

## Filter selection table

| Filter*              | Buy                                                                                 | Rated current<br>@ 40°C (25°C) | Leakage current**<br>@ 250 VAC/50 Hz<br>(@ 120 VAC/60 Hz) | Power Loss<br>@25°C/DC | Inductance***<br>L | Capacitance*** |      | Resistance***<br>R | Input/Output connections |                                                                                     |                                                                                     | Weight |                                                                                     |
|----------------------|-------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------------------|------------------------|--------------------|----------------|------|--------------------|--------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|
|                      |                                                                                     |                                |                                                           |                        |                    | Cx             | Cy   |                    | R                        | connections                                                                         |                                                                                     |        |                                                                                     |
|                      |                                                                                     |                                |                                                           |                        |                    |                |      |                    |                          |  |  |        |  |
|                      |                                                                                     | [A]                            | [mA]                                                      | [W]                    | [mH]               | [μF]           | [nF] | [kΩ]               |                          |                                                                                     |                                                                                     | [g]    |                                                                                     |
| FN2030-1-..          |    | 1 (1.1)                        | 0.31 (0.18)                                               | 0.9                    | 20                 | 0.22           | 2.2  | 1000               | -06                      | -07                                                                                 |                                                                                     | 58     |                                                                                     |
| FN2030-3-..          |    | 3 (3.4)                        | 0.47 (0.27)                                               | 2.2                    | 14                 | 0.33           | 3.3  | 1000               | -06                      | -07                                                                                 |                                                                                     | 87     |                                                                                     |
| FN2030-4-..          |    | 4 (4.5)                        | 0.47 (0.27)                                               | 2.9                    | 14                 | 0.33           | 3.3  | 1000               | -06                      | -07                                                                                 |                                                                                     | 92     |                                                                                     |
| FN2030-6-..          |    | 6 (6.7)                        | 0.66 (0.38)                                               | 3.2                    | 8                  | 0.47           | 4.7  | 680                | -06                      | -07                                                                                 |                                                                                     | 100    |                                                                                     |
| FN2030-8-..          |    | 8 (8.9)                        | 0.66 (0.38)                                               | 3.1                    | 8                  | 0.47           | 4.7  | 680                | -06                      | -07                                                                                 |                                                                                     | 170    |                                                                                     |
| FN2030-10-..         |    | 10 (11.2)                      | 0.66 (0.38)                                               | 5.3                    | 8                  | 0.47           | 4.7  | 680                | -06                      | -07                                                                                 |                                                                                     | 196    |                                                                                     |
| FN2030-12-..         |    | 12 (13.4)                      | 0.79 (0.45)                                               | 7.6                    | 4                  | 1.0            | 10   | 330                | -06                      | -07                                                                                 |                                                                                     | 185    |                                                                                     |
| FN2030-16-..         |    | 16 (17.9)                      | 0.79 (0.45)                                               | 6.1                    | 4                  | 1.0            | 10   | 330                | -06                      | -07                                                                                 | -08                                                                                 | 225    |                                                                                     |
| FN2030-20-..         |    | 20 (22.4)                      | 0.79 (0.45)                                               | 4.6                    | 4                  | 1.0            | 10   | 330                | -06                      |                                                                                     | -08                                                                                 | 285    |                                                                                     |
| FN2030-30-08         |    | 30 (33.5)                      | 0.79 (0.45)                                               | 6.0                    | 2                  | 1.0            | 10   | 330                |                          |                                                                                     | -08                                                                                 | 326    |                                                                                     |
|                      |                                                                                     |                                |                                                           |                        |                    |                |      |                    |                          |                                                                                     |                                                                                     |        |                                                                                     |
| FN2030A-1-..         |    | 1 (1.1)                        | 0.07 (0.04)                                               | 0.9                    | 20                 | 0.22           | 0.47 | 1000               | -06                      | -07                                                                                 |                                                                                     | 58     |                                                                                     |
| FN2030A-3-..         |    | 3 (3.4)                        | 0.07 (0.04)                                               | 2.2                    | 14                 | 0.33           | 0.47 | 1000               | -06                      | -07                                                                                 |                                                                                     | 87     |                                                                                     |
| FN2030A-4-..         |    | 4 (4.5)                        | 0.07 (0.04)                                               | 2.9                    | 14                 | 0.33           | 0.47 | 1000               | -06                      | -07                                                                                 |                                                                                     | 92     |                                                                                     |
| FN2030A-6-..         |    | 6 (6.7)                        | 0.07 (0.04)                                               | 3.2                    | 8                  | 0.47           | 0.47 | 680                | -06                      | -07                                                                                 |                                                                                     | 100    |                                                                                     |
| FN2030A-8-..         |   | 8 (8.9)                        | 0.07 (0.04)                                               | 3.1                    | 8                  | 0.47           | 0.47 | 680                | -06                      | -07                                                                                 |                                                                                     | 170    |                                                                                     |
| FN2030A-10-..        |  | 10 (11.2)                      | 0.07 (0.04)                                               | 5.3                    | 8                  | 0.47           | 0.47 | 680                | -06                      | -07                                                                                 |                                                                                     | 196    |                                                                                     |
| FN2030A-12-..        |  | 12 (13.4)                      | 0.07 (0.04)                                               | 7.6                    | 4                  | 1.0            | 0.47 | 330                | -06                      | -07                                                                                 |                                                                                     | 185    |                                                                                     |
| FN2030A-16-..        |  | 16 (17.9)                      | 0.07 (0.04)                                               | 6.1                    | 4                  | 1.0            | 0.47 | 330                | -06                      | -07                                                                                 | -08                                                                                 | 225    |                                                                                     |
| FN2030A-20-..        |  | 20 (22.4)                      | 0.07 (0.04)                                               | 4.6                    | 4                  | 1.0            | 0.47 | 330                | -06                      |                                                                                     | -08                                                                                 | 285    |                                                                                     |
