

HV Artificial Network

AN 100C80



- ISO 21498-2
- MBN_11123
- VW 80300

Features

- > Decoupling capacitor 10 mF, tolerance 0% ~ +10%
 - > Max. load capacity DC 1,000 V 800 A
 - > Dual modes, standard mode for HV component impedance networks; direct mode for direct connection tests without impedance networks
 - > Output impedance: 0 mΩ (direct mode)¹, 2*10 mΩ, 2*25 mΩ, 2*50 mΩ, 2*100 mΩ, 50 mΩ, 100 mΩ, 200 mΩ
 - > Support voltage monitoring and display function
 - > Features overcurrent, overtemperature, low cooling water flow, cooling water overtemperature, and cooling water overpressure protection
 - > HV monitoring protection and automatic HV discharge
 - > Water cooling design for enhanced heat dissipation capability
 - > Built-in dehumidification module to effectively prevent condensation
- Note: 0 mΩ (direct mode)¹: Internal direct connection without decoupling capacitor, grounding capacitor, or output resistance. The same applies below.

Introduction

The AN 100C80 High-Voltage Artificial Network complies with ISO 21498-2, MBN_11123 and VW 80300. It features a maximum full-range load capability of DC 1,000 V/800 A.

The AN 100C80 integrates impedance of 0 mΩ (direct mode)*¹, 2*10 mΩ, 2*25 mΩ, 2*50 mΩ, 2*100 mΩ, 50 mΩ, 100 mΩ, and 200 mΩ, together with a 10 mF capacitor. With flexible switching between Standard Mode and Direct Mode, it meets diverse testing requirements for high-voltage components.

Application Areas



Technical Parameters

Frequency	10 Hz ~ 150 kHz
Working Mode	Standard mode: Selectable decoupling capacitor and adjustable grounding capacitor and output impedance Direct mode: Internal direct connection without decoupling capacitor, grounding capacitor, or output resistance.
Output impedance	2*10 mΩ, 2*25 mΩ, 2*50 mΩ, 2*100 mΩ, 50 mΩ, 100 mΩ, 200 mΩ; 0 mΩ (direct mode)
Inductor	1 μH
Grounding capacitor	Optional 1 μF or 220 nF
Decoupling capacitor	10 mF (0% ~ +10%)
Input voltage	Max. 1,000 V DC
Continuous Current	800 A @0 mΩ (direct mode), 2*10 mΩ 700 A @2*25 mΩ, 50 mΩ 400 A @2*50 mΩ, 100 mΩ 300 A @2*100 mΩ, 200 mΩ
Capacitor Voltage Monitor	Monitoring of the 10 mF capacitor voltage
Overcurrent Protection	Stop working when the current exceeds the internal protection limit
Overtemperature Protection	Stop working when the internal temperature >50°C
Low Cooling Water Flow Protection	Stop working when the cooling liquid flow rate < 10 L/min
Water Overtemperature Protection	Stop working when the cooling liquid outlet temperature > 50°C
Water Overpressure Protection	Operation stops when the cooling liquid pressure > 0.9 MPa
Cooling Water Inlet Temperature	< 15°C
Cooling Water Inlet Flow Rate	>20 L/min

General Parameters

Working Power	AC 110 V ~ 240 V, 50 Hz /60 Hz ±5%
Fuse	10 A
Max. Power Consumption	400 W
Grounding Method	Flat grounding wire
Dimension	42U rack, 600 (W)*1,775 (H)*800 (D) mm
Weight	Approx. 740 kg
Ambient Temperature	15 °C ~ 35 °C
Relative Humidity	45% ~ 75% RH (no condensation)
Atmospheric Pressure	86 kPa ~ 106 kPa

Standard Accessories

User Manual, Fuse, Three-core Power Cord, Test Cable, Coaxial Cable, CN25 Cable, Grounding Wire

