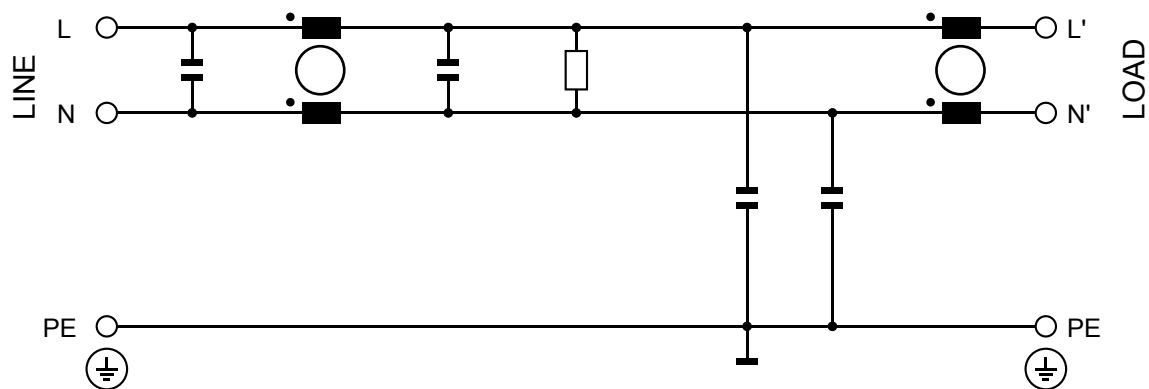


## EMI filter for power electronics and converters



Tolerances

L: +50 %  
-30 %C: +20 %  
-20 %R: +10 %  
-10 %

Designation:	FS43956-20-07-LL
Part Number:	823443
Customer's Designation:	AX-FIC1021-SE-LL
Document Number:	1077121 B
Created:	LUTSNO 2023-01-27
Checked:	LUTFVA 2023-02-01
Released:	LUTLUR 2023-02-02

## Revision History

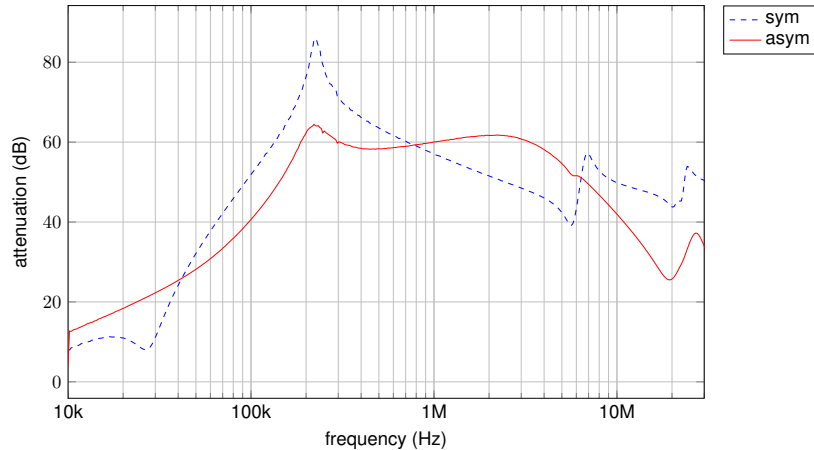
B	2023-02-02	LUTLUR	Label update	(Change Number: 20009375)
A	2023-01-24	LUTLUR	initial version	

## Electrical

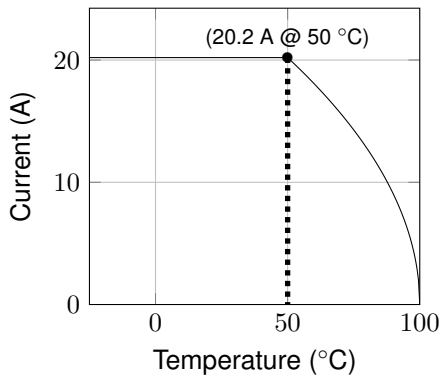
Rated Current ( $I_{th}$ ):	20.2 A	@ 50 °C amb. Temperature
Rated Current ( $I_{th1}$ ):	22.1 A	@ 40 °C amb. Temperature
Nominal Operating Voltage:	230 +/- 10% VAC	
Rated Operating Voltage:	250 VAC	
Max. Operating Frequency:	60 Hz	
Leakage Current (IEC60939-3):	2.59 mA	@ Rated Voltage and 50 Hz
Production Line Test Voltage:	2.25 kVDC*	for 2 s (L to PE)
	1.1 kVDC*	for 2 s (L to N)
(* Repetition with max. 80 % of the specified values)		
Overvoltage Category (IEC60664-1):	III	
Max. DC Resistance @ 25 °C:	15.1 mOhm	L - L'

