



FLASHERS

MF06 / MF12 / MF14



MSM has a wide range of solid-state flashers available, designed for marine aids-to-navigation applications. They stand out for their simplicity, flexibility and electrical protection.

These flashes include electronic circuits of the latest technology, allowing 256 preprogrammed rhythms, as well as an infinite rhythm selection.

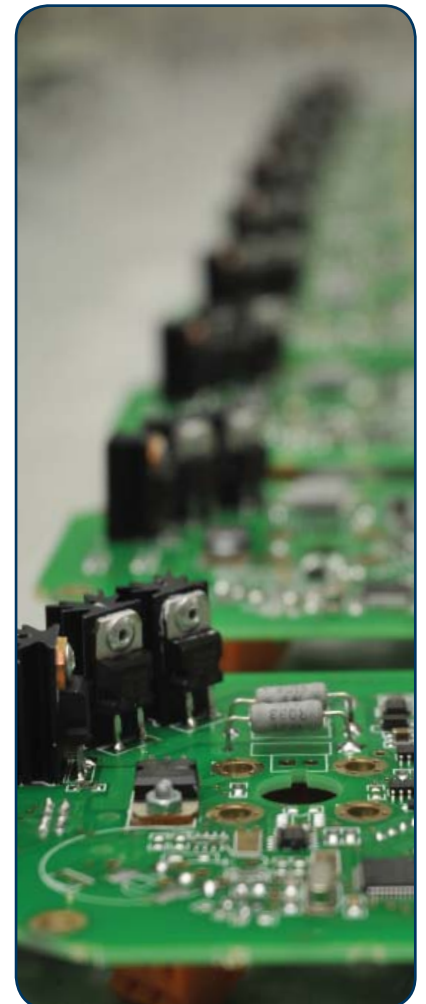
The sunlight detector switches off the flasher during day time, in order to save energy from the battery.

In the case of MF06 and MF12 flashers, LED current output is stabilized to protect their life in service.

In the MF14 flasher, PWM modulation applies a stable and regulated voltage, in order to keep the lamp filament colour temperature.

FEATURES

- ✓ Microprocessor-based circuit with Flash technology.
- ✓ Infinite rhythm programming.
- ✓ Time accuracy of $\pm 5\%$.
- ✓ Sunlight circuit sensor.
- ✓ High resistance to shocks and vibrations.
- ✓ Terminals protected against corrosion by gold plating and silicon coating (MF06 and MF12).
- ✓ Advanced solar charge regulation function in 3 phases.
- ✓ Measurement of analogical parameters and alarms for remote monitoring (MF12).
- ✓ Configuration software for PC under Windows environment.
- ✓ Reverse-polarity and short-circuit protections.
- ✓ Terminal screws from stainless steel.



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Specifications subject to change without previous notice.

SPECIFICATIONS	MF06	MF12	MF14
Power input	4.5-18V c.c.	4.5-36V c.c.	4.3-35V c.c.
LED/Lamp maximum current	1 A	5 A	10 A
Lamp maximum power	-	-	250W (24V system)
Output	LEDs, regulated.	LEDs	Lamps or LEDs
Output voltage	6-12V	5-36V	6.2 - 10.3 - 12 - 24V ± 1% PWM
Idle current	< 2 mA	< 3 mA	< 5 mA
Rhythms selectable by microswitches	256 positions	256 positions	256 positions
Rhythm programming by user (infinite)	6 positions Up to 25 cycles ON / OFF	6 positions Up to 25 cycles ON / OFF	6 positions Up to 25 cycles ON / OFF
Time accuracy	±0.05%	±0.05%	±0.05%
Solar module regulation	10W (maximum power)	75W (maximum power)	-
Vibration resistance	MIL-STD-202G, method 204D (5G)	MIL-STD-202G, method 204D (5G)	10 G
Shock resistance	MIL-STD-202G, method 213B	MIL-STD-202G, method 213B	40 G
Synchronisation	-	Cable or GPS (optional)	Cable or GPS (optional)
Communication serial	RS-232	RS-232 (2 nos.) (RS-482 and RS-422 optional)	RS-232
Remote monitoring	-	MF Series	MTU Series
ATEX	-	-	Zona 1 / Zona 2 (optional)
Temperature range	From -40° to 85°C	From -40° to 85°C	From -40° to 85°C
Weight	0.1 kg	0.2 kg	0.7 kg
Options	- IR Programmer	- IR Programmer. - Bluetooth programming. - RS-485 and RS-422. - GPS Synchroniser. - GSM, Radio, Satellite or AIS remote monitoring.	- GPS Synchroniser.



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