DSEGenset®

DSEP100

MAINS (UTILITY) DECOUPLING RELAY

G99/1
G98/1
COMPLIANT

G99 Type Tested Variant Available to Order DSE**P100-02** Mains (Utility) Decoupling Relay (G99 Type Tested)

KEY FEATURES

- Available to order in standard and G99 type tested variants
- Used to detect a mains (utility) failure when in parallel with another supply
- Designed to assist with integration with a number of world standards including G99/1, G98/1, G59/3, G83/3 & C10/11
- Two-stage under & over frequency protection
- Five stage under & over voltage protection
- 10 second rolling average over voltage protection
- Voltage asymmetry protection
- Vector shift protection
- 3 separate RoCoF protections
- Incorrect phase sequence protection
- Positive sequence under voltage protection
- Negative sequence over voltage protection
- Zero sequence over voltage protection (NVD protection)
- Lockable security tab to prevent configuration changes after commissioning
-

ADDITIONAL FEATURES

- Power up in trip position
- Breaker failed to open alarm
- True 3-phase mains (utility) RMS measurement
- MODBUS communication via RS485 with additional DSE857 interface
- Adjustable parameters by Front Panel Editor (FPE) or by the DSE Configuration Suite PC Software
- SCADA monitoring using DSE Configuration Suite PC Software
- Large, clear display for instrumentation and status indication
- LED & LCD indication for fault status
- Five button menu navigation
- Dedicated alarm reset button
- 5 configurable volt-free changeover relays for simple system integration
- Configurable event log (250)
- Alternate configuration select
- DIN rail mounting

KEY BENEFITS

- G99 type tested variant has protection settings set during the manufacturing process. A number of these are hard coded to maintain G99 compliance and cannot be changed. Others can only be changed by authorised users.
- All mains (utility) decoupling functions in one stylish easy to mount device
- Flexible for all mains (utility) decoupling applications - Can be used to trip one or more breakers
- Configurable automatic reset timer to avoid manual reset by site personnel
- Multi stage trips to suit a number of common international requirements
- Perfect for a wide array of paralleling applications such as:
  - Peak lopping/sharing
  - Fixed export & base load
  - Short Term Operating Reserve (STOR)
  - No break, seamless or closed transition
  - Commercial and domestic local power generation.

SPECIFICATION

DC POWER SUPPLY
CONTINUOUS VOLTAGE RATING
8 V to 35 V Continuous

CRANKING DROPOUTS
Able to survive 0 V for 50 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries.

MAXIMUM OPERATING CURRENT
360 mA at 12 V, 170 mA at 24 V

AC POWER SUPPLY
CONTINUOUS VOLTAGE RATING
85 V to 305 V AC (Ph to N)

CONTINUOUS FREQUENCY RATING
3.5 Hz to 75 Hz

MAXIMUM OPERATING CURRENT
58 mA at 110 V AC (Ph to N)
28 mA at 230 V AC (Ph to N)

MAINS (UTILITY)
VOLTAGE RANGE
15 V to 333 V AC (Ph to N)
26 V to 576 V AC (Ph to Ph)

FREQUENCY RANGE
3.5 Hz to 75 Hz

OUTPUTS
OUTPUT A, B, C, D & E
Volt-free change-over
5 A at 30 V DC
8 A at 250 V AC

DIMENSIONS
OVERALL
157 mm x 95 mm x 67 mm
6.2” x 3.5” x 2.6”

STORAGE TEMPERATURE RANGE
-40 °C to +85 °C
-40 °F to +185 °F

OPERATING TEMPERATURE RANGE
-30 °C to +70 °C
-22 °F to +158 °F

RELATED MATERIALS

TITLE	PART NO.
DSEP100 Installation Instructions	053-149
DSEP100 Operator Manual	057-184
DSEP100 Configuration Suite PC Software Manual	057-186

DEEP SEA ELECTRONICS LTD UK
Highfield House, Hunmanby Industrial Estate, Hunmanby YO14 0PH
TELEPHONE +44 (0) 1723 890099
EMAIL sales@deepseaelectronics.com **WEBSITE** www.deepseaelectronics.com

DEEP SEA ELECTRONICS INC USA
3230 Williams Avenue, Rockford, IL 61101-2668 USA
TELEPHONE +1 (815) 316 8706 **FACSIMILE** +1 (815) 316 8708
EMAIL ussales@deepseaelectronics.com **WEBSITE** www.deepseaelectronics.com

Registered in England & Wales No.01319649
VAT No.316923457

055-202/11/19 (3) US

DSEGenset®

DSE®

DSEP100

MAINS (UTILITY) DECOUPLING RELAY

G99/1
G98/1
COMPLIANT

The DSEP100 Mains (Utility) Decoupling Relay is used to protect independent power applications that are connected to a mains (utility)/ grid supply. This could include a range of applications that generate power in parallel with the grid e.g. generators that are inverter connected (including renewables) and all types of synchronous and asynchronous generators.

The DSEP100 works by reliably detecting mains (utility)/grid failures and disconnects equipment from the mains (utility) supply in line with relevant country/DNO requirements. The benefit of using a powerful independent mains (utility) decoupling relay, even where inverters are fitted is to provide a more sophisticated level of protection. The engineering framework dictates the limits/ parameters for under & over voltage, under & over frequency, vector-shift and RoCoF.