## Typical Insertion Loss

Per CISPR 17 (50  $\Omega$  / 50  $\Omega$ )



## 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:	-25 °C to 100 °C
Cooling:	AN
Pollution Degree (IEC60664-1):	3
Climatic Class (IEC60068-1):	25/100/21

## Standards, Certifications and Compliances

Design Standard	Certification
UL 60939-3	
IEC 60939-3	
UL 61800-5-1	
IEC 61800-5-1	
CSA C22.2 NO. 274	

### Product Compliances

Low voltage directive 2014/35/EU
The Electrical Equipment (Safety) Regulations S.I. 2016/1101

### Material Compliances

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

---

Line:	see comment		
Load:	(-07) Lace Ferrule	Type:	See Mechanical Drawing
PE:	Thread M5	Torque (Nm):	2.0-2.2
Net Weight:	0.81 kg		
IP Class (IEC60529-1):	20		

---

### Comment to Line Terminal

Type: DG637-6.35-02P-14-00AH  
Torque (Nm): 0.5  
Flex Wire (AWG): 28 - 10  
Flex Wire (mm<sup>2</sup>): 0.2 - 4

## Annexes

### Annex 1

---

Description:	Mechanical Drawing
Document Number:	1035714

---

### Annex 2

---

Description:	Product Label
Document Number:	1079061

---

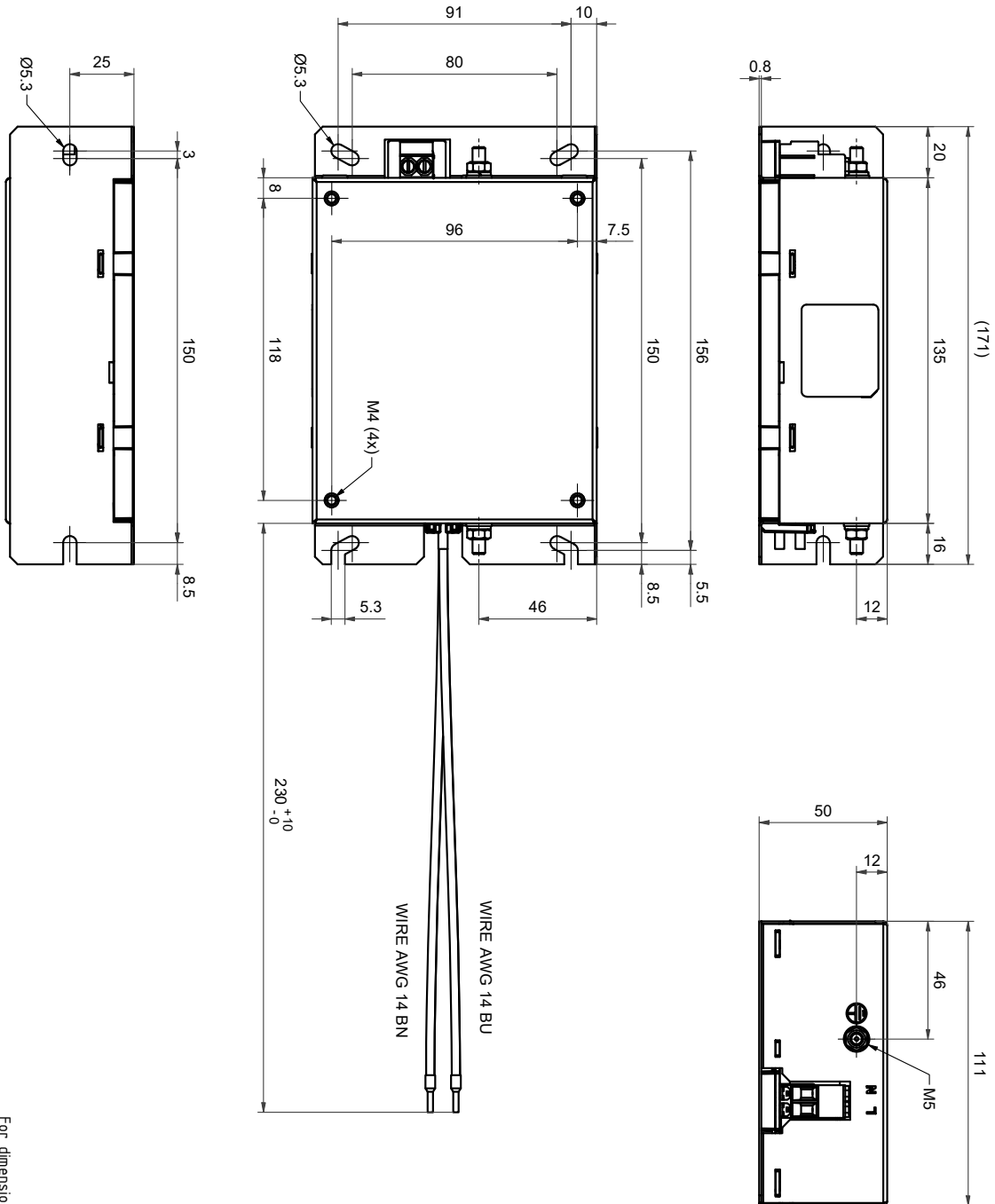
