# *REDUNDANCY MODULE with DIODE: MPA2 MPA2L*
## *250Vdc / 127Vdc / 110Vdc / 48Vdc / 24Vdc / 12Vdc*

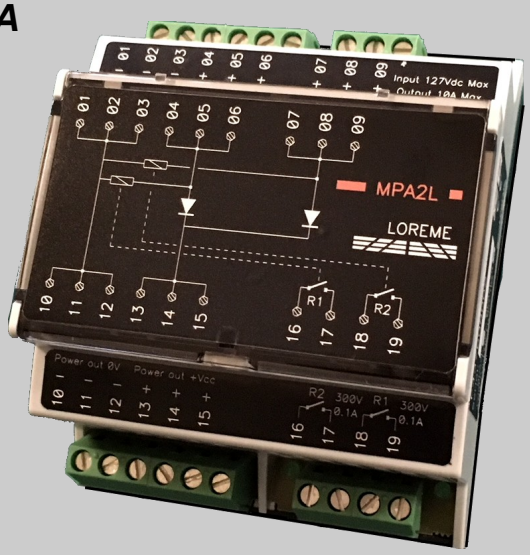
LOREME

- ***For parallel connection of 2 DC power supplies***
  *Increases system availability and safety*
  *Ensures uninterrupted redundancy when one of the power supplies fails.*

- ***MPA2L(HV) : 12Vdc … 127Vdc (280Vdc) maxi 10A***
  *Low dissipation, dropout voltage < 1V*
  *Option : control relay*

- ***MPA2 : 24Vdc version***
  *+ monitoring relay*
  *for power supplies diagnosis*
  *+ resettable thermal protection*
  *for each power supplies*
  *Option: inrush current limiter*
  *until the output voltage is set.*

- ***Application***
  *Uninterruptible power supply,*
  *installation requiring a high level of availability.*




**The redundant module provide an effective protection against the power supplies failure.**
**Through decoupling of two power supplies, the failure of one of them has no effect on the output, the other taking automatically its function without interruption.**
**The redundant module monitor continuously the two power supplies, and provide an alarm via a contact relay if a failure is detected (loss of redundancy).**

**Benefit**
- Improve the operational safety,
- Increases the availability of installations,
- Increase immunity against micro power cuts

**Inputs**
- MPA2 : 2 voltage inputs 24V +/- 15%, common ground.
- MPA2L : 2 voltage inputs up to 127Vdc.
- MPA2LHV : 2 voltage inputs up to 280Vdc.

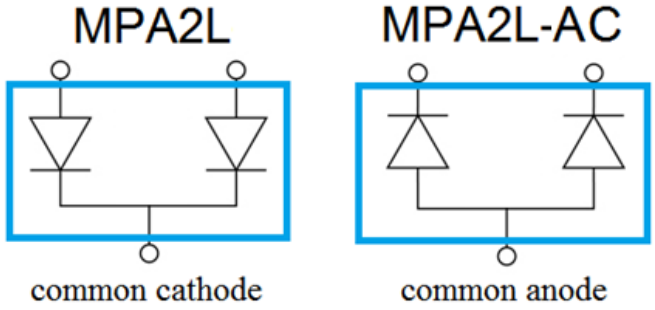
**Monitoring relay (MPA2 only)**
- Potential free contact (close when power supply is ok)
- 1 relay per channel, signal a faulty power supply.

**Special functions (option MPA2-LCA)**
- Inrush current limiter on supply primary circuits.
- EMC protection, varistor surge protector.

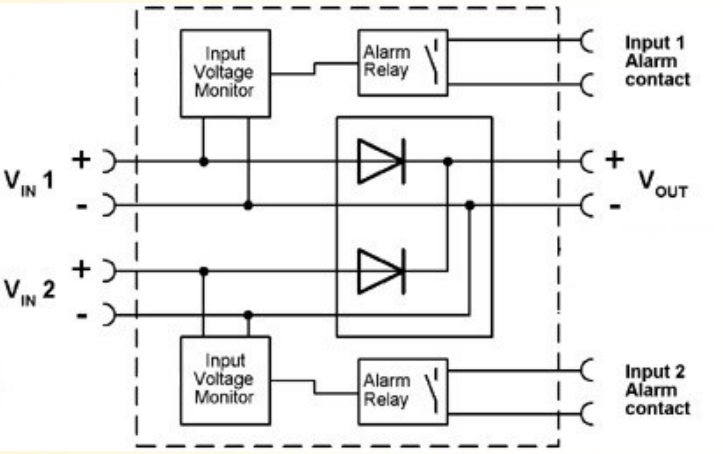
**Output**
- Protected with resettable fuse on MPA2 model
- Multi-output terminals (No need of external bridge connection)

