

DSE890 MKII DSEWebNet® / IoT Gateway - 4G (GSM/Ethernet)

Part Number : 0890-04



Overview

The DSE890 MKII gateway is used in conjunction with supported DSE controllers and programmable displays to provide remote monitoring and communications data via DSEWebNet® or third party MQTT brokers. The DSE890 MKII communicates with up to five connected DSE controllers, monitoring instrumentation and operating states. Data is logged internally and transmitted from the gateway device to the DSEWebNet® or MQTT broker (Amazon Web Services, Google, IBM etc.).

DSEWebNet® software is accessed using an Internet browser or the dedicated app. Users are able to perform multiple tasks including: monitoring equipment, clearing alarm conditions, starting/stopping equipment and monitoring fuel levels.

The IoT feature of the DSE890 MKII supports MQTT V 3.1.1 (ISO/IEC 20922:2016). This enables connection to a third party server that is running an MQTT broker, whilst simultaneously supporting connection to the DSEWebNet® server.

Key Features

- 4G Connectivity
- Supports 2G & 3G connections (where available)
- Configured device can be monitored using DSEWebNet® software
- Configured device can be monitored using third-party MQTT brokers
- DIN rail & chassis mount
- Multiple users can access each DSE890 MKII simultaneously
- Main & diversity aerial connection inputs

IMPORTANT INFORMATION: The DSE890 MKII IoT Gateway Device does not meet the cybersecurity requirements defined by the Radio Equipment Directive (RED), Article 3.3 (d) and the EN18031-1 standard.

Product Documentation

053-247 – DSE890 MKII Installation Instructions
057-304 – DSE890 MKII Operator Manual
055-301 - DSE891 MKII Data Sheet



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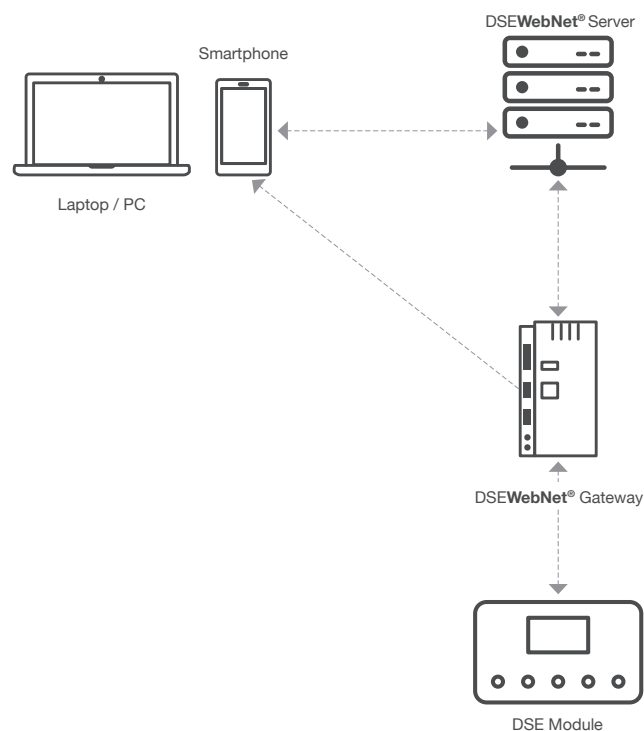
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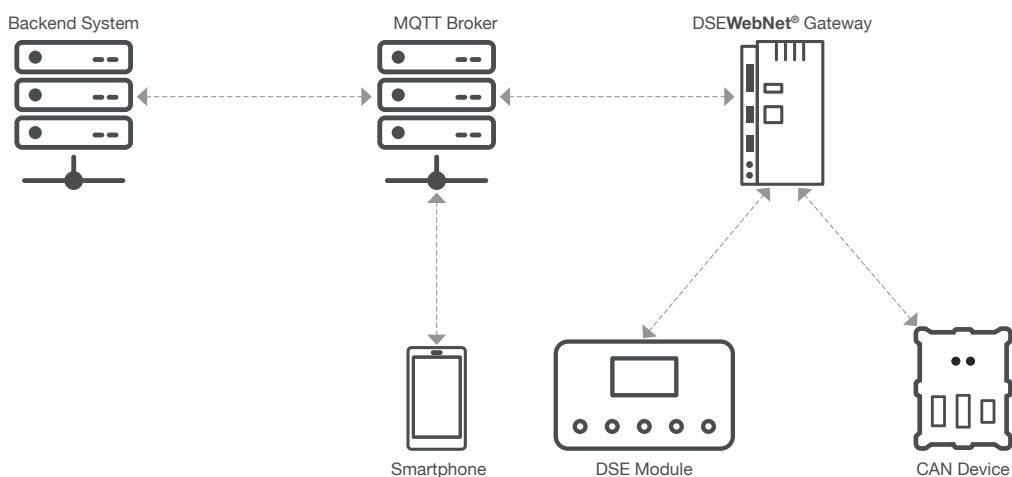
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DSEWebNet® System Overview



