



PE63011

## Easergy T200 I: an interface designed for telecontrol of MV networks

Easergy T200 I is a “plug and play” or multifunction interface that integrates all the functional units necessary for remote supervision and control of the RM6:

- acquisition of the different types of information: switch position, fault detectors, current values...
- transmission of switch open/close orders
- exchanges with the control center.

Required particularly during outages in the network, Easergy T200 I is of proven reliability and availability, being able to ensure switchgear operation at any moment. It is simple to set up and to operate.



PE6421

Local information and control



PE6422

Monitoring and control

## Functional unit designed for the Medium Voltage network

- Easergy T200 I is designed to be connected directly to the MV switchgear, without requiring a special converter.
- It has a simple front plate for local operation, which allows management of electrical rating mechanisms (local/remote switch) and display of information concerning switchgear status.
- It has an integrated MV network fault current detection system (overcurrent and zero sequence) with detection set points that can be configured channel by channel (current value and fault current duration).



PE6423

Back up power supply



PE6324

Polarized connectors

## Medium Voltage switchgear operating guarantee

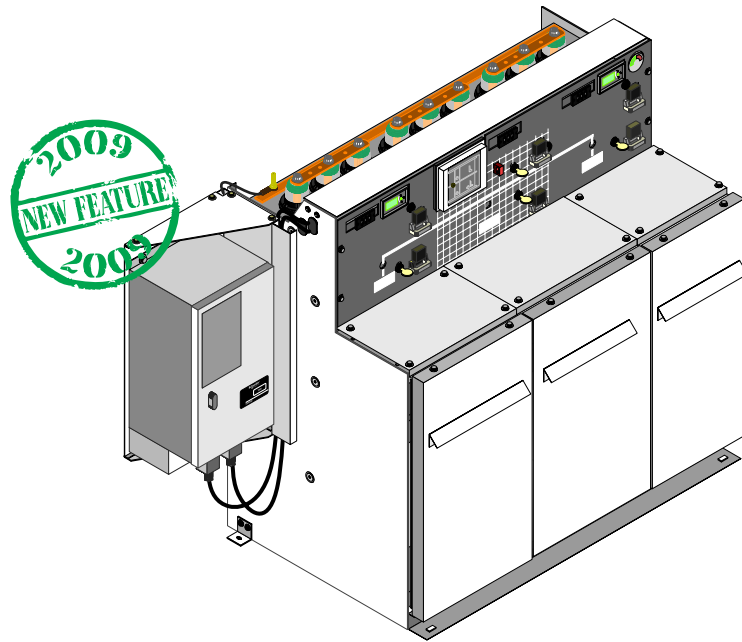
- Easergy T200 I has undergone severe MV electrical stress withstand tests.
- It is a backed up power supply which guarantees continuity of service for several hours in case of loss of the auxiliary source, and supplies power to the Easergy T200 I and the MV switchgear motor mechanisms.
- **Ready to plug**
  - Easergy T200 I is delivered with a kit that makes it easy to connect the motor mechanisms and collect measurements.
  - the telecontrol cabinet connectors are polarized to avoid any errors during installation or maintenance interventions.
  - current measurement acquisition sensors are of the split type, to facilitate their installation.
  - works with 24 Vdc and 48 Vdc motor units.



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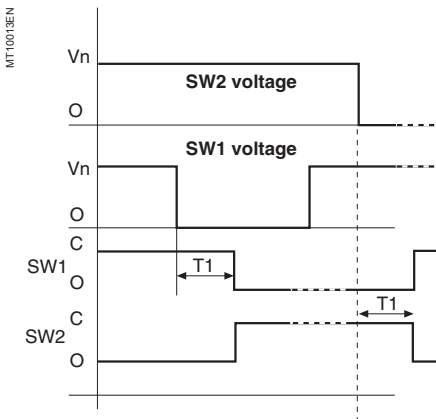
Split sensors

Because a MV power supply interruption is unacceptable especially in critical applications, an automatic system is required for MV source transfer.



