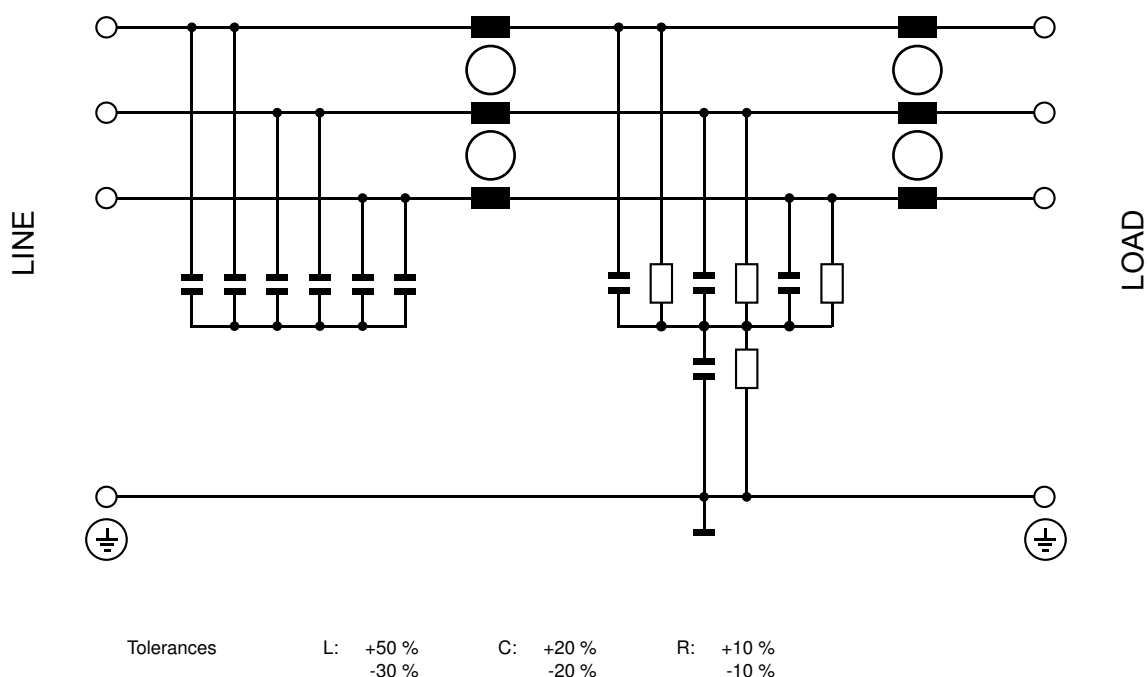


# Low leakage EMI filter for power electronics and converters



Designation:	FS42753-50-53
Part Number:	822102
Customer's Part No.:	10108127

Document Number:	1041959	A
Created:	LUTSNO	2020-10-09
Checked:	LUTLUR	2020-10-09
Released:	LUTLUR	2020-10-09

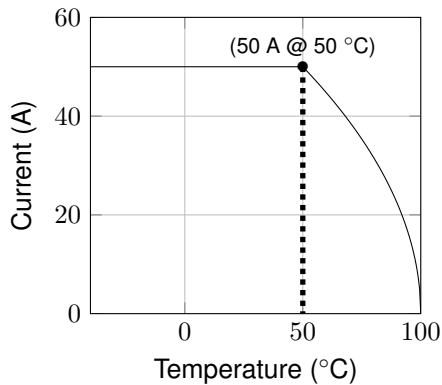
## Revision History

A	2020-10-09	LUTLUR	initial version
---	------------	--------	-----------------

## Electrical

Rated Current ( $I_{th}$ ):	50 A	@ 50 °C amb. Temperature
Nominal Operating Voltage:	480/277 +/- 10% VAC	
Rated Operating Voltage:	530/305 VAC	
Max. Operating Frequency:	60 Hz	
Leakage Current (IEC60939-3):	2.61 mA	@ Rated Voltage and 50 Hz
Leakage Current Worst Case:	125mA @ Rated Voltage and 50Hz	
Production Line Test Voltage:	2.28 kVDC*	for 2 s (L to L)
	2.26 kVDC*	for 2 s (L/L to PE)
(* Repetition with max. 80 % of the specified values)		
Overvoltage Category (IEC60664-1):	II	
Typ. Power Dissipation:	29.3 W	
Max. DC Resistance @ 25 °C:	3.9 mOhm	L - L'

