

TIE0085 Series

Integrated measurement device | Measures 10 kV DC and 5 mV ripple.



- AC coupling bandwidth: 1 Hz to 2 MHz
- DC input voltage: ± 10 kV
- AC output voltage: ± 10 V
- Measurable ripple: 5 mVp-p minimum
- Ripple attenuation ratio: better than 0.95 @ 50 Hz to 2 MHz

Product Introduction:

The Teslaman TIE0085 series high-voltage coupler is designed for precision ripple measurement of high-voltage power supplies. This model is an active version, integrating a precision operational amplifier and an independent battery-powered system. The built-in op-amp provides extremely high input impedance, minimizing the loading effect on the circuit under test and ensuring that the measured ripple accurately reflects the original signal, without introducing additional voltage drops or noise. The op-amp also offers unity-gain buffering and driving capability, isolating the influence of the downstream oscilloscope and enabling long-distance coaxial cable driving. Battery power eliminates ground-loop noise, ensuring accurate low-frequency ripple measurements. This product can measure ripple as low as 5 mVp-p, with a measurement bandwidth ranging from 1 Hz to 2 MHz, and features an inherent output noise of < 2 mVp-p. It also functions as a high-voltage divider, with a high-voltage attenuation ratio of 1000:1. Before use, ensure the battery is sufficiently charged (replace the battery promptly when the low-battery indicator lights up).

Specifications:

DC input voltage	DC: 0 to ± 60 kV.
AC output voltage	AC: 0 to ± 10 V.
AC coupling bandwidth	1 Hz to 2 MHz.
Measurable ripple	≥ 5 mV.
Attenuation ratio	0.95 @ 50 Hz - 2 MHz.
Output impedance	50 Ω .
Ambient temperature	0°C to +70°C.
Humidity	$< 80\%$.
Dimensions	160 mm (W) $\times$ 44.5 mm (H) $\times$ 200 mm (D).
Weight	1.66 kg.
Accessories	SHV high- voltage cable, SMA to BNC cable, ground wire.

Description of Model Code

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

Maximum output voltage in kV;

Output polarity, PN for bipolar

TIE0085	PN	10
Model	Polarity	Maximum Voltage

TIE0085 Series Product Model Selection Table (Customizable):

Max. input	Model
kV	
10	TIE0085PN10

Measurement Parameters:

Customer ID	Measurement Frequency Range	Measurement Ripple Range	Equipment Self- noise
C0201	1 Hz - 2 MHz	2 mV - 5.5 Vpp	< 2 mV

Dimensions:mm

