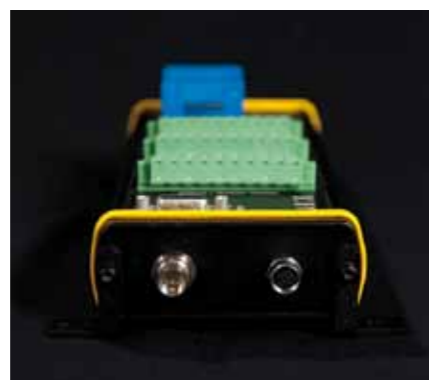


LightGuard Terminal

Remote monitoring of major lights, fixed beacons and range lights

LightGuard Terminal is a general purpose remote monitoring and control unit.

- Flexible communication by GSM, Satellite or AIS
- Easy integration with WebSCADA for internet based remote monitoring and control
- Windows Software for easy configuration and servicing in the field
- Low power consumption, ideal for solar powered application
- Wide temperature range
- Astronomical Clock for local sunset/sunrise calculation. Can generate alarm on lantern photocell failure.
- 2 CurrentSense inputs for monitoring of flashing lanterns, continuous load or solar charge
- 8 analogue inputs for monitoring of external equipment e.g. battery voltage, mains voltage, temperature, fuel level. High and low Alarm limits are adjustable
- 8 digital input for monitoring e.g. door switch, circuit breakers, last lamp, RACON overvoltage protection
- 2 digital outputs, remotely controllable, user programmable for functions such as manual light on, flash code generator, indirect light control



Current Sensor

Fully galvanic isolated current measurement with Hall-effect sensor. If the load is small, several iterations can be made to amplify the signal.



Integrated GSM

The unit can be equipped with an integrated GSM modem. SIM card is placed in a slot on the side of the unit.



Auxiliary connector

This connector is used to connect external communication equipment, LightGuard GPS or another LightGuard Terminal as subunit.



Inmarsat

Two way satellite communication using Inmarsat ISatM2M.



AIS

AtoN AIS Type 1 setting for message 21 regional bits or AtoN AIS Type Type 3 setting for two way communication using message 6.

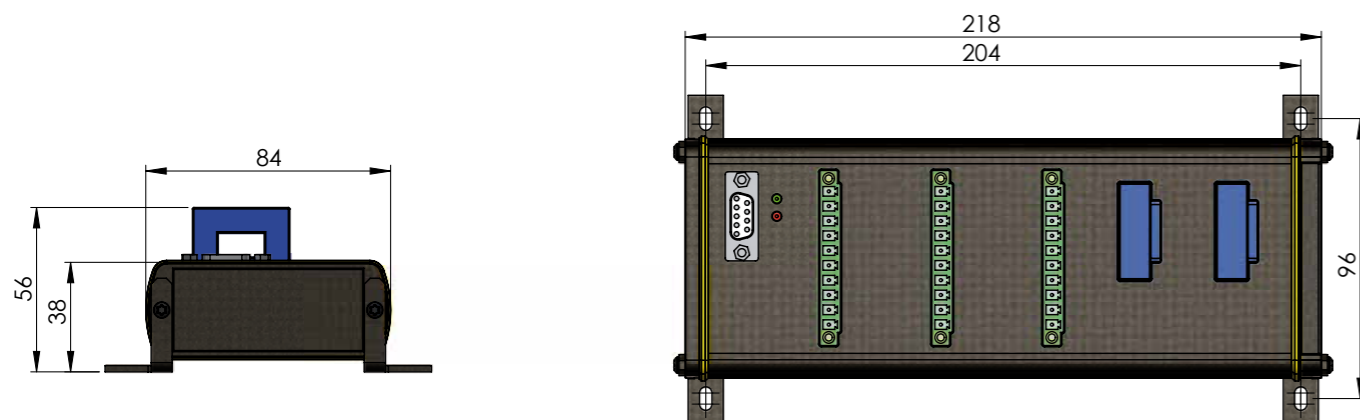


Configuration

The LightGuard Terminal configuration software for Windows can be used to setup the unit and as a local monitoring interface.



Technical Specification LightGuard Terminal



Main Technical Specification

Supply Voltage	8-36 V DC
Power Consumption	Full Speed Mode (including GSM), Avg. Current: 43 mA @ 13.8 V, Low Power Mode (including GSM), Avg. Current: 18 mA @13.8 V
Temperature	-40 to +60 °C
Protection	IP20
Digital Outputs	2 pcs., Galvanic Isolated, Normally Open, Input maximum 2 A/60 V
Digital Inputs	8 pcs., Galvanic Isolated, Logical HIGH > 8 V DC, Logical LOW < 3 VDC, Maximum 60 VDC
Analogue Inputs	8 pcs., not Galvanic Isolated, Signal Range 0-16 VDC, 12 Bit A/D conversion, Precision 0.5 % of full-scale, Input maximum 60 V
Current Sense Inputs	2 pcs., 0 – 50 A DC, Precision 1 % of full-scale
Serial Port	1 RS232, 9600 Baud, Modbus RTU Protocol, 1 CAN-bus port
Dimensions	220 x 90 x 50 mm
Terminals	1.5 mm ² / AWG 16, Type: Phoenix Contact, MC 1.5/10-STF-5.08
EMC	EN50081-1, EN50081-2 EN50082-1, EN50082-1

Order Overview LightGuard Terminal

Option matrix

GSM	Integrated GSM modem
Inmarsat D+	External Inmarsat D+ modem
AIS	External AIS AtoN (type 3) transponder
Orbcomm	External Orbcomm Satellite modem
IP66	LightGuard provided in IP66 polyester enclosure

LGT	LightGuard Terminal (without modem)
LGT-GSM	LightGuard Terminal with integrated GSM Modem
LGT-SAT	LightGuard Terminal with external Inmarsat Modem
LGT-AIS1	LightGuard Terminal with external AIS Type 1
LGT-AIS3	LightGuard Terminal with external AIS Type 3