SMART

STREET LIGHT

CONTROL

WHAT'S INSIDE?

INTRO

Smart lighting helps cities save energy, lower costs, reduce maintenance—all while better serving citizens and reducing energy use. Leveraging intelligent control systems can rapidly increase lighting efficiencies and traffic management.

With DELPHY's Smart street lighting solution, we offer you the ability to remotely monitor and control street lights, in a fool-proof manner. Keeping in mind different needs of lighting control applications, we offer two tailor-made variants - Bulk street light control and Individual street light control.

We'll guide you to identify your best fit and help you modernize your infrastructure, to maximize operational benefits, energy savings and the overall cost efficiency of your lighting network.

BULK
STREET LIGHT
CONTROL

Bulk street light control solution allows you to switch on or off an array of lights at a time from any location in the world. **DELPHY's smart light controller** is the device we use to achieve this feat. It can safely power many street lights in a locality.

All the switches are connected to a smart IoT network with Wi-Fi based 24x7 internet connectivity. Our interactive web portal allows authorized users to closely monitor any activity in their streetlight system remotely. The switches can also be controlled manually.

FEATURES

Serial Control of Lights

The DELPHY Smart light controller has a power output of 5KW. It can easily control a large number of streetlights that are commonly used in lighting systems.

Workflow Enabled Smart Sensing

The smart lighting system has ambient light sensors & Day light api integrated into it that continuously monitors the light intensity in the surroundings. Users can create customized actions called workflows that can be activated in various light conditions.

Real-Time Monitoring of Electrical Parameters

The smart light controller can detect the following electrical parameters dynamically: **Voltage on all 3 phases, Current on all 3 phases, Power factor, Phase angle, Operating Frequency.**

Protection for the Lights

The smart light controller checks for any unusual activity in the electrical network. Common discrepancies such as overload conditions, phase reversal and phase failure are duly noted and notified to the authorized users via the web portal as well as by SMS.

INDIVIDUAL
STREET LIGHT
CONTROL

DELPHY's individual street light control solution offers you flexibility in controlling lights. At a time, you can remotely switch on or off individual lights as well as the entire array of lights in the lighting system. It also offers flexibility to turn on or off a user-defined combination of lights, say, alternate lights in a row.

Here, each streetlight is controlled by a smart switch that allows remote operation. With a Wi-fi Mesh wireless Connectivity backbone in sync with GSM connectivity, we make sure that all the switches in the network have 24*7 connectivity to the internet as well as with each other. Users of the street light control system can use our web portal to remotely operate the devices, and do a variety of other operations on them.

FEATURES

Electrical Parameter Measurement

DELPHY smart switches can measure dynamic current and voltage readings and provide you power consumption in real time, for the whole system as well as individual lights. Depending on the power consumption values, you can take actions like schedules, routines etc. that help to reduce power wastage.

Workflows with intelligent traffic sensing

Light sensors integrated with the Smart switches help the smart lighting system to operate automatically with workflows, like turning on lights when it gets dark. You can also consider traffic input in the current location while creating a workflow in the dashboard. Eg. Setting a workflow to turn on only alternate lights, when there's heavy traffic (as the traffic itself will suffice for the lights switched off).

Dynamic Fault Detection

Users can view the working condition of the lights, and detect the faulty lights and their position, when they become non-functional. Also it's possible to compare the power consumption of individual lights and their on/off status on the web portal for this. So, if a light is switched on via the web portal, showing zero power consumption, it implies that it has become faulty.

Modular Sensing

Individual Streetlight control was designed by keeping the future in mind. The module has two additional slots in which user can add any sensors in the future.