**Feature**
- DIN rail mounting (symmetric according to EN50022)
- Screw terminal blocks (up to 2.5 $mm^2$)
- Protection rating: IP20, conformal coating

**MPA2L Normal and reverse model (-CA)**




**Synoptic for MPA2 and MPA2L/R models**




Version and order code:

**MPA2:** Redundancy module 24V / 5A with control relay
*(48Vdc version on request)*

Option : **-LCA** Inrush current limiter and EMC protection for input power supplies

---

**MPA2L:** Redundancy module up to 127Vdc 10A maxi
( voltage range: 12Vdc to 127Vdc)

**MPA2LHV:** Redundancy module up to 280Vdc 10A maxi
( voltage range: 12Vdc to 280Vdc)

Option : **/R** input voltage monitoring relay
**-AC** Diode mounted in common Anode

*90 days accuracy (20 °C +/- 2 °C)* *DATA SHEET CAN BE DOWNLOADED ON WWW.LOREME.FR*

# TECHNICAL SPECIFICATIONS

## INPUT / POWER SUPPLY

| | | |
|---|---|---|
| MPA2 | Voltage | 24dc +/- 15% |
| | Current | 5Adc |
| MPA2L (HV) | Voltage | 12 ... 127Vdc (280Vdc) |
| | Current | 10Adc |

Reverse polarity protected

## OUTPUT

| | |
|---|---|
| typical voltage | = input voltage - 0.42V @ 5A |
| maxi overcurrent | 3 x I / 5 seconds |
| ***MPA2*** protection | tripping current 10A, tripping delay: 10s maxi |

## MONITORING RELAY *MPA2*

Potential free contact (open on failure)

| | |
|---|---|
| switching capacity | 250V / 5A |
| response time | 5ms |

## OPTION *MPA2-LCA*

Primary inrush current limiter 5A @ 230Vca
Surge protector: 230Vac varistor, surge immunity 20us: 4500A

