltage:

. 100 - 240V AC

Rated frequency:

. 50/60 Hz

Poles:

. 1 pole « 1NO »

2. RANGE (continued)

Configuration and use:

. Can be used as a " standard " contactor not connected
And /Or

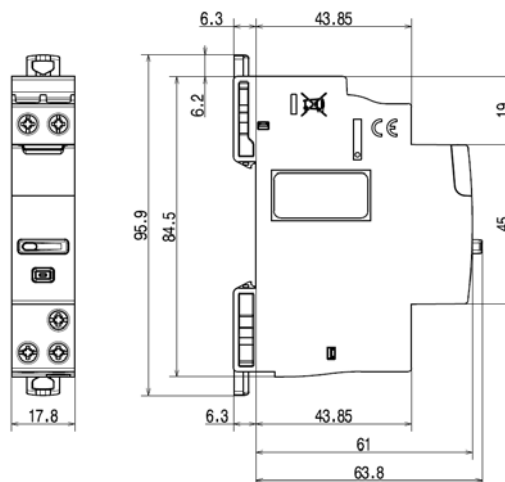
Can be used with:
- Legrand smartphone app
" HOME + CONTROL "



. Available for free on Google Play or App Store
- Voice assistants (compatible with the main voice assistants of the market).



3. OVERALL DIMENSIONS



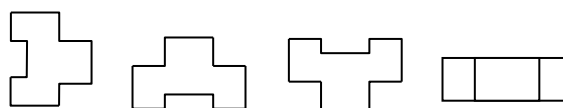
4. PREPARATION - CONNECTION

Mounting:

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

Operating position:

. Vertical, Horizontal, Flat.



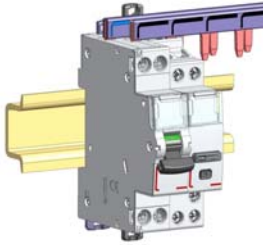
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4. PREPARATION - CONNECTION *(continued)*

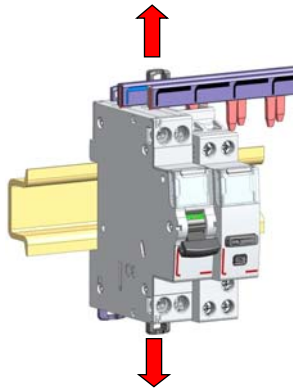
Row positioning:

. 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 Connected Contactor in the row and to connect by supply busbar the other devices put on the same DIN rail.

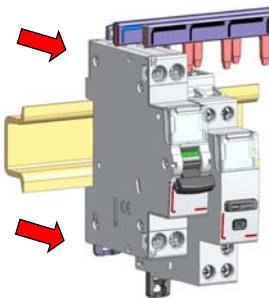


Module maintenance:

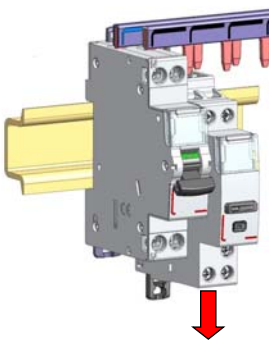
. It is possible to switch a Connected Contactor in the middle of a row supplied with an upstream busbar without disconnecting the other devices on the same DIN rail.



1. Unclip the clamp to put it in open position



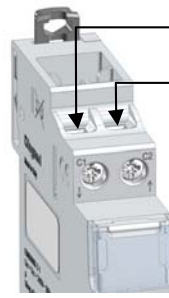
2. Unscrew the terminals and pull the device forward in order to release it from the DIN rail



3. Pull the device downward in order to completely release it from the prongs of the busbar

4. PREPARATION - CONNECTION *(continued)*

Wiring of the upstream terminals:

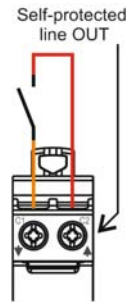


C1: IN terminal for control command (IN) ↓
Free dry-contact. No power allowed.

C2: Out terminal self-protected
Line for remote (OUT) ↑
Free dry-contact. No power allowed.

Advantage: « auto protected terminals » technology. It is not necessary to put a 2A protection

In case of a remote control done via a wired push button, the control is done either via C1 and C2 terminals.



