



Quick Start Guide



Pro-face

Pro-face LT3000 CANopen Master to a Telemecanique Altivar 71 Adjustable Speed Drive

Tested, Trusted, Out-of-the-Box



Pro-face LT3000 with CANopen Master Module

CANopen Cable



Altivar Adjustable Speed Drive



LT3000 Operator Interfaces



HMI Motion Control Quick Start Guides

Pro-face HMI motion control quick start guides make it easy to integrate variable speed drives directly to your operator interface and control system. With minimal knowledge a user can quickly set up a variable speed drive operator interface without requiring a separate programmable controller and drive interface wiring.

Differentiating Value:

- Simple, fast installation, 3 step guide with a sample project you can use
- No PLC required, logic controller is built-in
- Reduce system cost, no need for analog interfaces, eliminate pilot lights and push buttons
- Precision high resolution digital control

Applications:

- Conveyors
- Pumps and fans
- Packaging equipment
- Discrete manufacturing

These instructions along with the downloadable sample project facilitate quickly connecting and establishing communications between a Pro-face LT3000 using GP-Pro EX and a Telemecanique Altivar 71 Adjustable Speed Drive Controller. For a full explanation of this project refer to Pro-face America Application Note 1172.



Materials:

1. Pro-face GP-Pro EX Screen and Logic Editing software v2.2 or higher
2. Pro-face LT3300 Series HMI
3. Pro-face CA8-CANLT-01 CANopen master module
4. Telemecanique Altivar 71 Adjustable Speed Drive Controller
5. Telemecanique VW3 CAN A71 CANopen adapter
6. The Altivar drive EDS file "TEATV71xyE.eds" where x.y: is the drive software version
7. Standard CANopen network cable with DB9 CANopen bus connectors
8. The Pro-face sample project "APNT1172.zip" available at: <https://www.hmisource.com/otasuke/files/appnotes/>

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Right Size, Right Technology Solutions



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Easy Configuration

STEP 1 - Connecting to the Drive

1. Attach the Pro-face CA8-CANLT CANopen module (shown at right) to the back of the LT3300.
2. The Altivar 71 Drive communicates via a built-in CANopen interface.
 - a. Attach the Telemecanique VW3 CAN A71 CANopen adapter to a CANopen cable.
 - b. Connect the resulting adapter-cable assembly from the Altivar 71 drive RJ45 CANopen/Modbus port to the Pro-face CANopen adapter DB9 connector.

Note: If the components needed to assemble the cable are not available refer to the application note provided with the sample project to create your own cable.

STEP 1 - CANopen Module



CA8-CANLT
CANopen module

STEP 2 - Configure the Drive

1. Install a jumper from +24 to LI1 on the Altivar 71 Drive control terminal strip to complete the 3-wire stop circuit.
2. Set the following drive parameters using the Drive Control Panel as directed in the Altivar 71 Drive documentation. Default the drive to factory settings. Then use the following parameter settings to configure the drive for use with the sample project:

[2/3 wire control] (tCC) = (3C) [3 wire]

[CANopen address] (AdCO) = (2) [2]

[CANopen bitrate] (bdCO) = (125) [125 kbps]

[Ref.1 channel] (Fr1) = (CA) [CANopen]

[OUTPUT PHASE LOSS] (OPL-) = (n0) [No] *Allows the drive to run without a motor*

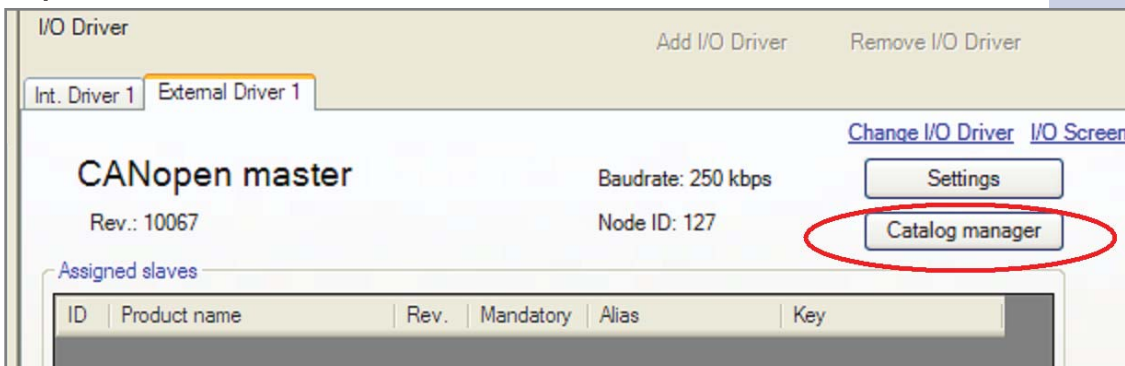
[INPUT PHASE LOSS] (IPL-) = (n0) [Ignore] *Allows single phase input power*

