

interact

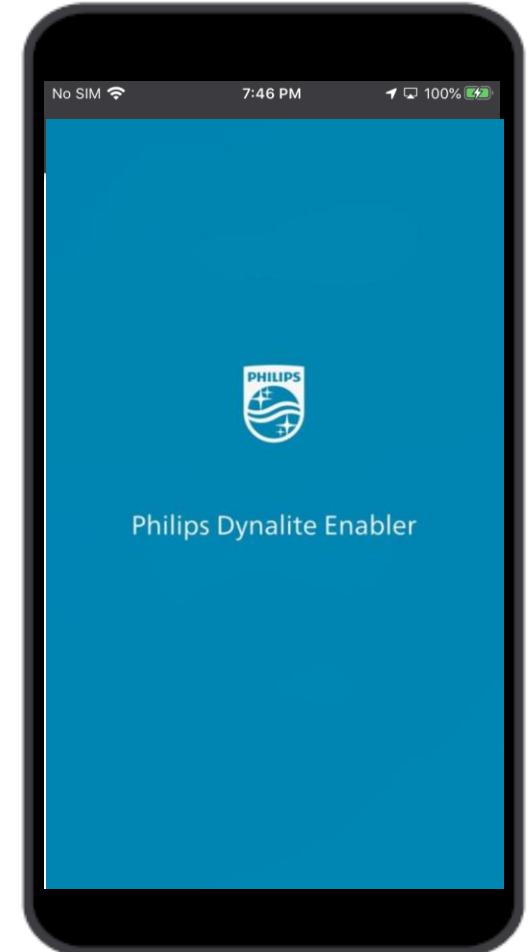
System architecture

Architecture FLX - Multisite

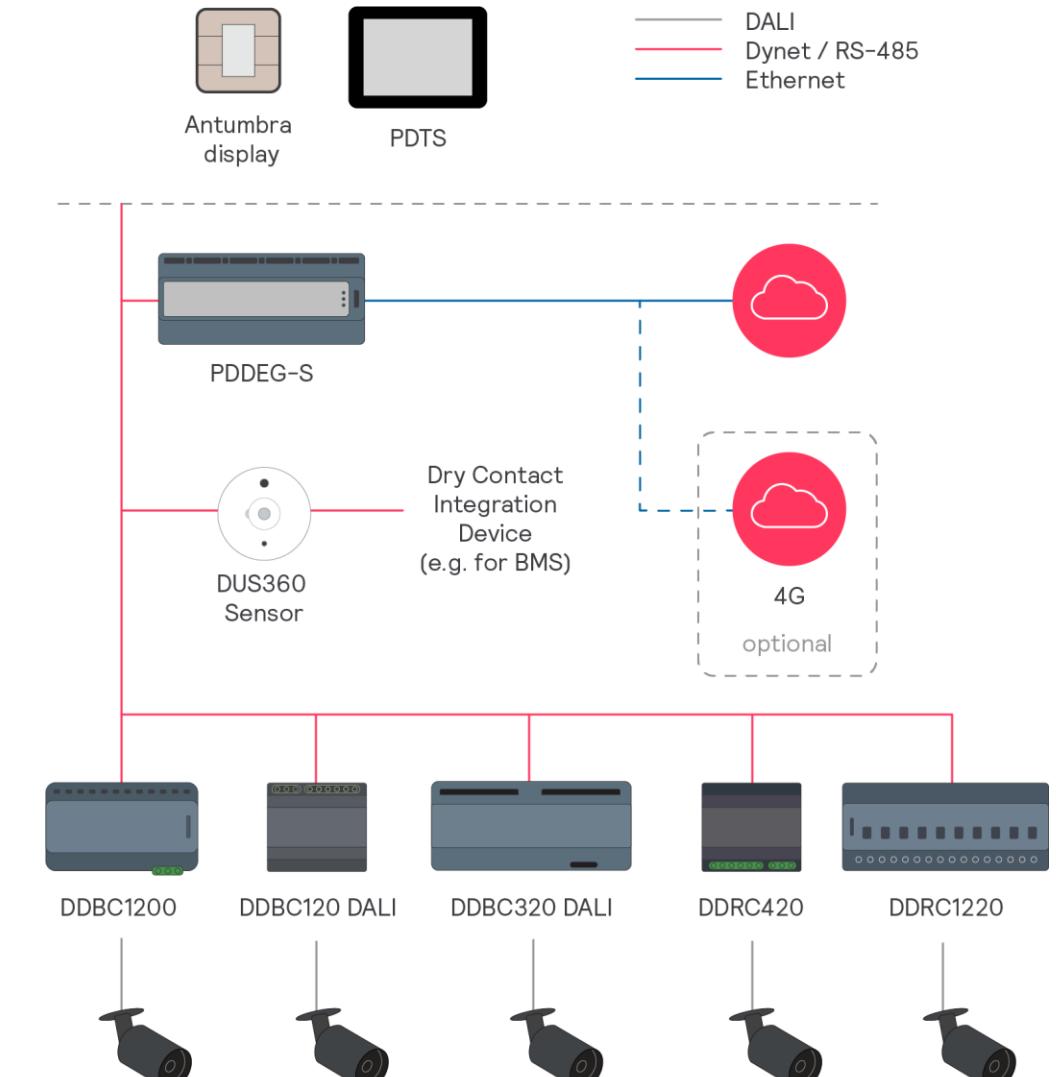
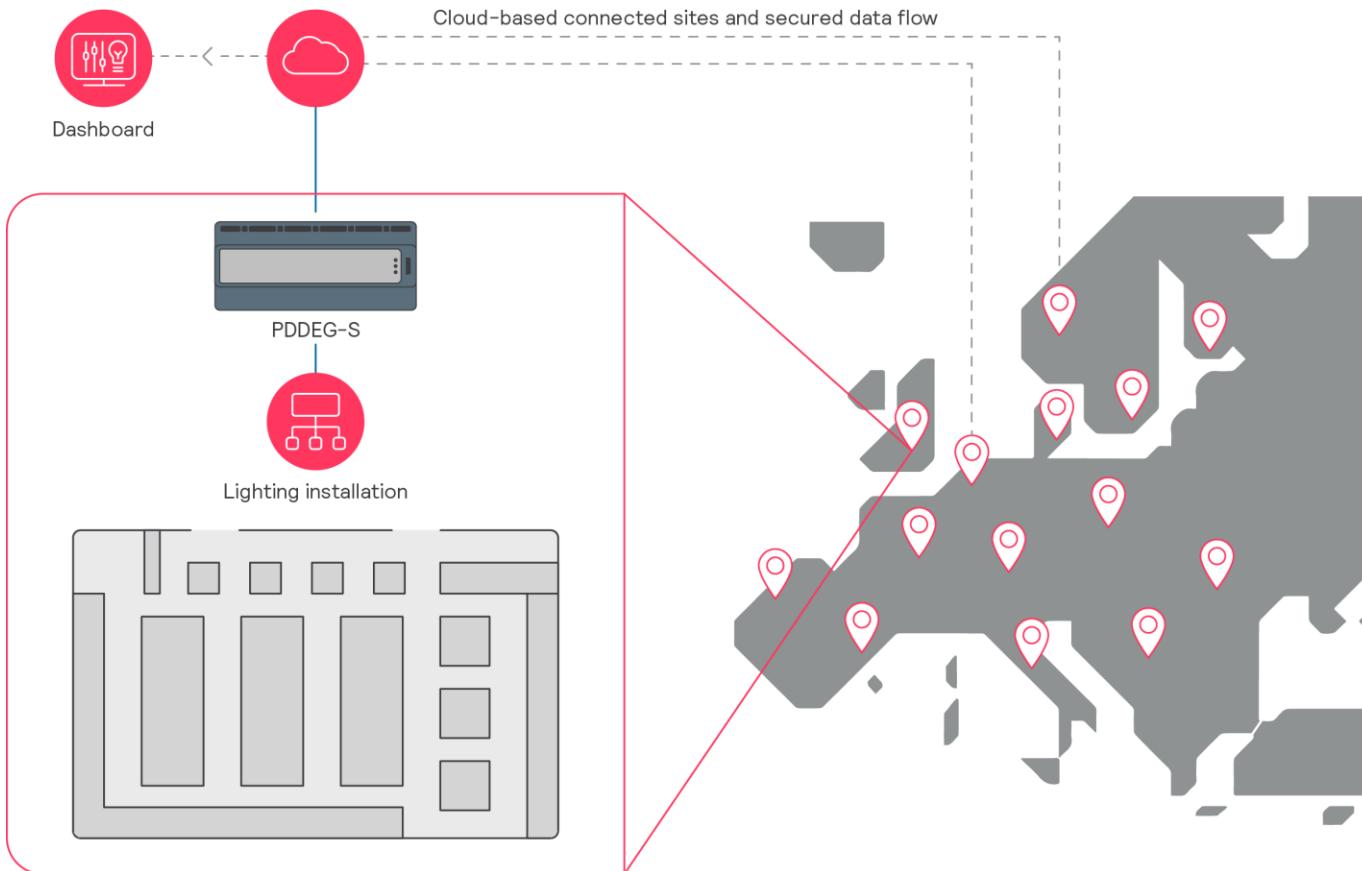
Lesson review | System architecture

