

DC/AC Inverter

2,4 kVA

2400 WRB 024 M230 W00

$$V_{In\ nom} = 24V_{DC}$$

$$V_{Out\ nom} = 230V_{AC} \quad I_{Out} = 10A$$

SYMBOL	PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
INPUT:						
V_{IN}	Input voltage range	Continuously	19	24	30	V_{DC}
V_{IN}	Input voltage range	Dynamic $t \leq 1\ sec.$ @ EN 50155	30		33.6	V_{DC}
$V_{IN\ Min}$	Inverter shutdown		17.0		18.5	V_{DC}
$V_{IN\ Max}$	Inverter shutdown		33.7		36.0	V_{DC}
I_{IN}	Input current	no load				mA
		Nominal load				A
		Nominal load				A
	Input current integral	$V_{IN} = 30\ V, I_{OUT} = 0\ A$ $V_{IN} = 24\ V, I_{OUT} = 10\ A$ $V_{IN} = 19\ V, I_{OUT} = 10\ A$				A ² s
$I_{IN\ Max}$	Switch on current at	$I_{OUT} = 10\ A$				A
	Input Fuse	External				
C_{IN}	Converter input capacitance					μF
	Reverse input protection					

OUTPUT:

V_{Out}	Output voltage range (1Ø line)	Continuously	225	230	235	V_{AC}
f	Output frequency range		47	50	53	Hz
Cos Φ						
	Switch On characteristic: soft start					
I_{out}				10		A
P_{Out}	Converter output power		2'400			VA
η	Efficiency	$P_{OUT} \geq 0.7 \times P_{OUT\ Nom}$	91	93		%

CONTROL SIGNALS

Enable	X11	Switch ON OFF Inverter	19	24	30	V_{DC}
PF	Addition failure message	Relais switching capacity		24V, 500mA		

GENERAL SPECIFICATIONS

f	Switching frequency	$V_{IN} = 24V_{DC}, 0 \leq I_{OUT} \leq 10\ A$		50		kHz
η	Efficiency	$P_{OUT} \geq 0.7 \times P_{OUT\ Nom}$	90	91		%
T_a	Operating Temperature Range $P_{OUT\ Nom}$	$-30^{\circ}C \leq T_A \leq +60^{\circ}C$	-30		+60	$^{\circ}C$
	MTBF (SN 29500)	$V_{IN} = 24\ V, I_{OUT} = 10\ A, T_A = +40^{\circ}C$		200 000		h
	No load, short circuit proof			Continuously		

SAFETY / DIMENSIONS

Creepage, Clearance (PD3) PCB: FR4, V0	Input – Output Input – Case Output – Case	6.0 4.0 2.0			mm mm mm
Converter Dielectric Strength Test each unit ramp function 2 s – 3 s – 2 s	Input – Output Input – Case Output – Case			3000 2250 750	VDC VDC VDC
Connector	Input, Output Signaling PE	See drawing „Pin assignment“			
Pin Assignment		See drawing „Pin assignment“			
Protection Class, Protection degree		I, IP 20			
Dimensions <i>see drawing</i>	w x h x d	483 x 132 x 534			mm
Assembling <i>see drawing</i> “Masszeichnung”	Wall mounting with screws	6 x M8			
Weight			34		kg

ENVIRONMENTAL CONDITIONS

T _A	Operating Range	Continuously EN 50155 class T2	- 30		+ 60	°C
T _{Sto}	Storage Range		- 40		+ 85	°C
	Cooling		convection			
	Humidity	EN 50155, IEC 60571	75% averaged year, 95% 30 days			
	Vibration / Shock	IEC 61373, IEC 68-2-27, EN 50155 Cat. I 3 shocks each Axis	50 m / s ² , 30 ms			

EMV

Emission *)	Line radiated	EN 50121 - 3 - 2: 2006	
Immunity	ESD EN 61000 - 4 - 2	6 kV / 8 kV performance criteria - B -	
	High Frequency Field EN 61000 - 4 - 3	20 V / m 80 MHz ... 1 GHz *)	
	Burst EN 61000 - 4 - 4	Level 3 asym., sym. performance criteria - A -	
	Surge EN 61000 - 4 - 5	2 kV asym. / 1 kV sym. R _i = 42 Ω performance criteria - B -	
	HF – Current Injection EN 61000 - 4 - 6	10 V _{eff} , R _i = 150 Ω performance criteria - A -	

*) 1400 MHz – 2100MHz 10V/m 2100MHz – 2500MHz 5V/m

STANDARDS

Applied Standards:	EN 50155: 2007	BN 411 002	EN 50124 - 1: 2006	EN 50121 - 3 - 2: 2006	IEC 60571 : 12 2006
	SN 29 500	EN 50 121 - 1	EN 50125 - 1	EN 60068 - 2 - 6, 2...27	EN 61000 - 4 - 2...6
	IEC 571	IEC 61373	EN 60721 - 3 - 5	EN 61373	EN 60529

Technical specifications valid for: - 30° C ≤ T_A ≤ + 70° C, 19 VDC ≤ V_{IN} ≤ 30 VDC, unless otherwise noted.