3. Power cycle the Altivar 71 drive to ensure the new settings take effect.

STEP 3 - Configure the Operator Interface

1. Import the CANopen configuration file for your Altivar 71 drive into the GP-Pro EX CANopen device database.
 - a. Locate the correct configuration (EDS) file for the drive. The Altivar EDS file is named "TEATV71xyE.eds" where x.y: is the Altivar drive software version:
 - x: Major revision
 - y: Minor revisionFor your convenience the EDS files for most versions of the drive are included with the sample project. If the version you need is not included it can be obtained from Schneider Electric.
 - b. From the Screen List in GP-Pro EX Click on the I/O Icon labeled CAN.
 - c. Click on "CANopen Driver (ID:#2)"
 - d. Click on [Catalog manager]

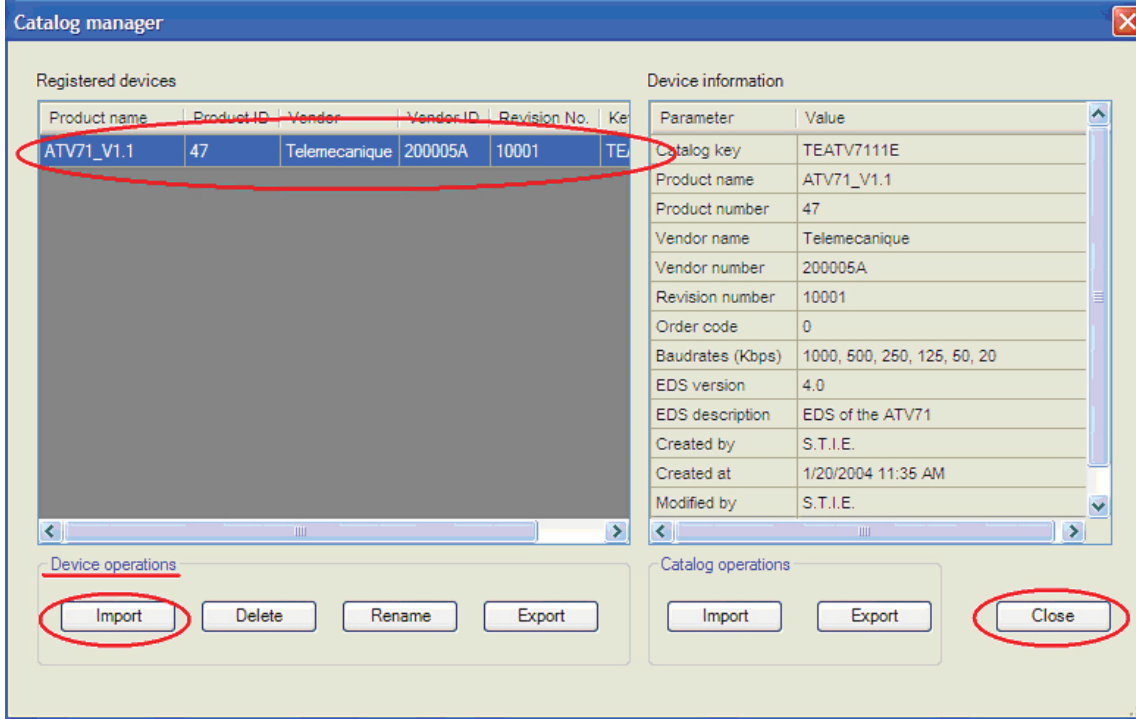
Step 3.1d



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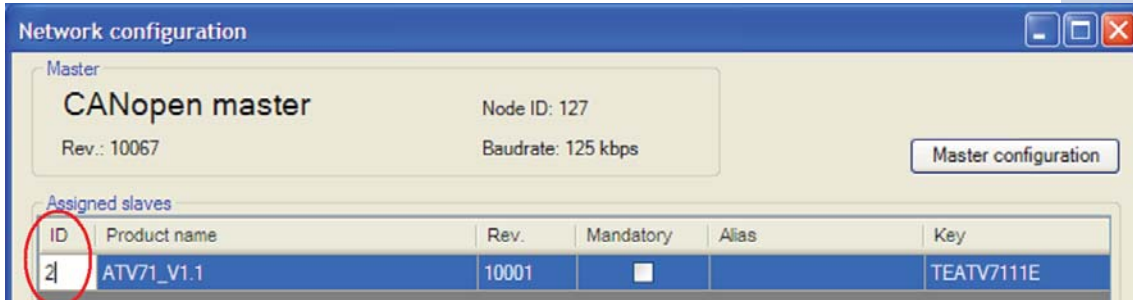
- e. Import the EDS file describing the Altivar drive into the GP-Pro EX CANopen Registered devices database. To do this begin by clicking on [Device operations](#) / [Import].
- f. Locate the correct EDS file, select it, and click on [Open]

Step3.1e - 3.1g



- g. Click on [Close]
2. Choose the Altivar Drive as a device on the CANopen network.
 - a. Click on [Settings].
