

# DSE335

## AUTO TRANSFER SWITCH CONTROL MODULE

### FEATURES



The DSE335 is an Automatic Transfer Switch Controller. The DSE335 will monitor the voltage and frequency of the incoming AC supply from two different sources, which could be from both generator or mains (utility), or a combination of both. The module will monitor S1 (source 1) and in the event of a failure will issue a start command to S2 (source 2).

Once S2 is available and producing an output within limits, the module will control the transfer device and switch the load from S1 to S2. Once the S1 supply returns to within limits, the module will command a load return to S1 and shut down S2.

Various timing sequences are available to prevent nuisance starting on minor supply breaks.

The DSE335 supports many topologies and features include mains (utility) rated volt-free relays, a clear back-lit LCD 4-line text display, showing system status and warnings and red and green LEDs indicating operational status.

The module includes USB, RS232 and RS485 ports as well as dedicated DSENet® terminals for system expansion, this gives features such as remote PC monitoring and SMS text alerts (with external modem).

The module can be easily configured using the DSE Configuration Suite PC Software. Selected front panel editing is also available.

Configurable inputs and outputs make the DSE335 fully flexible to suit a wide variety of applications.

When there is no DC supply, a compatible self-seeking power supply is available (DSE160).

### 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

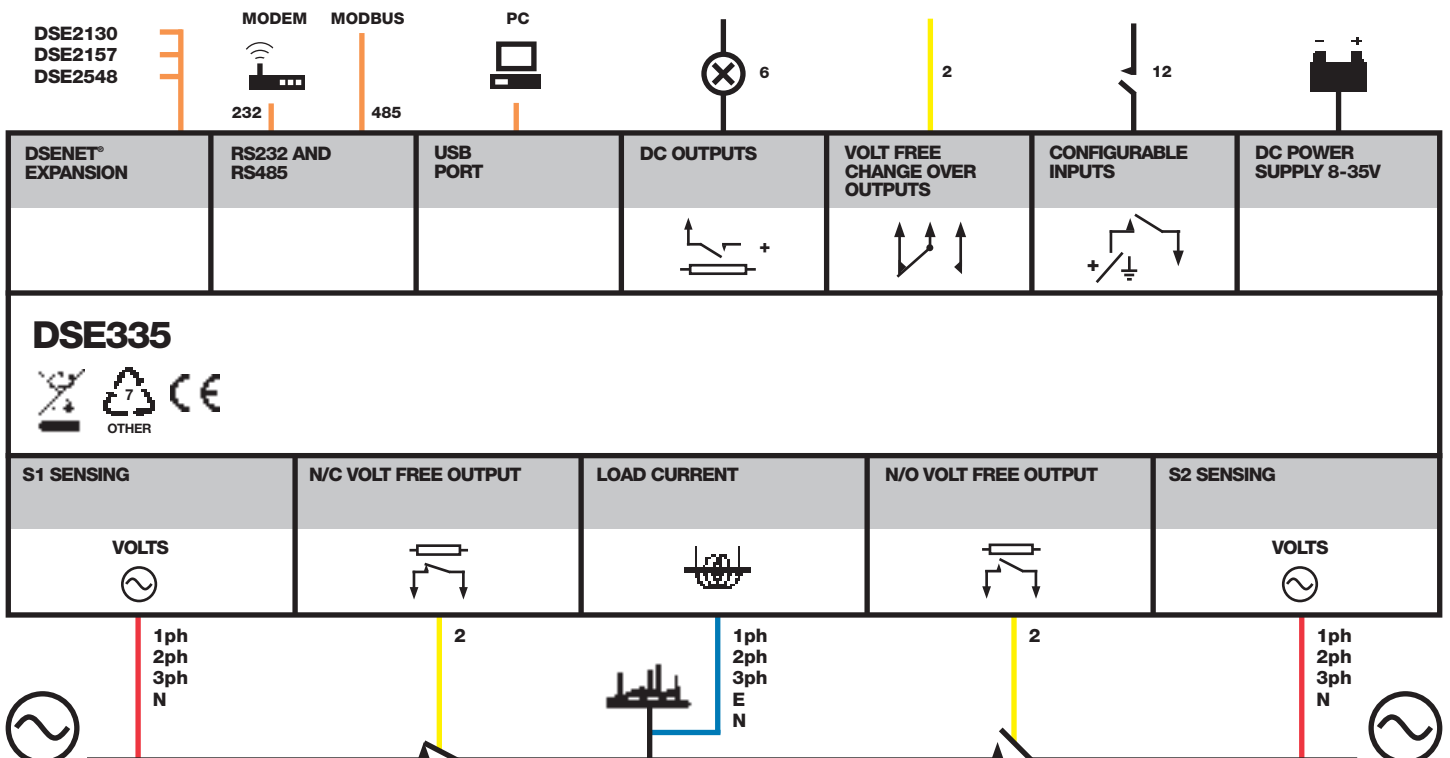
#### SHOCK

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  
IP65 - Front of module when installed into the control panel with the supplied sealing gasket.

## COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF ATS APPLICATIONS



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### FEATURES



### KEY FEATURES

- Configurable inputs (12)
- Configurable volt-free outputs (6)
- Configurable DC outputs (6)
- 4-Line back-lit LCD text display
- Five key menu navigation
- Front panel editing with PIN protection
- LED and LCD alarm indication
- Check sync feature
- Remote monitoring
- Source 1/Source 2 control
- Start inhibit
- Load inhibit
- Manual restore to S1
- Supports multiple topologies
- Automatic switch-over between supplies
- Rotary ATS configuration
- Configurable timers and alarms
- Multiple date and time scheduler
- Power monitoring (kW h, kV Ar, kV A h, kV Ar h)
- Load switching (load shedding outputs)
