

Automotive Waveform Simulation Test DC Power Supply

FTP-C, FTH-C (2 kW...90 kW)



FTP020-80-60C 2 kW/80V/60A (2U)

- Voltage range: 40 V, 80 V, 600 V, 1000 V;
- Power range: 2 kW...90 kW;
- 16-bit ADC/DAC, high precision V/I measurement;
- Low line/load regulation, low ripple noise;
- Voltage & current slew rate control;
- 2ms typical transient response;
- \pm OVP, \pm OCP, \pm OPP, OTP, \pm LVP;
- Optional analog programming & monitoring interface;
- Support ISO16750-2, VW80000, VW80300 standards.
- PC control software: waveform display, standard test waveform import, power supply control, sample data storage and display, data sampling rate up to 100 points per second;
- Standard LAN, RS232, optional GPIB communication interfaces;
- Support SCPI and ModBus-RTU protocol;
- Large TFT color display

General

The automotive power supply system often exhibits abnormal phenomena such as large fluctuations in the power supply voltage due to the complex electrical use environment, for example the startup and shutdown of various components such as motors and solenoid valves. In order to improve the reliability of automotive electrical and electronic equipments, automotive electronics manufacturers and vehicle manufacturers often use traditional programmable DC power supplies for electrical reliability testing. Due to the diversity of test standards, the complexity of programming functions, and the slow speed of traditional power supplies, automotive electronics manufacturers and vehicle manufacturers are confronted with difficulties and large expenditures.

To address this problem, Faithtech developed FTP-C series and FTH-C series programmable power supplies, which greatly enhances customers' ability in automotive electronic products testing and reduces clients' test cost.

FTP-C series power supply can realize ISO16750-2 (Road Vehicles - Environmental Conditions and Testing for Electrical and Electronic Equipment - Part 2: Electrical Loads) and Volkswagen VW80000 electrical and electronic equipment test waveform functions.

FTH-C series power supplies are more suitable for new energy vehicle electrical and electronic equipment testing, and the test waveforms meet the testing requirements of Volkswagen VW80300.

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Automotive waveform simulation test

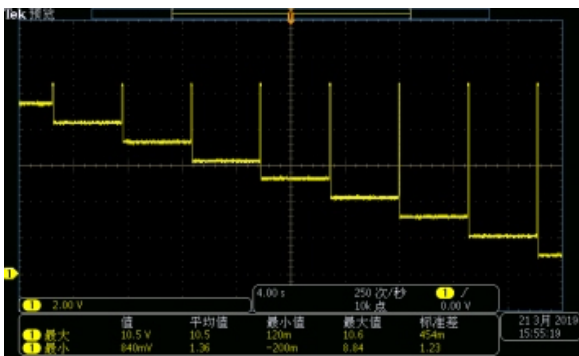
The 40 V and 80 V models of FTP-C, FTH-C are able to conduct following automotive test waveform:

- ISO16750-2 standard waveforms: voltage ramp-up and ramp-down, voltage startup characteristic, voltage instantaneous drop, voltage instantaneous drop and resume feature.
- VW80000 standard waveforms: E-02, E-03, E-04, E-05, E-07, E- 08, E-09, E-11, E-12.

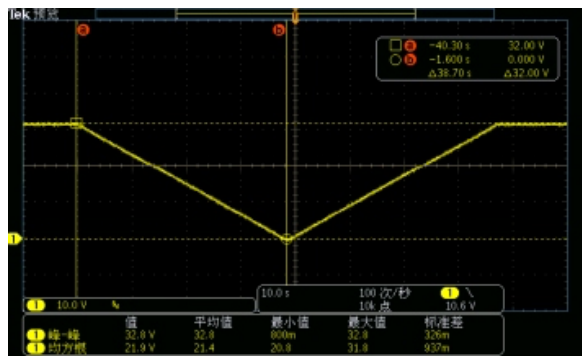
The 600 V and 1000 V models of FTH-C are able to conduct following automotive test waveform:

- VW80300 standard waveforms: HVPT-1, EHV-01, EHV-02, EHV- 03, EHV-05, EHV-06.

