1- stage filter for 3-phase systems

Description

- 3 phase line filter with standard attenuation
- Available as high voltage filter (up to 520 VAC)
- High symmetrical and asymmetrical attenuation
- In the frequency range from 10kHz up to 300MHz

Standards

- IEC 60939
- UL 1283, edition 5 and CSA 22.2 No. 8-M1986 @ Ta 75°C for filter types with excellent attenuation up to 110A and high attenuation filter (L-) types. UL PENDING for filter types with excellent attenuation with rated current >110A and high voltage filter (-I) types.

Approvals

- VDE Certificate Number: 40004666 + 40004673
- UL File Number: E72928

Applications

- Voltage rating 480 - 520 VAC for world wide acceptance
- Protection against interference voltage from the mains
- For photovoltaic systems and industrial applications
- Qualified for use in equipment according IEC/EN 60950

Weblinks

pdf-datasheet, html-datasheet, General Product Information, Approvals, RoHS, CHINA-RoHS, e-Shop, SCHURTER-Stock-Check, Distributor-Stock-Check, Detailed request for product

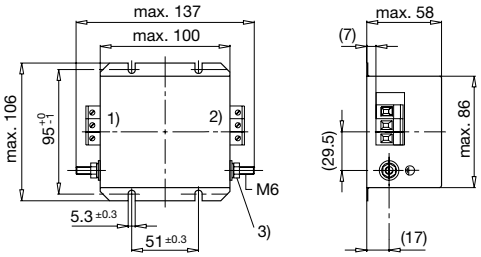
Technical Data

Rated Current	6 - 1100 A
Rated voltage	480 - 520 VAC, 50/60 Hz
Approval for	6 - 1100 A @ Ta 40 (75) °C / 520 VAC; 50 Hz
Overload Current	1.5 x Ir
Leakage Current	industrial < 5 mA (440 V / 50 Hz)
Dielectric Strength	2.25 kVDC between L-L 3 kVDC between L-PE
Number of Filter Stages	1-stage
Weight	0.9 - 47 kg
Material: Housing	Metal
Sealing Compound	UL 94V-0

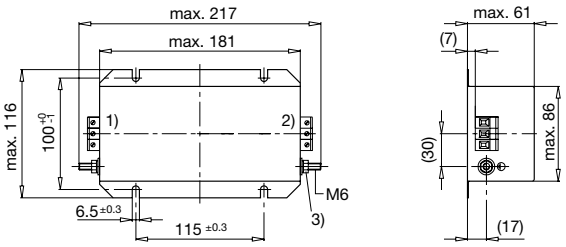
Mounting	Screw-on mounting on chassis from top
Terminal	Screw clamps
Operating Temperature [°C]	-25 °C to 100 °C
Climatic Category	25/100/21 acc. to IEC 60068-1
Degree of Protection	IP 20 acc. to IEC 60529
Protection Class	Suitable for appliances with protection class I acc. to IEC 61140
MTBF	> 200'000 h acc. to MIL-HB-217 F

