

Mimic Diagram

SPIDERä



Application

The mimic diagram provides the operator with an overview of the status of the power system. The dynamic data shown on the mimic is updated automatically with telemetered, calculated and manually updated data from the database.

The mimic diagram can also accommodate analog meters, digital displays, directional power flow indicators and chart recorders.

The mimic diagram control equipment, Mimic Controller 300, is used together with dedicated software, normally residing in the application servers, as the mimic driver unit.

Benefits

- The operator is able to scan the overall status of the complete power system at a glance.
- The mimic diagram provides a pictorial view of the power system network

Functions

The mimic diagram shows an overview comprising static and dynamic information. The static information shows devices such as transmission lines, bus-bars and transformers. The dynamic information shows the current state of the devices such as breakers, isolators and for example the direction of power flow on a line.

Indications in the power system are presented on the mimic diagram with LEDs. The value and the status of the indication determine the status of the LEDs. Indications can be presented with one or two LEDs.

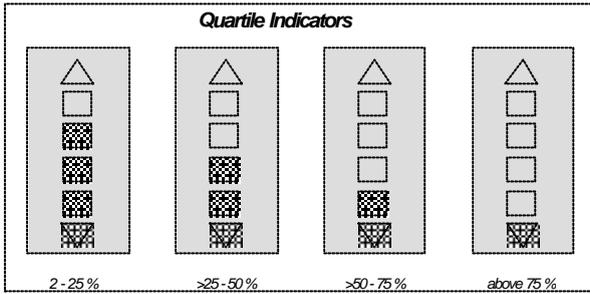
Calculated indications are presented on the mimic diagram in the same way as indications. The value of a calculated indication is recalculated whenever any of the component indications change status.

Summary Alarms are presented on the mimic diagram with single LED representing the alarm condition in a station or a subsystem. The status of the LED is updated when the status of the alarm summary indication changes.

Measurements can be displayed on the mimic diagram using analogue meters, digital displays with fixed decimal point, chart recorders, or quartile indicators. Measurements are updated cyclically.

For analogue meters, digital displays and chart recorders, the values are recalculated to utilize the full-scale range of the instruments.

Functions continued



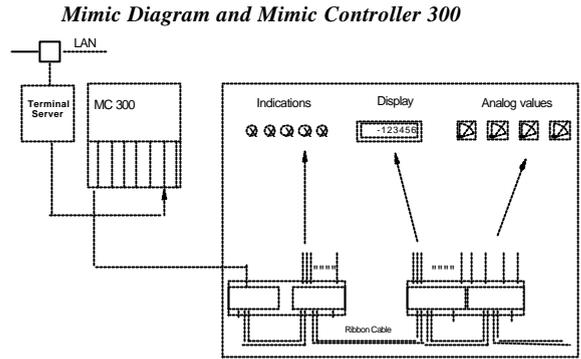
Measurements can also be presented by so called quartile indicators. These indicators are used to show loads in power lines and transformers as illustrated above. A quartile indicator comprises a set of lamps that show the sign and percentage of the measurement relative to a predefined reference value.

Technology

Different alternatives are available for the communication between the mimic diagram and the SPIDER system. The mimic diagram is normally connected to an application server.

The communication to the mimic diagram is continuously supervised from the master system and any permanent interrupt is immediately reported.

The supervision function also generates events for errors detected locally and reported by the mimic driver. The mimic diagram can be divided into logical sections, where each section then can be tested separately from an operator's console.



Human Machine Communication (HMI)

All human machine communication is carried out from the operators console using simple dialogs. The test of the mimic diagram is started from a dedicated test picture. All changes are registered in the event lists. The update of the mimic diagram may be blocked, by the operator.

