

English Service Guide

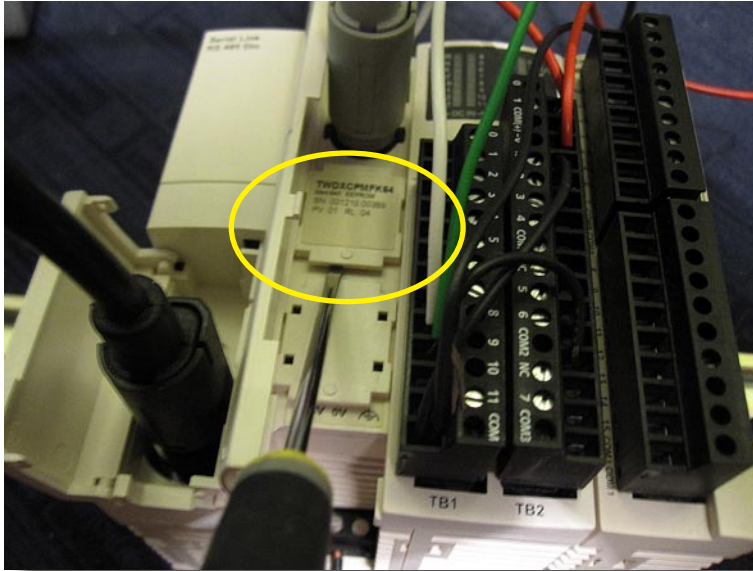
for

PGC TWD Novo Trigger Systems
&
PRC TWD Novo
Reciprocator Control System



A. Replacement / Upgrade of the PLC-program

Note: The Procedures in this Service Guide should only be performed by Trained Service Personell. It is important that each step is carried out in the exact described order.



To replace the PLC Program:

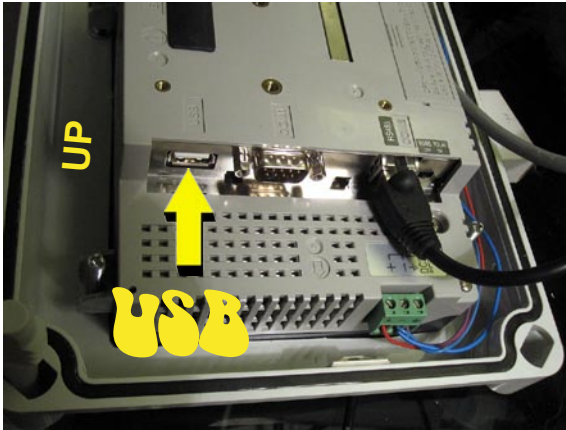
1. Write down all Settings in the SETUP and in your User Programs.
Refer to your PGC/PRC TWD Novo Manual on how to access the SETUP and User Program Settings.
2. POWER OFF !
3. Carefully remove the existing Program Cassette (in the yellow oval) and replace it with the new, containing the upgraded Program.
4. Power ON, and firstly re-enter the SETUP Settings, and then your User Program Settings.

The upgraded Program is automatically read-in by the PLC.

5. **IMPORTANT:** Send in the original EEPROM-cassette to Betraco Automation with REGISTERED MAIL* without delay.

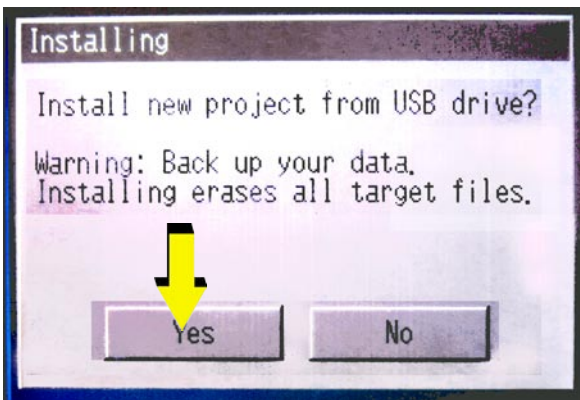
*Contact Betraco Automation via e-mail, or your Dealer, to get further information on Conditions for Program Upgrades.