In this lesson, you will learn:

- Why the PDDEG-S gateway is required
- How the cloud connection can be achieved.
- Which BMS integration possibilities are available.
- Which tools have been developed to facilitate store installations.



Multisite architecture



Multisite architecture | products & tools

End user UI's

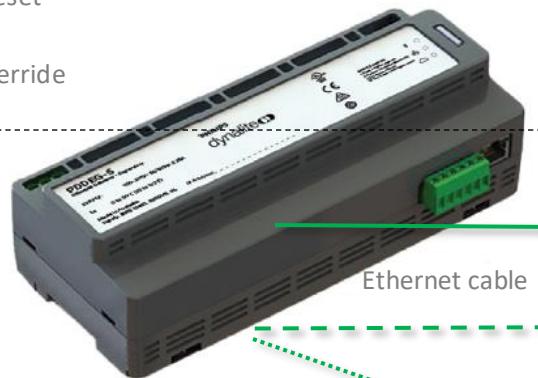


Antumbra panel UI

- Manual preset selection
- Manual override

Store-Gateway

Ethernet
Gateway
Supervisor
PDDEG-S

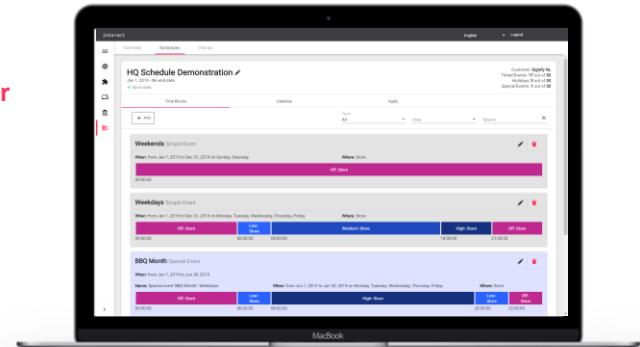


Ethernet cable

Ethernet Switch



Internet via
Customer IT,
incl firewall



Controllers



DALI cable



DALI cable



DALI cable



Power Cable



Power Cable

(DALI)
Luminaire
portfolio

EXIT



Commissioning tools

interact

Interact Multisite System Manager (MSM)

