



# SATELLITE REMOTE MONITORING MODULE

# MFSAT



MFSAT circuits are small and compact remote control devices, fitted inside our LED lanterns. The sending and receiving remote control signals is done via satellite.

Perfect for remote and isolated stations, where any other communication system is not viable. Even though its low-cost operation, it is the most reliable and available communication system.

Signals and alarms are transmitted via e-mail up to 5 configurable addresses. The users can be e-mail addresses or control centres. Therefore, the ideal complement to the system is the GLOBAL NETCOM Remote Monitoring Control Centre, in order to process and manage all the information exchanged.

Its modular construction allows its installation subsequently to the purchase of a MSM lantern.

## FEATURES

- ✓ Ideal to remote monitoring and control of MSM lanterns.
- ✓ Satellite communication service with world coverage.
- ✓ Maximum reliability and availability.
- ✓ Information is sent to up to 5 e-mail addresses and/or a control centre: in general to all authorized users or in priority agenda order, with alarm acknowledgment.
- ✓ Configuration is made by PC and RS-232 cable, using a free software. It can also be remotely settled from a mobile phone.
- ✓ A configurable sleep mode is available in order to save energy, but maintaining the transmission of messages at real time.
- ✓ Positioning and swinging radius on buoys (when including MFGPS module).
- ✓ Minimum energy consumption and a low-cost operation.
- ✓ Free-communication protocols, which allows the user to utilise his own control centre or use them for any other application needed.
- ✓ "Vigilantic" system available.



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Specifications subject to change without previous notice.



## Real time monitoring signals

- Lantern off.
- Mooring-chain breaking by GPS positioning (for buoys).
- Battery voltage reading.
- LED current consumption reading.
- Solar charging reading in accumulated Ah/day.

## Real time alarms by SMS

- Lantern off.
- LED diodes failure.
- Mooring-chain breaking.
- Low battery voltage.
- Flasher failure.
- Photocell failure.
- Wrong flashing rhythm.
- Excess consumption of the lantern.
- Solar module charge failure.

## Commands from User/Control Centre to beacon

- Report request on beacon general status.
- Day-Night mode change.
- Flasher reset.
- GPS reset (when included).
- Satellite modem reset.
- General system reset.
- Position self-detection.
- Change of MFSAT configuration by e-mail.

## MFSAT module features

- Communication by means of e-mails.
- Independent communication module from flasher, improving safety and global reliability.
- Sending of status and alarms by means of e-mails via SBD Iridium.
- Alarm detection on beacon operation, power supply and mooring-chain breaking in buoys.
- Remote re-programming via e-mails.
- Protection system through passwords.
- 4 nos. configurable digital inputs by user (impact detection, tamper, etc.).

## Technical specifications

Power range:	From 9 to 35V.
Daily average consumption:	15 mA.
Temperature range:	-30° to 60°C.
IRIDIUM module:	Iridium SBD.
External Inputs:	4 nos. opto-coupled.
MFGPS GPS receptor:	12 channels.

## Operation cost

- IRIDIUM satellite communication by SBD service (reduced rate).
- It only informs in case of alarms or commands.
- Adjustable maximum limit of messages per day.

## Options

- Other communication systems via satellite available.
- MFGPS position/synchronisation module.
- Other status/alarm signals and commands available under request.