

Product Datasheet

IoT Intelligent Power Box

(ONV-IoT9000-DY-SI)



OVERVIEW

The ONV-IoT9000-DY-SI intelligent power box is an intelligent power control system with high integration, strong functionality, and simple use and installation, independently developed and produced by ONV. It adopts a frame structure, providing AC220V, AC24V, DC12V multiple sets of voltage output, detection, and remote control. Embedded high-performance, high-stability intelligent control unit core, which can realize the detection and centralized monitoring and management of equipment such as environmental variables, power information, data communication, and transmission in the power box, with rich interfaces and powerful functions, which improves the reliability of unattended sites. It can simplify the maintenance methods and improve the efficiency of operation and maintenance. It is widely distributed in safe cities, smart transportation, countryside monitoring, smart cities, municipal facilities and environmental management, natural disaster monitoring and monitoring, water conservancy facilities monitoring and monitoring, communication base station monitoring, internal smart security IoT, and other projects.

FEATURE

■ Security

- ◇ The built-in 40KA power supply anti-surge and lightning protection module can effectively reduce the damage to the internal equipment caused by the surge current and ensure the stable operation of the equipment.
- ◇ Provide a power box door alarm switch to detect the status of the box door, prevent the abnormal opening of the equipment box, and support the management platform to monitor the box door status in the real-time, arm, disarm, and other modes.
- ◇ Built-in automatic reclosing, when a leakage, over-voltage, under-voltage, over-current, short circuit, and other power failures occur, it can automatically disconnect and close. When the fault is eliminated, it can return to normal working status. At the same time, the relevant power data and the number of lightning strikes are displayed to the management platform in real-time.

■ Online monitoring

- ◇ Support network equipment expansion (network switch, ONU equipment, etc.), real-time monitoring of network connection status, and remote restart of network equipment improving network connection reliability.
- ◇ Support power box dynamic ring monitoring and real-time linkage with the management platform, including but not limited to unpacking alarm, power failure alarm, network failure alarm, water leakage alarm, temperature and humidity alarm, unpacking lighting, etc.
- ◇ Support multiple types, multiple sets of output voltage, voltage data acquisition, and remote control, support 1*AC220V maintenance power supply, no less than 5*AC220V power output, 2*AC24V power output, and 3*DC12V power output. Each power supply can be individually remotely controlled on/off and power-down alarm.

■ Efficient operation and maintenance

- ◇ The smart power box adopts standard mounting rails, which can be fitted with any pole hoop installation, which is simple and convenient.

- ◇ When the device is online, you only need to use the mobile operation and maintenance application to scan the code, and it can be automatically entered into the management platform system without additional configuration.
- ◇ Real-time linkage with the platform, centralized remote management of the installation location of the smart box, fault alarm, fault location, remote control, automatic dispatch of work orders, etc., real-time monitoring of the status of the smart box, intelligent, automated operation and maintenance.
- ◇ Support GPS positioning function. When the smart box fails and requires manual maintenance, you can directly navigate to the designated location with your mobile phone for on-site repair. At the same time, it supports maintenance operations such as on-site fault picture upload and material application.
- ◇ With a centralized operation and maintenance management cloud platform, through the management platform software, managers can realize the management of front-end equipment, remotely view the real-time front-end equipment operation, and remote control. When the front-end equipment is abnormal, it will generate alarm information and report it to the platform or notify the management personnel. The platform intelligently classifies whether a maintenance work order is generated, and a QR code dispatch order is formed. The maintenance personnel can view the dispatch work order in the application and troubleshoot in time exclude. The centralized management cloud platform has alarm records, historical operation records, fault statistical analysis reports, and operation log records.

PRODUCT INNOVATION

- ◇ High-end R&D customization, automatic reclosing lightning protection, IP55 protection, online operation by mobile application operation and maintenance personnel.
- ◇ OLED display screen is provided in the intelligent power box, and installers or inspectors can check whether the various monitoring signals and status of the intelligent power box are working properly through the display screen.
- ◇ Remote central management platform fault dispatch, equipment online management, safety

protection, open-box alarm design, centralized power supply design, efficient early warning mechanism, voltage and current, temperature detection, remote network control, and restart, etc.