MQTT System Overview



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Specifications	
DC Supply	
Continuous Voltage Rating	8 V to 36 V DC continuous
Cranking Dropouts	Able to survive 0 V for 100 ms, providing supply was at least 8 V before dropout and supply recovers to 8 V. This is achieved without the need for internal batteries.
Maximum Operating Current	755 mA at 12 V 376 mA at 24 V
Maximum Standby Current	207 mA at 12 V 113 mA at 24 V
Frequency Bands & Max Radio-Frequency Power Transmitted	
Type	2G GSM 850/900 33dBm GSM 1800/1900 30dBm 3G B1/B2/B2/B4/B5/B6/B8/B19 24dBm LTE FDD: B1/B2/B3/B4/B5/B7/B8/B12/B18/B19/B20/B26/B28/B66 23dBm TDD: B38/B40/B41 23dBm
Digital Outputs	
Number	2
Type	Positive Switching DC outputs
Output Rating	2 A at Supply voltage
Digital Inputs	
Number	2
Type	Negative Switching Digital Input
Closed Voltage Threshold	Less than 2.1 V
Open Voltage Threshold	Greater than 6.6 V
Communications	
USB A	Single DSE Controller
CAN (Only active for third-party MQTT brokers)	Multiple DSE Controllers & Programmable Displays
RS485	Multiple DSE Controllers
Ethernet	Multiple DSE Controllers

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Specifications	
GPS & GSM	
GSM Main	SMA FEMALE Outside thread, female central receptacle
GSM Diversity	SMA FEMALE Outside thread, female central receptacle
GPS	SMA MALE Inside thread, male central pin
Temperature	
Operating Temperature	-30 °C to 60 °C / -22 °F to 140 °F
Storage Temperature	-40 °C to +80 °C / -40 °F to +185 °F
Dimensions	
Overall (W x H x D)	85.5 mm x 136.8 mm x 51 mm / 3.36 " x 5.39 " x 2.00 "
Mounting	
DIN Rail	35 mm / 1.4"
Chassis	2 M4 mounting holes

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Related Products		
DSEgenset®		
DSEG8900	7" Colour Parallel Genset Controller	G8900-01
DSEG8680	Bus-Tie Controller	G8680-01
DSEG8660	Mains (Utility) Controller	G8660-01
DSEG8600	Parallel Genset Controller with Integral Heater	G8600-01
DSEG4500	Compact Single Genset Controller	G4500-01
DSEG4501	Compact Single Genset Controller	G4501-01
DSEL401 MKII	Intelligent Lighting Tower Control Module	L401-01
DSEP100	Mains Decoupling Relay	P100-02
DSE8680	Synchronising Generator Bus Tie Control Module	8680-01
DSE8660 MKII	Auto Transfer Switch & Mains (Utility) Control Module	8660-02
DSE8620 MKII	Synchronising Auto Mains (Utility) Failure Load Share Control Module	8620-02
DSE8610 MKII	Synchronising & Load Sharing Auto Start Control Module	8610-02
DSE7420 MKII	Auto Mains (Utility) Failure Control Module	7420-03
DSE7410 MKII	Auto Start Control Module	7410-03
DSE7320 MKII	Auto Mains (Utility) Failure Control Module	7320-03
DSE7310 MKII	Auto Start Control Module	7310-03
DSE6120 MKIII	Auto Mains (Utility) Failure Control Module	6120-05
DSE6110 MKIII	Auto Start Control Module	6110-05
DSE6020 MKII	Auto Mains (Utility) Control Module	6020-03
DSE4620	Auto Mains (Utility) Failure Control Modules	4620-03
DSE4610	Auto Start Control Module	4610-03
DSE4520 MKII	Auto Mains (Utility) Failure Control Module	4520-05
DSEControl®		
DSEE800	Engine Only Control Module	E800-01
DSEE400	Engine Only Control Module	E400-01
DSEE100	Engine Only Control Module	E100-01
DSEAts®		
DSE335 MKII	Auto Transfer Switch Control Module	0335-11
DSE334	Auto Transfer Switch Control Module	0334-01
DSE331	Auto Transfer Switch Control Module	0331-01

Please note: the related product list is not exclusive, please email support@deepseaelectronics.com to check compatability.

