

HV Artificial Network

AN 150C30F



- ISO 21498-2
- MBN_11123
- VW 80300

Features

- > Decoupling capacitor 10 mF, tolerance 0% ~ +10%
 - > Max. output voltage 1,500 V DC
 - > Max. current (full range): 300 A
 - > Dual modes, standard mode for HV component impedance networks; direct mode for direct connection tests without impedance networks
 - > Output impedance: 0 m Ω (direct mode)¹, 2*10 m Ω , 2*25 m Ω , 2*50 m Ω , 2*100 m Ω , 50 m Ω , 100 m Ω , 200 m Ω
 - > Support capacitor 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 m Ω (direct mode)¹: Internal direct connection without decoupling capacitor, grounding capacitor, or output resistance.

Introduction

The AN 150C30F HV Artificial Network complies with ISO 21498-2:2021, ISO 21498-2:2024, MBN 11123 and VW 80300. It features a maximum full-range load capability of DC 1,500 V/300 A.

The AN 150C30F integrates impedance of 0 m Ω (direct mode)^{*1}, 2*10 m Ω , 2*25 m Ω , 2*50 m Ω , 2*100 m Ω , 50 m Ω , 100 m Ω , and 200 m Ω , 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 (ISO 21498-2 compliant impedance curve)	Standard mode: 2*10 mΩ, 2*25 mΩ, 2*50 mΩ, 2*100 mΩ, 50 mΩ, 100 mΩ, 200 mΩ; Direct Mode: 0 mΩ
Inductor	1 μH
Grounding Capacitor	Optional 1 μF or 220 nF
Decoupling Capacitor	10 mF (0% ~ +10%)
Input Voltage	Max. 1,500 V DC
Continuous Current	300 A
Capacitor Voltage Monitor	Monitoring of the 10 mF capacitor voltage
Overcurrent Protection	Stop working when the current exceeds 300 A
Overtemperature Protection	Stop working when the internal temperature >50°C
Low Cooling Water Flow Protection	Stop working when the cooling water flow rate < 10 L/min
Water Overtemperature Protection	Stop working when the cooling water outlet temperature > 50°C
Water Overpressure Protection	Stop working when the cooling water pressure > 0.9 MPa
Cooling Water Inlet Temperature	< 10°C (full load)
Cooling Water Inlet Flow Rate	>20 L/min (full load)

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	35U rack, 600 (W)*1,775 (H)*800 (D) mm
Weight	Approx. 300 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, Power Cord, Test Cable, Grounding Wire, Calibration Module AN 150C30F