## Current Derating



$$I = I_N \cdot \sqrt{\frac{\Theta_{max} - \Theta_{act}}{\Theta_{max} - \Theta_N}}$$

for  $\Theta_{act} > \Theta_N$  and  $\Theta_{act} < \Theta_{max}$

$I_N$  rated current at  $\Theta_N$   
 $\Theta_{act}$  actual ambient temperature  
 $\Theta_N$  temperature at which the rated current is defined  
 $\Theta_{max}$  rated maximum temperature of the component

## Environmental & Reliability

Operating Ambient Temp. Range:	-40 °C to 100 °C
Storage Temp. Range:	-40 °C to 100 °C
Cooling:	AN
Pollution Degree (IEC60664-1):	2
Climatic Class (IEC60068-1):	40/100/21

## Standards, Certifications and Compliances

Design Standard	Certification
UL 60939-3	E493879
IEC 60939-3	SE-ENEC-0037-71

### Material Compliances

ROHS 2011/65/EU, 2015/863/EU

## Mechanical

Line:	(-53) STB 16	Type:	Safety terminal block
		Torque (Nm):	2.0-2.3
		Flex Wire (AWG):	20-4
		Solid Wire (mm <sup>2</sup> ):	0.5-16
		Flex Wire (mm <sup>2</sup> ):	0.5-16
Load:	(-53) STB 16	Type:	Safety terminal block
		Torque (Nm):	2.0-2.3
		Flex Wire (AWG):	20-4
		Solid Wire (mm <sup>2</sup> ):	0.5-16
		Flex Wire (mm <sup>2</sup> ):	0.5-16
PE:	Thread M6	Torque (Nm):	3.5-4.0
Net Weight:	2.5 kg		
IP Class (IEC60529-1):	20		

