

Electric Vehicle Pulse Disturbance Generator **EVPS 20**



■ VW 80300

Features

- > In accordance with VW 80300:2021 for compliance pulse testing of EV HV electronic components
- > Support three standard HV pulse waveforms EHV-10 Case 2, EHV-16 Case 1, and EHV-16 Case 2
- > 5.7-inch color touchscreen for intuitive and convenient front-panel operation
- > Built-in fault alarm function for abnormal conditions
- > Overcurrent protection ensures safe and reliable testing
- > Real-time monitoring and display of EUT current
- > Ethernet interface for PC-based remote control and test report printing

Introduction

The EVPS 20 is developed in strict accordance with VW 80300:2021. It supports three standard HV pulse waveforms, including EHV-10 Case 2, EHV-16 Case 1, and EHV-16 Case 2, integrating three tests into one system. Designed for compliance testing of EV HV electronic components, it enables compliance pulse testing.

Built on the company's third-generation development platform, the EVPS 20 features a 5.7-inch color touchscreen for intuitive front-panel operation. It also supports remote control via PC software, making it suitable for laboratory testing and automated system integration.

Application Areas



Technical Parameters

EHV-10-2 Case2 Waveform Parameters in compliance with VW 80300: 2021	
Pulse Waveform Characteristic	Approx. double exponential waveform
Pulse Voltage Amplitude	20 V ~ 200 V, $\pm 10\%$
Pulse Width	≥ 1 ms (0% ~ 0%), open circuit
Voltage Slew Rate	$\geq 3,000$ V/ms
Nominal Output Impedance	0.16 Ω
Pulse Polarity	Positive
Number of Pulse	1 ~ 100
Pulse Repetition Time	1 s ~ 99 s
Pulse Trigger Mode	Manual, automatic, external
Pulse Coupling Mode	Pulse coupling transformer
Pulse Decoupling Mode	None, external series-connected power supply
DUT Load Capacity	DC 1,500 V, 300 A
EHV-16-1 Case1/2 Waveform Parameters in compliance with VW 80300: 2021	
Pulse Waveform Characteristic	Approx. square waveform
Pulse Voltage Amplitude	20V ~ 200V, $\pm 10\%$
Pulse Width	EHV-16 -1 Case1: $1\mu\text{s} \sim 20\mu\text{s}$, $\pm 10\%$ EHV-16-1 Case2: $1\mu\text{s} \sim 5\mu\text{s}$, $\pm 10\%$
Voltage Slew Rate	> 1 V/ns
Nominal Output Impedance	0.16 Ω
Pulse Duration	EHV-16-1 Case1: 10 ms ~ 100 ms EHV-16-1 Case2: 0.5 ms ~ 10 ms
Pulse Polarity	Positive
Number of Pulse	1 ~ 100
Number of pulse group	1 ~ 100
Pulse group Repetition Time	1 s ~ 99 s
Pulse Trigger Mode	Manual, automatic, external
Pulse Coupling Mode	Coupling capacitor 100 μF per line
Decoupling Mode	High-power diode
DUT Load Capacity	DC 1,500 V, 300 A

General Parameters

Display Screen	5.7-inch TFT touchscreen
Working Power	AC 220 V $\pm$ 10%, 50/60 Hz
Fuse	6 A
Max. Power Consumption	600 VA
Communication Mode	Ethernet
Working Status Indication	Front panel LED indication and LCD display
Fault Detection	Front panel LCD display and stop operation when failure occurs
Dimension	22U rack, 600 (W) *1,600 (H) *900 (H) (Incl. alarm indicator)
Weight	Approx. 140kg
Ambient Temperature	15°C ~ 35°C
Relative Humidity	45% ~ 75%
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

Power Cord, Test Cable, Coaxial Cable, Fuse, Flat Grounding Wire, Emergency Stop Pedal, User Manual

