Technical Instruction VPD_6708537_03_en

Control unit type ECOTAP® VPD® Basic & Control Pro

Checklist for malfunctions / error events

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VPD_6708537_03_en

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Replacing VPD_6708537_02_en

Error correction and additions

> **NOTICE**
>
> Safety, hazard and other information included in the MR operating instructions for control unit type ECOTAP® VPD® must be observed!
>
> Safety information for work performed on electrical systems must be observed!
>
> All work must be carried out by sufficiently qualified personnel!

The causes for a malfunction of the ECOTAP® VPD® control unit can be very diverse. Just one missing piece of information may prevent clear identification of the error cause. Therefore, please fill in this checklist as completely as possible.

F02028:02

1   General information

Serial number
OLTC: _____

Serial   number
control unit: _____

Operator: _____

Date: _____

Contact person: _____

E-mail address: _____

Phone number: _____

Substation: _____

Operating site: _____

Address: _____

Commissioning
date transformer: _____

2   Control unit data

Current number of operations of on-load tap-changer
(operations counter on display):   _____

Event(s) currently shown on display (E X, for example E4):   _____

Are events currently pending on control unit?

☐ Yes ☐ No

Please note the whole Error memory:

(<AVR MANUAL>, <MENU>

<UP> until E1 is displayed

<AVR MANUAL> event code(s)

<AVR MANUAL> number of operations

<AVR MANUAL> E2, etc)

Error-Memory	Event code(s) (EX.Y, for example E4.1)	Number of operations:
E1		
E2		
E3		
E4		
E5		
E6		
E7		
E8		
E9		
E10		

Please note the whole Error memory:	Error-Memory	Event code(s) (EX.Y)	Number of operations:
	E11		
	E12		
	E13		
	E14		
	E15		
	E16		
	E17		
	E18		
	E19		
	E20		

Control unit data – continued

Are terminals X3 and X5 in use? (Is a cable connected?)

X3: Yes ☐ No ☐

X5: Yes ☐ No ☐
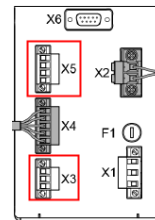
Is the control unit connected via Modbus using interface X6?

☐ Yes   ☐ No

Which voltage is present on terminals X1? Which voltage is shown on the display?

X1: _____ V   /   display: _____ V

*Which **temperature** is measured next to the terminals X1?*

_____

*Read and note Function **F2**: Remaining life of the energy accumulator:*

_____

*Is the **red LED** currently active? (advanced: In which mode is the LED active?)*

☐ Yes   ☐ No   _____

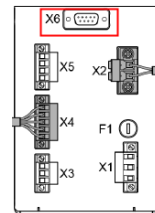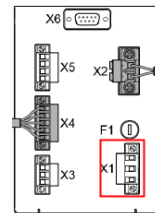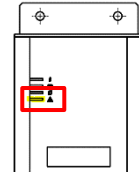*Read parameters on control unit display and enter them in parameter list.*

Activate function F9 to show the parameters in the menu.

(<MENU>, <UP> until F9 is shown on display ,<AVR MANUAL>)

☐ Parameters entered in parameter list in attachment A1.

☐ It is not possible to display the parameters.

Which operating mode was active in the control unit at the time of the failure?

☐ AVR Manual   ☐ AVR AUTO   ☐ External Control

Is the control unit connected to a "Control Pro" control unit?

☐ Yes   ☐ No

If yes, please download the data of *"Control Pro" control unit* (Settings>Export>System Image with history) and send it to MR.

Is the current tap position indicated in the web visualization of "Control Pro" control unit?

☐ Yes   ☐ No

 If yes, note the current tap position value: _____

Is the transformer operated in parallel with a second or several transformers?

☐ Yes   ☐ No

Where is the control unit mounted? (location/cabinet/environment behavior)

_____

_____

_____

=> It is important for analyses to get photos from the mounting situation and the temperature situation.

3	Additional information

Was there a voltage drop or a power system blackout before the incident?

☐ Yes   ☐ No

If yes please specify
which type:

(e.g., weather event,
switching operations) _____

Were maintenance or modification measures performed in the substation before the incident, or was the wiring/cabling changed?

☐ Yes   ☐ No

If yes, which? _____

Please send the completed checklist to e-mail-address service@reinhausen.com or to:

Maschinenfabrik Reinhausen GmbH	Phone	+49 (0)941 4090-0
Falkensteinstr. 8	Fax	+49 (0)941 4090-7001
93059 Regensburg		

A   Attachment

A.1 Parameter list

A.1 Parameter list

Parameters	Setting range	Factory setting	Setting
P1: Desired voltage	84…266 V	225 V	
P2: Normal regulation			
P2.1: Bandwidth B1	0.5…8 %	2%	
P2.2: Delay time T1	5….1800 s	10 s	
P3: Fast regulation			
P3.1: Bandwidth B2	3 %...9 %,off[1]	4 %	
P3.2: Delay time T2	2 s…(T1-1 s/5 s)[2]	2 s	
P4: Voltage blocking			
P4.1: Undervoltage blocking	84…266 V	84 V	
P4.2: Overvoltage blocking	84…266 V	266 V	
P5: Blocking contact	0 = inactive, 1 = active	0	
P6: Target position for loss of voltage			
P6.1: Target position	1…9(17)	1	
P6.2: Function	0 = inactive, 1 = active	0	
P7: Number of operating positions	9 or 17	9	
P8: Regulating range			
P8.1: Lowest operating position	1…9 (17)[3]	1	
P8.2: Highest operating position	1…9 (17)	9	
P9: Remote behavior	0 = local, 1 = remote	1	
P10: Password protection			
P10.1: Password	0…999	0	
P10.2: Activate password protection	0 = inactive, 1 = active	0	

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[1] Bandwidth B2 is always at least 0.5 % larger than bandwidth B1

[2] Delay time T2 is always at least one second less than T1

[3] Depending on the number of tap positions of the on-load tap-changer

Functions	Setting range	Factory setting	Setting
F1: Automatic adjustment			
F1.1: Automatic adjustment			
F1.2: Manual adjustment n-1			
F1.3: Manual adjustment n+1			
F2: Remaining life of the energy accumulator			
F3: LED function test			
F5: Invert travel commands	0 = inactive, 1 = active	0	
F6: Read out software version			
F7: Error relay			
F7.1: Error relay E1	0 = inactive, 1 = active	1	
F7.2: Error relay E2	0 = inactive, 1 = active	1	
F8: Factory setting			
F9: Display control parameters			