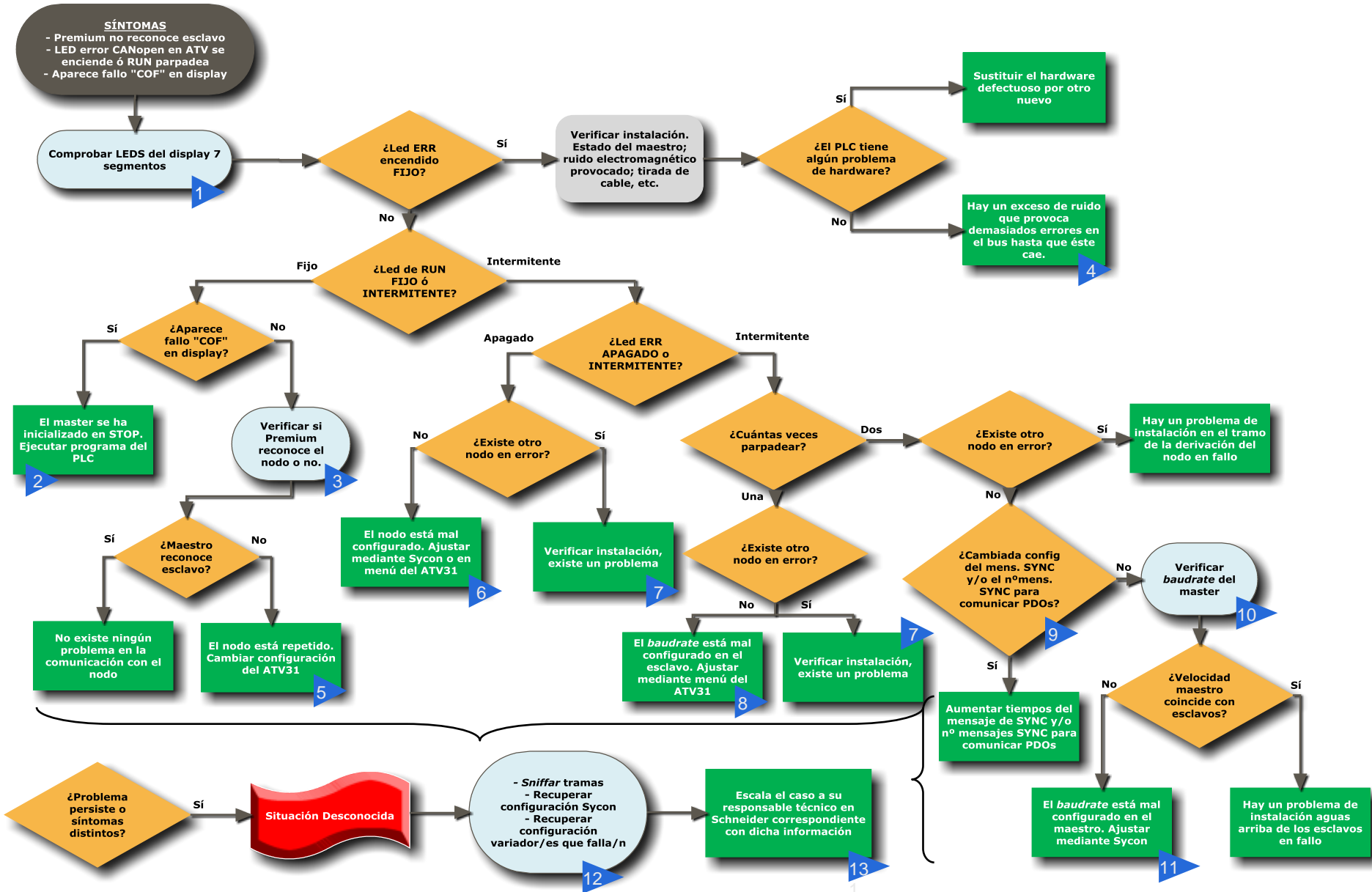


Guía de Diagnóstico

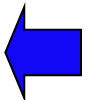
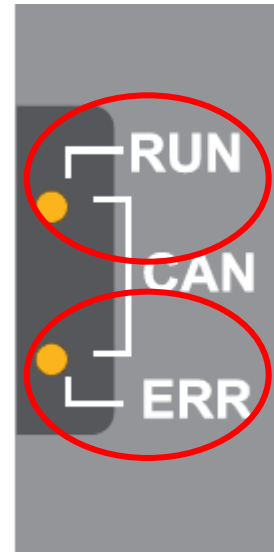
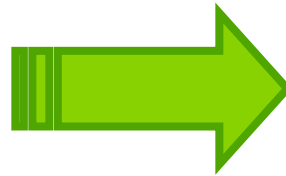
Comunicación CANopen ATV31 con Premium
desde el punto de vista del variador