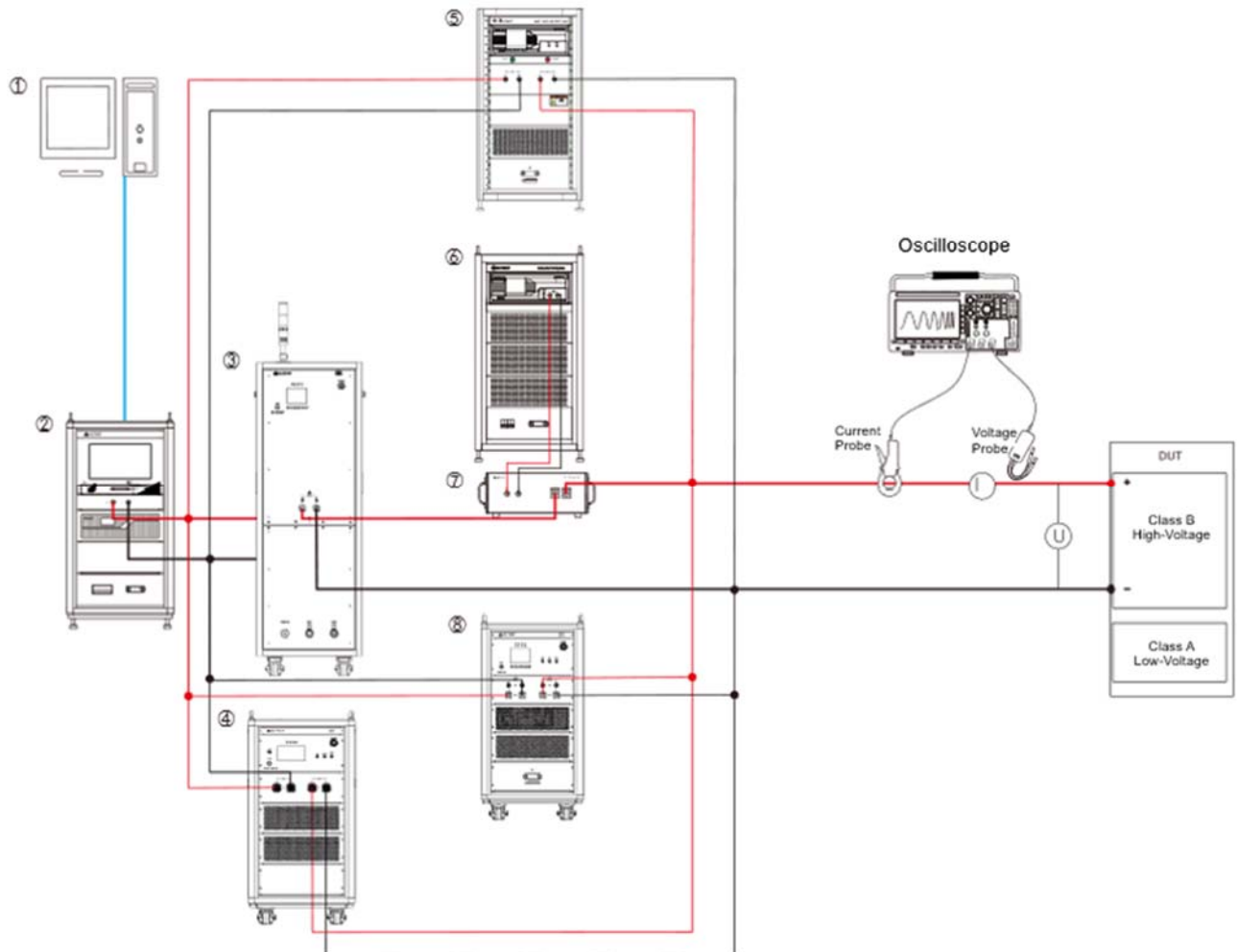
Optional Accessories

1	Immunity Test Software	Model: AutoLab > Compatible with Windows 7/8/10/11 > User-friendly operation with an intuitive UI > Supports customized test procedures with built-in standard test libraries > Comply with ISO 21498-2, VW 80300	
2	HV Artificial Network	Model: AN Series Standard: ISO 21498, VW 80300 Input voltage: 0 ~ 1,500 V DC DC current capacity: Max. 800 A (higher ratings can be customized)	
	HV Test Device	Model: HTS Series Standard: VW 80300 Input voltage: 0 ~ 1,500 V DC DC current capacity: 0 mΩ/50 mΩ 300 A/100 mΩ 200 A/200 mΩ 100 A	