| FN2030A-30-08        |  | 30 (33.5)                      | 0.07 (0.04)                                               | 6.0                    | 2                  | 1.0            | 0.47 | 330                |                          |                                                                                     | -08                                                                                 | 326    |                                                                                     |
|                      |                                                                                     |                                |                                                           |                        |                    |                |      |                    |                          |                                                                                     |                                                                                     |        |                                                                                     |
| FN2030B-1-..         |  | 1 (1.1)                        | 0.00                                                      | 0.9                    | 20                 | 0.22           |      | 1000               | -06                      | -07                                                                                 |                                                                                     | 58     |                                                                                     |
| FN2030B-3-..         |  | 3 (3.4)                        | 0.00                                                      | 2.2                    | 14                 | 0.33           |      | 1000               | -06                      | -07                                                                                 |                                                                                     | 87     |                                                                                     |
| FN2030B-4-..         |  | 4 (4.5)                        | 0.00                                                      | 2.9                    | 14                 | 0.33           |      | 1000               | -06                      | -07                                                                                 |                                                                                     | 92     |                                                                                     |
| FN2030B-6-..         |  | 6 (6.7)                        | 0.00                                                      | 3.2                    | 8                  | 0.47           |      | 680                | -06                      | -07                                                                                 |                                                                                     | 100    |                                                                                     |
| FN2030B-8-..         |  | 8 (8.9)                        | 0.00                                                      | 3.1                    | 8                  | 0.47           |      | 680                | -06                      | -07                                                                                 |                                                                                     | 170    |                                                                                     |
| FN2030B-10-..        |  | 10 (11.2)                      | 0.00                                                      | 5.3                    | 8.45               | 0.47           |      | 680                | -06                      | -07                                                                                 |                                                                                     | 196    |                                                                                     |
| FN2030B-12-..        |  | 12 (13.4)                      | 0.00                                                      | 7.6                    | 4                  | 1.0            |      | 330                | -06                      | -07                                                                                 |                                                                                     | 185    |                                                                                     |
| FN2030B-16-..        |  | 16 (17.9)                      | 0.00                                                      | 6.1                    | 4                  | 1.0            |      | 330                | -06                      | -07                                                                                 | -08                                                                                 | 225    |                                                                                     |
| FN2030B-20-..        |  | 20 (22.4)                      | 0.00                                                      | 4.6                    | 4                  | 1.0            |      | 330                | -06                      |                                                                                     | -08                                                                                 | 285    |                                                                                     |
| FN2030B-30-08        |  | 30 (33.5)                      | 0.00                                                      | 6.0                    | 2                  | 1.0            |      | 330                |                          |                                                                                     | -08                                                                                 | 326    |                                                                                     |
|                      |                                                                                     |                                |                                                           |                        |                    |                |      |                    |                          |                                                                                     |                                                                                     |        |                                                                                     |
| Enhanced performance |                                                                                     |                                |                                                           |                        |                    |                |      |                    |                          |                                                                                     |                                                                                     |        |                                                                                     |
| FN2030N1-1-06        |  | 1 (1.1)                        | 5.34 (3.08)                                               | 0.9                    | 20                 | 0.22           | 68   | 1000               | -06                      |                                                                                     |                                                                                     | 65     |                                                                                     |
| FN2030M-3-06         |  | 3 (3.4)                        | 3.69 (2.28)                                               | 2.2                    | 14                 | 0.33           | 47   | 1000               | -06                      |                                                                                     |                                                                                     | 110    |                                                                                     |
| FN2030M-4-06         |  | 4 (4.5)                        | 3.69 (2.28)                                               | 2.9                    | 14                 | 0.33           | 47   | 1000               | -06                      |                                                                                     |                                                                                     | 110    |                                                                                     |
| FN2030M-6-06         |  | 6 (6.7)                        | 3.69 (2.28)                                               | 3.2                    | 8                  | 0.47           | 47   | 680                | -06                      |                                                                                     |                                                                                     | 120    |                                                                                     |
| FN2030N1-8-06        |  | 8 (8.9)                        | 5.34 (3.08)                                               | 3.1                    | 8                  | 0.47           | 68   | 3680               | -06                      |                                                                                     |                                                                                     | 200    |                                                                                     |
| FN2030N1-10-06       |  | 10 (11.2)                      | 5.34 (3.08)                                               | 5.3                    | 8                  | 0.47           | 68   | 680                | -06                      |                                                                                     |                                                                                     | 200    |                                                                                     |
| FN2030N1-12-06       |  | 12 (13.4)                      | 5.34 (3.08)                                               | 7.6                    | 4                  | 1.0            | 68   | 330                | -06                      |                                                                                     |                                                                                     | 210    |                                                                                     |
| FN2030M-16-..        |  | 16 (17.9)                      | 3.69 (2.28)                                               | 6.1                    | 4                  | 1.0            | 47   | 330                | -06                      |                                                                                     | -08                                                                                 | 265    |                                                                                     |
| FN2030M-20-..        |  | 20 (22.4)                      | 3.69 (2.28)                                               | 4.6                    | 4                  | 1.0            | 47   | 330                | -06                      |                                                                                     | -08                                                                                 | 326    |                                                                                     |
| FN2030M-30-08        |  | 30 (33.5)                      | 3.69 (2.28)                                               | 6.0                    | 2                  | 1.0            | 47   | 330                |                          |                                                                                     | -08                                                                                 | 346    |                                                                                     |

