

Product Datasheet

IoT Intelligent Power Box

(ONV-IoT9000-DY-DG)



OVERVIEW

The ONV-IoT9000-DY-DG intelligent power box is an intelligent power control system with high integration, strong functionality, and simple installation. It adopts a frame structure, providing AC220V, AC24V, and DC12V multiple sets of voltage output, detection, and remote control. Embedded high-performance, high-stability intelligent control unit module, 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, 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 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.
- ◇ Mobile APP supports real-time reception of work order alarm information, and real-time positioning of maintenance personnel's movement trajectory. It supports convenient maintenance operations such as uploading on-site fault pictures and online material claiming. (APP needs to connect to the Internet)
- ◇ Centralized and systematic operation and maintenance can be quickly realized through the management platform software. **The details are as follows:**
 - Support custom fault alarm type and fault alarm priority setting.
 - Support custom editing of network topology and visualization of on-site physical connection platform.
 - Real-time viewing of front-end equipment, unified deployment, unified management, and remote control.
 - Maintenance personnel can view the dispatched work orders through the app and troubleshoot them on time.
 - Support fault alarm records, historical operation records, fault statistical analysis reports, operation log records, work order dispatch records, work order processing execution record reports, and summary analysis and report export functions.
 - Front-end equipment fault alarm information is reported to the platform in real-time or notified to management personnel through information. The platform intelligently classifies whether maintenance work orders are generated and forms QR code work orders.

PRODUCT INNOVATION

- ◇ Data collection. The voltage, current, network, temperature, energy consumption, and other data of remote monitoring equipment can be displayed in real-time.
- ◇ Remote control. For common minor faults such as equipment freezes, the equipment can be remotely controlled to restart, greatly reducing the workload of fieldwork.
- ◇ Fault location. It can accurately locate common fault causes such as equipment failure, circuit failure, network failure, heat dissipation failure, etc., and provide decision support for managers.
- ◇ Permission management. The operating permissions of supervisors can be flexibly set, and business work content can be divided. All operations have detailed log records for backup.
- ◇ Data mining and analysis. The system can archive and store multi-dimensional regulatory data. After data mining and sorting, it can realize applications such as fault classification statistics and trend analysis.
- ◇ Asset management. Inventory the key equipment asset ledger, classify and screen the attributes and operating status of assets, classify and count the availability indicators of assets, and display them intuitively with visual charts.
- ◇ Stable and flexible. The platform software runs on the Linux operating system, which is reliable, stable, and flexible to deploy. It has a communication interface that can be smoothly connected to third-party software systems.
- ◇ Ubiquitous connection. It can connect to various scene perception systems, and the corresponding system data and dashboards can be directly called on the management platform to simplify multi-system access and compatibility issues.
- ◇ Log audit. The platform automatically records logs from sources such as management operations, operation and maintenance operations, work order flow, network security, inbound and outbound traffic, etc., and can generate risk warnings after auditing important logs.
- ◇ Work dispatch management. Reported faults can be dispatched with one click, work orders can be generated and pushed to the APP of field operation and maintenance personnel, and the entire process of work order circulation can be tracked to generate work order KPI assessment reports.

- ◇ Intelligent alarm. When the front-end network, power supply, and working environment are abnormal, the system intelligently triggers early warning or alarm actions through data analysis, pushes the cause of the failure and specific data to the large screen, and accurately locates the alarm location on the GIS map.

