

# FN221-450-99-C1414-R99

SAP Code: 822772



- Chassis mount
- 450 A EMC filter with bus bars
- DC

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## Approvals & Compliances



## Features and Benefits

- FN222X, FN223X and FN224X series of filters provides state-of-the-art EMI attenuation with a choice of three performance levels
- The filters are built to fit perfectly to high power EV charging applications
- The shape allows a convenient and space-saving installation
- Fulfills the requirements in IEC/EN 61851-23 Electric vehicle conductive charging system
- Fulfills the requirements in UL 2202 Electric Vehicle (EV) Charging System Equipment
- FN224X offers voltage and performance ratings of FN222X on a smaller footprint

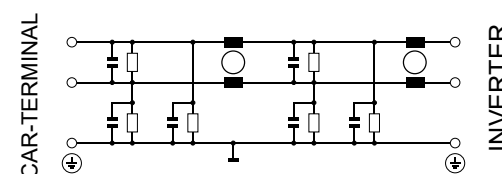
## Family Technical Specifications

<b>Maximum continuous operating voltage</b>	500 VDC (FN223X) 1000 VDC (FN222X, FN224X)
<b>High potential test voltage</b>	P -> E 4800 VDC for 2 sec P -> P 3600 VDC for 2 sec
<b>Rated currents</b>	450
<b>Pollution degree</b>	2 acc. IEC 60664-1
<b>Surge withstand</b>	2kV (P-P) / 4kV (3P - E) acc. to IEC 6100-4-5
<b>Temperature range (operation and storage)</b>	-40°C to +100°C
<b>Climatic category</b>	40/100/21 acc. to IEC 60068-1
<b>Protection category</b>	IP 00
<b>Flammability corresponding to</b>	UL 94V-0
<b>Design corresponding to</b>	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939, EN 60721-3, EN 62109
<b>Overload capability</b>	4x rated current at switch on, max. 8 sec 1.5x rated current for 1 minute, once per hour
<b>MTBF (Mil-HB-217F)</b>	>300,000 h @ 50°C/500V
<b>Overvoltage category</b>	III acc. IEC 60664-1

## Typical Applications

- High Power EV DC charging beyond HPC350 (500 A @ 920 V)
- Two voltage levels 500 VDC and 1000 VDC
- Compatible to CHAdeMO and CCS

## Typical electrical schematic



## General Specification

Voltage AC	1000 (Volt)
Nominal Frequency	DC
Rated Current @ambient	450 (Hertz)
Ambient temperature [°C]	55 (Celsius)

## Electric Specification

Input terminal	99 - special / busbar
Output terminal	99 - special / busbar
Resistance	10 (Kilohm)

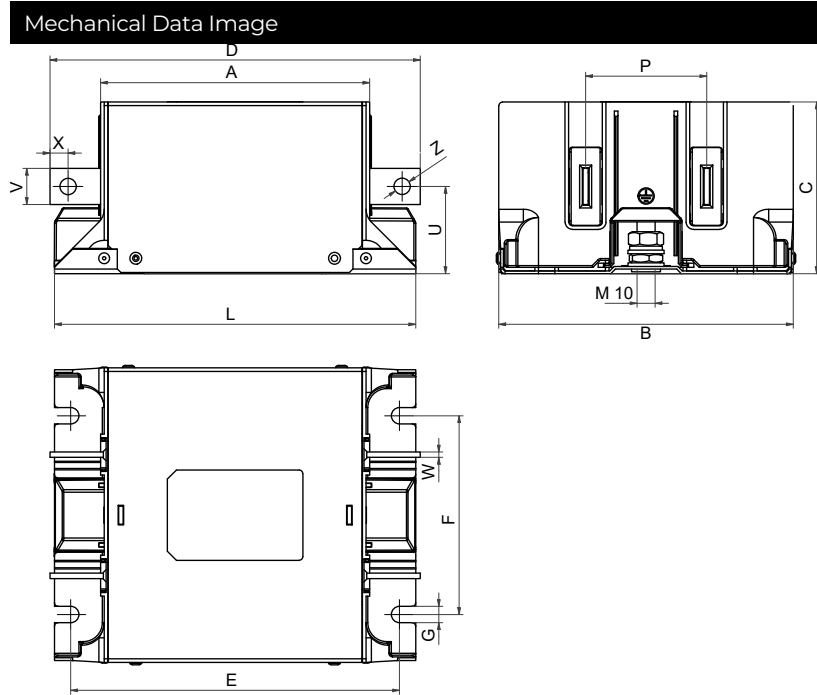
## Attenuation Specification

CM attenuation @ 150kHz [dB]	11 (Decibels)
DM attenuation @ 150kHz [dB]	36 (Decibels)
Capacitance Cy1 [nF]	15 (Nanofarad)
Capacitance Cy2 [nF]	15 (Nanofarad)

## Mechanic Specification

Length [mm]	150 (Millimeter)
Width [mm]	163 (Millimeter)
Height [mm]	95 (Millimeter)
Volume [cm <sup>3</sup> ]	2323 (Cubic Centimeter)
NetWeight [g]	3240 (Gram)

## Schaffner schemes



## Dimensions

A [mm]	145
B [mm]	163
C [mm]	95
D [mm]	210
E [mm]	182
F [mm]	110
G [mm]	9
L [mm]	200
P [mm]	67
U [mm]	48
V [mm]	25
W [mm]	8
X [mm]	12.5
Z [mm]	11