

Addendum - product manual and quick installation guide (QIG) TRIO-20.0/27.6-TL-OUTD-X-US-480



This document provides a notification of updates to the product documentation included in the original product packaging (Quick installation guide) and online product manual. It is to be used together with the current TRIO-20.0/27.6 product manual (BCG.00627.2_AB NA) or the Quick installation guide (BCM.00202.2_Rev AB), both located at <http://new.abb.com/power-converters-inverters/solar/string/three-phase> (select “Show offering for: United States of America”). All the safety precautions indicated in the product manual also apply to this update notification and must be read, understood and followed.

List of applicable manuals

TRIO manuals and guides	Code (English)
Manual - TRIO-20.0_27.6-TL-OUTD-US (-A)	BCG.00627.2_AB NA
QIG - TRIO-20.0_27.6-TL-OUTD-US (-A)	BCM.00202.2_Rev AB

1. The TRIO may be packaged with the new mounting bracket (see Figure 1 below) — (refer to page 25 of the current TRIO manual or section 3 of the current TRIO QIG).

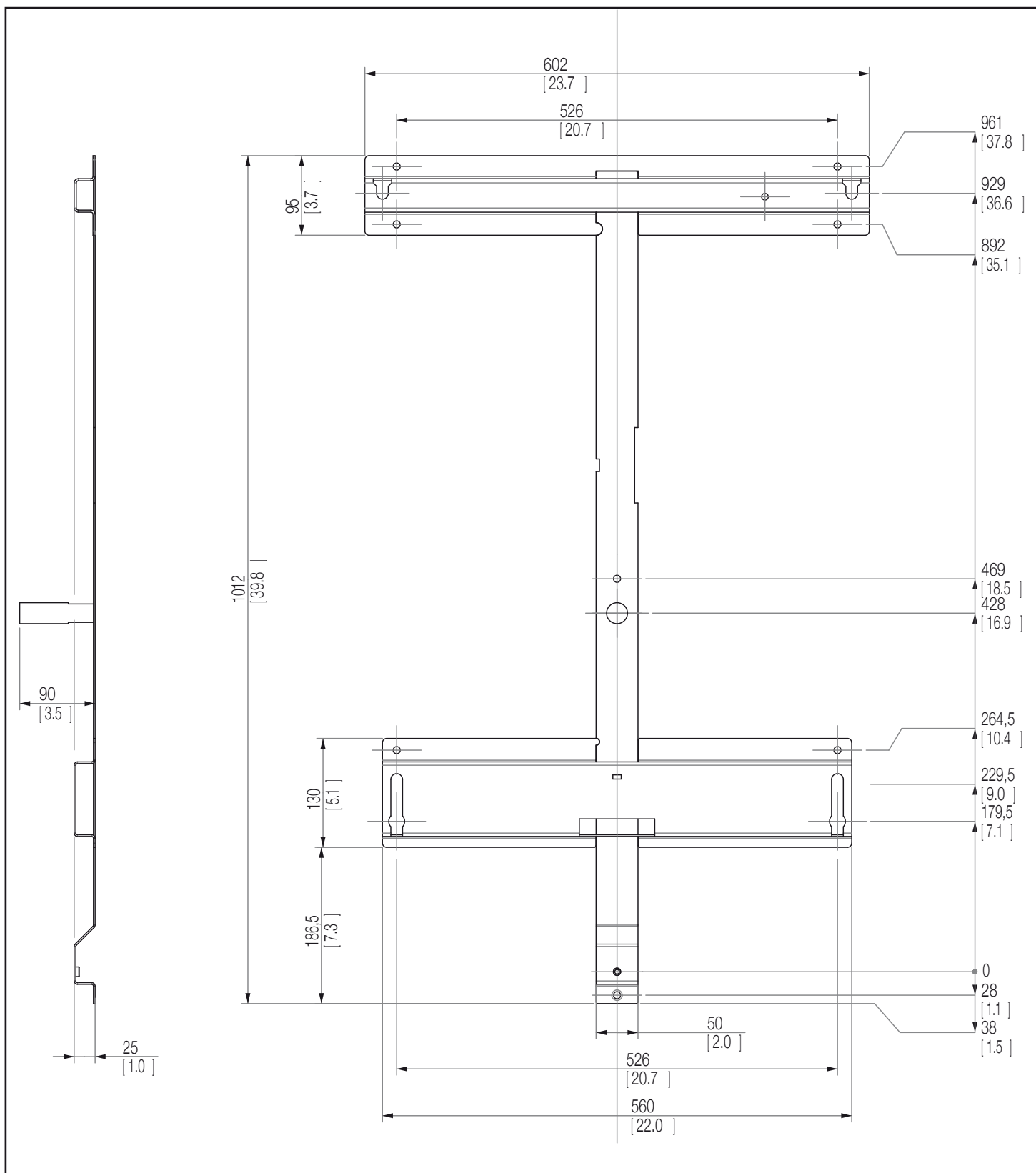


Figure 1 - new mounting bracket dimensions

2. Coupling screw - this part is now optional and not included in the new TRIO packaging (see page 27-28 of the current TRIO manual or section 5 of the current TRIO QIG).

Refer to diagrams in the current product manual for applicable product part reference numbers.

