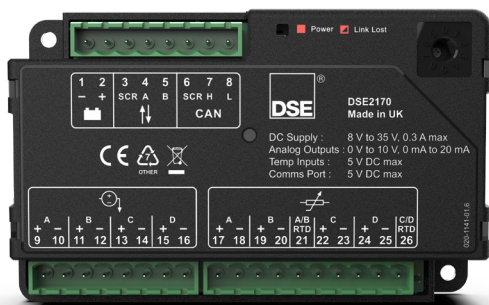


## DSE2170 DSENet® RTD / Thermocouple Input & Analogue Output Expansion Module

Part Number: 2170-01



### Overview

The DSE2170 RTD/Thermocouple Input and Analogue Output Expansion Module has been developed for use with the DSEG8600 platform and DSEM-Series platform. The DSE2170 extends the host modules input and output capabilities for increased application flexibility. This is achieved by providing an additional 4 RTD/thermocouple inputs (configurable as J Type, K Type, L Type, Pt100 or Pt1000) and 4 analogue outputs (configurable as 0 V to 10 V or 0 mA to 20 mA).

For enhanced communication with the host module, the DSE2170 features a DSENet® port for connection to the DSEG8600 platform and a CAN port for connection to the DSEM-Series platform. A red status LED is provided to easily identify when the DSE2170 is connected to a power source and communicating with the host controller.

### Key Features

- 4 RTD/Thermocouple Inputs (configurable as J Type, K Type, L Type, Pt100 or Pt1000)
- 4 Analogue Outputs (configurable as 0 V to 10 V or 0 mA to 20 mA)
- Status LED to Indicate Power On and Link Lost
- DSENet® Communication
- CAN Communication

### Product Documentation

053-269 – DSE2170 Installation Instructions  
057-362 – DSE2170 Operator Manual



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## DSE2170 DSENet® RTD / Thermocouple Input &amp; Analogue Output Expansion Module

Part Number: 2170-01

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	200 mA at 12 V, 95 mA at 24 V
Maximum Standby Current	50 mA (no communication active)
<b>RTD / Thermocouple Inputs</b>	
Number	4
Type	J Type Thermocouple, K Type Thermocouple, L Type Thermocouple, Pt100 or Pt1000
Probe Type	Insulated
Input Resolution	0.0015 % when configured as RTD 0.18 % when configured as Thermocouple
Input Accuracy	±1 % or ±2 °C - whichever is greater
<b>Analogue Outputs</b>	
Number	4
Type	0 V to 10 V or 0 mA to 20mA
Load Impedance	Minimum 1 kΩ when configured as 0 V to 10 V Maximum 500 Ω when configured as 0 mA to 20 mA
Output Resolution	2.5 mV when configured as 0 V to 10 V 5 μA when configured as 0 mA to 20 mA
Output Accuracy	±0.5 %
<b>Communications</b>	
DSENet®	Fully isolated
CAN	Fully isolated
<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)	120 mm x 75 mm x 31.5 mm / 4.72" x 2.95" x 1.24"
<b>Mounting</b>	
DIN Rail	35 mm / 1.35"
Chassis	2 M4 mounting holes with 108 mm x 63 mm / 4.25" x 2.48" centres

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## DSE2170 DSENet® RTD / Thermocouple Input & Analogue Output Expansion Module

Part Number: 2170-01

Related Products		
<b>DSEGenset®</b>		
DSEG8600	Parallel Genset Controller with Integral Heater	G8600-01
<b>DSEControl® Programmable Controllers</b>		
DSEM870	7" Programmable Display	M870-01, M870-02, M870-03, M870-04
DSEM840	4.3" Programmable Display	M840-01, M840-02
DSEM835	3.5" Programmable Display	M835-01
DSEM812	12" Programmable Display	M812-01, M812-02, M812-03, M812-04
DSEM810	10" Programmable Display	M810-01, M810-02, M810-03, M810-04
DSEM643	Programmable Controller (34 I/O)	M643-01
DSEM640	Programmable Controller (68 I/O)	M640-01
<b>DSENet®</b>		
DSE2548	DSENet® LED Output Expansion Module	2548-01
DSE2160	DSENet® Input / Output Expansion Module	2160-01
DSE2157	DSENet® Output Expansion Module	2157-01
DSE2152	DSENet® Analogue Output Expansion Module	2152-01
DSE2133	DSENet® RTD/Thermocouple Input Expansion Module	2133-01
DSE2131	DSENet® Ratiometric Input Expansion Module	2131-01
DSE2130	DSENet® Input Expansion Module	2130-01

### Product Documentation

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## DSE2170 DSENet® RTD / Thermocouple Input & Analogue Output Expansion Module

Part Numbers: 2170-01

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 of Information Technology Equipment, including Electrical Business Equipment
<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	IP21
<b>Pin Out Description</b>	
Pin	Description
1 to 2	DC Supply
3 to 5	DSENet®
6 to 8	CAN
9 to 16	Analogue Outputs
17 to 26	RTD / Thermocouple Inputs