 - b. Highlight the correct Product name, Altivar 71 (ATV71_V....), in the list of Registered Devices.
 - c. Click [Add Slave]
 3. Click on the slave ID number and change it to 2. Click [OK].

Step3.3

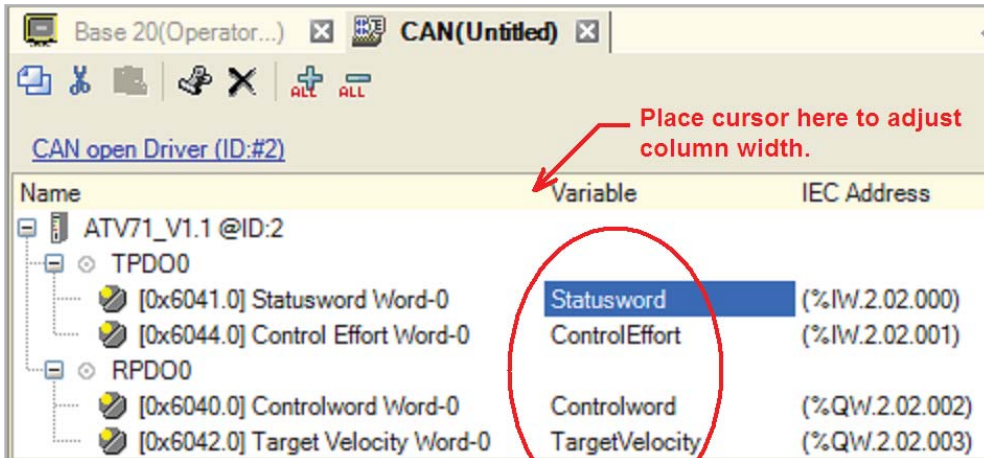


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4. Map the I/O to the project variables. Refer to the illustration below for these steps.
 - a. Click on "I/O Screen".
 - b. Adjust the column "Name" width as shown in the illustration below.
 - c. Click on the variable column. Press [Ctrl M] on the keyboard to open a scroll box. Click on the down arrow to view and select the appropriate variable as shown in the illustration. Repeat this step for each of the 4 I/O points.

Step 3.4b – 3.4c



Name	Variable	IEC Address
ATV71_V1.1 @ID:2		
TPDO0		
[0x6041.0] Statusword Word-0	Statusword	(%IW.2.02.000)
[0x6044.0] Control Effort Word-0	ControlEffort	(%IW.2.02.001)
RPDO0		
[0x6040.0] Controlword Word-0	Controlword	(%QW.2.02.002)
[0x6042.0] Target Velocity Word-0	TargetVelocity	(%QW.2.02.003)

5. Save the project and download it to the LT3000.
6. When the download is complete press "Operator Panel" to view drive status and operate the drive.

Note: If communications is not established, try switching the termination (term) switch on the cable. Cycle power to establish communications whenever changing the termination

