MTF Remote Control Unit is a universal device designed for AtoN remote monitoring, especially for long-range beacons and major lighthouses.

It has multiple digital and analogical inputs and outputs, opto-coupled which may be timed and adjusted at different levels by a configuration software; as well as to configure their logic, being easily adapted to any control system installed into a lighthouse or beacon.

The unit uses different communication modems, depending on the way selected: GSM, radio, AIS, satellite, IP, microwaves, fibre optic, etc.

Although its ideal complement is the GLOBAL NETCOM Remote Monitoring Centre, the communication protocol used is free, in such a way that it is very easy to send the information to any existing platform.

Features:

- Compatible with lighthouses and rotating beacons, with lamps and LEDs.
- Monitoring of solar power supply systems, diesel generators, etc.
- Direct current measurement for solar charging up to 15A, or up to 100A with external Hall sensors.
- Rotation alarm detection for lighthouses through a magnetic rotation sensor.
- 12 or 24V d.c. power supply.
- Analogical inputs by voltage or current, with configurable alarm threshold detection. Current measurement up to 100A.
- GPS, DGPS modules available as an option.
- Configuration and testing software for PC, and remote programming.
- Reverse-polarity and atmospheric over-surge protections.
- Configurable sleep mode available in order to save energy.
- Redundant communications available with several modems and different technologies.
Universal Remote Monitoring Unit
for Lighthouses

**MTF**

### Technical specifications
- **Power supply voltage:** 12 or 24V d.c.
- **Daily average consumption:** 25 mA.
- **Internal battery:** 12V-12 Ah.
- **Temperature range:** -30° to 60°C.
- **Watertightness degree:** IP 65.
- **Dimensions:** 530x430x200 mm.

### Type of communications (depending on modem)
- **GSM:** SMS/GPRS (850, 900, 1800, 1900 Mhz).
- **Radio:** UHF 869 Mhz or 330 to 473 Mhz.
  - VHF 135 to 174 Mhz or 218 to 238 Mhz.
- **Satellite:** E-mail messages(Iridium/Inmarsat).
- **AIS:** Messages 6 and 8 (161,972 a 162,025 Mhz).
- **ADSL:** IP fixed connexion.
- **Microwaves:** IP linked (Wifi or Wimax).
- **Optical fibre:** Serial converter IP link.

*Other frequencies and types of communications available.

### Inputs/Outputs

#### MTF 800
- Opto-coupled digital inputs: 4
- Opto-coupled digital outputs: 3
- Analogical inputs V/I: 3
- Power outputs: -
- Inner current sensor: 15A
- External solar current sensor: 1(100A)
- RS-232 ports: 2
- RS-485 ports: -

#### MTF 900
- Opto-coupled digital inputs: 16
- Opto-coupled digital outputs: 9
- Analogical inputs V/I: 7
- Power outputs: 1(8A)
- Inner current sensor: 15A
- External solar current sensor: 6(100A)
- RS-232 ports: 6
- RS-485 ports: 1

### Options
- Redundant communications (MTF 900).
- GPS/DGPS receptor.
- Meteorologic, oceanographic and environmental sensor connexions.
- Additional input and output expansion module.

### Adjustable parameters (programming software)
- Input and output timing.
- Reversal of logic.
- Status view of every input/output.
- Alarm and status threshold adjustment.
- Analogical value reading.
- Type of communications and parameters.
- Password changing and network-identifier.
- Matching inputs and outputs with status and alarms.