### Product Documentation

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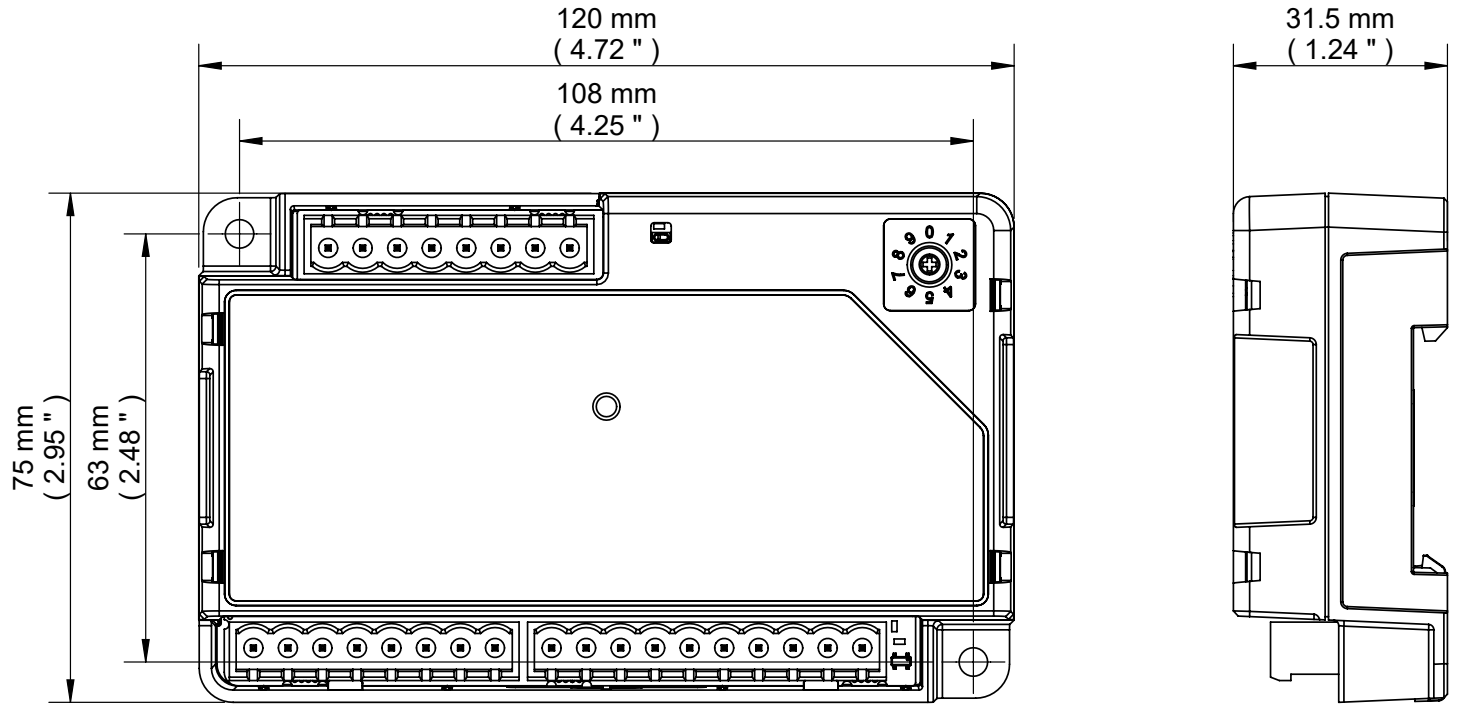
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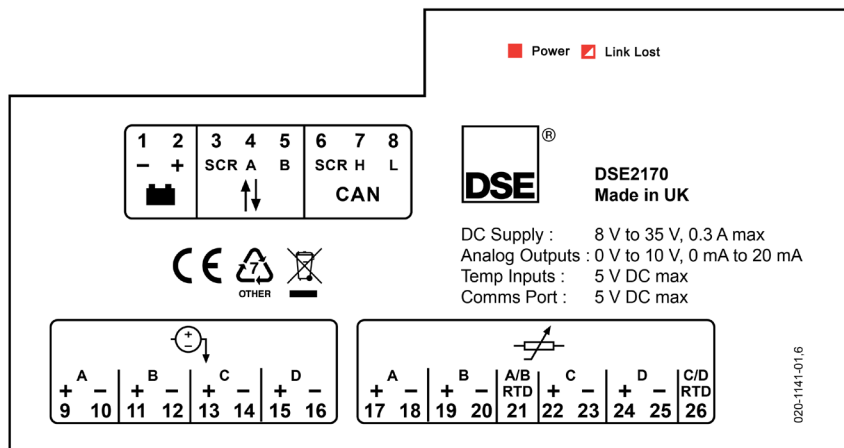
DSE2170 DSENet® RTD / Thermocouple Input & Analogue Output Expansion Module

Part Numbers: 2170-01

Technical Drawing



Connection Label



Product Documentation

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