DELPHY WEB PORTAL

The web portal is the monitoring station for all the functionalities in the street light control system. Users can be assigned different permissions to handle various levels of operations in the portal.
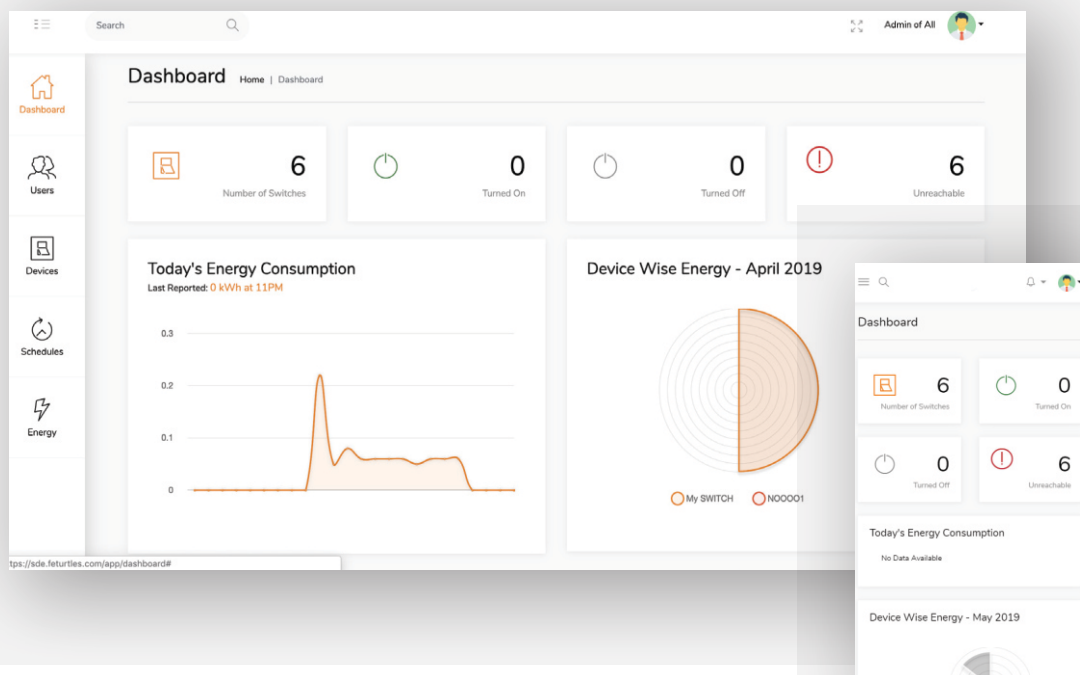
Virtual operation of appliances

Switch on/off lights from any location in the world. View the on/off status, operating duration of the lighting system on the web portal at any time.

Power consumption dashboard

The power consumption dashboard displays the power consumed by the lights in real time. You can see dynamic power consumption as well as weekly and monthly power consumption reports.
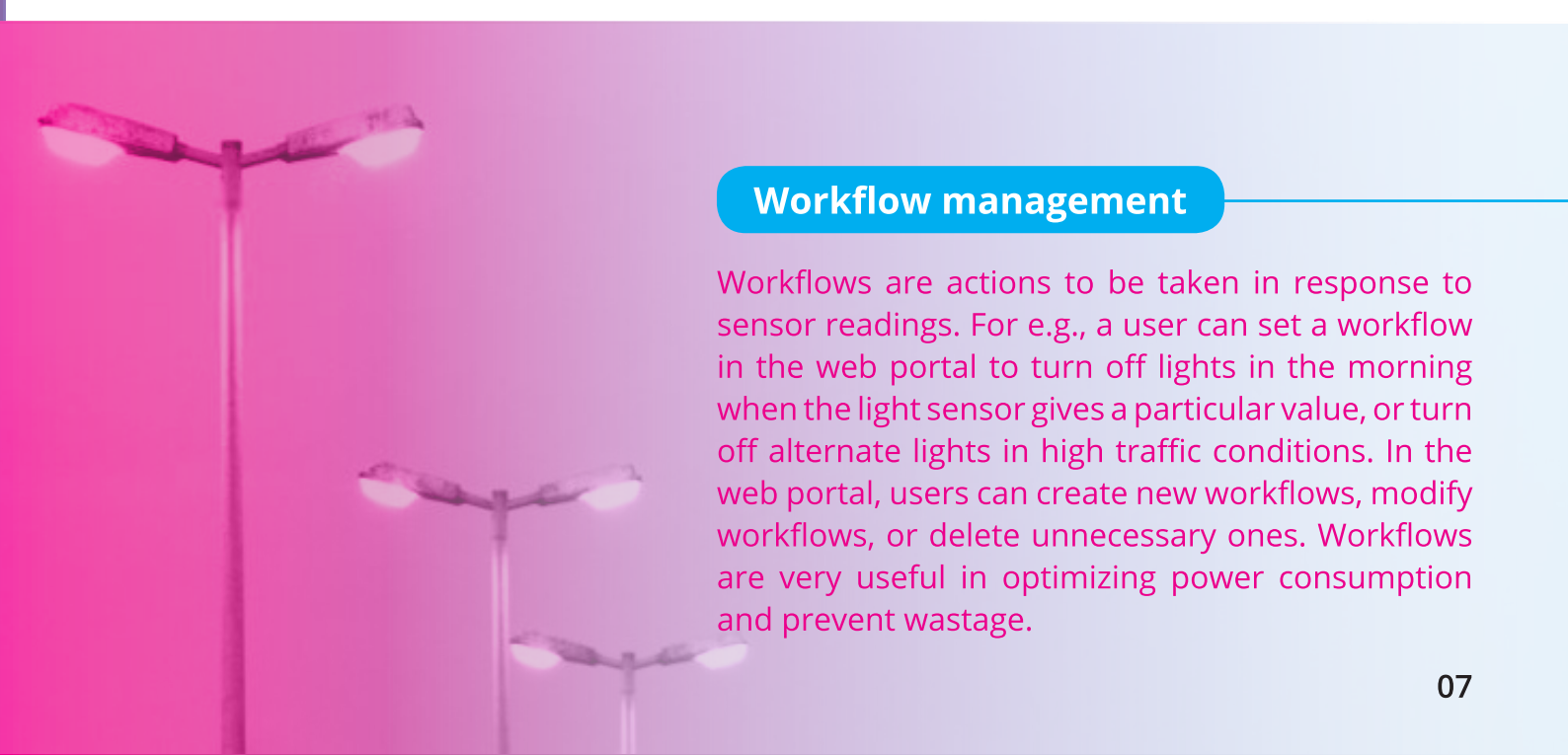
Workflow management