B. Replacement of Program in the HMI Terminal with a USB-port



To upload a new program into the existing HMI Terminal,
or:
To upload the existing program into a new Terminal:

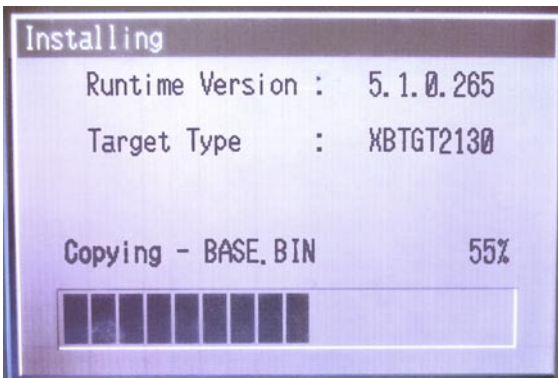
1. POWER ON.
2. Install the USB Memory Stick into the USB Port (The Arrow shows the USB Port Location on the Model XBT GT2130 HMI Terminal).



3. After a short while, the message according to the picture appears on the screen.

Press YES.

Your settings/data will not be erased.



4. The Activity Line shows the progress of the upload, which can take a few minutes..



5. IMPORTANT: when this message is Shown: Remove the USB Memory Stick with POWER ON.

Then, press RESTART, and the HMI Unit will boot up with the new/updated program, and the process is completed.

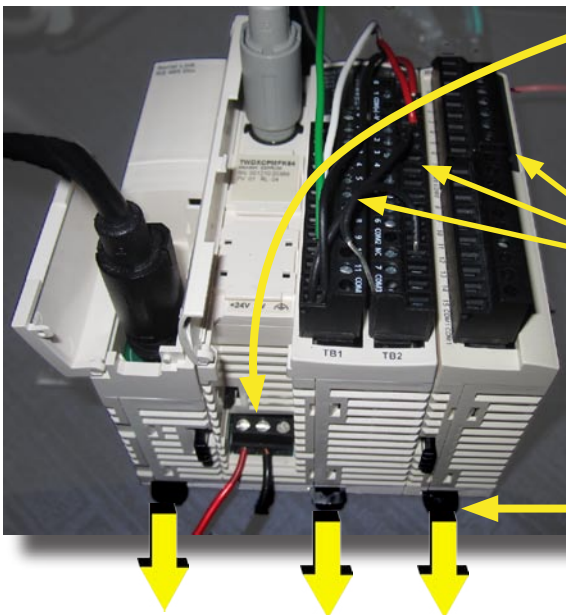
C. Replacement of the PLC Module



Shifting of PLC and Expansion Modules is only allowed with POWER OFF.

Here are examples of PLC and a few Expansion Module Models:

1. Basic PLC System TWD LMDA20DRT (the module shown here in the middle with double width).
2. The Communication Module TWDNOZ485D (the module to the left).
3. TM2DRA16RT, the module to the right, with 16 relay outputs.

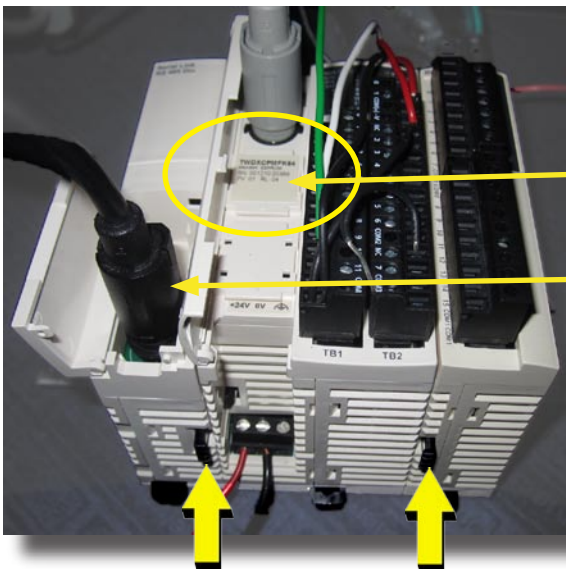


If the Basic PLC System shall be replaced: Firstly, loosen the wires with 24VDC (red and black leads), and the green/yellow earth wire from the Screw Terminal Block, as indicated by the arrow.