### Annex 1

Description:	Mechanical Drawing
Document Number:	1004984

### Annex 2

Description:	Cross Reference Dimensions FS42753 series
--------------	---

## Marking

### Annex 3

Description:	Product Label
Document Number:	1040971

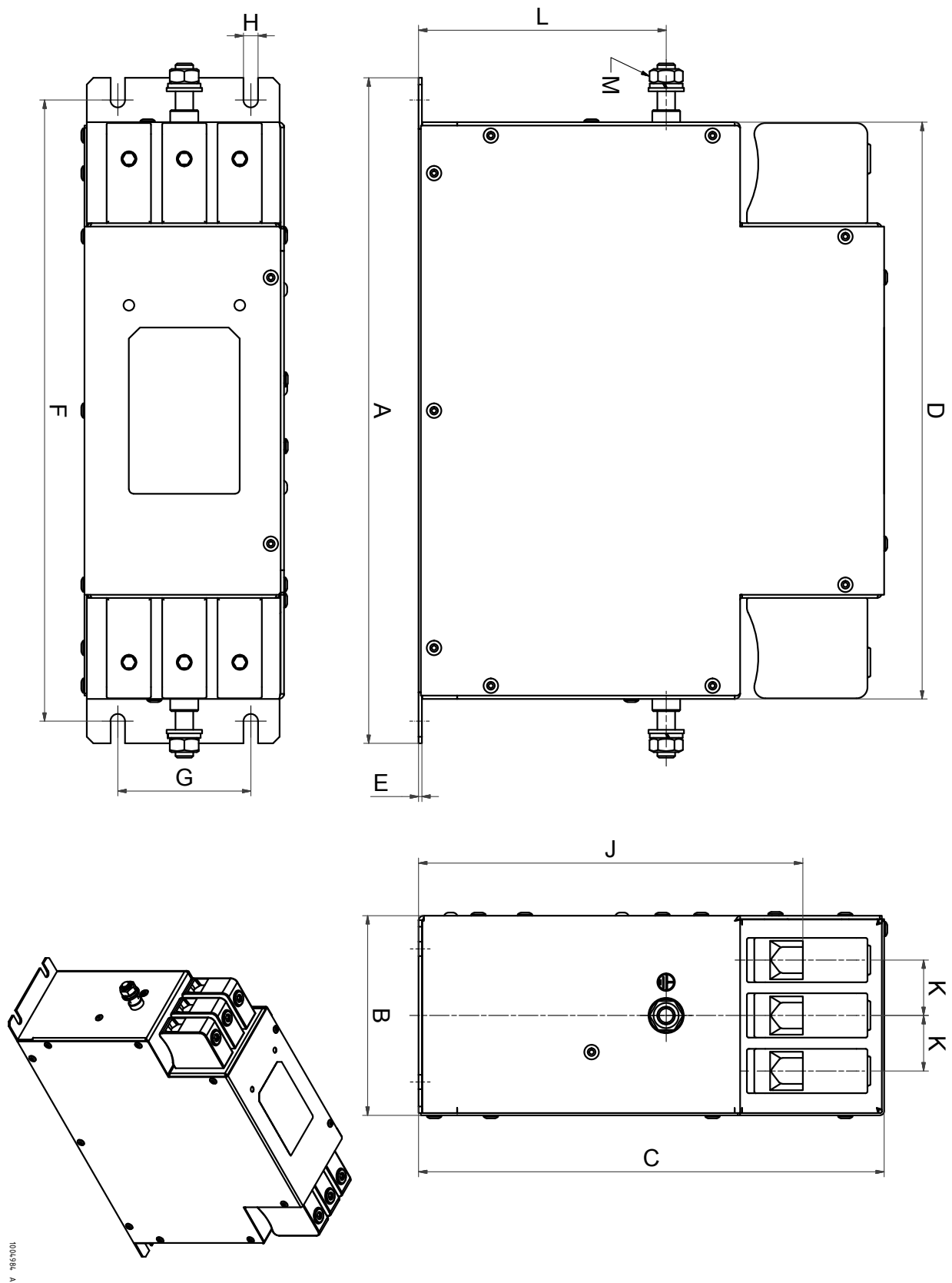
**Annex 4**

Description:	Packaging Label
Document Number:	1043819

**Annex 5**

Description:	Box Label
Document Number:	1043818

Annex 1



1041959\_A

## Annex 2

### Dimensions FS42753 series

FS42753-10-44

A	B	C	D	E	F	G	H	J±2	K	L±1	M
185	40	120	157	0.8	175	20	4.5	102	11	76	M5

FS42753-16-44

A	B	C	D	E	F	G	H	J±2	K	L±1	M
195	45	140	164	0.8	180	25	5.4	122	11	93	M5

FS42753-20-33

FS42753-25-33

A	B	C	D	E	F	G	H	J±2	K	L±1	M
210	45	145	174	0.8	195	25	5.4	126	13	96	M5

FS42753-40-33

A	B	C	D	E	F	G	H	J±2	K	L±1	M
235	50	168	207	1	220	30	5.4	149	13	115	M6

FS42753-50-53

FS42753-63-53

A	B	C	D	E	F	G	H	J±2	K	L±1	M
255	65	180	226	1	240	45	5.4	156	16	120	M6

FS42753-80-34

A	B	C	D	E	F	G	H	J±2	K	L±1	M
290	80	205	250	1.2	270	50	6.5	172	22	110	M6

FS42753-83-35

FS42753-115-35

A	B	C	D	E	F	G	H	J±2	K	L±1	M
300	90	210	260	1.5	280	60	6.5	173	25	112	M8

Annex 3

QR CODE  
Example: FS42753-50-53 822102 10108127

Description

Customer number

Variable A

Variable B

Variable C

FS42753-50-53

10108127

3x530/305V 50/60Hz

50A@50°C 40/100/21

LINE

L1

L2

PE

L3

Risk of electric shock - wait >5min before servicing

3889999 / 06 / 2041R

LOAD

PE

L2

L3

L1

WORK ORDER / PRODUCTION PLACE / DATA CODE YYWW ROHS

Material	Description	Customer number	Variable A	Variable B	Variable C
822102	FS42753-50-53	10108127	3x530/305V 50/60Hz	50A@50°C 40/100/21	2.0 - 2.3Nm / PE: 3.5 - 4.0Nm
822103	FS42753-63-53	10108128	3x530/305V 50/60Hz	63A@50°C 40/100/21	2.0 - 2.3Nm / PE: 3.5 - 4.0Nm
822104	FS42753-80-34	10108129	3x530/305V 50/60Hz	80A@50°C 40/100/21	4.0 - 4.5Nm / PE: 3.5 - 4.0Nm
822105	FS42753-83-35	10108130	3x530/305V 50/60Hz	83A@50°C 40/100/21	7.0 - 8.0Nm / PE: 8.0 - 9.0Nm
822106	FS42753-115-35	10108122	3x530/305V 50/60Hz	125A@50°C 40/100/21	7.0 - 8.0Nm / PE: 8.0 - 9.0Nm

Label printout directly from ZO11N based on the settings from Classification in SAP!

Packing labels are also printed directly from ZO11N!

Note: Production place  
