Connect switchboards for electrical monitoring and control

"Monitor it, Secure it, Tag it"

Customer case

Sophia is in charge of designing an electrical network for a new building.

She is looking for monitoring of electrical circuits that would enable to:
- identify origin of trouble in case of network issues, and return to service faster to minimize downtime,
- remotely control electrical circuits,
- engage preventive maintenance.

Moreover, she will select a system that is optimized in terms of impact (space, wiring, integration).

Our recommendation

Connect electrical switchboards with PowerTag System with one single point of aggregation to:
- monitor electrical loads,
- be notified when needed specially in case of circuit breaker tripping,
- remotely control through contactors,
- make data available to supervision system.

With PowerTag System, manage energy and fluids by adding wireless communication energy sensors or energy meters and using analog inputs.

Benefit from Schneider Electric expertise thanks to EcoStruxure solutions.

Benefits

For Design Office:
- Extended connectivity capability: remote OF/SD, connected circuit breakers, contactors and impulse relays.

- PowerTag System supports and contributes to Energy efficiency programs and standards such as ISO 50001 "Energy Management System".

- Simple to integrate into supervision system including Schneider Electric EcoStruxure Solutions.

For Panel Builder:
- Reduced footprint in the switchboard.

- Simplified wiring of monitoring and control functions.

- Less wiring thanks to wireless communication energy sensors.

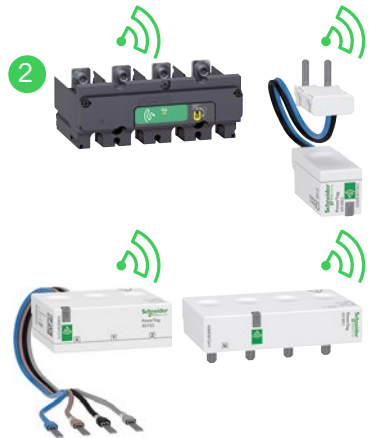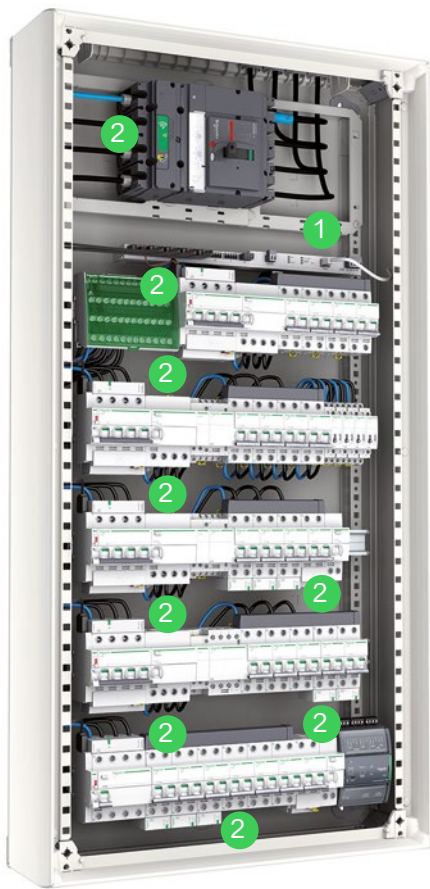- Intuitive and simple commissioning through embedded web page and EcoStruxure Power Commission.

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Solution

Which wireless communication devices for digital electrical switchboards?

Smartlink SI B – I/O module with wireless communication:

- Controls contactors, impulse relays and collects breaker status (open, close, trip).
- Concentrates PowerTag Energy sensors.
- 2 analog inputs to collect information: gaz, water, T°C, CO2, humidity…

Can be connected up to 8 modbus server devices:

- SmartLink Modbus (11 I/O each),
- IEM energy meters.

For cloud application, Com'X gateway is requested.

PowerTag Energy sensors:

- U, I, V, P, Q*, S* values,
- active energy, partial and total, delivered* and received* values, class 1 accuracy,
- reactive energy*, partial delivered and received values,
- wireless communication,
- voltage loss alarm,
- power factor.

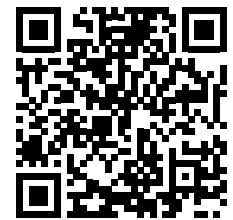* Available with PowerTag Energy sensor 250 A / 630 A.

Other monitoring and control functions:
iOF+SD24, iACT24, iATL24, Reflex iC60 Ti24, iEM.

iOF/SD 24 + iC60   iACT24 + iCT   iATL24 + iTL   Reflex iC60   IEM2000

Products used		
Product	Function	Reference
SmartLink SI B	Modular Ethernet I/O module with wireless communication	A9XMZA08
PowerTag Energy	Energy sensor 63 A	Depend on model
PowerTag Energy	Energy sensor Monoconnect 250 A / 630 A	LV43402•
Acti9 iOF+SD 24	Auxiliary contact (Ti24 connector)	A9A2689•
Acti9 iACT24	Control and auxiliary contact (Ti24 connector)	A9C15924
Acti9 iATL24	Control and auxiliary contact (Ti24 connector)	A9C15424
Acti9 Reflex iC60N Ti24	Circuit breaker with integrated control (Ti24 connector)	Depend on model
Acti9 iEM2000	Energy meters with modbus communication	A9MEM2150

More about Smartlink SI B

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