The rear coupling screw ①05 is not included with the new TRIO product packaging (see Figure 2 below), and can be purchased separately (part number 3M870010000A) to be used as a fitting tool during installation. This tool must be extracted from the wiring box after assembly and can be used in other installations. Before removal, make sure the connection screws ①07 are tightened and that the assembled Inverter/Wiring Box is secured to the wall bracket. Exercise caution when removing the coupling screw, because when it becomes disconnected from the Inverter, it will freely fall from the bottom of the wiring box.

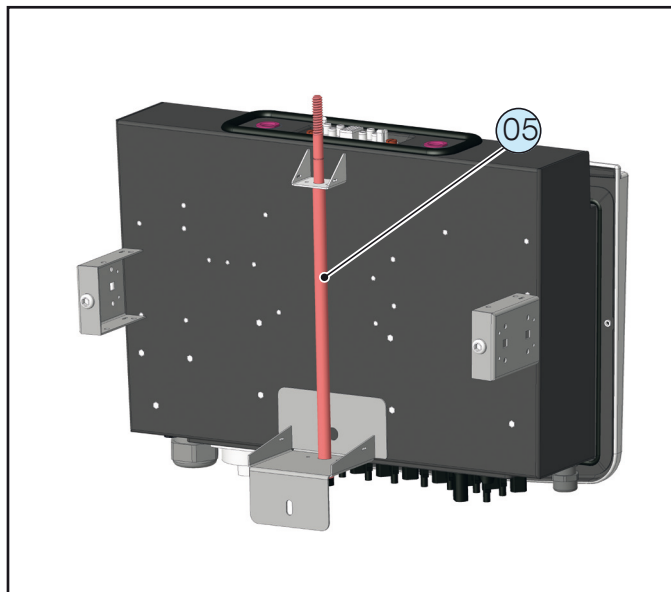


Figure 2 - rear coupling screw

3. Installing the new mounting bracket (refer to pages 25-29 of the current TRIO manual or section 5 of the current QIG).

Refer to Figure 3:

- Using a level, mark the two holes through the vertical strip (A) to ensure it is mounted vertically. Drill a hole with a bit suitable for the depth required.
- Tighten the pin (B) on the (A) vertical strip.
- Position the bracket (C) in the slot on the vertical strip (A) and mark the four holes, using a level to ensure it is horizontal.
- Position the bracket (D) in the slot on the strip (A) and mark the two holes, using a level to ensure it is horizontal.
- Drill with a bit suitable for the required depth.
- The type and size of the anchors will depend on the type of wall. Size the anchors while taking into consideration an overall load four times the weight of the inverter (670 lbs.) distributed over the six fastening points of the horizontal bracket (112 lbs. per anchor).
- Fit the bracket (C) into the slot at (A) and tighten the screws, using a level to ensure it is horizontal.
- Fit the bracket (D) into the slot at (A) and tighten the screws, using a level to verify it is horizontal.

