User Manual

PowerGate

PGA-M-1DE, PGA-M-4DE, PGS-3-2DE,
PGS-5-2DE, PGS-3-4DE, PGS-5-4DE

Version 2.00
November 11, 2020

Contents

Safe operation

To ensure safe and reliable operation of the devices, please observe the following requirements:

Use the device only for its intended purpose;
Do not use devices that show signs of malfunctioning;
Avoid strong physical impacts on the device;
Protect devices and cables from contact with corrosive liquids;
Whenever a fault is detected in the device, please contact the manufacturer.

Warning!

The device uses hazardous voltage AC 100-230V

General information

PowerGate converter presents is an intelligent PWRDMX/Ethernet/DMX converter protocols, with functions of merging (merging) and redundancy data, and is an effective solution for managing lighting equipment based on the interface DMX512. A special feature of the converter is it's multifunctionality, which is expressed in the possibility various transformations and merging (merging) of protocols PWRDMX, DMX512, RDM (ANSI E1.20), ArtNet (1,2,3,4), sACN (Draft, Release), KiNet (v1, v2), RTTrPL, data transfer of these protocols via a power line up to 400 m long and an Ethernet network with functions and redundancy, as well as the possibility of building different combinations of reception / transmission of signals. To connect an additional equipment and settings via Ethernet the converter has a built-in Ethernet port with a speed of 10/100 Mbit / s. For equipment settings, you can use the built-in web interface, ArtGate Setting program, third-party software manufacturers supporting the ArtNet protocol, or specially developed ARISTO software. The device is designed in a dust-and-moisture-proof duralumin case with an IP65 protection class and can be used at positive and negative ambient temperatures outdoors, indoors, indoors and outdoors. The flexibility in placement of the device is characterized by its compactness, the ability to install on a farm and a horizontal/vertical surface.

Installation

1. Visually inspect the device to make sure that there are no transportation damages;
2. Connect the first device in transmitter mode to DMX signal source, and the second device in receiver mode to DMX-controlled equipment;
3. Connect AC power cable of the device to a power outlet in the network segment which is selected for work. There should be no reactive components such as transformers, surge protectors, etc. between the power sockets transmitter and receiver connected to. Normal operation of the device in any mode starts immediately after switching power on.

Warning!

Before mounting and power up, it is necessary to verify protective earthing and cable connections.

Wireless network configuring (receiver)

1. At power-on the receiver waits for a connection request from the transmitter. In this state the green LEDs on it lights steadily.
2. When connected to the transmitter the receiver LEDs start blinking on every data reception. DMX512 data received from network are sent to the output interface.

Wireless network configuring (transmitter)

1. At power-on the transmitter connects to all receivers connected to all receivers from the same segment of power network. If the DMX data stream at the input connector of this channel is correct the LED associated with it lights steadily green. If there is no data stream the LED starts blinking.
2. DMX512 data taken by the transmitter from the input connector are transmitted to all connected receivers.

Indication

List of possible malfunctions and methods of their elimination:

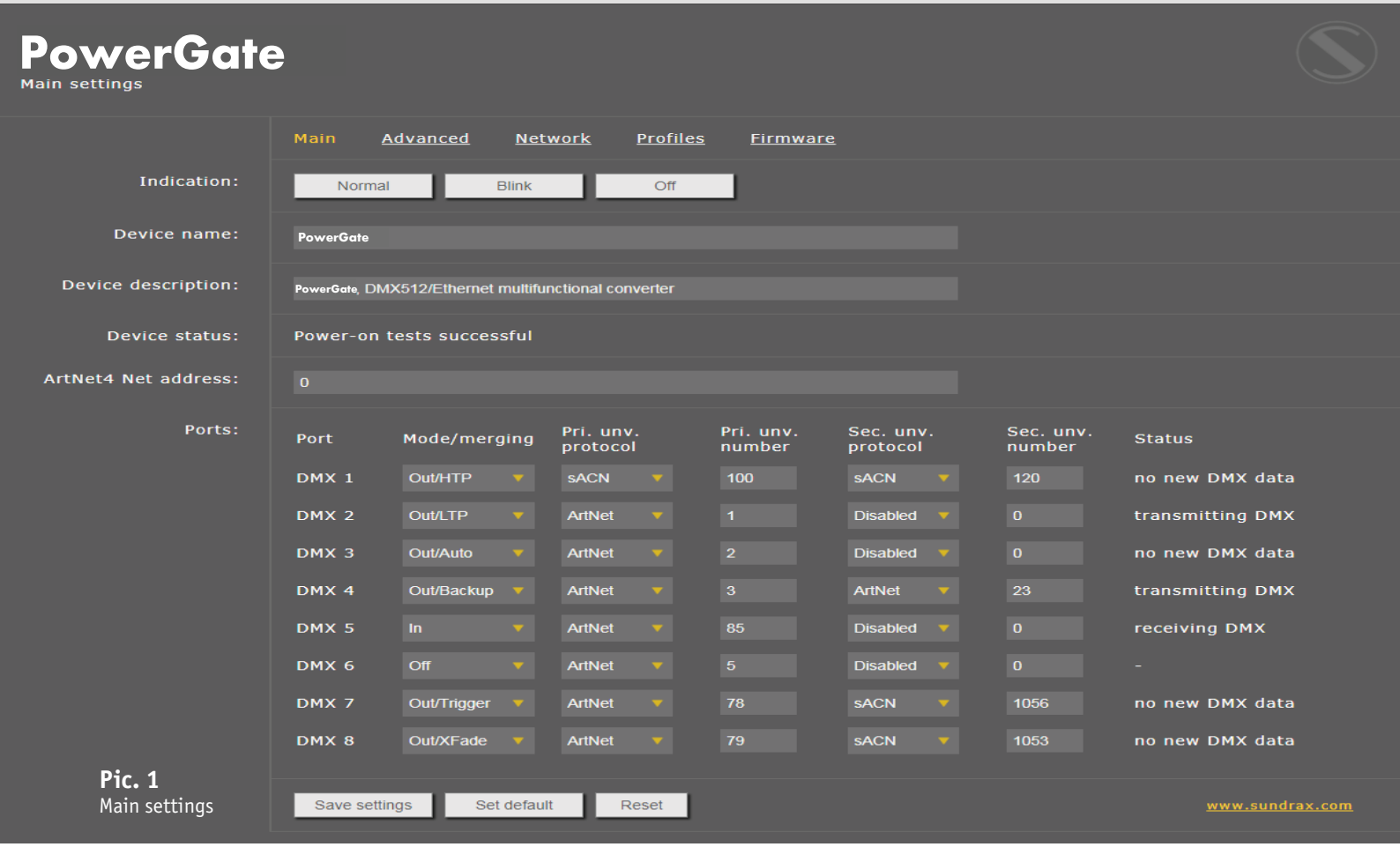
Fault Name, Visual Signs	Possible Reasons	Troubleshootings
The device does not work, neither of the LEDs are lit	There is no supply voltage Supply line fuse is broken	Connect the device to a working power outlet Replace the supply line fuse
No data transmission between the transmitter and one or more receivers	The receivers are in another network segment There are reactive elements present in the segment	Check the network, put devices to the same mains segment Check the network, remove reactive load

Web-settings

PowerGate devices support configuring most of their parameters through the web-interface using HTTP protocol (TCP port 80).

Main settings

To access the settings page enter the IP-address of the device to the browser.
Main settings page of the PowerGate device will be displayed.



Pic. 1
Main settings

Indication – switching LED indication modes:

Normal	Indication depending on the current port status
Blink	Search mode
Off	LEDs are off

Device name	Editable device name (up to 17 characters)
Device description	Editable device description (up to 63 characters)
Device status	Current state of the device
ArtNet 4 Net address	Network number (0-127, only for ArtNet 4)

