

# DSEL400/L401

## INTELLIGENT LIGHTING TOWER CONTROL

### FEATURES



### KEY BENEFITS

- Ultimate size to feature ratio
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored simultaneously which are clearly displayed on the largest back-lit icon display in its class
- The module can be configured to suit a wide range of lighting tower applications
- Compatible with a wide range of CAN engines, including tier 4 engine support
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- Fuel monitoring provides the ability to turn off lights as the fuel level drops which can enable longer running hours.

- IP65 rating (with optional gasket) offers increased resistance to water ingress

### KEY FEATURES

- Largest back-lit icon display in its class
- Heated display option available
- Fully configurable via the fascia or PC using USB communication
- Extremely efficient power save mode
- 3 phase generator sensing
- Generator/load power monitoring (kW, kV A, kV Ar, pf) (DSEL401 only)
- Generator/load current monitoring and protection (DSEL401 only)
- Light failure detection (DSEL401 only)
- Compatible with 600 V ph - ph nominal systems
- Fuel and crank outputs (configurable when using CAN)

- 4 configurable DC outputs
- 3 configurable analogue/digital inputs
- 4 configurable digital inputs
- Configurable staged light control outputs
- CAN and alternator speed sensing in one variant
- 3 engine maintenance alarms
- Engine speed protection
- Engine hours counter
- Engine pre-heat
- Engine run-time scheduler
- Battery voltage monitoring
- Start on low battery voltage
- Configurable remote start input
- 1 alternative configuration
- Comprehensive warning, electrical trip or shutdown protection upon fault condition
- LCD alarm indication
- Event log (50)

### 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

85 mA at 12 V, 96 mA at 24 V

#### MAXIMUM STANDBY CURRENT

51 mA at 12 V, 47 mA at 24 V

#### MAXIMUM SLEEP CURRENT

35 mA at 12 V, 32 mA at 24 V

#### MAXIMUM DEEP SLEEP CURRENT

<10 uA at 12 V, <10 uA at 24 V

#### OUTPUTS

##### OUTPUT A (FUEL)

10 A short term, 5 A continuous, at supply voltage

##### OUTPUT B (START)

10 A short term, 5 A continuous, at supply voltage

##### AUXILIARY OUTPUTS C, D E & F

2 A DC at supply voltage

#### GENERATOR

##### VOLTAGE RANGE

15 V to 415 V AC (Ph to N)  
26 V to 719 V AC (Ph to Ph)

##### FREQUENCY RANGE

3.5 Hz to 75 Hz

#### DIMENSIONS

##### OVERALL

140 mm x 113 mm x 43 mm  
5.5" x 4.4" x 1.7"

##### PANEL CUT-OUT

118 mm x 92 mm  
4.6" x 3.6"

##### MAXIMUM PANEL THICKNESS

8 mm  
0.3"

##### 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

##### HEATED DISPLAY VARIANT

-40 °C to +70 °C  
-40 °F to +158 °F

### OPTIONAL PARTS

PART	PART NUMBER
IP65 Gasket	020-282

### RELATED MATERIALS

#### TITLE

DSEL400 & DSEL401 Installation Instructions  
DSEL400 & DSEL401 Operator Manual  
DSEL400 & DSEL401 Configuration Suite PC Manual

#### PART NO'S

053-153  
057-188  
057-187

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## INTELLIGENT LIGHTING TOWER CONTROL

### FEATURES

#### SUITABLE FOR A WIDE RANGE OF MOBILE LIGHTING APPLICATIONS

The DSEL4xx Series are sophisticated control modules designed specifically for mobile lighting tower applications such as events, road maintenance, emergency lighting etc.

Cleverly designed with ease-of-use in mind, the DSE L Series controllers provide an unrivalled level of flexible features which can be easily configured to suit a wide range of complex lighting sequences.

#### EFFICIENT SYSTEM MANAGEMENT

An eight-event scheduler is provided to operate up to a 4-stage load output to protect the generator from stalling on start-up, and to shut down lighting circuits in a

chosen sequence, depending on fuel level, to maximise the run time of essential lighting. This ensures maximum fuel efficiency against optimum lighting levels. Each of the lighting circuits can also be inhibited individually using available inputs, ensuring that unnecessary light is not made available.

The built-in lighting circuit monitor in the DSEL401 is able to detect and indicate light bulb failures to facilitate maintenance efficiencies.

#### OPTIONS AVAILABLE

The L Series modules offer high levels of protection and control for engine, alternator and lighting and are available in different versions:

- DSEL400 Standard Lighting Tower Controller
- DSEL401 Lighting Tower Controller with current measurement.

Both versions are available with or without a heated display.

Based on the same world-leading technology used in contemporary DSE controllers, the modules are creatively engineered to fit into a compact case making it ideal for small panel designs.

Configurable via the front fascia or using the DSE Configuration Suite PC software, which is common to other DSE modules, the DSE L Series can be configured to provide a comprehensive list of sophisticated protection and monitoring functions.

### 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 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

#### DEGREES OF PROTECTION PROVIDED BY ENCLOSURES

BS EN 60529  
IP65 - Front of module when installed into the control panel with the optional sealing gasket.

## COMPREHENSIVE FEATURE LIST TO SUIT A WIDE VARIETY OF LIGHTING TOWER APPLICATIONS