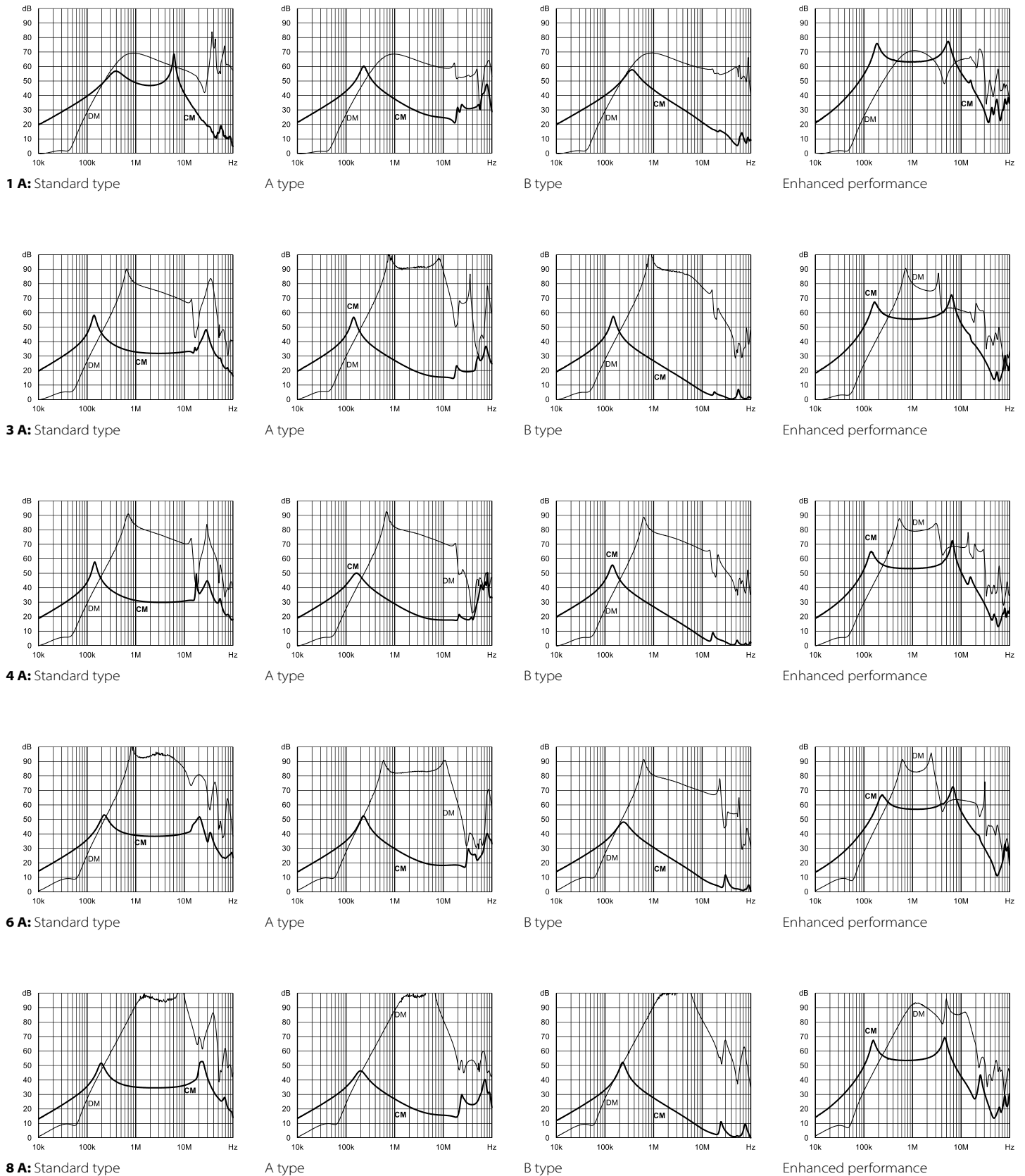
\* To compile a complete part number, please replace the .. with the required I/O connection style. For surge pulse protection, please add Z (e.g. FN 2030Z-10-06, FN 2030BZ-20-08).