- Scene creation and editing
- Schedule creation and editing
- System Status

Philips Dynalite Enabler app

- Provisioning of gateway to cloud
- Activate template deployment
- Functional validation of site

System Designer / System Builder

- Template to shorten the onsite commissioning effort.
- Off-site preparation is executed by system engineer

IT requirements – customer IT

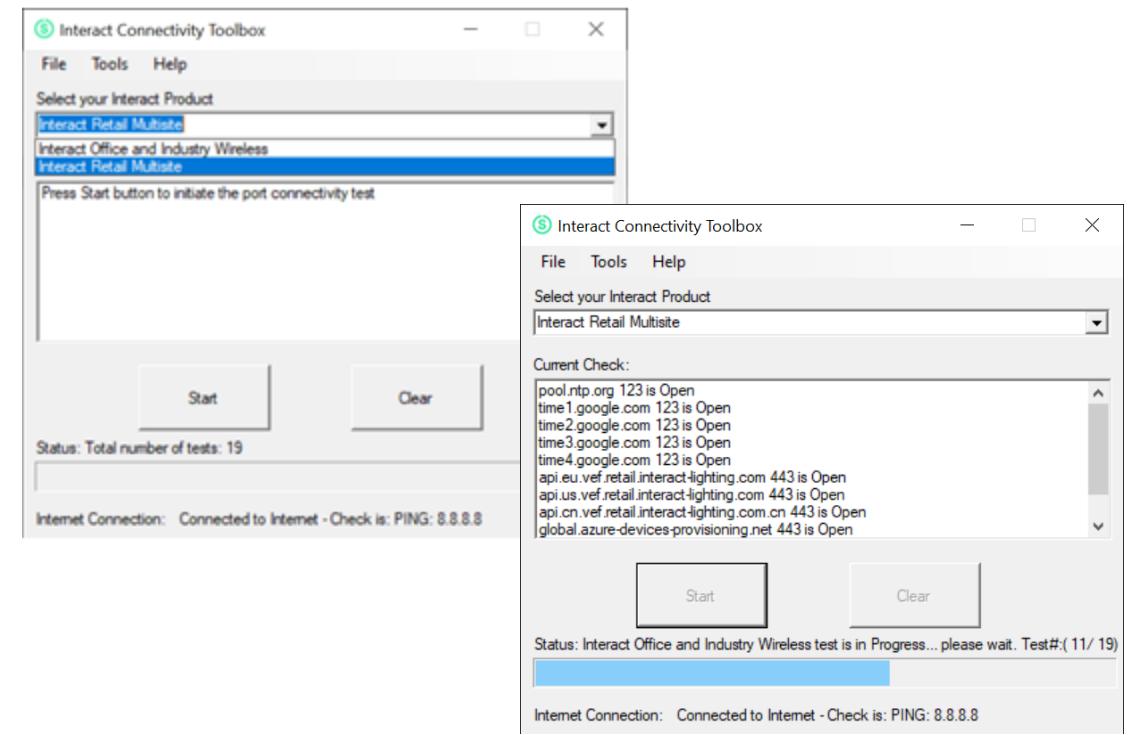
Connectivity provided by customer/retailer:

- Fully available and functioning @ day of installation
- Secure internet connection 24/7
- Open ports for outbound communication (details in table below)
 - Optionally we provide list of endpoints that need to be whitelisted on the Firewall → Security Statement document, Appendix A
- NTP (network time protocol) enabled
- Provide DHCP server (also static IP supported)
- Firewall preventing inbound connection
- MDNS discovery enabled (local at store), (only for System builder)
- No proxy
- No 802.1x network access control
- Access to DNS service available
- Network protocol: we support both: ipv4 & ipv6 (default: ipv4)
- Nice to have: Provide separate VLAN for lighting
- Expected traffic per site: up to 1GB / month

Device	Port & Protocol
PDDEG-S	<ul style="list-style-type: none"> • 53 DNS (outbound only) • 123 NTP (outbound only) • 443 HTTPS (outbound only) • 5671 AMQP (outbound only) • 8883 MQTT (outbound only)

IT connectivity test tool

- This tool simplifies the audit of the IT infrastructure of a customer, validating if it is ready to install Multisite.
- It can be used by both the customer and the installer.





Lighting management

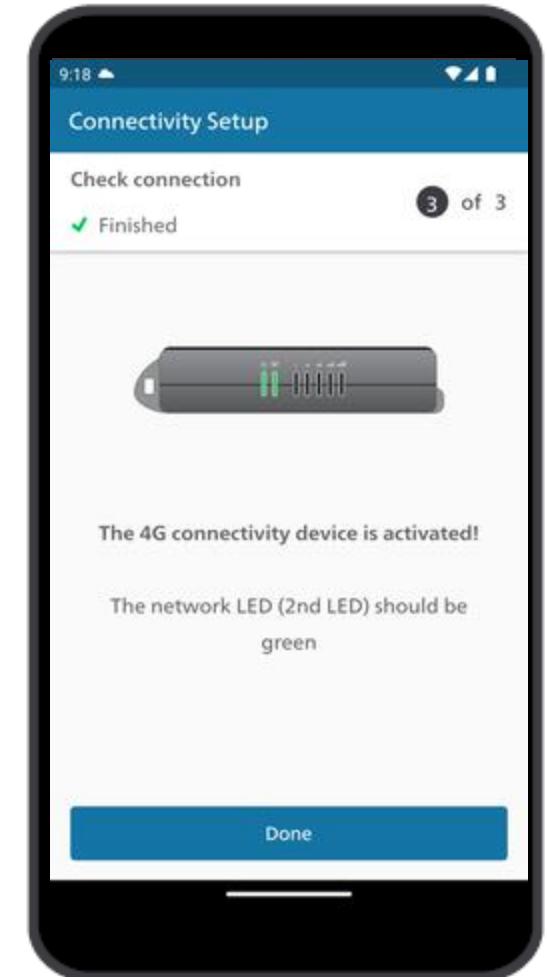
4G mobile connectivity

In case fixed line connectivity is not possible, we can offer powerful wireless connectivity from the day of commissioning

