

MEA-2000 and the Chromeleon™ 7.3.1 Software

Description

This technical note describes the integration of the MEA-2000 with Chromeleon software, including configuration using the Service Manager and Instrument Configuration Manager.



1.0 Start by showing the result

What we want is to control the valve with the console and to test it with the Toggle command.

The instrument LOG shows:

- Device initialization
- Device good connection
- Valve toggle many times by the console command
- Disconnect and connect by the console
- More toggle and reset actuation counter

The screenshot displays the Instrument Configuration Manager interface. The top window shows a log of messages from the Instrument Controller AN-305[C305], including SPROF Heart Beat received, SPROF Heart Beat acknowledged, SPROF Heart Beat confirmation, SPROF Version Info, SPROF Loading configuration, SPROF Check configuration, SPROF Configuration operation successful, SPROF Other Node configuration, SPROF Start Initial Change, SPROF End Initial Change, SPROF Initial Change Success, SPROF Controller Discovery initialization, SPROF Controller Discovery done, SPROF Populate Node type system, SPROF Node type system populated, SPROF Populate Node type hierarchy, SPROF Node type hierarchy populated successfully, SPROF Processed Object, and SPROF UnitControllers.

The bottom window shows the Structure and Properties of the instrument. The Structure tree includes State, Status, Input, Communications, Calibration, Configuration, Output, Redundant, Communications, Calibration, Configuration, and Test/Others. The Properties table lists various parameters and their values.

Property	Value
ControllerIdentifier	C305
ControllerID	O-Connect
DeviceID	Two-Wire
DeviceManufacturer	Yokogawa
DeviceType	T-32-10-HFF with Smartfills Inc.
MapSWRev	2
MinorSWRev	2
NodeID	10.20.201.6-11:18:14:1B:3A:76:7C
RedundantControllerSelector	0
SerialNo	SA_M02_07-Qw-00-2257
ShortInfo	This position with slider

The bottom window also shows the Detail window with the Structure tree and the Properties table. The Structure tree includes State, Status, Input, Communications, Calibration, Configuration, Output, Redundant, Communications, Calibration, Configuration, and Test/Others. The Properties table lists various parameters and their values.

Command	Parameters
Connect	☐
Disconnect	☐
Reboot	☐
Reset	☐
RemoteController	☐
Upgrade	☐

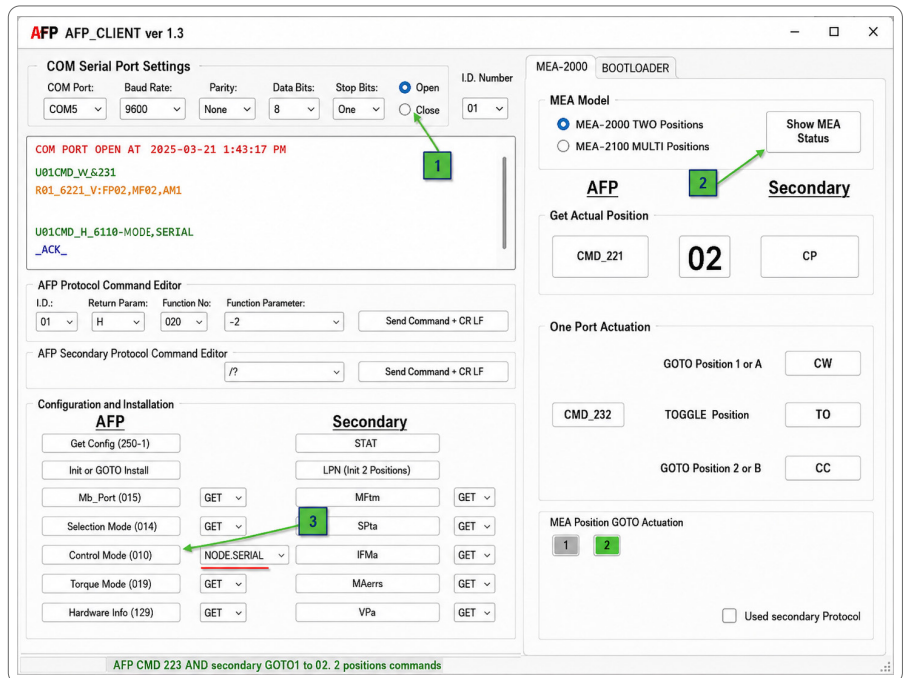
MINIMUM MEA-2000 CONFIGURATION

- A good serial communication with the MEA-2000 (9600,n,8,1).
- The 2 positions valve installed
- The MEA-2000 initialized with the configuration button
- The MEA-2000 configure in serial control mode
- The MEA-2000 AFP secondary protocol enable

