

# REDUNDANT MODULE MPA2 and MPA2L

Application: 24Vdc / 110Vdc and 127Vdc



- **For parallel coupling of 2 DC power supplies**

*Increases the available and the safety of installations*

*Ensures uninterrupted redundancy when one of the power supplies fails.*

- **MPA2L application 110Vdc / 127Vdc maxi 10A**

*Low dissipation, dropout voltage < 1V*

- **MPA2 24Vdc version**

+ control relay for power supplies diagnosis

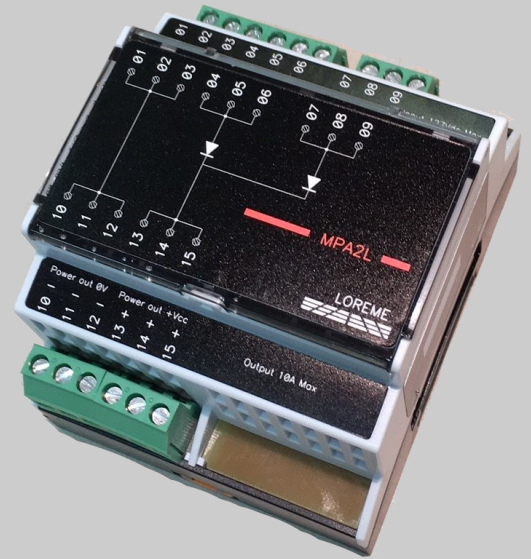
+ resettable thermal protection for each power supplies

Optional: inrush current limiter until the output voltage is set.

- **Application**

*Backed up system,*

*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 a alarm via a contact relay if a failure is detected.

**Benefit**

- Improve the operational safety,
- Increases the available of installations
- Increase immunity against micro power cuts

**Input**

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

**Special functions (option for MPA2 model)**

- Inrush current limiter on primary circuit.
- EMC protection, varistor surge protector.

**Relay for correct operation control (MPA2 model only)**

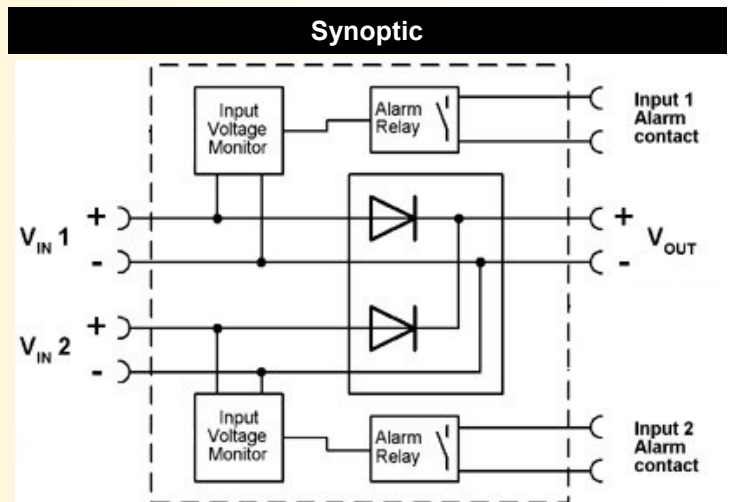
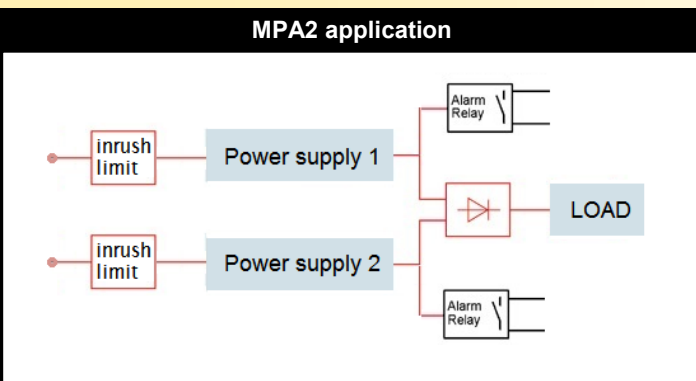
- Potential free contact (close when power supply is ok)
- 1 relay per channel, signal a faulty power supply.

