

Datasheet

3-line filters

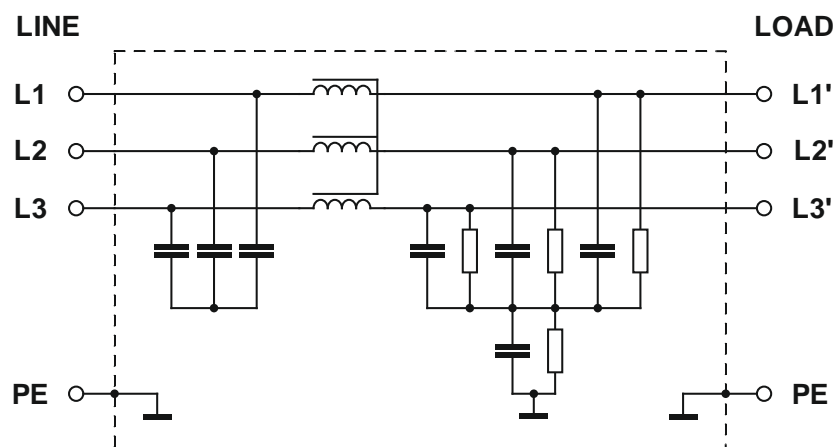
for converters and power electronics

305/530 V, 50/60 Hz, 7...175 A, 40 °C

Ordering code: B84143A0007...A175L220
Date: 2018-05-16
Version: 02

Customer release	
Hitachi Europe GmbH	07.06.2018
Company	Date
Shuhei Takarabe	
Name	Expected date of first delivery (optional)
Engineer	<i>S. Takarabe</i>
Function	Signature
Please send back to EPCOS MAG PEMC or to your EPCOS sales representative	




Typical circuit diagram



Technical data and measuring conditions

Rated voltage	U_R [L-PE / L-L]	305/530 V AC (50/60 Hz)
Test voltage line to line for 2 s	U_{test}	1770 V DC
Test voltage line to case for 2 s	U_{test}	2700 V DC
Rated temperature	T_R	40 °C
Overload capability (thermal)		1.5 x I_R for 3 min per hour or 2.5 x I_R for 30 s per hour
Leakage current (IEC 60939-1: 2010, Annex A)	I_{LK}	At U_R and 50 Hz
Climatic category (IEC 60068-1: 1992)		25/100/21
Degree of protection (IEC 60529: 2013)		IP 00

Characteristics and ordering codes

I _R	Terminal / connection wire cross section	I _{LK}	R _{typ}	Approx weight.	Hitachi-Number / Ordering code / (Preliminary code *)	Approvals ¹⁾		
						 IEC 60939	 UL 1283	 CSA C22.2 No.8
A	mm ²	mA	mΩ	kg				
7	4 / 1.5	6.8	15	tbd.	FPF-P1340-7 B84143A0007L220 (P30198D002)			
15	10 / 2.5	1.65	8	tbd.	FPF-P1340-15 B84143A0015L220 (P30198E002)			
26	10 / 6	4.8	7	tbd.	FPF-P1340-23 B84143A0026L220 (P30198F002)			
37	10 / 10	4.8	2.6	tbd.	FPF-P1340-37 B84143A0037L220 (P30198G003)			
52	25 / 10	6.8	2.2	tbd.	FPF-P1340-52 B84143A0052L220 (P30198H002)			
74	25 / 50	6.8	1.2	tbd.	FPF-P1340-74 B84143A0074L220 (P30198I002)			
92	50 / 50	14	1.3	tbd.	FPF-P1340-92 B84143A0092L220 (P30198J002)			
111	50 / 50	14	1.19	tbd.	FPF-P1340-111 B84143A0111L220 (P30198K002)			
175	95 / 95	16	0.57	tbd.	FPF-P1340-175 B84143A0175L220 (P30198L002)			

