

Features

- **Input Voltage Range: 600 VDC/750VDC: 420VDC - 1100 VDC**
- **Ambient Temperature: -40C to +85C (EN 50155)**
- **High Efficiency**
- **Isolation up to 8000VDC**



Description

The MHVC Series converts 600VDC/750VDC from the third rail to 24VDC, ideal for supplying points, signal lamps and electronic monitoring. The MHVC250 Series can be used as a self-starting module for trams or trolley buses with discharged batteries, avoiding towing. The rugged design and high quality components guarantees high reliability in transit vehicles, even under severe shock and vibration conditions. High efficiency allows for performance without the need for forced air over an ultra wide temperature range of -40C to 85C.

Specifications

Input	Parameter	Conditions	Data
Vin	DC Input Voltage	Continuous	600V / 750V: 420V to 1100V
		t ≤ 2 s	600V / 750V: 375V to 1125V
	No Load Input Current	600VDC Input	≤30 mA
	Stand-by Current	600VDC Input	≤3 mA
Lin max	Maximum Input Current	375VDC Input	≤950 mA
	Transient Filter		According to IEC1287-1 (UIC550)
	Input Fuse		1.25A / 3.0 kV (8 x 85 mm) (Vibration Resistant)
	Reverse Polarity Protection		Series Diode
	Undervoltage Shutdown		340...370VDC
	Overvoltage Protection		1130...1180VDC

Output	Parameter	Conditions	Data
Vout	Voltage Accuracy	Factory Preset	±1.5%
		Line Regulation	≤1.0%
		Load Regulation	Iout= 10...90...10%
VLF/HF	Ripple / Noise	Iin= min, 20 MHz	≤1.0% p-p / ≤2.0% p-p
		Iout= 50...100...50 % dynamic	≤250 mV
tR	Transient Response Time	Iout= 50...100...50 % ohmic load	≤10.0 ms
Imax	Overload Characteristics		≥1,1 x Iout nom
		Nominal Load	≤200 ms
OVP	Overvoltage Protection	5 kW Transient (BZW 50-27)	27VDC
ε	Temperature Coefficient		0.01 % / K
		No Load Characteristics	No Ground Load
Pover	Short Circuit Protection		Continuous
PG	Power Good Signal		Open Collector *
		Shut Down/Inhibit Function	Via Output Circuit (optional) **
	Parallel Operation		Without Decoupling Diode

* Limit value for Open Collector Transistor (connector X200C ref. to -Uout):
Uce, max ≤70 V and Icmx ≤300 mA. Uout ≥ Uout,nom x 0,15 (18,7 V) → PG = Low

** Max. external voltage (connectors X200D, X200E): UEX= 12...36 VDC, IEX <10 mA
All data measured at nominal input voltage, full load and ambient temperature of 25 °C (unless otherwise specified).

General Specifications

General	Parameter	Conditions	Data
Uisol	Isolation	Input-Output Input-Ground Output-Ground	8.0 kV _{AC} (1 Min.) 5.0 kV _{AC} 0.5 kV _{AC}
	Creepage/Clearance Distances	Input-Output Input-Ground Output-Ground	≥17.2 mm ≥8.6 mm ≥1 mm
	Operating Isolation	Creepage Distances	≥5 mm (EN 50124-1)
	Partial Discharge Intermittent Voltage		1.425 VDC
TA	Ambient Temperature		-40C to +70C -40C to +85C (t ≤ 10 Min.)
TS	Storage Temperature		-40C to +100C *
ΔT	Cooling		Free Convection
	Protection Type		IP 20
	Protection Class		
	Pollution Level		PD 2
	MTBF	T _A = +70C, SN 29500	200K Hours
	Case Material/Baseplate Material	Perforated Plate Cover	Stainless Steel/Aluminum
	Weight		2,500g ±50 g
	Connecting Type	Wall mounting	Spring Clamps
	Dimensions L x W x H		330 x 170 x 87 mm

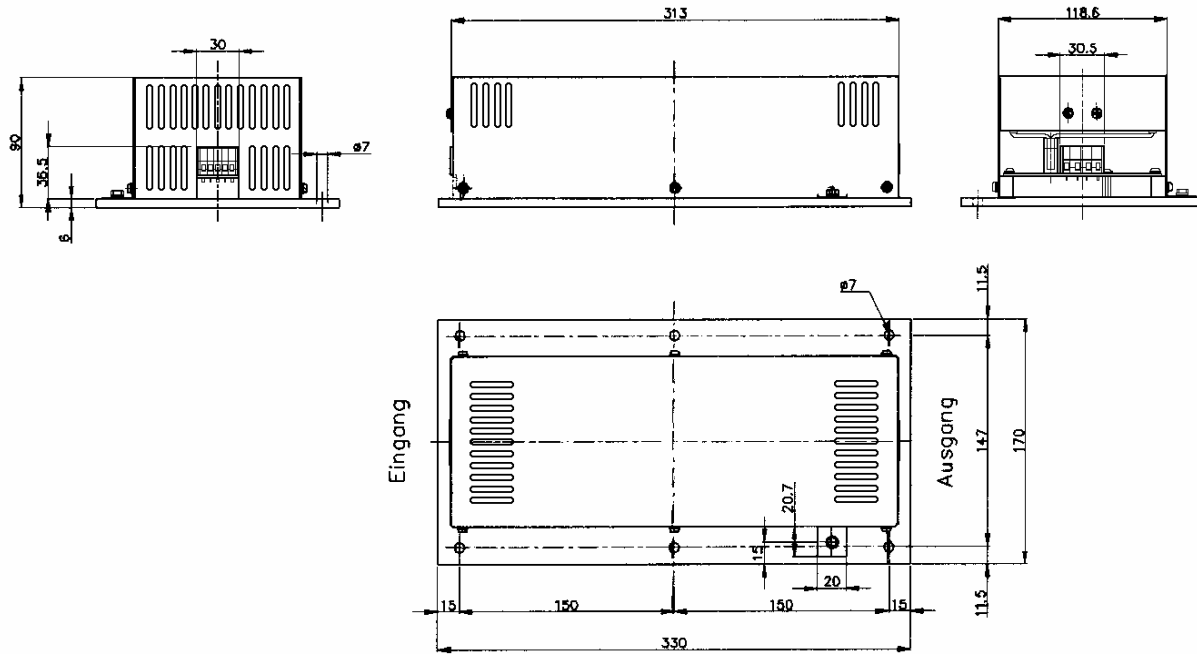
Model Number

Model Number	Input	Output	Output	Efficiency
	[V]	[V]	[A]	[%]
MHVC250	600/750	24	10	≥88

Regulatory Compliance

Safety:	EN 50155, EN 50124 (designed to meet)
EM/RFI: Radiated Voltage	EN 50121-3-2
Radiated Interference	EN 50121-3-2
Immunity	EN 50121-3-2
ESD	EN 61000-4-2 , Contact Discharge 6KV, Air Discharge, 8KV
Electromagnetic Fields	EN 61000-4-3
Burst	EN 61000-4-5
Conducted Disturbance	EN 61000-4-6

Mechanical Outline



Electrical Connections

