

DSEP100

MAINS (UTILITY) DECOUPLING RELAY



KEY FEATURES

- Used to detect mains (utility) failure when in parallel with another supply
- Designed to assist with integration with a number of world standards including 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 R.O.C.O.F 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

- 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

DSEP100 Installation Instructions
DSEP100 Operator Manual
DSEP100 Configuration Suite PC Software Manual

PART NO.

053-149
057-184
057-186

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DSEP100

MAINS (UTILITY) DECOUPLING RELAY

DSEP100 Mains (Utility) Decoupling Relay is designed to detect and protect a wide range of devices generating power in parallel with the mains (utility) supply. These include diesel generators, photovoltaic [solar] installations and wind turbine applications.

The DSEP100 ensures that a mains (utility) failure is detected and that the mains (utility) supply is disconnected from the local source in line with common international requirements. This eliminates the possibility that power is supplied into an islanded grid, providing a safe, reliable protection solution when in parallel with the mains (utility) supply.

The DSEP100 is simple to use and easy to install into the application wiring enabling the decoupling of the mains (utility) supply and the local supply as quickly as possible.

Depending upon the system requirements and application design the relay can be used to open one or more breakers.

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

ELECTRICAL SAFETY

BS EN 60950
Safety of Information Technology Equipment, including Electrical Business Equipment

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

