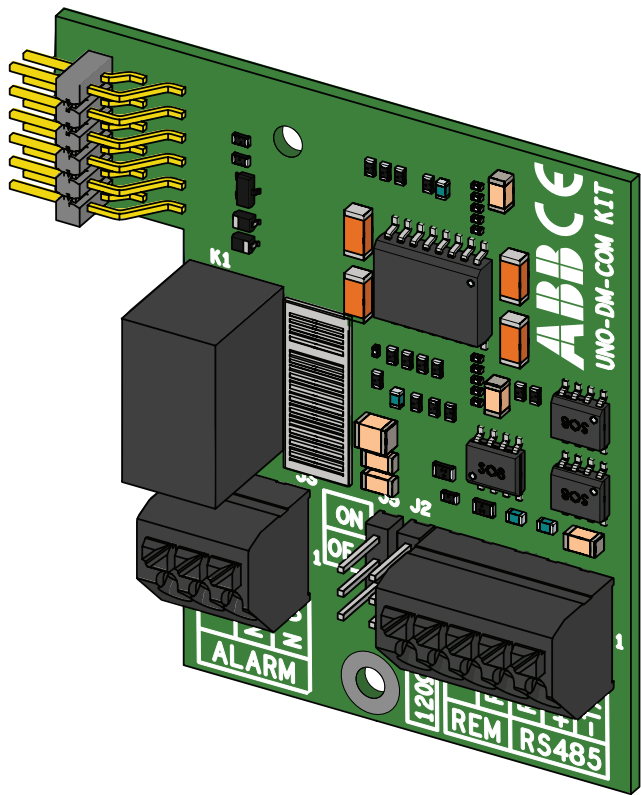


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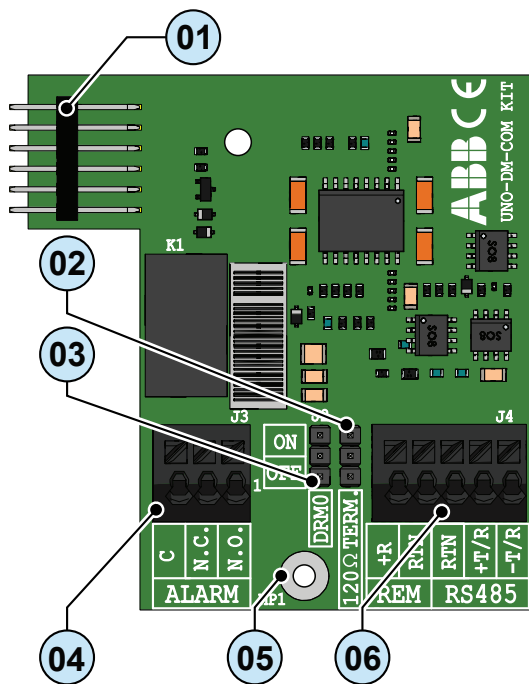


1. Principal Components

Principal components of the accessory board UNO-DM-COM KIT are shown in the figure and described in the following table:

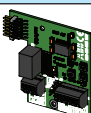

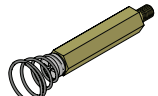



Main components

- 01 Inverter connector
- 02 RS485 Line Termination Jumper
- 03 DRM0 Activation Jumper
- 04 Alarm Connector
- 05 Fixing hole
- 06 RS485 and REM connector



2. Supplied component list

Inside the package, the following items are supplied:

Available components	Quantity
 UNO-DM-COM KIT	1
 Quick installation guide	1
 Tower with spring	1
 Toroid	1
 Cable gland M25	1
 Gasket with two holes for the service cable gland M25 + cap TGM613	1 + 1

3. Functional diagram

UNO-DM-COM KIT is an optional accessory board that can be integrated in the inverters of the UNO-DM-PLUS family offering the following additional functions:

- RS485 communication port.
- Digital input for Remote on/off.
- Alarm Contact.
- Demand Response Mode 0 required by AS/NZS 4777.2:2015

It is an expansion board that can be inserted directly into a dedicated connector inside the inverter and can also be easily added to a previously installed inverter.

The installation must be performed by an installer or by a trained technician after reading the instructions given in this guide.

