



PCB Filters FN 405

SCHAFFNER
energy efficiency and reliability

PCB-mounting filter



- Rated currents from 0.5 to 10A
- Compact PCB-mountable design
- Low profile

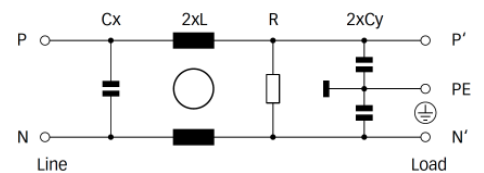
Approvals



Technical specifications

Design corresponding to:	UL 1283, CSA 22.2 No. 8 1986, IEC/EN 60939
Flammability corresponding to:	UL 94V-0
High potential test voltage:	P → PE 2000VAC for 2 sec P → N 760VAC for 2 sec
Maximum continuous operating voltage:	250VAC, 50/60Hz
MTBF @ 40 °C/230V (Mil-HB-217F):	1,600,000 hours
Operating frequency:	dc to 400Hz
Rated currents:	0.5 to 10 A @ 40 °C max.
Temperature range (operation and storage):	-25 °C to +100 °C (25/100/21)

Typical electrical schematic



The FN 405 PCB filter is a single-phase filter designed for easy and fast PCB-mounting. Choosing the FN 405 product line brings you the rapid availability of a standard filter associated with the necessary safety acceptance. Standard PCB single-phase filters are a practical solution helping you to pass EMI system approval in a short time. A selection on amperage ratings are designed to offer you the desired standard product.

Features and benefits

- Good conducted attenuation performance, based on chokes with high saturation resistance and excellent thermal behavior.
- PCB through hole mounting.
- Low profile.
- Custom specific versions on request.

Typical applications

- Electrical and electronic equipment
- Small to medium-sized machines and household equipment
- Single-phase power supplies, switch-mode power supplies
- Test and measurement equipment

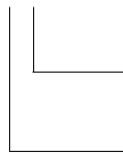
Filter selection table

Filter	Rated current @ 40 °C (25 °C)	Leakage current* @ 230VAC/50Hz	Inductance L	Capacitance		Resistance R	Input/Output connections	Weight [g]
	[A]	[µA]	[mH]	Cx [nF]	Cy [nF]	[kΩ]		
FN 405-0.5-02	0.5 (0.6)	373	24	15	2.2		-02	40
FN 405-1-02	1 (1.2)	373	10	15	2.2		-02	40
FN 405-3-02	3 (3.6)	373	2	15	2.2		-02	40
FN 405-6-02	6 (6.9)	373	0.8	15	2.2		-02	40
FN 405-10-02	10 (11.5)	373	0.5	15	2.2		-02	40

* Maximum leakage under normal operating conditions. Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

Product selector

FN 405-yy-..



02: PCB through hole mounting

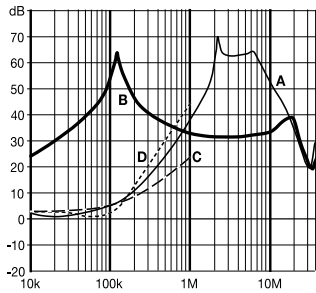
0.5 to 10: Rated current

For example: FN 405-0.5-02, FN 405-10-02

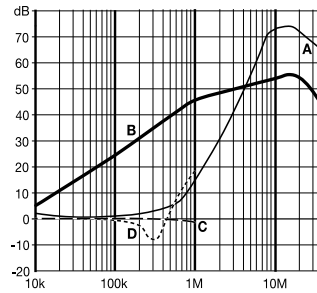
Typical filter attenuation

Per CISPR 17; A = 50Ω/50Ω sym; B = 50Ω/50Ω asym; C = 0.1Ω/100Ω sym; D = 100Ω/0.1Ω sym

