

DESCRIPTION

PRODUCT COVERED:

* USR, CNR Component - Appliance Filters, Model **Series CE, KFA, FKG, FKH, FKI, KFC, KFB1, KFB2, FKHD, FKID, CG and CD.**

* USR, Component - Appliance Filter, Model **FKAK-0100-0640.**

GENERAL:

These devices are Electromagnetic Interference (EMI) Filters intended to be factory-installed as a component part of end-use appliances or equipment connected to (supplied by) the branch circuits of a building wiring system. 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.

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ELECTRICAL RATINGS:

Models	Voltage Rating (V ac)	Current Rating (A)	Phase	Frequency (Hz)	Cold to Maximum Ambient Temp (°C)
CE, KFA, FKG, FKH, FKI, KFC, KFB1, KFB2, FKHD, FKID, CG and CD Series	125/250	1, 2, 3 , 4, 6 or 10 A (See Nomenclature breakdown and Ills 1-10)	1	50/60	0 to 40
FKAK-0100-0640	125/250	6	1	50/60	40

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE'S USE):

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

CNR indicates investigation to the requirements of the Canadian Standard for Electromagnetic Interference (EMI) Filters, CSA C22.2 No. 8-13, Fifth Edition.

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 UL LLC.

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

1. The filters should be provided with an overall enclosure suitable for the applicable end-product requirements.
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. The acceptability of the grounding terminal should be determined in the end use application.
4. Appliance filters inherently have high leakage currents. Leakage current measurements in the end use application should be considered for compliance with the end use application requirements.
5. The suitability of the grounding means in conjunction with the filter shall be evaluated in the end-use application.
6. The components were submitted and evaluated at a maximum manufacturer's recommended ambient as indicated in the Electrical Ratings Table. The need for additional testing if these devices are used above this rating shall be considered in the end-use application.
7. The Abnormal Operation/Limited Short Circuit Test (UL 1283, Cl. 32; CSA C22.2 No. 8, Cl. 6.14) was performed on the following models using a short circuit current and fuse rating as indicated below.

Model	Represented Models	Test Current, A	Fuse rating, A
*KFA	All FKE Models	2000	15
*FKH	All FKH Models	2000	15
KFB1	All KFB1 Models	2000	15
FKAK-0100-0640	-	1000	15

8. Fuses are not provided with component. The acceptability of the fuse must be determined in the end-product.

CONDITIONS OF ACCEPTABILITY (cont'd):

9. See nomenclature for constructional features such as:
- Switched or un-switched, number of poles switched
 - Fused or un-fused, number of poles fused
 - Voltage selector switch provided
 - X or Y cap provided
10. For all 10 A version models the following conditions should be met.
- a. The marking "Use only with 250 volt fuses" must appear adjacent to the device in the end-use equipment.
 - b. The wiring of the fuseholder shall be such that it is in the ungrounded circuit of the end-use equipment.
 - c. The marking "Disconnect power before replacing fuses" or equivalent wording must be supplied adjacent to the device in the end-use equipment.
 - d. If the end-use application requirements prohibit the use of fuses in both lines leads, only devices incorporating single-pole fuseholders are to be used.

MODEL NOMENCLATURE KFA:

KFA	-	X	X	X	X	X	-	X	X	X	X	X	-	X	XX
I		II	III	IV	V	VI		VII	VIII	IX	X	XI		XII	XIII

I - Model Designation
KFA

II - Fuse drawer types
 1 = 1-pole without Voltage Selector (former FKE)
 2 = 2-pole without Voltage Selector (former FKF)
 3 = 1-pole with Voltage Selector (former FKV)
 4 = 2-pole with Voltage Selector (former FKW)

III - Rated Current
 1 = 1 A
 2 = 2 A
 3 = 3 A
 4 = 4 A
 5 = 6 A
 7 = 10 A

IV - Terminal L/N
 1 = Quick Connect 6.3 x 0.8
 2 = Flexible wire

V - Terminal PE
 0 = Without PE terminal
 1 = Quick Connect 6.3 x 0.8
 2 = Flexible wire with additional Quick Connect 6.3 x 0.8
 3 = Flexible wire without additional PE terminal