The DSEP100-02 variant is fully G99 type tested and has its protection settings set during the manufacturing process. These settings cannot be changed.

Fully compliant to world standards including G99/1, G98/1, G59/3, G83/3 & C10/11, the DSEP100 has been intelligently engineered and meets all grid code and RfG changes.

ENVIRONMENTAL TESTING STANDARDS

ELECTRO-MAGNETIC COMPATIBILITY
BS EN 61000-6-2
EMC Generic Immunity Standard for the Industrial Environment.
BS EN 61000-6-4
EMC Generic Emission Standard for the Industrial Environment.
BS EN 60255-26:2013
Measuring relays and protection equipment. Electromagnetic compatibility requirements.

ELECTRICAL SAFETY
BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment.
BS EN 60255-1:2010
Measuring relays and protection equipment. Common requirements.
BS EN 60255-27:2014 Measuring relays and protection equipment. Product safety requirements.

TEMPERATURE
BS EN 60068-2-1
Ab/Ae Cold Test -30 °C
BS EN 60068-2-2
Bb/Be Dry Heat +70 °C

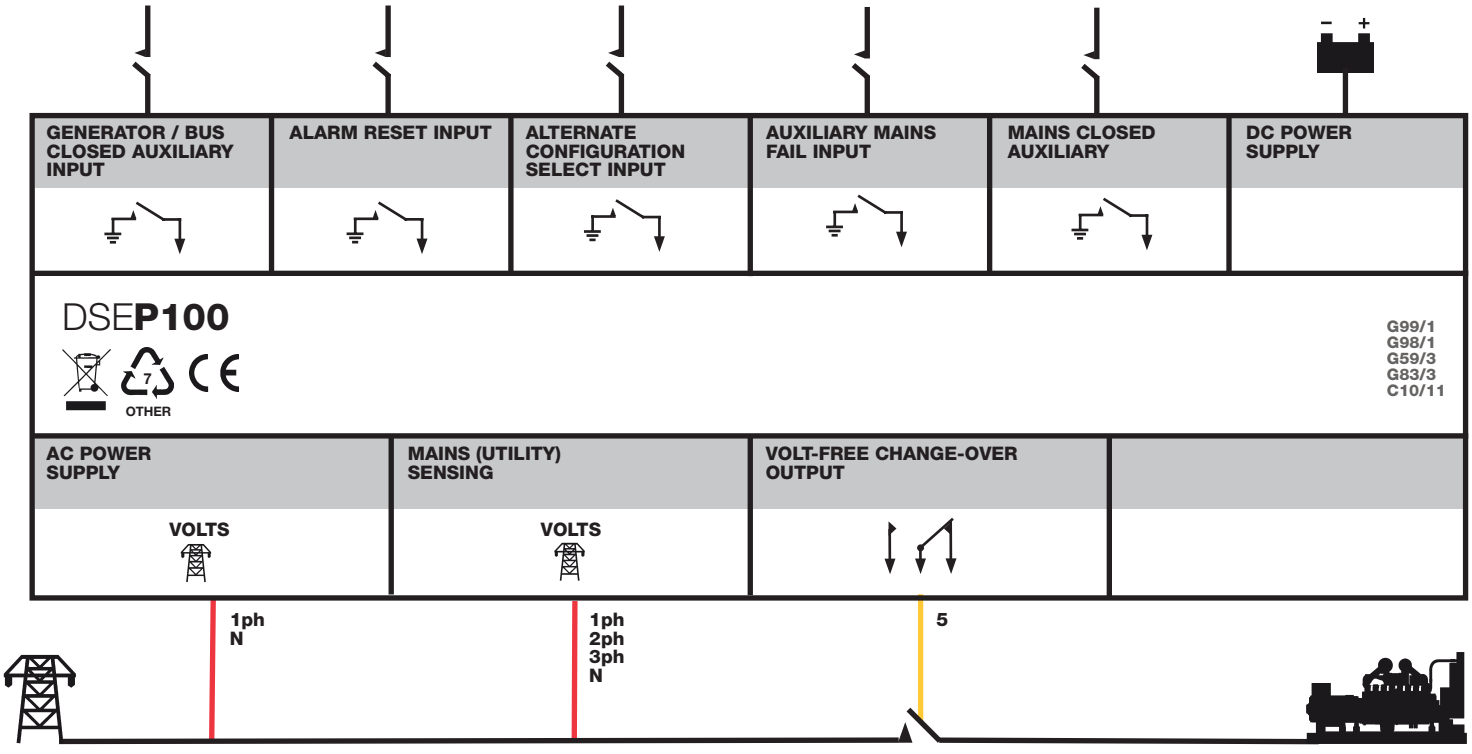
VIBRATION
BS EN 60068-2-6
Ten sweeps in each of three major axes
5 Hz to 8 Hz @ +/-7.5 mm,
8 Hz to 500 Hz @ 2 gn

HUMIDITY
BS EN 60068-2-30
Db Damp Heat Cyclic 20/55 °C
@ 95% RH 48 Hours
BS EN 60068-2-78
Cab Damp Heat Static 40 °C
@ 93% RH 48 Hours

SHOCK
BS EN 60068-2-27
Three shocks in each of three major axes
15 gn in 11 mS

DEGREES OF PROTECTION PROVIDED BY ENCLOSURES
BS EN 60529
IP31

COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF MAINS (UTILITY) DECOUPLING APPLICATIONS



LISTED