Or via a push button through the phase line protected by a circuit breaker on terminal C1



Warning: Do not wire from Neutral to C1 or C2

Wiring of the power supply and the load (downstream terminals):



L: IN terminal for the Line

N: IN terminal for Neutral

Load: OUT terminal for the line after contact (towards Load)

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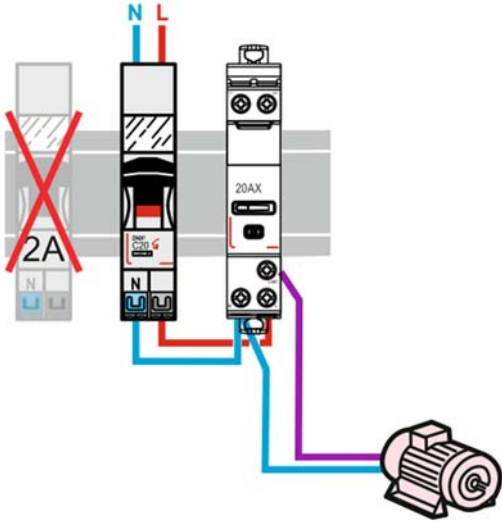
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4. PREPARATION - CONNECTION *(continued)*

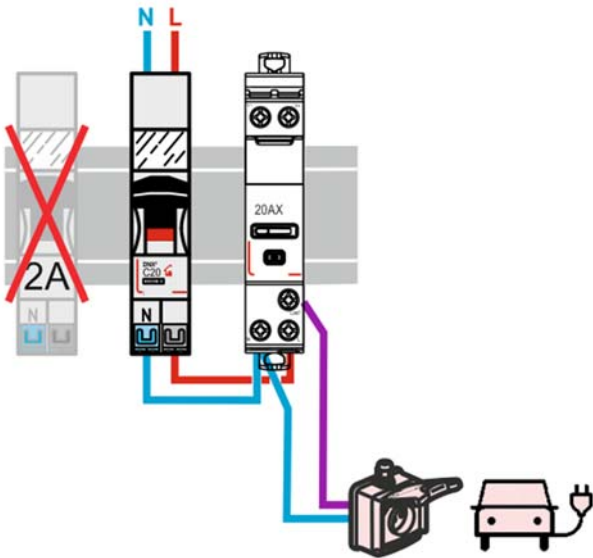
Wiring diagrams:

- N (neutral) = bleu
- L (Line) = Everything but blue and green/yellow
- Line after contact = usually purple, orange...

. Installation for electrical motor:



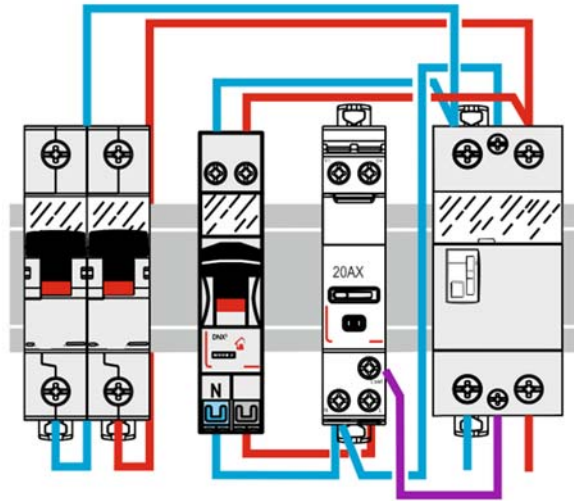
. Installation for charging electric cars:



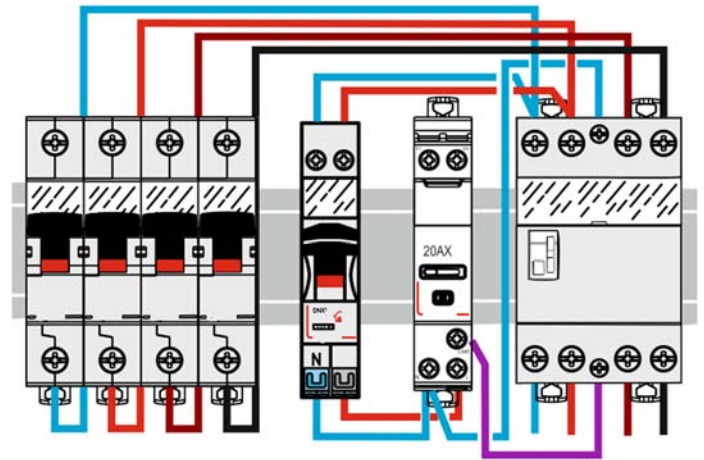
4. PREPARATION - CONNECTION *(continued)*

Wiring diagrams *(continued)*:

. Control of a single line standard contactor (>20A):



. Control of a three lines standard contactor (>20A):



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4. PREPARATION - CONNECTION *(continued)*

Recommended tools:

- . For the terminals: screwdriver Pozidriv n° 1 or flat-blade 4 mm.
- . For clamping: screwdriver flat-blade (5,5mm or less) or Pozidriv n° 1

Connection:

- . Control and power screw terminals:
 - Terminal type: cage
 - Depth: 9 mm
 - Stripping length recommended: 9 mm
 - Screw head: Posidriv n° 1 or slotted
 - Type of screw: M3,5
 - Minimum tightening torque: mini 0.8 Nm / maxi: 1.4 Nm advised: 1 Nm

Conductor type for remote control terminals (C1, C2):

- . Copper cables

	Without ferrule	With ferrule
Rigid cable	1x (0.75 to 2.5mm ²) 2 x (0.75 to 1.5mm ²)	-
Flexible cable	1x (0.75 to 2.5mm ²) 2 x (0.75 to 1.5mm ²)	1 x (0.75 to 2.5mm ²) 2 x (0.75 to 1.5mm ²)

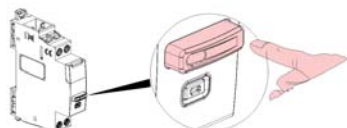
Conductor type for power terminals (N, L, LOAD):

- . Copper cables

	Without ferrule	With ferrule
Rigid cable	1x (0.75 to 6mm ²) 2 x (0.75 to 2.5mm ²)	-
Flexible cable	1x (0.75 to 6mm ²) 2 x (0.75 to 2.5mm ²)	1 x (0.75 to 2.5mm ²) 2 x (0.75 to 1.5mm ²)

Remote control commands:

- . Operation on-site, directly with the front face push-button of the device.



- . Via the General Scenario Wireless Command « Departure/Arrival »



- . Via smartphone with the Home + Control smartphone app



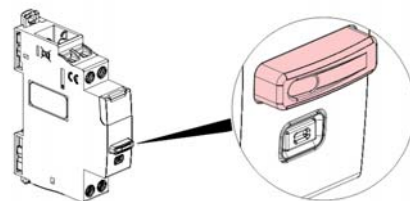
- . By voice through a vocal assistant.



4. PREPARATION - CONNECTION *(continued)*

Visualization of the operating mode of the device and contacts:

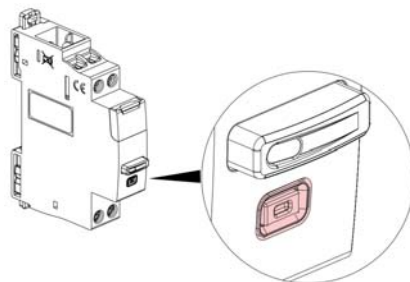
- . Via the LED, on the push button command



Color	Status	Meaning
	OFF	Manual mode and opened Contact (OFF)
	Slow blinking	Automatic mode and opened Contact (OFF)
	Slow blinking	Automatic mode and closed Contact (ON)
	Fixed	Manual mode and closed Contact (ON)

Visualization of the setup:

- . Via the LED on the settings button



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

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4. PREPARATION - CONNECTION *(continued)*

Other configurations & actions

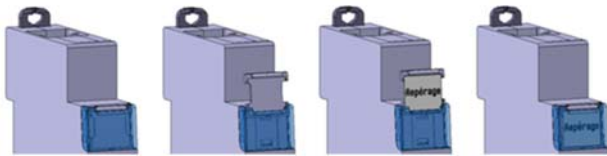
. All other features and settings such as ; scenarios etc... are directly explained step by step in the smartphone app and/or online guide

Self-protection

. The load is disconnected (OFF) if the current exceeds the rated value for more than 7.5 seconds.

Labelling:

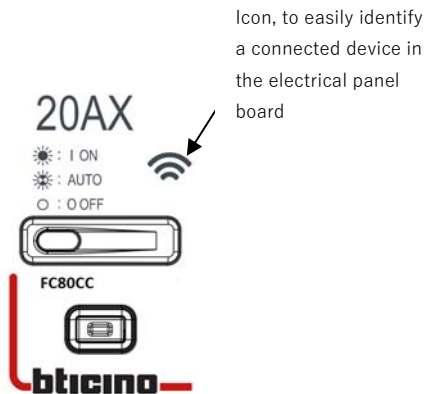
. Circuit identification by way of a label inserted in the label holder situated on the front of the product.