05 for Thailand  
06 for Hungary  
88 for China

LABEL: 202349  
SIZE: 75x50mm  
FILE: 1040971A


			no scale	A4	created	08.10.2020	LUTEJE
					checked	08.10.2020	LUTLUR
					released	08.10.2020	LUTLUR
A	Add approvals	08.10.2020	scale	format	status	date	user
A1	Add approvals	08.10.2020	LABEL				
A0		16.07.2020					
rev.	change no. / change description	date	doc. description				
<div><div><div>FS42753-50-53</div><div>10108127</div><div>3x530/305V 50/60Hz</div><div>50A@50°C 40/100/21</div></div><div><div>LINE</div><div>L1</div><div>L2</div><div>PE</div><div>L3</div></div><div><div>Risk of electric shock - wait &gt;5min before servicing</div><div>3889999 / 06 / 2041R</div></div></div>			several	FS42753-SERIES			
			mat. number	project			
We reserve all rights in this document and in the information contained therein. Passing on and/or copying of this document, use and/or communication of its content is not permitted without authorization of Schaffner.			LAB	1040971	A	1 / 1	
Template: SPC 159332 / A			doc. type	doc. number	doc. rev.	page	

DSC: 1041959 - A

DSC: v2.0.1

Page: 7 of 10

## Annex 4



Country of origin  
Plain text:  
Made in .....


Data matrix (4L...):  
Thailand TH  
Hungary HU  
China CN  
Switzerland CH  
Germany DE  
Finland FI

ARTIKELNUMMER / PRODUKTIONSdatum JAHR, WOCHE, R (RoHS) / ANZAHL BOX  
 PART NO. / PRODUCTION-DATE YEAR, WEEK, R (RoHS) / QUANTITY PER BOX

Barcode 39  
Material description  
Example: \*10108127\*


Barcode 39  
Customer part number  
Example: \*FS42753-50-53\*

LABEL: 203532  
SIZE: 70 x 41mm  
FILE: 1043819A

			no scale	A4	created	03.09.2020	LUTLNI
					checked	04.09.2020	LUTLUR
					released	08.10.2020	LUTLUR
			scale	format	status	date	user
A		08.10.2020	LABEL (INNER BOX)				
A0		03.09.2020					
rev.	change no. / change description	date	doc. description				
			822102	FS42753-50-53			
			mat. number	project			
We reserve all rights in this document and in the information contained therein. Passing on and/or copying of this document, use and/or communication of its content is not permitted without authorization of Schaffner.			LAB	1043819	A	1 / 1	
Template: SPC 159332 / A			www.schaffner.com	doc. type	doc. number	doc. rev.	page




