MRF

UNIVERSAL REMOTE MONITORING UNIT FOR LIGHTHOUSES

MRF

Universal Remote Control Unit

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

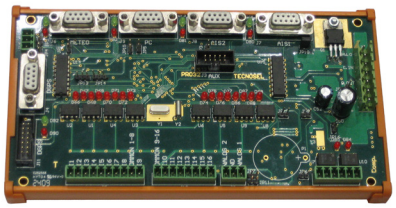
Multiple inputs and outputs

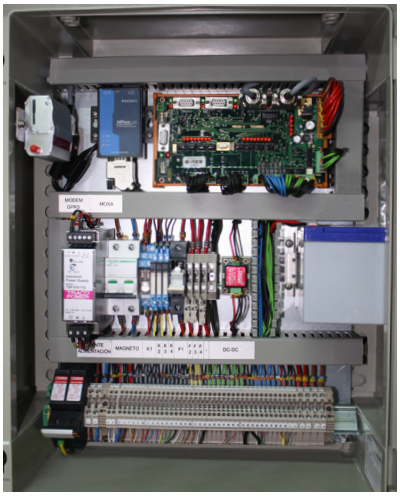
It has multiple digital and analogical inputs and outputs, opto-coupled which may be timed and adjusted at different levels by a configuration software; as well as to configure their logic, being easily adapted to any control system installed into a lighthouse or beacon.

Free communication protocol

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 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.*

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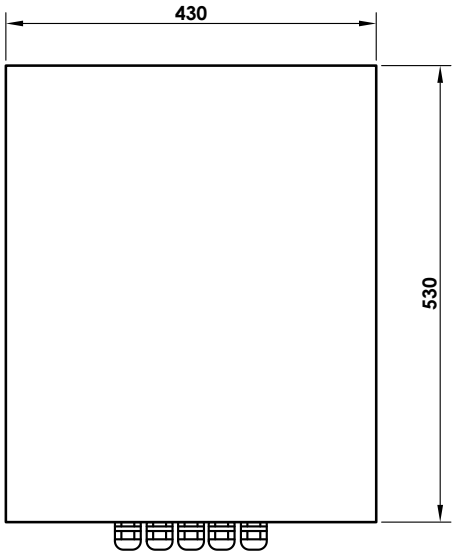
TECHNICAL SPECIFICATIONS

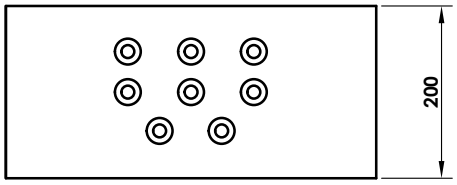
Power supply voltage:	12 or 24V c.c.
Daily average consumption:	25 mA.
Internal battery:	12V-12 Ah.
Temperature range:	-30º to 60ºC.
Watertightness degree:	IP 65.
Dimensions:	530x430x200 mm.



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 ou 218 to 238 Mhz.
Satellite:	E-mail messages (Iridium/Inmarsat).
AIS:	Messages 6 and 8 (161.972 to 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	MTF 900
Opto-coupled digital inputs:	4	16
Opto-coupled digital outputs:	3	9
Analogical inputs V/I:	3	7
Power outputs:	-	1(8A)
Inner current sensor:	15A	15A
External solar current sensor:	1(100A)	6(100A)
RS-232 ports:	2	6
RS-485 ports:	-	1

ADJUSTABLE PARAMETERS (PROGRAMMING SOFTWARE)

Input and output timing.

Reversal of logic.

Status view of every input/ouput.

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.

OPTIONS

Redundant communications (MTF 900).

GPS/DGPS receptor.

Meteorologic, oceanographic and environmental sensor connexions.

Additional input and output expansion module.

Specifications subject to change without previous notice.

MSM

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