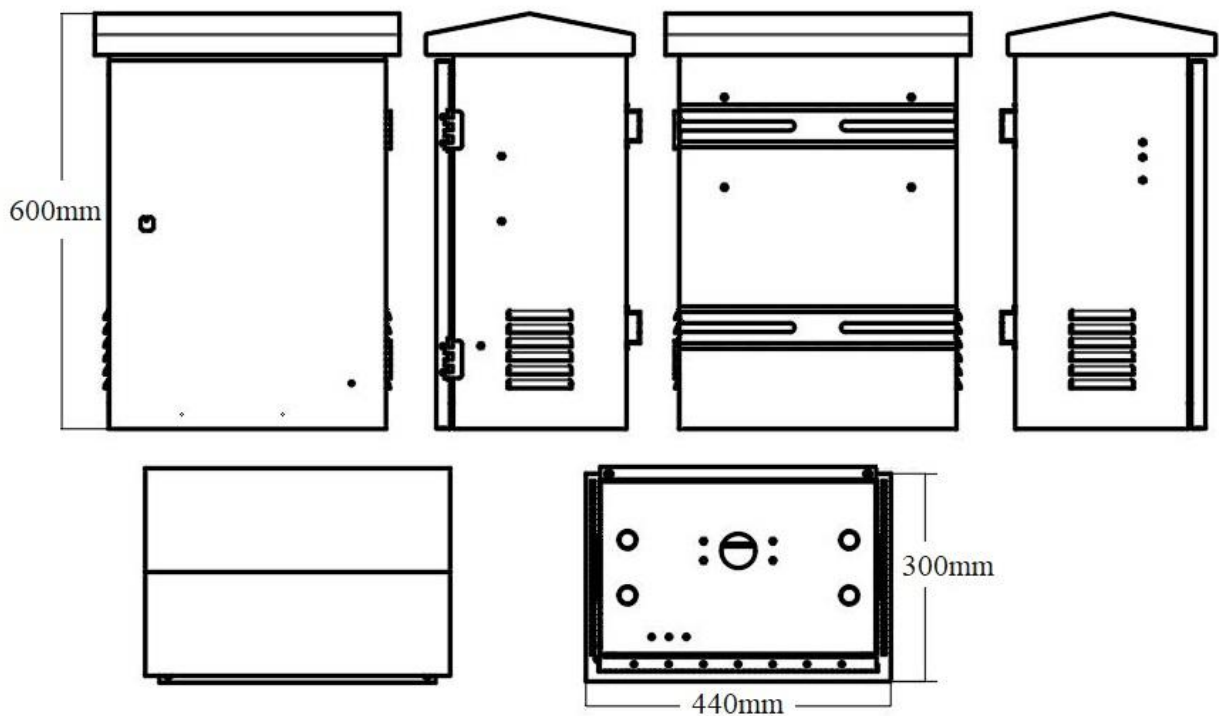
TECHNICAL SPECIFICATION

Model	ONV-IoT9000-DY-DG
Power Configuration	
220V AC Power Air Circuit Breaker	1*220V/20A
220V AC Power SPD	1*power SPD: 220V max: 40kA, Voltage protection Level≤1.7kV 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	Over current protection/ action time: 16A/2-5S Over-voltage protection/ action time: AC275V/2-5S Under voltage protection/ action time: AC145V/2-5S Electric leakage protection/ action time: 30mA/≤0.1S Short circuit protection/ action time: 3 times input current/≤0.1S Detection function before closing, with remote control function Working voltage: 175-275VAC 50-60Hz, Rated output current: 10A
AC220V Power Output	5*AC220V/1A output, max load 220W, supports voltage and current detection, supports remote on/off control. 1*AC220V maintenance socket, 3-hole socket output (Not support voltage and current detection)
AC24V Power Output	2*AC24V/4A output, max load 100W, terminal connection, support voltage and current detection, remote on/off control. (External AC24V power input)
DC12V Power Output	3*DC12V/2A output, max load 24W, terminal connection, support voltage and current detection, remote on/off control.

Built-in Power Supply	<p>1*AC220V input, 3P industrial terminal connection.</p> <p>1*12V/5A output, max load 60W, 2P terminal connection,</p> <p>1*AC220V/5A output, max load 1100W, 2P industrial terminal connection.</p> <p>1 alarm signal output interface (normal low level 0.3VDC, power off high level $\geq 3.3V$)</p> <p>Input voltage range: 90-264VAC 47-63Hz, rated input voltage: 100-240VAC 50-60Hz</p> <p>1*DC12V&AC220V UPS backup power output (backup power duration 5-10S), max load 45W, 3P industrial terminal connection.</p>
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, 1*switch output port
I/O Function Port	1*lighting control, 1*door status output, 1*fan control, 3*status indicator output
Controlled power Output	5*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-T, 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
Box Door Lock	Rust-proof mechanical door lock
Disk Fiber Box	1*2 in 2 out disk fiber box, 2*optical fiber connection adapters
Storage Tray	270*160*47mm
Physical Parameter	
Operation Temp/ Humidity	-20~+55°C, 5%~90% RH Non condensing
Storage Temp/ Humidity	-40~+75°C, 5%~95% RH Non condensing

MTBF	>100,000H
Dimension	600*440*300mm
Net /Gross Weight	<21kg/ <23kg
Installation	Pole hoop mount
Certification& Warranty	
Lightning Protection	Lightning protection: 6KV 8/20us, Protection level: IP55
Certification	CE mark, commercial, CE/LVD EN62368-1, FCC Part 15 Class B, RoHS
Warranty	2 years, lifelong maintenance.

