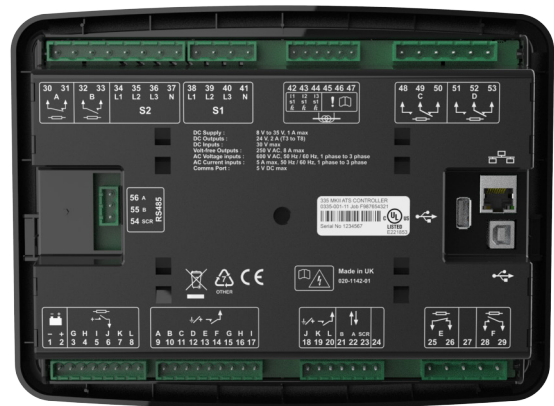




## DSE335 MKII Auto Transfer Switch Control Module

Part Numbers: 0335-11



### Overview

The DSE335 MKII is an automatic transfer switch controller designed to monitor the voltage and frequency of incoming AC supplies from two different sources. These are either generator or mains (utility), or a combination of both. The module monitors S1 (Source 1) and in the event of a failure issues a start command to S2 (Source 2).

Once S2 is available and producing an output within limits, the module controls the transfer device and switches the load from S1 to S2. Once the S1 supply returns to within limits, the module commands a load return to S1 and shuts down S2. Various timing sequences are available to prevent nuisance starting on minor supply breaks. The DSE335 MKII supports multiple topologies. Features include a configurable close transition menu down to 100 ms, mains (utility) rated volt-free relays, a clear back-lit LCD 4-line text display, showing system status and warnings and 4 configurable bi-colour LEDs indicating operational status.

The module includes USB, RS485, Ethernet\* ports and dedicated DSENet® terminals for system expansion. The module is configured using the DSE Configuration Suite PC Software. Selected front panel editing is also available. Configurable inputs and outputs make the DSE335 MKII fully flexible to suit a wide variety of applications. When no DC supply is available, the DSE160 self-seeking power supply is available to order.

### Key Features

- Configurable inputs (12)
- Configurable volt-free outputs (6)
- Configurable DC outputs (6)
- Configurable bi-colour front panel LEDs (4) for enhanced status indication
- 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
- Passive closed transition
- Remote monitoring
- Source 1 / Source 2 control
- 1 A & 5 A CT secondary support
- Phase rotation detection
- Start & load inhibit functions

- Manual restore to S1
- Supports multiple topologies
- Automatic switch-over between supplies
- Configurable timers and alarms
- Multiple date and time scheduler
- Power monitoring (kW h, kV Ar, kV A h, kV Ar h)
- Backed up real time clock
- Fully configurable via DSE Configuration Suite PC software using USB, RS485 and Ethernet\* communication
- Configurable display languages
- DSENet® expansion compatible
- Integrated PLC editor
- Simultaneous use of RS485 & Ethernet\* communication ports
- MODBUS RTU & TCP\* support with configurable MODBUS pages
- Memory stick to expand storage\*

\*Available in future software updates.

### Product Documentation

- 053-272 – DSE335 MKII Installation Instructions
- 057-368 – DSE335 MKII Operator Manual
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## DSE335 MKII Auto Transfer Switch Control Module