### Annex 3

---

Description:	Packaging Label
Document Number:	1079064

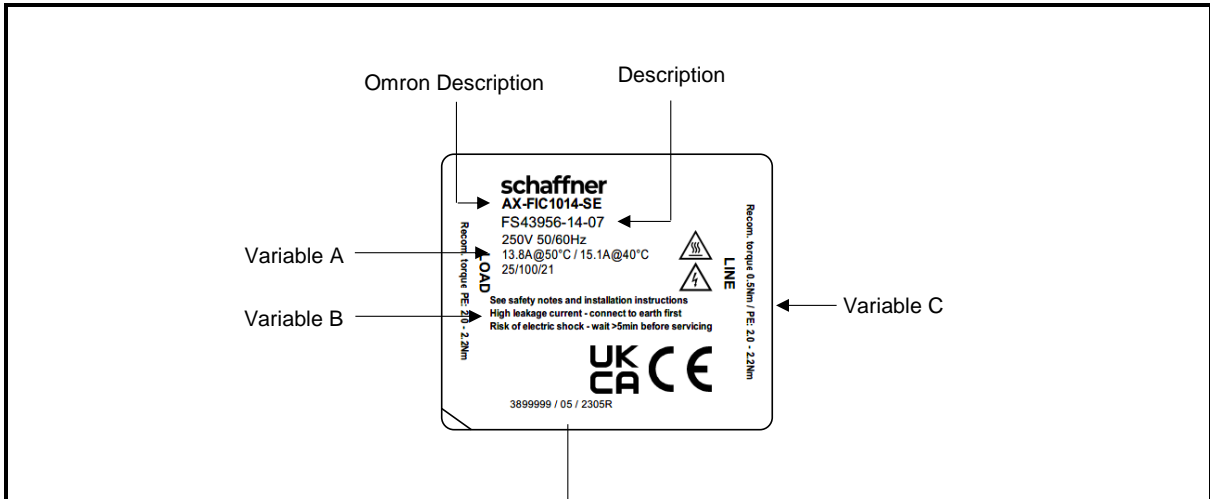
---

**Annex 1 - Mechanical Drawing**



For dimensions [mm] without tolerances:  
ISO2768-m/EN2768-m applies  
1035714 B

**Annex 2 - Product Label**



WORK ORDER / PRODUCTION PLACE / DATA CODE YYWW ROHS

Mat.	Description	Omron Description	Variable A	Variable B	Variable C
823440	FS43956-14-07	AX-FIC1014-SE	13.8A@50°C / 15.1A@40°C	x	0.5Nm / PE: 2.0 - 2.2Nm
823442	FS43956-20-07	AX-FIC1021-SE	20.2A@50°C / 22.1A@40°C	x	0.5Nm / PE: 2.0 - 2.2Nm
823444	FS43956-26-07	AX-FIC1026-SE	26A@50°C / 28.5A@40°C	x	1.2Nm / PE: 2.0 - 2.2Nm
823446	FS43956-45-07	AX-FIC1045-SE	45.4A@50°C / 49.7A@40°C	x	1.5 - 1.8Nm / PE: 2.0 - 2.2Nm
823441	FS43956-14-07-LL	AX-FIC1014-SE-LL	13.8A@50°C / 15.1A@40°C		0.5Nm / PE: 2.0 - 2.2Nm
823443	FS43956-20-07-LL	AX-FIC1021-SE-LL	20.2A@50°C / 22.1A@40°C		0.5Nm / PE: 2.0 - 2.2Nm
823445	FS43956-26-07-LL	AX-FIC1026-SE-LL	26A@50°C / 28.5A@40°C		1.2Nm / PE: 2.0 - 2.2Nm
823447	FS43956-45-07-LL	AX-FIC1045-SE-LL	45.4A@50°C / 49.7A@40°C		1.5 - 1.8Nm / PE: 2.0 - 2.2Nm