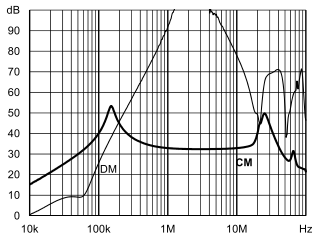
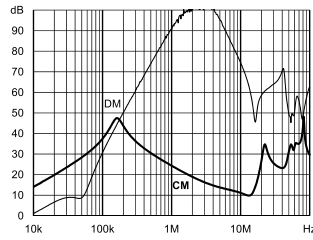
\*\* Maximum leakage under usual AC operating conditions (acc. IEC60939-3). Note: if the neutral line is interrupted, worst case leakage could reach twice this level.

\*\*\* Tolerances apply: Inductance: -30/+50%, Capacitance: ±20%, Resistance: ±10%

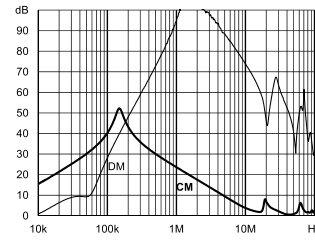
## Typical filter attenuation

Per CISPR 17; CM=50  $\Omega$ /50  $\Omega$  sym; DM=50  $\Omega$ /50  $\Omega$  asym