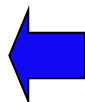
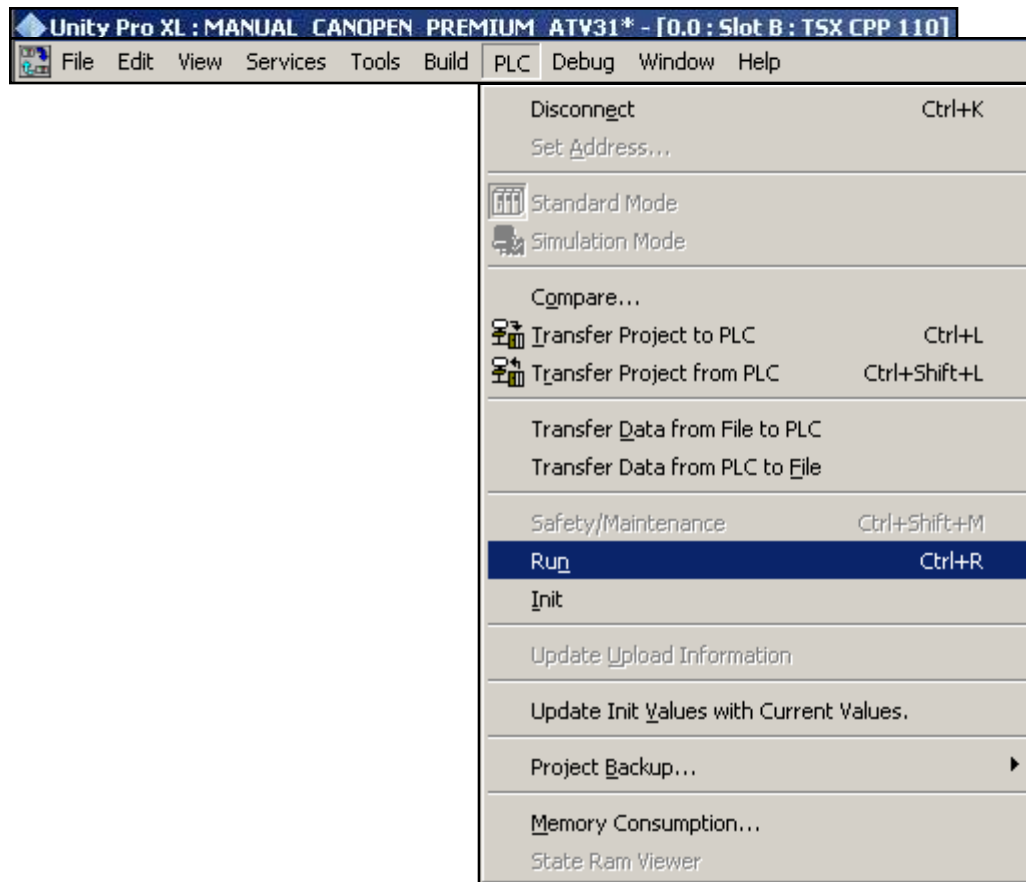
Diagrama de Diagnóstico



1. Leds Diagnóstico Display ATV31

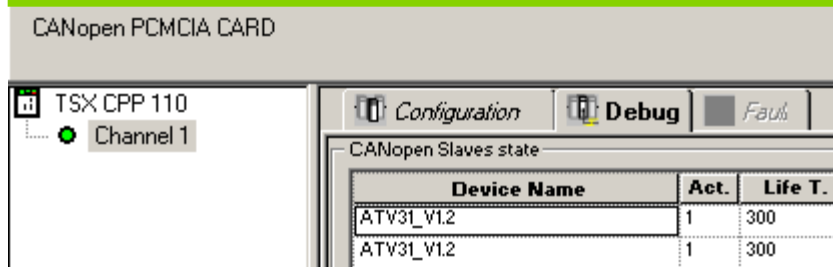


2. Ejecutar Programa Premium



3. Reconocimiento del Esclavo

Reconocimiento correcto en 2 esclavos:



CANopen PCMCIA CARD

TSX CPP 110
Channel 1

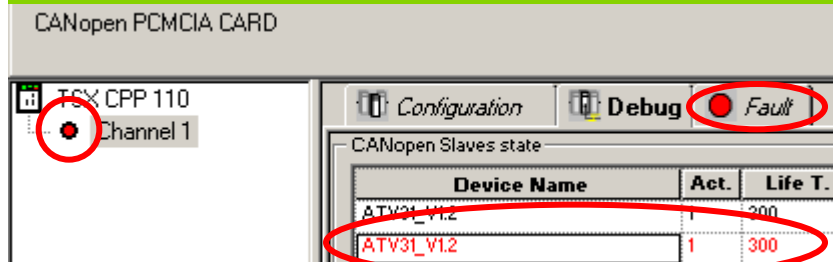
Configuration Debug Fault

CANopen Slaves state

Device Name	Act.	Life T.
ATV31_V1.2	1	300
ATV31_V1.2	1	300

A screenshot of a software interface for a CANopen PCMCIA CARD. The main window shows 'TSX CPP 110' and 'Channel 1' with a green status indicator. The 'Configuration' tab is active. Below, the 'CANopen Slaves state' table lists two instances of 'ATV31_V1.2', both with 'Act.' status '1' and 'Life T.' of '300'. A large green arrow on the left points from this screenshot down to the one below.

Reconocimiento incorrecto del segundo esclavo:



CANopen PCMCIA CARD

TSX CPP 110
Channel 1

Configuration Debug Fault

CANopen Slaves state

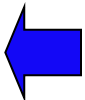
Device Name	Act.	Life T.
ATV31_V1.2	1	300
ATV31_V1.2	1	300

A screenshot of the same software interface as above, but showing an incorrect state. The 'Channel 1' status indicator is now red. The 'Fault' tab is selected and highlighted with a red circle. The 'CANopen Slaves state' table is also circled in red, showing two instances of 'ATV31_V1.2' with 'Act.' status '1' and 'Life T.' of '300'. A large blue arrow on the left points from this screenshot up to the one above.

