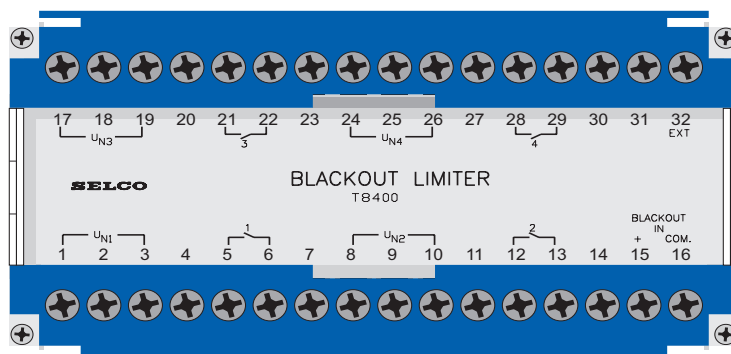


# T8400 Blackout Limiter



- Enables fast clearing of a blackout
- Monitoring 4 generators in 1 unit, and 8 generators in 2 units
- Communication with another Blackout Limiter over only 1 wire
- Cost effective and highly reliable compact design
- 50 hours burn-in before final test
- Certified by major marine classification societies
- Flame retardant enclosure



## Application

The T8400 Blackout Limiter enables fast clearing of a blackout. It is possible to monitor up to 4 generators with 1 unit and max. 8 generators with 2 units.

If a blackout occurs, the first generator to have more than 90% voltage will close the generator breaker.

## Function

When a 24V DC signal is supplied over terminals 15 and 16, the T8400 becomes

active, indicating that a blackout occurred. All generators are now checked and the first generator to have more than 90% voltage will close the contact to the generator breaker. See function diagram in fig. 4.

If generator 1 is the first generator to have more than 90%, this will happen after 1 sec. If generator 2 is the first generator on voltage it will happen after 1.5 sec. If generator 3 is the first one, it will happen after 2 sec. etc....

By adding a second unit with time delays

3 – 3.5 – 4 – 4.5 sec. 8 generators can be handled.

When one of the generators has been switched on, the blackout signal of 24V DC should be switched off.

The operation is illustrated in the connection diagram in fig. 2. Here a normally closed contact is connected to each of the circuit breakers:  
Shore, G/B1, G/B2, G/B3 and G/B4.

If all circuit breakers are open the contacts will all be closed and the T8400 is activated via the 24V DC signal.

In this example a standby generator is also started up (for example via the M2000 Engine Controller) in the event of a blackout.

As soon as one of the generator breakers is closed, the corresponding contact will open, and the T8400 is no longer in operation.

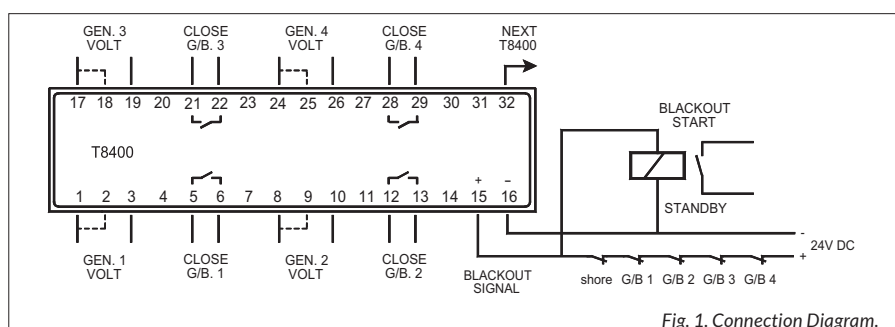


Fig. 1. Connection Diagram.

