

GPS Current Interrupter

GPS Current Interrupter (GPS Synchronized Current Interrupter) is a key device in cathodic protection systems used for accurately measuring the polarized potential of pipelines. It employs GPS satellite synchronization technology to achieve precise periodic on-off control of the protective current, thereby accurately obtaining the pipeline's "instant-off potential" (OFF potential) and eliminating the influence of soil IR drop.

Core Functions and Working Principle:

1. GPS Synchronized On-Off: Receives the second-pulse time signal from GPS satellites, ensuring that multiple interrupters and detection equipment perform on-off operations at the same precise moment, achieving synchronization of measurements across the entire pipeline.
2. Accurate Potential Measurement: Measures the true polarized potential of the pipeline at the instant the current is interrupted, which is the most reliable parameter for evaluating cathodic protection effectiveness.
3. Multi-Device Coordination: On long-distance pipelines, multiple interrupters can be deployed to connect to different cathodic protection current sources simultaneously, working in coordination with CIPS detection hosts, data loggers, and other equipment.



PRODUCT SPECIFICATIONS

Enclosure Dimensions: 417x330x265mm(L x W x H)

Insulation Resistance of Main Contacts: In the disconnected mode, 100MΩ

Withstand Voltage Strength of Main Contacts: In the disconnected mode, 50/60HZ 2000VAC 1min

Positive/Negative Poles: Rated load current 100A, Maximum load current 200A

Potential: ON/OFF potential detection function, precision 50mV

Interruption Function: Manual and automatic interruption functions, action time within 50ms.

Interruption Mode: 1. Inner Clock synchronization 2. GPS time interruption

Power Input: Power Adapter and battery input voltage in 12V range (+/-5%)

Communication Function: RS485 communication interface, remote data transmission: tasks, time, switch status, potential data, latitude and longitude

Real-time Self-check Function: Real-time self-check and feedback of data during power-on state

APPLICATIONS

Primarily used for the inspection of cathodic protection systems on buried metal pipelines (oil, natural gas, etc.)