DIMENSION



DEFAULT CONFIGURATION DETAILS

ONV-IoT9000-DY-DG

No.	Model	Product Name	Description
-----	-------	--------------	-------------

7

+86 755 33376606

Optical Network Video Technologies (Shenzhen) Co., Ltd.



1	IoT9000-DG-SI	Galvanized steel box	1.2mm thick galvanized steel sheet. 600*400*300mm(L*W*H)
2	IoT90-CZ250-10A	3-hole socket	3-hole socket 10A/250V
3	IoT90-KK2P250-16A	2P Air circuit breaker	2P bipolar Air circuit breaker 16A/400V, rated short circuit: 6KA
4	IoT90-CH175275-16A	Auto-reclosing	Working voltage: 175-275VAC 50-60Hz, Rated power: 16A
5	IoT90-SPD-220AC	AC power SPD	2P power SPD, rated voltage Un: 220V, Max current capacity: 40KA
6	IoT7000-G530-DG	Box status monitoring and remote control module unit	<p>Mainboard operating voltage: DC12V.</p> <p>Input port: 1*AC220V input, 1*AC24V input, 1*DC12V input, 1*UPS AC220V backup power input port.</p> <p>Output port: 5*AC220V output acquisition and control (single current Max 1A), 2*AC24V output acquisition and control (single current Max 4A), 3*DC12V output acquisition and control (single current Max 2A).</p> <p>1*10/100M RJ45 port, 2*RS485 port, 1*RS485 reclosing communication port, 1*RS485/RS232 hybrid port.</p> <p>I/O port: support 1*box door control, 1*box lighting control, temperature/humidity detection, 1*fan control, 1*power-off detection port.</p> <p>ONV-OMS cloud platform management and APP mobile operation and maintenance management.</p> <p>Support network port and fiber port communication status detection, network watchdog function, remote power-off restart, and</p>

			<p>TFTP batch online upgrade function.</p> <p>The built-in OLED display can query and display the device IP address, input and output voltage and current, temperature/humidity, lightning protection status, box door status, host networking status, and other information in real-time.</p>
7	IoT7000-UPS220-DG	Delay UPS power supply	<p>Rated input AC100-240V, 50-60Hz, output DC12V/7.5A-80W power supply unit.</p> <p>UPS battery charge/discharge function connector, which can realize non-waiting power switching.</p> <p>The battery needs to be purchased separately.</p> <p>This power supply only provides DC12V battery charge and discharge connector.</p> <p>Replace with IoT90-PWR80-DC12, choose one.</p>
8	IoT90-PWR60-AC24	AC24V power supply unit	Rated input AC100-240V, 50-60Hz, Output AC24V/2.5A-60W power supply unit
9	IoT90-LED	LED lighting+Fan	LED lighting automatically turns on when the box is opened and turns off when the box is closed.
10	IoT90-ODF2	Fiber optical cable tray and adapter	<p>2 in and 2 out fiber optical cable tray</p> <p>2*LC/LC or SC/SC fiber optical adapters</p>

PACKING LIST

	Content	Qty	Unit
Packing List	IoT intelligent power box	1	Set
	User Guide	1	PC
	Warranty Card and Certificate of Conformity	1	PC

CONTACT US

ONV Optical Network Video Technologies (Shenzhen) Co., Ltd.

Tel: 0086-755-33376606

Fax: 0086-755-33376608

Email: onv@onv.com.cn

Skype: onv@onv.com.cn

WeChat ID: ONV-PoE-IoT

Website: www.onvcom.com

Headquarter Address: Room 1003, Block D, Terra Building, Futian District, Shenzhen

Factory Address: Building B3, Galaxy Artificial Intelligence Industrial Park, No. 333, Zhongkai 6th Road, Chenjiang Street, Zhongkai High-tech Zone, Huizhou