4. Consejos Instalación

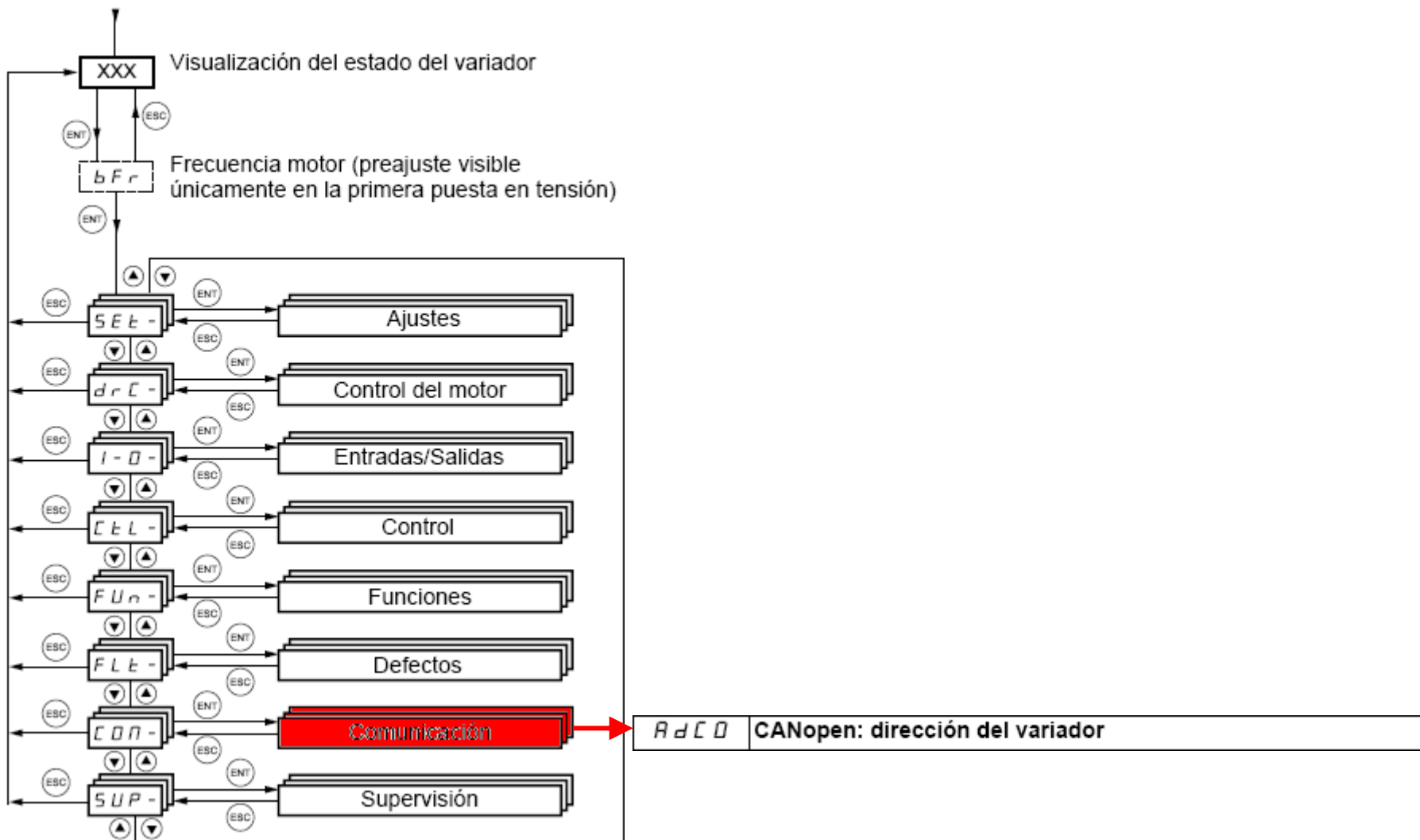
Consejos de Instalación para evitar Ruido Eléctrico:

- Separar cables de potencia y comunicaciones
- Canalizar metálicamente el cableado
- Evitar realizar *loops* con los cables
- Acortar las distancias de cable en la medida de lo posible
- Colocar/activar filtros RFI e inductancias motor en el variador
- Evitar bucles de masa
- Comprobar equipotencialidad de las tomas a tierra
- Si es posible separar tierras sucias (potencia) de tierras limpias (control y comunicaciones) mediante piquetas independientes.



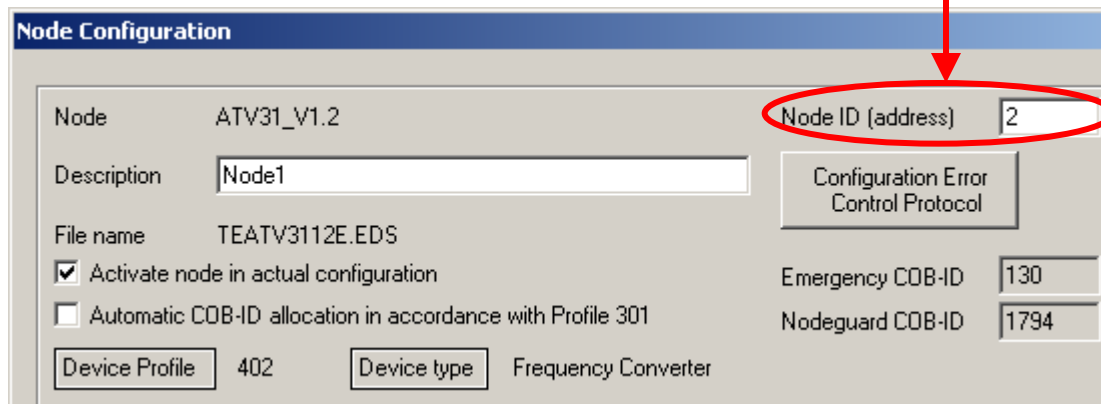
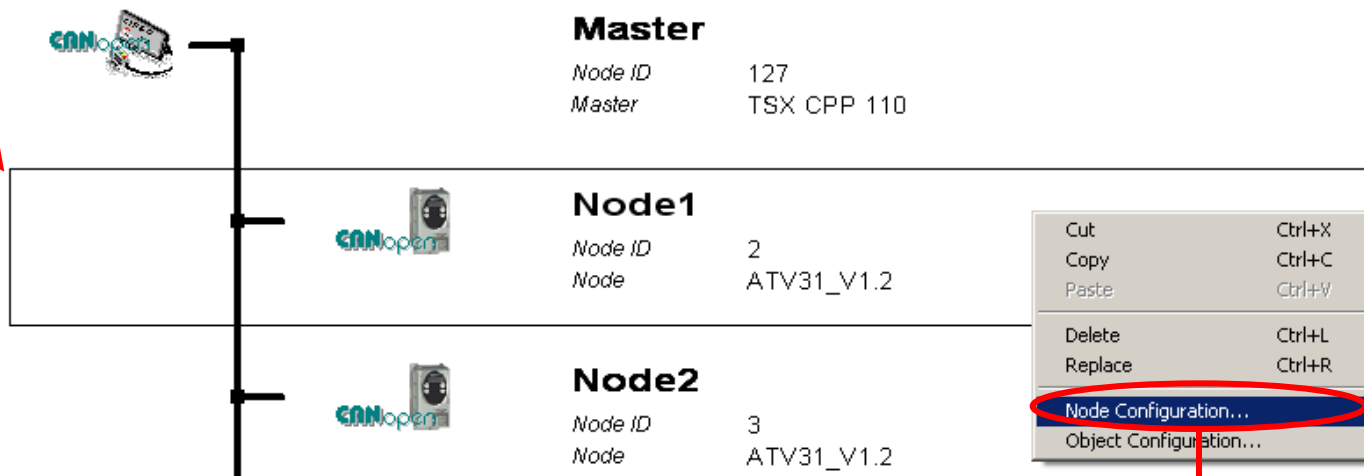
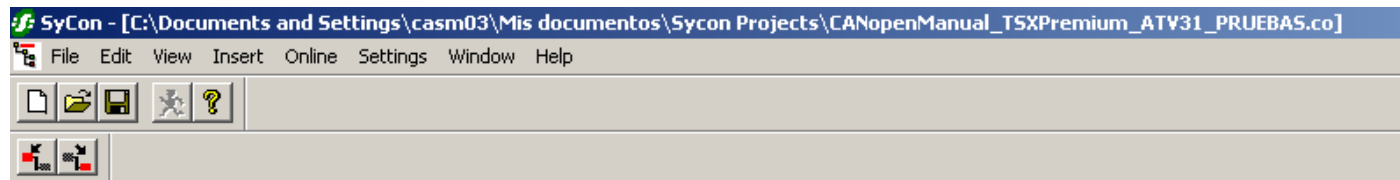
5. Cambiar Nodo en ATV31