Dimensions

Case 24-3

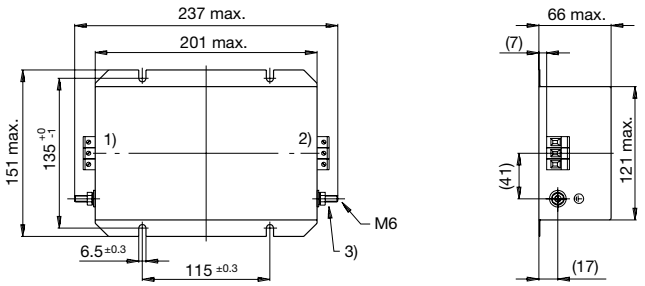


Case 31-3

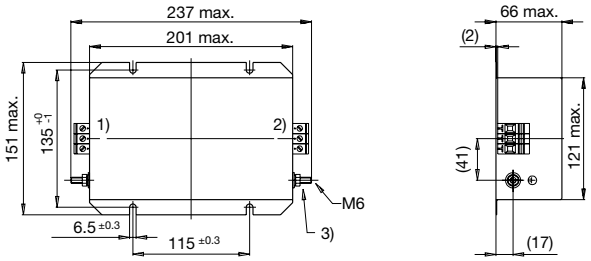


1) Line
2) Load
3) Nut torque 3...4 Nm

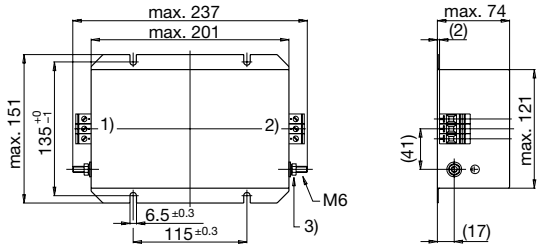
Case 32-3



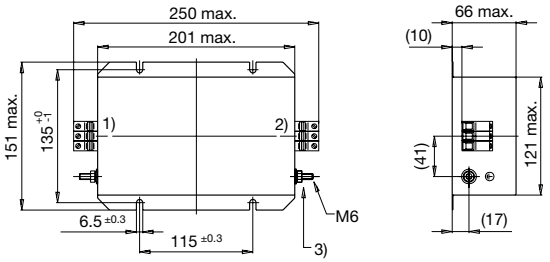
Case 32-7



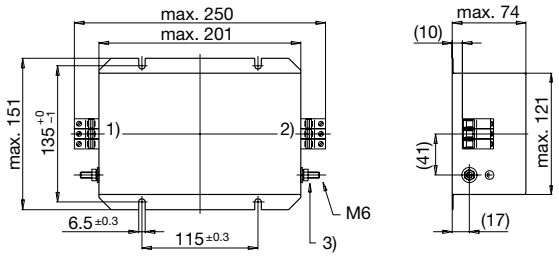
Case 32-C



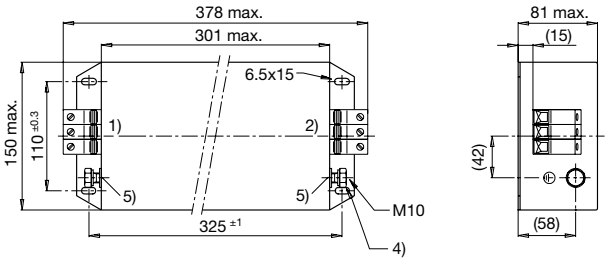
Case 34-3



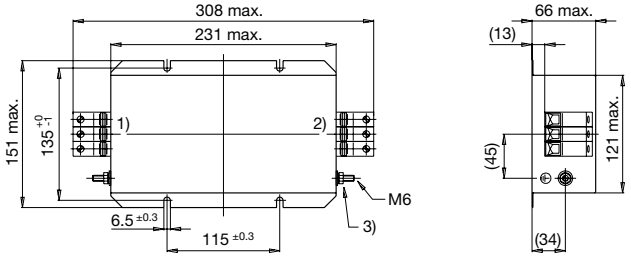
Case 34-C



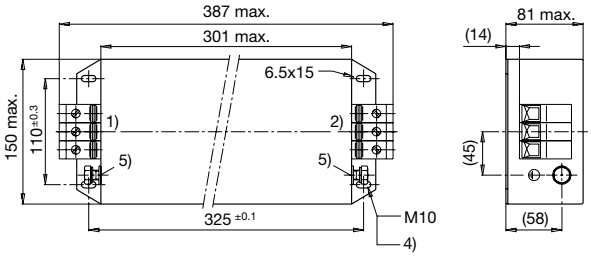
Case 37-3



Case 53-3

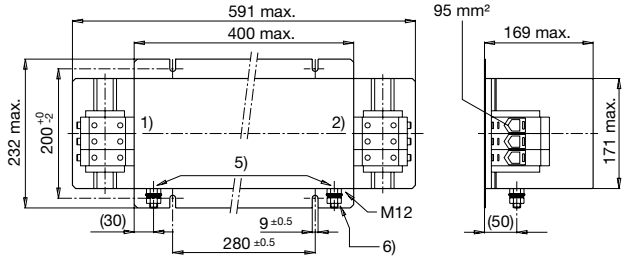


Case 54-3

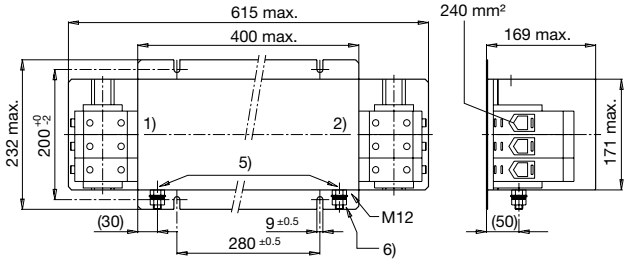


1) Line
2) Load
3) Tightening torque 3...4 Nm
4) Tightening torque 10...17 Nm
5) Do not unscrew lock-nut

