



LMSU

Lamp Monitoring and
Switching Unit

Compliant to Latest International Standards*

- ▶ ICAO Annex 14. Vol 1
- ▶ IEC 61827
- ▶ EASA

Applications

Individual lamp control and monitoring of airfield
lighting fixtures

Application

The Lamp Monitoring and Switching Unit offers back indication for monitoring and switching of runway, taxiway, stopbars and lead-ons lighting applications. It has been designed to be an essential component in Surface Movement Guidance Control Systems (SMGCS) for regional hubs to major international airports. As part of a fully integrated ILCMS the LMSU is capable of providing lamp status information and fault detection to meet ICAO requirements. The LMSU is designed to work alongside existing field equipment and it can be combined with conventional circuits to provide individual lamp monitoring for either tungsten halogen and LED fixtures.

Applicable circuits can be circuit selector switched, have primary field switches (such as the atg airports static switch) or secondary field switches such as the atg airports TSU. The LMSU is particularly suited to applications where switching is unnecessary but integrity is important such as runway edge and centreline and approach circuits.

Description

The Lamp Monitoring and Switching Unit offers full real time individual lamp control and monitoring via a multi-drop serial link. Lamp monitoring includes lamp status and secondary RMS current measurement.

The security and reliability of communications is ensured by utilising a RS485 standard data link operating over ordinary fieldbus cable. This benefits from a mature and proven technology with a world wide base in excess of hundreds of thousands of communications links. Such communications links are widely used in other safety related applications.

Features

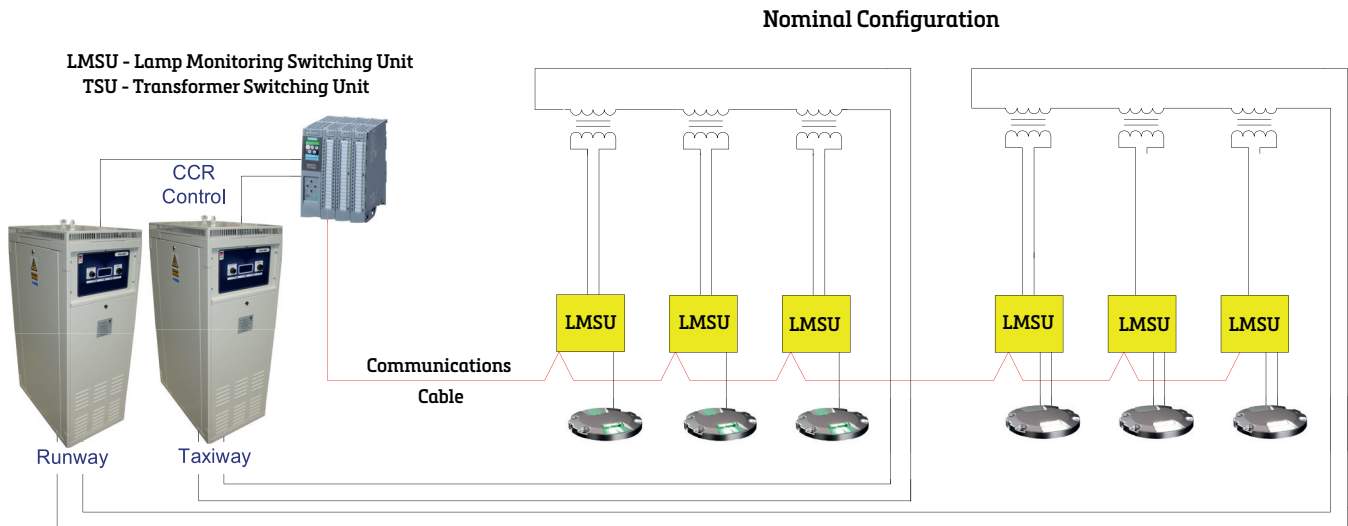
- Monitors and switches LED or Tungsten Halogen fixtures*
- Compatible with other manufacturers fixtures**
- Unmatched communications reliability
- High communications speed – typical stopbar/lead on back indication within 2 seconds (actual 500ms)
- Fully fail safe
- Onboard microprocessor is constantly monitored by watchdog to ensure safe operation
- Communications completely independent of primary loop equipment
- Communication's signals have no effect on existing CCRs
- No shielding required on primary cable
- No insulation resistance requirements on primary cable
- No special primary loop cable routing requirements to avoid high frequency pick-up or radiation
- No special performance requirements for existing isolating transformers
- Operates on the full range of 2.8A to 6.6A on either 3 or 5 step IGBT, ferroresonant or thyristor CCRs that are designed in compliance with IEC or FAA requirements.
- CCR circuits can freely accommodate any mix of Monitored and non-Monitored fittings
- Injection moulded polypropylene
- No need to replace the CCRs, series transformers, or cables. Full compatibility with existing airfield lighting series circuits
- FAA L-823 connector
- Capable of being installed in FAA L-867/L-868 deep bases
- Integral surge protection

* Maximum 85 Watts for tungsten Halogen

** contact head office for further information

Communications

- Communications are based upon ESP, asynchronous half duplex (2-wire), using RS485 signal levels at 9.6KB
- Up to 200 elements may be multidropped on a single link
- Communications cable is a screened single twisted pair fieldbus cable, optionally insulated up to 5kV
- Full isolation between communications and power circuits.



Environmental Conditions

- ▶ Ambient Temperature -20 °C to +55°C (-4 °F to +131°F)
- ▶ Storage Temperature -20°C to +70°C (-4 °F to +158°F)
- ▶ Atmospheric Altitude up to 10,000 feet (3000m)
- ▶ Relative Humidity 0-100% (sealed unit)

Standards	
EMC protection	Immunity IEC 61000-4 Emission IEC 61000-2
Ingress protection class dust/liquids	IP68 (IEC69598-1)
Vibration resistance	IEC60068-2-6

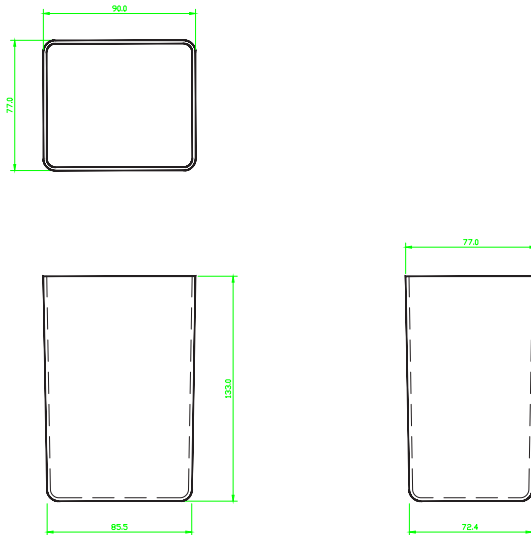
LMSU

Lamp Monitoring and Switching Unit

Ordering Codes:

045006

Dimensions



*Dimensions exclude cables and connectors

Packaging

- ▶ Net weight 2.0Kg
- ▶ Gross weight 2.1 (boxed)
- ▶ Box 200mm (L) x 100mm (W) x 90mm (H)



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atg airports reserve the right to change technical data and details at any point in time. Errors may have occurred



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