Puesta en tensión



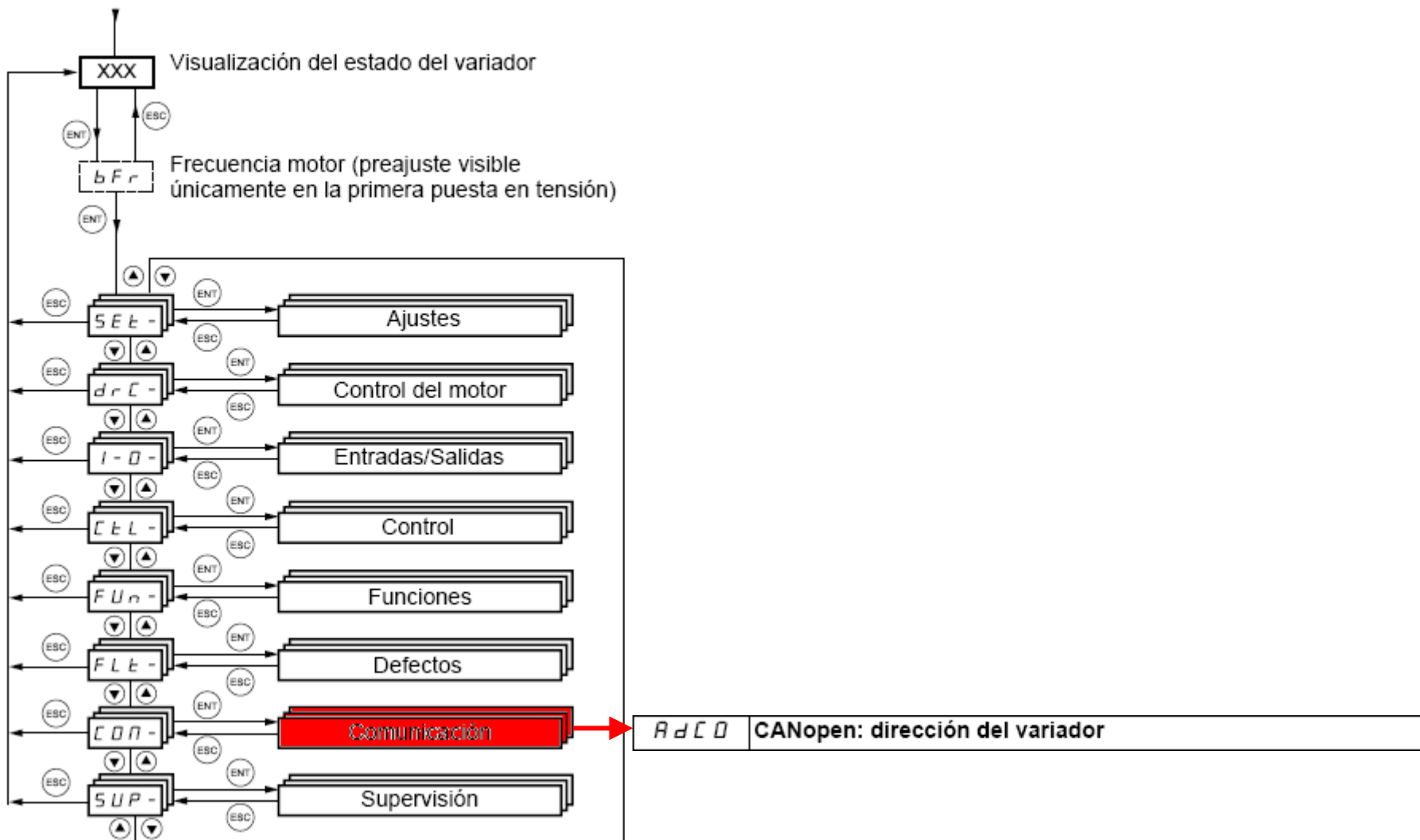
6. Cambiar Nodo en Sycon

Unity Pro XL



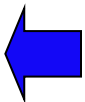
6. Cambiar Nodo en ATV31

Puesta en tensión



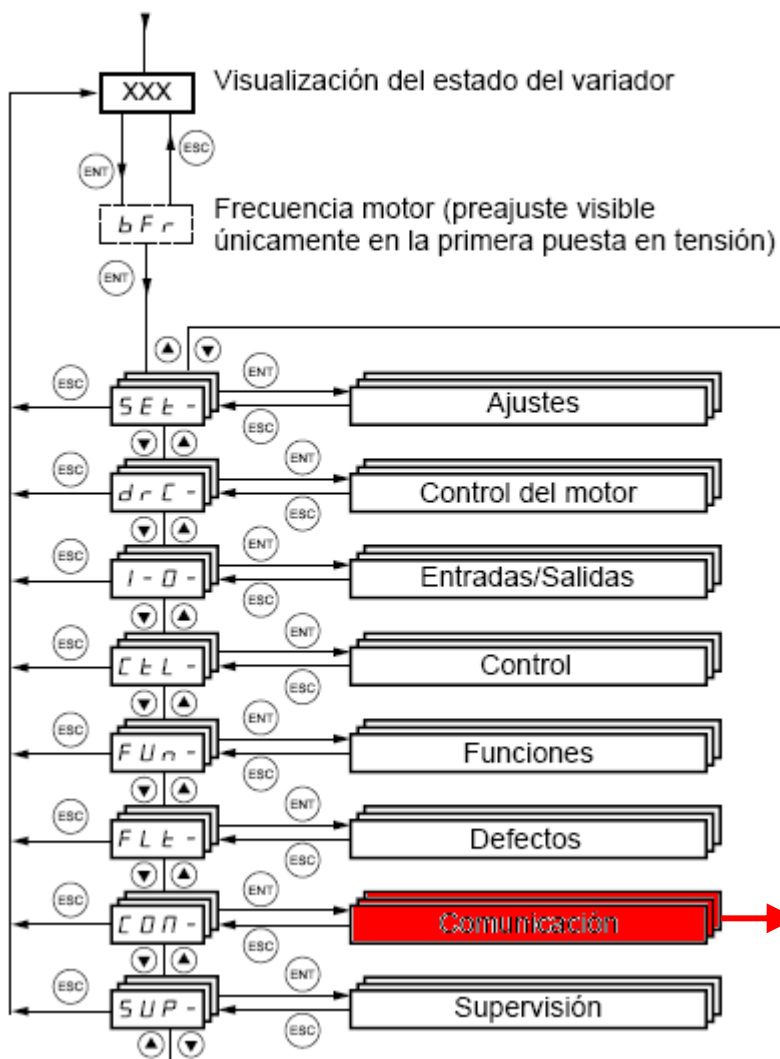
7. Verificar Instalación

Ver Documento Adjunto (Guía Diagnóstico del bus CANopen):



8. Cambiar *Baudrate* en ATV31

Puesta en tensión



b d C D	CANopen: velocidad de transmisión
10.0	10 kilobits/segundo
20.0	20 kilobits/segundo
50.0	50 kilobits/segundo
125.0	125 kilobits/segundo
250.0	250 kilobits/segundo
500.0	500 kilobits/segundo
1000	1.000 kilobits/segundo

9. Verificar Tiempo Objeto SYNC

The image shows the SyCon software interface. The 'Settings' menu is open, and the 'Bus Parameter...' option is highlighted with a red oval. A red arrow points from this menu item to the 'Bus Parameter' dialog box. In the dialog box, the 'Communication Cycle Period' field is also highlighted with a red oval. The dialog box contains the following information:

Field	Value
Master Node ID	127
Baudrate	500 kBit/s
Master stops in case of Node Guard or Heartbeat Error	<input checked="" type="radio"/> Disabled <input type="radio"/> Enabled
Synchronisation Object (SYNC) COB-ID	128
Communication Cycle Period	50 msec

