Railway certified DC/DC converters

Railway Certified DIP Package DC-DC Converter 3W

MINMAX Railway DC-DC Converter family offer industrial standard DIP packag with output power 3 Watt which are designed to meet stringent requirements and harsh environment. DIP package DC-DC converters are available for railway input voltage with 24V, 48V, 110V VDC and tight regulation for 5V, 12V, 15V, ±15V, ±24V VDC output voltage. In accordance with EN50155 approval, railway DC-DC Converters conform to：(1) railway input voltage range and transient requirement. (2) vibration and thermal shock test meets EN61373. (3) cooling, dry and damp heat test meets IEC/EN 60068-2 (4) railway EMC standard EN50121-3-2 and complies also with railway approval EN50155 (IEC60571). Advanced circuit topology provides a very high efficiency up to 85%, allowing baseplate temperature up to 105℃ and very high I/O isolation up to 3000VAC with reinforced insulation. Further features include overload & short circuit protection and complies specifically fire protection test meets EN45545-2 to ensure safety during railway/railroad vehicle operation. MINMAX Railway DC-DC converters are high reliable solutions for critical railway applications in traction inverter, backup power system, train operation monitor, gate controller and many railway systems.

Product Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Output Regulation	I/O Isolation	Package Style	Safety
MIZI03	3W	9-36, 18-75, 40-160	5, 12, 15, ±12, ±15	●	3000VAC Reinforced	DIP-24	●

Railway Certified Quarter Brick DC-DC Converter 50-150W

MINMAX Railway DC-DC Converter family offer industrial standard quarter brick with output power rating from 50 to 150 Watt which are designed to meet stringent requirements and harsh environment. Quarter Brick DC-DC converters are available for railway input voltage with 72V, 110V VDC and tight regulation for 5V, 12V, 15V, 24V, 54V VDC output voltage. In accordance with EN50155 approval, railway DC-DC Converters conform：(1) railway input voltage range and transient requirement. (2) vibration and thermal shock test meets EN61373. (3) cooling, dry and damp heat test meets IEC/EN 60068-2 (4)railway EMC standard EN50121-3-2 and complies also with railway approval EN50155 (IEC60571). Advanced circuit topology provides a very high efficiency up to 92%, allowing baseplate temperature up to 105℃ and very high I/O isolation up to 3000VAC with reinforced insulation. Further features include overload/voltage/temp., short circuit protection, remote ON/OFF, output voltage trim, output sense and complies specifically fire protection test meets EN45545-2 to ensure safety during railway/railroad vehicle operation. MINMAX Railway DC-DC converters are high reliable solutions for critical railway applications in traction inverter, backup power system, train operation monitor, gate controller and many railway systems.

Product Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)		Output Regulation	I/O Isolation	Package Style	Safety
MTQZ50	50W	43-101, 66-160	5, 12, 15, 24	●	3000VAC Reinforced	Quarter Brick	●	
MTQZ75	75W	43-101, 66-160	5, 12, 15, 24	●	3000VAC Reinforced	Quarter Brick	●	
MRZI1000	100W	36-160	5, 12, 15, 24, 54	●	2000VAC Reinforced	Quarter Brick	●	
MRZI1500	150W	36-160	5, 12, 15, 24, 54	●	2000VAC Reinforced	Quarter Brick	●	

Railway Certified 2"×1" Package DC-DC Converter 10-40W

MINMAX Railway DC-DC Converter family offer industrial standard DIP packag with output power rating from 10 to 40 Watt which are designed to meet stringent requirements and harsh environment. 2"×1" package DC-DC converters are available for railway input voltage with 24V,

48V, 110V VDC and tight regulation for 5V, 12V, 15V, 24V, 54V, ±12V, ±15V VDC output voltage. In accordance with EN50155 approval, railway DC-DC Converters conform to : (1) railway input voltage range and transient requirement. (2) vibration and thermal shock test meets EN61373. (3) cooling, dry and damp heat test meets IEC/EN 60068-2. (4)railway EMC standard EN50121-3-2 and complies also with railway approval EN50155 (IEC60571). Advanced circuit topology provides a very high efficiency up to 90%, allowing baseplate temperature up to 105℃ and very high I/O isolation up to 3000VAC with reinforced insulation. Further features include overload/voltage, short circuit protection, remote ON/OFF, output voltage trim and complies specifically fire protection test meets EN45545-2 to ensure safety during railway/railroad vehicle operation. MINMAX Railway DC-DC converters are high reliable solutions for critical railway applications in traction inverter, backup power system, train operation monitor, gate controller and many railway systems.

Product Series	Output Power	Input Voltage Range (VDC)	Output Voltage (VDC)	Output Regulation	I/O Isolation	Package Style	Safety
MKZI10	10W	9-36, 18-75, 40-160	5, 12, 15, 24, ±12, ±15	•	3000VAC Reinforced	2"×1"	•
MKZI20	20W	9-36, 18-75, 40-160	5, 12, 15, 24, ±12, ±15	•	3000VAC Reinforced	2"×1"	•
MKZI40	40W	36-160	5, 12, 15, 24, ±12, ±15, 54	•	3000VAC Reinforced	2"×1"	•