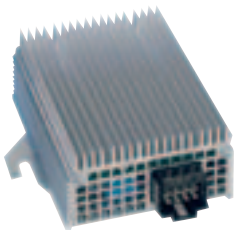




24/12 SERIES

NON-ISOLATED DC/DC CONVERTERS

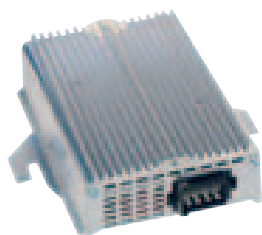
MPF 280 2D01



MPF 210 2D01



MPF 154 2D01



MPF 140 1D01



Description

Specially designed for truck, bus or off-road construction vehicles markets, this DC/DC converter allows customers to use 12 VDC electric equipments with a 24 VDC original installation. This series offers several output powers, depending on customer applications.

Input Specifications

Product reference	All references
Nominal input voltage	24 VDC
Input voltage range	16 to 34 VDC
Input transients voltage	36 V during 2 h 48 V during 2 min
Reverse input voltage protection	Yes (30 V continuous)

Output Specifications

Product reference	MPF 140 1D01	MPF 154 2D01	MPF 210 2D01	MPF 280 2D01
Nominal output voltage	14 VDC			
Output voltage ripple p-p (WB 0 to 30 MHz)	150 mV			
Maximal output current	10 A	11 A	15 A	20 A
Crossed regulation (load + line)	± 0.7 V	± 0.7 V	± 0.7 V	± 0.7 V
Nominal output power	140 Watt	154 Watt	210 Watt	280 Watt
Efficiency	> 92%			
Long term stability during 8 hours (after 1/2 hour operating)	< 0.3%			
Thermal protection	No			
Switching frequency	> 25 kHz, fixed			
Output current limitation	1,2 In			
Overvoltage protection	Yes, by fuse			
Permanent short circuit protection	Yes			

NB: When the supply voltage is 8V the converter must deliver at least 1A under 5V

Environmental Details

Product reference	All references
Operating temperature range	-40 to +70°C
Derating	Without derating
Storage temperature range	-40°C to +85°C
Temperature coefficient	< 2.10 ⁻⁴ /°C
Relative humidity at 40°C	93%
Cooling	Natural convection
Insulation resistance	No
Dielectric strength	No
MTBF (according to "MIL HDBK.217F")	GM 40°C: > 90 000 h
Coating	PCB coated with varnish
Protection index	IP 20



Applicable Norms

Item	Reference	Level	Compliance
	ISO/DIS 16750-X (1, 2, 5, 6)		X
Vibrations and shocks	ISO/DIS 16750-3 (F)		X
Climatic load	ISO/DIS 16750-4	-40°C to +70°C	X
EMC	CISPR 25		X

Mechanical Characteristics

Product reference	MPF 140 1D01	MPF 154 2D01	MPF 210 2D01	MPF 280 2D01
Box material	Aluminium			
Potting	No			
Dimension	130 x 129 x 40 mm			130 x 129 x 52 mm
Weight	< 500 g		< 550 g	
Fixing	2 x Ø7 mm			
Input connector	FCI RT 94BR08WH*T	AMP 82 88 01-3	AMP 82 88 01-4	AMP 96 61 40-3

Pinout:

Product reference	MPF 140 1D01	MPF 154 2D01	MPF 210 2D01	MPF 280 2D01
1	+Vin	+Vin accessory	-Vin	+VOut2 accessory
2	GND (Vin)	+VOut2 accessory	+Vin power	+VOut2 accessory
3	+VOut	+VOut1 power	+Vin accessory	+V accessory
4	GND (VOut)	+VOut1 power	+VOut1 power	+VOut1 power
5	+VOut	+VOut1 power	GND	+VOut1 power
6	GND (VOut)	GND (VOut)	+VOut1 power	GND
7	NC	GND (Vin)	GND	+Vin power
8	NC	Vin power	+VOut2 accessory	GND
9			+VOut2 accessory	GND
10			+VOut2 accessory	+Vin power
11				GND
12				GND

Technical Drawing

- NOTES**
- All dimensions in mm
 - Specifications subject to change without notification
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