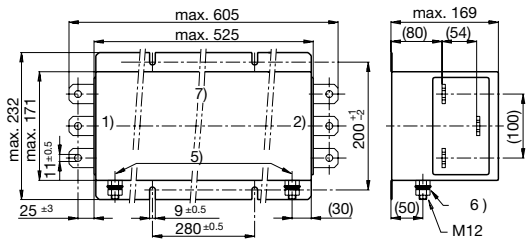
Case 55-3



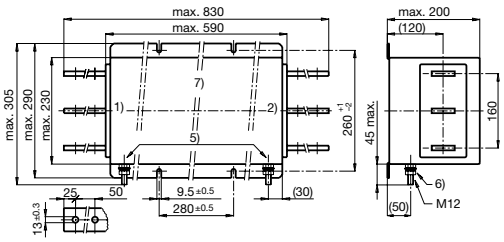
Case 56-3



Case 57



Case 74

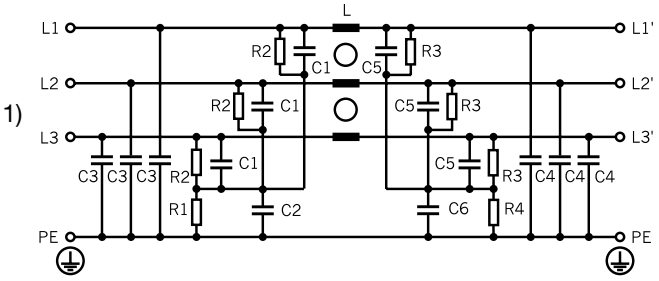


1) Line
2) Load
5) Do not unscrew lock-nut
6) Tightening torque 14...30 Nm
7) Current plates 720 mm² (60x12)

Technical data to the filter components

Rated Current @ Ta 40°C (75°C)	Characteristic	Rated Voltage [VAC]	L [mH]	C1 [µF]	C2 [µF]	C3 [nF]	C4 [nF]	C5 [µF]	C6 [µF]	R1 [MΩ]	R2 [MΩ]	R3 [MΩ]	R4 [MΩ]
6 (6)	Excellent attenuation	480	10	1.0	-	100	10	2.2	-	-	-	1	1
8 (5)	Excellent attenuation	480	10	1.0	-	100	10	2.2	-	-	-	1	1
16 (10)	Excellent attenuation	480	6	1.0	-	100	10	2.2	-	-	-	1	1
16 (Pending)	High voltage filter	520	6	1.5	-	50	11	1.5	-	2	1	1	2
16 (10)	Excellent attenuation	480	6	1.0	-	100	10	2.2	-	-	-	1	1
25 (15)	Excellent attenuation	480	3	4.4	1	10	47	4.4	1	2.2	1	1	2.2
25 (14)	High attenuation	480	2.4	4.4	1	10	47	4.4	1	2.2	-	1	2
25 (Pending)	High voltage filter	520	3	3	1.1	50	11	3	1.1	2	1	1	2
36 (20)	High attenuation	480	1.5	4.4	1	10	47	4.4	1	2.2	-	1	2
36 (Pending)	High voltage filter	520	2	3	1.1	50	11	3	1.1	2	1	1	2
50 (32)	Excellent attenuation	480	1	4.4	1	10	100	4.4	1	2.2	1	1	2.2
50 (30)	High attenuation	480	1	4.4	1	10	100	4.4	1	2.2	-	1	2
50 (Pending)	High voltage filter	520	1	3	1.1	50	11	3	1.1	2	1	1	2
64 (37)	High attenuation	480	0.6	4.4	1	10	100	4.4	1	2.2	-	1	2
80 (45)	Excellent attenuation	480	1	6.6	1	47	100	6.6	1	2.2	1	1	2.2
80 (Pending)	High voltage filter	520	1	4.5	1.1	50	50	4.5	1.1	2	1	1	2
64 (37)	Excellent attenuation	480	0.6	4.4	1	10	100	4.4	1	2.2	1	1	2.2
64 (Pending)	High voltage filter	520	0.6	3	1.1	50	11	3	1.1	2	1	1	2
110 (70)	Excellent attenuation	480	0.7	6.6	1	47	100	6.6	1	2.2	1	1	2.2
110 (Pending)	High voltage filter	520	0.7	4.5	1.1	50	50	4.5	1.1	2	1	1	2
180 (Pending)	Excellent attenuation	480	0.4	6.6	1	47	100	6.6	1	2.2	1	1	2.2
180 (Pending)	High voltage filter	520	0.4	4.5	1.1	50	50	4.5	1.1	2	1	1	2
250 (Pending)	Excellent attenuation	480	0.3	11	1	100	100	11	1	2.2	0.5	0.5	2.2
250 (Pending)	High voltage filter	520	0.3	7.5	1.1	50	50	7.5	1.1	2	1	1	2
340 (Pending)	Excellent attenuation	480	0.2	11	1	100	100	22	1	2.2	0.33	0.33	2.2
340 (Pending)	High voltage filter	520	0.2	7.5	1.1	50	50	15	1.1	2	1	1	2
450 (Pending)	Excellent attenuation	480	0.2	11	1	100	100	22	1	2.2	0.33	0.33	2.2
550 (Pending)	Excellent attenuation	480	0.2	11	1	100	100	22	1	2.2	0.33	0.33	2.2
1100 (Pending)	High voltage filter	520	0.12	11	1.1	50	-	22	1.1	2	0.5	0.25	2

