

How to make a diagnostic on TeSysT to start the network ?

I- Type of publication

<input type="checkbox"/>	Typical application
<input type="checkbox"/>	Best know Method (BKM)
<input checked="" type="checkbox"/>	Troubleshooting guide

<input type="checkbox"/>	Level 2 use
<input type="checkbox"/>	Internal use
<input checked="" type="checkbox"/>	Customer

II- Product

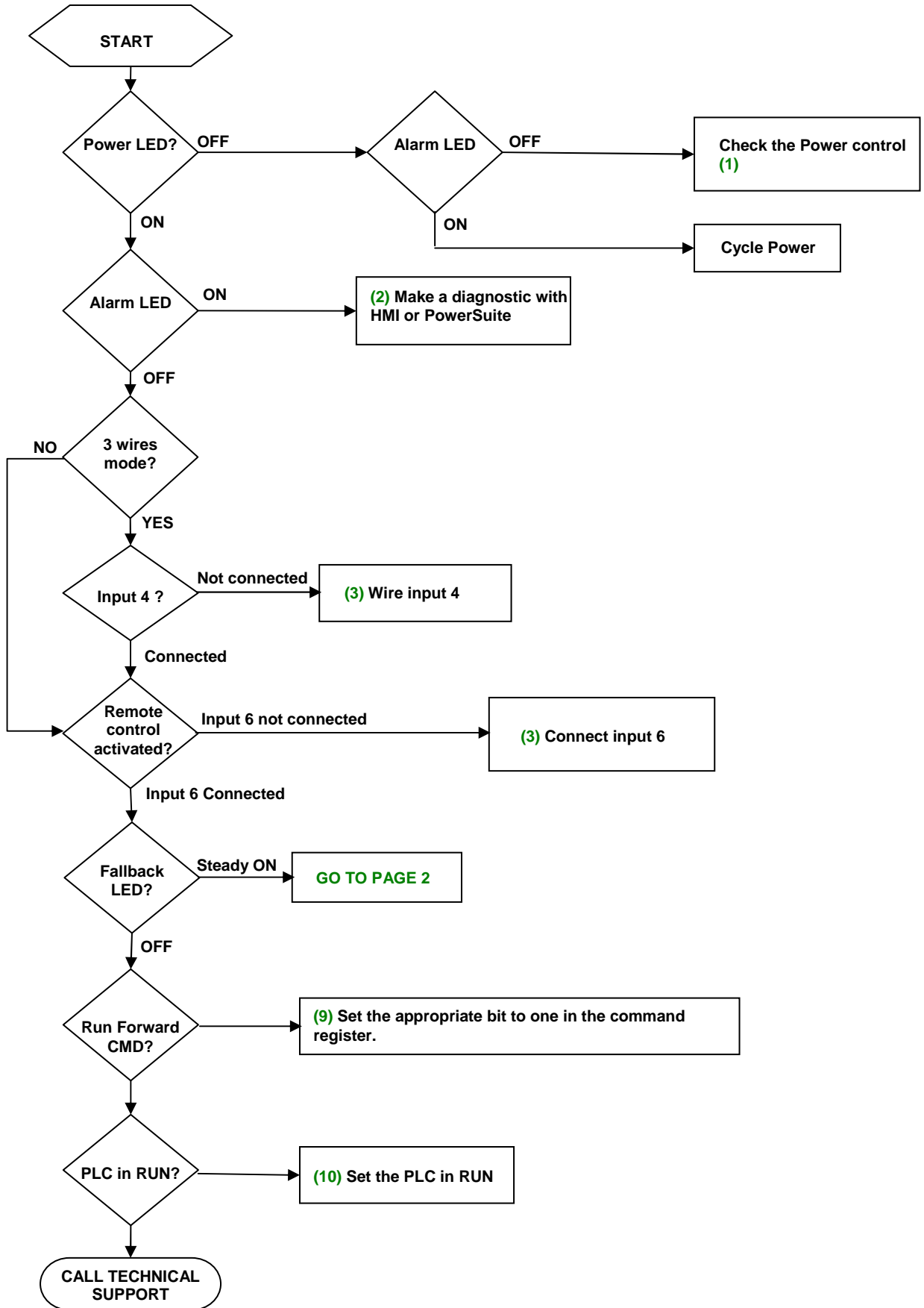
- Product range :