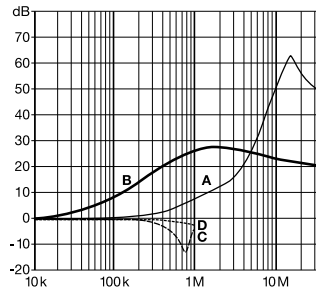
0.5 and 1A types



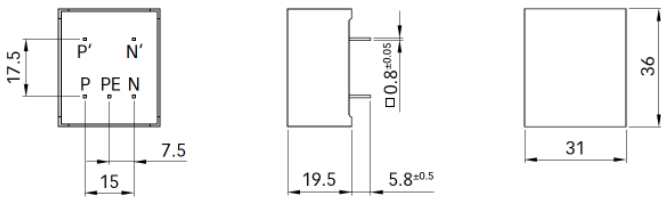
3 and 6A types



10A types



Mechanical data



All dimensions in mm; 1 inch = 25.4mm

Tolerances according: ISO 2768-m / EN 22768-m

**Headquarters, global innovation
and development center**

Schaffner Group

Nordstrasse 11
4542 Luterbach
Switzerland
T +41 32 681 66 26
F +41 32 681 66 30
info@schaffner.com
www.schaffner.com

To find your local partner within
Schaffner's global network, please go
to www.schaffner.com

© 2012 Schaffner Group
Specifications are subject to change
without notice. The latest version of the
data sheets can be obtained from the
website. All trademarks recognized.

Schaffner is an ISO-registered
company.

Its products are designed and
manufactured under the strict quality
and environmental requirements of
the ISO 9001 and ISO 14001
standards.

This document has been carefully
checked. However, Schaffner does not
assume any liability for errors or
inaccuracies.

Sales and application centers

China

Schaffner EMC Ltd. Shanghai
T20-3, No 565 Chuangye Road
Pudong New Area
201201 Shanghai
T +86 21 3813 9500
F F +86 21 3813 9501 / 02
cschina@schaffner.com
<http://www.schaffner.com.cn/>

Finland

Schaffner Oy
Sauvonrinne 19 H
08500 Lohja
T +358 19 35 72 71
finlandsales@schaffner.com

France

Schaffner EMC S.A.S.
112, Quai de Bezons
Boîte postale 133
95103 Argenteuil
T +33 1 34 34 30 60
F +33 1 39 47 02 28
francesales@schaffner.com

Germany

Schaffner Deutschland GmbH
Westring 18
33142 Büren
T +49 2951 60 01 0
F +49 2951 60 01 23
buerealsales@schaffner.com

Italy

Schaffner EMC S.r.l.
Via Galileo Galilei 47
20092 Cinisello Balsamo (MI)
T +39 02 66 04 30 45/47
F +39 02 61 23 943
italysales@schaffner.com

Japan

Schaffner EMC K.K.
1-32-12, Kamiyama, Setagaya-ku
7F Mitsui-seimei Sangenjaya Bldg.
154-0011 Tokyo
T +81 3 5712 3650
F +81 3 5712 3651
japansales@schaffner.com
<http://www.schaffner.jp>

Singapore

Schaffner EMC Pte Ltd.
Blk 3015A Ubi Road 1
05-09 Kampong Ubi Industrial Estate
408705 Singapore
T +65 6377 3283
F +65 6377 3281
singaporesales@schaffner.com

Spain

Schaffner EMC España
Calle Caléndula 93, Miniparc III, Edificio E
El Soto de la Moraleja Alcobendas
28109 Madrid
T +34 618 176 133
spainsales@schaffner.com

Sweden

Schaffner EMC AB
Turebergstorg 1, 6
19147 Sollentuna
T +46 8 5792 1121 / 22
F +46 8 92 96 90
swedensales@schaffner.com

Switzerland

Schaffner EMV AG
Nordstrasse 11
4542 Luterbach
T +41 32 6816 626
F +41 32 6816 641
sales@schaffner.ch

Taiwan R.O.C.

Schaffner EMV Ltd.
6 Floor, No. 413
Rui Guang Road
114 Neihu District Taipei City
T +886 2 87525050
F +886 2 87518086
taiwansales@schaffner.com

Thailand

Schaffner EMC Co. Ltd.
Northern Region Industrial Estate
67 Moo 4 Tambon Ban Klang Amphur Muangng
P.O. Box 14
51000 Lamphun
T +66 53 58 11 04
F +66 53 58 10 19
thailandsales@schaffner.com

UK

Schaffner Ltd.
5 Ashville Way
Molly Millars Lane Wokingham
RG41 2PL Berkshire
T +44 118 9770070
F +44 118 9792969
uksales@schaffner.com
<http://www.schaffner.uk.com>

USA

Schaffner EMC Inc.
52 Mayfield Avenue
08837 Edison
T 1-800-367-5566
T 732-225-9533
F 732-225-4789
usasales@schaffner.com
<http://www.schaffner.com/us>