# CONTROL, PROTECTION & SUPERVISION

[FOR GENERATORS & BT ELECTRICAL NETWORK]

Since foundation of the company in 1960, SELCO's technology offer to the power generation market state of the art equipment to meet requirements of international norms. Most of the SELCO products are approved by marine classification companies (BV, LR, GL, DNV, ...). Units are all designed for DIN rail mounting or screw mounting in switchboards.

They can be installed and easily replaced. All the units are available in several versions (voltage, various functions, ...), fulfilling your specific requirements.





## Relais de protection électriques

## T-LINE Range







### **CURRENT & FREQUENCY RELAY**

**T3000 / T3100 / T3300:** Frequency Relay is intended for effective frequency monitoring on generators, busbars or other distribution systems.

#### **OVERCURRENT RELAY**

**T2200 (3-phases) and T2800 (earth faults):** broad potential applications thanks to various settings possibilities. When a preset value is exceeded, the units influence a output relay after a delay setting

#### **OVERCURRENT & SHORT CIRCUIT RELAY**

**T2500:** is intended for protection of generators, power transmissions and consumer supply against thermal damage and faults caused by high currents, with consequent tripping of the system breaker.

## THREE PHASE DIFFERENTIAL CURRENT RELAY & INSULATION MONITOR

**T2900:** Protection relay for generators, power transmissions and consumer's supply by tripping the main circuit breaker. The T2900 measures the differential current of each of the 3 phases

**T3200:** The relay continuously monitors two systems galvanically separated from each other, e.g. the busbar and the lighting system or two busbar systems.

## ECONOMIC G-LINE Range

New economic and high performance range, customizable through programming (range, threshold...).



## FREQUENCY & VOLTAGE RELAY

**G3000 / G3100 / G3300 / G3600:** Monitoring voltage and frequency for generators, busbars and other distribution systems

#### OVERCURRENT RELAY FOR THREE-PHASE CURRENT

**G2200:** broad potential applications thanks to various settings possibilities. When a preset value is exceeded, the units influence a output relay after a delay setting

#### **ACTIVE POWER RELAY**

**G2000:** protection against reverse active power Dimensions: 73x75x114 mm. DIN rail mounting.



## Synchronisation & load control/power management

## Synchronizers



**T4000 ET T4500:** Auto Synchronizer provides automatic synchronization of an incoming generator to a busbar in a minimum of time

### Alarm monitor units





**M1000 ALARM MONITOR:** The M1000 is a compact 10 channel programmable unit with many features. An input signal originating from a potential free closing or opening contact (NO or NC contact) will cause the appropriate alarm LEDs to flash and simultaneously the related output will activate

**M3000 ALARM MONITOR:** The M3000 Analog Alarm Annunciator has 24 inputs that can be configured individually for dry contact (NO or NC) inputs or analog inputs. Analog inputs can read measurements through 4-20 mA, 0-10  $V_{DC}$  or 0-24  $V_{DC}$  transmitters. Up to 48 alarms can be configured with individual reference to any of the 24 inputs.

An alarm is activated and indicated when the input value exceeds a preset critical low or high level. The alarm can be related to any of the 24 LEDs and any of the 14 outputs. Several alarms may activate the same LED and/or output. The M3000 has a common alarm output, a siren output, as well as dedicated inputs for remote reset and blocking

## Arc detecting relay





In case of an arcing fault, the relay generates a fast tripping pulse, less than 1msec., to the circuit breaker(s) supplying the installation. The arcing time is thus reduced to the mechanical opening time of the circuit breaker. The relay is solid state with complete isolation between input and output. Thus the relay and the circuit breaker may have different pilot voltages.

## Static potentiometers



**E7800 - MOTORIZED POTENTIOMETER:** used as an interface between increase/decrease contacts and a device requiring control/adjustments by an external potentiometer.

**T7900 - ELECTRONIC POTENTIOMETER:** used as converter between pulse contacts and a device requiring control adjustment by a voltage or current signal, such as an electronic speed controller.

## Synchronoscope



**M8100:** Pprovides illuminated indication of the phase and frequency difference between voltages on two separate AC systems, e.g. a generator and a busbar. The M8100 will also indicate whether or not the two systems are on voltage. The M8100 is also available in a version with a built-in relay for automatic closure of the circuit breaker (Synchro Check Relay). Dimensions:  $96 \times 96 \times 80$  mm.