

MPF 560 1D01

NON-ISOLATED DC/DC CONVERTER

Description

This automotive battery equalizer allow the use of two serial batteries (starting battery and auxiliary battery) guarantying a balanced discharge and a longer battery life.

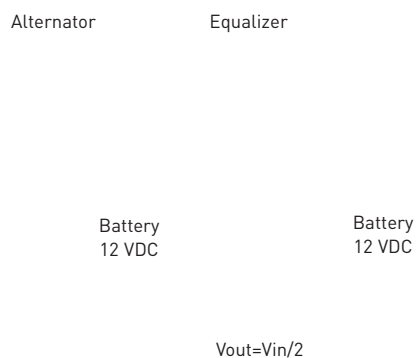
Input Specifications

Product reference	MPF 560 1D01
Nominal input voltage	24 VDC
Input voltage range	16 to 32 VDC
Input transients voltage	14,4 VDC to 33,6 VDC during 100 ms
Reverse input voltage protection	Yes, by serial MOSFET
Inrush current limitation	< 10 In
Overvoltage protection	Yes, by Gemov V36ZA80

Output Specifications

Product reference	MPF 560 1D01
Nominal output voltage	$V_{out}=V_{in}/2$ VDC
Output voltage ripple p-p (WB 0 to 30 MHz)	150 mV
Nominal output current	40 A
Crossed regulation (load + line)	$\pm 2\%$
Nominal output power	560 W
Efficiency	> 95%
Long term stability during 8 hours (after 1/2 hour operating)	< 0,3%
Thermal protection	No
Output current limitation	> 48 A
Overvoltage protection	Yes
Permanent short circuit protection	Yes

Bloc diagram



Environmental Details

Product reference	MPF 560 1D01
Operating temperature range	-32°C to +85°C
Derating	Without derating
Storage temperature range	-40°C to +85°C
Temperature coefficient	$< 2 \cdot 10^{-4} / ^\circ\text{C}$
Relative humidity at 40°C	93%
Cooling	Natural convection
Insulation resistance	No
Dielectric strength	No
MTBF UTE C 80-810	GM 40°C: > 1 000 000 h
Coating	PCB coated with varnish
Protection index	IP 65

Applicable Norms

Item	Reference	Level	Compliance
Vibrations and shocks	GAM EG13	parts 41, 42, 43	X
EMC	GAM EG13B	part 61 M1 harshness 3	X
EMC	GAM EG13B	part 61 M2 harshness 3	X
Radiation	GAM EG13B	hardened test 62 R3	X
Conduction	GAM EG13B	test 62 C2 curve A1	X
	ISO/DIS 16750-X (1 to 4)		X

Mechanical Characteristics

Product reference	MPF 560 1D01
Box material	Extruded in aluminium
Potting	Yes
Dimension	220 x 112 x 60 mm
Weight	< 2,6 kg
Fixing	Using the box profile
Input connector	3 Bus bars
Output connector	

Technical Drawing