Carefully notice how they are connected.

Then, carefully remove the Screw Terminal Blocks by lifting upwards in both ends.

Pull out all Rail Clamps as shown in the picture in order to release all the modules from the DIN Rail.



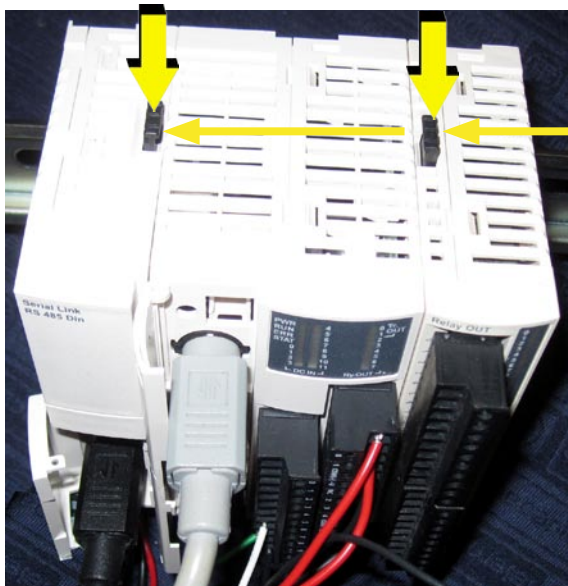
Then, push in/up the Latch Buttons that lock the modules together, as pointed by the thick arrows below.

Pull the modules apart, change the PLC to be replaced, mount (push) the units together again, and transfer the EEPROM Memory Cassette from the old to the new PLC Unit.

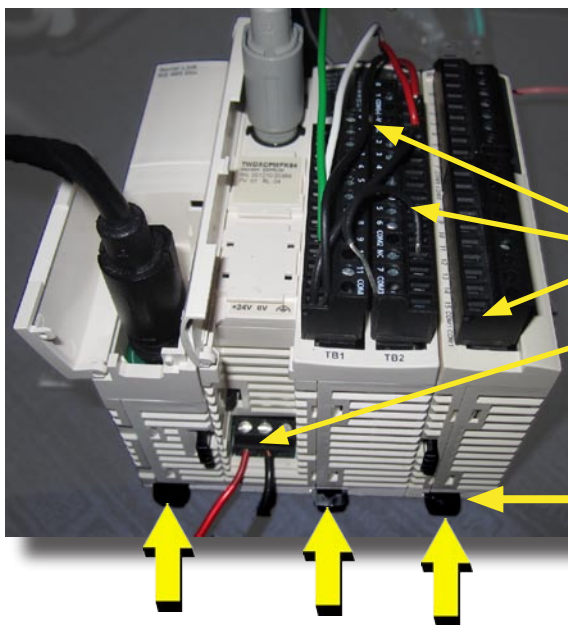
Note: If you need to remove the (black) cable from the Comm. Module: **Do not pull the cable**, instead, grip and pull out the cable contact, as the arrow shows.

To be continued on next page

C. Replacement of the PLC module (cont.)



When the modules are pushed together:
Push down the Latch Buttons **from the top** so that the modules are locked to each other again.



While pushing the modules lightly down against the mounting rail:
Push the Rail Clamps inwards in order to lock the modules onto the rail, as shown by the 3 thick arrows below.

Relocate the Screw Terminal Blocks back to their positions again.

Reconnect the 24VDC wires, as well as the green/yellow earth wire (not shown here) again.

Now, all that remains to be done is - POWER ON - and feed back all your program settings again, starting with the Password-protected settings in the SETUP, and then your user program settings.

Note: the procedure to replace the PLC Unit can be applied when replacing any of the Expansion Modules as well. If you are replacing one of the Expansion Modules, but not the Basic PLC, of course you don't have to change anything in the SETUP or your User Programs. But it is always a good idea to write down those settings for future use.