9. Verificar Ciclos PDOs Objeto SYNC

Node Configuration

Configured PDOs

PDO name	Symbolic Name	COB-ID	I Type	I Addr.	I Len.	O Type	O Addr.	O Len.
Receive PDO6	DO_1405	1804				QB	0	4
Transmit PDO6	DO_1805	1805	IB	0	4			

PDO Contents Mapping...
PDO Characteristics...
Define new Receive PDO...
Define new Transmit PDO...
Delete configured PDO
Symbolic Names...

Node Receive PDO Characteristics, Master Output Process Data

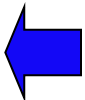
Transmission Mode

- Node shall use a synchronization message to actuate the received PDO
- Node shall use every 10 . received synchronization message to actuate the received PDO

Node Transmit PDO Characteristics, Master Input Process Data

Transmission Mode

- Node shall use a synchronization message as trigger to send the transmit PDO acyclically
- Node has to send the transmit PDO at every 10 received synchronization message



10. Verificar *Baudrate* en Premium

Unity Pro XL : MANUAL_CANOPEN_PREMIUM_ATV31* - [0.0 : Slot B : TSX CPP 110]

CANopen PCMCIA CARD

TSX CPP 110
Channel 1

Configuration

Bus startup

- Automatic
- Semi-Automatic (bus only)
- By program

Inputs

Nb. of words (%Mw)

Index of 1st %Mw

Outputs

Maintain RESET

Nb. of words (%Mw)