VI - Terminal SiHa and VS (without A and B)
 0 = Without Terminal SiHa and VS
 1 = Quick Connect 4.8 x 0.8

VII - Terminal SiHa A and B
 0 = Without Terminal SiHa A and B
 3 = A: Solder - B: Solder
 4 = A: Solder - B: without

VIII - X-Capacitor
 1 = X2, 68 nF
 2 = X2, 100 nF
3 = X2, 330 nF

IX - Y-Capacitor
 0 = Without Y-Capacitor
 1 = Y2, 2.2 nF
 2 = Y1, 0.47 nF
3 = Y1, 3.3 nF
4 = Y2, 1.0 nF

MODEL NOMENCLATURE KFA (CONT'D):**X - Resistor**

0 = Without resistor
1 = 1 MOhm

XI - PE-Choke

0 = Without PE-Choke
1 = 0.15 mH (10 A)
2 = 0.6 mH (1 A - 6 A)
3 = 0.15 mH, short housing
4 = 0.6 mH (1 A - 6 A), short housing

XII - Mounting

1 = Screw front
2 = Screw rear
3 = Snap-in front

XIII - Customer specific type

00 = Standard
01...ZZ = Customer specific (e.g. packaging, wire length, etc.)

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MODEL NOMENCLATURE CE:

CE	-	X	X	X	X	X	-	X	X	X	X	-	X	X	X	-	XX
I		II	III	IV	V	VI		VII	VIII	IX	X		XI	XII	XIII		XIV

- I - Model Designation
CE
- II - Fuse drawer types
1 = 1-pole (former FKA)
2 = 2-pole (former FKB)
- III - Rated current
1 = 1 A
2 = 2 A
4 = 4 A
5 = 6 A
7 = 10 A
- IV - Terminal L
1 = Quick Connect 4.8 x 0.8
2 = Connection
- V - Terminal N
1 = Quick Connect 4.8 x 0.8
2 = Connection
- VI - IV - Terminal PE
1 = Quick Connect 4.8 x 0.8
- VII - Terminal SiHa and VS
1 = Quick Connect 4.8 x 0.8
- VIII - X-Capacitor
1 = X2, 68 nF
- IX - Y-Capacitor
0 = Without Y-Capacitor
1 = Y2, 2.2 nF
2 = Y1, 0.47 nF
- X - Resistor
0 = Without Resistor
1 = 1 MOhm
- XI - PE-Choke
0 = without PE-Choke
- XII - Mounting
1 = Screw front

*

MODEL NOMENCLATURE CE (CONT'D):

XIII - Locking System

0 = Without Locking System

1 = V-Lock

XIV - Customer specific type

00 = Standard

01...ZZ = Customer specific (e.g. packaging, etc.)

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MODEL NOMENCLATURE KFB1:

KFB1	-	X	X	X	X	-	X	X	X	X	-	X	XX
I		II	III	IV	V		VI	VII	VIII	IX		X	XI

I - Model Designation
KFB1

II - Rated current
1 = 1 A
2 = 2 A
4 = 4 A
5 = 6 A
7 = 10 A

III - X-Capacitor
1 = X2, 68 nF

IV - Y-Capacitor
0 = Without Y-Capacitor
1 = Y2, 2.2 nF

V - Resistor
0 = Without Resistor

VI - Rocker-switch
1 = 1 pole non-illuminated O I

VII - Terminal L/N
1 = Quick Connect 6.3 x 0.8

VIII - Terminal PE
0 = Without Terminal PE
1 = Quick Connect 6.3 x 0.8

IX - Mounting
0 = Screw

X - Color
0 = Black

XI - Customer specific type
00 = Standard
01...ZZ = Customer specific (e.g. packaging, etc.)