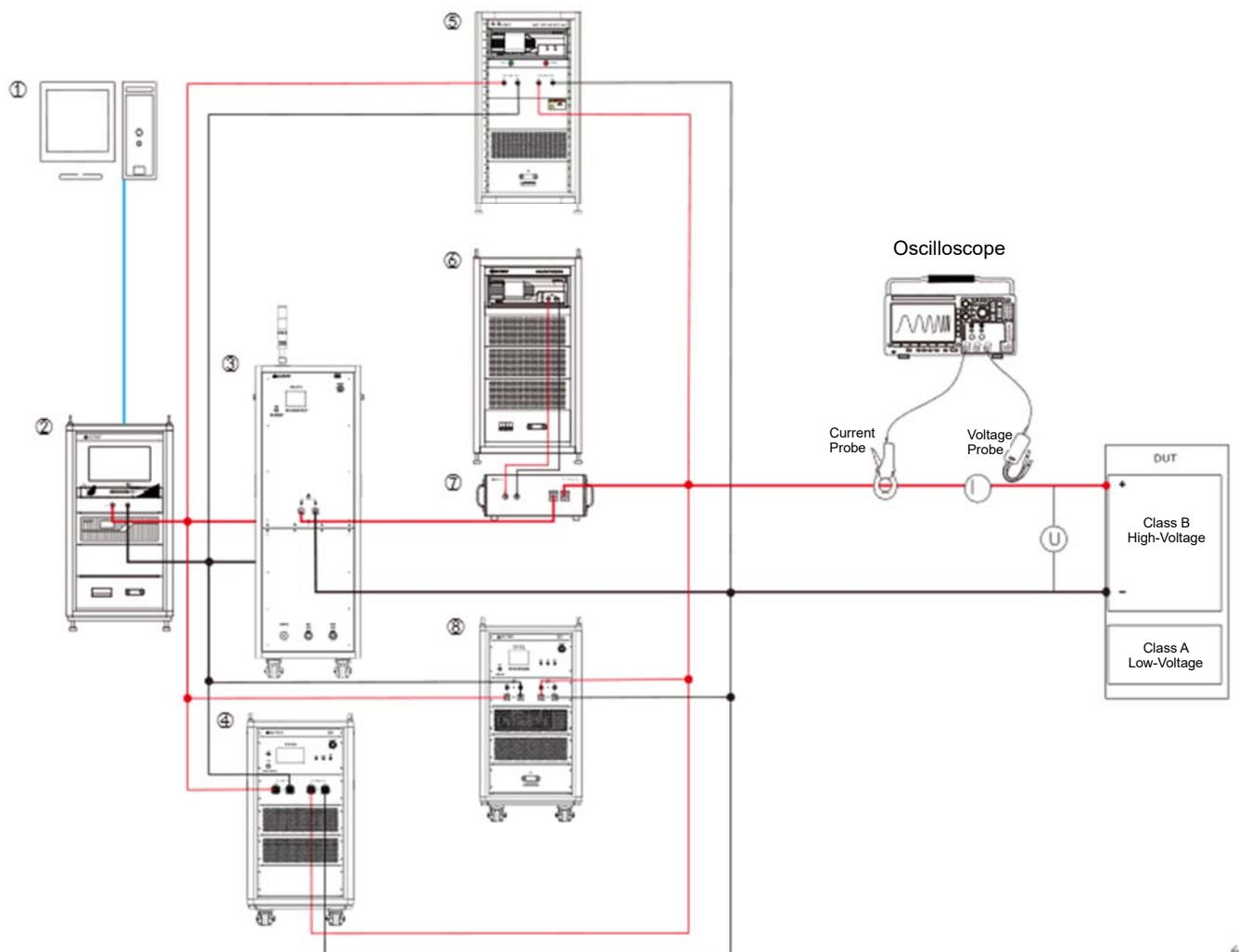
Optional Accessories

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

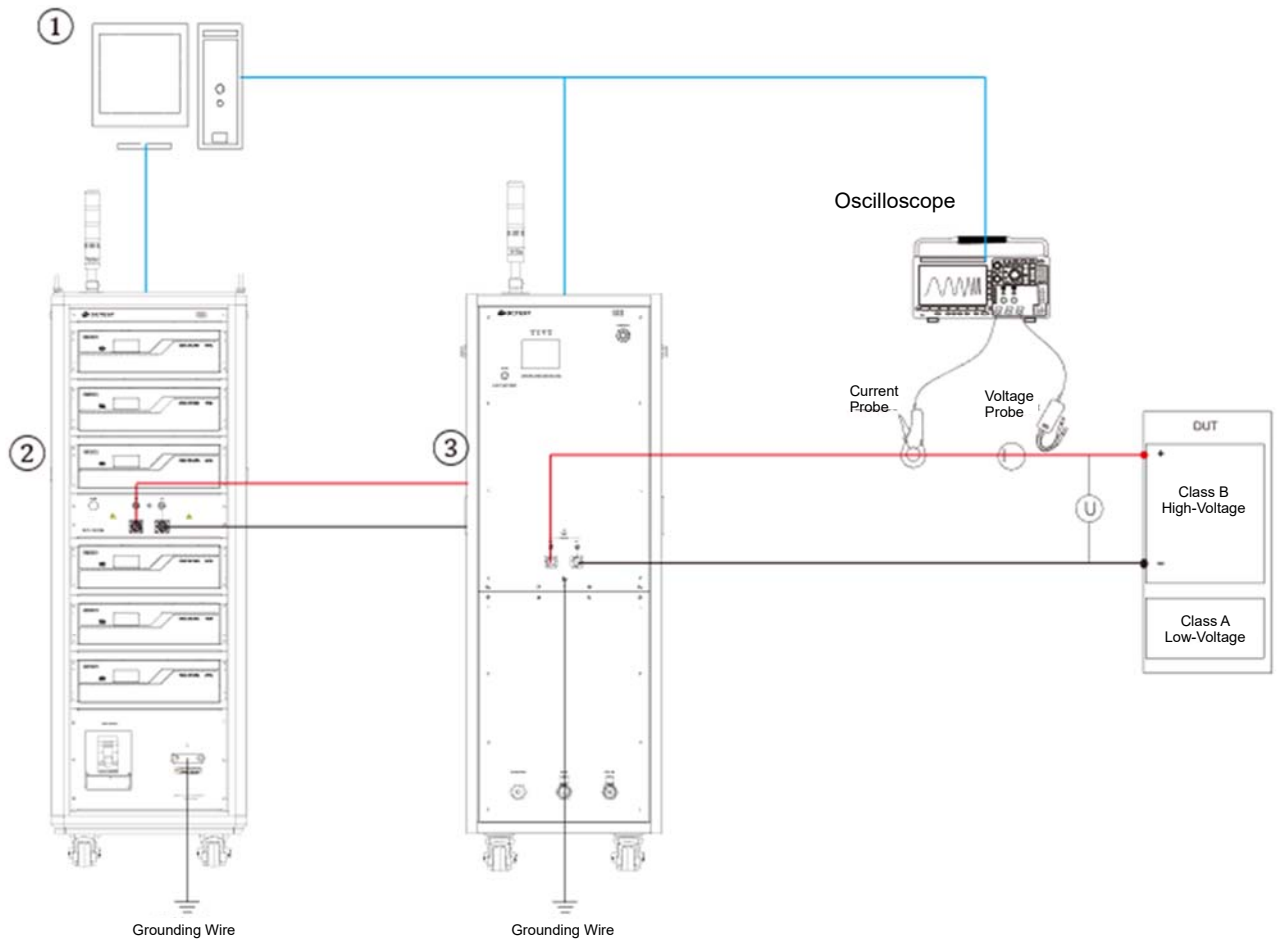
8	Automotive Load Dump Simulator	Model: EVDG 20 Standard: VW 80300 EHV-10 Pulse voltage amplitude: 20 V ~ 200 V DC current capacity: Max. 100 A (higher ratings can be customized)	
	Electro-mobile Vehicles Pulse Disturbance Generator	Model: EVPG 20 Standard: VW 80300 EHV-16 Pulse voltage amplitude: 20 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 150C36
- ③ HV Artificial Network AN 150C30F

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