



NORMA.CP

Navigation lights monitoring and control system



PRESENTATION

► NORMA is a navigation lights alarm system. It allows the monitoring and control of up to 14 24VDC/230VAC navigation lights with a power ranging from 0.5W to 65W*.

► The navigation lights are controlled by a NORMA.CP operator interface that must be associated with the NORMA.CPU and the NORMA.PWR. Thanks to a customizable printout with a simple laser printer, the user can choose to personalise the NORMA.CP in two different forms

- with the name of the navigation lights
- with the mimic of the ship

► NORMA.CPU enables the control and monitoring of 8 navigation lights.

► NORMA.PWR provides power management from 2 different sources, with associated alarms, automatic and manual switchover.

(*65W max. at 230VAC, 40W max. at 24VDC)

FUNCTIONAL CHARACTERISTICS

Functions

- Power supply: manual or automatic switchover with alarm.
- Bipolar protection and control of navigation lights. (No common wire authorized).
- Compatible with filament or LED navigation lights under 24 VDC, 230VAC (1 min./max. see manual), other voltages available as option.
- Lifetime alarm for LEDs navigation lights.
- Detection of navigation lights failures: filament breakage, short-circuit, power supply failure and fuse failure.
- Day/night mode
- Serial connections to control panel, AMS, VDR.
- Up to 14 navigation lights (230VAC and/or 24VDC, 2 NORMA.CPU cards needed).
- Emergency control switches directly on the board.

NORMA CPU inputs

- 1 control power supply (24VDC).
- 1 acknowledgement input (N.O. push button).
- 1 dimming input (N.O. push button).
- 1 test input (N.O. push button).
- 1 local/remote switch input.
- 1 ON/OFF switch input.
- 1 main/emergency switch input.
- 8 navigation lights control inputs.

NORMA CPU outputs

- 8 navigation lights outputs.
- 8 navigation light status indication outputs.
- 3 relay outputs (buzzer, navigation light fault, power supply fault) (N.O. 24VDC /1A).
- 1 «system fault» relay output (N.C. 24VDC/1A).
- 4 signalling outputs (power supplies + lifetime alarm).

NORMA CPU serial outputs

- NORMA.CP control panel output (RJ45): RS485, 9600 bauds, 8 bits, 1 stop bit; Modbus RTU
- VDR (Voyage Data Recorder) output : RS485, 4800 bauds, 8 bits, 1 stop bit; IEC61162-1
- AMS(Alarm Monitoring System) output: RS485, 9600 bauds, 8 bits, 1 stop bit; Modbus RTU



APPROVALS

► Bureau Veritas





_ MECHANICAL CHARACTERISTICS _



	Dimensions	Weight	Mounting
NORMA.CP	172x170x68 mm	1 kg	built-in
NORMA.CPU	331x127x67 mm	1 kg	DIN rail
NORMA.PWR	111x128x57 mm (DC) 146x128x57 mm (AC)	0,5 kg 0,5 kg	DIN rail

_ ELECTRICAL CHARACTERISTICS _

NORMA.PWR

- ▶ Control supply voltage: 24VDC -25%/+30% (1A max.)
- ▶ Power supply voltage : 24VDC -25%/+ 30%
230VAC + -10%, 50-60Hz (*other voltage, contact us)
- ▶ Power supply current consumption :
 - ▶ 30A maximum if switching directly to the NORMA.CPU_DC card
 - ▶ 10A maximum if switching directly to the NORMA.CPU_AC card

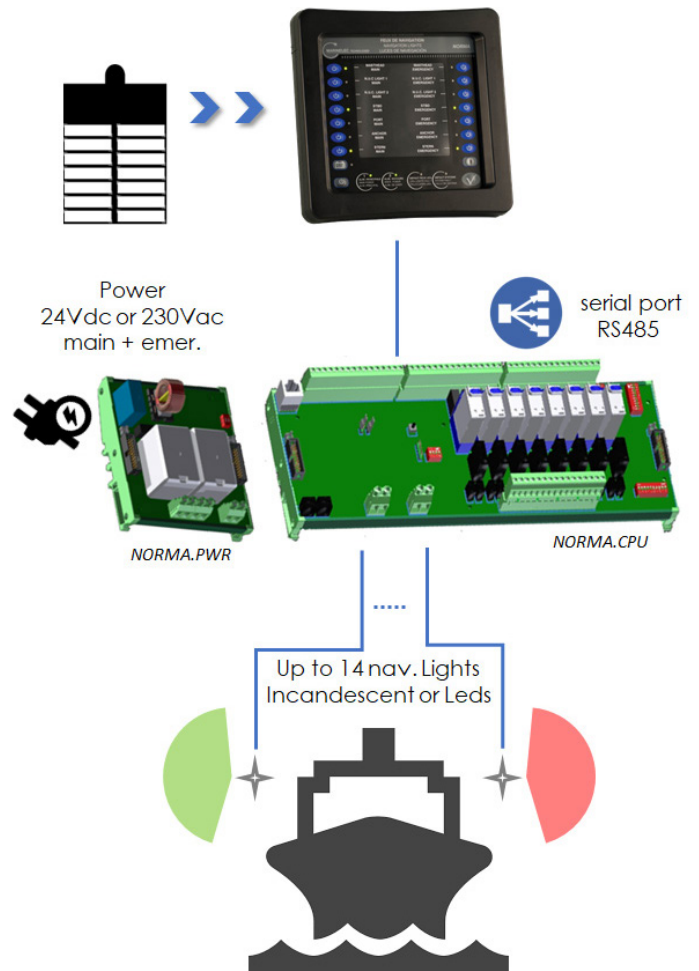
NORMA.CP

- ▶ Power : 24VCC -25% +30% (Via the NORMA.CPU card)
- ▶ Consumption : 0.5A
- ▶ Connection to the NORMA.CPU via a single standard CAT5 Ethernet cable, straight, 3m (supplied).

NORMA.CPU DC

- ▶ Limitation of 200W by NORMA.CPU (e.g. 5 lights of 40W or 8 lights of 25W)

CONNECTION OVERVIEW



ENVIRONMENTAL CONDITIONS



Temperature limits

- ▶ 0°C to 55°C (functioning)
- ▶ 0°C to 70°C (storage)



Humidity

- ▶ 95% Humidity max.



Ingress protection rating

- ▶ IP 44 (NORMA CP)



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sail safely

