File E234324

Project 03CA37545

2004-04-26

REPORT

on

COMPONENT - Industrial Control Panel Enclosures
Components - Filter Fan and Filter Kits

STEGO ELEKTROTECHNIK GMBH
KOLPINGSTRASSE 21

74523 SCHWAEBISCH HALL
GERMANY

DESCRIPTION

PRODUCT COVERED:

USR, CNR Component - Filter fan kits, FF 018/EF 118, followed by 00, 01, 02, 03, 04, 05, 21, 50 or 51; followed by 0 or 1; followed by 00, 01, 02, 03.

GENERAL:

The products are filter fan kits or filter kits (exhaust filters) for the use in Industrial Control Panel Enclosures. The Model FF 018 is the Filter Fan, the Model EF 118 is the Exit Filter.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

*CNR - Indicates investigation to Canadian National Standard C22.2 No. 14-**10.**

USR - Indicates investigation to United States Standard UL 508 17th Edition (Industrial Control Equipment).

Note: CNR = Canadian National Standards - Recognized component
USR = United States Standards - Recognized component

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bRATINGS - ELECTRICAL / TEMPERATURE:

*__Series__ FF 018 and EF 118 are filter kits. **Series EF 118 does** not including any electrical device. **Series FF 018 is used with a fan motor.**

Max. ambient temperature without motor 70°C with motor see table below.

Model FF , EF	Voltage in V	Current in A	Power in W	Frequency in Hz	Capacitor in uF/450V	Max.ambient temp. °C	Designation Fan
01800.0-00	230 Vac	0.08	13	50/60	none	70	3610PS-23W-B30-A00
01800.0-01	120 Vac	0.16	9	50/60	none	70	3610PS-12W-B30-A00
01800.0-03	230 Vac	0.08	13	50/60	none	70	3610PS-23W-B30-A00
01800.1-00	230 Vac	0.08	13	50/60	none	70	3610PS-23W-B30-A00
01800.1-01	120 Vac	0.16	9	50/60	none	70	3610PS-12W-B30-A00
01801.0-00	230 Vac	0.10	15	50/60	none	60	4715MS-23W-B5A-D00
01801.0-01	120 Vac	0.18	14.5	50/60	none	60	4715MS-12W-B5A-D00
01801.0-02	24 Vdc	0.21	5	50/60	none	70	4715KL-05W-B20-P00
01801.1-00	230 Vac	0.10	15	50/60	none	60	4715MS-23W-B5A-D00
01801.1-01	120 Vac	0.18	14.5	50/60	none	60	4715MS-12W-B5A-D00
01802.0-00	230 Vac	0.10	15	50/60	none	60	4715MS-23W-B5A-D00
01802.0-01	120 Vac	0.18	14.5	50/60	none	60	4715MS-12W-B5A-D00
01802.0-02	24 Vdc	0.21	5	50/60	none	70	4715KL-05W-B20-P00
01802.0-03	48 Vdc	0.16	8	50/60	none	70	4715KL-07W-B30-P00
01802.1-00	230 Vac	0.10	15	50/60	none	60	4715MS-23W-B5A-D00
01802.1-01	120 Vac	0.18	14.5	50/60	none	60	4715MS-12W-B5A-D00
01802.1-02	230 Vac	0.10	15	50/60	none	60	4715MS-23W-B5A-D00
01803.0-00	230 Vac	0.10	15	50/60	none	60	4715MS-23T-B5A-A00
01803.0-01	120 Vac	0.18	14.5	50/60	none	60	4715MS-12T-B5A-A00
01803.0-02	120 Vac	0.18	14.5	50/60	none	60	4715MS-12T-B5A-A00
01803.0-03	24 Vdc	0.21	5	50/60	none	70	4715KL-05T-B20-P00
01803.1-00	230 Vac	0.10	15	50/60	none	60	4715MS-23T-B5A-A00
01803.1-01	120 Vac	0.18	14.5	50/60	none	60	4715MS-12T-B5A-A00
01804.0-00	230 Vac	0.32	45	50/60	none	50	A2S130-AA03-38
01804.0-01	120 Vac	0.47	38	50/60	none	70	A2S130-AA25-38
01804.0-02	**230Vac**	**0.32**	**45**	**50/60**	**none**	**50**	**A2S130-AA03-38**
01805.0-00	230 Vac	0.30	64	50/60	1.5	70	A2E200-AH38-12
01805.0-01	120 Vac	0.78	85	50/60	3	70	A2E200-AH86-76
01821.0-00	230 Vac	0.10	15	50/60	none	60	4715MS-23W-B5A-D00
01821.0-01	48 Vdc	0.16	8	50/60	none	70	4715KL-07W-B30-P00
01821.0-02	120 Vac	0.18	14.5	50/60	none	60	4715MS-12W-B5A-D00
01821.1-00	230 Vac	0.10	15	50/60	none	60	4715MS-23W-B5A-D00
01821.1-01	48 Vdc	0.16	8	50/60	none	70	4715KL-07W-B30-P00
01821.1-02	120 Vac	0.18	14.5	50/60	none	60	4715MS-12W-B5A-D00
01850.0-00	230 Vac	0.10	15	50/60	none	60	4715MS-23T-B5A-A00
01851.0-00	120 Vac	0.18	14.5	50/60	none	60	4715MS-12T-B5A-A00

