

## MFSAT

### Communication via satellite

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

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.

### Ideal for self-contained lanterns

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 NET-COM 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 MCL and MBL lanterns.*
- *Satellite communication service with world coverage.*
- *Maximum reliability and availability.*
- *Configuration is made by PC and RS-232 cable 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.*

# MFSAT

## TECHNICAL SPECIFICATIONS

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

## 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.).



Specifications subject to change without previous notice.