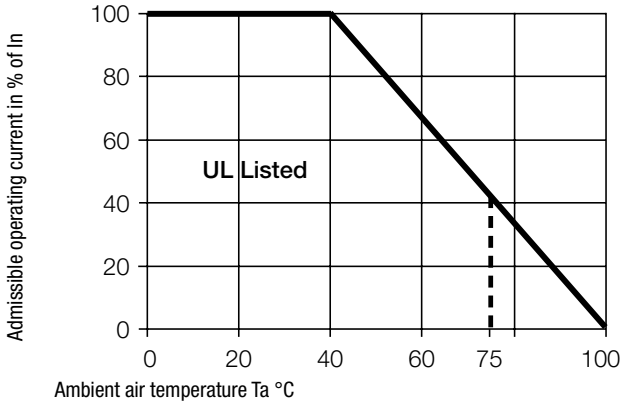
Diagrams



1) Power Line

Derating Curves

Permissible Working Current as a Function of Ambient Temperature

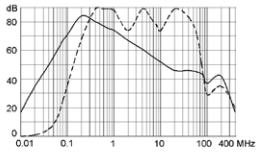


Attenuation Loss

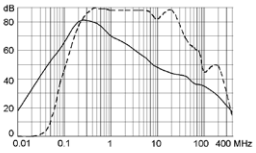
- - - - differential mode _____ common mode

Industrial version

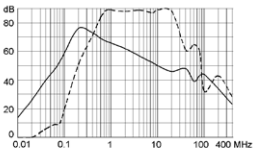
6A (FMAC-0924-0610)



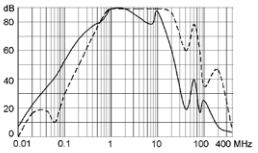
8A (FMAC-0931-0810)



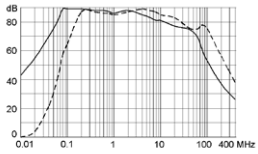
16A (FMAC-0931-1610)
16A (FMAC-0932-1610)



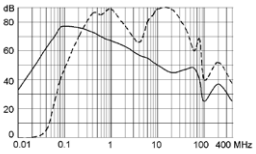
16A (FMAC-0931-1612I)



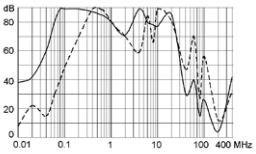
25A (FMAC-0932-2510)



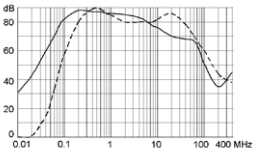
25A (FMAC-0932-2510L)