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NOMENCLATURE AND MECHANICAL DIMENSION:

FF018 or EF118	YY	.	Z	–	XX
I	II		III		IV

I – FF 018 **=** filter fan **kit (inlet)**
EF 118 **=** exit filter **kit (outlet)**

II – technical variation

Original Model Designation FF 018 **or** EF 118 YY	Outer Dimensions in mm x mm
00	92 x 92
01	120 x 120
02	120 x 120
03	120 x 120 4 Exemplar
04	Ø 136 x 58
05	Ø 197 x 62
21	120 x 120
50	120 x 120 4 Exemplar
51	120 x 120 4 Exemplar

*III – 0 = standard **version**
1 = EMV **version**

*IV – 00…**03** = **See Table on Page 2 for more details.**

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Ill.3 to Ill.6 - Show instructions for mounting of different models.

CONDITIONS OF ACCEPTABILITY:

1. The suitability of the fan motors for use when exposed to water, oil, Freon, chemical, X-rays, ultraviolet rays, and the like, have not been determined by this investigation.

2. The suitability of these fans for use in combination with any solid-state control has not been evaluated.

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4. If other motors as described will be used the fan motor shall be equipped with one of the following forms of locked rotor protection:
   a) Thermal protection complying with UL 2111, Standard for Overheating Protection for Motors, where the motor is marked "thermally protected" or "T.P."; or
   b) Impedance protection complying with UL 2111, Standard for Overheating Protection for Motors, where the motor is marked "Impedance Protected" or "Z.P.".

*5. These devices are rated for an environmental Type Rating 12 when used with the manufacturers additional filters P15/350S **(G3),** P15/500S **(G4)** or P15/150S **(G2)** or **fine filter** A3/300S **(F5).**

6. These devices have been investigated to use only together with filter mesh as noted in construction details.

7. These devices have been evaluated to meet Type Rating 1, if mounted according to manufacturers instructions as shown in illustration 3 to 6.

8. These devices have been evaluated for environmental Type Rating 12, when used with the manufacturers additional filters P15/150S (G2), P15/350S (G3), P15/500S (G4), or fine filter A3/300S (F5), manufactured by Freudenberg Filtration Technologies KG and if mounted according to manufacturers instructions as shown in illustration 3 to 6. For Models FF 01821 / EF 11821, the tightening torque of screws for cover hood is 1.0 to 1.2 Nm.

MARKINGS:

*Recognized Company **name,** trademark **or File No**. and Model No..

Installation instructions shall be included in the package, reporting dimensions of the required hole in the enclosure.

Any marking that is required to be permanent shall be molded, die-stamped, stencil-printed, laser-etch printed, stamped or etched metal that is permanently secured, or indelibly stamped lettering on a pressure-sensitive label secured by adhesive.
If directly printed by the manufacturer, the Marking and Labeling shall be R/C Printing Materials (PGJI2).
If the complete labels are externally provided, the external supplier shall use R/C Marking and Labeling Systems (PGDQ2).

All provided markings shall be located so as to be visible after installation.

Additional the dives may be marked as follows:

"Type Rating 1, if mounted according to manufacturers instructions" or equivalent.

"Type Rating 12, when used with the manufacturers additional filters P15/150S (G2), P15/350S (G3), P15/500S (G4), or fine filter A3/300S (F5) and if mounted according to manufacturers instructions" or equivalent.