

Controlling an industrial process in a dairy plant



Customer needs

An industrial bakery needs to control a small dairy unit to produce its butter and cream. The objective is to be able to manage the start-up and manual stoppage of a unit for churning matured cream and mixing butter from acidified milk (Leben or Ribot) in a stainless steel tank. A stainless steel moulding machine performs continuous moulding of the butter in 250 g/500 g or 1 kg format. This machine, of power 750 W, has a throughput of 150 kg of butter per hour.

The 300-litre stainless steel churn is equipped with a lever-operated tilting system. It is powered by a two-speed three-phase motor, 5 kW, 400 Vac, and for personnel safety reasons it has an emergency stop switch located near the equipment.

Given the nature of the equipment and the safety rules applying in this type of plant, any remote automatic reclosing after an electrical fault is prohibited.

Proposed solution

- The functional unit is installed in the main cabinet of the dairy plant's production laboratory.
- The RCA remote control auxiliary allows the power supply to be switched off by actuating the circuit breaker.
- Switching on and off is controlled from an ON/OFF portable control box.
- An emergency stoppage switch is located near each device.
- The RCA remote control is configured in 1-B mode to inhibit automatic reclosing of the circuit breaker following a fault.



Benefits for users/customers

- **Simplicity:** Simple, secure solution for switching the power supply on and off (even for non-experts).
- **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.

RCA iC60

Remote control!



RCA iC60

For more details, refer to the catalogue.



Applications :

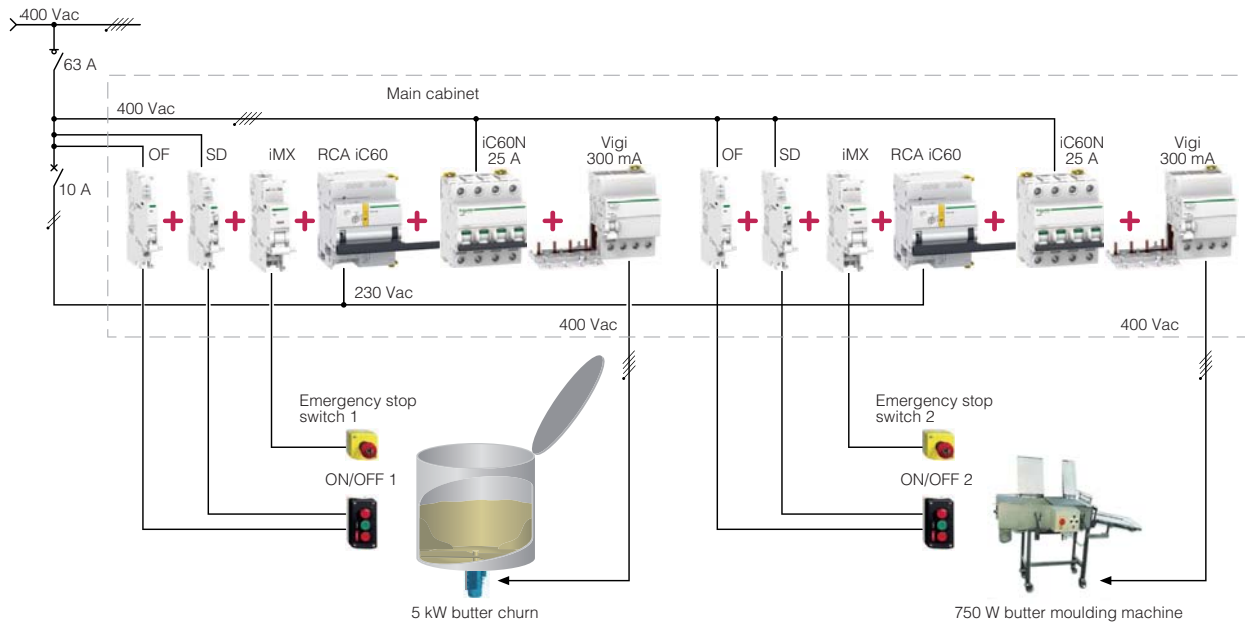
- Infrastructure
- Industry
- Tertiary sector
- Public lighting
- Power distribution
- Circuit load shedding



> Ensuring installation safety

> This device can easily isolate the process power supplies during plant operating periods.

Wiring diagram of the solution



Technical specifications of the solution

- Each feeder is powered by a modular circuit breaker combined with a remote control.
- The circuit breaker state (open/closed) must be remotely indicated by an OF indication auxiliary.
- The presence of an electrical fault must be remotely indicated by an SD indication auxiliary.
- ON/OFF control is possible via a portable control box.
- The emergency stoppage function is implemented by combination with a shunt release.
- After tripping of the protective device, remote reclosing of the circuit breaker is impossible.

> Products used

Product	Description	Unit	Reference
RCA iC60	230 Vac 50 Hz 4P remote control	2	A9C70114
iC60 N	25 A 4P circuit breaker, D curve	2	-
Vigi iC60	300 mA earth leakage module	2	-
iOF	OF indication auxiliary	2	A9C26924
iSD	SD indication auxiliary	2	A9C26927
iMX	MX shunt release	2	A9A26476