Index of 1st %Mw

Configuration load mode

Select Database

Configuration size Words

Unity Pro SyCon

Transmission speed

SYNC Message COB-ID

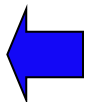

SYNC Message Period

Auto-Clear

Watchdog

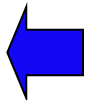
Activated Deactivated

SyCon tool

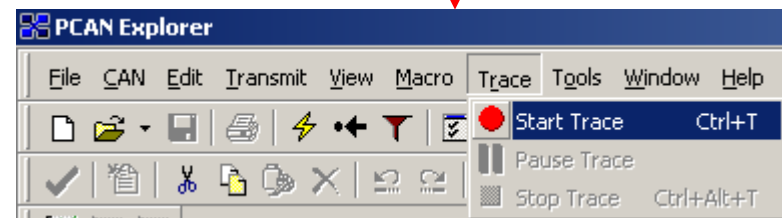
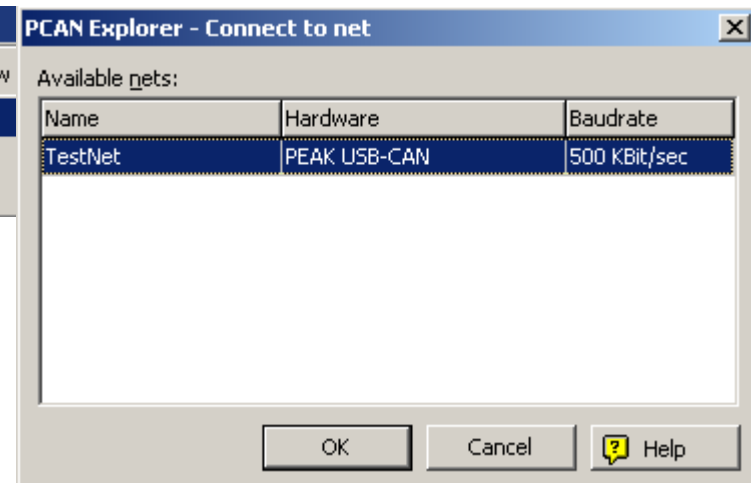
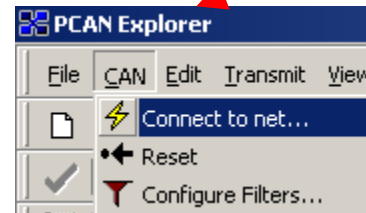
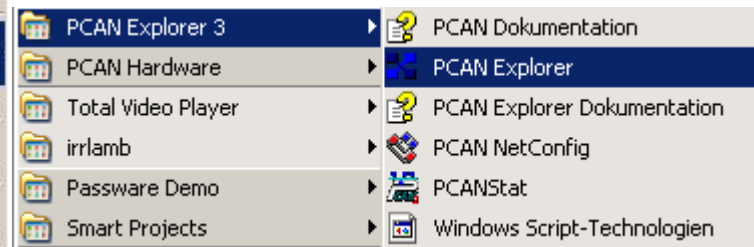


11. Cambiar *Baudrate* en Premium

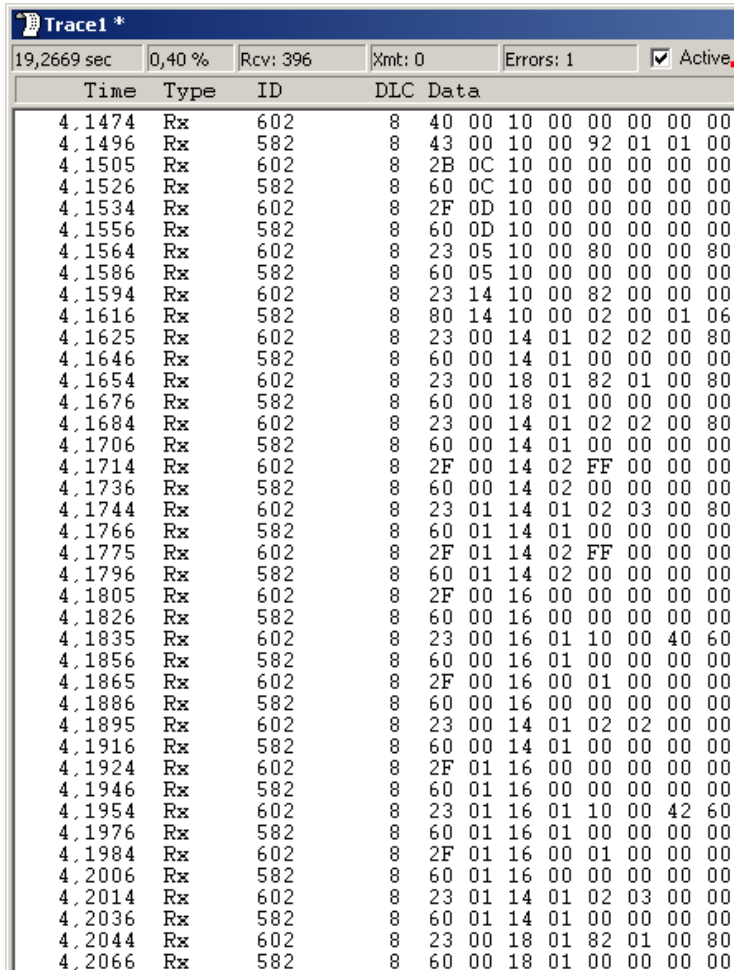
The image shows a screenshot of the SyCon software interface. The main window title is "SyCon - [C:\Documents and Settings\casm03\Mis documentos\Sycon Projects\CANopenManual_TSXPremium_ATV31_PRUEBAS.co]". The menu bar includes File, Edit, View, Insert, Online, Settings, Window, and Help. The "Settings" menu is open, and the "Bus Parameter..." option is highlighted with a red circle. A red arrow points from this menu item to a "Bus Parameter" dialog box. The dialog box has two fields: "Master Node ID" with the value "127" and "Baudrate" with a dropdown menu showing "500 kBit/s". Both fields are circled in red. The background shows a CANopen network diagram with a node labeled "e1" and parameters "2" and "ATV31_V1.2".