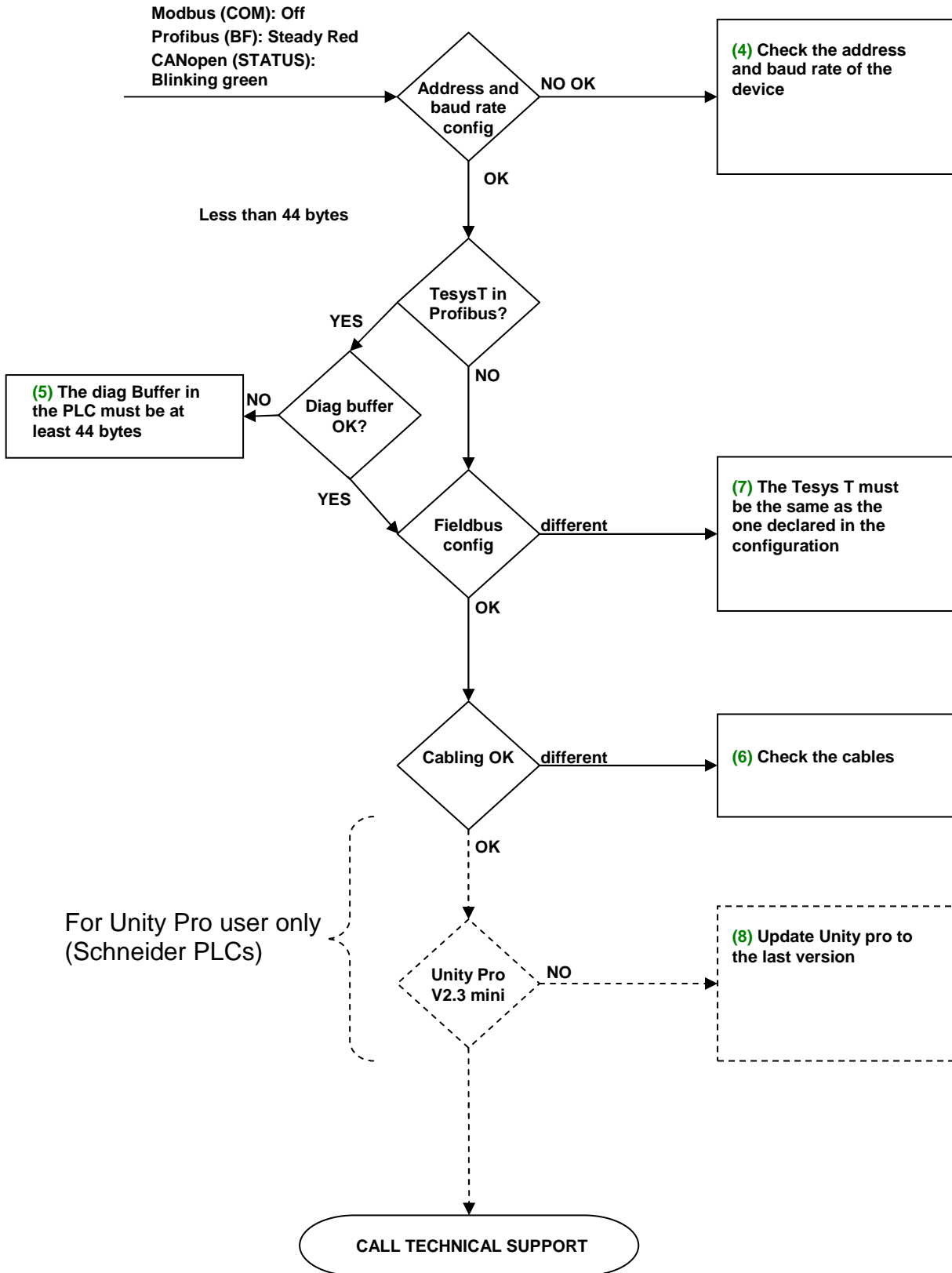
- Product family :

III- Introduction

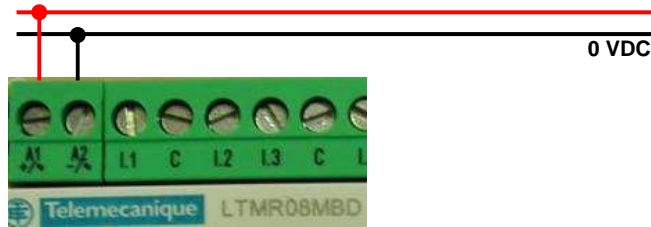
This document describes how to make a diagnostic on TesysT Profibus for a communication loss or if you cannot establish the communication between PLC and Network Port. You have step by step the process to start your network port and to send a command request (Run Forward, Run Reverse....). The two first pages is a block diagram and each box of this block diagram refers to the three pages following to show you where you should intervene to remove the problem.