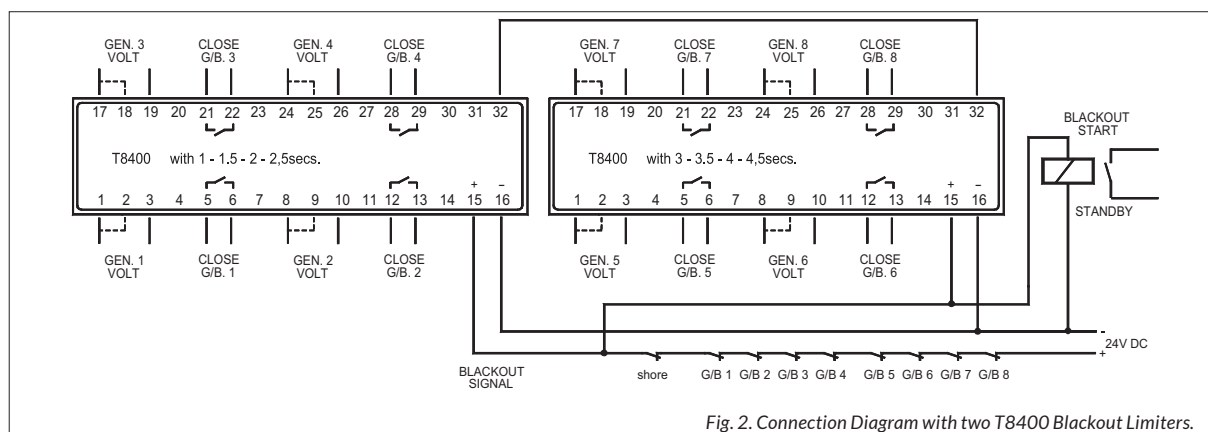


Fig. 2. Connection Diagram with two T8400 Blackout Limiters.

# Specifications

## **T8400 Blackout Limiter**

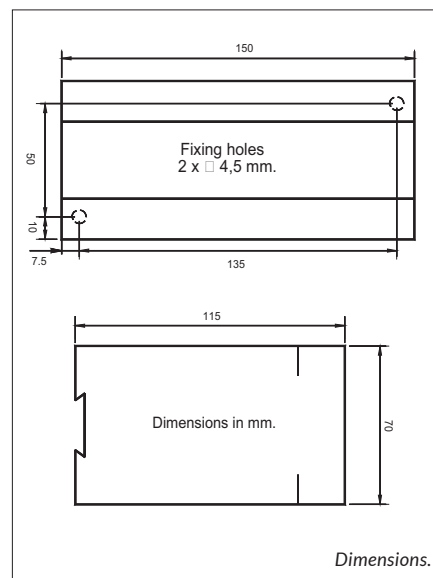
Supply voltage	24V DC 30%
Max. generator voltage	660V AC
Frequency range	35 - 75Hz
Contact ratings	AC: 250V, 2A, 250VA, DC: 60V, 2A, 100W
Operating temperature	-20°C to +70°C
EMC	According to IEC/EN 61000-6-1/2/3/4
Burn-in	50 hours before final test
Weight	0.5kg
Dimensions	70 x 150 x 115mm (H x W x D)
Installation	35mm DIN rail or 4mm (3/16") screws

The specifications are subject to change without notice.

### Type Selection Table

Type	Terminals 1-3 8-10 17-19 24-26	Function
T8400.0010	400V	1 - 1.5 - 2 - 2.5sec.
T8400.0020	400V	3 - 3.5 - 4 - 4.5sec.
T8400.0030	230V	1 - 1.5 - 2 - 2.5sec.
T8400.0040	230V	3 - 3.5 - 4 - 4.5sec.
T8400.0050	415V	1 - 1.5 - 2 - 2.5sec.
T8400.0060	415V	3 - 3.5 - 4 - 4.5sec.

Other supply voltages are available on request.





### Approvals & Certificates

The T8400 has been approved by major marine classification societies.

For more information about the individual certificates, please visit [selco.com](http://selco.com)

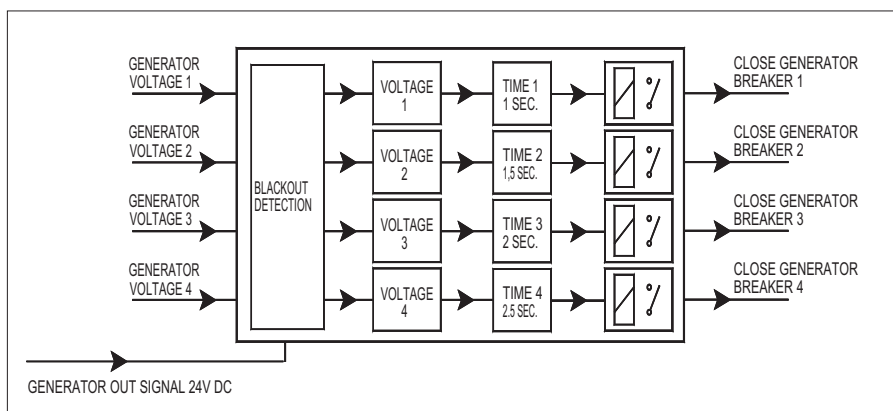


Fig. 4. Function Diagram.