1) X = approval granted
*: Development Number

P = pending

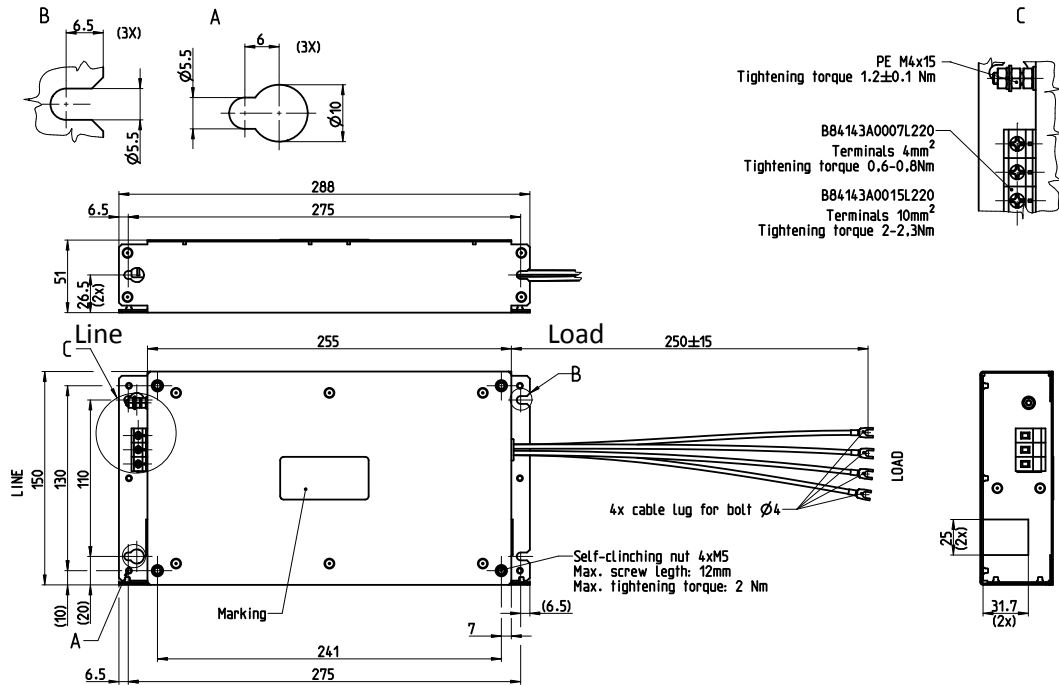
D = designed with reference to

- = none

3-line filters for converters and power electronics

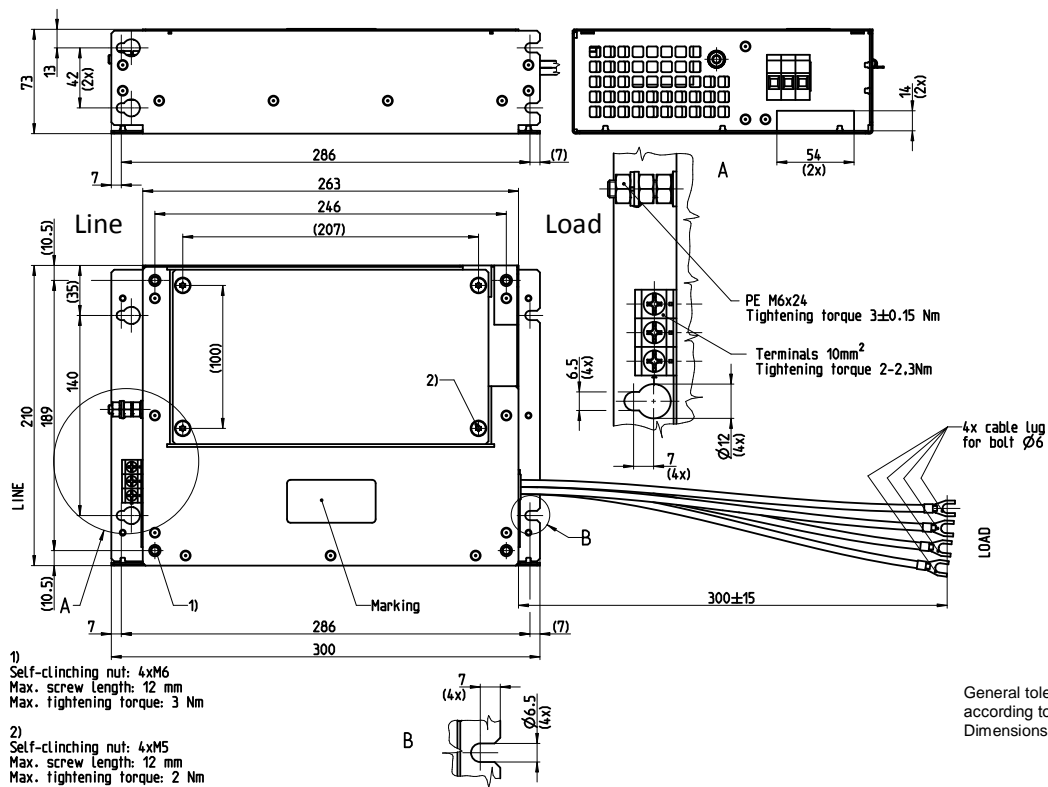
B84143A0007...A175L220

Dimensional drawings B84143A0007L220, B84143A0015L220