- ✓ Hassel free installation and commissioning
- ✓ Includes a secure 4G IoT router delivered in partnership with Vodafone
- ✓ Managed data bundle
- ✓ Broad EU/US coverage: 30 countries



- Austria
- Belgium
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Germany
- Greece
- Hungary
- Ireland
- Italy
- Latvia
- Lithuania
- Luxembourg
- Malta
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- United Kingdom
- United States

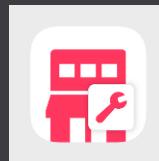
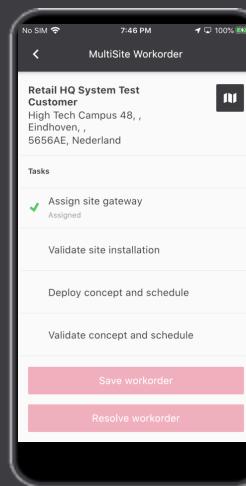


More details in "System guide" and "Commissioning guide" @ Partner portal

Installation and maintenance made easy

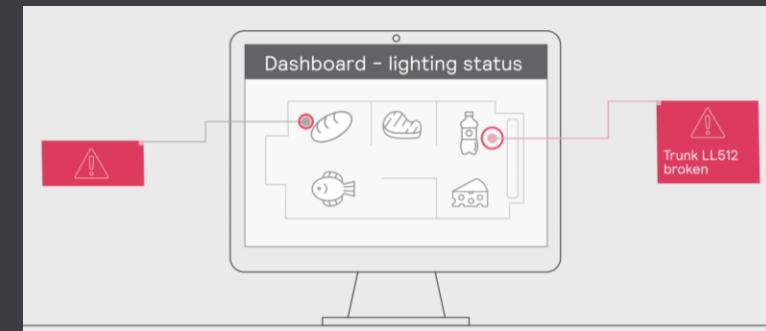
Installer based commissioning

We prepare the digital twin of the lighting system upfront, simplifying the on-site commissioning effort so it can be done by your installer. We provide the installer with an easy-to-use app that guides him step by step through commissioning and validation.



