

CERTIFICATE OF COMPLIANCE

Certificate Number 20161013-E64388
Report Reference E64388-19950202
Issue Date 2016-OCTOBER-13

Issued to: SCHAFFNER EMV AG
TEST CENTER
NORDSTRASSE 11
4542 LUTERBACH SWITZERLAND

**This is to certify that
representative samples of**


COMPONENT - ELECTROMAGNETIC INTERFERENCE
FILTERS
SEE ADDENDUM PAGE

Have been investigated by UL in accordance with the
Standard(s) indicated on this Certificate.

Standard(s) for Safety:
Additional Information:

UL 1283 Standard for Electromagnetic Interference Filters
See the UL Online Certifications Directory at
www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's
Certification and Follow-Up Service.

The UL Recognized Component Mark generally consists of the manufacturer's identification and catalog
number, model number or other product designation as specified under "Marking" for the particular
Recognition as published in the appropriate UL Directory. As a supplementary means of identifying products
that have been produced under UL's Component Recognition Program, UL's Recognized Component Mark:
, may be used in conjunction with the required Recognized Marks. The Recognized Component Mark is
required when specified in the UL Directory preceding the recognitions or under "Markings" for the individual
recognitions.

Recognized components are incomplete in certain constructional features or restricted in performance
capabilities and are intended for use as components of complete equipment submitted for investigation rather
than for direct separate installation in the field. The final acceptance of the component is dependent upon its
installation and use in complete equipment submitted to UL LLC.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

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contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

MODELS

Component - Appliance Filters, Models FS35320-6-06, FS3966-20-06, FS5409-12-06, FS5757 13.5-07, FS5757 16 07, FS7437-30-08-1.

Component - Appliance Filters, Type Series FN20XX, where XX may be 10, 13, 20, 60, 61, 62, 63, 70, 71, 72, 73, 80, 81, 82 or 83. Model numbers may be followed by A, A1, A2, B, C, C1, C2, D, F, G, H, I, K, L, M, N or N2, may be followed by Z, followed by 1, -3, -6, -10, -12, -16, 20, -30, -36 or -60, followed by -01, -03, -05, -06, 07, -08, -10, -17, -24 or -46.



Bruce Mahrenholz, Director North American Certification Program
UL LLC

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DESCRIPTION**PRODUCT COVERED:**

USR, Component - Appliance Filters, Models FS3966-20-06, FS5409-12-06, FS5757-13.5-07, FS5757-16-07, FS7437-30-08-1.

USR, Component - Appliance Filters, Type Series FN20XX, where XX may be 10, 13, 20, 60, 61, 62, 63, 70, 71, 72, 73, 80, 81, 82 or 83. Model numbers may be followed by A, A1, A2, B, C, C1, C2, D, F, G, H, I, K, L, M, N or N2, may be followed by Z, followed by -1, -3, -6, -10, -12, -16, -20, -30, or 60, followed by -01, -03, -05, -06, -07, -08, -10, -17, -24 or -46.

GENERAL:

These devices are Electromagnetic Interference (EMI) Filters intended for incorporation in appliances or similar equipment. They are provided with metal housing and terminals for factory wiring. The current detailed below is the maximum rated at a maximum ambient temperature rating.

ELECTRICAL RATINGS:

Model	Current ratings [A]	Voltage (Vac)	Frequency (Hz)	Voltage (Vdc)	Phase	Maximum Ambient Temperature (°C)
FN201X, FN202X	1, 3, 6, 10, 12, 16, 20, 30, 60	250	50/60	250	1	40
FN206X	1, 3, 6, 10, 12, 16, 20, 30	250	50/60	250	1	40
FN207X	1, 3, 6, 10, 12, 16, 25, 36	250	50/60	250	1	40
FN208X	1, 3, 6, 10, 12, 16	250	50/60	250	1	40
FS3966-20-06	20	250	50/60	250	1	40
FS5409-12-06	12	250	50/60	250	1	40
FS5757-13.5-07	13.5	250	50/60	250	1	80
FS5757-16-07	16	250	50/60	250	1	85
FS7437-30-08-1	30, 22	250	50/60	250	1	40 65

ENGINEERING CONSIDERATIONS:

USR indicates the filters have been evaluated to the Standard for
Electromagnetic Interference Filters, UL 1283, Fifth Edition.