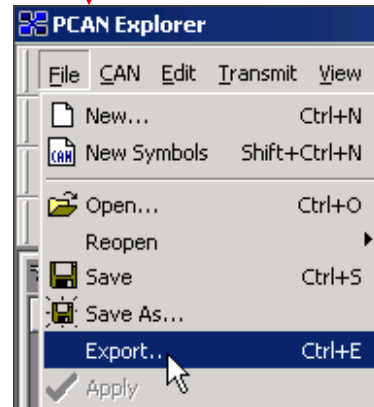
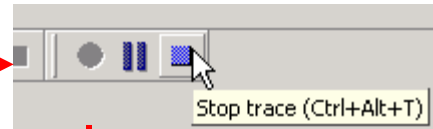
12. Sniffar tramas con PEAK (I)



12. Sniffar tramas con PEAK (II)



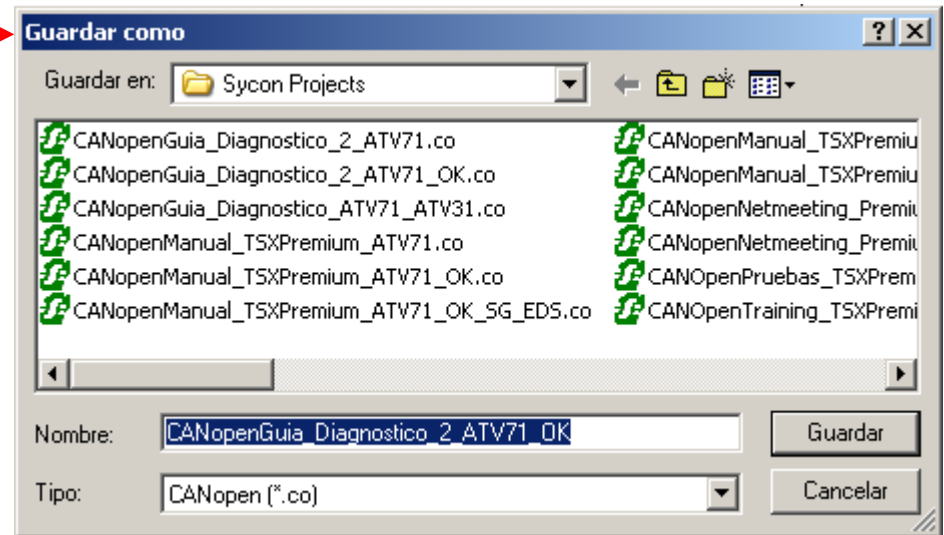
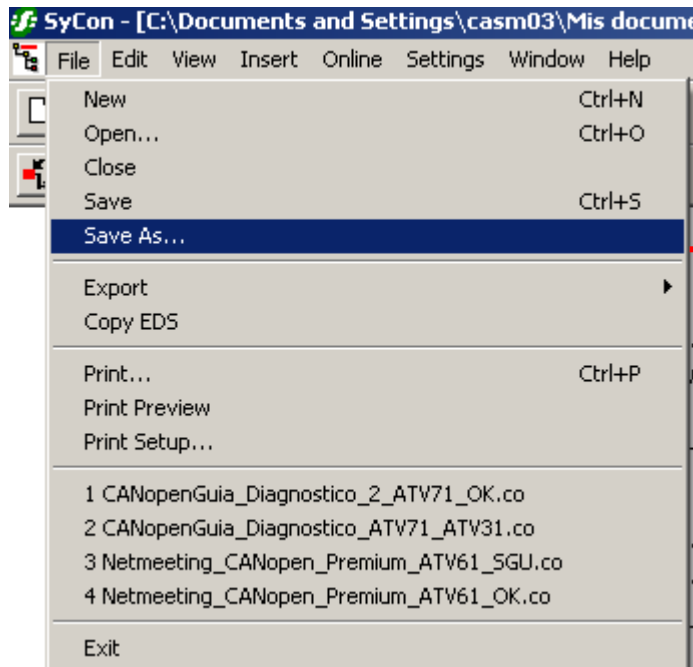
Time	Type	ID	DLC	Data
4,1474	Rx	602	8	40 00 10 00 00 00 00 00
4,1496	Rx	582	8	43 00 10 00 92 01 01 00
4,1505	Rx	602	8	2B 0C 10 00 00 00 00 00
4,1526	Rx	582	8	60 0C 10 00 00 00 00 00
4,1534	Rx	602	8	2F 0D 10 00 00 00 00 00
4,1556	Rx	582	8	60 0D 10 00 00 00 00 00
4,1564	Rx	602	8	23 05 10 00 80 00 00 80
4,1586	Rx	582	8	60 05 10 00 00 00 00 00
4,1594	Rx	602	8	23 14 10 00 82 00 00 00
4,1616	Rx	582	8	80 14 10 00 02 00 01 06
4,1625	Rx	602	8	23 00 14 01 02 02 00 80
4,1646	Rx	582	8	60 00 14 01 00 00 00 00
4,1654	Rx	602	8	23 00 18 01 82 01 00 80
4,1676	Rx	582	8	60 00 18 01 00 00 00 00
4,1684	Rx	602	8	23 00 14 01 02 02 00 80
4,1706	Rx	582	8	60 00 14 01 00 00 00 00
4,1714	Rx	602	8	2F 00 14 02 FF 00 00 00
4,1736	Rx	582	8	60 00 14 02 00 00 00 00
4,1744	Rx	602	8	23 01 14 01 02 03 00 80
4,1766	Rx	582	8	60 01 14 01 00 00 00 00
4,1775	Rx	602	8	2F 01 14 02 FF 00 00 00
4,1796	Rx	582	8	60 01 14 02 00 00 00 00
4,1805	Rx	602	8	2F 00 16 00 00 00 00 00
4,1826	Rx	582	8	60 00 16 00 00 00 00 00
4,1835	Rx	602	8	23 00 16 01 10 00 40 60
4,1856	Rx	582	8	60 00 16 01 00 00 00 00
4,1865	Rx	602	8	2F 00 16 00 01 00 00 00
4,1886	Rx	582	8	60 00 16 00 00 00 00 00
4,1895	Rx	602	8	23 00 14 01 02 02 00 00
4,1916	Rx	582	8	60 00 14 01 00 00 00 00
4,1924	Rx	602	8	2F 01 16 00 00 00 00 00
4,1946	Rx	582	8	60 01 16 00 00 00 00 00
4,1954	Rx	602	8	23 01 16 01 10 00 42 60
4,1976	Rx	582	8	60 01 16 01 00 00 00 00
4,1984	Rx	602	8	2F 01 16 00 01 00 00 00
4,2006	Rx	582	8	60 01 16 00 00 00 00 00
4,2014	Rx	602	8	23 01 14 01 02 03 00 00
4,2036	Rx	582	8	60 01 14 01 00 00 00 00
4,2044	Rx	602	8	23 00 18 01 82 01 00 80
4,2066	Rx	582	8	60 00 18 01 00 00 00 00



