

Chapter 1 Introduction

TCM6700 Series

High Voltage DC Power Supply | 30kV, 30W, Ripple Less Better than 0.01% Less Than 1U Height



- Maximum Output Voltage 30kV
- Maximum Output Power 30W
- Programmable Power Trip Feature
- Preset Output Value
- Over-Voltage and Over-Current Protection
- RS-485 Digital Communication
- Digitally Programmable

Product Introduction:

Teslaman TCM6700 series high voltage power supply, maximum output 30kV30W. The full digital control mode is adopted, which can meet the functional requirements of customers' various control settings, and the fast voltage and current transient response capability ensures the trouble-free operation of the power supply. This series of products have complete functions and wide output range, and can also add the functions that customers need to customize through software.

Typical Applications:

Electrostatic Field; Electrostatic spinning; Electrostatic printing; Microcapsule embedding machine; Non-woven fabrics production; Withstand voltage test; Electron acceleration; Scientific research, etc.

Specification Description:

Input	AC220V \pm 10%, 50/60 Hz.
Output	Rated voltage 30kV, rated current 1mA, continuously adjustable from 0 to the highest voltage, output positive and negative single polarity.
Front Panel Functions	power on/off, Auto-start, memory, voltage/current preset, high voltage output/turn-off, user interface settings and voltage output adjustment.
Front Panel Status Indication	polarity indication, constant voltage/constant current mode, auto-start status, memory status, preset status, output status and abnormal code display.
Voltage Control	The encoder of the power supply can set the output voltage between 0 and the highest voltage.
Coarse/Fine Adjustment Function	The power supply automatically identifies coarse/fine adjustment according to the rotation rate of the knob. Large step output when rotating quickly and small step output when rotating slowly.
Voltage Regulation Rate	Load: 0.01% of output voltage from no load to full load. Line: 0.01% for 10% change in input voltage.
Current Adjustment Rate	Load: 0.01% of output current from 0 to rated voltage. Line: 0.01% for 10% change in input voltage.
Ripple Voltage	Ripple Voltage RMS is 0.01% of the maximum output voltage.
Environmental	Operational: 0 $^{\circ}$ C to + 50 $^{\circ}$ C. Storage: -20 $^{\circ}$ C to + 80 $^{\circ}$ C.
Temperature Coefficient	0.01% per $^{\circ}$ C, voltage and current.
Stability	less than 0.1% every 8 hours after 1/2 hour warm-up.
Voltage and Current Indication	Three-digit LED nixie tube, with an accuracy of 1% under rated output conditions.
Overall Dimensions	141.2 mm wide, 40mm high and 217mm deep.
Weight	About 1.8 kg.

High Voltage Output Line

Self-contained unmasked high voltage cable. The standard high-voltage cable is 2 meters long, and the outer diameter of high-voltage cable is 5.5 mm, unable to plug in or unplug.

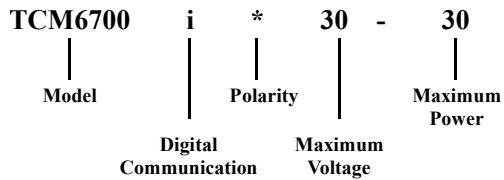
Description of Model Code

The model code represents the performance and parameters of the power supply, which are:

Maximum output voltage in kV;

Maximum output power in W;

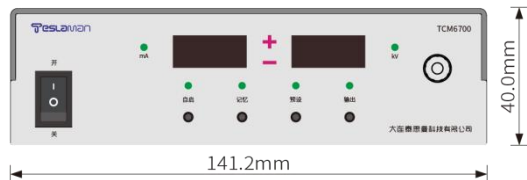
Output polarity, P for positive output, N for negative output;



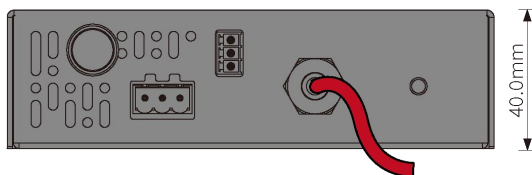
TCM6700 Series HVPS model selection table (customizable) :

Rated value		Model	
kV	mA	Positive	Negative
10	3	TCM6700P10-30	TCM6700N10-30
20	1.5	TCM6700P20-30	TCM6700N20-30
30	1	TCM6700P30-30	TCM6700N30-30

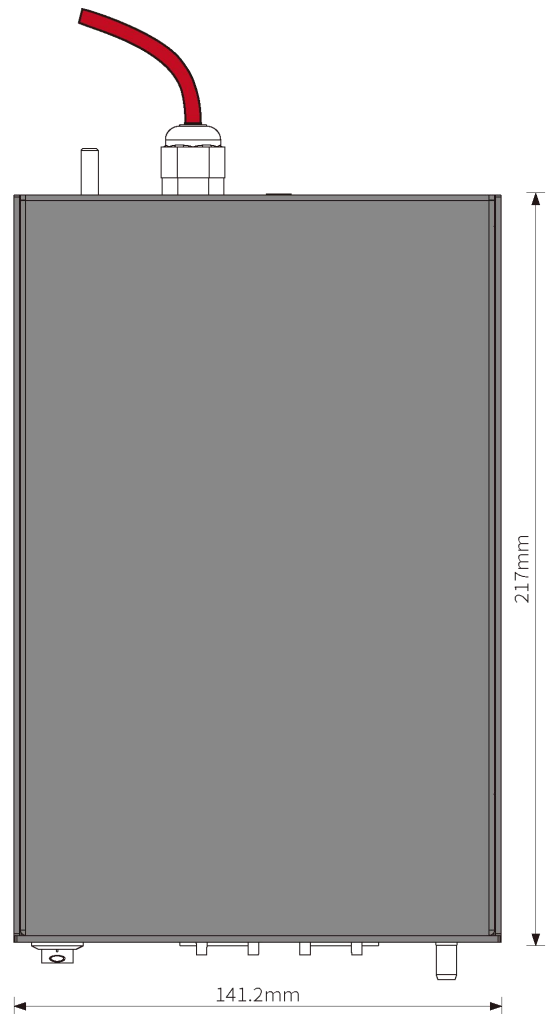
Dimensions: mm



Front View



Rear View



Top View