IV- Description





(1) Check the power control



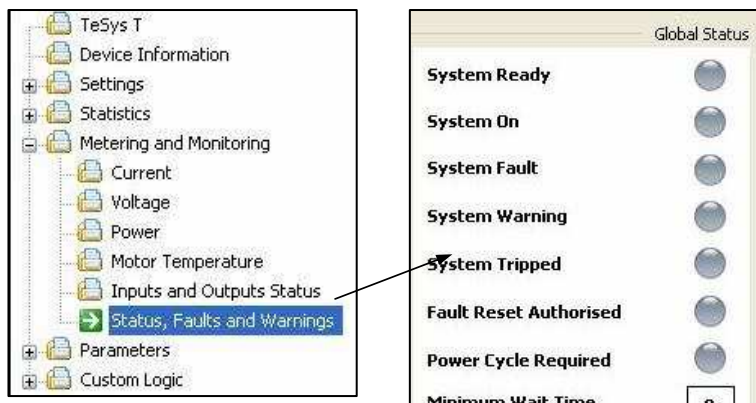
***BD** : Power Supply in DC Current : 24Vdc nominal current. You can supply with a voltage between 20.4Vdc and 26.24 Vdc.



***FM** : Power Supply in AC Current : 100-230Vac nominal current. You can supply with a voltage between 93.5Vac and 264 Vac.

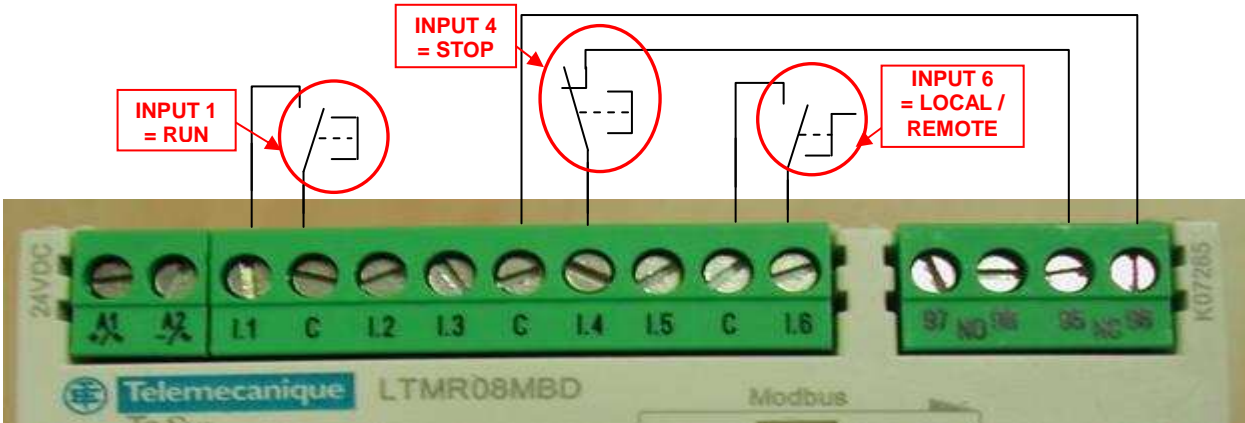
(2) Make a diagnostic with an HMI or PowerSuite

You can use the windows of PowerSuite, XBTN410 or LTMCU. For Powersuite, you should be connected and go on the menu : Monitoring/Status :

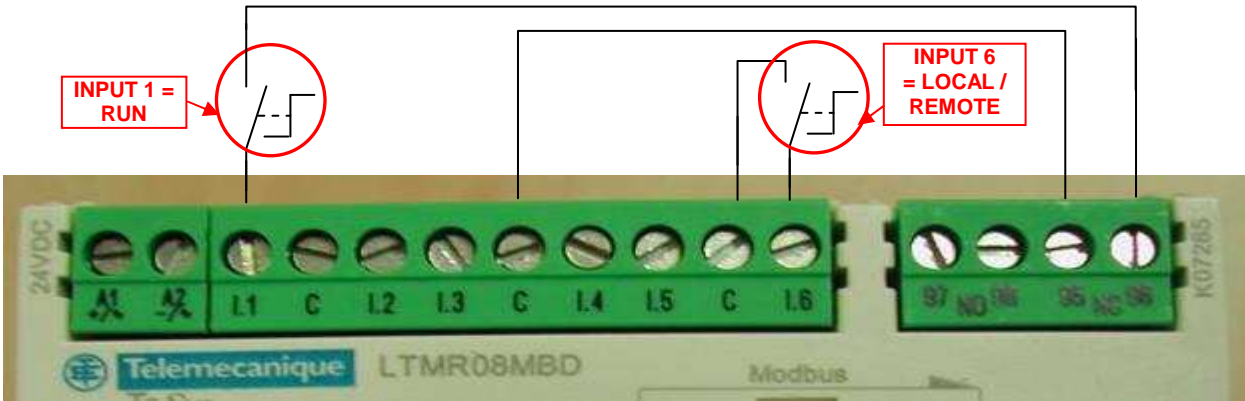


(3) Wired Input 4 (Stop input)

■ **3 wires :**



■ **2 wires :**



Note : In « 2 wires » you do not have « Stop button ». In the case of using an external power supply to switch on/off a logic input check the current and voltage level put on it (see catalogue of TesysT).