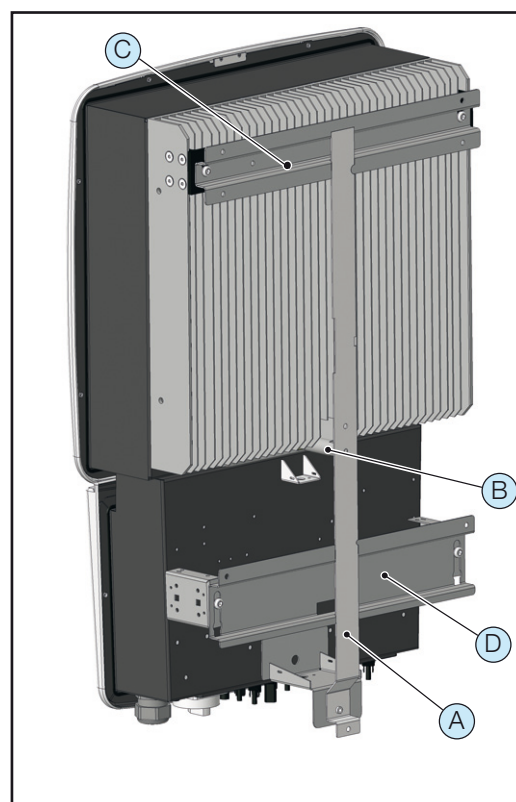


Figure 3 - back side of inverter

Refer to Figures 4 and 5 and page 27 of the existing product manual for product part reference numbers:

- Fasten the Wiring Box (02), inserting the head of the rear screws (circled in black in Figure 4 below) into the slots in the bracket, remove the front cover (see Figure 5) and perform all the necessary connections. The inverter does not need to be installed (03) at this stage.
- Mount the inverter by putting the heads of the rear screws into the slots in the bracket. To make this operation easier, an optional lifting kit which includes handles (06) or two eyebolts (M12) can be fitted in the side holes (part number 3M2200HNDK0). The threaded wall plug in the lower part of the heat sink makes contact with the pin (B), keeping the inverter in the ideal position.
- Use the prefitted screw or insert the optional coupling screw (05) (see Figure 2) and tighten it, bringing the Wiring Box towards the inverter until it makes firm contact.
- Fully tighten the two connection screws (07) to the centering pins in the Wiring Box, ensuring the gasket adheres correctly.
- Attach the assembled Inverter/Wiring Box to the bracket by tightening the locking screw (27) located at the bottom of the Wiring Box.

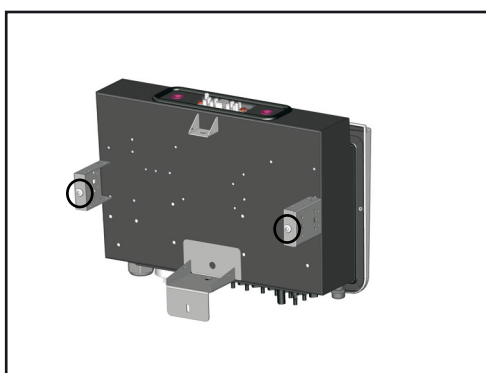


Figure 4 - rear screws (circled in black) to be inserted into the bracket slots





Figure 5 - remove wiring box front cover

4. Dismantling Inverter and Wiring Box (page 89 of the current TRIO manual).


Refer to diagrams in the current product manual for applicable product part reference numbers and use of the optional coupling screw.