- USB connectivity

- Backed up real time clock
- Fully configurable via DSE Configuration Suite PC software
- Configurable display languages
- User selectable RS232 and RS485 communications
- Configurable Gencomm pages
- SMS messaging (additional external modem required)
- Additional display screens to help with modem diagnostics
- DSENet® expansion compatible
- Integral PLC editor

### KEY BENEFITS

- Source 1/Source 2 provides total flexibility for the application of the product
- Fully automatic and switch-over control minimises the effects of power disruptions
- User friendly set-up and button layout
- 3 phase display and check sync provide enhanced module functionality
- DSE Configuration Suite PC Software compatibility for remote control and monitoring
- 132 x 64 pixel ratio display for clarity
- Real-time clock provides accurate event logging
- Ethernet communications (via DSE860/865 modules), provides advanced remote monitoring at low cost
- Modules can be integrated into building management systems (BMS)
- Increased input and output expansion capability via DSENet®
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- PLC editor allows user configurable functions to meet specific application requirements

### SPECIFICATION

#### DC 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. LEDs and backlight will not be maintained during cranking.

#### MAXIMUM OPERATING CURRENT

480 mA at 12 V, 360 mA at 24 V

#### MAXIMUM STANDBY CURRENT

126 mA at 12 V, 96 mA at 24 V

#### S1

**VOLTAGE RANGE**  
15 V to 333 V AC (L-N)

**FREQUENCY RANGE**  
3.5 Hz to 75 Hz

#### OUTPUTS

##### OUTPUTS A & E

Normally closed volt-free output  
8 A AC at 250 V AC

##### OUTPUTS B & F

Normally open volt-free output  
8 A AC at 250 V AC

##### OUTPUT C & D

Changeover volt-free output  
8 A AC at 250 V AC

##### AUXILIARY OUTPUTS G,H,I,J,K & L

2 A DC at supply voltage

#### S2

**VOLTAGE RANGE**  
15 V to 333 V AC (L-N)

**FREQUENCY RANGE**  
3.5 Hz to 75 Hz

#### DIMENSIONS

**OVERALL**  
240 mm x 181 mm x 42 mm  
9.4" x 7.1" x 1.6"

#### PANEL CUT-OUT

220 mm x 160 mm  
8.7" x 6.3"

#### MAXIMUM PANEL THICKNESS

8 mm  
0.3"

#### STORAGE TEMPERATURE RANGE

-40 °C to +85 °C

### RELATED MATERIALS

#### TITLE

DSE335 Installation Instructions  
DSE335 Operator Manual  
DSE335 Configuration Suite PC Manual  
DSE160 Self Seeking Power Supply Data Sheet  
DSE160 Operator Manual

#### PART NO'S

053-136  
057-158  
057-157  
055-076  
057-108

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