

ProSense™

INTELLIGENT TEST STATION

PRODUCT DESCRIPTION

The intelligent test station is a monitoring device designed for cathodic protection systems. It is primarily used for the automatic measurement and collection of cathodic protection parameters, including native potential, polarized potential, AC interference, and DC interference. The device can be installed and used as an intelligent replacement for conventional test stations, enabling automated collection and management of cathodic protection parameters along pipelines.

In addition to measuring cathodic protection parameters, Advance Technology's intelligent test station can be connected to and drive other industrial sensors. It supports remote transmission, monitoring, and control of measurement signals, providing expanded data acquisition and management capabilities for cathodic protection systems.

PRODUCT PERFORMANCE

Monitoring Performance

- Automatically measures CP potential, AC interference, and DC interference.

Anti-Interference Capability

- Lightning protection and AC-interference-resistant design support stable operation.

Long-Term Operation

- Ultra-low power consumption with sleep mode enables long-term unattended service.

Data Reliability

- Local data storage helps prevent data loss during communication failures.



PRODUCT FEATURES

Power Supply Options

- Supports primary battery, solar power, or AC power supply.

Communication Compatibility

- Supports RS485/MODBUS RTU communication, 4-20 mA analog signal interface, IoT-based communication, and optical fiber communication.

Expandable Functions

- Supports temperature, humidity, corrosion rate, and other sensor inputs.

Remote Data Management

- Enables data access and management via PC and mobile devices.

Custom Engineering Capability

- Customized functions are available, including integration with UAV-based inspection data.

Reference	Title
NACE RP0572	DESIGN, INSTALLATION, OPERATION, AND MAINTENANCE OF IMPRESSED CURRENT DEEP GROUND BEDS
EN 13509	CATHODIC PROTECTION MEASUREMENT TECHNIQUES

PRODUCT PARAMETERS

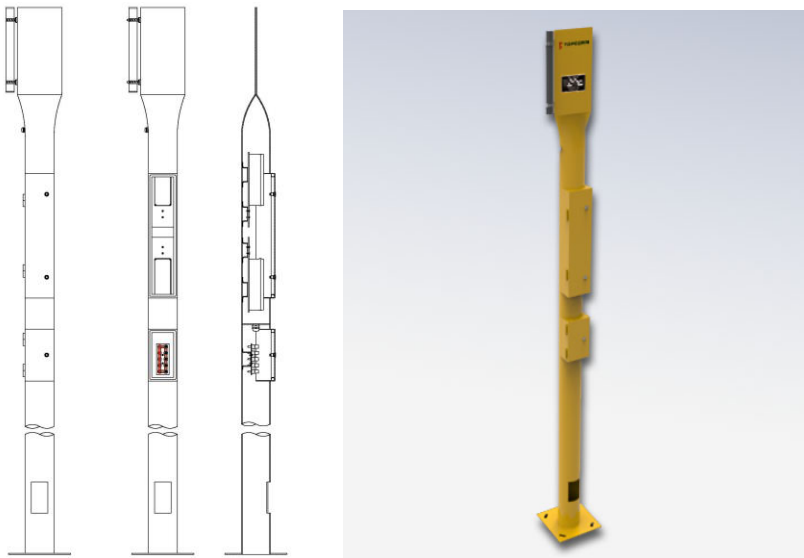
Environmental Parameters		
Temperature	-25°C ~ +55°C	Customizable
Relative Humidity	0 ~ 100%RH	Customizable
Location	Indoor	Outdoor
Explosion-proof Requirements	NA	Exd II BT4 / Other customization
Installation	Pile Type	Box Type / Wall Type
Device Parameters		
Enclosure Material	Galvanized steel, painted steel, stainless steel, cast aluminum, fiberglass, concrete, etc.	
Protection Level	IP55 ~ IP68 optional	
Size	Pile Type	Φ 108*2000、Φ 108*3000、Φ 140*2000 (Various specifications can be customized)
	Box Type	300x200x150mm, 400x300x150mm 500x400x150mm, 600x400x150mm 700x600x150mm, 800x600x150mm (Various specifications can be customized)
Enclosure Colour	Light gray, dark gray, bright yellow (Other customized colours also available).	
Inner Terminals	Brass Terminals and Nuts	
In line mode	Conduit or cable gland	
Nameplate	Aluminum / stainless steel, including manufacturer, production date, equipment material, equipment name, protection level, etc.	
Life	Continuous service life not less than 10 years under normal operating conditions	
Sampling Parameters		
General	The equipment is highly integrated, and the host adopts modular design. A single module can be repaired or replaced separately.	
Potential Sampling	a) Sampling Range: -5.0V ~ +5.0V , -20.0V ~ +20.00V , -100.0V ~ +100.0V; automatic range switching; b) Sampling Precision: ≤±0.5% c) Resolution: 1mV d) Input Impedance: ≥ 10MΩ ;	
AC Voltage Sampling	a) Sampling Range: 0V ~ 10.0V , 0V ~ 100.0V; automatic range switching; b) Sampling Precision: ≤±1% c) Resolution: 0.1V	
AC Current Sampling	a) Sampling Range: 0mA ~ 10mA , 0mA ~ 100mA; automatic range switching; b) Sampling Precision: ≤±1% c) Resolution: 10 μA	
DC Current Sampling	a) Sampling Range: -1mA ~ +1mA , -20mA ~ +20mA; automatic range switching; b) Sampling Precision: ≤±1% c) Resolution: 1 μA	
Battery Voltage Sampling	a) Sampling Precision: ≤±1%	