Part Numbers: 0335-11

Specifications	
<b>DC Supply</b>	
Continuous Voltage Rating	8 V to 35 V DC 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 are not maintained during cranking.
Maximum Operating Current	396 mA at 12 V, 216 mA at 24 V
<b>Voltage Measurement</b>	
Number	2 (Source 1 and Source 2)
Measurement Input	3 Phase + Neutral
Voltage Range	15 V to 415 V Phase to Neutral 25 V to 720 V Phase to Phase
Frequency Range	3.5 Hz to 75 Hz
<b>Current Transformer Measurement</b>	
Number	1 (Load)
Measurement Input	3 Phase
Current Range	0 A to 1 A 0 A to 5 A
<b>Digital Inputs</b>	
Number	12
Type (In Groups of 3)	Negative Switching Digital Input or Positive Switching Digital Input
Negative Switching Input Closed Voltage Threshold	Less than 3.2 V
Negative Switching Input Open Voltage Threshold	Greater than 8.1 V
Positive Switching Input Closed Voltage Threshold	Greater than 8.1 V
Positive Switching Input Open Voltage Threshold	Less than 3.2 V
<b>Digital Outputs</b>	
Number	12
Type	2 Normally Open Volt-Free Contacts 2 Normally Closed Volt-Free Contacts 2 Changeover Volt-Free Contacts 6 Positive Switching DC Output
Volt-Free Contact Output Rating	5 A <sub>DC</sub> resistive at 30 V <sub>DC</sub> 8 A <sub>AC</sub> resistive at 250 V <sub>AC</sub>
Positive DC Output Rating	2 A <sub>DC</sub> at module supply voltage

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## DSE335 MKII Auto Transfer Switch Control Module

Part Numbers: 0335-11

Specifications	
<b>Communications</b>	
USB A*	Data Storage
USB B	Programming Port
DSENet®	Expansion Port
RS485	Fully Isolated
Ethernet*	10/100 Ethernet Port
<b>Temperature</b>	
Operating Temperature	-30 °C to +70 °C / -22 °F to +158 °F
Storage Temperature	-40 °C to +85 °C / -40 °F to +185 °F
<b>Dimensions</b>	
Overall (W x H x D)	250 mm x 189 mm x 50.5 mm / 9.85 " x 7.43 " x 1.99 "
<b>Mounting</b>	
Type	Panel Facia Mounting
Panel Cutout (W x H)	220 mm x 160 mm / 8.66 " x 6.30 "
Maximum Panel Thickness	8 mm / 0.31 "

Related Products		
<b>DSEAts®</b>		
DSE160	Self-Seeking Power Supply	0160-00
<b>DSENet®</b>		
DSE2548	DSENet® LED Output Expansion Module	2548-01
DSE2157	DSENet® Output Expansion Module	2157-01
DSE2130	DSENet® Input Expansion Module	2130-01
<b>DSEWebNet®</b>		
DSE890 MKII	DSEWebNet® Gateway	0890-04

\*Available in future software updates.

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## DSE335 MKII Auto Transfer Switch Control Module

Part Numbers: 0335-11

Environmental Testing Standards	
<b>Electro-Magnetic Compatibility</b>	
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
<b>Electrical Safety</b>	
BS EN 61010	Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory use.
<b>Temperature</b>	
BS EN 60068-2-1	Ab/Ae Cold Test -30 °C
BS EN 60068-2-2	Bb/Be Dry Heat +70 °C
<b>Vibration</b>	
BS EN 60068-2-6	Ten sweeps in each of three major axes 5 Hz to 8 Hz at ±7.5 mm, 8 Hz to 500 Hz at 2 Gn
<b>Humidity</b>	
BS EN 60068-2-30	Db Damp Heat Cyclic 20/55 °C at 95% Relative Humidity 48 Hours
BS EN 60068-2-78	Cab Damp Heat Static 40 °C at 93% Relative Humidity 48 Hours
<b>Shock</b>	
BS EN 60068-2-27	Three shocks in each of three major axes 15 Gn in 11 ms
<b>Degrees of Protection Provided by Enclosures</b>	
BS EN 60529	IP65 - From the front of the module when installed into the panel with the supplied gasket.

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## DSE335 MKII Auto Transfer Switch Control Module

Part Numbers: 0335-11

Pin Out Description	
Pin	Description
1 to 2	DC Supply
3 to 8	Positive Switching DC Outputs
9 to 20	Digital Inputs
21 to 23	DSENet®
24	Not Applicable
25 to 26	Normally Closed Volt-Free Output Contact
27	Not Applicable
28 to 29	Normally Open Volt-Free Output Contact
30 to 31	Normally Closed Volt-Free Output Contact
32 to 33	Normally Open Volt-Free Output Contact
34 to 37	S1 Voltage Sensing
38 to 41	S2 Voltage Sensing
42 to 47	Load Current Sensing
48 to 50	Changeover Volt-Free Output Contact
51 to 53	Changeover Volt-Free Output Contact
54 to 56	RS485