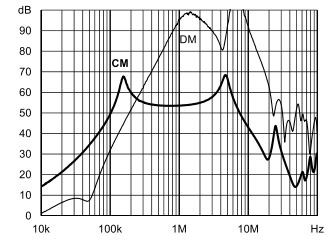


**10 A:** Standard type

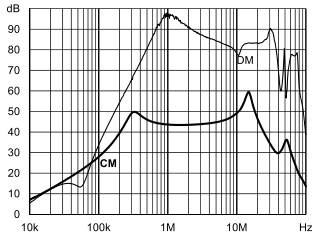
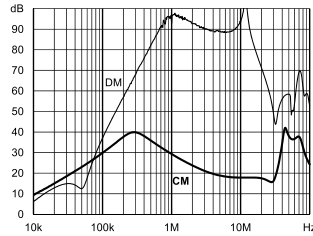
A type



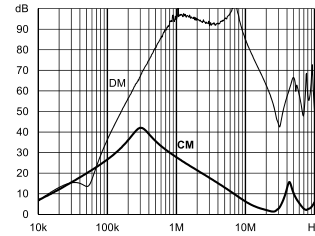
B type



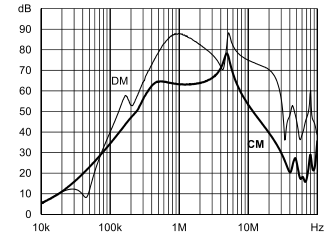
Enhanced performance

**12 A:** Standard type

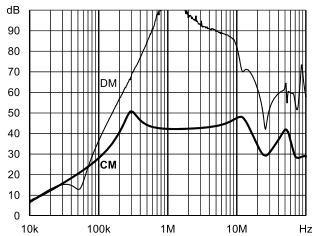
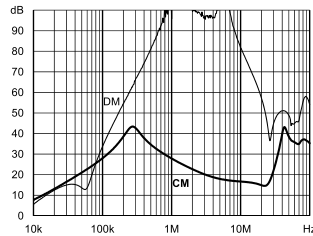
A type



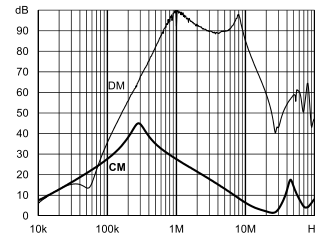
B type



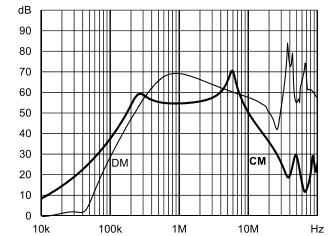
Enhanced performance

**16 A:** Standard type

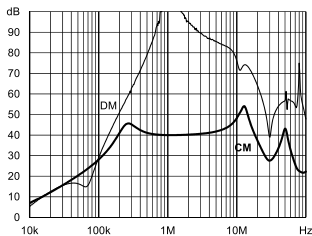
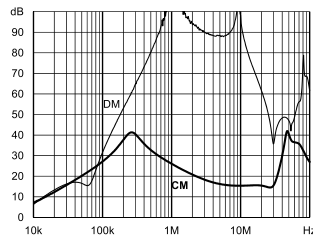
A type



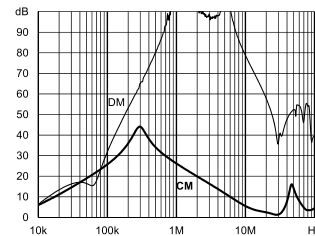
B type



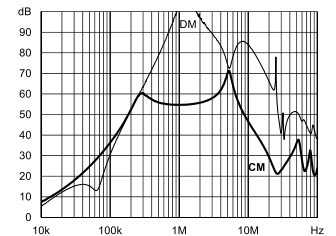
Enhanced performance

**20 A:** Standard type

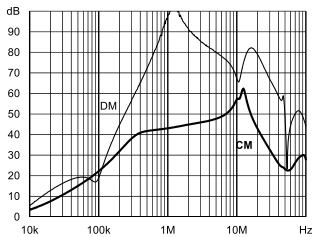
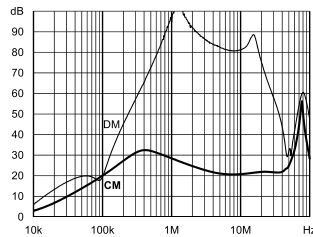
A type