Refer to other technical note about controlling the MEA-2000 in serial communication

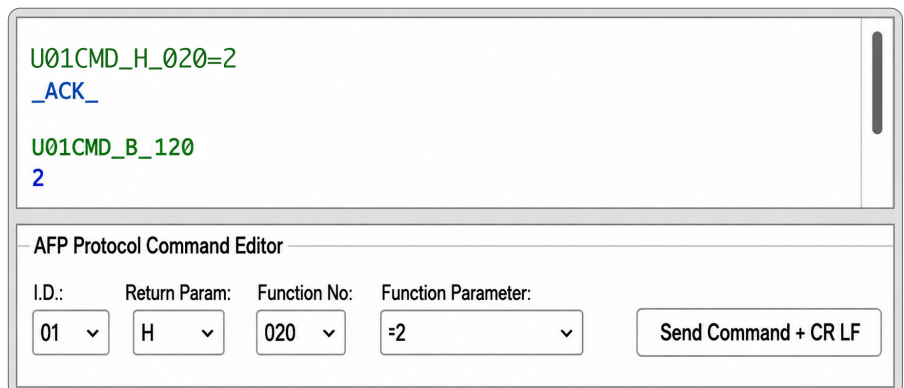
Set to Serial Mode

- 1, Open the serial communication port
- 2, Press "Show MEA Status" to give information to the AFP_CLIENT
- 3, SET the MEA-2000 to Control Mode SERIAL

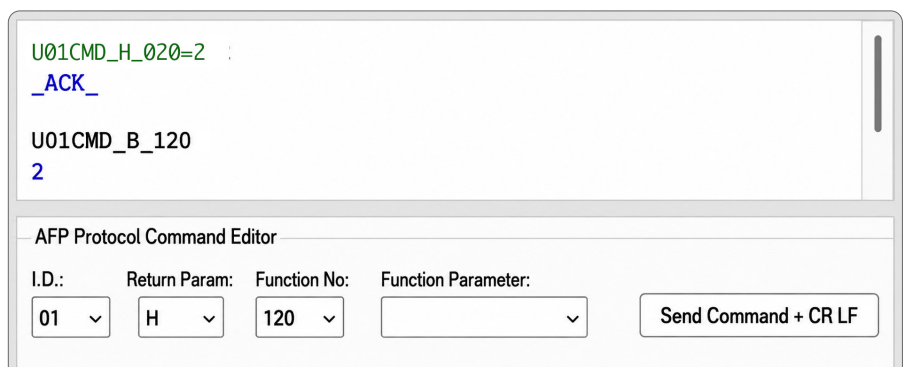


Enable the AFP Secondary Protocol

SET with the AFP command 020 and parameter "2"



Verify the configuration with the AFP command 120



MINIMUM MEA-2000 CONFIGURATION

Verifying the Second Protocol:

Using: MEA Position GOTO Actuation

Select Position 1

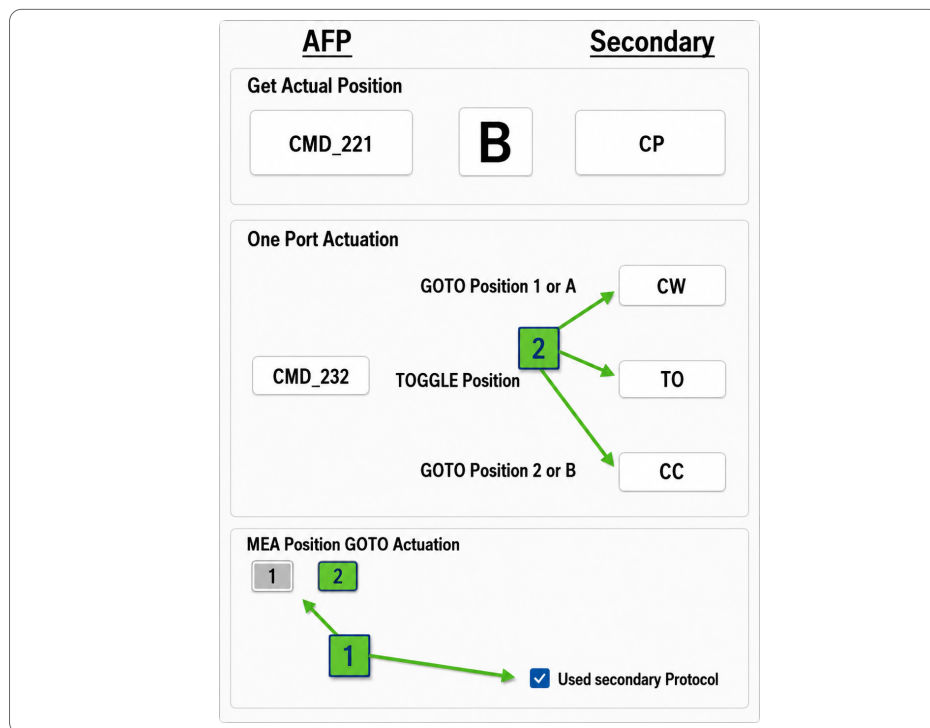
Select Position 2

Using: One Port Actuation

Select CW

Select TO

Select CC



Configuring the Chromeleon Software

The screenshots show the configuration process in the Chromeleon Instrument Configuration Manager. The first screenshot shows the 'Add Instrument...' option selected in the 'How to...' menu. The second screenshot shows the 'Add module to instrument' dialog box with 'MEA-2000' selected. The third screenshot shows the 'VICI UEA Configuration' dialog box with 'Device Name: Valve' and 'COM Port: 7'.

STEP 4: Press OK and the Chromeleon software will initiate communication

Messages: Instrument Controller APNIALAPR02 [Expert]

- 2:43:25 PM Instrument Controller APNIALAPR02: Chromeleon Instrument Configuration Manager in the exclusive mode.
- 2:43:25 PM Node MEA-2000 added.
- 2:43:27 PM (Valve) Controller initialization successfully completed.
- 2:43:27 PM Instrument Controller APNIALAPR02: Thermo Fisher Scientific Chromeleon Instrument Configuration Manager in the exclusive mode.
- 2:43:27 PM Chromeleon software version 7.3.1 Build 828 © Copyright 2009-2021 Thermo Fisher Scientific Inc. All rights reserved.
- 2:43:27 PM Chromeleon server Chrsrv01.
- 2:43:27 PM Chromeleon user User.
- 2:43:27 PM Chromeleon client LOCAL.
- 2:43:27 PM Chromeleon project VICI.
- 2:43:27 PM Chromeleon controller Instrument Controller APNIALAPR02: Version 7.3.1 Build 828 © Copyright 2009-2021 Thermo Fisher Scientific Inc. All rights reserved.
- 2:43:27 PM System configuration summary:
- 2:43:27 PM Chromeleon controller Instrument Controller APNIALAPR02: Version 7.3.1 Build 828 © Copyright 2009-2021 Thermo Fisher Scientific Inc. All rights reserved.
- 2:43:27 PM Chromeleon client LOCAL.
- 2:43:27 PM Chromeleon server Chrsrv01.
- 2:43:37 PM Chromeleon software version 7.3.1 Build 828 © Copyright 2009-2021 Thermo Fisher Scientific Inc. All rights reserved.
- 2:49:39 PM (Valve) Controller initialized successfully.
- 2:49:39 PM (Valve) Controller initialized successfully.
- 2:43:30 PM Initializing driver VICI UEA.
- 2:43:32 PM VicUaDriver - Dionex Chromeleon.Valco.ViciUaDriver. Version 1.22.0.6538. © Copyright 2009-2021 Thermo Fisher Scientific Inc. All rights reserved.
- 2:44:58 PM Communication timeout.
- 2:47:43 PM VicUaDriver - Dionex Chromeleon.Valco.ViciUaDriver. Version 1.22.0.6538. © Copyright 2009-2021 Thermo Fisher Scientific Inc. All rights reserved.
- 2:47:43 PM Initializing driver VICI UEA.
- 2:47:43 PM (Valve) Trying to connect.
- 2:47:43 PM (Valve) Device is in connecting state.
- 2:47:43 PM Received license data (serial number(s): 111116).
- 2:47:43 PM (Valve) Device is in idle state.
- 2:47:43 PM Connection established successfully.
- 2:49:39 PM User APNITrousseau (trousseau) has acquired control over instrument MEA-2000.
- 2:49:39 PM (System) Log UserName: trousseau
- 2:49:39 PM (System) Log UserFullName: APNITrousseau
- 2:49:39 PM (System) Log UserRoleName:
- 2:49:39 PM (Valve) Valve Toggle
- 3:01:46 PM (Valve) Valve Home
- 3:01:48 PM (Valve) Valve Toggle