	b) Resolution: 0.001V
Communication Mode	RS485/4-20mA/IoT/Optical Fiber
Continuous Sampling	24h continuous sampling working mode supports the minimum sampling interval time of 1s
Remote Control	Through the system software, the working parameters (such as sampling delay time, sampling interval time, continuous sampling time) can be adjusted, and the management and alarm system can be configured according to the standards and specifications.
Power Supply	Primary Battery/Solar Power/AC
Power Dissipation	The average working current of communication is 500 mA and the average standby working current is 10 μ A.
Communication Failure Protection	It has the data storage function. In the case of communication failure, it can store the running data for more than 1 year to ensure that the data is not lost. When the communication is restored, the data can be automatically uploaded
Equipment clock	The clock error is less than ± 0.5 s per 24h; it can be corrected through the server or GPS module,
Activate monitoring	When the measuring data exceeds the set standard range, the device uploads an alarm signal and automatically switches to the appropriate sampling range and sampling interval time. When the measuring data is restored to the set standard range, the device automatically returns to the set working mode.
Insulating property	Insulation resistance of > 10 M Ω
Dielectric strength	The collector can withstand the dielectric strength test voltage of AC1500V (effective value) for 1min without breakdown and flashover phenomenon

MODELS AND SPECIFICATIONS

Pile Type AT-AP-PT

The pile-type model is mainly used for collecting and remotely transmitting cathodic protection parameters for long-distance pipelines and station areas.

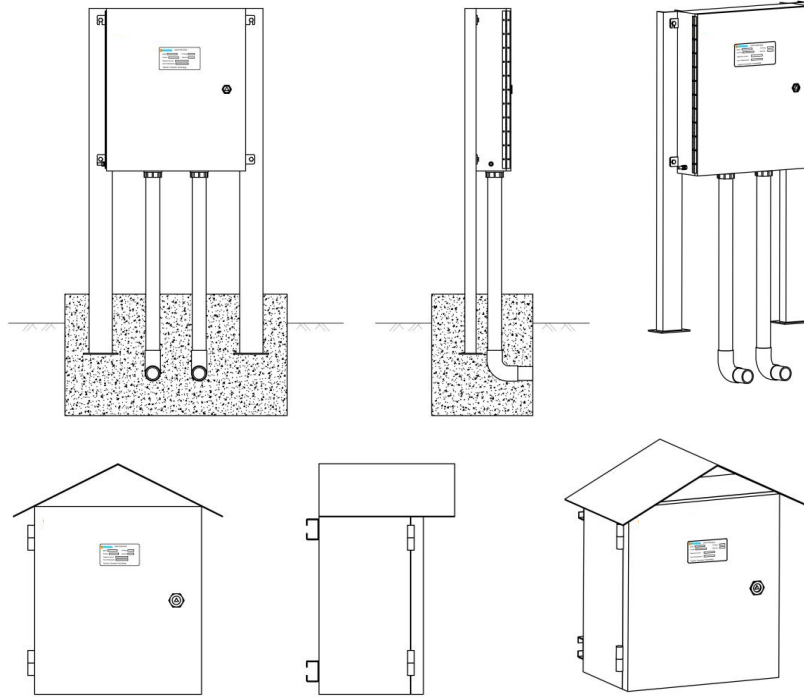


ProSense™

INTELLIGENT TEST STATION

Box Type AT-AP-BT

The box-type model is mainly used for cathodic protection parameter collection and remote transmission for storage tanks, station areas, offshore platforms, and other structures.



Canada

290 North Queen St
Suite 208,
Etobicoke, Ontario
Canada, M9C 5L2

Phone: + 1 416 433 3186

advance-technology.com
consult@advance-tech.ca

For further information, please contact Advance Technology.