Optional Accessories

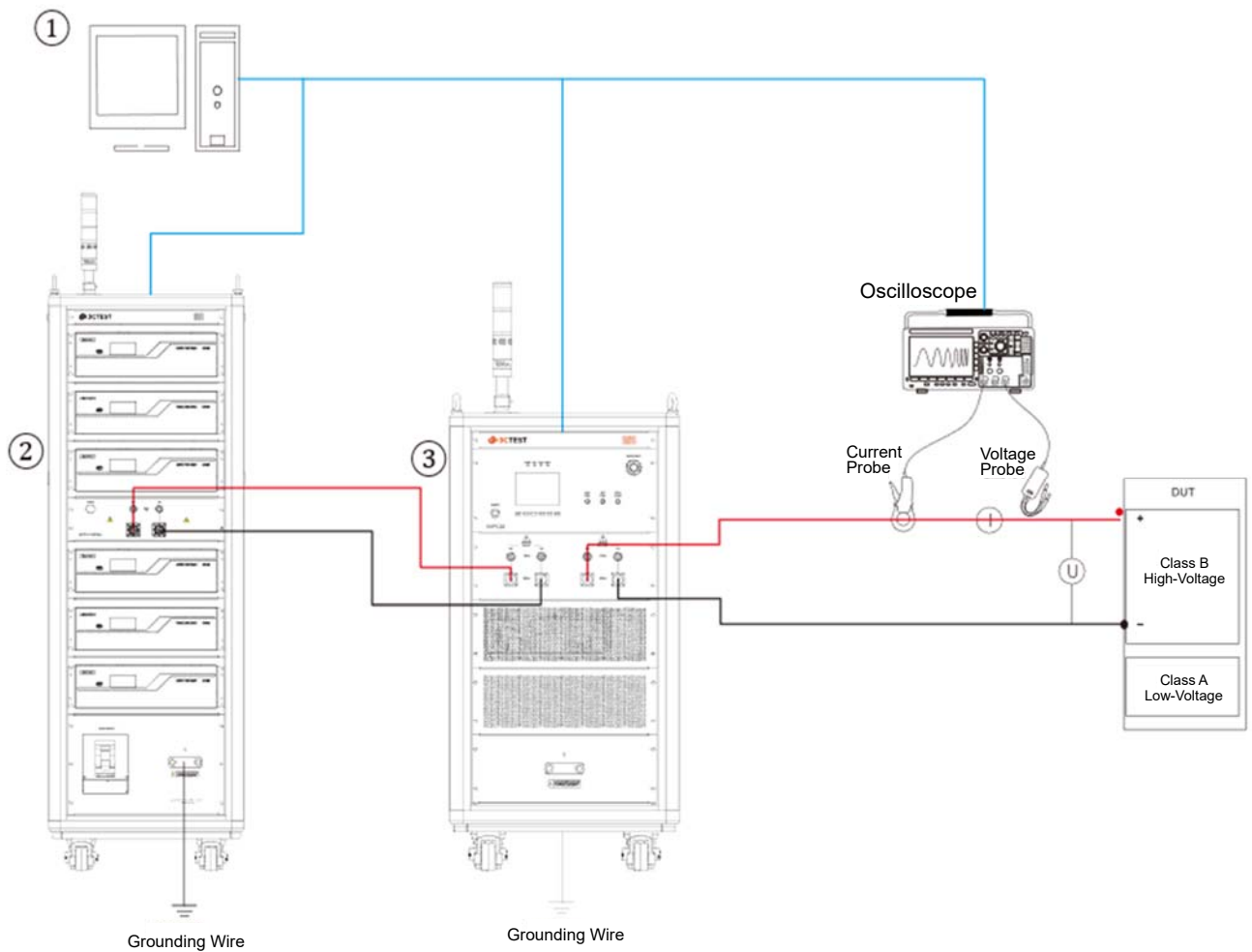
3	Electric Vehicle HV Electrical Performance Comprehensive Tester	Model: EVTS Series Standard: ISO 21498, VW 80300 Input voltage: 0 ~ 1,500 V DC DC current capacity: Max. 600 A (higher ratings can be customized)	
4	HV DC Short-Circuit Simulator	Model: HDSS Series Standard: ISO 21498.12 Input voltage: 0 ~ 1,500 V DC DC current capacity: 500 A (higher ratings can be customized)	
5	Wide-range Adjustable Pre-charging Test Device	Model: RC Series Standard: VW 80300 EHV-04 Input voltage: 0 ~ 1,500 V DC Capacitor: 10 μ F ~ 1,200 μ F DC current capacity: Max. 300 A (higher ratings can be customized)	
6	Ripple Signal Generator	Model: RSG Series Standard: ISO 21498, VW 80300 Max. open-circuit output voltage: 160 V _{pp} Max. output current: 200 A _{pp} Frequency: 10 Hz ~ 300 kHz	
7	Coupling Transformer	Model: TPT Series Standard: ISO 21498, VW 80300 Max. coupling voltage: 160 V _{pp} Max. coupling current: 400 A _{pp} DC current capacity: Max. 1,000 A (higher ratings can be customized)	
8	Automotive Load Dump Simulator	Model: EVDG 20 Standard: VW 80300 EHV-10 Pulse voltage amplitude: 20 V ~ 200 V DC current capacity: Max. 100 A (higher ratings can be customized)	
	Electro-mobile Vehicles Pulse Disturbance Generator	Model: EVPG 20 Standard: VW 80300 EHV-16 Pulse voltage amplitude: 20 V ~ 200 V DC current capacity: Max. 100 A (higher ratings can be customized)	

Test Setup



- ① PC software AutoLab
- ② Electric Vehicle HV Electrical Performance Comprehensive Tester EVTS Series
- ③ HV Artificial Network AN Series/ HV Test Device HTS Series
- ④ HV DC Short-Circuit Simulator HDSS Series
- ⑤ Wide-range Adjustable Pre-charging Test Device RC Series
- ⑥ Ripple Signal Generator RSG Series
- ⑦ Coupling Transformer TPT Series
- ⑧ Automotive Load Dump Simulator EVDG 20/ Electro-mobile Vehicles Pulse Disturbance Generator EVPG 20/
Electro-mobile Vehicles Pulse Disturbance Simulator EVPS Series

Equipment Connection



- ① PC software AutoLab
- ② Electric Vehicle HV Electrical Performance Comprehensive Tester EVTS 150C36
- ③ Electro-mobile Vehicles Pulse Disturbance Generator EVPG 20

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