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MODEL NOMENCLATURE FKG:

FKG	-	X	X	X	-	X	X	X	X	-	XX
I		II	III	IV		V	VI	VII	VIII		IX

I - Model Designation
FKG

II - Rated Current

1 = 1 A

2 = 2 A

4 = 4 A

5 = 6 A

7 = 10 A

III - Switch

0 = Without Switch

1 = Non-illuminated O I

IV - Fusedrawer marking

3 = Blind cover without marking

V - X-Capacitor

1 = X2, 68 nF

VI - Y-Capacitor

0 = Without Y-Capacitor

1 = Y2, 2.2 nF

VII - Resistor

0 = Without Resistor

1 = 1 MOhm

VIII - Filter case material

1 = Steel

2 = Aluminum

IX - Customer specific type

00 = Standard

01...ZZ = Customer specific (e.g. packaging, etc.)

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MODEL NOMENCLATURE FKH:

FKH	-	X	X	X	-	X	X	X	X	-	XX
I		II	III	IV		V	VI	VII	VIII		IX

I - Model Designation
FKH

II - Rated Current
1 = 1 A
2 = 2 A
4 = 4 A
5 = 6 A
7 = 10 A

III - Switch
0 = Without Switch
1 = Non-illuminated O I

IV - Fusedrawer marking
1 = Text legible, when inlet on bottom
2 = Text legible, when inlet on top

V - X-Capacitor
1 = X2, 68 nF

VI - Y-Capacitor
0 = Without Y-Capacitor
1 = Y2, 2.2 nF
2 = Y1, 0.47 nF

VII - Resistor
0 = Without Resistor
1 = 1 MOhm

VIII - Filter case material
1 = Steel
2 = Aluminum

IX - Customer specific type
00 = Standard
01..ZZ = Customer specific (e.g. packaging, etc.)

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MODEL NOMENCLATURE FKI:

FKI	-	X	X	X	-	X	X	X	X	-	XX
I		II	III	IV		V	VI	VII	VIII		IX

I - Model Designation
FKI

II - Rated Current
1 = 1 A
2 = 2 A
4 = 4 A
5 = 6 A
7 = 10 A

III - Switch
0 = Without Switch
1 = Non-illuminated O I
2 = Non-illuminated O -

IV - Fusedrawer marking
1 = Text legible, when inlet on bottom
2 = Text legible, when inlet on top

V - X-Capacitor
1 = X2, 68 nF

VI - Y-Capacitor
0 = Without Y-Capacitor
1 = Y2, 2.2 nF
2 = Y1, 0.47 nF

VII - Resistor
0 = Without Resistor
1 = 1 MOhm

VIII - Filter case material
1 = Steel
2 = Aluminum

IX - Customer specific type
00 = Standard
01...ZZ = Customer specific (e.g. packaging, etc.)

MODEL NOMENCLATURE FKHD:

FKHD	-	X	X	X	-	X	X	X	X	-	X	X	XX
I		II	III	IV		V	VI	VII	VIII		IX	X	XI

I - Model Designation
FKHD

II - Rated current

- 1 = 1 A
- 2 = 2 A
- 4 = 4 A
- 5 = 6 A
- 7 = 10 A

III - Switch

- 0 = Without Switch
- 1 = Non-illuminated O I

IV - Fusedrawer marking

- 1 = Text legible, when inlet on top
- 2 = Text legible, when inlet on bottom

V - X-Capacitor 1-stage

- 1 = X2, 68 nF

VI - Y-Capacitor 1-stage

- 0 = Without Y-Capacitor
- 1 = Y2, 1.5 nF
- 2 = Y1, 0.47 nF

VII - X-Capacitor 2-stage

- 1 = X2, 68 nF

VIII - Y-Capacitor 2-stage

- 0 = Without Y-Capacitor
- 1 = Y2, 1.0 nF
- 2 = Y1, 0.47 nF

IX - Resistor

- 0 = Without Resistor
- 1 = 1 MOhm

X - Filter case material

- 1 = Steel
- 2 = Aluminum

XI - Customer specific type

- 00 = Standard
- 01...ZZ = Customer specific (e.g. packaging, etc.)