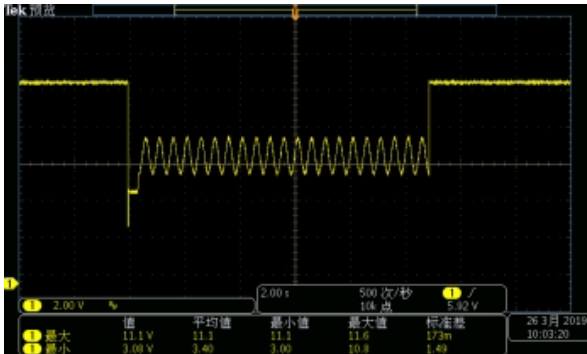
Typical waveforms examples:



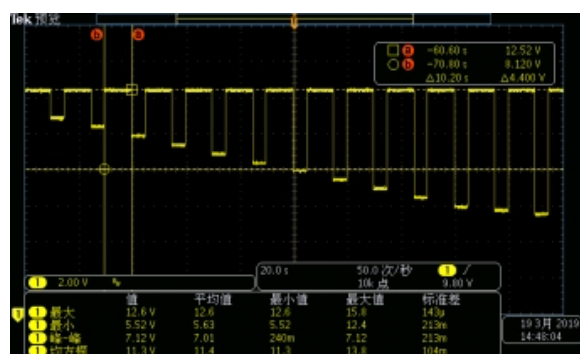
ISO16750 voltage instantaneous drop and resume



