DEPLOYMENT GUIDE

SOMFY DIGITAL ELECTRICITY™

Building happiness

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I. OVERVIEW

Digital Electricity™ is a Limited Power Source which allows to utilize standard 18AWG 2-Conductor Cable without conduit while confirming to the National Electric Code standards for building installations. When the Transmitter and Digital Electricity™ Power Panel for SDN with Receiver are pair together the Digital Electricity™ system is formed.

A fully loaded Transmitter provides 8 channels of Digital Electricity™ up to 600W per channel, total 3000W per unit. Each of the 8 connected Receivers will provide up to 3A at a nominal output voltage of 336V DC per unit.

The Digital Electricity™ Transmitter and Receiver are listed products certified to safety and EMC standards by Nationally Recognized Test Laboratories (NRTLs). If a person or foreign conductor comes in contact with the wiring, power is disconnected, preventing fire, equipment damage and personal injury.

CONNECTIONS

Digital Electricity™ Transmitter

Digital Electricity™ Receiver

**included with Digital Electricity™ Power Panel for SDN #1870628*

LEDs

NORMAL STATES	LED PATTERN	NOTE
Normal Operation	GRN OUTPUT ON RED FAULT OFF BLU SYSTEM BRIEF BLINK(heartbeat)	Normal operation
Boot-Up	GRN OUTPUT OFF RED FAULT OFF BLU SYSTEM BLINK (booting up)	Start-up sequence occurs when power is first applied to the receiver
Pre-Charge DE	GRN OUTPUT BLINK (slow) RED FAULT OFF BLU SYSTEM	Part of normal set-up sequence
Pre-Charge Load	GRN OUTPUT BLINK RED FAULT OFF BLU SYSTEM	Part of normal set-up sequence

FAULTS	LED PATTERN	FAULT CODE	TROUBLESHOOTING
Load Connection	GRN OFF RED BLINKS = FAULT CODE BLU OFF	2 Blinks	Connection problem between Receiver Output and load *Check Receiver Output polarity; Check connections to load*
Overload		3 Blinks	Load Current too high *Reduce load; Check wiring*
Transmitter		4 Blinks	Transmitter power issue *Check Transmitter card(s); Check wiring from Transmitter*
Temperature		5 Blinks	Receiver over temperature *Reduce ambient temp. surrounding Receiver; Reduce load*
Short Circuit		6 Blinks	Short circuit detected between Receiver and load *Check wiring; Check load for short circuit or ground fault*
Internal Failure		8 Blinks	Internal hardware failure *Contact Voltserver*

II. INSTALLATION

MOUNTING & POWER

Digital Electricity™ Transmitter #9026105

- Can be mounted on a standard 19" network rack
- Receives power by a Dedicated AC Outlet

Digital Electricity™ Power Panel for SDN #1870628

- Mount on-wall or in-wall between studs
- Receives power by the Digital Electricity Transmitter

WIRING TO SYSTEM FOR OPERATION

1. Connect a Phoenix Contact Output Connector and 18AWG (minimum) 2-Conductor Cable from an open Output Port on the Transmitter to the open end of the Splice Connector in the DE Power Panel (see Wire Detail below):
   - Max Distance is 1000' using 18AWG 2-Conductor Cable (*Contact Somfy Representative for additional distance requirements)*
   - The minimum wire gauge for use with Transmitters is 18AWG copper conductors; Mutual conductor capacitance max 15-40pF/ft (49-164pF/m)
   - The voltage rating of the transmission wiring between Transmitter and Receiver(s) must be 300Vrms
   - Consider the requirements of plenum vs. riser cabling

III. SOFTWARE SET UP

INSTALL

Download the latest VoltServer ETX8 Discovery Tool software.

Software can be downloaded from: https://www.somfypro.com/services-support/software

- *When possible, install as administrator*

Access the GUI using one of the following supported browsers:

- Mozilla Firefox v52 or later
- Google Chrome v56 or later
- Microsoft Edge

CONNECT

1. Using a standard CAT-5e or higher cable, connect your laptop to the ENET Port on the Digital Electricity Transmitter by one of the following 4 methods pictured below:

DHCP ROUTER WITH WIFI

DHCP ROUTER WITH WIRED ETHERNET

AUTO IP CONNECTION VIA UNMANAGED SWITCH

AUTO IP CONNECTION VIA CROSSOVER ETHERNET

2. Launch the Discovery Tool and then click Discover. This will search the entire network that you are connected to and display all of the Transmitters that it finds.

3. The discovery tool will list all of the Transmitters information on the screen.
4. Click the Connect button for the Transmitter that you want to connect to.

5. This will open a browser window with a login screen. Login info can be found on the side of the Transmitter.

IV. SOFTWARE FEATURES

STATUS

All "real time" device telemetry is displayed on the main Status page:

- Device (Transmitter) Name
- Total System Power
- System Faults
- Device (Transmitter) Serial, MAC and IP Addresses
- Channel Numbers and editable Channel Names
- Channel Power, Status, Faults
- Channel Analog Setpoint (lighting applications only)

Monitor the total power (watts) output of the transmitter in real time under the System Power section on the Status page

Transmitter information can be found under the *Info* section on the Status page

Customize Channel Names:

1. **Select a Channel from the main Status page**
2. **Click on the current Channel name and it will turn into a text box**
3. **Type the new name and click the green check mark to save**

Power for each Channel can be turned off or on with the Output toggle button. It is recommended to turn power off for unused channels.