General tolerances according to ISO 2768-cL
Dimensions in mm

B84143A0026L220, B84143A0037L220



General tolerances according to ISO 2768-cL
Dimensions in mm

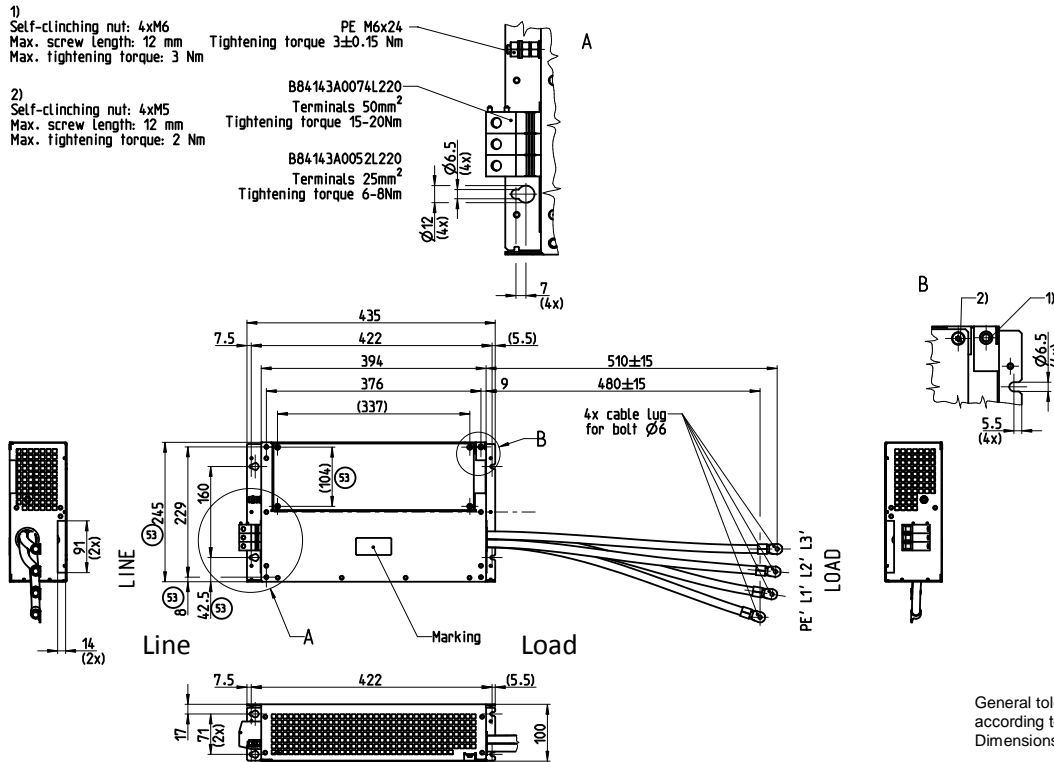
Please read *Cautions and warnings* and *Important notes* at the end of this document.