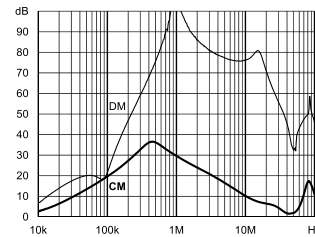
B type



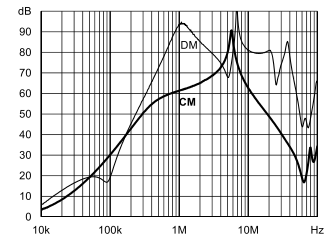
Enhanced performance

**30 A:** Standard type

A type



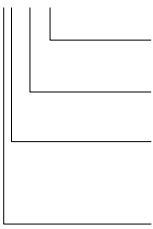
B type



Enhanced performance

Product selector

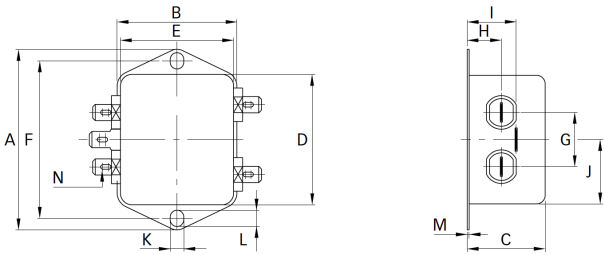
FN 2030 xy-xx-yy



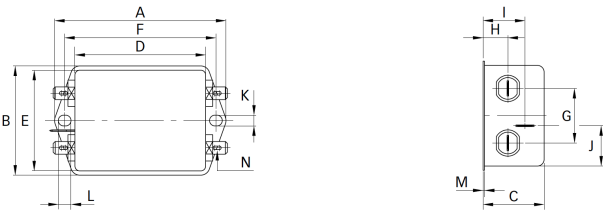
|         |                                       |
|---------|---------------------------------------|
| 06      | Faston 6.3 × 0.8 mm (spade/soldering) |
| 07      | Wire leads                            |
| 08      | Studs (M4 screws)                     |
| 1 to 60 | Rated current                         |
| Blank   | Standard version                      |
| Z       | With surge protection                 |
| Blank   | Standard version                      |
| A       | Safety version                        |
| B       | Medical version                       |
| N1/M    | High performance version              |

Mechanical data

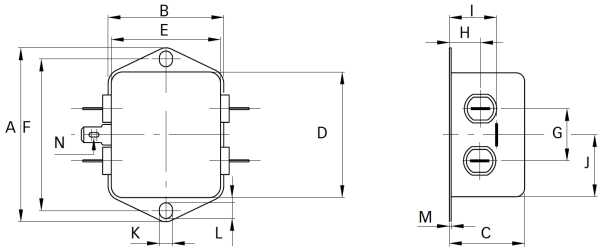
Connection style -06, 1 A types



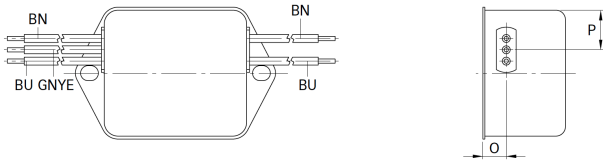
Connection style -06, 8 to 20 A types



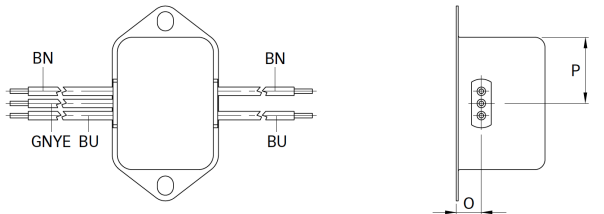
Connection style -06, 3 to 6 A types



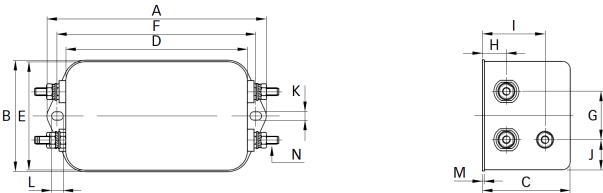
Connection style -07, 8 to 16 A types (same dimensions as style -06)



Connection style -07, 1 to 6 A types (same dimensions as style -06)