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MODEL NOMENCLATURE FKID:

FKID	-	X	X	X	-	X	X	X	X	-	X	X	X	X
I		II	III	IV		V	VI	VII	VIII		IX	X	XI	XII

I - Model Designation
FKID

II - Rated current
1 = 1 A
2 = 2 A
4 = 4 A
5 = 6 A
7 = 10 A

III - Switch
0 = Without Switch
1 = Non-illuminated O I

IV - Fusedrawer marking
1 = Text legible, when inlet on top
2 = Text legible, when inlet on bottom

V - X-Capacitor 1-stage
1 = X2, 68 nF

VI - Y-Capacitor 1-stage
0 = without
1 = Y2, 1.5 nF
2 = Y1, 0.47 nF

VII - X-Capacitor 2-stage
1 = X2, 68 nF

VIII - Y-Capacitor 2-stage
0 = Without Y-Capacitor
1 = Y2, 1.0 nF
2 = Y1, 0.47 nF

IX - Resistor
0 = Without Resistor
1 = 1 MOhm

X - Filter case material
1 = Steel
2 = Aluminum

XI - Mounting Accessories
0 = Without Mounting Accessories
1 = With Mounting Accessories

*

MODEL NOMENCLATURE FKID (CONT'D):

XII - Customer specific type

0 = Standard

1...Z = Customer specific (e.g. packaging, etc.)

MODEL NOMENCLATURE CD:

CD	-	X	X	X	X	X	-	X	X	X	X	X	-	X	X	X	-	X	XX
I		II	III	IV	V	VI		VII	VIII	IX	X	XI		XII	XIII	XIV		XV	XVI

I - Model Designation
CD

II - Fuse drawer types
 1 = 1-pole without voltage selector (former FKSO)
 2 = 2-pole without voltage selector (former FKSP)
 3 = 1-pole with voltage selector (former FKSU)
 4 = 2-pole with voltage selector (former FKSV)

III - Rated Current
 1 = 1 A
 2 = 2 A
 4 = 4 A
 5 = 6 A
 7 = 10 A

IV - Terminal L
 1 = Quick Connect 4.8 x 0.8
 2 = Connection

V - Terminal N
 1 = Quick Connect 4.8 x 0.8
 2 = Connection

VI - IV - Terminal PE
 1 = Quick Connect 4.8 x 0.8

VII - Terminal Switch
 1 = L: Connection - N: Quick Connect 4.8 x 0.8
 2 = L: Connection - N: Connection

VIII - Terminal SiHa and VS
 1 = Quick Connect 4.8 x 0.8 - A Connection
 2 = Quick Connect 4.8 x 0.8 - A & B Connection

IX - X-Capacitor
 1 = X2, 68 nF

X - Y-Capacitor
 0 = Without Y-Capacitor
 1 = Y2, 2.2 nF
 2 = Y1, 0.47 nF
4 = Y2, 1.0 nF

XI - Resistor
 0 = Without Resistor
 1 = 1 MOhm

MODEL NOMENCLATURE CD:

XIII - PE-Choke

0 = Without PE-Choke

XIII - Mounting

1 = Screw front

XIV - Voltage selector

* 0 = Without **Voltage Selector*** 3 = **VS 3-position*** 4 = **VS 4-position**

*

XV - Switch

0 = Without Switch

1 = non-illuminated O I

2 = illuminated red

3 = illuminated green

4 = for remote control (Bowden)**5 = for remote control**

XVI - Customer specific type

00 = Standard

01...ZZ = Customer specific (e.g. packaging, etc.)