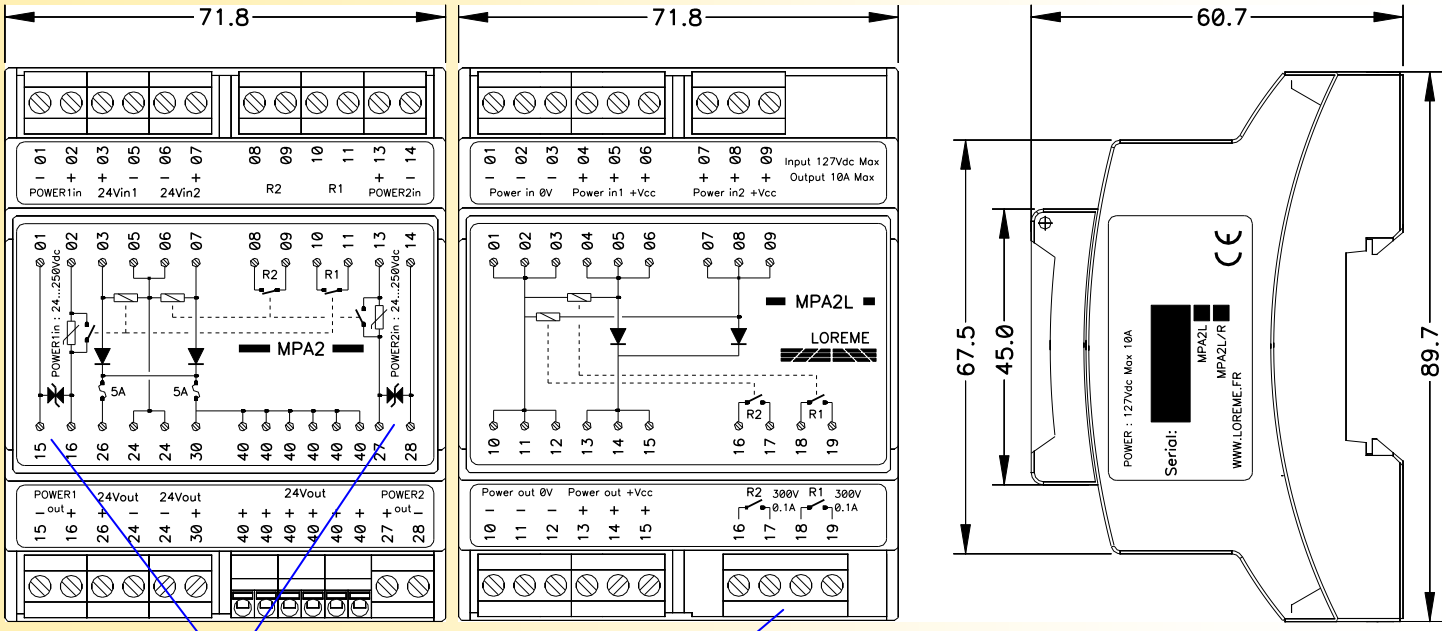
## ENVIRONMENT

| | |
|---|---|
| Operating temperature: | -20°C to 60°C |
| Storage: | -40°C to 85°C |
| Humidity: | 85 % non condensing |
| Protection rating (according to EN 60529): | IP20. |
| Weight: | 150 g |
| Dielectric strength (power supply / relay) | 2500Vac continuously |
| MTBF (MIL HDBK 217F) | > 1 200 000 Hrs @ 25°C |
| life time | > 200 000 Hrs @ 30°C |

***Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE***

| Immunity standard for industrial environments EN 61000-6-2 | | Emission standard for industrial environments EN 61000-6-4 |
|---|---|---|
| *EN 61000-4-2 ESD* | *EN 61000-4-8 AC MF* | *EN 55011* |
| *EN 61000-4-3 RF* | *EN 61000-4-9 pulse MF* | |
| *EN 61000-4-4 EFT* | *EN 61000-4-11 AC dips* | *group 1* |
| *EN 61000-4-5 CWG* | *EN 61000-4-12 ring wave* | *class A* |
| *EN 61000-4-6 RF* | *EN 61000-4-29 DC dips* | |

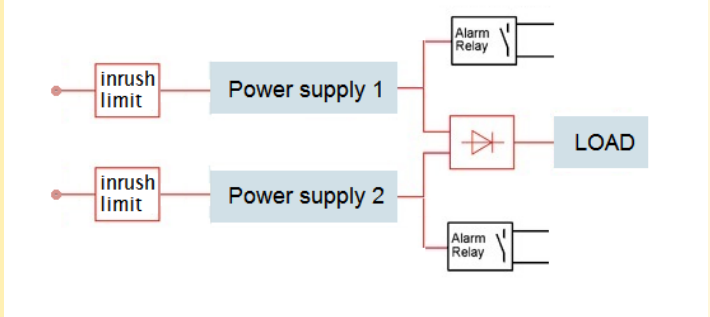
## *WIRING AND OUTLINE DIMENSIONS:*



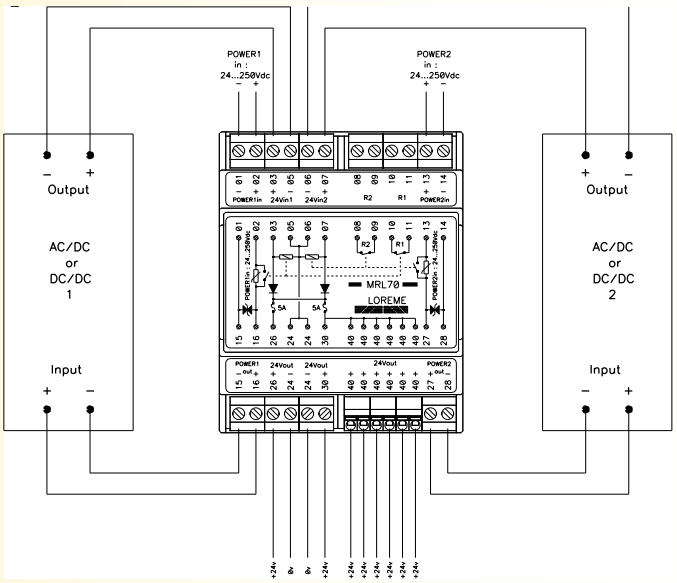

Option: Inrush current limiter and shock waves EMC protection

Option: Monitoring relay

## MPA2 application




## Wiring of MPA2 with inrush current limiter




**E 2 LOREME** 12, rue des Potiers d'Etain - 57071 Metz ☎ 03.87.76.32.51 - www.loreme.fr - Email: Commercial@Loreme.fr - Technique@Loreme.fr