- ◇ Support customizing the working temperature of the chassis according to the requirements of the application environment. When the ambient temperature is higher than the set value, the fan will start to dissipate heat. Set the threshold to ensure that the equipment in the box works in the best condition and prolongs the service life of the intelligent power box equipment.

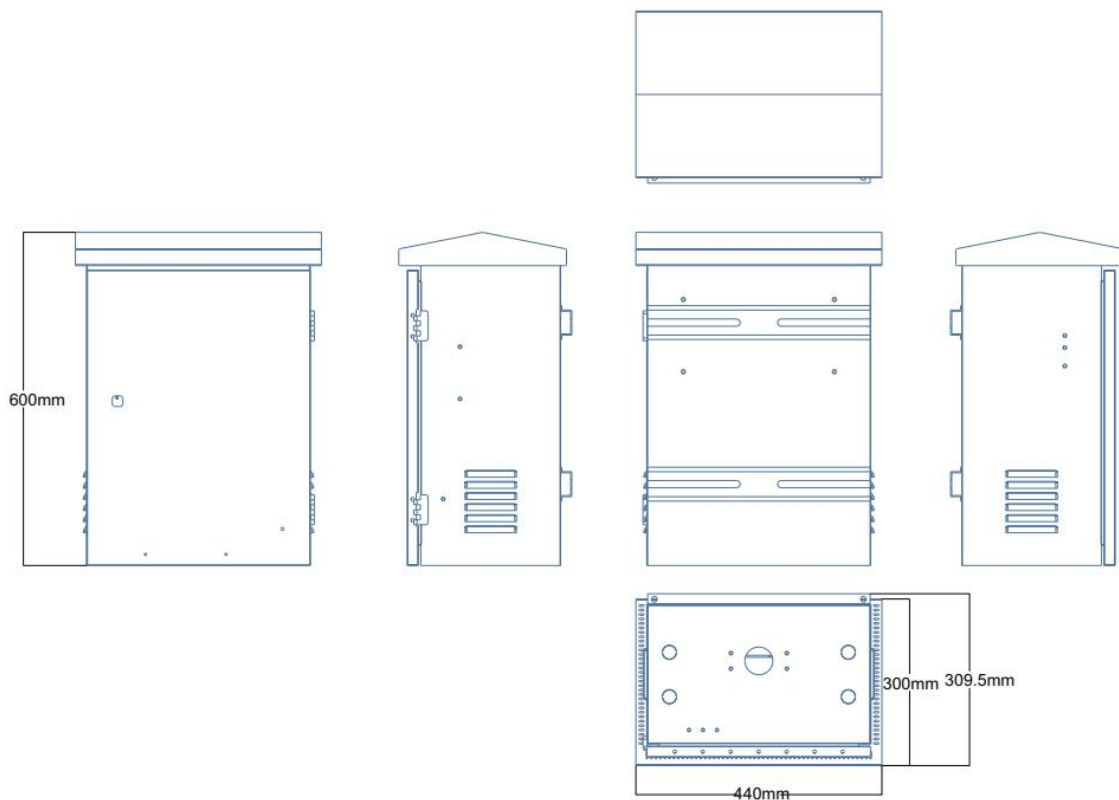
TECHNICAL SPECIFICATION

Model	ONV-IoT9000-DY-SI
Power Configuration	
220V AC Power	1*220V/20A
Air Circuit-breaker	
220V AC Power SPD	1*power SPD: 220V max: 40kA, In: 10KA Voltage protection Level \leq 1.1kV Adding 1.2/50us (8-20us) combined wave of L-N, 2KV does not cause to malfunction, 6KV is non-damaged, the upper limit is 10KV.
Auto-reclosing	Working voltage: 175-275VAC 50-60Hz Rated output current: 10A Electric leakage protection / action time: 30mA/ \leq 0.1S Over-voltage protection / action time: AC275V/2-5S Under-voltage protection / action time: AC145V/2-5S Over-current protection / action time: 16A/2-5S Short circuit protection/ action time: 3 times input current/ \leq 0.1S Detection function before closing, with remote control function
AC200V Power Output	6*AC220V/1A output, the maximum load is 220W, 5 outputs of which support voltage and current detection, support remote on/off control, and 3 outputs are 5-hole sockets.

