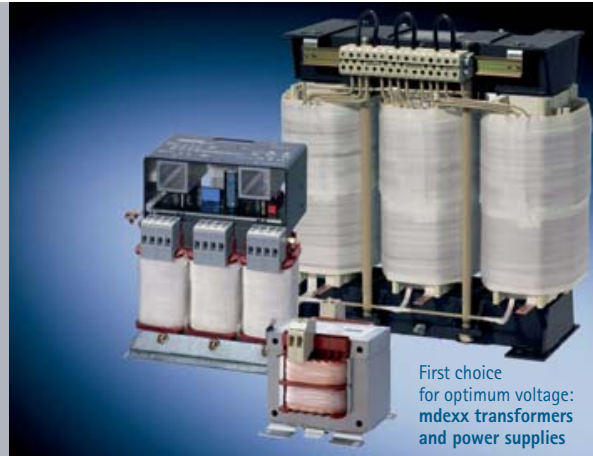


From standard to innovative solutions:  
 High quality wound components and fans



When reliability counts:  
 mdexx reactors and filters



First choice  
 for optimum voltage:  
 mdexx transformers  
 and power supplies

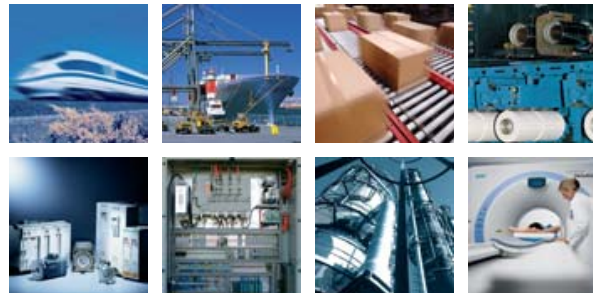


Powerful, quiet, compact:  
 mdexx fans

Line reactors and radio interference suppression filters for mains connection of non-linear loads, output reactors and output filters to adapt the cable length and as motor protection and filter reactors for reactive power compensation systems as standard and as well as customized products for variable speed drives and other applications

Step-up / Step-down and control transformers as well as power supplies as standard products and customized products for machines, plants and controls, drives, traction systems, ships and many other applications

Axial and radial fans as standard products and optimal designed solutions for selected branches as rolling stock, electrical drives engineering, laundries, compressor, power transformers and shipbuilding



# Reactors and filters at a glance

|                                  |  |  |   |   |  |  |   |   |
|----------------------------------|--|--|---|---|--|--|---|---|
|                                  |   |                       |    |    |   |   |  |                                        |
| <b>Product</b>                   | Line/commutation reactors<br>4EM, 4EP, 4EU   | Output reactors<br>4EP, 4EU  | Smoothing reactors<br>4EM, 4ET  | Filter reactors<br>4EP, 4EU   | RFI suppression filter (A)<br>4EF151   | RFI suppression filter (B)<br>4EF151   | Dv/dt filter  | Sine-wave filter<br>4EF11   |
| <b>Function</b>                  | Reduction of harmonics in the power system and of current rise speeds in the input circuit of the converter.                                 | Increase of motor service life. Increase of system availability, option of using longer motor cables.  | Reduction of harmonics and current rise speeds, permitting the use of high-speed DC switches.   | Choking of reactive-power compensation systems. They form a defined resonant circuit with the power factor correction capacitors.   | Damping of line-related radio interference voltages. Avoiding mutual interference by high-frequency interference voltages. | Damping of line-related radio interference voltages. Avoiding mutual interference by high-frequency interference voltages. | Reduction of the voltage rise speed at the motor terminals.                         | Motor supply with almost sinusoidal-like current and voltage. Increase of the motor service life and system availability. |
| <b>Operating voltage</b>         | 1 x 230 V AC 50 Hz<br>1 x 400 V AC 50 Hz<br>3 x 480 V AC 60 Hz<br>3 x 500 V AC 50 Hz<br>3 x 690 V AC 50 Hz<br>3 x 750 V AC 50 Hz             | 3 x 500 V AC   | 4ET: 1150 V DC<br>4EM: 750 V DC   | 3 x 400 V AC  | 1 x 250 V AC<br>3 x 520 V AC   | 1 x 250 V AC<br>3 x 480 V AC   | 3 x 500 V AC  | 3 x 500 V AC  |
| <b>Power range <sup>1)</sup></b> | For drives of 0 to 1500 kW   | For drives of 1.5 to 75 kW   | For drives up to 30 kW, energy contents of 0.38 Ws to 6300 Ws   | For filter bank rating of 5 to 100 kvar   | For drives of 0.55 to 900 kW   | For drives of 0.55 to 90 kW  | Available upon request  | For drives of 1.5 to 132 kW   |
| <b>Currents</b>                  | 1.5 to 2500 A  | 4 to 150 A   | 1.75 to 40 A  | 8 to 175 A  | 10 to 1600 A   | 8 to 200 A   |   | 4 to 250 A  |
| <b>Frequency</b>                 | 50 Hz (60 Hz)  | Max. 200 Hz  |   | 50 Hz   | 60 Hz  | 60 Hz  | Max. 200 Hz   | Max. 150 Hz   |
| <b>Rated temperature</b>         | t <sub>a</sub> 40 °C   | t <sub>a</sub> 40 °C   | t <sub>a</sub> 40 °C  | t <sub>a</sub> 40 °C  | t <sub>a</sub> 40 °C   | t <sub>a</sub> 40 °C   | t <sub>a</sub> 40 °C  | t <sub>a</sub> 40 °C  |
| <b>Degree of protection</b>      | IP00   | IP00   | IP00  | IP00  | ≤220 A IP20, > 220 A IP00  | IP20   | IP00  | IP00  |
| <b>Connection</b>                | Terminal, flat connector   | Terminal, flat connector   | Terminal, flat connector  | Terminal, flat connector  | Terminal, flat connector   | Terminal   | Terminal, flat connector  | Terminal, flat connector  |
| <b>Approval</b>                  | cRUus  | cRUus  | cRUus   | cRUus   | cRUus partially<br>ENEC partially  | cRUus partially<br>ENEC partially  |   | cRUus   |
| <b>Special features</b>          | Voltage drop of 2% related to model, and/or 4%. Permissible voltage stressing: 4EM 690 V AC, 4EU/4EP 1000 V AC, 4EP with terminals 690 V AC. | Applicable:<br>• Clock frequency 4 kHz to 8 kHz<br>• Motor cable max. 300 m unshielded, 200 m shielded | Ripples of the overlaid AC current 30%. Permissible voltage stressing: 4EM 690 V AC, 4ET with terminals 800 V AC, 4ET with flat connectors 1s000 V. | Considered harmonic load: Basic wave I1 (50 Hz)=110 %<br>5th harmonic I5 (250 Hz)=6 %<br>7th harmonic I7 (350 Hz)=5%<br>11th harmonic I11 (550)=3.5%<br>Permissible overload 5% | Filter recommended for interference suppression in accordance with EN 55011 Class A  | Filter recommended for interference suppression in accordance with EN 55011 Class B  | 4 to 8 kHz  | Applicable:<br>• Clock frequency 4 kHz to 8 kHz<br>• Motor cable max. 300 m unshielded, 200 m shielded                    |

<sup>1)</sup> All models are also available with a higher power range. Should you be interested or if you would like further advice, please contact e-mail: [anfrage@mdexx.com](mailto:anfrage@mdexx.com)