**Output**

- Protected by rearmable fuse on MPA2 model
- Multi-output terminals (No need of external bridge connection)

**Implementation**

- DIN rail mounting (symmetric according to EN50022)
- Screw terminals (up to 2.5 mm<sup>2</sup>)
- Protection rating: IP20, conformal coating



Version and order code:

**MPA2:** Redundant module 24V / 5A with control relay  
*Other voltage on request*

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

**MPA2L:** Redundant module 127Vdc 10A maxi without control relay  
( voltage range: 12Vdc to 127Vdc)

INPUT / Power supply		
MPA2	Voltage	24dc +/- 15%
	Current	5A <sub>dc</sub>
MPA2L	Voltage	12 ... 127Vdc +/- 15%
	Current	5A <sub>dc</sub>
Reverse polarity protected		
		<b>Output</b>
Voltage typical	= input voltage - 0.42V @ 5A	
Overcurrent admissible	3 x 1 / 5 seconds	
<b>MPA2</b> protection	tripping current 10A, tripping delay: 10s maxi	
Control relay (MPA2 only)		
Potential free contact (opening on fault)		
switching capacity	250V / 5A	
response time	5ms	
Option (MPA2 only)		
Primary inrush current limiter	5A @ 230Vca	
Surge protector: varistor 230Vac, surge immunity 20us:	4500A	

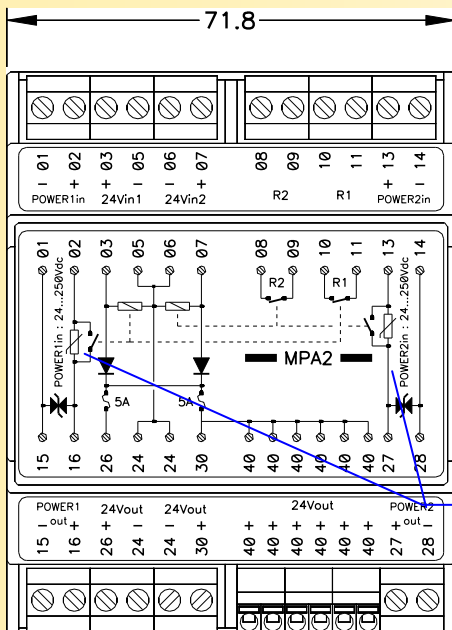
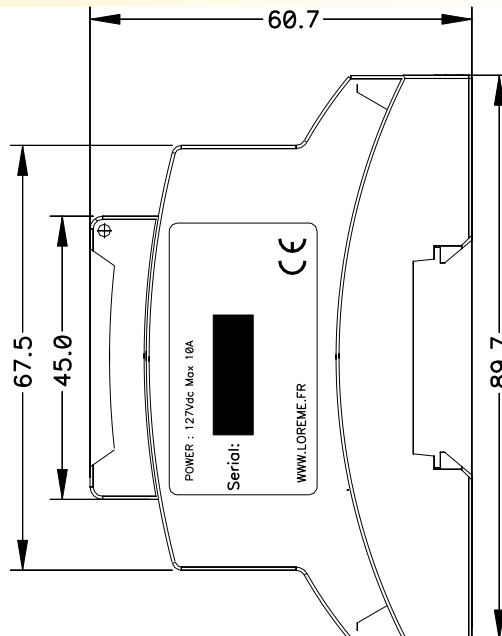
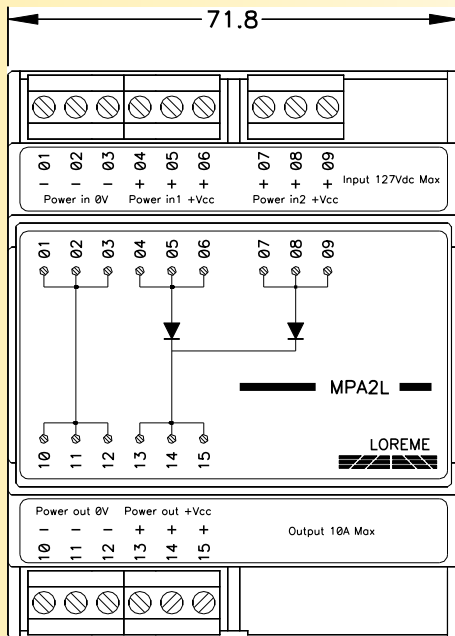
ENVIRONMENT	
Operating temperature	-20°C to 60°C
Storage	-40°C to 85°C
Relative humidity	85 % (not condensed)
Protection rating (according to EN 60529)	IP20.
Weight	150 g
Dielectric strength (power supply / relay)	1500Vac continuously
MTBF (MIL HDBK 217F)	> 1 200 000 Hrs @ 25°C
life time	> 200 000 Hrs @ 30°C

**Electromagnetic compatibility 2004/108/CE / Low Voltage Directive 2006/95/EC**

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  group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC dips	



**WIRING AND OUTLINE DIMENSIONS:**



Option:  
Inrush current limiter and  
EMC protection

**Wiring of MPA2 with inrush current limiter**