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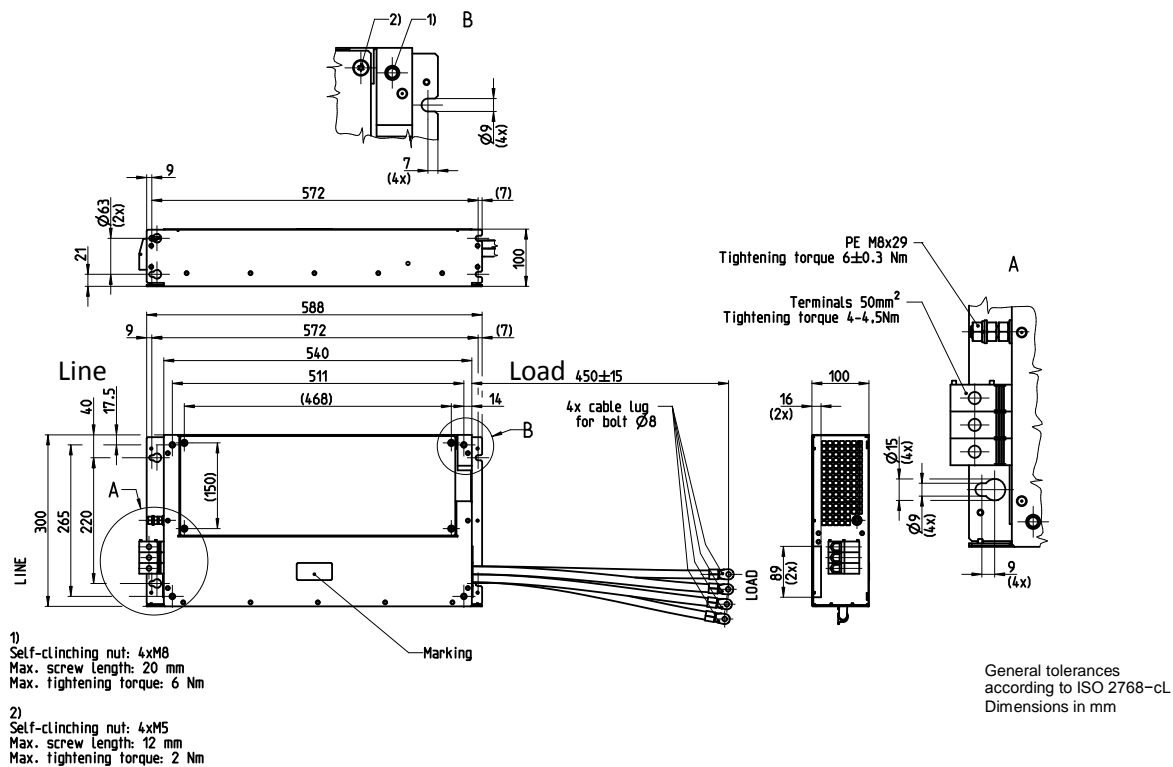
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B84143A0092L220