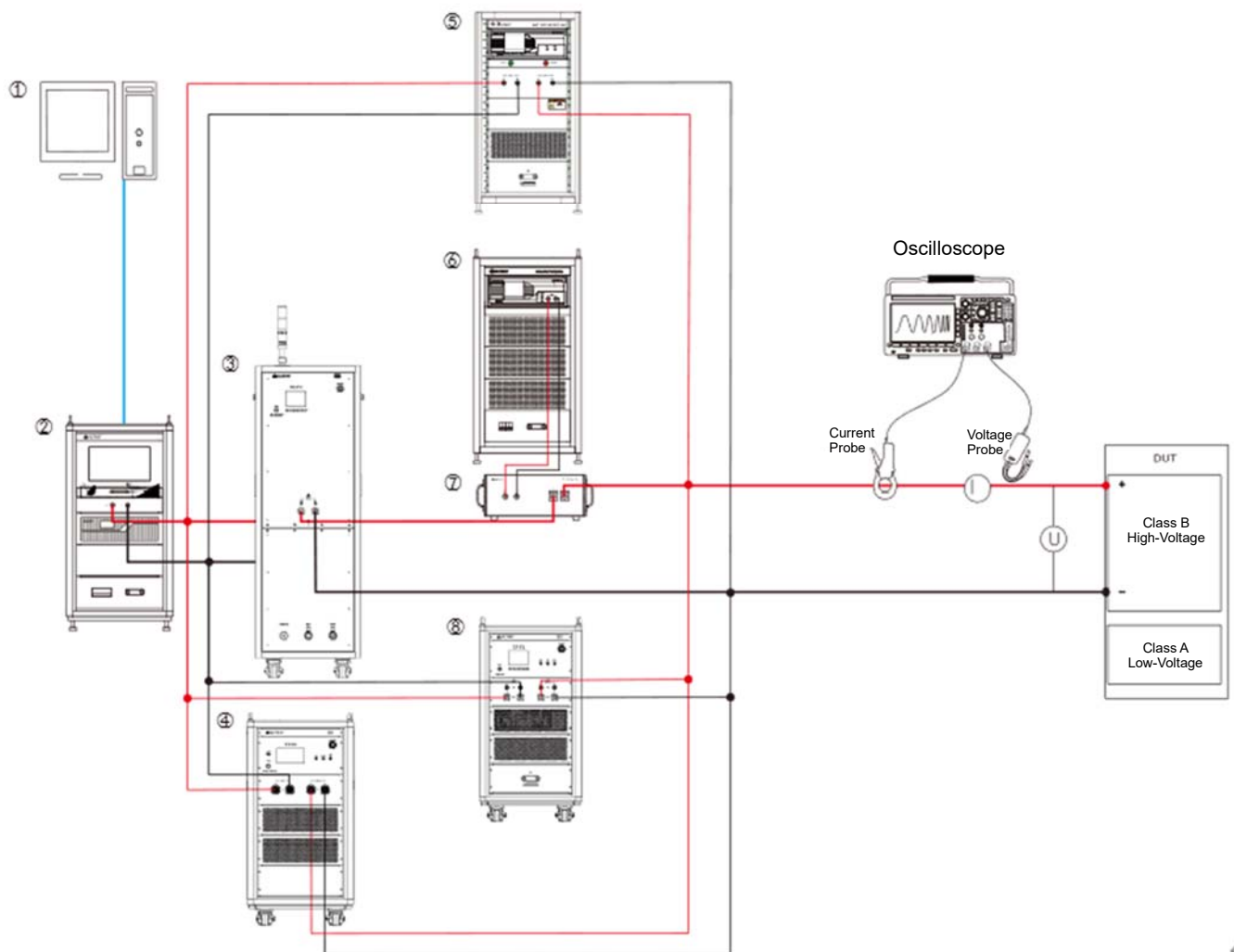
Optional Accessories

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	
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 μF ~ 1,200 μF 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)	