Self healing

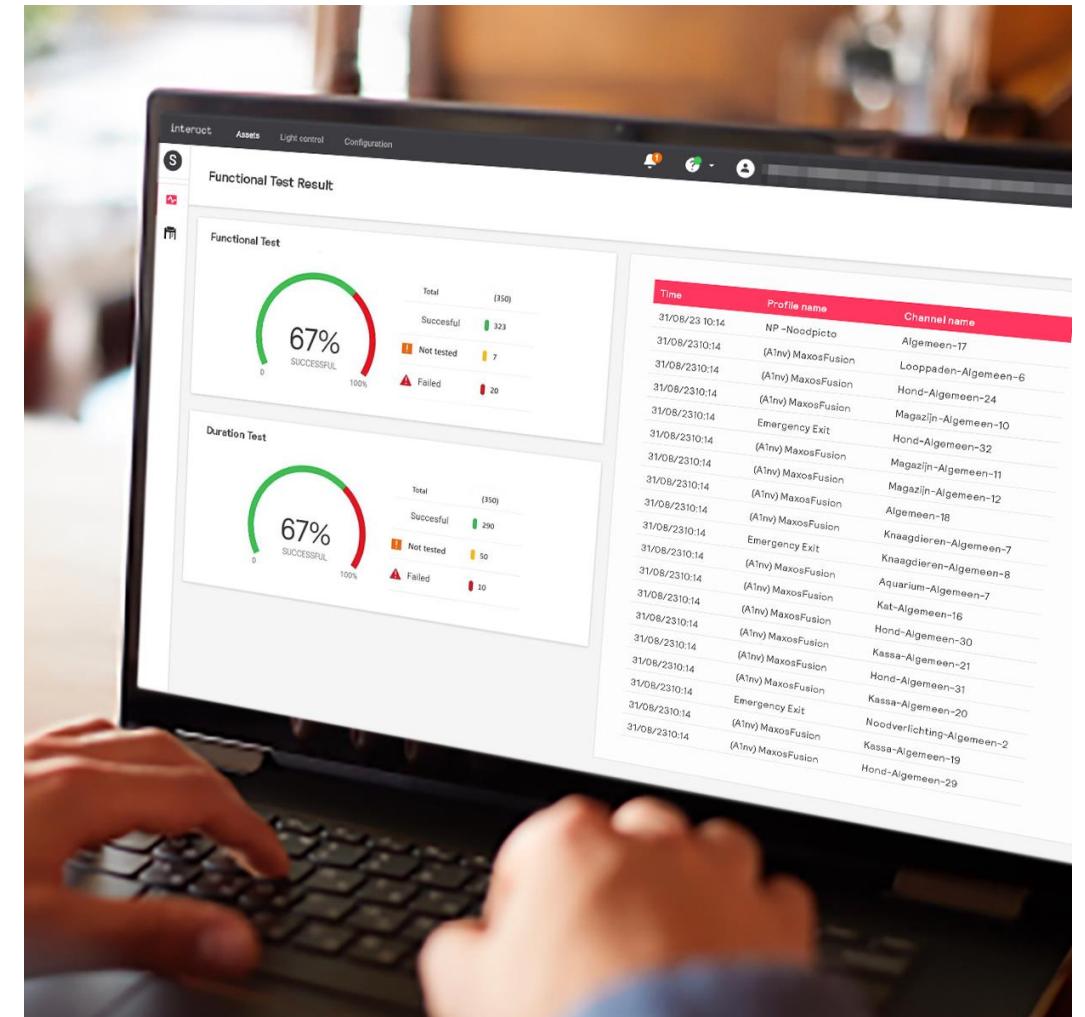
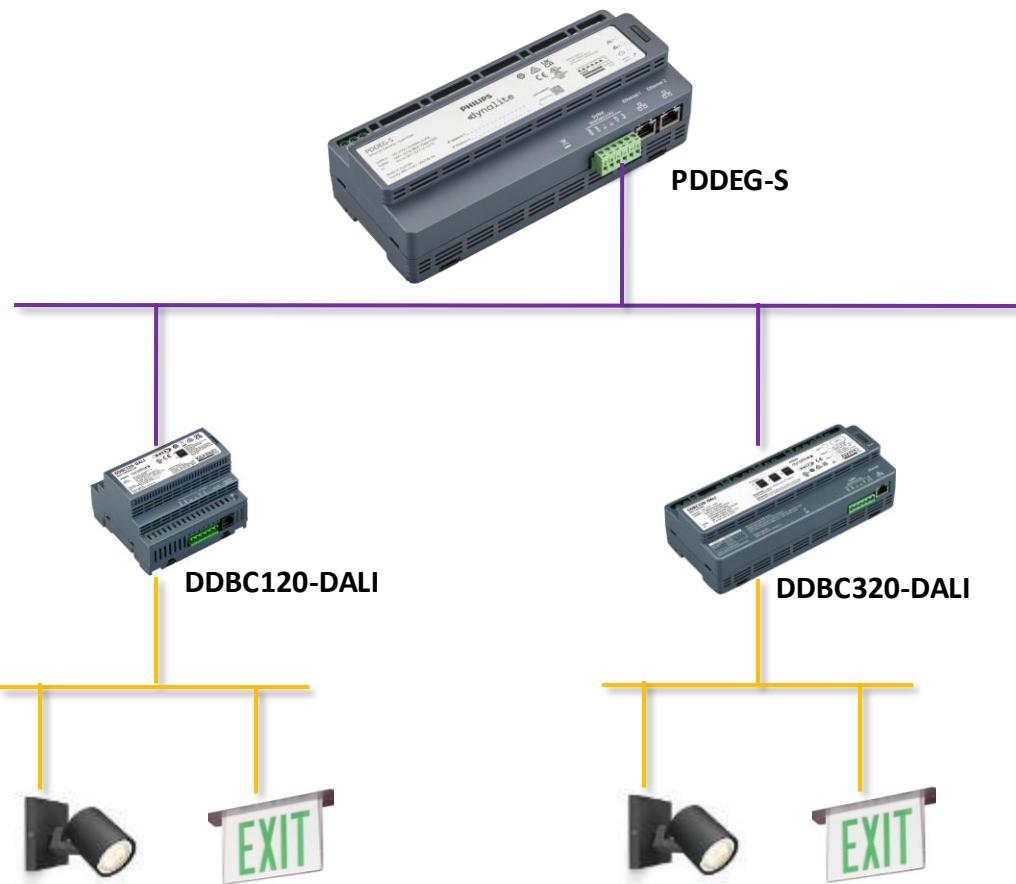
Our Multisite solution has an addressable infrastructure that automatically detects a driver or luminaire replacement and swaps the DALI address from old to new.