**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  
88 for China

LABEL: 202154  
SIZE: 36x30mm  
FILE: L-202154-24

			no scale	A4	created	30.01.2023	LUTMST
B	20009375, Update Test Plan and Label	30.01.2023			checked	30.01.2023	LUTLUR
A	New with CE and UKCA	21.12.2022	scale	format	released	30.01.2023	LUTLUR
A1	New with CE and UKCA	28.11.2022			status	date	user
A0		10.10.2022					
rev.	change no. / change description	date	LABEL				
<b>schaffner</b>			doc. description				
			several	FS43956 / FS43957-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	1079061	B	1 / 2	
Template: 02-31777 A		schaffner.com	doc. type	doc. number	doc. rev.	page	

Omron Description
Description

**schaffner**  
**AX-FIC4004-SE**  
FS43957-5-07

3x520/300V 50/60Hz  
4.4A@50°C / 4.8A@40°C  
25/100/21

Recom. torque PE: 2.0 - 2.2Nm

See safety notes and installation instructions  
Risk of electric shock - wait >5min before servicing

UK  
CA  
CE

3899999 / 05 / 2305R

Recom. torque 0.5Nm / PE: 2.0 - 2.2Nm

LINE

Variable A →

Variable B →

Variable C ←

LABEL: 202154  
SIZE: 36x30mm  
FILE: L-202154-24

WORK ORDER / PRODUCTION PLACE / DATA CODE YYWW ROHS

Material	Description	Omron Description	Variable A	Variable B	Variable C
823448	FS43957-5-07	AX-FIC4004-SE	4.4A@50°C / 4.8A@40°C	PE: 2.0 - 2.2Nm	0.5Nm / PE: 2.0 - 2.2Nm
823450	FS43957-11-07	AX-FIC4011-SE	10.3A@50°C / 11.3A@40°C	PE: 2.0 - 2.2Nm	0.5Nm / PE: 2.0 - 2.2Nm
823452	FS43957-17-07	AX-FIC4017-SE	15.3A@50°C / 16.8A@40°C	PE: 2.0 - 2.2Nm	1.2Nm / PE: 2.0 - 2.2Nm
823454	FS43957-44-07	AX-FIC4044-SE	40A@50°C / 43.8A@40°C	PE: 2.0 - 2.2Nm	1.5 - 1.8Nm / PE: 2.0 - 2.2Nm
823456	FS43957-61-07	AX-FIC4061-SE	55.3A@50°C / 60.6A@40°C		2.0 - 2.3Nm / PE: 3.5 - 4.0Nm
823449	FS43957-5-07-LL	AX-FIC4004-SE-LL	4.4A@50°C / 4.8A@40°C	PE: 2.0 - 2.2Nm	0.5Nm / PE: 2.0 - 2.2Nm
823451	FS43957-11-07-LL	AX-FIC4011-SE-LL	10.3A@50°C / 11.3A@40°C	PE: 2.0 - 2.2Nm	0.5Nm / PE: 2.0 - 2.2Nm
823453	FS43957-17-07-LL	AX-FIC4017-SE-LL	15.3A@50°C / 16.8A@40°C	PE: 2.0 - 2.2Nm	1.2Nm / PE: 2.0 - 2.2Nm
823455	FS43957-44-07-LL	AX-FIC4044-SE-LL	40A@50°C / 43.8A@40°C	PE: 2.0 - 2.2Nm	1.5 - 1.8Nm / PE: 2.0 - 2.2Nm
823457	FS43957-61-07-LL	AX-FIC4061-SE-LL	55.3A@50°C / 60.6A@40°C		2.0 - 2.3Nm / PE: 3.5 - 4.0Nm

Omron Description
Description

**schaffner**  
**AX-FIC4095-SE**  
FS43957-95-07

3x520/300V 50/60Hz  
86A@50°C / 94.3A@40°C  
25/100/21

Recomended torque : 17 - 20Nm / PE: 15 - 17Nm

See safety notes and installation instructions  
High leakage current - connect to earth first  
Risk of electric shock - wait >5min before servicing