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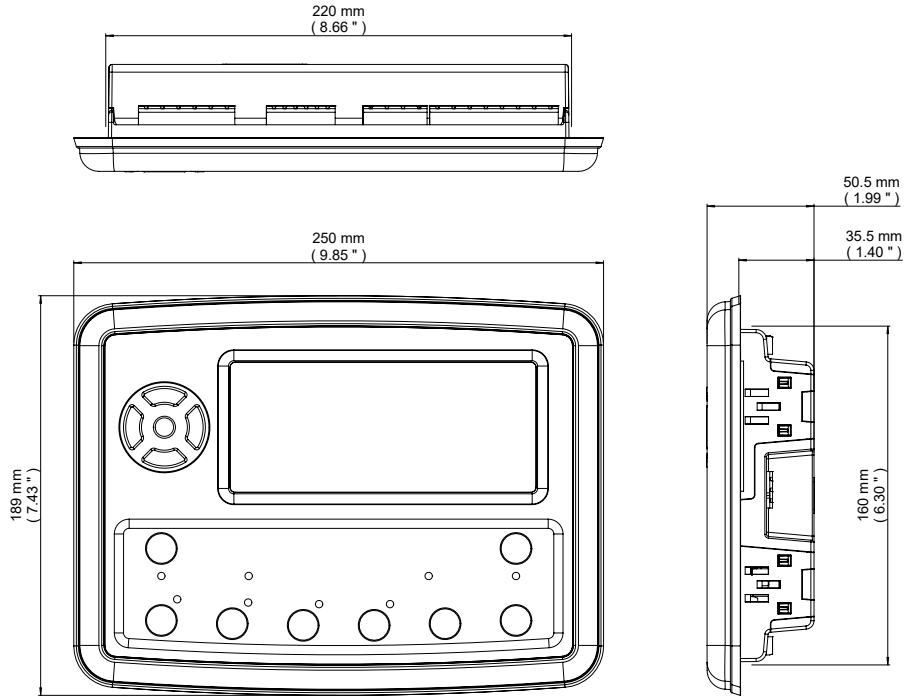
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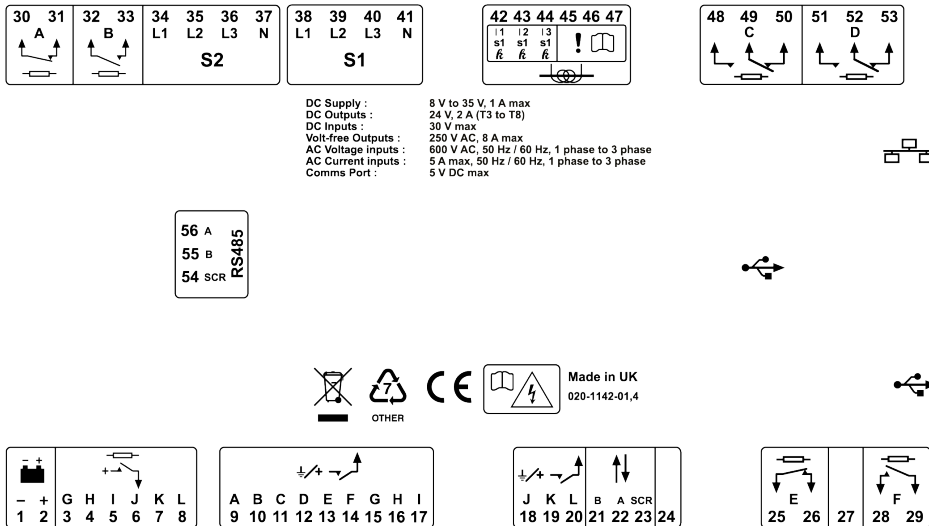
### DSE335 MKII Auto Transfer Switch Control Module

Part Numbers: 0335-11

#### Technical Drawing



#### Connection Label



#### Product Documentation

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