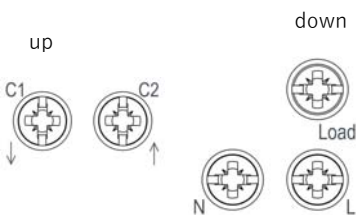
5. GENERAL CHARACTERISTICS

Marking of the Connected Contactor:

Markings of the front side:



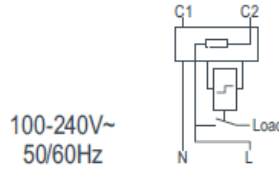
Terminal markings:



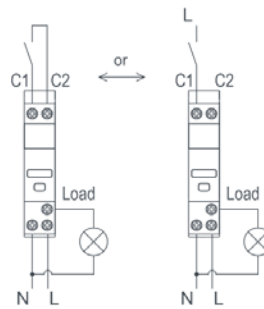
5. GENERAL CHARACTERISTICS *(continued)*

Other configurations & actions

Markings on the upper side



Lateral markings



bticino
Made in Italy

EN60669-2-1
Ue = Uc = 100-240V~ 50/60Hz
Ie = Ith = 20A
μ
Uimp 4kV
AC1/AC7a : 20A
AC3/AC7b : 10A

BTICINO SpA
Viale Borri, 231
21100 Varese
ITALY



Sectioning distance:

. micro-gap contact according to the standard EN 60669-2-1

Rated insulation voltage (Ui):

. Ui = 250 V~

Degree of pollution:

. 2

Rated impulse withstand voltage (Uimp):

. 4 kV

Influence of altitude:

. No influence up to 2 000 m

Assigned frequency:

. 50/60 Hz

Rated operational current (Ie) depending on utilization category:

- . AC-7a or AC1 (heaters): Ie = 20 A
- . AC-7b or AC3 (electric motors): Ie = 10 A

Rated voltage of use (Ue):

. Ue = 100- 240 V ~

5. GENERAL CHARACTERISTICS *(continued)*

Resistance to short-circuits:

- . Presumed short circuit current 1500 A according to EN 60669-2-1
- . Thermal stress: 15 000 A²s to EN 60669-2-1

Recommendations:

- . For the device protection against short circuits according to the conditional current, it is recommended to use a circuit breaker or fuse gG rated current ≤ 20 A.

Endurance:

- . 20 000 000 operations without load
- . 100 000 operations cycles AC-7a according to EN 61095
- . 100 000 operations cycles AC-7b according to EN 61095.
- . 10000 operations under load SBL650W according to EN 60669-2-1
- . 200000 operations under resistive load according to EN 60669-2-5

Characteristics of the radio interface:

- . Standard IEEE 802.15.4
- . Frequencies 2,4 à 2,4835Ghz
- . Transmitter output power <100mW

Dielectric resistance:

- . 2000V between front face and rail.
- . 750V between upstream and downstream

Protection degree:

- . Protection index of terminals against direct contacts: IP2X (IEC/EN 60529)
- . 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)

Vibrations and shaking resistance:

- . vibrations: 10 to 55 to 10Hz single amplitude 0.75mm
- . Shaking: 1000m / s² (6 ± 1ms)

Plastic material:

- . Self-extinguishing polycarbonate.
- . Heat and fire resistant according to IEC/EN 60669-2-1, glow-wire test at 960° C
- . Classification UL 94 V0 (≥ 1.5 mm)

Ambient operating temperature:

- . Min. = - 5° C Max. = + 45° C.

Ambient storage temperature:

- . Min. = - 40° C Max. = + 70° C.

Average weight:

- . 78g

Volume when packed:

- . 0,17 dm³.

Environmental profile:

- . PEP document available

Installation software:

- . XL PRO3

6. COMPLIANCE AND APPROVALS

Compliance to standards:

- . NF EN 60669-2-1 / IEC 60669-2-1

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

Conformity with electromagnetic interference (EMC):

- . Compliant EN 301 489-1, IEC 60669-2-5, NF EN 60669-2-1
- Immunity to shock waves
- Radio transmission
- Immunity to electrical transients in bursts.
- Immunity to conducted disturbances induced by radio fields
- Immunity to radiated fields
- Electrostatic discharge immunity
- Immunity to voltage dips and short break
- . Compliance mission radiated according to NF EN55032.

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.

7. AUXILIARIES AND ACCESSORIES

Beforehand, requires the installation of a "connected starter pack " or a "gateway module ".