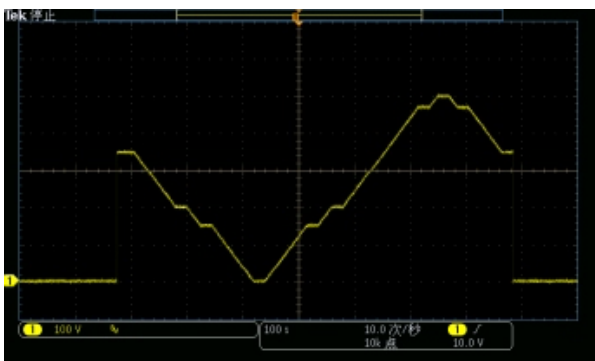
ISO16750 voltage ramp-up and ramp-down



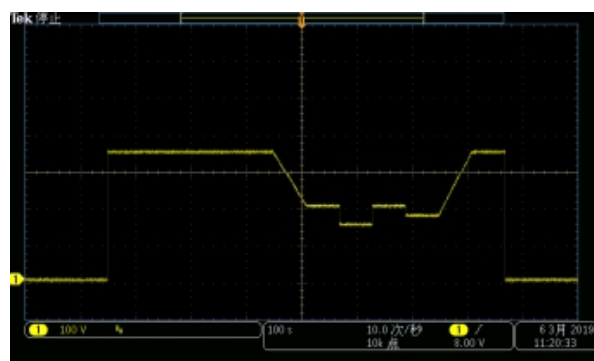
VW80000 E-11



VW80000 E-09



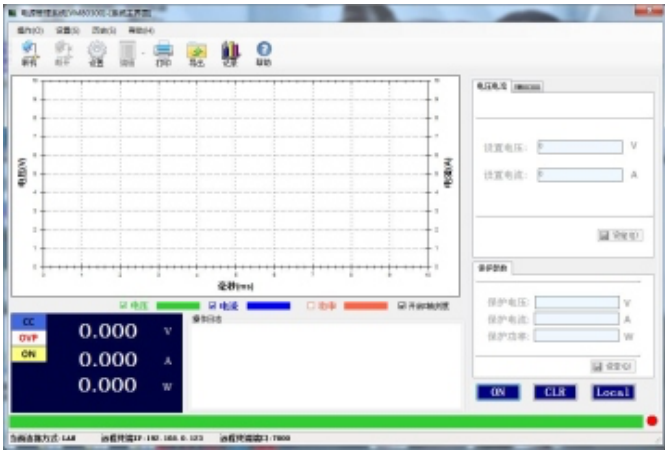
VW80300 HVPT-1



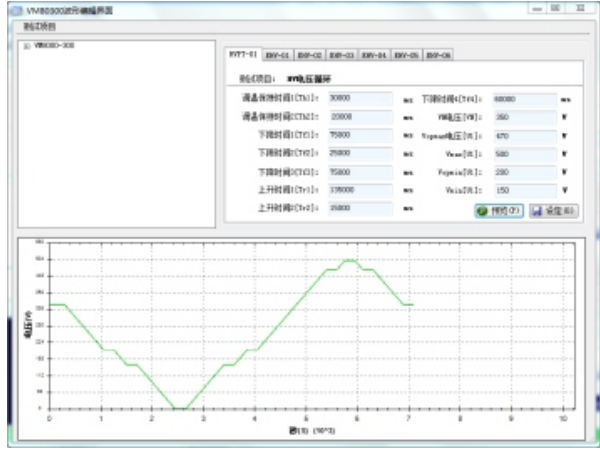
VW80300 EHV-03

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PC software



Main Page



Standard waveform operation interface

Model options

Model	Specification	Compatible standards
FTP020-40-120C	2kW/40V/120A	ISO16750-2, VW80000
FTP020-80-60C	2kW/80V/60A	
FTP032-40-120C	3.2kW/40V/120A	
FTP032-80-60C	3.2kW/80V/60A	
FTH050-40C	5kW/40V/125A	
FTH050-80C	5kW/80V/62.5A	
FTH100-40C	10kW/40V/250A	
FTH100-80C	10kW/80V/125A	
FTH150-40C	15kW/40V/375A	
FTH150-80C	15kW/80V/187.5A	
FTH300-40C	30kW/40V/750A	
FTH300-80C	30kW/80V/375A	
FTH050-600C	5kW/600V/8.5A	VW80300
FTH050-1000C	5kW/1000V/5A	
FTH100-600C	10kW/600V/17A	
FTH100-1000C	10kW/1000V/10A	
FTH150-600C	15kW/600V/25A	
FTH150-1000C	15kW/1000V/15A	
FTH300-600C	30kW/600V/50A	
FTH300-1000C	30kW/1000V/30A	

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Specifications

Model	FTP032-40-120C	FTP032-80-60C	FTH150-40C	FTH150-80C	FTH150-600C	FTH150-1000C
Voltage	0~40V	0~80V	0~40V	0~80V	0~600V	0~1000V
Current	0~120A	0~60A	0~375A	0~187.5A	0~25A	0~15A
Power	3.2kW		15kW		15kW	
Voltage programming						
Resolution	16Bits					
Accuracy	0.1%+0.1%F.S.					
Current programming						
Resolution	16Bits					
Accuracy	0.1%+0.3%F.S.	0.1%+0.2% F.S.				
Voltage measurement						
Resolution	16Bits					
Accuracy	0.1%+0.1%F.S.					
Current measurement						
Resolution	16Bits					
Accuracy	0.1%+0.3%F.S.	0.1%+0.2%F.S.				
Ripple Noise						
Voltage ripple(p-p)	60mV	80mV	60mV	80mV	350mV	650 mV
Voltage ripple(rms)	20mV	20mV	20mV	20mV	60mV	100mV
Slew rate						
Voltage	Max:10V/ms				Max: 40V/ms (below 50% rated current)	
Current	Max: 2A/ms					
OVP set						
Range	0~110%F.S.					
Accuracy	1%F.S.					
Transient response	Typical 2ms, for a 50% load change					
Efficiency	0.9 (typical value)			0.87 (typical value)		
Wave Standards	ISO16750-2, VW80000				VW80300	
Interfaces	RS232 and LAN					
AC Input	190VAC~265VAC, 47Hz~63Hz, PF: 0.98(Typical)			340VAC~420VAC, 47Hz~63Hz		
Dimension (mm)	430(W) X 88(H) X 453(D)			482(W) X265(H) X694(D)		
Weight	~15kg			~60kg		