

FN 251

Filter for motor drives

- 4 to 24A current ratings
 - compact size
 - insulated safety input terminals
 - wire outputs
- Nennströme von 4 bis 24A
 - Kompakte Bauform
 - Berührungssichere Anschlußklemmen
 - Litzen an den Ausgängen
- courant de service entre 4 et 24A
 - taille réduite compacte
 - connexions d'entrée par bornes de sécurité isolées
 - connexions de sortie par fils



Technical specifications

Maximum operating voltage: 440VAC at 40°C; Operating frequency: DC to 60Hz at 40°C

Hipot test voltage: P ⇒ E 2000VAC; P ⇒ P 1700VDC

MTBF at 40°C, 400V per Mil-HB-217F: 160,000 hours

Protection category: IP20

Overload: 4 times rated current at switch on, then 1.5 times rated current for 1 minute, once per hour

Approvals



| Filter | Current ratings at 40°C (25°) A | Leakage current† (400V/50Hz) mA | Power loss W | Component values/phase | | | | | Connections input | Connections output | Weight kg |
|------------------|---------------------------------------|---------------------------------------|--------------------|------------------------|----------|----------|----------|---------|----------------------|-----------------------|--------------|
| | | | | L mH | L1 mH | Cx µF | Cy nF | R kΩ | | | |
| FN 251 - 4 / 07 | 4 (4.6) | 0.5 | 5.5 | 7 | 1.5 | 1 | 15 | 470 | /29 | /07 | 0.75 |
| FN 251 - 8 / 07 | 8 (9.2) | 0.5 | 7 | 4.2 | 1.5 | 1 | 15 | 470 | /29 | /07 | 0.75 |
| FN 251 - 16 / 07 | 16 (18.4) | 0.5 | 14 | 2.6 | 0.7 | 1 | 15 | 470 | /29 | /07 | 1.8 |
| FN 251 - 24 / 07 | 24 (27.6) | 0.5 | 18 | 1 | 0.5 | 1 | 15 | 470 | /29 | /07 | 1.95 |

† Max. leakage under normal circumstances. Note: if two phases are interrupted, worst case leakage current could reach 7.7 times higher levels.

Mechanical data

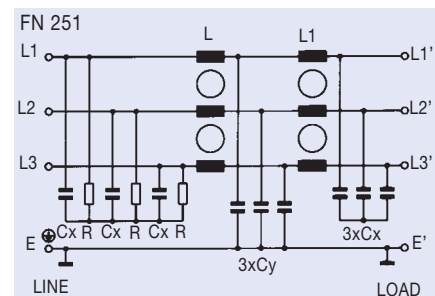
| Current | -4, -8 | -16, -24 | Tol.* ± mm |
|---------|---------------------|---------------------|---------------|
| A | 145 | 180 | ± 0.5 |
| B | 75 | 115 | ± 0.5 |
| C | 40 | 60 | ± 0.5 |
| D | 123 | 85 | ± 0.5 |
| E | 135 | 115 | ± 0.2 |
| F | 55 ± 0.1 | 100 | ± 0.2 |
| G | | 0.7 | ± 0.05 |
| H | | 20 | ± 1 |
| M | 7 x 5.3 | 6.4 | ± 0.1 |
| P | | M6 | - |
| W | 1.31mm ² | 2.08mm ² | - |
| Y | | 6 | + 1 |
| Z | | 300 | + 10 |

All dimensions in mm; 1 inch = 25.4mm

* Measurements share this common tolerance unless otherwise stated

Electrical schematic

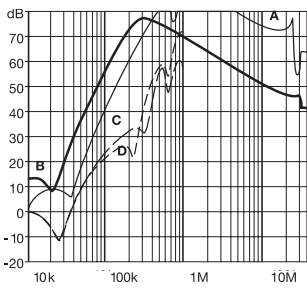
See table for component values



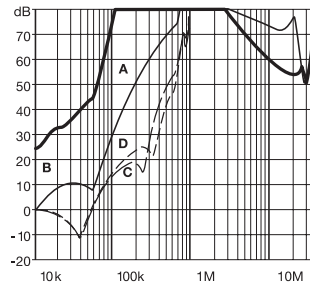
FN 251 insertion loss

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

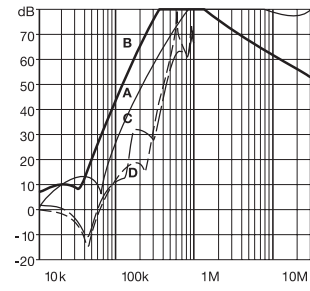
4 amp types



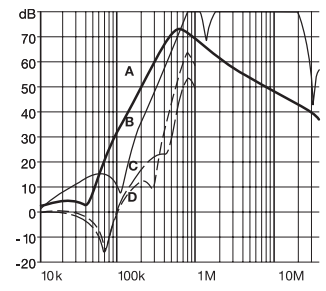
8 amp types



16 amp types



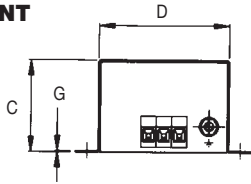
24 amp types



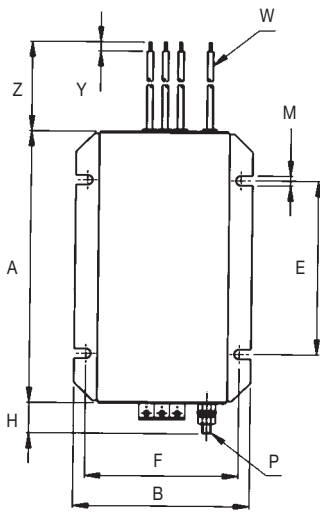
Mechanical drawings

See mechanical data table for dimensions

FRONT

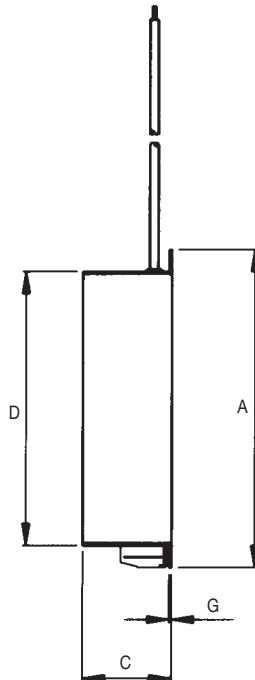


TOP

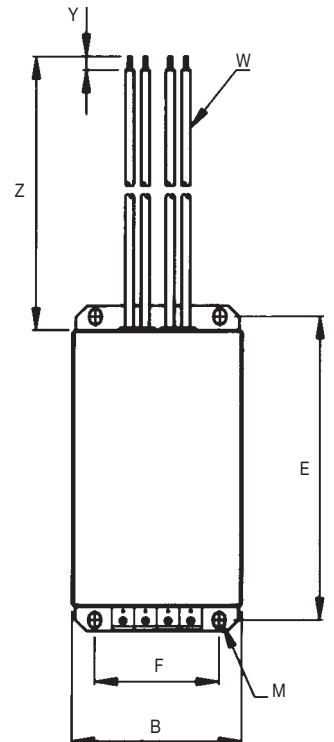


FN 251-16, -24
Input connection: /29

SIDE



TOP



FN 251-4, -8
Input connection: /29