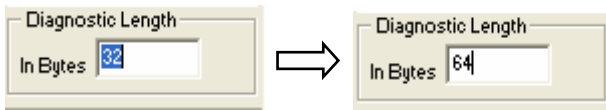
Use the HMI or the PowerSuite software to configure address and baud rate.

(4) Check address and baud rate of the device

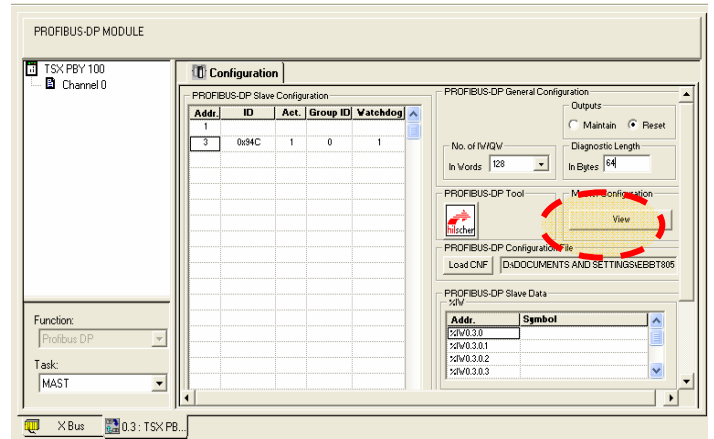
Use the HMI or the PowerSuite software to configure address and baud rate.

(5) Check the diagnostic buffer size

Check the diagnostic buffer size configured in the PLC. The Tesyst in Profibus needs at least 44kbytes length for diagnostic. Some PLCs (like Premium) set the diag by default at 32kbytes. You must put more than 44. (64kbytes is recommended)

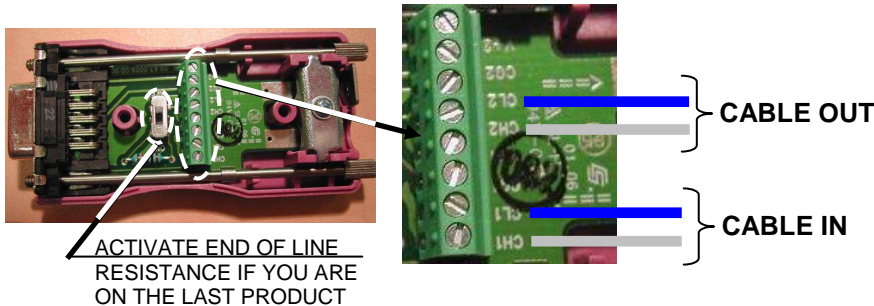


Those screenshots are taken from UnityPro software

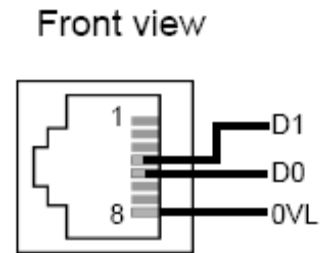


(6) Check wiring and Network parameters

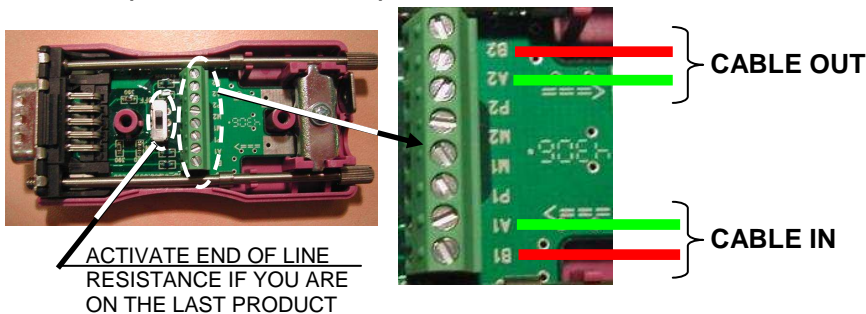
- TSXCANKCDFT180T (CanOpen connector):