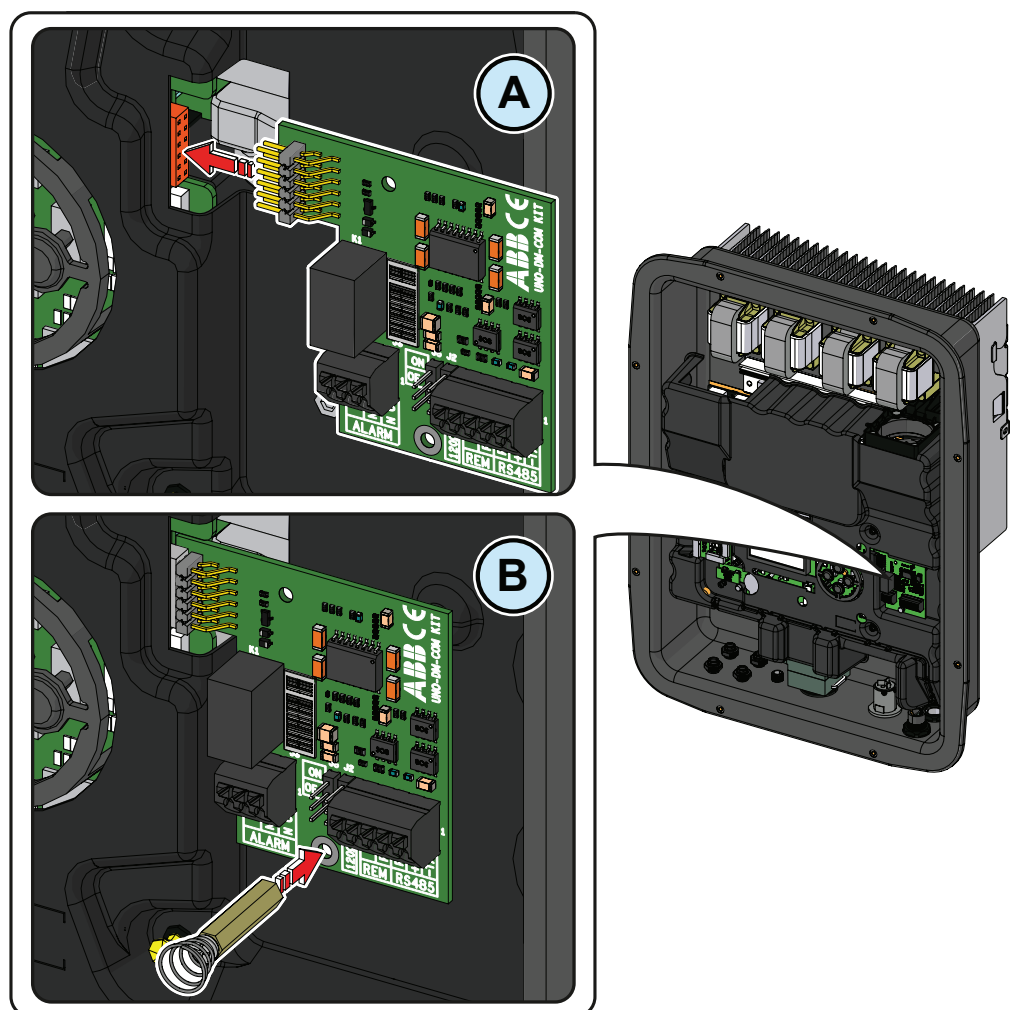
The board is directly powered by the inverter and provides the required safety isolation from the primary side of the inverter.


4. Assembly instructions

**Caution!** Hazardous voltages may be present on UNO-DM-COM KIT board. To avoid the risks for electric shock, the access to the internal zones of the inverter must be carried out after at least 5 minutes following the disconnection of the equipment from the network and from the photovoltaic generator.

To install the UNO-DM-COM KIT accessory board, perform the following steps:

- Remove the front cover of the UNO-DM-PLUS inverter (Refer to the quick installation guide of UNO-DM-PLUS inverter for proper removal of the front cover)
- (A) Connect the connector 01 to the counterpart present on the inverter
- (B) Use the tower with the spring supplied to secure the board to the chassis of the inverter using the appropriate hole 05.



 Before turning on the unit, it is mandatory to close the cover of the inverter.

Stick the label "DRM0 supported", present in the documentation kit, to the external side of the inverter nearby the label of approval (for Australia only).