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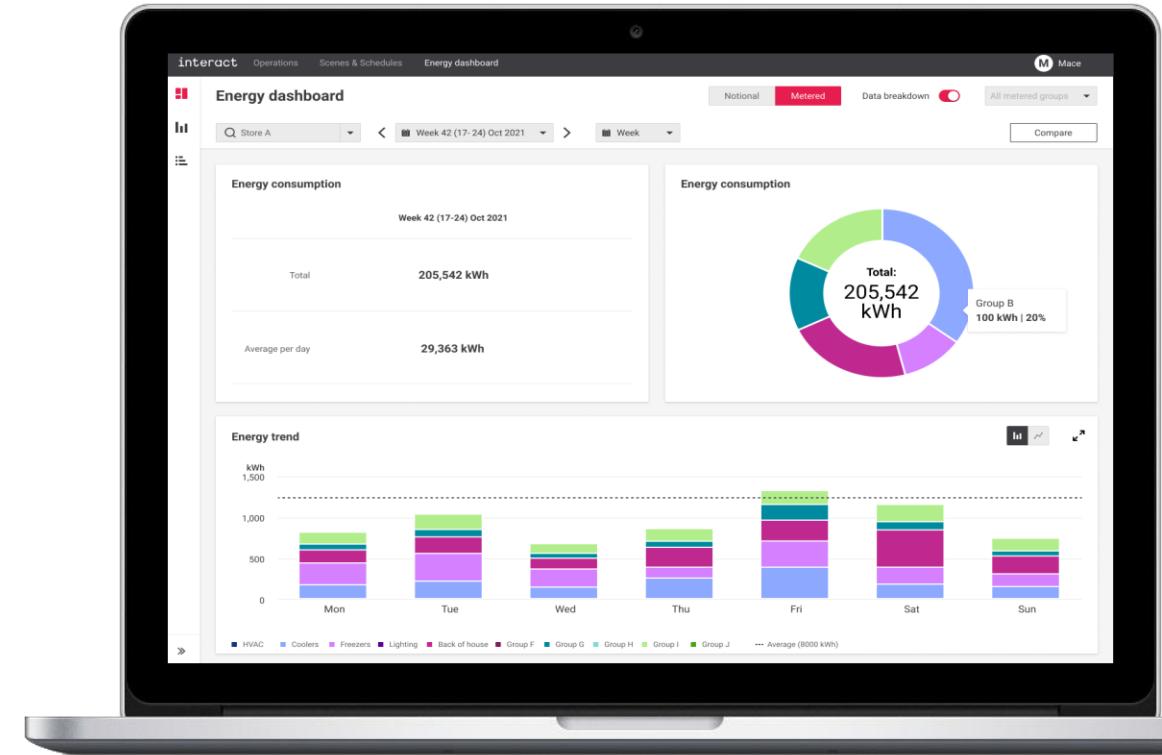
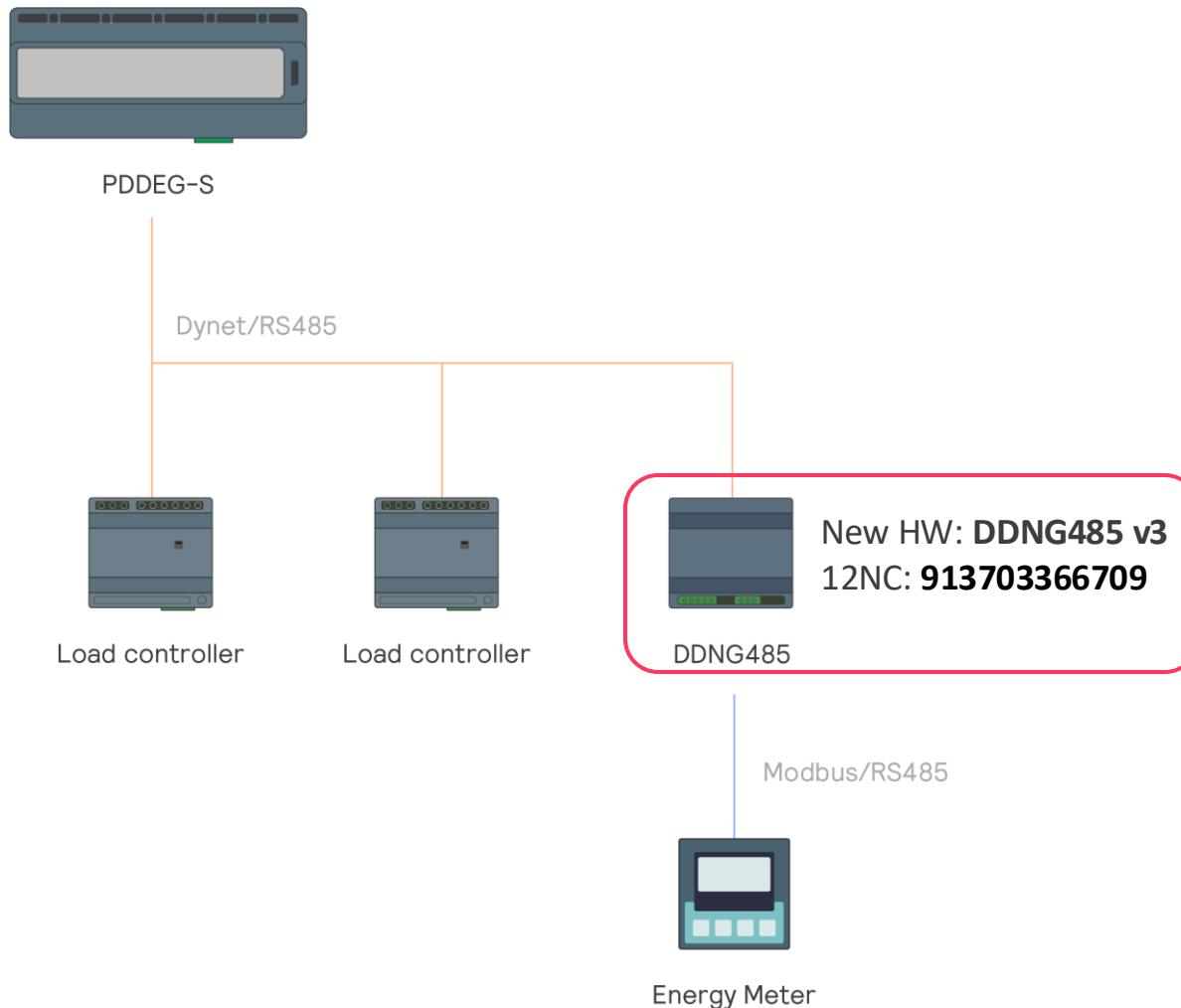
Connected Emergency Light Testing | Supported controllers