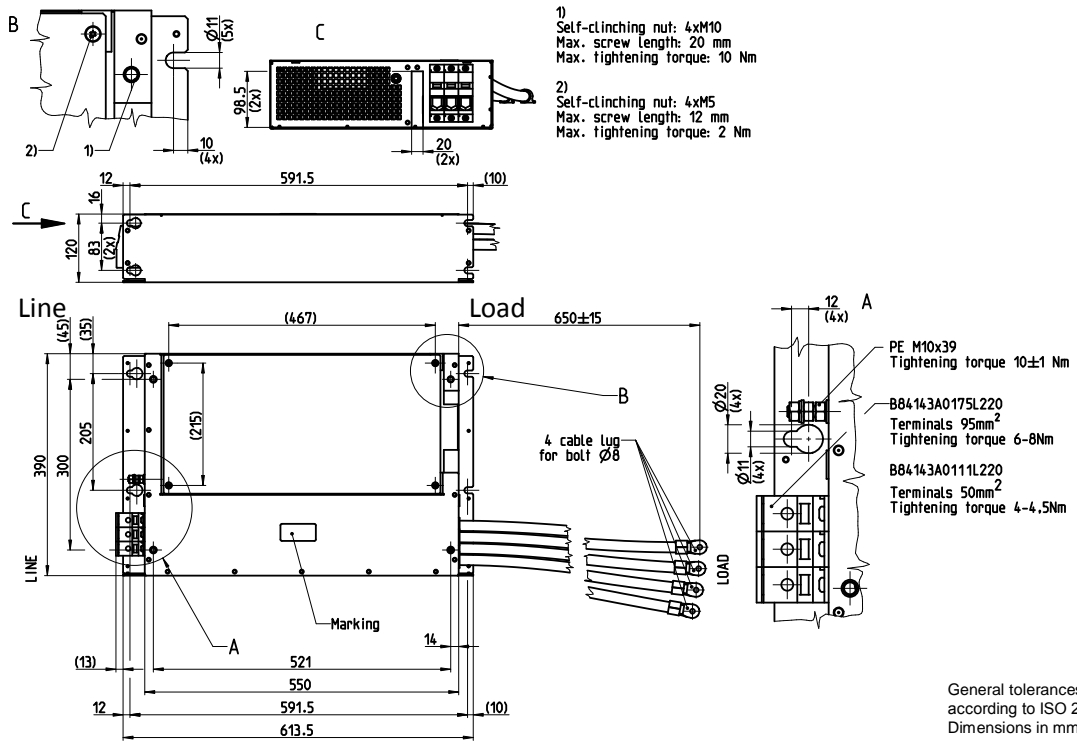
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3-line filters
for converters and power electronics

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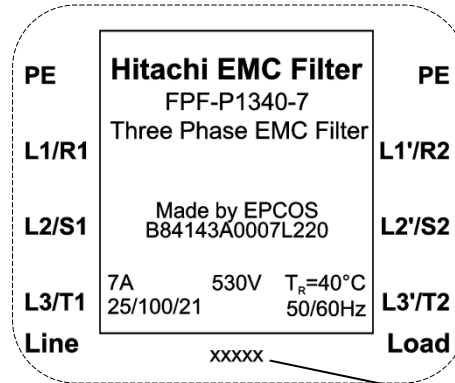
**3-line filters
for converters and power electronics**

