

DESCRIPTION

PRODUCT COVERED:

USR, CNR - Component - Appliance Filters, Series C20F. See Nomenclature Breakdown for type **designations**.

USR, CNR - Component - Appliance Filters, Series C22F. See Nomenclature Breakdown for type **designations**.

GENERAL:

These devices are 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 housed in a metal housing and incorporate with terminals for factory Wiring.

ELECTRICAL RATINGS:

Model No.	Voltage (V ac)	Current (A)	Number of Phases	Frequency (Hz)	Maximum Ambient Temperature (°C)
C20F-XXXX- XX0X-XXXX	125/250	20	1	50/60	40
C20F-XXXX- XX1X-XXXX	125/250	16	1	50/60	40
C22F-XXXX-XX1- XX	125/250	20	1	50/60	65
C22F-XXXX-XX2- XX	125/250	16	1	50/60	75

NOMENCLATURE BREAKDOWN:

Type Code and Description for C20F Filter Series:

Example:

P/N	C20F	-	X	X	X	X	-	X	X	X	X	-	X	000
No.	I		II	III	IV	V		VI	VII	VIII	IX		X	XI

No.	P/N Description
I	Type Designation C20F
II	Mounting 0 = Screw, front side 1 = Screw, rear side 2 = Snap-in 1 - 3 mm
III	X-Capacitor 1 = X1, 100 nF 2 = X2, 100 nF 3 = X2, 330 nF
IV	Y-Capacitor 0 = without Y-Capacitor 1 = Y1, 2.2 nF 2 = Y2, 2.2 nF 3 = Y1, 0.47 nF 4 = Y2, 0.47 nF 5 = Y2, 2.2 nF (min. 300 Vac)
V	Bleeder Resistor 1 = 1 MOhm
VI	Terminal L & N 1 = Quick Connect 6.3 x 0.8 mm 2 = Solder 3 = Wire AWG14
VII	Terminal PE 1 = Quick Connect 6.3 x 0.8 mm 2 = Solder 3 = Wire AWG14
VIII	Rated Current 0 = 20 A, 1 = 16 A
IX	Label 0 = Standard, 1 = On other side
X	PE-Choke 0 = without PE-Choke 1 = 0.15 mH (20A only) 2 = 0.4 mH (16A only)
XI	Customer Specific Types 000 = Standard 001 = Customer Specific Wire Length, max. 1000 mm 002 = Customer Specific Flange and Ground Terminal

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NOMENCLATURE BREAKDOWN**Type Code and Description for C22F Filter Series:****Example:**

P/N	C22F	-	X	X	X	X	-	X	X	X	-	00
No.	I		II	III	IV	V		VI	VII	VIII		

No.	P/N Description
I	Type Designation C22F
II	Mounting 1 = Screw, front side
III	X-Capacitor 1 = X1, 100 nF 2 = X2, 100 nF 3 = X2, 330 nF
IV	Y-Capacitor 0 = without Y-Capacitor 1 = Y1, 2.2 nF 2 = Y2, 2.2 nF 3 = Y1, 0.47 nF 4 = Y2, 0.47 nF
V	Bleeder Resistor 1 = 1 MOhm
VI	Terminal L & N 1 = Quick Connect 6.3 x 0.8 mm 2 = Solder
VII	Terminal PE 1 = Quick Connect 6.3 x 0.8 mm 2 = Solder
VIII	Rated Current 1 = 20 A, 2 = 16 A

ENGINEERING CONSIDERATIONS:

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 - For use in complete equipment where the acceptability of the combination has been determined by UL LLC. The following items should be evaluated to determine the acceptability in the end-product.

1. **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.**
2. **The filter shall be installed in compliance with the terminal spacing and segregation requirements of the end use application.**
3. The filter should be provided with an overall enclosure suitable for the applicable end-product requirements. **Mounting means should be considered in the end-use application.**
4. **Suitability of the Capacitor Discharge voltage values and the need for additional discharge means should be determined with the filter installed in the end-use application.**
5. Terminals have not been evaluated as field wiring terminals. The acceptability of the grounding terminals should be determined in the end-product.
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. The case temperature should be measured and the suitability determined 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
C20F-0221-2200-0000 C22F-1221-221-00	Series C20F Series C22F	3500	15