Technical parameters

	57-69 V	100-139 V	220-277 V
Rated Vg range Un:	57-69 V	100-139 V	220-277 V
Overload capacity			
- continuous:	87 V	174 V	346 V
- 10s max.:	104 V	209 V	416 V
Minimum supply Vg Uopen:	35 V	60 V	132 V
Burden on supply (Max):	2 VA / 1.6W	2.7 VA / 1.7W	4 VA / 2.2W
Max. dissipated power (Un + terminals):	3 W	3 W	3.5 W
Frequency range:	45-65 Hz		
Deadbus on Udbon:	25% Un		
Deadbus off Udboff:	50% Un		
Sync Tolerance:	10-30% Volts		
Relay contacts:	2 x changeover, volt-free, for general switching operations		
Load capacity - AC:	250 V @ 8 A, 2 kVA		
Load capacity - DC:	30 V 8A		
Insulation:	4 kV/1 min		
Mechanical endurance:	30×10^6 operations		

Other Data

|			
Operating temperature:	-20 to +55 °C		
Storage temperature:	-30 to +70 °C		
Over-voltage category:	III		
Pollution degree:	2		
Environmental protection:	IP40 for front panel, IP20 for terminals		
Maximum conductor size:	2 x 1.5 mm² or 1 x 2.5 mm²		
Dimensions:	90 x 105 x 64 mm		
Weight:	291 g	335 g	332 g
Standards:	EN 60255-6, EN 60255-27, EN 61000-6-2, EN 61000-6-4		

Connection
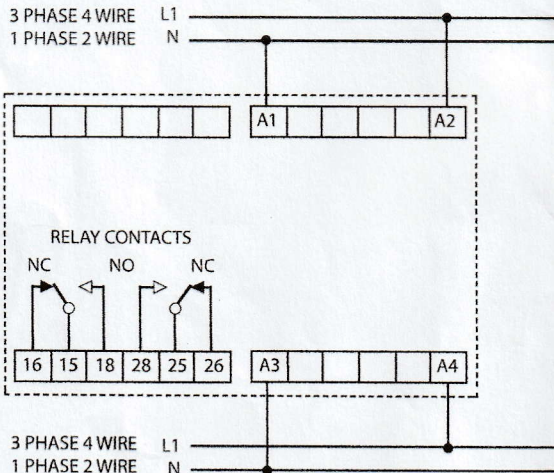
- This unit compares the voltage, frequency and phase angle of two supplies and operates a relay according to the synchronicity of the supplies. If the two supplies cease to match, the relay operates to provide a control output. The relay output can be used for alarm or control purposes.
- The unit also provides a dead bus function. If the bus supply fails, the relay operates and the output can be used to switch in an emergency generator. LEDs indicate power on, relay and dead bus status.
- Controls on the front panel set the trip points at which the relays and LEDs operate:
  - Degree of synchronicity Ux (%Volts)
  - Nominal voltage (Un)
  - Dead bus function on/off
- The unit is powered from the generator supply.
- These instructions contain important safety information. Please read them thoroughly before commissioning, operating or maintenance of the unit.

Device description

Function

Ux % | UGEN - Ubus | (VOLTAGE, FREQUENCY + PHASE ANGLE)
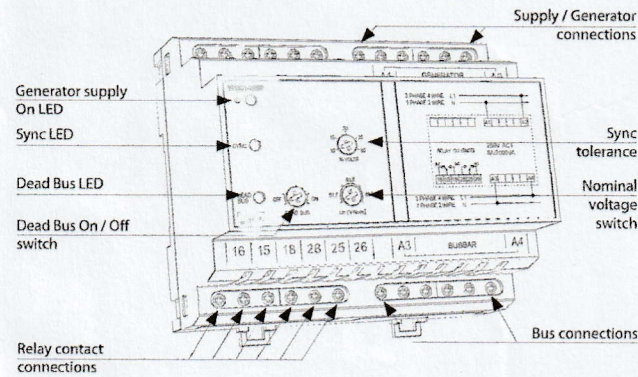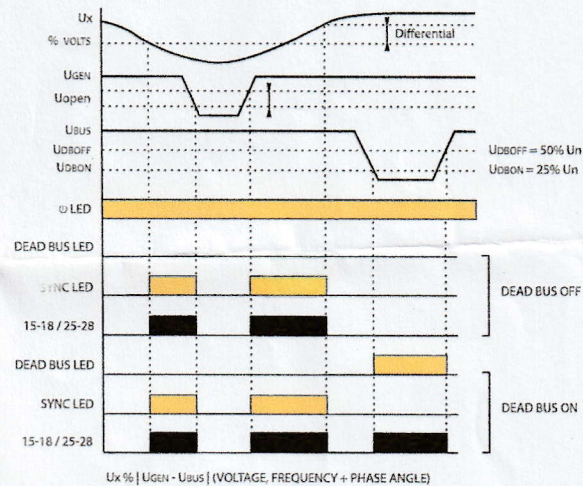
The differential trip levels help to prevent relay chatter as the monitored voltage level varies.

As the relays have changeover contacts, the relay outputs can be inverted by wiring to the alternative terminals 15-16 or 25-26.

The green LED lights shows when the power supply is on.

While the two supplies match in voltage, frequency and phase to the degree set by the % Volts control, the Sync LED lights and the relay is energised.

If one supply varies such that they no longer match to that degree, the Sync LED goes off and the relay de-energises.

If the generator voltage falls below the Uon level, the unit ceases to operate, the relay de-energises and the Sync LED goes off.

With Dead Bus On, if the bus voltage falls below the Udbon level, the relay energises and the Dead Bus LED lights. The relay can be used to turn on an emergency supply in the event of bus supply failure. The relay will de-energise again and the LED will go off when the bus voltage rises above the Udboff level.

Note; Red LED indicates fault condition, not relay status.