Optional Accessories

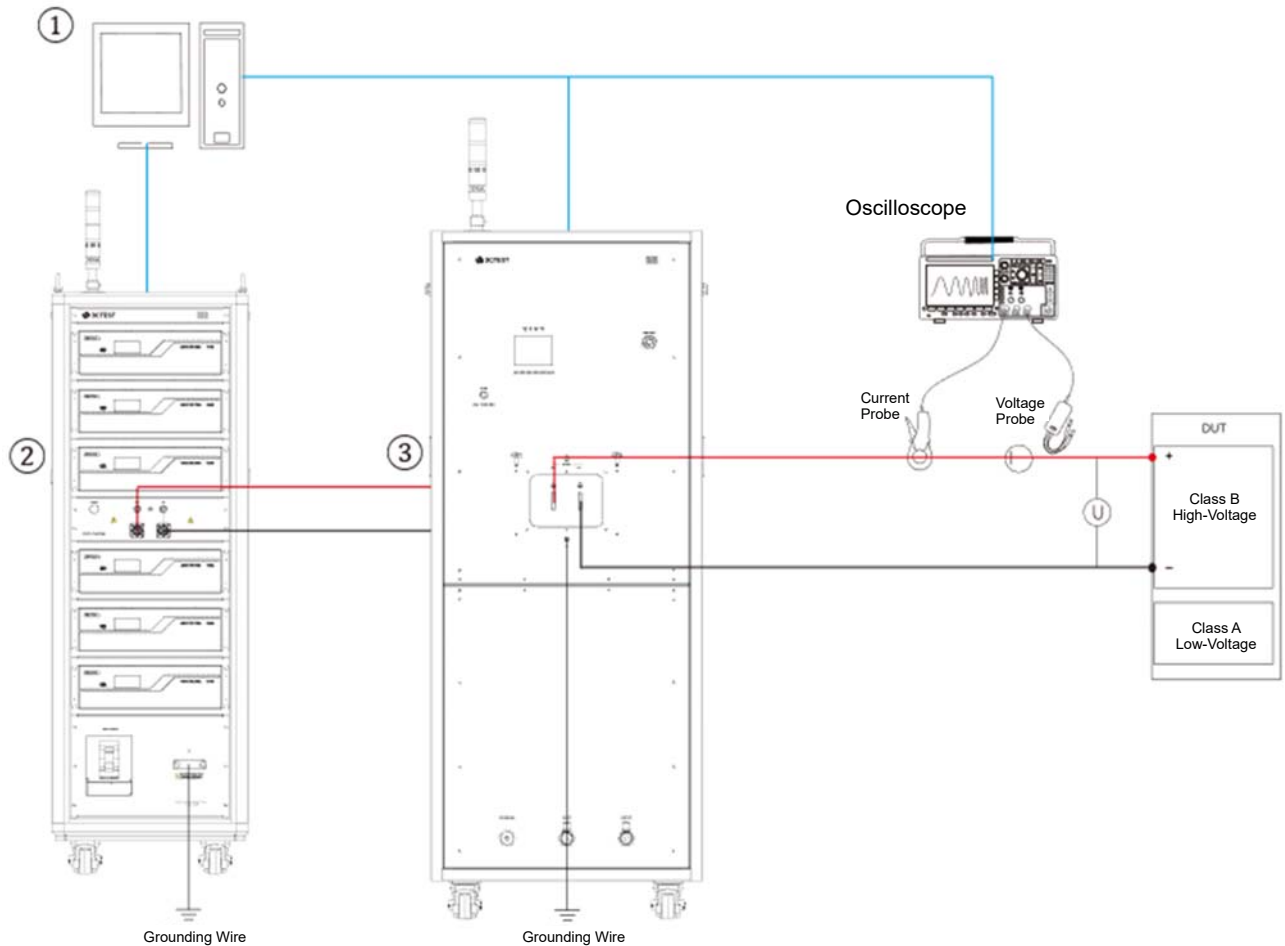
8	Automotive Load Dump Simulator	Model: EVDG 20 Standard: VW 80300 EHV-10 Pulse voltage amplitude: 20 V ~ 200 V DC current capacity: Max. 100 A (higher ratings can be customized)	
	Electro-mobile Vehicles Pulse Disturbance Generator	Model: EVPG 20 Standard: VW 80300 EHV-16 Pulse voltage amplitude: 20 V ~ 200 V DC current capacity: Max. 100 A (higher ratings can be customized)	
	Electro-mobile Vehicles Pulse Disturbance Simulator	Model: EVPS Series Standard: VW 80300 EHV-10 & EHV-16 Pulse voltage amplitude: 20 V ~ 200 V DC current capacity: Max. 300 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 Series
- ③ HV Artificial Network AN 100C80

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