



MPF 3K0 1101

DC/AC INVERTER



Description

The 3kVA railway application inverter provides 230 VAC power to train passengers. It has an input of 110 VDC and an output of 230 VAC 50Hz. It is fan cooled and complies with railway standards EN 50155 and EN 50121-3-2. Its standard size facilitates its integration in electric cabinets.

Input Specifications

Product reference	MPF 3K0 1101
Nominal input voltage	110 VDC
Input voltage range	77 to 137,5 VDC
Input transients voltage	66 VDC, 154 VDC during 100 ms
Reverse input voltage protection	Yes, by reverse diode
Inrush current limitation	8 x I _n during 1ms at 120 VDC 3 kVA

Output Specifications

Product reference	MPF 3K0 1101
Nominal output voltage	230 VAC
Nominal output current	8,5 A
Crossed regulation (load + line)	± 10%
Nominal output power	3 kVA
Cos φ	< 0,65
Harmonic distortion	< 8%
Efficiency	> 85%
Long term stability during 8 hours (after 1/2 hour operating)	< 0,3%
Thermal protection	Yes
Switching frequency	> 25 kHz, fixed
Output current limitation	> 15,6 A
Permanent short circuit protection	Yes, 120% I _{max}

Power Good	Enable	To switch on the equipment 77 V to 140 V input range	Green LED
	VOK	To control the converter by monitoring the output voltage value. Relay dry contact. When V out > 150 VAC, VOK is on	Green LED
	DIFOK	To control the converter by monitoring the status of the differential. When Differential OK, DIFOK is on	Green LED

Environmental Details

Product reference	MPF 3K0 1101
Operating temperature range	-25°C to +70°C
Derating	Without derating
Storage temperature range	-40°C to +70°C
Temperature coefficient	< 2.10 ⁻⁴ /°C
Relative humidity at 40°C	Up to 98% non condensing
Cooling	Internal fan
Insulation resistance	100 MΩ / 500 VDC
Dielectric strength	1 500 V rms
MTBF (according to "MIL HDBK.217F")	GM 40°C: > 90 000 h
Protection index	IP 20



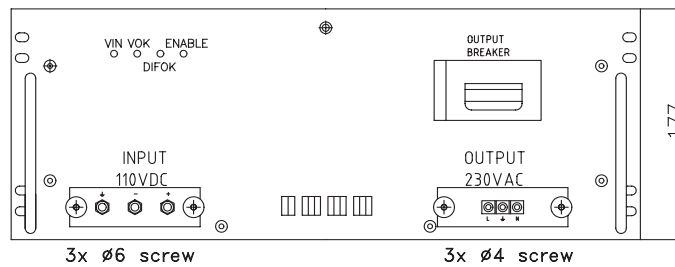
Applicable Norms

Item	Reference	Level	Compliance
EMC	EN 61000-4-X (2 to 6); EN 50121		X
Environmental	EN 60068-2, EN 60068-2-X (6 & 27)		X
Safety	EN 50 155; NF F 16101; NF F 16102		X

Mechanical Characteristics

Product reference	MPF 3K0 1101		
Box material	Metal		
Potting	No		
Dimension	4U x 84TE x 350 mm		
Weight	< 20 kg		
Fixing	On the rack		
Input connector	M6 threaded rods		
Output connector	Screw terminal		
Signals details	Input voltage > 77 VDC	Green LED on front panel	
	Enable	Green LED on front panel	
	VOK V out > 150 VAC	Green LED on front panel	
	DIFOK differential ok	Green LED on front panel	

Technical Drawing



NOTES

1. All dimensions in mm
2. Specifications subject to change without notification