HISTORY

The **History** tab will allow you to view the history log of each channel.
Select the date range to narrow the search and use the "Export CSV" button to export the data to a file.

EVENTS

The **Events** tab will allow you to find a log of all events on all channels.
Select the date range to narrow the search and use the "Export CSV" button to export the data to a file

POLICY

The **Policy** tab will allow you to Enable and Disable the Dry Contact Input Policies and configure the actions. The Transmitter features a dry contact input enabling the user's system to trigger the policy software to enable features such as load shedding for battery back-up. The dry contact input should be connected to either an open circuit or closed circuit. Do not apply voltage to the dry contact. For details on this functionality contact Somfy Support.

V. SOFTWARE SETTINGS

NETWORK

The *Network* page will allow you to set/change the network name of the Transmitter, set/change a Static IP, or make the Transmitter DHCP.

NETWORK TIME PROTOCOL (NTP)

The *NTP* page will allow you to set the Transmitter to synchronize it's internal clock to the NTP server of your choice, and set a time zone. Enter the server URL and connect the Transmitter to a network with internet access.

ACCOUNT

The *Account* page will allow you to change the account email address, roll and password.

USERS

The *Users* page will allow you to set up different User accounts for the Transmitter. Users can be set up as one of 3 roles: Admin, Operator or Basic. See the chart in the appendix for the rights of each role.

ALERTS

The *Alerts* page will allow you to set up email addresses to be notified when there is an alert. Click on the "Add Alert Recipient" button, enter the email address and click the green checkmark. To delete the recipient just click the red X.

WEBHOOKS

The *Webhooks* page will allow you to set up information to be automatically sent to another server via HTTP with a JSON payload. Create, edit or remove commands in the boxes provided. Apply changes and send a test with the buttons on screen.

SIMPLE MAIL TRANSFER PROTOCOL (SMTP)

The *SMTP* page will allow you to set up, change or remove SMTP Server settings for outgoing mail communication over the network. Refer to the project's network administrator for server information to be populated here.

SIMPLE NETWORK MANAGEMENT PROTOCOL (SNMP)

The *SNMP* page will allow you to set up, change or remove SNMP information email communication. Refer to the project's network administrator for server information to be populated here.

SECURE SHELL (SSH) SERVER

The *SSH Server* page will allow you to Enable or Disable the use of an SSH server and to add Authorization Keys. Refer to the project's network administrator for server information to be populated here.

SOFTWARE UPDATE

The *Software Update* page will allow you to update the Transmitter's Software. Select the update file and click the "Update" button. A progress bar will show you the % that the update is at, and it will prompt you when completed.

FIRMWARE UPDATE

The *Firmware Update* page will show you the current version Firmware on the Transmitter and allow you to update the firmware via the web interface. A progress bar will show you the % that it is at and will prompt you when completed.

DIAGNOSTICS

The *Diagnostics* page will allow you to turn On/Off Error Reporting.

FACTORY RESET & REBOOT

There are 2 recessed buttons on the front of the Transmitter that are used to Clear/Reset the Transmitter to it's factory settings, and to Reboot the Transmitter. Press the recessed button once to trigger the action.

VI. APPENDIX

USER ROLE CAPABILITIES MATRIX

Feature	Admin	Operator	Basic
View status page (realtime telemetry)	✓	✓	✓
View channel status	✓	✓	✓
View device history	✓	✓	✓
View fault events	✓	✓	✓
View system events	✓	✓	✓
Change device name	✓	✓	
Change channel name	✓	✓	
Toggle channel outputs	✓	✓	
Toggle channel live ID	✓	✓	
View policies	✓	✓	✓
Create, edit policies	✓	✓	
Enable or disable policies	✓	✓	
Change own password	✓	✓	✓
Change own email	✓	✓	✓
Create user	✓		
Edit user	✓		
Create/ edit alerts	✓	✓	
Change/ view webhook settings	✓		
Change/ view hostname	✓		
Change/ view network settings	✓		
Change/ view NTP settings	✓		
Change/ view SMTP settings	✓		
Change/ view RADIUS settings	✓		
Change/ view SSH settings	✓		
Change diagnostic reporting	✓		
View software version	✓	✓	✓
Perform software update	✓		
View firmware version	✓	✓	✓
Perform firmware update	✓		

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FOR QUESTIONS OR ASSISTANCE PLEASE CONTACT TECHNICAL SUPPORT:
(800) 22-SOMFY (76639)
technicalsupport_us@somfy.com

SOMFY SYSTEMS INC
SOMFY NORTH AMERICA HEADQUARTERS
121 Herrod Blvd.
Dayton, NJ 08810

FLORIDA
1200 SW 35th Ave.
Boynton Beach, FL 33426

CALIFORNIA
15301 Barranca Pkwy.
Irvine, CA 92618-2201

CANADA
5178 Everest Dr.
Mississauga, Ontario L4W2R4

www.somfysystems.com