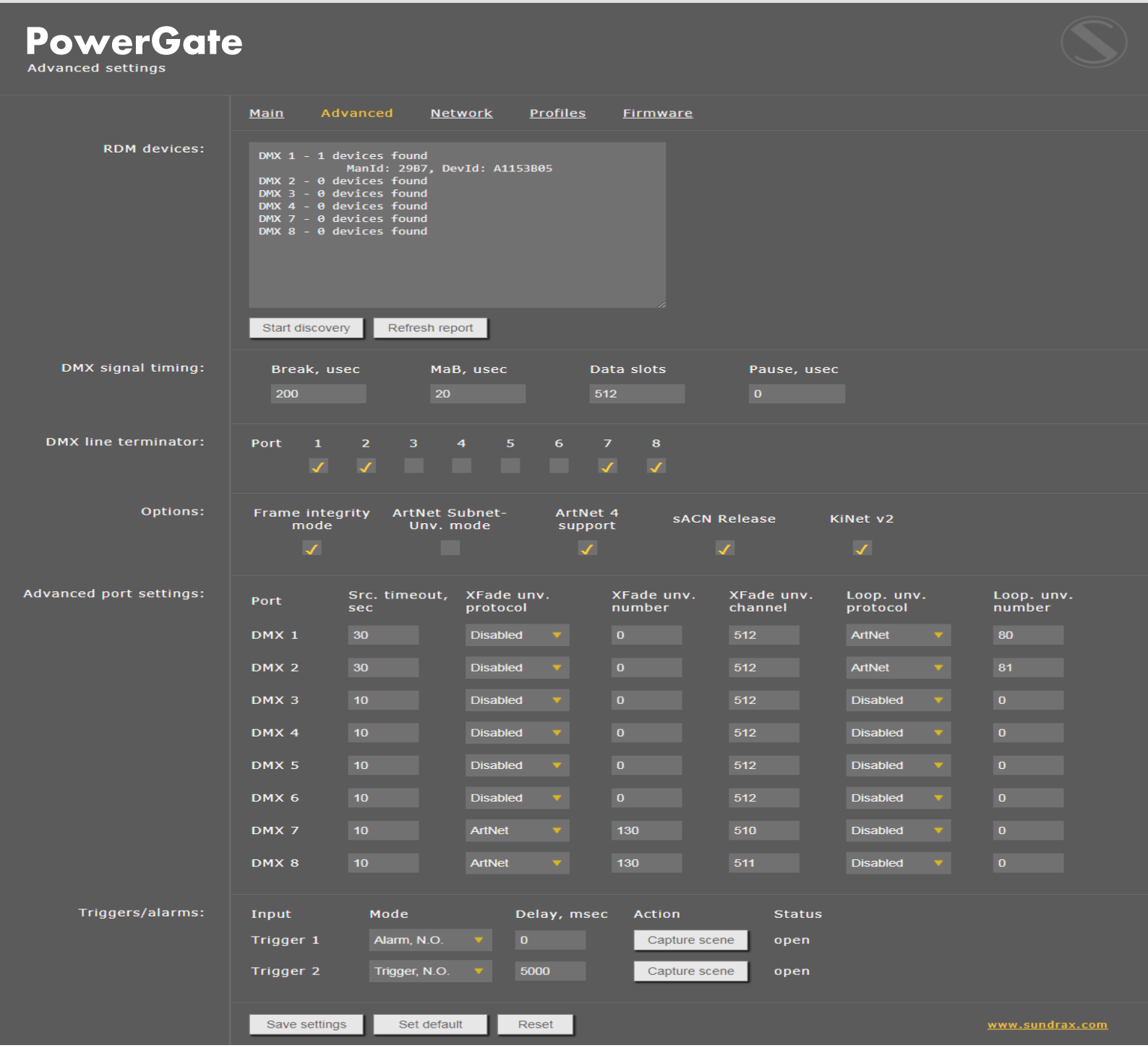
Ports – configuration and status for each DMX ports

Mode/merging	Port direction and merge mode for output
Pri. unv. protocol	Primary universe protocol
Pri. unv. number	Primary universe number
Sec. unv. protocol	Secondary universe protocol
Sec. unv. number	Secondary universe number
Status	Current state of the port

To save the changes in main settings, click **«Save settings»**.
To restore default values of main settings, click **«Set default»**.
To reset to the current saved values of main settings, click **«Reset»**.

Advanced settings

To edit the advanced settings of the device, click on the link **“Advanced”**.



Pic. 2
Advanced settings

RDM devices – RDM devices list, connected to DMX ports:

Start discovery Searching connected devices
Refresh report Refresh search/list state detected devices

DMX signal timing – sets the parameters of the output DMX signal for all ports:

Break	from 4 to 1000 µs
MaB	from 4 to 1000 µs
Data slots	1 to 512
Pause	from 0 to 10000 µs

DMX line terminator – enables (selected) or disables (cleared) termination resistor between D+ and D- wires of DMX line on each port.