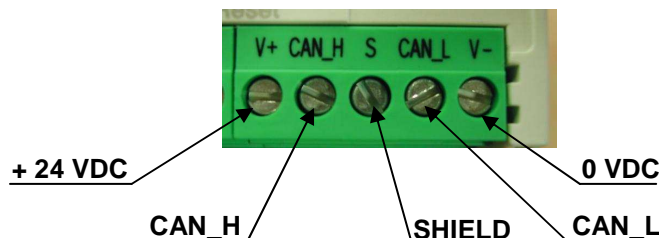
- Modbus connector (port on Right side):



- LU9AD7 (Profibus connector):



- DeviceNet connector (Phoenix connector):



(7) The Tesys T must be the same as the one declared in the configuration

In CANopen, Devicenet or Profibus, you have to select the right profile of the Tesys T:

- Tesys T MMC R
- Tesys T MMC L
- Tesys T MMC R EV40
- Tesys T MMC L EV40
- Tesys T MMC R PKW*
- Tesys T MMC L PKW*
- Tesys T MMC R PKW EV40*
- Tesys T MMC L PKW EV40*

** Profibus only !*

TeSysT with Expansion module (optional)

with PKW system. (optional)

R emote configuration
L ocal configuration

MMC=Motor Management Controller



-Disable this option if you select 'L '
-Enable this option if you select 'R '
Each time you modify this option you have to do a power cycle on TeSysT

(8) Update Unity Pro the last version

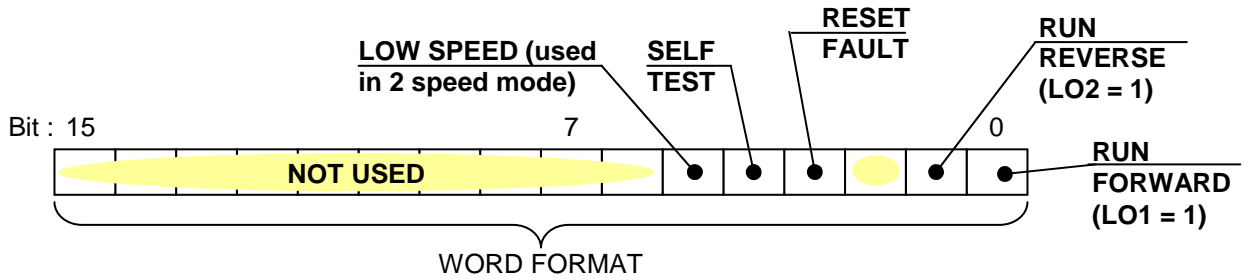
Check the Unity Pro version. If you use Unity Pro software and a Premium PLC, check the version. You must have at least V2.3, otherwise the Communication module may go into a internal error state. (all LEDs off !)



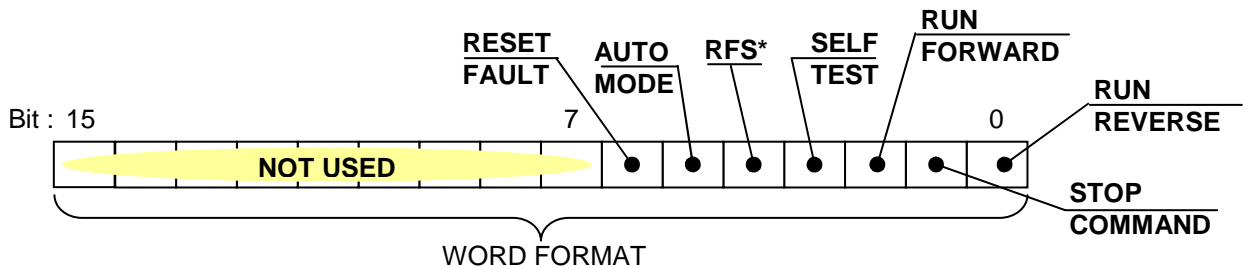
(9) Command register

In Modbus, CanOpen and DeviceNet the register 704 controls the Outputs LO1 and LO2. In Profibus, this is the First Output Word which manages the outputs. TesysT Profibus uses MMS profil (TesysU uses MMS and MS profil).

■ Mapping 704 :



■ Mapping Command register in Profibus MMS (First Output Word) :



- LO1 = 1** : Auto Mode and Run Forward (Command register = 36)
- LO2 = 1** : Auto Mode and Run Reverse (Command register = 33)
- LO1 = LO2 = 0** : Auto Mode and Stop Command (Command register = 34)

Note : The register 704 works on state and the command register works on rising edge.

*RFS: Return to Factory Settings

(10) Set the PLC in Run mode