UNO-DM-COM KIT installed inside the inverter, DRM0 supported

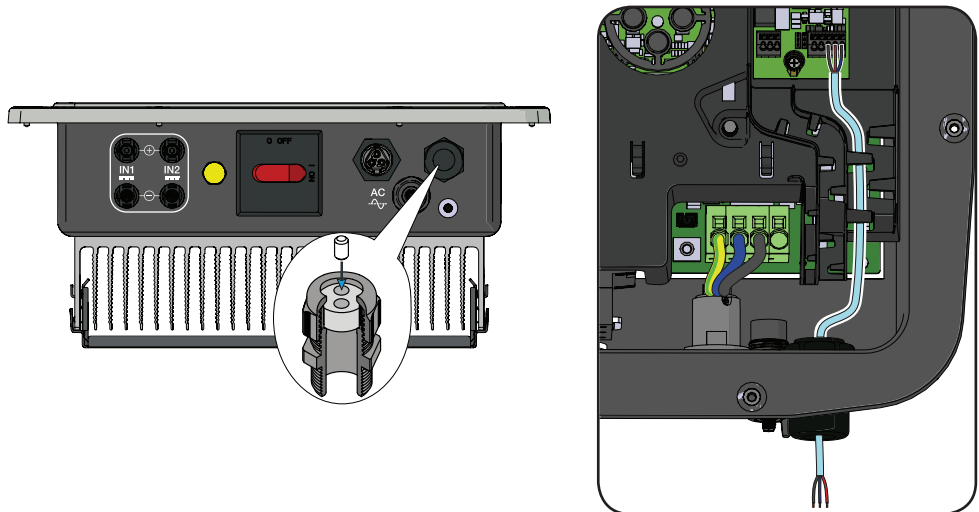


For more information about the configuration and use of the terminal for communication and control signals, refer to the inverter manual.

Each cable connected to the connectors of the UNO-DM-COM KIT must be passed through the appropriate passage present in the plastic protection of the inverter's motherboard (see right figure below). They must also be passed through the cable gland present on the bottom part of the inverter.

There is a M25 cable gland (that accepts a cable with a diameter ranging between 10 mm and 17 mm) and a gasket with two holes to be inserted inside the cable gland, which allows the passage of two separate cables with a diameter of maximum 6 mm.

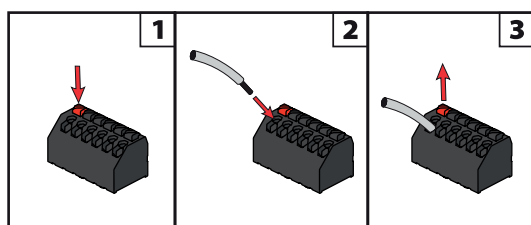
If only a single cable is being passed through the gasket, the TGM613 cap must be inserted into the spare hole to ensure degree of environmental protection (see left figure below).



**Caution!** To ensure the degree of environmental protection IP65, it is necessary to fix the cable gland to the inverter chassis with a minimum torque of 7.5 Nm.

To connect the wires to the connector terminals:

- 1) With a flathead screwdriver, hold the button corresponding to the contact to be wired.
- 2) Insert the cable.
- 3) Release the button and check the cable seal.

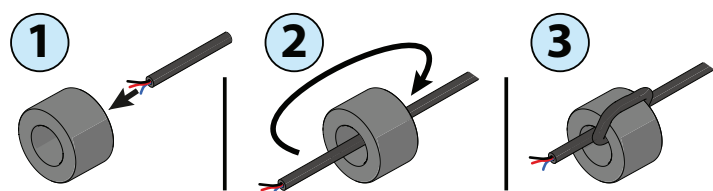


**Characteristics and dimensioning of the communication cables:**

To connect the RS485 line, you must use a shielded cable with three conductors. The characteristics that the cable must possess are indicated in the following table:

Type	AWG - mm <sup>2</sup>	Characteristic impedance	Operational voltage	Operational temperature
Shielded	24 - 16 0.2 - 1.5	120 Ohm	≥300 V	-20...+60 °C

The wiring of the RS485 line must also be wrapped around the toroid supplied in the package (1 winding); such a toroid should be appropriately placed in proximity of this service cable gland present on the bottom of the inverter.

