CEBORA Robot Analyzer art.125.01

Instruction Manual



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Introduction

The CEBORA Robot Analyzer (art.**125.01**) is a diagnostic tool designed for CEBORA automated welding or cutting systems. The <u>IXXAT USB-to-CAN V2</u> interface is used to capture the CAN messages exchanged between the power source and the robot controller. The CEBORA software application is designed to decode, log and display process data in a human readable format.

Related documents

Before using this device, read the *General Warnings Manual* (cod.**3301151**) and the specific *Machine Instruction Manual* available from the Support-Documentation section of the CEBORA website (<u>https://welding.cebora.it</u>).

Hardware requirements

A personal computer running Microsoft Windows 11, 10, 8 or 7 with a USB port.

Software Installation

Do not connect the IXXAT USB-to-CAN device to the USB port before completing the installation.

System administrator rights are required to perform the installation.

Installing the IXXAT VCI4 driver

From the HMS IXXAT manufacturer page:

https://www.ixxat.com/technical-support/resources/downloads-and-documentation? ordercode=1.01.0281.12001

Download the VCI V4 driver if you are using Windows 11 or 10.

or the VCI V4 LEGACY driver if you are using Windows 8 or 7.

Run the installer and from the component selection page, select the following items:

- SDKs
 - ✓ SDK VCI4 (.NET)
 - Kernel-mode driver
 - ✔ USB-to-CAN V2
 - ✓ USB-to-CAN compact
 - ✓ USB-to-CAN II
 - ✓ USB-to-CAN FD

Optionally (minimal application supplied with the driver)

- Tools
 - ✓ canAnalyser3 Mini

All other components must be deselected.

During the installation procedure you may be asked several times to trust the HMS vendor.

Restart the PC and then connect the device to the USB port waiting for the recognition of the new hardware.

Installing the application

Download the Robot Analyzer application from the CEBORA website:

https://welding.cebora.it/en/products/accessories/mig-mag-accessories/robot-analyzerper-usb?set_language=en

Start the installation by double-clicking the downloaded file.

If not already present in the system, the installation of the .NET Framework from the Microsoft site may be required.

Connections

Two types of connetions are included in this kit.

For welding systems (MIG or TIG) connect the cable to the rear CAN connector of the power source and to the robot controller directly or to the robot interface depending on the specific installation.

For plasma cutting systems connect the cable between the power source and the gas console.

Running the application

Double-click on the Robot Analyzer icon to start the application.

On first launch you will be asked to enter the 16-digit code to activate the license.

Power source selection

Select the power source model from the startup window:

| 🥺 CEBORA Robot | - 0 | × | | | |
|----------------|----------|---|-----------|----------|----|
| Machine type s | election | | CAN mode | | |
| • MIG | KINGSTAR | • | C Master | | |
| ं TIG | WIN | - | Slave | | 2÷ |
| C PLASMA | 300A | Ŧ | Baud Rate | 125 kbps | • |
| | 1 | | | | |
| Change License | | | Cancel | ОК | |
| | | | | | |

Three types of power source are supported:

- MIG KINGSTAR and SPEEDSTAR families
- **TIG** WIN and EVO families
- **PLASMA** HQC family

From the right panel select the CAN configuration.

Main window

Checks the status of the signals exchanged between the generator and the robot controller from the main window.

- Active signals are indicated in green (received bit with value 1)
- Not active signals are indicated in red (received bit with value 0)
- Unavailable signals are indicated in gray (data not received or not valid).

|) \iint 🦺 🚺 | | | | | |
|--------------------------------------------------------|----------------|--------------------|----------------------|-----------------|--------------------|
| | | | | | |
| Operating Mode Bits | Speed Setpoint | | Output | Welding Current | |
| Operating Mode Bit 0 | | 0.0 ÷ 25.0 [m/min] | Communication ready | | 0 ÷ 1000 [A] |
| Operating Mode Bit 1 | | | Power source ready | | |
| Operating Mode Bit 2 | | Correction | Current flow | Weldir | ig Voltage |
| Operating Mode Bit 3 | | -9.9 ÷ 9.9 [V] | Process active | | 0.0 ÷ 100.0 [V] |
| 0 | I | 0 | Main current | | 0 |
| Operating Mode | | Correction | Collision protection | Motor | Speed |
| 0000 Short | • 🛛 💮 | -9.9 ÷ 9.9 | Sticked remedied | | 0.0 ÷ 25.0 [m/min] |
| Job Number | | Time Correction | 🔘 Wire available | Motor | Current |
| | | | | | |
| 0 | ⊜ | -200 ÷ 200 [ms] | | | 0.0 ÷ 5.0 [A] |
| Program Number | | | Error Number | | |
| 0 | | | 0 | | |
| Innut | | | | | |
| Input | | | | | |
| Arc-On | | | | | |
| Robot ready | | | | | |
| Digital protocol Gas test | | | | | |
| Wire inching | | | | | |
| Wire retract | | | | | |
| Source error reset | | | | | |
| Touch sensing | | | | | |
| Blow through | | | | | |
| Welding simulation | | | | | |

Logging

From the log window it is possible to record all CAN messages.

Filters are available to show some types of messages only.

Logged data can also be saved as a file for further analysis.

| 🧇 Robot Analyzer - L | .og | | – 🗆 X |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Select an options to filte 04/07/2023 10:40:28,9 04/07/2023 10:40:29,0 04/07/2023 10:40:29,2 | r the log => STATE STATE STATE | Initializing the device Waiting for synchronization Communication lost | Filters Image: All Image: Digital Input Image: Analog Input 2 Image: Digital Output Image: Analog Output Image: Analog Output 2 Image: Analog Output 3 |
| | | | Clear Save Close |