Connection style -08, 16 to 30 A types



## Dimensions

|                                | 1 A       | 3 A       | 4 A       | 6 A       | 8 A       | 10 A      | 12 A      | 16 A      | 20 A      | 30 A      | Tolerances |
|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| <b>A</b>                       | 64        | 71        | 71        | 71        | 85        | 85        | 85        | 85        | 85        | 85        | ±0.5       |
| <b>B</b>                       | 35        | 46.6      | 46.6      | 46.6      | 54        | 54        | 54        | 54        | 54        | 54        | ±0.5       |
| <b>C</b>                       | 24.3      | 22.3      | 22.3      | 22.3      | 30.3      | 30.3      | 30.3      | 40.3      | 40.3      | 40.3      | ±0.5       |
| <b>D</b>                       | 43.5      | 50.5      | 50.5      | 50.5      | 64.8      | 64.8      | 64.8      | 64.8      | 64.8      | 64.8      | ±0.5       |
| <b>E</b>                       | 32.5      | 44.5      | 44.5      | 44.5      | 49.8      | 49.8      | 49.8      | 49.8      | 49.8      | 49.8      | ±0.5       |
| <b>F</b>                       | 54        | 61        | 61        | 61        | 75        | 75        | 75        | 75        | 75        | 75        | ±0.3       |
| <b>G</b>                       | 21        | 21        | 21        | 21        | 27        | 27        | 27        | 27        | 27        | 27        | ±0.2       |
| <b>H</b>                       | 9.3       | 10.8      | 10.8      | 10.8      | 12.3      | 12.3      | 12.3      | 12.3      | 12.3      | 12.3      | ±0.5       |
| <b>I</b>                       | 15.3      | 16.8      | 16.8      | 16.8      | 20.8      | 20.8      | 20.8      | 29.8      | 29.8      | 29.8      | ±0.5       |
| <b>J</b>                       | 21.8      | 25.25     | 25.25     | 25.25     | 19.9      | 19.9      | 19.9      | 11.4      | 11.4      | 11.4      | ±0.5       |
| <b>K</b>                       | 5.3       | 5.3       | 5.3       | 5.3       | 5.3       | 5.3       | 5.3       | 5.3       | 5.3       | 5.3       |            |
| <b>L</b>                       | 6.3       | 6.3       | 6.3       | 6.3       | 6.3       | 6.3       | 6.3       | 6.3       | 6.3       | 6.3       |            |
| <b>M</b>                       | 0.7       | 0.7       | 0.7       | 0.7       | 0.7       | 0.7       | 0.7       | 0.7       | 0.7       | 0.7       |            |
| <b>Connection style -06</b>    |           |           |           |           |           |           |           |           |           |           |            |
| <b>N</b>                       | 6.3 x 0.8 | 6.3 x 0.8 | 6.3 x 0.8 | 6.3 x 0.8 | 6.3 x 0.8 | 6.3 x 0.8 | 6.3 x 0.8 | 6.3 x 0.8 | 6.3 x 0.8 |           |            |
| <b>Connection style -07</b>    |           |           |           |           |           |           |           |           |           |           |            |
| <b>O</b>                       | 8.3       | 8.3       | 8.3       | 8.3       | 8.3       | 8.3       | 8.3       | 8.3       |           |           | ±0.5       |
| <b>P</b>                       | 21.8      | 14        | 14        | 14        | 14.9      | 14.9      | 14.9      | 14.9      |           |           | ±0.5       |
| <b>AWG type wire</b>           | AWG 20    | AWG 20    | AWG 20    | AWG 18    | AWG 18    | AWG 18    | AWG 16    | AWG 16    |           |           |            |
| <b>Wire length</b>             | 140       | 140       | 140       | 140       | 140       | 140       | 140       | 140       |           |           | +5         |
| <b>Connection style -08</b>    |           |           |           |           |           |           |           |           |           |           |            |
| <b>N</b>                       |           |           |           |           |           |           |           | M4        | M4        | M4        |            |
| <b>Recommended torque (Nm)</b> |           |           |           |           |           |           |           | 1.2 - 1.3 | 1.2 - 1.3 | 1.2 - 1.3 |            |
| <b>Earth terminal</b>          |           |           |           |           |           |           |           | 1.5 - 1.7 | 1.5 - 1.7 | 1.5 - 1.7 |            |

All dimensions in mm; 1 inch = 25.4 mm  
Tolerances according: ISO 2768-m/EN 22768-m



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