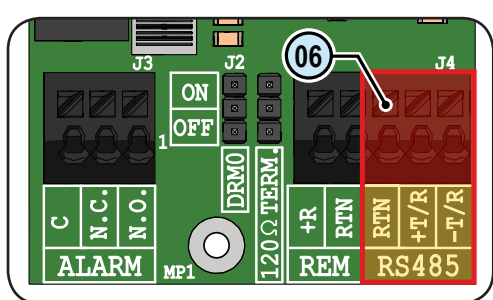
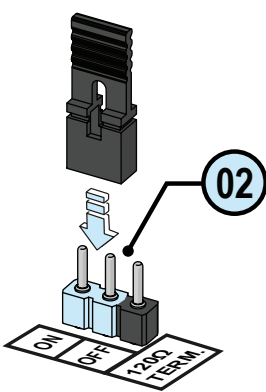


**Using the RS485 terminals:**

The RS485 HALF-DUPLEX communication line must consist of two wires of transmission and reception (+T/R and -T/R) and a reference communication cable (RTN).

All three cables are to be connected using daisy chain technique (it's recommended to make the chain connection external to the inverter). The RS485 connection is made using the terminal 06.

The last inverter of the daisy chain must be "terminated". Apply the 120 Ohm termination resistance by configuring the RS485 Line Termination Jumper 02 to the "ON" position.



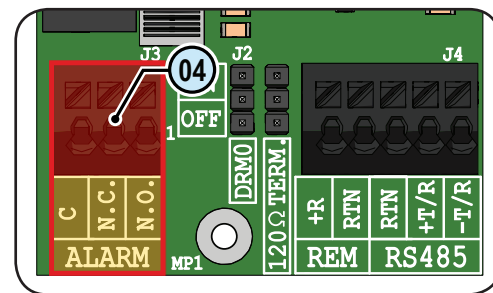
**Characteristics and dimensioning of the cable for alarm and remote control contact:**

The characteristics that the cable must possess are indicated in the following table:

AWG / mm <sup>2</sup>	Operational voltage	Operational temperature
24 - 16 / 0.2 - 1.5	≥300 V	-20...+60 °C

**Using the Alarm terminal**

Connections to the configurable ALARM relay are through the terminals 04. This allows connection to external devices to signal fault conditions or load control. The operation mode can be selected in the "INVERTER> SETTINGS> Alarm" menu.



The operation modes that can be selected: Production, Alarm, Alarm Configurable, Crepuscular, Alarm Configurable Latch, Alarm Configurable ext, GoGo relè (Auto), GoGo relè (Remote). Refer to the product manual for further details on the operation modes of the Alarm terminal.

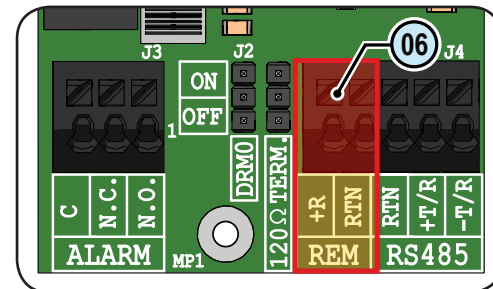


**The ALARM contact can only be used with systems that include additional safety insulation (supplementary insulation in relation to the DC input voltage).**

**Using the REM terminal**

The REM terminal 06, when properly configured, allows the use of the "Remote ON / OFF" or the "DRM0" functions.

The inverter can be disconnected from the grid remotely using the REMOTE ON/OFF function. This function is enabled in the "INVERTER > SETTINGS > Remote ON/OFF" menu. To use purely as a REMOTE ON/OFF, the DRM0 jumper 03 must be set to "OFF".

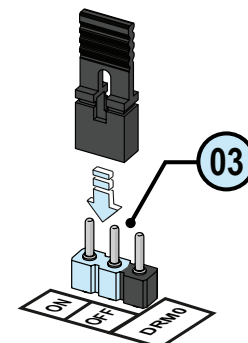


Where required, it is possible to activate the DRM0 function by configuring the Jumper for the activation of the DRM0 function 03 in the "ON" position.



**In case the DRM0 function is enabled if the proper connection of the REM terminal is not made, the inverter will remain disconnected.**

**Refer to the product manual for further information on the DRM0 function.**



Connections	
Type of connectors	Connectors with spring (Cables accepted: 0.2-1.5 mm <sup>2</sup> / 24-16 AWG)
Alarm relay rating	Floating contact (230V, 1A max.)
Remote On/Off	Digital input
Serial communication protocol	RS485 ModBus RTU or RS485 Aurora Protocol
Safety	
Brands	CE
Class of insulation	I
EMC and safety standards	IEC 62109, CISPR 55022, CISPR 55024

**Contact us**

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