

# 3-phase + neutral filter

# FN 256

- 8 to 160A current ratings
  - high attenuation
  - Low leakage current
  - very compact dimensions
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- Nennströme von 8 bis 160A
  - Hohe Dämpfung
  - Geringer Ableitstrom
  - Sehr kompakte Gehäusedimensionen
- 
- courant de service entre 8 et 160A
  - bonne atténuation
  - faible courant de fuite
  - encombrement très réduit



## Technical specifications

Maximum operating voltage: 480VAC (520VAC versions also available) at 50°C  
 Operating frequency: DC to 60Hz at 50°C  
 Hipot test voltage: P/N → E 3000VDC for 2s; P/N → P 2100VDC for 2s  
 MTBF at 50°C, 400V per Mil-HB-217F: 8/16A 1,300,000 hours; 25/36/64A 600,000 hours  
 Protection category: IP20  
 Overload: 4 times rated current at switch on, then 1.5 times rated current for 1 minute, once per hour  
 Temperature range: -25°C to +100°C  
 Flammability class: UL 94V2

## Approvals



Filter	Current ratings at 50°C (40°) A	Leakage current <sup>†</sup> (480V/50Hz) mA	Power loss W	Component values/phase					Phase connections	Weight kg
				L mH	ΣCx μF	ΣCy μF	R1 MΩ	R2 MΩ		
FN 256 - 8 / ??	8 (9.1)	3.4	2.9	1.78	2.20	0.19	0.68	1.50	/46	1.0
FN 256 - 16 / ??	16 (18.1)	3.4	5.6	1.14	2.20	0.19	0.68	1.50	/46	1.1
FN 256 - 25 / ??	25 (28.3)	3.4	9.8	1.57	4.40	0.19	0.68	0.82	/47	1.4
FN 256 - 36 / ??	36 (40.8)	3.4	10.9	1.10	4.40	0.19	0.68	0.82	/47	1.5
FN 256 - 64 / ??	64 (72.6)	3.4	17.2	1.00	4.40	0.19	0.68	0.82	/52	2.2
FN 256 - 80 / ??	80 (90.4)	3.4	18.8	0.77	9.90	0.20	0.68	1.00	/28* /34	4.5
FN 256 - 120 / ??	120 (135.6)	5.0	25.1	0.65	13.20	0.29	0.68	1.00	/28* /35	6.1
FN 256 - 160 / ??	160 (180.8)	6.8	30.7	0.46	13.20	0.39	0.68	1.00	/28* /40	8.0

<sup>†</sup> Max leakage under normal circumstances. Note: if two phases are interrupted, worst-case leakage current could reach 6 times higher levels.  
<sup>\*</sup> 80A, 120A and 160A versions with screw connections for 40°C only.

## Mechanical data

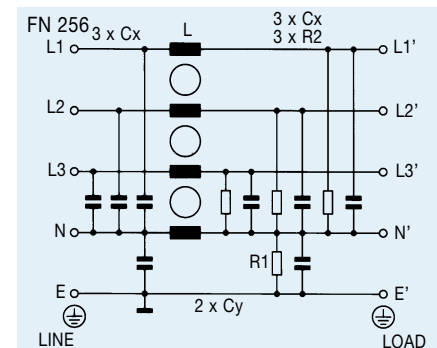
Current	-8, -16	-25, -36	-64	-80	-120	-160	Tol. mm
A	143	153	153	170	170	170	± 1
B	115	125	125	140	140	140	± 0.5
C	80	115	125	110	130 <sup>†</sup> /140 <sup>§</sup>	130 <sup>†</sup> /160 <sup>§</sup>	± 0.5
D	120	130	140	160	180	200	± 0.5
E	141.2	154.2	175	220 <sup>†</sup> /237 <sup>§</sup>	240 <sup>†</sup> /266 <sup>§</sup>	260 <sup>†</sup> /299 <sup>§</sup>	± 1
F	156	166	176	-	-	-	± 1
G	1	1	1.5	1.5	1.5	1.5	± 0.1
H	80	90	100	110	130	150	± 0.3
I	127.5	137.5	137.5	153.5	153.5	153.5	± 0.5
J	6.5	6.5	6.5	6.5	6.5	6.5	± 0.1
K	M6	M6	M6	M10	M10	M10	-
L	60.5	93	99.25	85 <sup>†</sup>	105 <sup>†</sup>	105 <sup>†</sup>	± 1
M	11.5	15	18	35 <sup>†</sup> /30 <sup>§</sup>	35 <sup>†</sup> /30 <sup>§</sup>	35 <sup>†</sup> /30 <sup>§</sup>	± 1

All dimensions in mm; 1 inch = 25.4mm

<sup>†</sup> with screw connections /28  
<sup>§</sup> with safety terminals /34, /35, /40

