TH6900 Series

Wide-Range Programmable DC Power Supply

A constant-power, wide-voltage-range programmable DC power supply for R&D, production-line test and new-energy applications. 21 models across three power classes (750 W, 1.5 kW, 3 kW) cover output voltages from 35 V to 1000 V — each model delivers up to three times the voltage/current range of an equal-power fixed-rectangle supply, so fewer models are needed to cover a broad test-voltage window. CV / CC / CP operation, up to 10-unit true master-slave parallel operation, built-in sequence test and function generator, and a solar-array simulation mode are standard across the series.



Standard 2U rack chassis: 482(W) × 88(H) × 455(D) mm · Net weight 9.6 kg (750 W) / 10.8 kg (1.5 kW) / 13.5 kg (3 kW)

- **0–1000 V** output, 21 models across three power ratings (750 W / 1.5 kW / 3 kW)
- High-frequency LLC multi-resonant inverter; efficiency up to **93%**, active PFC up to 0.99
- CV, CC and CP operating modes with independently adjustable rise/fall edge speed (0.01–999.99 s)
- True master-slave parallel operation, active current sharing, up to **10 units** of the same model
- OVP, OCP, OPP, OTP, input under-voltage and SENSE reverse-connection protection
- Built-in function generator (sine, square, triangle, trapezoid) and 50-sequence / 20-step sequence test engine
- Built-in solar-array simulation mode, plus CC / CV / EN50530 output via PC software
- Discharge circuit brings output below 10 V within 1 s at no-load / light load, for operator safety
- 4.0" high-brightness colour LCD, English UI, remote-sense (S+/S–) output-voltage compensation
- SCPI command support; RS232 standard (RS485 or CAN available as a factory-fitted alternative)

Applications

New energy & e-mobility

Solar-cell and PV-array simulation, new-energy vehicle and e-bike component test, battery-pack charging and burn-in.

R&D and production test

General R&D and design-verification testing, automated test-cell integration, LED test.

Production line & education

Routine test and maintenance on production-line workbenches, teaching laboratories.

Three power classes, one platform

750 W
7 models, 40–1000 V

Voltage range	40–1000 V
Max. current	60 A
Net weight	9.6 kg

1.5 kW
7 models, 35–1000 V

Voltage range	35–1000 V
Max. current	100 A
Net weight	10.8 kg

3 kW
7 models, 35–1000 V

Voltage range	35–1000 V
Max. current	200 A
Net weight	13.5 kg

All 21 models share the same 2U chassis, control panel, protection set and interface options — only rated voltage, current and power differ. Select the model whose voltage/current pair covers your test point; the constant-power topology gives up to 3× the operating window of an equal-power fixed-rectangle supply.

750 W models

Model	TH6940-60	TH6980-30	TH69200-12.5	TH69360-7.5	TH69500-5	TH69750-3	TH691000-2.5
Voltage	40 V	80 V	200 V	360 V	500 V	750 V	1000 V
Current	60 A	30 A	12.5 A	7.5 A	5 A	3 A	2.5 A

1.5 kW models

Model	TH6935-100	TH6980-60	TH69200-25	TH69360-15	TH69500-10	TH69750-6	TH691000-5
Voltage	35 V	80 V	200 V	360 V	500 V	750 V	1000 V
Current	100 A	60 A	25 A	15 A	10 A	6 A	5 A

3 kW models

Model	TH6935-200	TH6980-120	TH69200-50	TH69360-30	TH69500-20	TH69750-12	TH691000-10
Voltage	35 V	80 V	200 V	360 V	500 V	750 V	1000 V
Current	200 A	120 A	50 A	30 A	20 A	12 A	10 A

Efficiency & ripple by voltage class

Voltage class	40 V	80 V	200 V	360 V	500 V	750 V	1000 V
Efficiency	≤92%	≤92%	≤92%	≤93%	≤93%	≤93%	≤93%
Ripple RMS (20 Hz–300 kHz)	10 mVrms	10 mVrms	20 mVrms	40 mVrms	50 mVrms	75 mVrms	100 mVrms
Ripple P-P (20 Hz–2 MHz)	75 mVpp	100 mVpp	175 mVpp	250 mVpp	325 mVpp	500 mVpp	650 mVpp

Voltage set/readback resolution is 10 mV on every model. Current set/readback resolution is 1 mA on the lower-current variant at each voltage and 10 mA on the higher-current variants of the same voltage — see the per-model current ratings on this page. Set-value and readback accuracy for all models: voltage ≤±(0.05%+0.04%FS); current ≤±(0.15%+0.1%FS); power ≤±0.8%FS.

General & environmental specifications

Parameter	All models		
Operating modes	Constant voltage (CV), constant current (CC), constant power (CP)		
Load regulation	Voltage ≤0.05%FS (0–100% load) · Current ≤0.15%FS (0–100% ΔUDC)		
Line regulation	Voltage ≤0.02%FS · Current ≤0.05%FS (both at ±10% ΔUAC input)		
Rise time	≤2 ms, 10–100% no load · ≤30 ms, 10–90% full load		
Rise/fall edge speed	Adjustable in all modes (CV/CC/CP); settable range 0.01–999.99 s		
Protection	OTP, OVP, OCP, OPP, PF (input under-voltage), SENSE reverse-connection protection		
OVP range	Adjustable, 0–110% of rated output voltage		
Discharge circuit	Brings output below 10 V within 1 s at no-load/light-load shutdown		
Master-slave parallel	True master-slave operation via shared digital bus, up to 10 units of the same model, active current sharing		
Sequence test	50 sequences (non-volatile storage), 20 steps per sequence, 12 independently configurable step functions including loop control and slope-mode output		
Function generator	Built-in; sine, square, triangle and trapezoidal waveforms on output voltage or current		
Solar-array simulation	Built-in output-curve model; CC, CV and EN50530 modes also available via host-computer software		
Remote sense	S+/S– terminals for output-voltage compensation at the load		
Display	4.0" high-brightness colour LCD, English UI		
Cooling	Temperature-controlled fans		
Operating conditions	Indoor use; 0–50 °C, <80% RH non-condensing, altitude <2000 m		
Storage temperature	–20 to 70 °C		
AC input	220 V AC ±10%, 45–66 Hz, 1ph+N+PE, power factor ≥0.99		
Isolated withstand voltage	AC input to chassis: 2500 VDC · AC input to DC output: 2500 VDC · DC output to chassis (PE): negative max. 400 VDC, positive max. 400 VDC + output voltage		
Dimensions (W×H×D)	482 × 88 × 455 mm, standard 2U rack chassis		
Net weight	9.6 kg (750 W)	10.8 kg (1.5 kW)	13.5 kg (3 kW)

Interfaces

RS232	USB Host	SCPI	RS485	CAN
standard	standard	standard	alt.*	alt.*

* RS232, RS485 and CAN share a single communication port and are factory-fitted as one mutually exclusive choice per unit — selecting RS485 or CAN replaces RS232, it is not an add-on alongside it. GPIB, LAN and an analog control interface are not available on this series. Master-slave parallel operation uses a separate, dedicated digital bus (PAR IN / PAR OUT rear-panel connectors), independent of the communication port.

Standard accessories

Item	Description
–	EU power cable (Schuko, CEE 7/7)

Rear panel

Item	Description
–	PAR IN / PAR OUT (master-slave bus), USB, communication port (RS232, or factory-fitted RS485/CAN alternative), output terminals, S+/S– remote-sense terminals, AC power input

Output and remote-sense wiring is sized by the customer to the selected model's rated current; consult your Techmize contact or authorized distributor for wire-gauge guidance at high current ratings (up to 200 A).

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