



> Description

Originally designed for on-board passenger information systems, the JL series is now available in a wide variety of input and output configurations. Capable of providing 35W or 50W of continuous power at ambient temperatures of up to 75°C, the low component count makes the JL series a highly reliable yet cost effective solution. For applications where the converter will be housed within an enclosure, the open frame version offers a further cost saving.



Special features include:

- Wide operating temperature range
- Low component count, high reliability
- Simple construction - open frame or enclosed versions available
- Low cost

> Input Specifications

The following input voltages versions are available as standard:

- 110V (66.0 - 137.5V) dc (Suffix A)
- 72V (43.2 - 90.0V) dc (Suffix D)
- 52V (31.2 - 65.0V) dc (Suffix C)
- 36V (21.0 - 50.4V) dc (Suffix F)
- 24V (16.8 - 33.6V) dc (Suffix B)

Other ranges are available to order

Parameter	Detail
Input Ripple	EN50155
Input Protection	Reverse polarity protection. Surges and transients to EN50155 (Direct and Indirect)
Inrush Current	Limited to typically 5 x nominal current (after 0.1ms)
Efficiency	85% typical
Hold up time	10ms to EN50155 S2 (except JLH 72Vdc input version)

> Output Specifications

Parameter	Detail
Maximum Output Power	JL series = 35W JLH series = 50W
Output Versions	JL series = Single & Dual JLH series = Single only
Output Voltage	Fixed output can be specified from 5V to 48Vdc
Setting Tolerance	±0.2%
Line / Load Regulation	Single output version ±2%, second output where fitted ±10%
Temperature Coefficient	<0.02% / °C
Output Ripple	<1% Pk-Pk of Output Voltage
Output Noise	<75mV Pk-Pk superimposed (up to 20MHz)
Response Time	1.0ms to within 2% (for a 20% - 90% load change)
Primary Power Limit	Operates at approximately 120% of full power
Isolation (tested at dc equivalent voltage)	Input to Output 2.0kV ac Output / Input to Case 1.0kV ac (enclosed version) Output to Output N/A (common ground)

Options for JL and JLH versions only		
Option	Detail	Code
RIA norms 12 & 13	RIA filtering	R
Enable	Connect to + input to enable	V





> Environmental Details

Option	Detail	Code
Extended temperature range	-40°C operating -65°C storage	T

Parameter	Detail
Operating Temperature	-25°C to +75°C (no derating)
Storage Temperature	-40°C to +80°C
Cooling	By convection
Relative Humidity	95% max.
Shock & Vibration	EN50155 (EN61373)

> Applicable Norms

Parameter	Detail
EMC	EN50155 (2007), EN50121-3-2 (2006)
Other	EN50155 (2007)

> Mechanical Characteristics

Parameter	Detail												
Construction	Open frame PCB (two alternative footprints) or enclosed versions												
Dimensions (Length x Width x Height)	Open frame PCB - JL / JLH = 220 x 73 x 30mm Open frame PCB - JLW / JLHW = 137 x 94 x 30mm Open frame PCB - JLM / JLHM = 115 x 85 x 22mm Enclosed version - JL / JLH = 250 x 78 x 35mm												
Finish	PCB, Conformal coating. Enclosure, plated mild steel.												
Weight	<0.5kg												
Connections	<table border="0"> <thead> <tr> <th>Variant</th> <th>Input</th> <th>Output</th> </tr> </thead> <tbody> <tr> <td>JL and JLH</td> <td>Wago 236-501</td> <td>Wago 236-501</td> </tr> <tr> <td>JLM & JLHM</td> <td>Wago 236-501</td> <td>Wago 721-434/001-000</td> </tr> <tr> <td>JLM & JLHM (option Q4)</td> <td>Wago 721-433/001-000</td> <td>Wago 721-433/001-000</td> </tr> </tbody> </table>	Variant	Input	Output	JL and JLH	Wago 236-501	Wago 236-501	JLM & JLHM	Wago 236-501	Wago 721-434/001-000	JLM & JLHM (option Q4)	Wago 721-433/001-000	Wago 721-433/001-000
Variant	Input	Output											
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JLM & JLHM (option Q4)	Wago 721-433/001-000	Wago 721-433/001-000											
Fixings	Open frame version: five \varnothing x 3.2mm fixing holes on PCB Enclosed version: four \varnothing 4.2mm clear holes on base plate.												



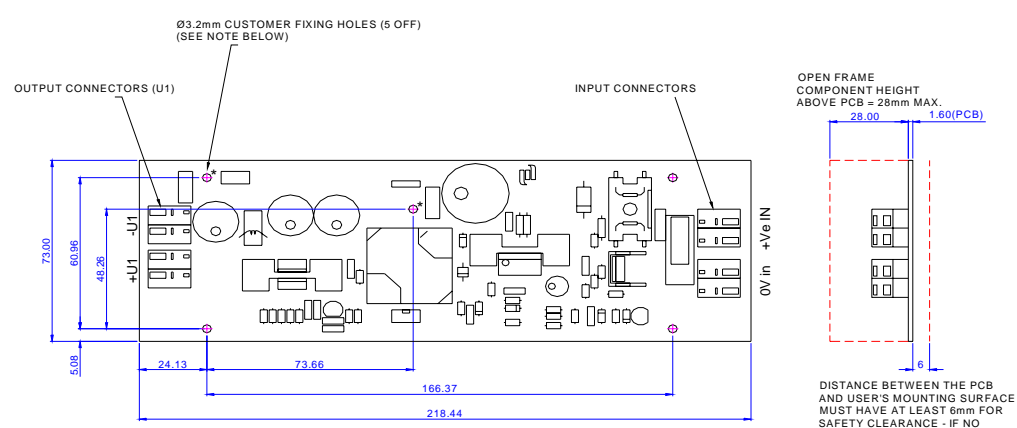
Enclosed Version



JLW Version



JLM Version Q4 option



NOTES:
FOR OPTIMUM EMC PERFORMANCE THE TWO CUSTOMER FIXING HOLES (MARKED *) SHOULD BE CONNECTED TOGETHER AND TO EARTH.
TERMINAL BLOCKS ARE WAGO 236-501.