

THP2290Series

DC high voltage power supply

100kV, 25kW, efficiency >80%



The THP2290 series is a series of closed, programmable, low ripple, high-voltage power supplies that can provide up to 100kV and 25kW power supplies. The THP2290 series is a fast-response power supply and adopts air insulation, so it is lighter and more environmentally friendly than oil cooling.

- 0 to 100% programmable voltage and current
- Local, analog and RS485/USB digital control. Ethernet is optional
- 3 phase AC input. 480VAC standard, 380VAC and 415VAC optional
- Output voltage and current regulation
- Voltage and current monitor output
- Short circuit, arc, overload and thermal protection
- Efficiency >80%
- Low ripple of rated voltage at full load <0.1% RMS

Specifications:

Input:Standard 3-phase, 480VAC (+/-) 10%, 48-63Hz, maximum 35kVA, less than 45ARMS per phase. The surge is less than 50A peak. A five-position wiring board is provided for AC line connection. The main service must be subjected to a fuse or circuit breaker with a maximum rating of 175A.

Efficiency:Usually >80% at full load.

Output control:Continuous and stable adjustment through the rotary encoder installed on the panel or the external 0 to +10V signal.

Voltage adjustment rate:Relative load: 0.01% (no load to rated load).

Relative input: $\pm 0.01\%$ (input voltage change is $\pm 10\%$).

Current adjustment rate:Relative load: 0.01% (no load to rated load).

Relative input: $\pm 0.01\%$ (input voltage change is $\pm 10\%$).

Ripple:Under rated output conditions, it is better than 0.1% rms.

Temperature coefficient:Voltage and current are better than 100ppm/°C.

Stability:It is less than 0 every 8 hours after starting up for half an hour..05%

Voltage rise time:Typical 200 milliseconds for 15kV to 100kV models and 50ms typical for 1kV to 12kV models.

Analog voltage monitor:0 to +10V, equal to 0 to rated voltage, the reading accuracy is 0.5%+0.2%.**Analog current monitor:**0 to +10V, equal to 0 to rated current, with an accuracy of 1% + 0.5% of the rating.

RS485/USB/Ethernet programming and display resolution:0.025% of the total proportion of voltage and current channels.

RS485/USB/ Ethernet setting accuracy:The voltage setting accuracy is better than the set rating of 0.5%+0.2%.

RS485/USB/Ethernet reading accuracy:The voltage reading accuracy is 0.5% of the reading + 0.2% of the rating. The current reading accuracy is 1% of reading + 0.5% of the rating.

The temperature is too high:Turn off and lock the device in the OFF state to measure the temperature threshold or sense the defective fan when it exceeds the interior. The fault indicator will be activated.

Input under voltage:It will prevent the PowerStage circuit from running without all 3-wire voltages being active. When this happens, the output will turn off and resume automation when normal input line conditions are restored. The fault indicator will be activated during shutdown.

DC under voltage (DCUV):It will prevent the PowerStage circuit from operating at DC bus voltages below the operating level. When this happens, when the normal input line condition returns, the output will be turned off and automatically restored. The fault indicator will be activated during shutdown.

Unsaturated power block:IGBT power block control can sense excessive current in its conduction state and turn off the conversion cycle to avoid shooting through

Mode status indicator:Low/high indicates that the output is in current/voltage mode.

The monitoring failure is:Input low voltage, DC low voltage, overtemperature, power module and fan failure.

Status indicator:Low/high indicates that the output has been turned off/turned off.

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Ambient temperature:

Operating temperature: 0 to +40°C.

Working humidity: 30–90%RH (no condensation).

Storage temperature: -20 to +70°C.

Storage humidity: 10–95%RH (no condensation).

Elevation:

For operations up to 5,000 feet.

Cooling:Force air cooling with an internal fan.

External dimensions:482.6mm wide, 133mm high and 610mm deep.

Weight:About 55kg.

External dimensions: (mm)