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NOMENCLATURE for Series FN20XX:

P/N	FN20XX	B	Z	-6	-01
No.	1	2	3	4	5

No.	Example	Suffixes and Description																		
1	FN20XX	<p>Model Number Series Designation:</p> <table> <tr> <td>FN2010</td> <td>FN2013</td> <td>FN2020</td> </tr> <tr> <td>FN2060</td> <td>FN2061</td> <td>FN2062</td> <td>FN2063</td> </tr> <tr> <td>FN2070</td> <td>FN2071</td> <td>FN2072</td> <td>FN2073</td> </tr> <tr> <td>FN2080</td> <td>FN2081</td> <td>FN2082</td> <td>FN2083</td> </tr> </table>	FN2010	FN2013	FN2020	FN2060	FN2061	FN2062	FN2063	FN2070	FN2071	FN2072	FN2073	FN2080	FN2081	FN2082	FN2083			
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2	B	<p>Y2-capacitors:</p> <table> <tr> <td>"Blank" = Standard</td> <td>F = 3.3 nF</td> </tr> <tr> <td>A = 0.47 nF</td> <td>G = 4.7 nF</td> </tr> <tr> <td>A1 = 0.22 nF</td> <td>H = 10 nF</td> </tr> <tr> <td>A2 = 0.33 nF</td> <td>I = 6.8 nF</td> </tr> <tr> <td>B = No Y2-capacitors</td> <td>K = 15 nF</td> </tr> <tr> <td>C = 1.5 nF</td> <td>L = 22 nF</td> </tr> <tr> <td>C1 = 1 nF</td> <td>M = 33 nF</td> </tr> <tr> <td>C2 = 0.68 nF</td> <td>N = 47 nF</td> </tr> <tr> <td>D = 2.2 nF</td> <td>N2 = 68 nF</td> </tr> </table>	"Blank" = Standard	F = 3.3 nF	A = 0.47 nF	G = 4.7 nF	A1 = 0.22 nF	H = 10 nF	A2 = 0.33 nF	I = 6.8 nF	B = No Y2-capacitors	K = 15 nF	C = 1.5 nF	L = 22 nF	C1 = 1 nF	M = 33 nF	C2 = 0.68 nF	N = 47 nF	D = 2.2 nF	N2 = 68 nF
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3	Z	Indicates additional Varistor																		
4	6	<p>Current Rating, as applicable:</p> <table> <tr> <td>-1 = 1 A</td> <td>-3 = 3 A</td> <td>-6 = 6 A</td> </tr> <tr> <td>-10 = 10 A</td> <td>-12 = 12 A</td> <td>-16 = 16 A</td> </tr> <tr> <td>-20 = 20 A</td> <td>-30 = 30 A</td> <td>-60 = 60 A</td> </tr> </table>	-1 = 1 A	-3 = 3 A	-6 = 6 A	-10 = 10 A	-12 = 12 A	-16 = 16 A	-20 = 20 A	-30 = 30 A	-60 = 60 A									
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5	01	<p>Terminal Type:</p> <table> <tr> <td>-01 = Soldering lugs</td> <td>-08 = Screw Terminal</td> </tr> <tr> <td>-03 = Clamp Terminal</td> <td>-10 = Screw Terminal</td> </tr> <tr> <td>-05 = Faston 6.3 x 0.8 (spade)</td> <td>-17 = Screw Terminal</td> </tr> <tr> <td>-06 = Faston 6.3 x 0.8 (spade/soldering)</td> <td>-24 = Screw Terminal</td> </tr> <tr> <td>-07 = Wire Lead</td> <td>-46 = Strip terminal</td> </tr> </table>	-01 = Soldering lugs	-08 = Screw Terminal	-03 = Clamp Terminal	-10 = Screw Terminal	-05 = Faston 6.3 x 0.8 (spade)	-17 = Screw Terminal	-06 = Faston 6.3 x 0.8 (spade/soldering)	-24 = Screw Terminal	-07 = Wire Lead	-46 = Strip terminal								
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CONDITIONS OF ACCEPTABILITY:

General - The components covered by this Report are Component Appliance Electromagnetic Interference Filters intended to be used in the end-use product where the acceptability of the combination with the end-use product has been determined by Underwriters Laboratories, Inc.

The following items should be considered in the end use product engineering evaluation.

1. The filter shall be installed within an overall enclosure suitable for the end product application. Mounting means should be considered in the end-use application.
2. The filter shall be installed in compliance with the mounting, terminal, spacing and segregation requirements of the end use application.
3. The terminals have not been evaluated for field wiring.
4. Leakage current measurements have been provided for reference only. Leakage current measurements shall be considered for compliance with the end use application requirements.
5. Capacitor Discharge voltage measurements have been provided for reference only. The need to determine capacitor discharge voltages in the end application shall be considered.
6. The components were submitted and evaluated at a maximum manufacturer's recommended ambient as indicated in the Electrical Ratings Table. The Temperature Tests were conducted in free air. The need for additional testing if these devices are used above this rating shall be considered in the end-use application.
7. The suitability of the grounding means in conjunction with the filter shall be evaluated in the end-use application
8. The Abnormal Operation (Limited Short Circuit) Test (Par. 32, UL 1283) was not conducted. Suitability of this device to comply with this requirement must be considered in the end-use application.
9. These devices may employ varistors that have not been subjected to the Current Testing as required by Section 39 of UL 1449. The suitability of these devices to comply with these tests in the end-use application shall be determined.
10. These devices have not been evaluated for use within equipment where surge protection is desired. The suitability of these devices to comply with these requirements in the end-use application shall be determined.