Para mayor información del hardware PEAK, instalación, configuración y captura de tramas consultar el documento del punto 6 (Diagnóstico del Bus CANopen)



12. Recuperar Configuración Sycon



12. Recuperar Configuración Altivar

The image illustrates the process of recovering Altivar configuration using PowerSuite software. It shows the following steps:

- Windows XP Professional Desktop:** The Start menu is open, showing 'Programas' and 'Ejecutar...'. A red arrow points from the Start menu to the PowerSuite application icon in the taskbar.
- PowerSuite Application:** The application is open, showing the 'Herramientas' (Tools) menu. A red circle highlights the 'Exportar' (Export) option. A red arrow points from this option to the 'Exportar carpetas de equipos' dialog box.
- Exportar carpetas de equipos (Export Equipment Folders) Dialog:** The dialog shows the 'Guardar en:' (Save in) field set to 'Mis documentos' (My Documents). The file list includes folders like 'Advantys Projects', 'Bluetooth', 'CCT Docs', etc. The 'Nombre:' (Name) field is set to 'Config CANoper' and the 'Tipo:' (Type) is set to 'Carpetas equipos (*.psf)'. A red arrow points from the 'Exportar' menu option to this dialog.



13. Información para Reportar Caso

SÍNTOMAS DEL PROBLEMA:

Descripción detallada del fallo (si lo hay): p. ej. Fallo “COF”

Ocurrencia y frecuencia del error (si lo hay): p. ej. aleatorio; cada vez que arranca variador de 110kW; etc.

ENTORNO/VERSIÓN:

Referencia de los equipos y versión: p. ej. ATV31xxx V1.7Exx; Premium TSXP57104 V2.3 con TSXCPP110; Unity V3.0 + Sycon V2.9; Ficheros eds. ATV71_V1.1, etc.

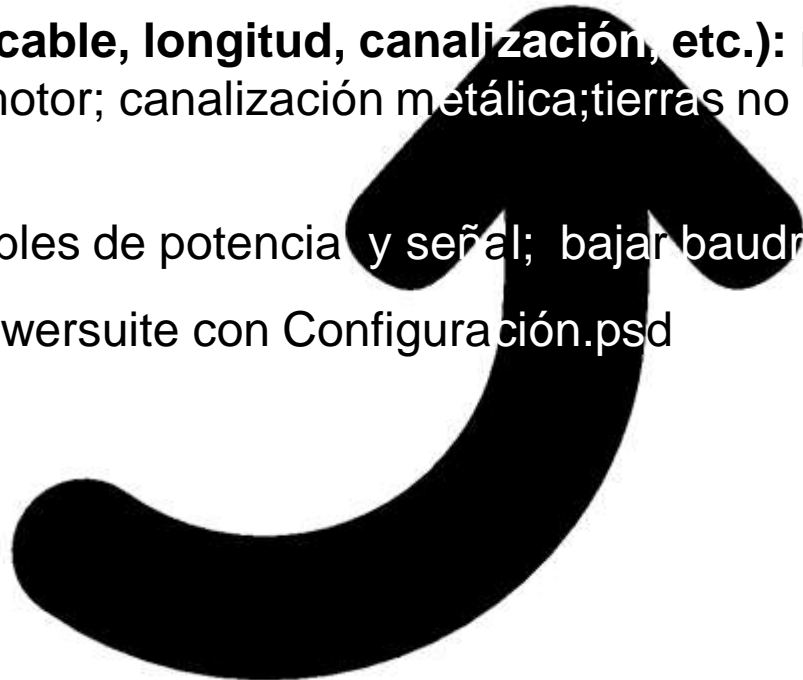
Entorno de instalación (filtros, tipo de cable, longitud, canalización, etc.): p.ej. 20 metros cable blindado; inductancias AC motor; canalización metálica; tierras no separadas entre comms. y potencia...

Pruebas ya realizadas: p. ej. separar cables de potencia y señal; bajar baudrate, etc.

DOCS. ANEXOS: Archivo Parámetros Powersuite con Configuración.psd

Archivo Configuración Sycon.sco

Captura de Tramas con Peak.txt

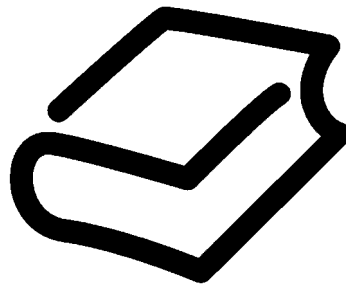
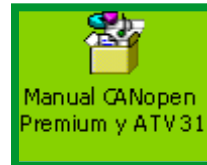


Documentos Asociados de Interés

Guía para el Diagnóstico del bus CANopen (desde el punto de vista físico/instalación):



Manual Comunicaciones CANopen entre Premium y Altivar 31:



Make the most of your energy

www.schneiderelectric.es