MODEL NOMENCLATURE CG:

CG	-	X	X	X	X	X	-	X	X	X	X	-	X	X	X	X	-	X	XX
I		II	III	IV	V	VI		VII	VIII	IX	X		XI	XII	XIII	XIV		XV	XVI

I - Model Designation
CG

II - Fuse drawer types
1 = 1-pole (former FKSA)
2 = 2-pole (former FKSB)

III - Rated Current
1 = 1 A
2 = 2 A
4 = 4 A
5 = 6 A
7 = 10 A

IV - Terminal L
1 = Quick Connect 4.8 x 0.8
2 = Connection

V - Terminal N
1 = Quick Connect 4.8 x 0.8
2 = Connection

VI - IV - Terminal PE
1 = Quick Connect 4.8 x 0.8

VII - Terminal Switch
1 = L: Connection - N: Quick Connect 4.8 x 0.8
2 = L: Connection - N: Connection

VIII - Terminal SiHa and VS
1 = Quick Connect 4.8 x 0.8 - A & B Connection

IX - X-Capacitor
1 = X2, 68 nF

X - Y-Capacitor
0 = Without
1 = Y2, 2.2 nF
2 = Y1, 0.47 nF

XI - Resistor
0 = Without Resistor
1 = 1 MOhm

XII - PE-Choke
0 = Without PE-Choke

MODEL NOMENCLATURE CG (CONT'D):

XIII - Mounting

1 = Screw front

XIV - Locking System

0 = Without Locking System

1 = V-Lock

XV - Switch

0 = Without Switch

1 = Non-illuminated O I

2 = Illuminated red

3 = Illuminated green

4 = for remote control (Bowden)**5 = for remote control**

XVI - Customer specific type

00 = Standard

01...ZZ = Customer specific (e.g. packaging, etc.)

MODEL NOMENCLATURE KFB2:

KFB2	-	X	X	X	X	-	X	X	X	X	-	X	XX
I		II	III	IV	V		VI	VII	VIII	IX		X	XI

I - Model Designation
KFB2

II - Rated Current

1 = 1 A
2 = 2 A
4 = 4 A
5 = 6 A
7 = 10 A

III - X-Capacitor

1 = X2, 68 nF

IV - Y-Capacitor

0 = Without Y-Capacitor
1 = Y2, 2.2 nF
2 = Y1, 0.47 nF

V - Resistor

0 = Without Resistor
1 = 1 MOhm

VI - Rocker-switch

1 = 2 pole non-illuminated O I
2 = 2 pole illuminated green O I

VII - Terminal L/N

1 = Quick Connect 6.3 x 0.8

VIII - Terminal PE

0 = Without Terminal PE
1 = Quick Connect 6.3 x 0.8

IX - Mounting

0 = Screw

X - Color

0 = Black

XI - Customer specific type

00 = Standard
01..ZZ = Customer specific (e.g. packaging, etc.)

MODEL NOMENCLATURE KFC:

KFC	-	X	X	X	X	-	X	X	X	X	-	X	X	X	X	-	XX
I		II	III	IV	V		VI	VII	VIII	IX		X	XI	XII	XIII		XIV

I - Model Designation
KFC

II - Fuse drawer types
 1 = 1-pole without Voltage Selector (former FKO)
 2 = 2-pole without Voltage Selector (former FKP)
 3 = 1-pole with Voltage Selector (former FKQ)
 4 = 2-pole with Voltage Selector (former FKR)

III - Rated current
 1 = 1 A
 2 = 2 A
 4 = 4 A
 5 = 6 A
 7 = 10 A

IV - Terminal L/N
 1 = Quick Connect 4.8 x 0.8

V - Terminal PE
 1 = Quick Connect 4.8 x 0.8

VI - Terminal SiHa and VS (without A and B)
 1 = Quick Connect 4.8 x 0.8

VII - X-Capacitor
 1 = X2, 68 nF

VIII - Y-Capacitor
 0 = Without
 1 = Y2, 2.2 nF
 2 = Y1, 0.47 nF

IX - Resistor
 0 = Without Resistor
 1 = 1 MOhm

X - PE-Choke
 0 = Without PE-Choke

XI - Mounting
 1 = Screw front

XII - Locking System
 0 = Without Locking System
 1 = V-Lock

MODEL NOMENCLATURE KFC (CONT'D):

XIII - Voltage Selector

- 0 = Without Voltage Selector
- 3 = VS 3-position
- 4 = VS 4-position

XIV - Customer specific type

- 00 = Standard
- 01...ZZ = Customer specific (e.g. packaging, etc.)