Load shedding on non-priority circuits in a hospital

Customer needs

To ensure maximum continuity of service, a hospital has standby energy sources generally of lower power than the overall need. The standby sets ensure a power supply for priority circuits and emergency applications.

In the event of a reduction in the power available from the main power supply grid, following an electrical fault or a demand from the energy supplier (consumption peak, energy contract management), the operator must perform selective load shedding on non-priority feeders.

Depending on service requirements, the operator must be able to shed or restore loads manually on non-priority circuits. In the event of an electrical fault, the installation must not be able to be restarted without action by an authorized person.

Proposed solution

- Load shedding is performed on the group terminals of non-priority feeders by combining an RCA remote control with an iC60 circuit breaker.
- These functional units are controlled automatically via a GTE (energy technical management) system.
- A manual override, located on the front panel of the distribution cabinets, is accessible to authorized personnel.
- The RCA remote control is configured in 3-B mode to allow manual override and prevent remote circuit reclosing following a fault.

Benefits for users/customers

- Simplicity:
  - Direct connection to a PLC via the Ti24 interface;
  - Prioritization of automatic and manual load shedding ensured directly by the RCA iC60 without using additional relay circuitry.
- Safety:
  - Prevention of automatic reclosing upon an electrical fault;
  - Padlocking possible without any additional accessory.
- Energy efficiency: No permanent consumption because the RCA iC60 remote control is a bistable actuator.

Focus on

RCA iC60

Remote control!

With Ti24 interface

RCA iC60

For more details, refer to the catalogue.

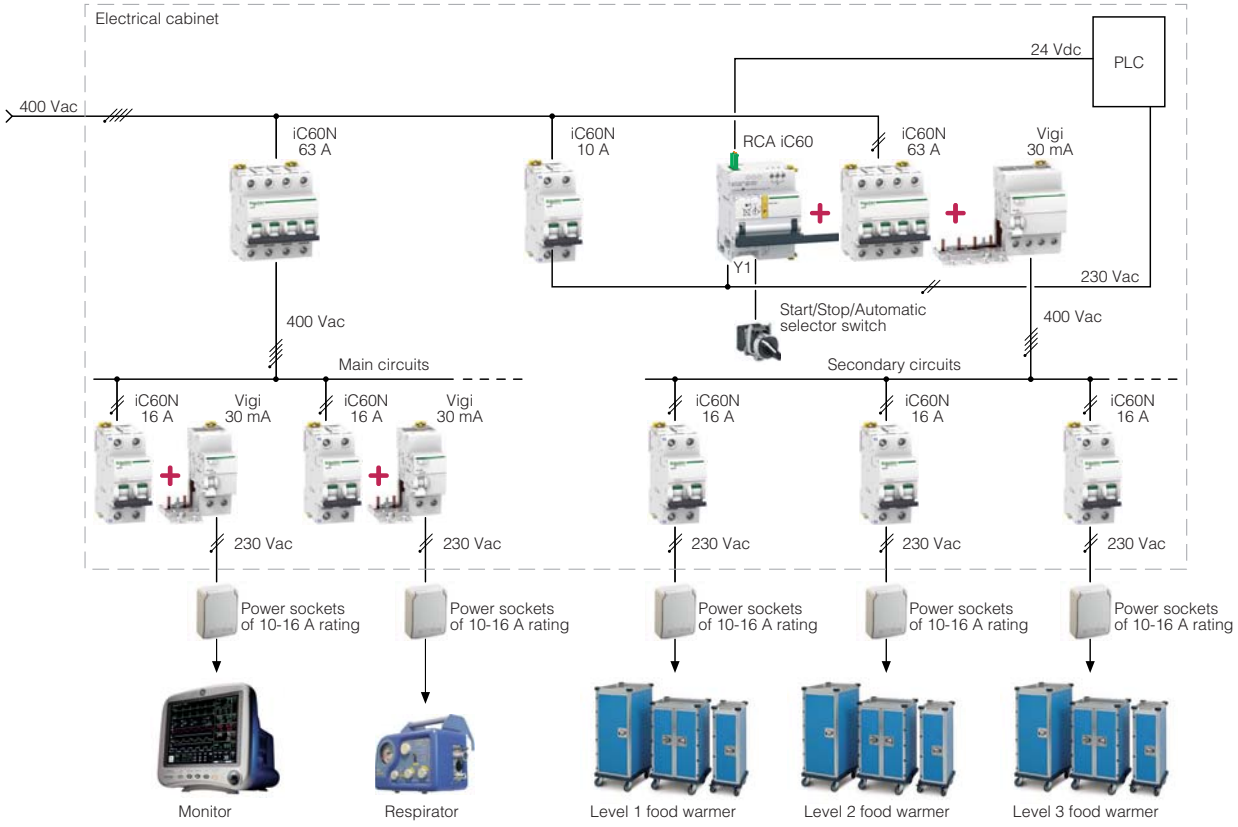
Applications :

- Infrastructure
- Industry
- Tertiary sector
- Public lighting
- Power distribution
- Circuit load shedding

> Continuity of service

> Improvement in energy management to ensure improved continuity of service.

Wiring diagram of the solution



Technical specifications of the solution

- The non-priority feeders must be powered by a modular circuit breaker combined with a remote control and an earth leakage protection auxiliary.
- This circuit breaker is remote controlled automatically via a connection with a PLC without any additional interface.
- The state of the circuit breaker (open/closed) and the presence of an electrical fault must be indicated at the PLC level.
- A manual override is made possible by a three-position switch (start/stop/automatic).
- After tripping of the protective device, remote reclosing is impossible.

> Products used

Product	Description	Unit	Reference
RCA iC60	230 Vac 50 Hz remote control with Ti24 4P interface	1	A9C70124
iC60N	63 A 4P circuit breaker, C curve	2	-
Vigi iC60	30 mA 4P earth leakage module	1	-
iC60N	16 A 2P circuit breaker, C curve	5	-
Vigi iC60	30 mA 2P earth leakage module	2	-
iC60N	10 A 2P circuit breaker, C curve	1	-