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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 62368-1	Audio / video, information and communication technology 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 at ± 7.5 mm, 8 Hz to 500 Hz at 2 gn
Humidity	
BS EN 60068-2-30	Db Damp Heat Cyclic 20/55 °C at 95% RH 48 Hours
BS EN 60068-2-78	Cab Damp Heat Static 40 °C at 93% RH 48 Hours
Shock	
BS EN 60068-2-27	Three shocks in each of three major axes 15 gn in 11 ms

Pin Out Description	
Pin	Description
1 to 2	DC Supply
3 to 4	Digital Outputs
5 to 7	Digital Inputs
8 to 10	RS485
11 to 13	CAN

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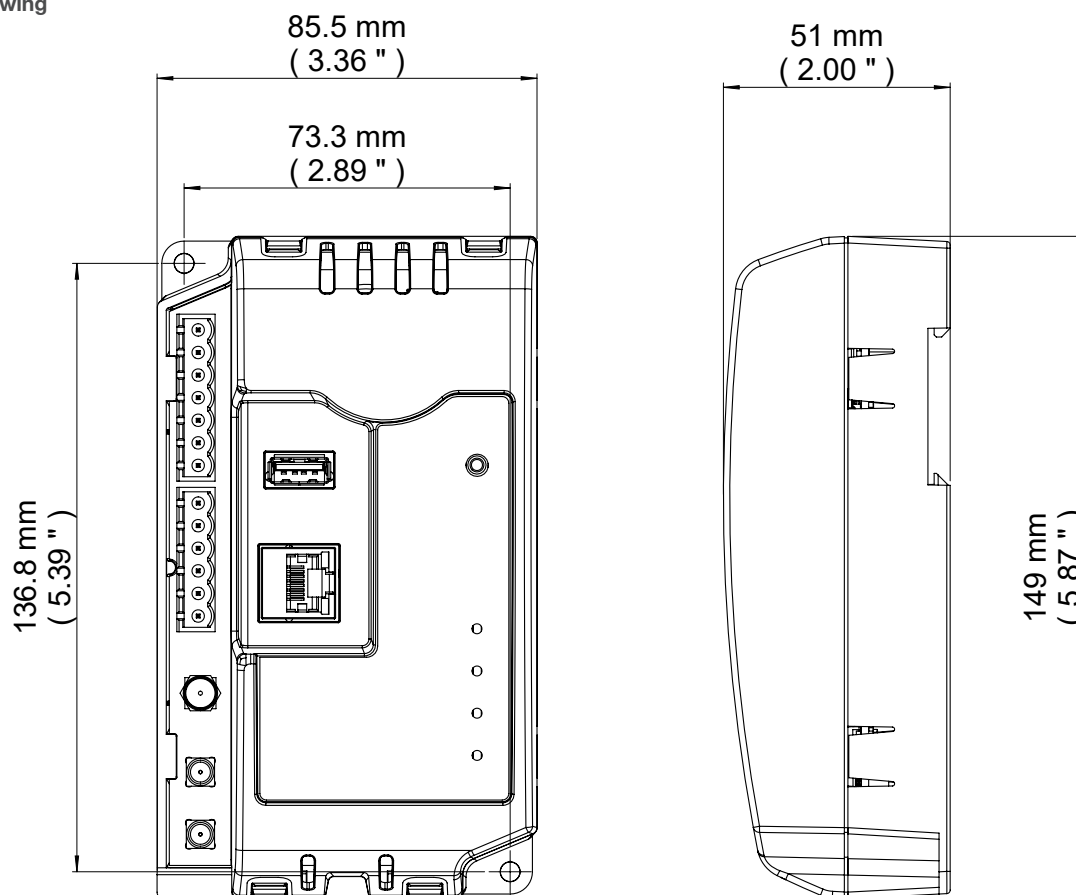
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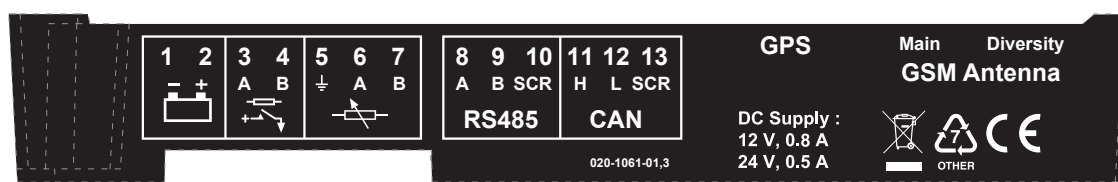
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Technical Drawing



Connection Label



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