## Electrical schematic

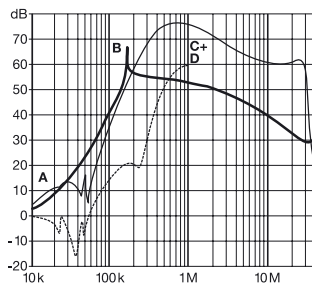
See table for component values



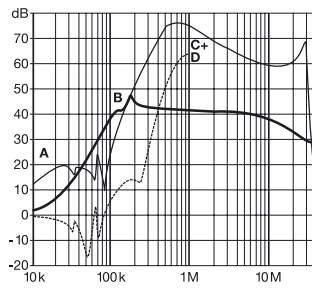
## FN 256 insertion loss

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

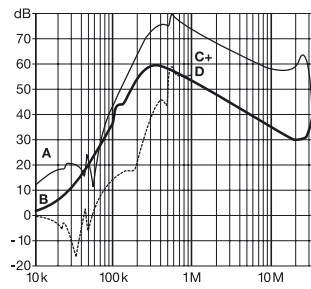
### 8 amp types



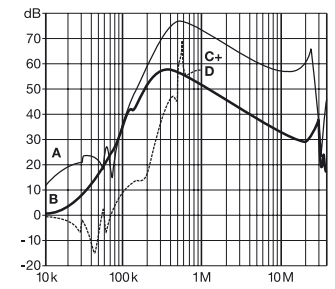
### 16 amp types



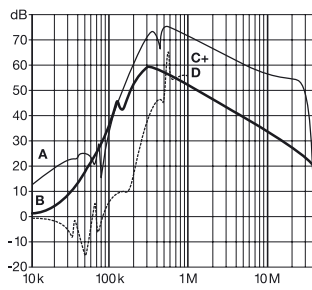
### 25 amp types



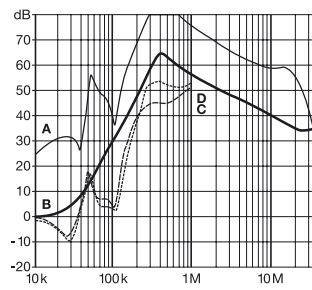
### 36 amp types



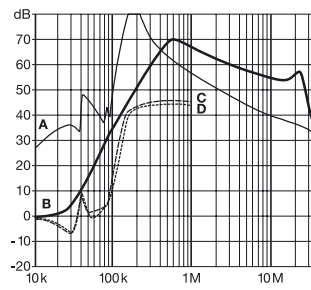
### 64 amp types



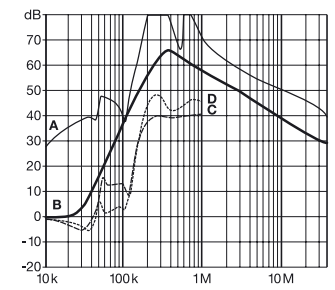
### 80 amp types



### 120 amp types



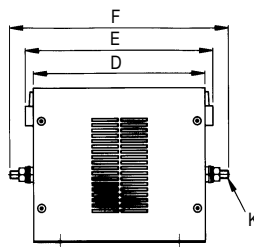
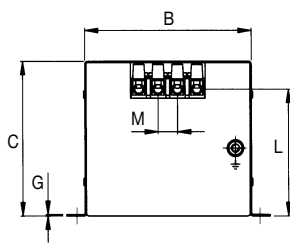
### 160 amp types



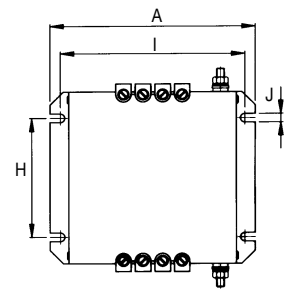
## Mechanical drawings

See mechanical data table for dimensions

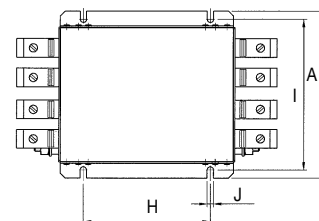
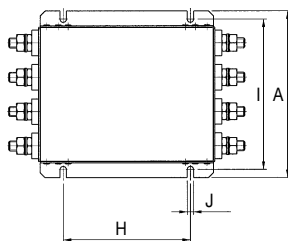
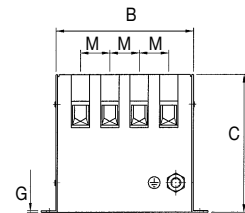
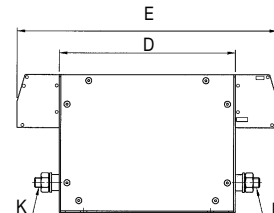
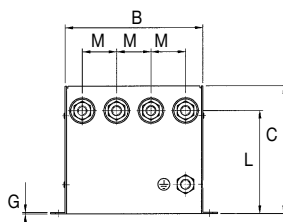
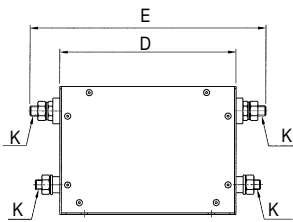
### SIDE VIEW



### TOP VIEW



FN 256 -8, -16, -25, -36, -64



FN 256 -80, -120, -160  
with screw connections

FN 256 -80, -120, -160  
with safety terminals