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Customer specific labeling

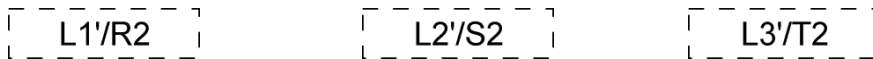
e.g. B84143A0007L220

Type label

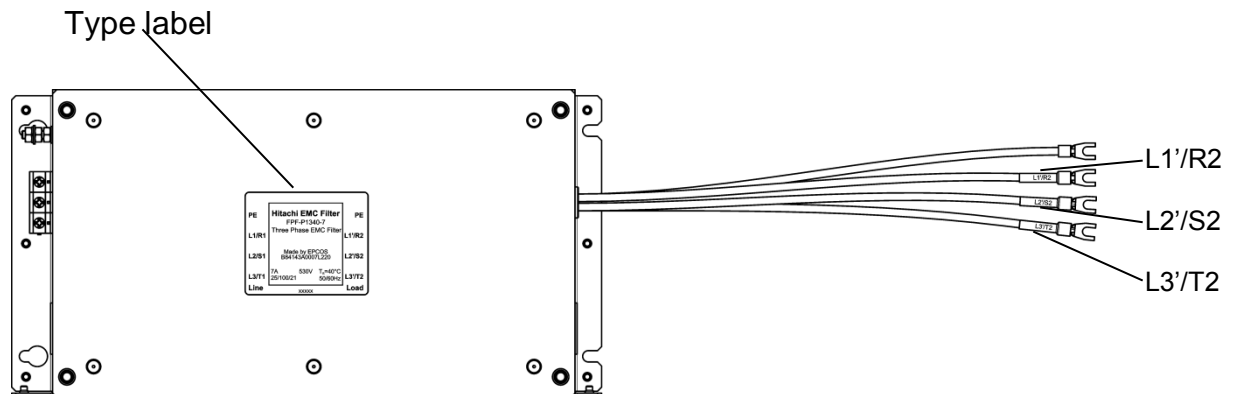


Manufacturing date CYCWD

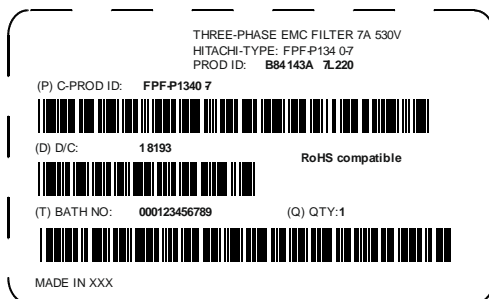
Lettering shrinking tube



position of labeling



Packing label (delivery label SAP debtor 122876)



Barcodes only samples!

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for converters and power electronics
Cautions and warnings

- Please note the advices in our data book "EMC Filters" (latest edition); attention should be paid to the chapter "General safety notes".
- It shall be ensured that only qualified persons (electricity specialists) are engaged on work such as planning, assembly, installation, operation, repair and maintenance. They must be provided with the corresponding documentation.
- Danger of electric shock: Filters contain components that store an electric charge. Dangerous voltages can continue to exist at the filter terminals for longer than five minutes even after the power has been switched off.
- The protective earth connections shall be the first to be made when the filter is installed and the last to be disconnected. Depending on the magnitude of the leakage currents, the particular specifications for making the protective-earth connection must be observed.
- Impermissible overloading of the filter, such as with circuits able to cause resonances, impermissible voltages at higher frequencies etc. can lead to bodily injury and death as well as cause substantial material damages (e.g. destruction of the filter housing).
- Filters must be protected in the application against impermissible exceeding of the rated currents by overcurrent protective devices.
- In case of leakage currents > 3.5 mA you shall mount the PE conductor stationary with the required cross section before beginning of operation and save it against disconnecting. For leakage currents $I_L^{a)} \leq 10$ mA the PE conductor must have a KU value $b)$ of 4.5; for leakage currents $I_{LK} > 10$ mA the PE conductor must have a KU value of 6.
- Output chokes and output filters must be protected in the application against impermissible exceeding of the component temperature.
- The converter output frequency must be within the specified range to avoid resonances and uncontrolled warming of the output chokes and output filters.
- Because the product can become very hot during operation, there is the risk of burns if touched. The product can remain hot for some time after the power is switched off!

a) I_L = Leakage current let-go

b) The KU value (symbol KU) is a classification parameter of safety-referred failure types designed to ensure protection against hazardous body currents and excessive heating. (DIN VDE 0800-1, 0800-8, 0800-9)

A value of KU = 4.5 with respect to interruptions is attained:

- with a permanently connected protective earth connections ≥ 1.5 mm²

- with a protective earth connection ≥ 2.5 mm² via connectors for industrial equipment (IEC 60309-2).

KU = 6 with respect to interruptions is achieved for fixed-connection lines ≥ 10 mm², where the type of connection and installation is conform to the specification for PEN conductors according to DIN VDE 0100-540.

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