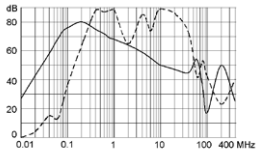
25A (FMAC-0932-2512I)



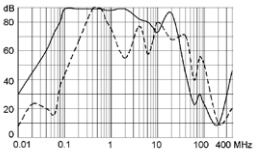
36A (FMAC-0934-3610)



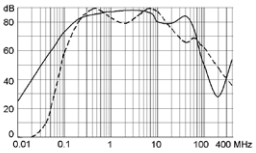
36A (FMAC-0932-3610L)



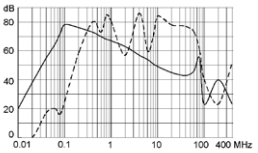
36A (FMAC-0932-3612I)



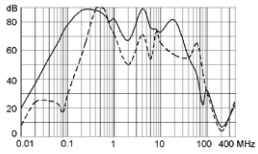
50A (FMAC-0934-5010)



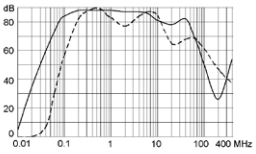
50A (FMAC-0934-5010L)



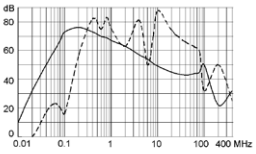
50A (FMAC-0934-5012I)



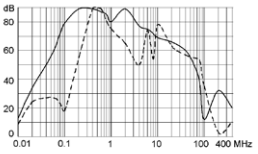
64A (FMAC-0953-6410)



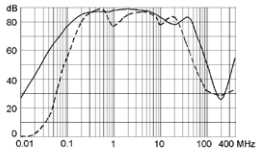
64A (FMAC-0934-6410L)



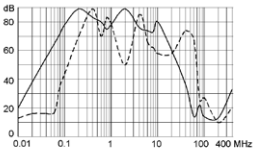
64A (FMAC-0953-6412I)



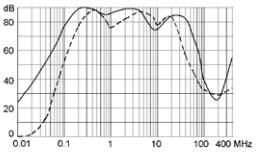
80A (FMAC-0937-8010)



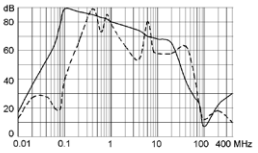
80A (FMAC-0937-8012I)



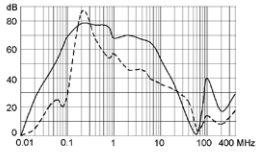
110A (FMAC-0954-H110)



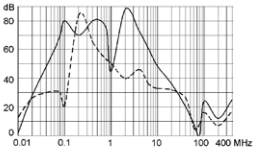
110A (FMAC-0954-H112I)



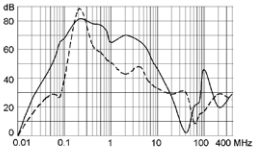
180A (FMAC-0955-H210)



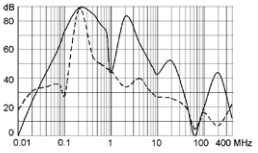
180A (FMAC-0955-H212I)



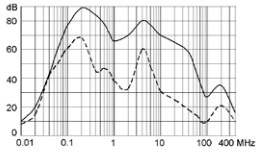
250A (FMAC-0956-H310)



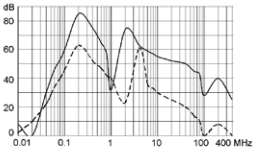
250A (FMAC-0956-H312I)



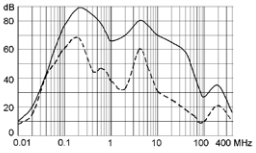
340A (FMAC-0956-H410)



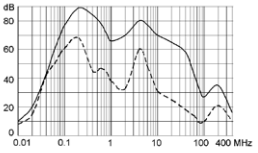
340A (FMAC-0956-H412I)



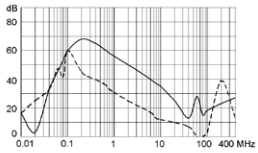
450A (FMAC-0957-H550)



550A (FMAC-0957-H650)



1100A (FMAC-0974-K152I)