Workflows are actions to be taken in response to sensor readings. For e.g., a user can set a workflow in the web portal to turn off lights in the morning when the light sensor gives a particular value, or turn off alternate lights in high traffic conditions. In the web portal, users can create new workflows, modify workflows, or delete unnecessary ones. Workflows are very useful in optimizing power consumption and prevent wastage.

Auto turn-off timer

Auto turn-off timer feature allows you to set a maximum operating time on the lights after which they'll turn off automatically. For e.g. a user can set the lights to turn off automatically inside the web portal, if it has been switched on for more than say, 12 hours.

Schedules

Users can set schedules on the lighting system. By doing so, the lights can be programmed to operate between preset time intervals. Schedules can also be grouped together. For e.g. A user can set a schedule to switch on the parking lights between 6 pm and 6 am daily, or group different lights like porch lights, parking lot lights, etc...to turn on or off together at a preset time.

Power conservation

Despite being an electricity deficient country, it is common to see street lights working even during the day or unevenly at sunset or at nights. This leads to wastage of electricity. With DELPHY's web portal, employees can use features such as schedules and timers, that ensure that the lights are not switched on during daytime. They can even go one step further to utilize workflows with light sensors so that the lights can turn off automatically when the surrounding becomes dark.

Cost efficiency

DELPHY's smart lighting control has proven to reduce power consumption by at least 30%. By controlling the lighting system using the web portal, you can reduce unnecessary expenses due to power wastage, lax attitude of the employees and poor maintenance efforts to improve the operating efficiency of the lighting system by a significant margin.

Prevention of unnecessary maintenance costs

Firstly, there is no baseline data that shows the number of faulty lights. Also, there is no data to understand which make of lights work or don't work and their lifetime. This could lead to high failure rate of devices. And in most cases, detecting the faulty ones and maintenance undertakings end up being a costly time-consuming affair. In our system, faulty lights can be identified as soon as the lights are turned on.

Electricity theft detection

Electricity theft is a major issue in many countries. There is no data on the amount of electricity consumed by each light, or on a broader level, even how much a phase consumes; thus, there is no way of determining if there is a leak somewhere in the line. With DELPHY Smart street light control, you can get accurate data about power consumed by the lighting system, even in the individual lights.

SPECIFICATIONS

Bulk Streetlight

- Storage/operating temperature- up to 90 degree Celsius
- Mounting type: pole and surface
- Mounting orientation: vertical
- 3 phase 3 wire connection
- Input: 340-450 VAC
- Output: up to 10,000W
- Electronic board Power Consumption Max. 9W
- GSM/GPRS connectivity (2G) - NbIoT Support in future
- Metal box: weather proof ABS plastic
- Contactor: SG
- Power measurement with +/- 0.5% accuracy

Individual Streetlight

- Connectivity: Connects to 2.4 GHz, Wi-Fi 802.11 b/g/n/Wi-Fi Mesh
- Input: 100-240V ~ 50/60 Hz
- Output: Max power o/p – 1000W on each load

DELPHY™
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