	1*AC220V maintenance socket, 5-hole socket output (Not support voltage and current detection)
AC24V Power Output	2*AC24V/4A output, maximum load 100W, terminal connection, support voltage and current detection, remote on/off control.
DC12V Power Output	3*DC12V/2A output, maximum load 24W, terminal connection, support voltage and current detection, remote on/off control.
Power Consumption	Standby<20W, Full Load<2000W
Data Control Unit	
Main Control Chip	Flash:512Byte, CPU: ARM 108MHz,SDRAM: 64KByte
Data Port	1*RS232 data, 1*RS485 data, 2*switch input ports, 1*switch output port
I/O Function Port	1*lighting control, 1*door status output, 1*fan control, 1*water leakage detection control, 3*status indicator output
Controlled power Output	6*AC220V, 2*AC24V, 3*DC12V output, support remote control
Ethernet Port	1*10/100Base-TX adaptive RJ45 port for transmission of network control signals
Ethernet Standard	IEEE802.3 10Base-TX, IEEE802.3u 100Base-TX
Data Display	An OLED display is used to display the address of the device and query various status information
Others	
Fan	Built-in DC12V temperature control fan, speed 3000RPM
Box Door Lock	The default configuration is rust-proof fastening mechanical box door lock (electronic lock can be customized)
Disk Fiber Box	Equipped with 1*2 in 2 out disk fiber box, 2*optical fiber connection adapters
Storage Tray	270*160*47mm
Physical Parameter	
Operation TEMP /	-40~+80°C,5%~90% RH Non condensing

Humidity	
Storage TEMP / Humidity	-40~+85°C, 5%~95% RH Non condensing
MTBF	>100,000 hours
Dimension	600*440*300mm
Net /Gross Weight	<23kg / <25kg
Installation	Pole hoop mount
Certification & Warranty	
Lightning Protection	Lightning protection: 6KV 8/20us, Protection level: IP55
Certification	CE mark, commercial, CE/LVD EN60950, FCC Part 15 Class B, RoHS
Warranty	2 years, lifelong maintenance.

DIMENSION



IoT INTELLIGENT POWER BOX (DEFAULT CONFIGURATION)

ONV-IoT9000-DY-SI			
No.	Model	Product Name	Description
1	IoT90-Box-DYX	Seiko chassis	1.2mm thickness seiko chassis Dimension: 600*440*300mm
2	IoT90-175275-16A	Auto-reclosing	working voltage: 175-275VAC 50-60Hz, 16A
3	IoT90-SPD-220AC	AC power SPD	1*AC power SPD 220V max: 40kA
4	IoT90-Data-DYX	Data acquisition control module	Status collection, switch control, remote management function
5	IoT90-PWR-DC12	DC12V power supply unit	DC12V/90W isolated power supply
6	IoT90-PWR-AC24	AC24V power supply unit	AC24V/200W power supply
7	IoT90-LED	LED lighting	LED lighting inside the intelligent power box
8	IoT90-ODF2	2-port disk fiber box and adapter	2 in and 2 out disk fiber box and adapter
9	IoT90-OMS	O&M management software	Cloud platform integrated management platform, consisting of computer and mobile application operation and maintenance

PACKING LIST

	Content	Qty	Unit
Packing List	IoT intelligent power box	1	SET
	User guide	1	PC
	Warranty card	1	PC

Note:The SFP optical module is not included by default and needs to be purchased separately.

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