Variants

Rated Current @ Ta 40°C (75°C) [A]	Characteristic	Rated Voltage [VAC]	Tripped Power Dissipation [W]	Leakage Current [mA] 1)	Contact Resistance [mΩ]	Weight [kg]	Screw clamps [mm²] 2)	Housing	Order Number
6 (6)	Excellent attenuation	480	2.48	40	23	0.9	4	24-3	FMAC-0924-0610
8 (5)	Excellent attenuation	480	5.38	40	28	1.8	4	31-3	FMAC-0931-0810
16 (10)	Excellent attenuation	480	8.83	40	11.5	1.8	4	31-3	FMAC-0931-1610
16 (Pending)	High voltage filter	520	8.83	26	11.5	1.8	4	31-3	FMAC-0931-1612I
16 (10)	Excellent attenuation	480	8.83	40	11.5	2.8	4	32-3	FMAC-0932-1610
25 (15)	Excellent attenuation	480	8.25	156	4.4	3.4	6	32-7	FMAC-0932-2510
25 (14)	High attenuation	480	9.86	156	5.26	3.5	4	32-7	FMAC-0932-2510L
25 (Pending)	High voltage filter	520	8.25	172	4.4	3.35	6	32-7	FMAC-0932-2512I
36 (20)	High attenuation	480	10.55	156	2.71	3.75	6	32-C	FMAC-0932-3610L
36 (20)	Excellent attenuation	480	12.91	156	3.32	3.5	6	34-3	FMAC-0934-3610
36 (Pending)	High voltage filter	520	12.91	172	3.32	3.3	6	34-3	FMAC-0934-3612I
50 (32)	Excellent attenuation	480	9.75	160	1.3	3.4	6	34-3	FMAC-0934-5010
50 (30)	High attenuation	480	12.63	160	1.68	3.6	6	34-C	FMAC-0934-5010L
50 (Pending)	High voltage filter	520	9.75	172	1.3	3.35	6	34-3	FMAC-0934-5012I
64 (37)	High attenuation	480	18.23	160	1.48	4.2	6	34-C	FMAC-0934-6410L
80 (45)	Excellent attenuation	480	22.6	167	1.17	7	25	37-3	FMAC-0937-8010
80 (Pending)	High voltage filter	520	22.6	179	1.17	7.28	25	37-3	FMAC-0937-8012I
64 (37)	Excellent attenuation	480	13.52	160	1.1	3.9	25	53-3	FMAC-0953-6410
64 (Pending)	High voltage filter	520	13.52	172	1.1	3.8	25	53-3	FMAC-0953-6412I
110 (70)	Excellent attenuation	480	27.23	167	0.75	7.5	50	54-3	FMAC-0954-H110
110 (Pending)	High voltage filter	520	27.23	179	0.75	7.45	50	54-3	FMAC-0954-H112I
180 (Pending)	Excellent attenuation	480	36	167	0.37	22	95	55-3	FMAC-0955-H210
180 (Pending)	High voltage filter	520	36	179	0.37	23	95	55-3	FMAC-0955-H212I
250 (Pending)	Excellent attenuation	480	36	175	0.2	23.7	240	56-3	FMAC-0956-H310
250 (Pending)	High voltage filter	520	36	185	0.2	25	240	56-3	FMAC-0956-H312I
340 (Pending)	Excellent attenuation	480	45	176	0.13	27	240	56-3	FMAC-0956-H410
340 (Pending)	High voltage filter	520	45	188	0.13	30	240	56-3	FMAC-0956-H412I
450 (Pending)	Excellent attenuation	480	40	176	0.06	33	(B)	57	FMAC-0957-H550
550 (Pending)	Excellent attenuation	480	45	176	0.046	32	(B)	57	FMAC-0957-H650
1100 (Pending)	High voltage filter	520	80	182	0.022	47	(A)	74	FMAC-0974-K152I

6A version: packing unit 2 pcs.

(A): Connecting straps for M12

(B): Connecting straps for M10

1) Worst case leakage current acc. to IEC60950 - Annex G4 (situation with two interrupted lines). Nominal leakage current acc. to IEC60950 - 5.2.5. can be found in section technical data.

2) Maximum conductor cross section (wire gauge) to be used; a comparative table for AWG and mm² values can be found in the general product information www.schurter.com/emc_info

Packaging unit 1 Pcs

16.02.2013