## Annex 5




**SCHAFFNER**

MADE IN THAILAND


**FS42753-50-53**



\*10108127\*



\*4\*



\*FS42753-50-53\*

2036R
Quantity 4 pcs./box

Quantity per box

Production-date

Barcode 39

Material description

Example: \*10108127\*

Barcode 39


Customer part number

Example: \*FS42753-50-53\*

LABEL: 203536

SIZE: 105x74mm

FILE: 1043818A

			no scale	A4	created	03.09.2020	LUTLNI
					checked	04.09.2020	LUTLUR
					released	08.10.2020	LUTLUR
			scale	format	status	date	user
A		08.10.2020	<b>LABEL BOX</b> doc. description 822102      FS42753-50-53 mat. number      project				
A0		03.09.2020					
rev.	change no. / change description	date					
 <p><b>SCHAFFNER</b></p>							
We reserve all rights in this document and in the information contained therein. Passing on and/or copying of this document, use and/or communication of its content is not permitted without authorization of Schaffner.			LAB	1043818	A	1 / 1	
Template: SPC 159332 / A <a href="http://www.schaffner.com">www.schaffner.com</a>			doc. type	doc. number	doc. rev.	page	

## Disclaimer

1. Product suitability for a given application must ultimately be determined by the user (the party that is putting the product into operation) on a case by case basis. Product functionality and suitability must be determined with proper verification within the final application. Neither Schaffner nor its subsidiaries will assume liability for any consequential downtimes or damages resulting from use of products outside their specifications or due to incomplete verification in application.

2. Do not attempt to install, operate, maintain or inspect any product until you have read and understood the related safety notes and installation guidelines delivered with the product. If not available, general safety and installation notes are available on Schaffner Website: [www.schaffner.com](http://www.schaffner.com).

Non-qualified persons are not allowed to install or maintain Schaffner products!

3. The user is responsible to observe compliance with all local installation and electrical regulations.

4. All products must have their safety earth connected using properly dimensioned connectors. It is recommended to avoid chaining safety earth of multiple equipment together.

5. Warnings, cautions and notes as displayed on the product label must be observed at all times.

6. Overcurrent or overvoltage applied to products or resulting from an improper setup (i.e. resonances) may cause substantial damages, represent a fire hazards and lead to body injury or death.

7. Unless specifically indicated in datasheet, products do not contain any protection components. Suitable overcurrent and overvoltage protection circuits must be placed upstream of the product to avoid any consequential damage in case of any system malfunction.

8. Products with capacitive elements can have significant amount of stored energy. If misused or mishandled it could lead to body harm, damage and eventually fire hazard.

9. Products have limited lifetime and are subject to ageing effects heavily depending on operating conditions and environment. Schaffner recommends to regularly check any inbuilt capacitance to ensure constant performance and considering replacement after 12 years from initial commissioning unless otherwise indicated. Even when properly operated as in specifications, it is not possible to rule out single malfunctioning or failures of components happening before the usual lifetime.

User is responsible to evaluate the environment in the application and eventually perform preventive maintenance before the above recommendation. User shall also evaluate risk of possible failures and implement proper containment actions to avoid damage or injury.

10. Schaffner reserves the right to change raw materials used in this product during its life cycle on the companys own discretion, mainly for the purpose of managing and maintaining a capable international supplier base and for ensuring prompt product availability at all times. All changes having no impact on form, fit, function and technical specifications according to company internal evaluation will be carried out without notification.

Stricter change management process can be implemented on request.