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For your peace of mind, RM6 gives automatic control and management of power sources in your Medium Voltage secondary distribution network with a short transfer time (less than 10 seconds), guaranteeing the hi-reliability of your installation. Automatic control is performed by Easergy T200 I. This T200 I device can also be used for remote control with a wide range of modems and protocols. By default, the T200 I is provided with the RS232C modem and the Modbus/IP protocol.



Semi-auto operating mode

## Auto changeover switch (ACO 1/2)

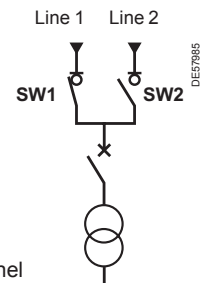
Changeover between two sources in the distribution network: SW1 and SW2.

### Operating modes

The operating mode is selected from the Easergy T200 I configurator.

#### Semi-Auto mode, SW1 < > SW2

In the event of a voltage loss on one of the three phases of the active line, automatic control switches to the other channel after a time delay T1: opening of SW1 and then closing of SW2. Automatic control executes no return, except in case of voltage loss on the new active channel.



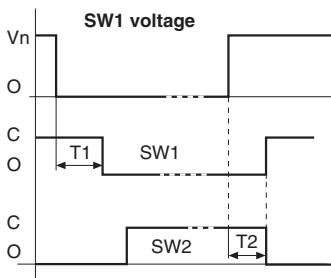
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#### Semi-Auto mode SW1 > SW2, (SW2 > SW1)

Automatic control executes only one changeover from channel 1 or 2 to the backup channel.

#### Mode Auto-SW1 or Auto-SW2

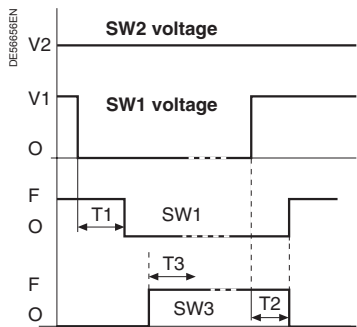
After a changeover, return to the priority channel occurs if the MV voltage on that channel is restored.



Auto-SW1 operating mode

#### Configurable parameters:

- Operating mode: semi-auto, auto SW1, auto SW2
- T1: 1 to 60 s in 1 s steps
- T2: 10 to 60 s in 1 s steps
- Automation system valid/invalid



**Configurable parameters:**

- Operating mode
  - Automatic return SW1/SW2
  - Automation system on/off
  - Delay before switching
  - Delay before return
  - Interlock delay on voltage loss
  - Motorisation type: command time.
- T1: 100 ms to 60 s in 100 ms steps  
 T2: 5 s to 300 s in 1 s steps  
 T3: 100 ms to 3 s in 100 ms steps

## Bus tie coupling (BTA 2/3)

Source changeover between 2 incoming lines (SW1 and SW2) and a busbar coupling switch (SW3).

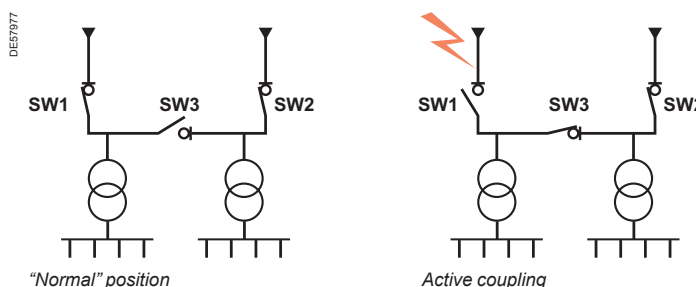
### Operating modes

#### Standard Semi-Auto mode

In the event of a voltage loss on one of the three phases of the SW1 line, following time delay T1, automatic control opens SW1 and then closes SW3. After closing of SW3, presence of voltage on SW2 is monitored for a period T3. If the voltage is lost during this period, SW3 opens and the system is locked. Same logic if the voltage disappears on SW2.

#### Auto mode

Same sequence as Semi-Auto mode. Then, if the voltage returns normally on SW1 during a time delay T2, the system changes over (opening of SW3 and closing of SW1). Same logic if the voltage disappears on SW2.



## An ATS solution is made of:

