Technical Data Sheet

ID3300-I-X-3PH-460-400
3300W

DESCRIPTION

AC/AC Isolated three-phase frequency charger for railway rolling stock application. The input is three-phase without neutral and the output has the possibility of neutral use or not, allowing unbalanced loads.

APPLICATION



BASIC CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.
Input				
Nominal AC Voltage	Three Phase		460V	
Minimum AC Voltage		360V		
Maximum AC Voltage				528V
Frequency Range		47Hz		63Hz
Maximum Current				6.8A
Inrush Current			<12A	
Efficiency			>94%	
Output				
Type	AC 3ph + Neutral			
Waveform	Sinusoidal			
Nominal Voltage			400V	
Voltage Tolerance			±5%	
Voltage Adjust Range		±20%		±100%
Frequency			50Hz	
Maximum Continuous Current (Io)				3A
Maximum Active Power				2.0784KW
Maximum Apparent Power				2.0784kVA

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REGULATIONS

Parameter	Conditions	Value
Maximum Line Regulation		<1%
Maximum Load Regulation		<4.5%

ENVIRONMENTAL

Parameter	Conditions	Value
Operating Temperature Range	OT3 + ST1 acc. to EN 50155	-40°C to +70°C
Derating Po/Temperature		-2.5%/°C
Cooling	Internal Forced Air with Fan Spees Control	
Relative Humidity		5%...95%
Operating Altitude		2000m
Pollution Degree		PD2
Overvoltage Category		OV2
Protection Degree		IP23
MTBF		150000h
Service Life		20 Years
Shock	Category 1 Class B Body Mounted	EN61373
Vibration	Category 1 Class B Body Mounted	EN61373
Fire and Smoke		EN45545-2
Environmental Regulations	According to Directive 2015/863/EU and REACH	RoHS

SAFETY AND CERTIFICATION

Certificate (Type)	Standard
Safety (according to)	EN50124-1 Railway app. (Insulation Coordination)
Dielectric Strength Input/Output	3000VAC
Dielectric Strength Input/Earth	1500VAC
Dielectric Strength Output/Earth	1500VAC
Capacitor Discharge Time/Voltage Presence	<1 minute

DIMENSION & PHYSICAL CHARACTERISTICS

Parameter	Type	Value
Material		aluminum
Mechanical Shape		Slotted Case
Finish		Anodized
Dimensions HxWxD (approx)		85x260x530mm
Weight		5.8kg
Input Connection Type		Spring Clamp Terminals
Output Connection Type		Spring Clamp Terminals
Signals Connection Type		Phoenix Contact MC1.5/ _-G-3.81
Communication Connection Type		DB9
Earth Connection		M5 Stud

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PROTECTION

Parameter	Type	Value
Overloads and Short-circuit Protection		Shutdown by I^2t with Three Recovery Attempts
Over-Temperature Protection		Shutdown with Self Recovery
Input Under-Voltage Lockout		YES
Input Over-Voltage Lockout		YES
AC Input Failure Alarm		YES
Output Failure Alarm		YES
Remote ON/OFF Input		YES
Communication Port #1		RS232
Communication Protocol #1		CAN BUS
LED of Alarm		YES
LED of Input OK		YES
LED of Output OK		YES

EMC-EMISSION EN50121-3-2 (Rolling stock. Apparatus)

Test	Norm	Port	Frequency	Limits
Radiated Emissions	EN61000-6-4	Enclosure	30MHz-230MHz	Class-A 40dB (µV/m) Qpk at 10m
			230MHz-1GHz	Class-A 47dB (µV/m) Qpk at 10m
			1GHz-3Ghz	Do Not Apply (Freq.< 108MHz)
			3GHz-6GHz	Do Not Apply (Freq.< 108MHz)
Conducted Emission	EN55016-2-1	Input	150kHz-500kHz	99db (µV) Qpk
			500kHz-30MHz	93db (µV) Qpk
THD Total Harm. Distortion	EN61000-4-30	Output	50Hz-2kHz	<8%

EMC-IMMUNITY EN50121-3-2 (Rolling stock. Apparatus)

Test	Norm	Port	Severity	Conditions	Crit.
Radiated High-Frequency	IEC61000-4-3	Enclosure	20V/m	80-1000MHz M. 80% 1kHz	A
			10V/m	1-2GHz M. 80% 1kHz	A
			5V/m	2-2.7GHz M. 80% 1kHz	A
			3V/m	5.1-6GHz M. 80% 1kHz	A
Conducted RF	IEC61000-4-6	Input	10V	0.15-80MHz M. 80% 1kHz	A
		Output	10V	0.15-80 MHz M. 80% 1kHz	A
		Signal	10V	0.15-80MHz M. 80% 1kHz	A
Electrostatic Discharge	IEC61000-4-2	Enclosure	±8kV	Air (isolated parts)	B
			±6kV	Contact (conductive parts)	B
Fast Transients	IEC61000-4-4	Input	±2kV	Tr/Th: 5/50ns	A
		Output	±2kV	Tr/Th: 5/50ns	A
		Signal	±2kV	Tr/Th: 5/50ns	A
Surges	IEC61000-4-5	L to L	±1kV	Tr/Th: 1.2/50ns	B
		L to PE	±2kV	Tr/Th: 1.2/50ns	B

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