Options – enable/disable device features.

Advanced port settings – settings for advanced features for each port:

Src. timeout	Universe source timeout, in seconds
Trigger/XFade unv. protocol	XFade/Trigger control universe protocol
Trigger/XFade unv. number	XFade/Trigger control universe number
Trigger/XFade control channel	XFade/Trigger control channel
Loop. unv. protocol	Loop back universe protocol
Loop. unv. number	Loop back universe number

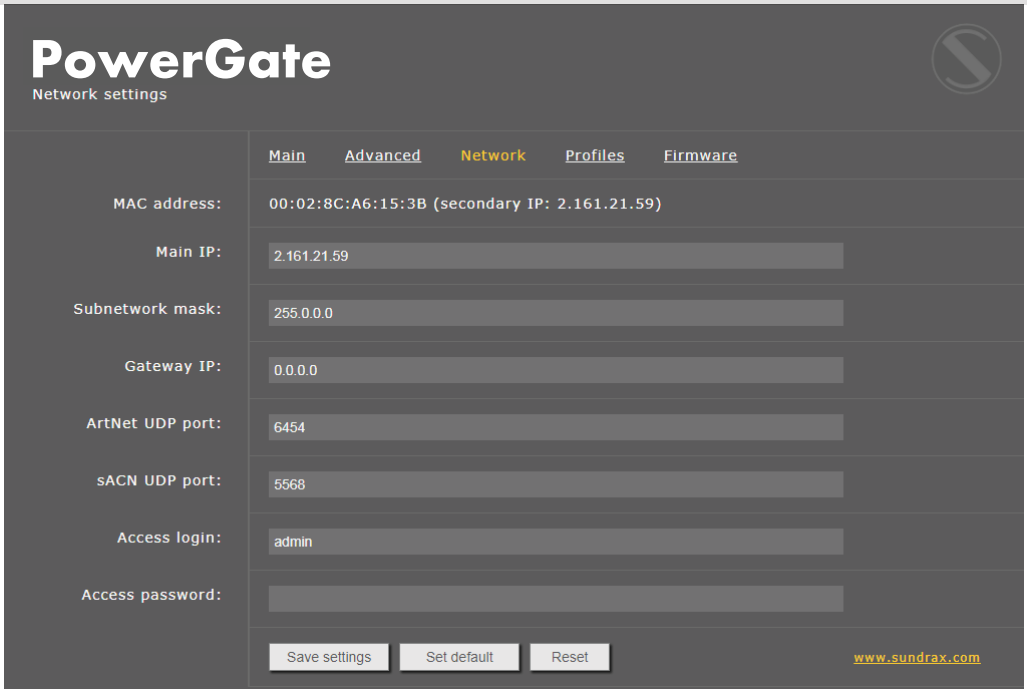
Triggers/alarms – (for PowerGates equipped with Trigger inputs)- setup the mode of Trigger inputs:

Input	Trigger/Sensor input
Mode	Operating mode (disabled, trigger/alarm sensor normally open/closed)
Delay, ms	Delay for triggering in milliseconds
Action	Current status of input (open, closed, active, alarm) Save the current state of all DMX ports as scene to recall on trigger activation

To save the changes in advanced settings, click **«Save settings»**.
To restore default values of advanced settings, click **«Set default»**.
To reset to the current saved values of advanced settings, click **«Reset»**.

Network settings

To edit the network settings of the device, click on the link **“Network”**.



