Ensuring the satisfactory functioning of loads critical for human protection

Customer case

In an underground car park, ventilation and lighting are essential. Any malfunction must immediately alert the surveillance personnel. They must be able to diagnose the equipment and restore it to operation very quickly, remotely when possible, or by going to the site.

Even in the event of a malfunction of the automatic control system which manages them, these loads must continue to operate without interruption.

Our recommendation

Thanks to Acti9 Smartlink, all the final distribution boards are connected directly to the site surveillance network. The circuit breaker auxiliaries iOF+SD24 report any tripping and any deliberate opening. The contactors and impulse relays receive switch-on and switch-off orders and report their status. Selector switches on the front panel of the switchboards allow maintenance personnel to take over control of the automatic system to manage the contactors and impulse relays via push buttons. In that case, the position of the inhibition selector switch is sent over the Modbus network via the Acti9 Smartlink interface.

Benefits

- Fast, reliable installation: the appliances are connected to the Modbus network via Acti9 Smartlink communication interfaces and entirely prefabricated connector systems:
  - wiring is performed quickly, without risk of error (inversion of cables, etc.),
  - during maintenance operations, "thin wire" connections inside the switchboard are identifiable immediately. They can be handled without any tools thanks to plug-in connectors.
- Reliability of data and indications:
  - low-level iOF+SD24 signaling contacts complying with IEC 60947-5-4,
  - high level of electromagnetic compatibility of the Acti9 Smartlink modules.
- Data ready for asset management: directly integrated in Acti9 Smartlink, the counting of protective device tripping actions and hours' operation of luminaires can be used to plan preventive maintenance.

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Solution

Diagram

Specifications

- The communication system should combine command, monitoring, control and protection functions designed for energy efficiency solutions in any type of environment.
- Based on the Modbus protocol, the communication system allows switchboard data to be exchanged in real time with a supervision system or a PLC.

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More about Acti9 Smartlink

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