Application Note



Firmware Update of IC2 Controller



Sample picture

Imprint

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1 Firmware Update for VAT Controllers

Background Information:

- Applicable for IC2 controller type with USB service port connector
- Update Tool is supported since the CPA v4.0.8
- Multivalve Option is supported since CPA v4.2.0
- In case of lower CPA version, please update the CPA first The latest version of CPA can be downloaded from the VAT homepage
- During update process the valve does not operate, communication to the host get lost. Ensure no process is in progress.

1. Connect Valve to PC and open the CPA

Connect the VAT control Valve with the USB connector to a PC or laptop. A Network drive will open where you can open CPA4.exe to start VAT's graphical user interface called CPA. Press the button "Local" on the CPA to operate the valve via CPA instead via the host computer.

2. Save the valve state (optional)

In a first step you can generate a Diagnostic File with the CPA to save the actual value of all parameters. This includes also additional information for troubleshooting purpose.

- 🗆 X

Open Diagnostic File functionality under Tools

Define the location and press Save	
201 CPA - Control Performance Analyzer	
Local 🧶 Remote	

navigation	status information		control buttons	control panel		control panel	
Parameters	Valve Series	Simulation	Open	Actual Position		Actual Pressure	
Information	Access Mode	Local	Close		0	-0.000	2180726 mbar
Pressure Pressure Control	Control Mode	Position	Start Learn	Target Position	0 ‡	Target Pressure	0 0
Pressure Sensor	20" Speichern unter				×	1,333224 -	1.333224
Adaptive Learn	Speichem in: Des	ktop	• • • •			1,066579	1.066579
# Tools	*	Mulic Amal	Distan PC		^	0,7999342	0.7999343
Chart Analyzer	Schnellzugtf	Mujic Amai	Diserc		1	0,5332895	0.5332895
Terminal	Desktop	Bibliotheken	CD-Laufwert	k (D:) VAT CPA ron 2.66 MB	1	0,2666447 —	0.2666447
Trace Log Update Tool	Bblotheken	CD-Laufwerk (F:) VAT CPA 0 Bytes frei von 2.66 MB	Netzwerk			0-	0
Diagnostic File CPA Scaling	Dieser PC	CPA_Tests	Data IC2H3_	Aufwärtswandler	- P	2	
	Netzwerk -	Help&Manual_V7_METP	Live		-	4E-05	
			-		· · ·	8E-05	Actual Position
	Dateinam	e: <u>85548-PHHX.CAF1_00</u>	28_20210510_163417_Diag	tosticfie 💌	Speichem	0.00012 8 2-1	arget Position
	Dateityp:	CSV files (".csv)		-	Abbrechen	a nlots avi	s 2

A diagnostic file might look similar to the following:

	⊟ 5				980EC-24G	Q-AAZ1_0	47_20210104_10	0649_Diagno:	sticFile.csv - E	ixcel				
C	Datei	Start	Einfügen	Seitenlayout	Formeln	Daten	Überprüfen		Add-Ins	Team	Q Sie wüns	Stucki An	A Freige	eben
G	15	×	1 ×	√ f _x										Ŷ
				A								в		
1	Create	ed						04.01.2	021 10:07					
2	Name							Value						
3	System	n.Acce	ss Mode					Local						
4	System	n.Cont	rol Mode					Error						



2. Open "Update Tool"

In CPA activate open "Update Tool"

CPA - Control Performance A	nalyzer						- 🗆 🗙
ocal 🔰 Remote						Version 4.2.1	O VAT
avigation	status information		control buttons	control panel		control panel	
Parameters	Valve Series	65.3	Open	Actual Position		Actual Pressure	
Information	Access Mode	Local	Close		0		1.399885 mbar
A Pressure	Cor an Lasters That	1				×	0 5
Pressure Sensor	Cor Diet				man 124 Q	VAT	1.333224
Adaptive Learn	Em Tim						1.066579
Adaptive Learn Data	Em						0.7000742
# Tools	25.046						0.7999945
Chart Analyzer							0.5332895
ferminal	Vah						0.2665447
Trace Log							0
Update Tool	chart						
Diagnostic File	1.0000						
Gate Adjustment							
CPA Scaling							
About							plots axis 1
	-						Actual Position
	Vois						Target Position
	-						plots axis 2
	1.10mt	The later					Position State
	0.1					10	
	0					0	
	13:55:06		Time			14:00:06	
	C Bacard	Clear	Stop Analyze	1			
	La Necola						

3. Load the update files

Move the update files per drag and drop into the Update Tool Or Press 'Load' and choose the update file

Ideally all FW relevant files are uploaded as package using a *.zip that includes all firmwares, drive parameter file and configuration parameter file

Possible file types are

- • *.vat (VAT Firmware)
- • *.mc (Motion Controller Firmware)
- • *.net (Interface Firmware)
- • *.drive (Drive parameter file)
- • *.config (Configuration parameter file)
- • *.seq (Sequence textile, since CPA v4.2.0)
- • *.zip (Collection with multiple files)
- • *.cpa (CPA software)

Select relevant valve in case more than one valve is connected when multivalve option was chosen

upda	te lool		X
E Loa	d	Version 1.0.4 💡	VAT
valves			
Valve:	65548-PHHX-CAF1/0028		
files			
	Valve firmware	O:\MT\PG5\-=FirmwareTest=-\F01.0C.56.00.vat	
Sta	ston		
54	5000		

1244406EA



4. Press "Start" to initialize the download to the valve

Start Stop	-run Start Stop 2021876 of 2818048 bytes downloaded	

The progress of the download will be shown. It will roughly take 2 minutes, followed by a confirmation that update was successful. The FW-version is now updated on the valve.

Load			
		Version 1.0.3	
Valve firmware	653_Update_Files/F01.0C.28.05.vat		
	Show Report		
n			

5. Generate Report (Optional)

Open Report (Push Show Report Button) and Save File Close the Update Tool 1 Created: 15.05.2019 19:11:07 3 Device Information: 4 Valve Series = 65.3 5 Valve Variant = Standard 6 Nominal Diameter = DN320 7 Serial Number = n.a. 8 Valve Firmware Version = F01.0C.28.05 9 Configuration Parameters ID = n.a. O Controller Type = IC2H5 1 Interface Type = EtherCAT 2 Option Type = SPS + PFO + Cluster 3 Start Up Counter = 24 .5 Updating 'Valve firmware' from '653_Update_Files/F01.0C.28.05.vat' .6 Update success 5

6. Save the valve state (optional) Generate Diagnostic File if wanted, as described in Chapter 2 above



7. Verify VAT firmware update

You can check that any FW upload was successful in CPA under: "Parameter System/Identification/Firmware/Valve Firmware Version"