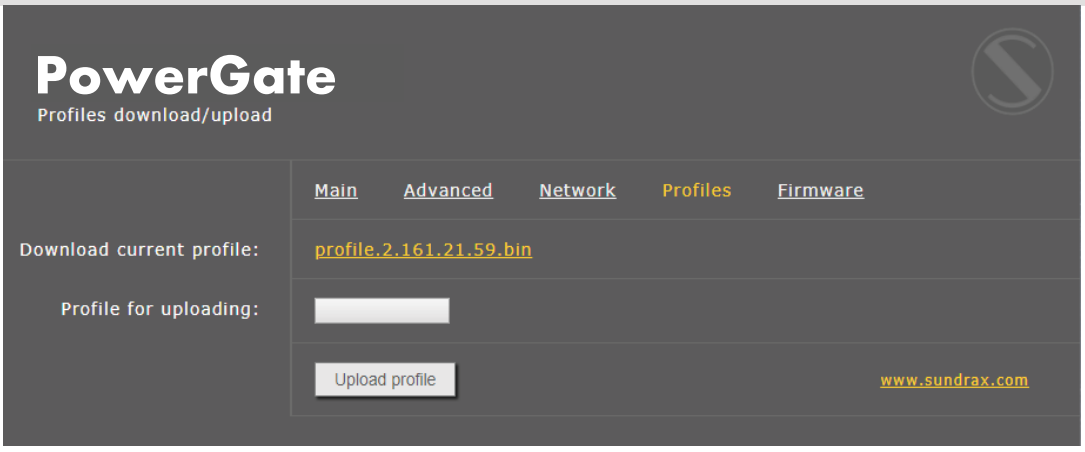
Pic. 3
Network settings

MAC address	Hardware address and secondary (permanent) IP-address of the device
Main IP	Set the main network address of the device
Subnetwork mask	Set the mask of the IP-subnet
Gateway IP address	Set the network address of the gateway (if ability to operate via the Internet is required)
Art-Net UDP port	Set the UDP-port for ArtNet protocol
sACN UDP port	Set the UDP-port for sACN protocol
Access login/password	Login and password for access to web-interface of device. If password is empty, authentification is not performed

To save the changes in network settings, click **«Save settings»**.
To restore default values of network settings, click **«Set default»**.
To reset to the current saved values of network settings, click **«Reset»**.

Profiles

For profile operations, click
on the link **«Profiles»**.

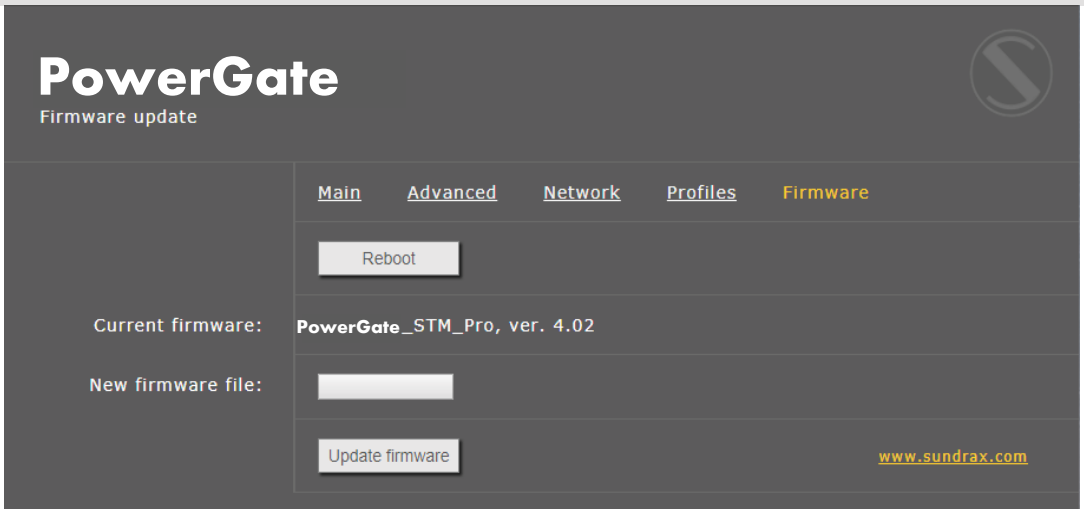


Pic. 4
Profiles settings

Download current profile	Download the current settings as a file
Profile for uploading	Select the file of previously saved profile
Upload profile	To upload the selected profile in the device

Firmware update

To update firmware of the device,
click on the link **«Firmware»**.



Pic. 5
Firmware update

Reboot	Device reboot button
Current firmware	Current firmware name and version
New firmware file	Select firmware file to upload to the device
Update firmware	Upload the selected firmware file

After software update downloading, need to accept updating by clicking button **«Reboot»**.

Technical maintenance

Maintenance, search and troubleshooting should be performed by service personnel. The device should be free from dirt, dents, connecting cables and wires must be intact and securely fastened.

Notes

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