Before dismantling the Inverter and the Wiring Box, insert the coupling screw 05 until the Wiring Box and Inverter are held together. If the optional coupling screw is not used, the wiring box should be held while the connection screws are loosened, in order to prevent the Wiring Box from falling. After either the Wiring Box and Inverter are connected using the coupling screw or the Wiring Box is held while the connection screws are loosened, follow the instructions provided in #4 of this notification. but in the reverse order.

5. Components no longer supplied (refer to page 18 of the current TRIO manual or section 3 of the current QIG).

List of components no longer supplied	Quantity
 Male key TORX TX20	1
 Plugs, screws and washers for wall mounting	10 + 10 + 10

6. Routine maintenance update (refer to page 8 of the current TRIO manual).

Annual visual checks	
	Check that there are no obstacles (animals, insects, leaves or anything which could reduce the heat-exchanging capacity of the heat sink) at the top, bottom and between the fins.

7. Alarm relay mode (refer to pages 49-50 of the current TRIO manual).

The **Alarm** section of the **Settings** menu is used to set the activation state of a relay (available both as a normally open contact — N/O — and as a normally closed contact — N/C).

This contact can be used, for example, to activate a siren or a visual alarm, control the disconnect device of an external transformer, or control an external device.

The relay can be set to switch in seven different modes:

MODE 0 - Production:

The relay switches whenever there is an alarm (error) on the inverter. If the N/O (or N/C) contact is chosen, the contact will stay open (or closed) until the inverter is connected to the grid. Once the inverter connects to the grid and starts to export power, the relay switches state and closes (or opens). When the inverter disconnects from the grid, the relay contact returns to its position of rest, namely open (or closed).

MODE 1 - Alarm (no latch):

The relay switches whenever there is an alarm (error) on the inverter. No switching occurs when there is a warning. If the N/O (or N/C) contact is chosen, the contact will stay open (or closed) until the inverter reports an error; once the inverter reports an error, the relay switches state and closes (or opens). The contact remains switched from its rest condition until normal operation is restored.

MODE 2 - Configurable alarm (no latch):

The relay switches whenever there is an alarm (error) or a warning, which has been previously selected by the user through the dedicated menu. If the N/O (or N/C) contact is chosen, the contact will stay open (or closed) until the inverter reports an error or a warning out of those selected from the menu. Once the inverter displays an error or a warning from those selected, the relay switches state and closes (or opens) the contact. The relay remains switched from its rest condition until the alarm or warning has disappeared..

MODE 3 - crepuscular (twilight):

The relay switches when the voltage from the photovoltaic array exceeds/falls below the threshold set for grid connection. If the N/O (or N/C) contact is chosen, the contact will stay open (or closed) until the inverter has an input voltage higher than the one selected for grid connection. The contact remains switched from its rest condition for as long as the inverter is switched on (even if not connected to the grid). This mode is can be used to disconnect large output transformers that could have unnecessary consumption during the night.

MODE 4 - Alarm (latch):

The relay is switched when a fault (all system or network errors) is activated. When the inverter reconnects to the AC grid, the relay returns to its rest position.

MODE 5 - Configurable alarm (latch):

The relay is switched when one of the configured errors/warnings is activated (the user can select one or more possible error/warning events). When the inverter reconnects to the AC grid, the relay returns to its rest position.

MODE 6 - Configurable alarm table:

In this mode, the user can independently configure one of the errors/warnings to check the relay according to the alarm mode (latch) or alarm mode (no latch).

Please note:

- It is recommended that the product packaging is kept in the event a product return is necessary. Returning items in insufficient packaging will void the warranty.
 - Always keep the Quick Installation Guide, all accessories supplied and the connector cover.
 - The Quick Installation Guide and accessories are not to be returned, as they will not be resupplied.
 - If returning the Wiring Box, the connector cover must be secured to the Wiring Box for transport. If it is not properly secured to the Wiring Box, the warranty will be voided.
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For more information please contact:
www.abb.com/solarinverters

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