UK  
CA  
CE

3899999 / 05 / 2305R

LOAD

LINE

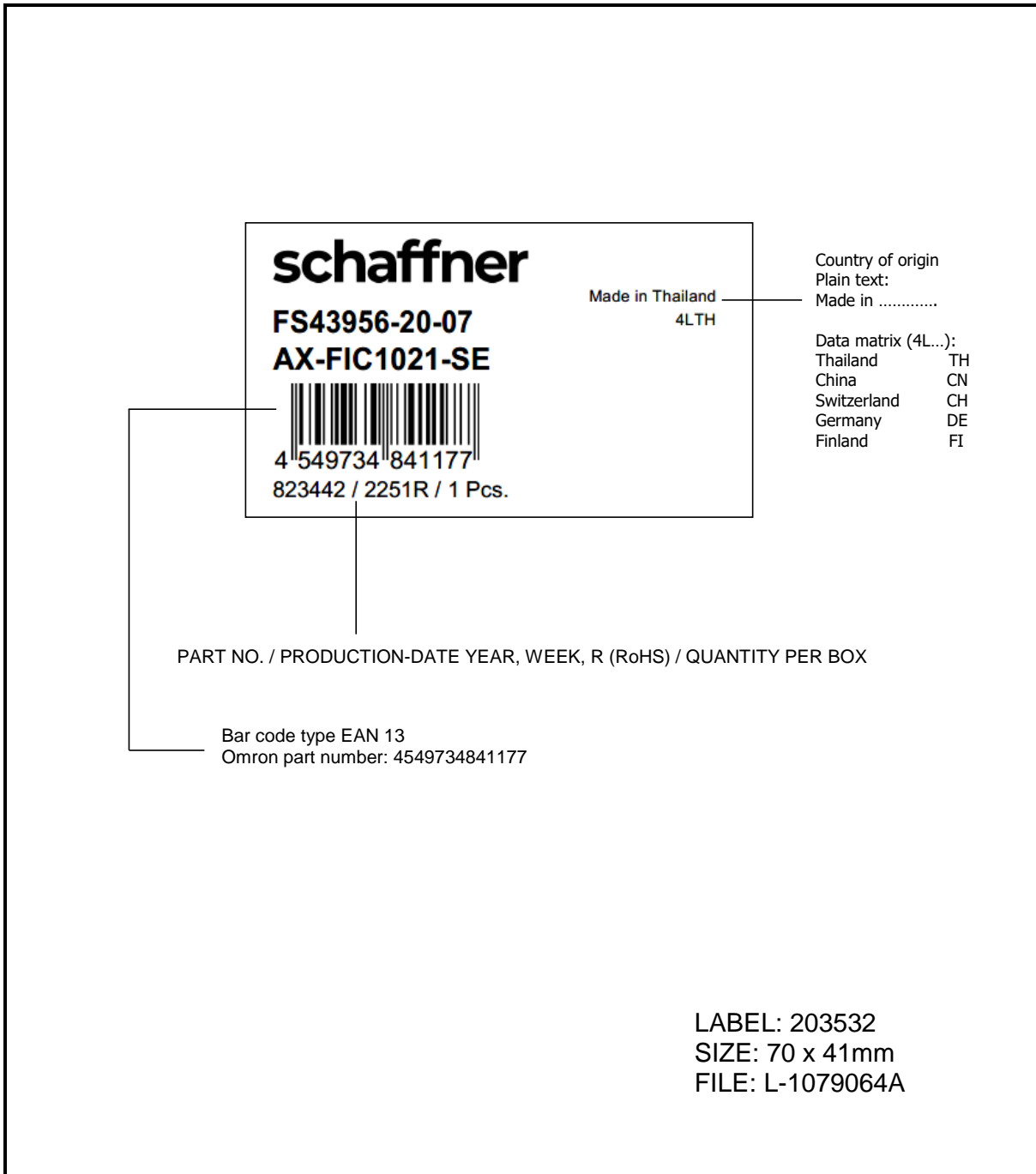
Variable A →

LABEL: 202466  
SIZE: 60x45mm  
FILE: L-202466-39

WORK ORDER / PRODUCTION PLACE / DATA CODE YYWW ROHS

Material	Description	Omron Description	Variable A
823458	FS43957-95-07	AX-FIC4095-SE	X
823459	FS43957-95-07-LL	AX-FIC4095-SE-LL	

**Annex 3 - Packaging Label**



			no scale	A4	created	21.12.2022	LUTMST
A	EAN code 4549734841177	21.12.2022			checked	21.12.2022	LUTLUR
A2	EAN code 4549734841177	21.12.2022	scale	format	released	21.12.2022	LUTLUR
A1	Removed CE and UKCA	12.10.2022			status	date	user
A0		10.10.2022	LABEL (INNER BOX)				
rev.	change no. / change description	date	doc. description				
<b>schaffner</b>			823442	FS43956-20-07			
			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	1079064	A	1 / 1	
Template: 02-31777 A			schaffner.com	doc. type	doc. number	doc. rev.	page



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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.