C2S

Auto synchronizer and safety column

- Led synchronoscope
- Protections
- Manual and Automatic modes

This second generation of microprocessor module combines all the visualization and control functions needed to couple a generator to a bus bar manually: display of the phase, frequency and voltage differences, a safety relay which monitors these three parameters and indicates the status of the installation.

This new version does not need an external DC power supply, as it takes it from the busbar. The reduced size allows the use of DIN92 format tools and its heavy duty metal case can operate in extreme environment.

SYNCHRONIZATION COLUMN

Led synchroscope:

18 LEDs spread over 360° display the phase difference. The synchroscope lines up when the frequency difference is less than 0.5 Hz.

Differential frequency meter:

The frequency difference is displayed by a 17 LED bar graph corresponding to ± 5 Hz with an expanded scale over 1 Hz.

Differential voltmeter:

The voltage difference is displayed by a 17 LED bar graph corresponding to ± 20%.

SAFETY RELAY

The coupling authorization relay monitors the difference in frequency, voltage and phase. It authorizes coupling only when all the parameters meet the requirements of the installation.

Frequency difference:

Coupling authorization is given for a frequency difference of less than 0.1 Hz.

Phase difference:

The phase difference which authorizes coupling is adjustable between ± 5° and ± 20°.

Voltage difference:

The voltage difference which authorizes coupling is adjustable between ± 2.5% and ± 20%.

LED INFORMATION

Presence of generator voltage (Vgen):

Shows that the voltage of the generator or the power source to be coupled is between 85% and 115% of its nominal value.

Presence of bus voltage (Vbus):

Shows that the voltage of the bus to which the generator must be coupled is between 85% and 115% of its nominal value.

Voltage difference fault (ΔV):

Shows that the voltage difference between the generator and the bus is greater than the safety relay setting.

Coupling in automatic mode (Auto):

Shows that the installation is in automatic coupling mode. The synchronization column is active but the other signalling LEDs and the safety relay are inactive.

Safety relay:

Shows that the safety relay which authorizes coupling is closed.

MEASUREMENTS

Measuring generator voltage input ±15%:

Reference	AC Voltage
A25Z0	100 V_{AC}
A25Z1	230 V_{AC}
A25Z2	400 V_{AC}

50 and 60 Hz
(maximum consumption <4 VA).

Measuring bus voltage input ±15%:

Reference	AC Voltage
A25Z0	100 V_{AC}
A25Z1	230 V_{AC}
A25Z2	400 V_{AC}

50 and 60 Hz
(maximum consumption <0.1 VA).

CHARACTERISTICS

Current, voltage and frequency

- Output relay: Isolated contact
- 8 A with the 250 V_{AC} nominal voltage, maximum voltage 440 V_{AC}
- 2000 VA switched power on resistive load.

Environment

- Operating temperature: -20 to +85°C.
- Can be mounted in all positions.
- Humidity: will function normally in humid conditions (Tropic-proof circuits).

Size and weight

- Weight: 0.9 Kg
- Size: 160x96x68mm
- Fixing: 4 x 3mm screws with 82x 150mm spacing

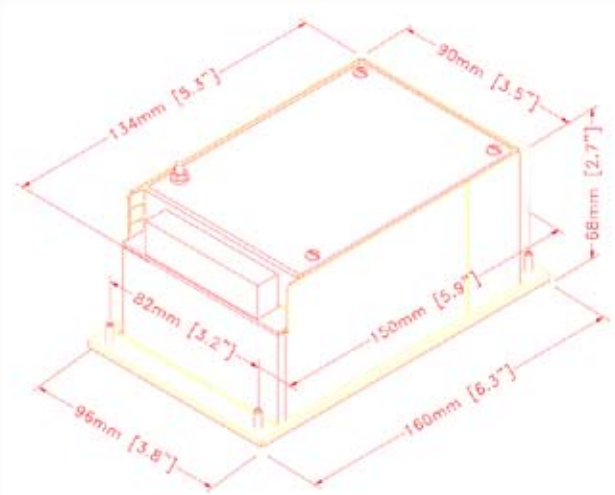
Certifications

CE Mark: the C2S complies with European CE Mark requirements.

PART NUMBERS
A25Z0
A25Z1
A25Z2

ASSOCIATED PRODUCTS
Reduced: SCR
Complementary: UNIGEN FAMILY

Dimensions



Wiring Diagram