Emergency Light Testing



Multisite metered energy | Modbus RS485

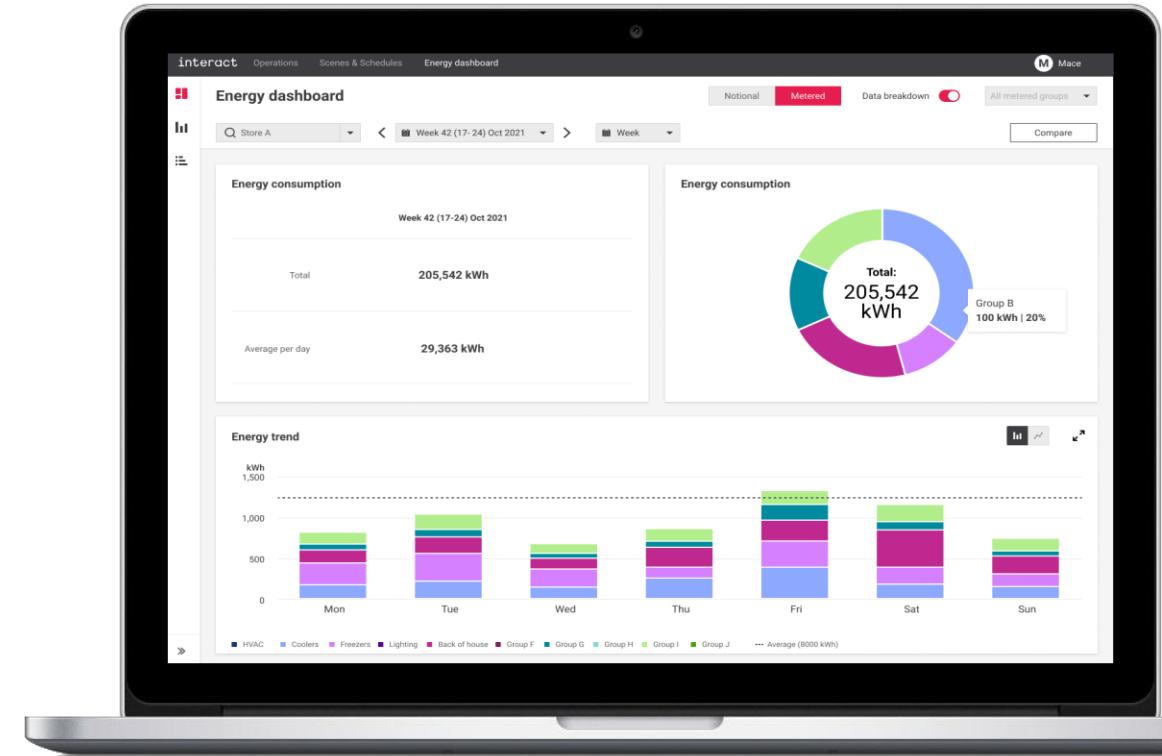
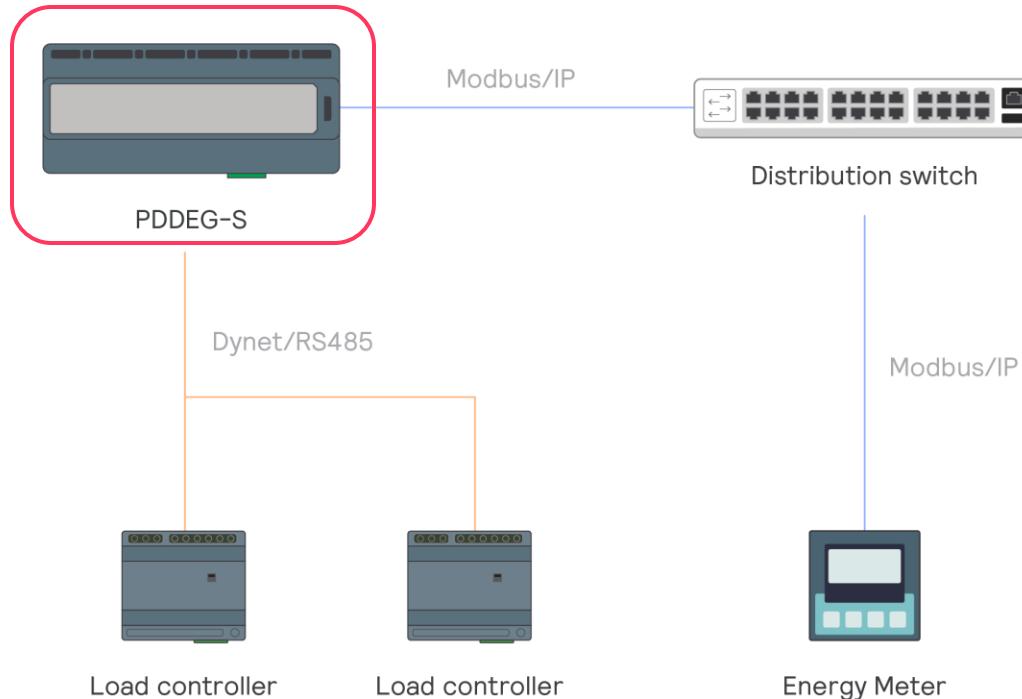
Modbus RS485 - with new DDNG485



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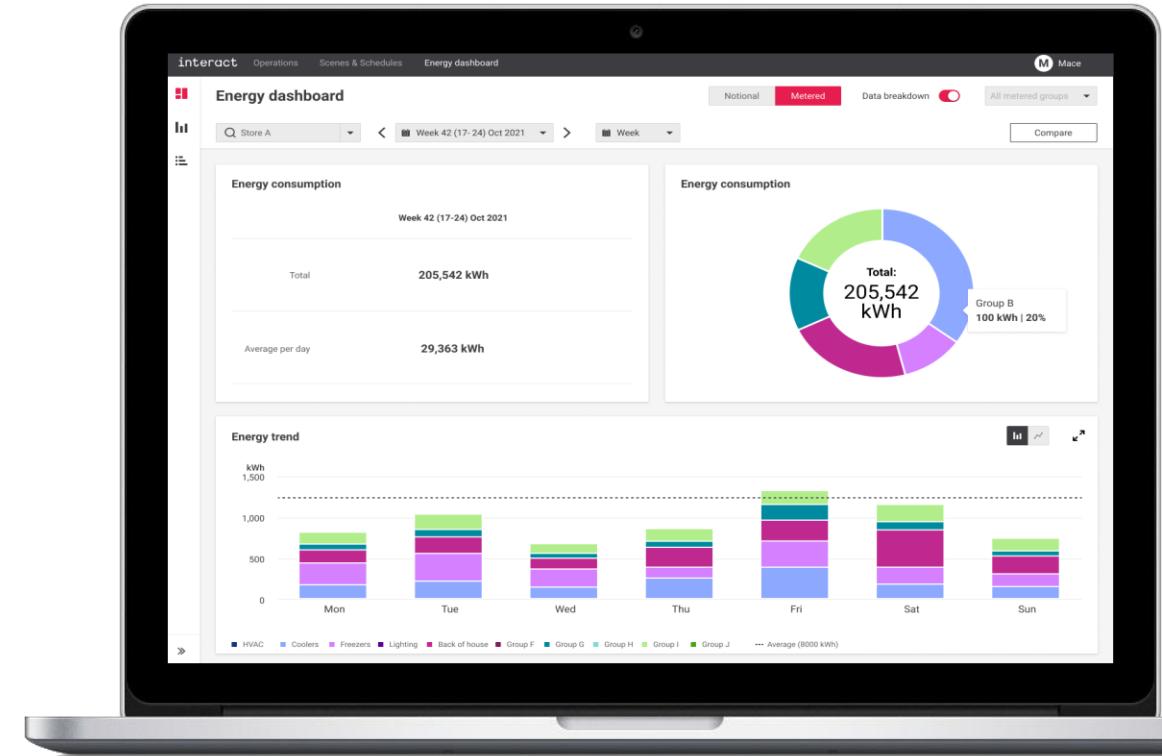
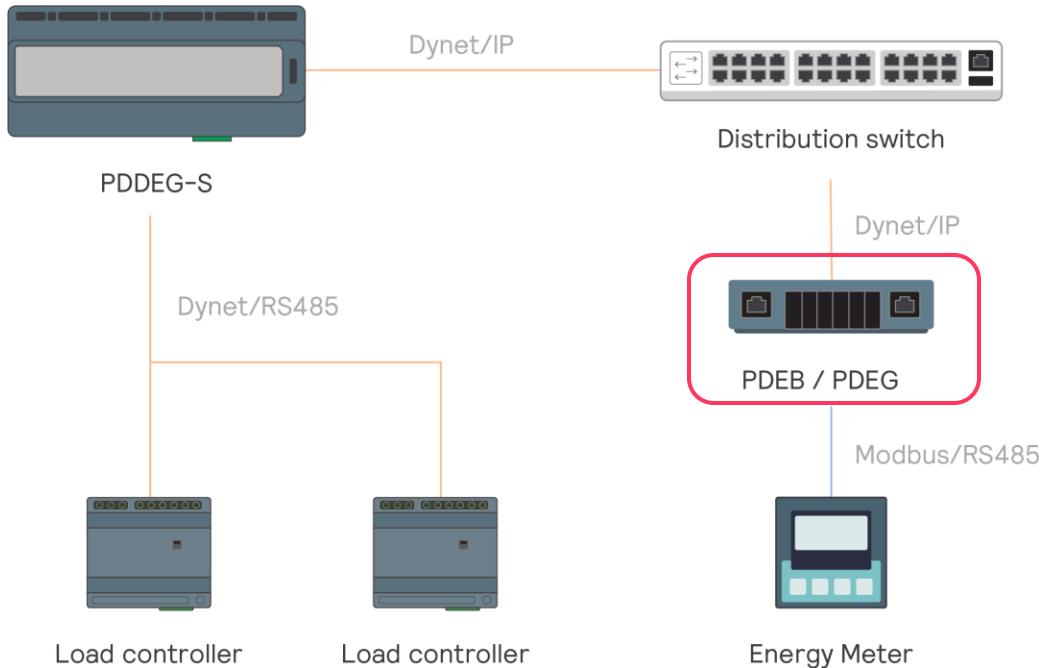
Multisite metered energy | Modbus IP

Modbus IP - with PDDEG-S Site Gateway



Multisite metered energy | Modbus RS485

Modbus RS485 - with PDEG/PDEB



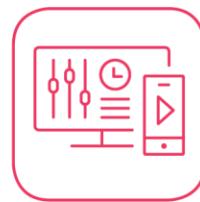


Lighting management

Integration

- ✓ Onsite integration with Alarm and BMS systems
- ✓ Large variety of local manual override options
- ✓ Support of common interfaces: Dry contact | BACnet | CGI

Interact Cloud and application



Scene management



Energy optimization



Lighting management



Remote service

Site(s)



Lighting



Secure site gateway and lighting controls network



Sensors

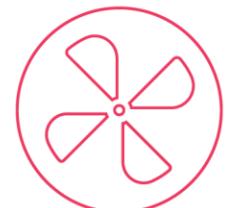


User interfaces

BMS



Alarm systems



HVAC



Store safety

UV-C upper air disinfection

- ✓ Shoppers and employees can now feel safer thanks to Philips UV-C upper air disinfection luminaires
- ✓ Validated 99.99% effectiveness within only 10 min
- ✓ Extend lifetime of UV-C light sources by automatic schedules to operate them only during trading hours

[Proofpoint: EDEKA Clausen Germany >](#)

[Proofpoint: dm drugstore Bratislava >](#)

[Learn more on validated 99.99% effectiveness to deactivate pathogens within 10 min exposure >](#)

“It provides me with a bit of peace of mind while shopping, knowing that they did their best to protect their clients.”



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Lesson review | System architecture

In this lesson, you learnt that:

- Multisite is based on Dynalite with the addition of a PDDEG-S gateway.
- A test tool has been developed for testing the connectivity.
- Philips Dynalite Enabler app tool has also been developed to facilitate onsite commissioning.
- Multisite can integrate with the customer's BMS either at store level through a dry contact or a JACE box, or cloud level.



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