

Capacitors for Power Electronics



FEATURES

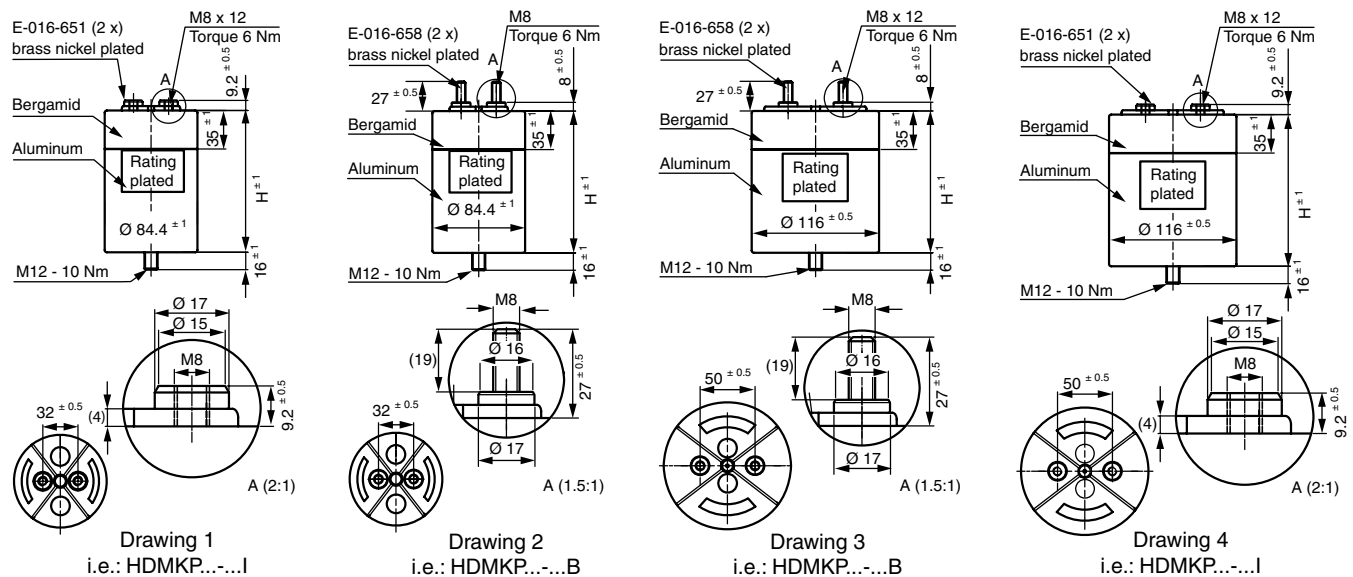
- High RMS current rating: up to 150 A
- High impulse current rating: up to 25 kA
- Low self-inductance of < 70 nH
- High reliability and life expectancy
- Withstands heavy-duty shock and vibration
- Non-polar dielectric

APPLICATIONS

- DC-linking and DC-filtering in industry and traction converters
- DC-linking in low - power drives
- DC-linking in windturbine converters
- Impulse discharge capacitors for magnetizing and welding
- Replacement of aluminum electrolytic capacitors (lower capacitance, higher currents)
- AC filter in UPS

| QUICK REFERENCE DATA | |
|--|--|
| DESCRIPTION | VALUE |
| Dielectric | Metallized polypropylene |
| Dissipation factor ($\tan \delta_0$) | $< 2 \times 10^{-4}/1 \text{ kHz}$ |
| Capacitance tolerance | $\pm 5 \%$ |
| Operating temperature (hot spot) | $\theta_{\text{min.}} - 40 \text{ }^\circ\text{C}$ $\theta_{\text{max.}} + 80 \text{ }^\circ\text{C}$ |
| Inductance | $< 70 \text{ nH}$ |
| Lifetime expectancy | 100 000 h at U_R and $< 70 \text{ }^\circ\text{C}$ hotspot |
| Reliability | 100 FIT |
| Test voltage | Terminal/terminal = $1.5 \times U_{RDC}$, 10 s terminal/case = $2 \times U_{RDC} + 1000 V_{AC}$, 60 s |
| Casing material | Aluminum/bergamid 3700 UF |
| Filling | Resin dry, UL 94 V-0 |
| Standards | IEC 61071-1, IEC 61881 and EN61071-1 |

DIMENSIONS





| HDMKP 900, U_{NDC} = 900 V, U_N = 220 V_{RMS} | | | | | | | | | | | | |
|--|------------------------|----------------------------|------------------------|--------------------------|--------------------------|-----------------------|-----------|----------------|--------------|----------------|-------------------|----------------|
| TYPE | C _N [µF] | VOLTAGE V _{DC} | R _s [mΩ] | R _{th} [K/W] | I _{max.} [A] | I _p [A] | Î [A] | HEIGHT [mm] | DIA. [mm] | WEIGHT [kg] | PACKAGING UNIT | DRAWING NO. |
| 900-360 | 360 | 900 | 2.4 | 6.0 | 32.0 | 1309 | 3928 | 105 | 84.4 | 0.7 | 4 | 1 and 3 |
| 900-460 | 460 | 900 | 3.2 | 5.4 | 29.0 | 1258 | 3775 | 135 | 84.4 | 0.9 | 4 | 1 and 3 |
| 900-720 | 720 | 900 | 1.3 | 3.2 | 59.0 | 1329 | 3988 | 185 | 84.4 | 1.2 | 4 | 1 and 3 |
| 900-950 | 950 | 900 | 1.7 | 2.7 | 56.0 | 1300 | 3899 | 235 | 84.4 | 1.6 | 4 | 1 and 3 |
| 900-1080 | 1080 | 900 | 0.9 | 2.2 | 85.0 | 1316 | 3948 | 260 | 84.4 | 1.7 | 4 | 1 and 3 |
| 900-2050 | 2050 | 900 | 1.3 | 1.7 | 75.0 | 5610 | 16 830 | 235 | 116 | 3.0 | 4 | 2 and 4 |
| 900-2235 | 2235 | 900 | 0.6 | 1.6 | 120.0 | 8385 | 25 155 | 260 | 116 | 3.3 | 4 | 2 and 4 |
| HDMKP 1.1, U_{NDC} = 1100 V, U_N = 275 V_{RMS} | | | | | | | | | | | | |
| 1.1-240 | 240 | 1100 | 2.9 | 4.1 | 28.0 | 1125 | 3375 | 105 | 84.4 | 0.7 | 4 | 1 and 3 |
| 1.1-325 | 325 | 1100 | 3.8 | 4.8 | 27.0 | 1112 | 3335 | 135 | 84.4 | 0.9 | 4 | 1 and 3 |
| 1.1-480 | 480 | 1100 | 1.6 | 2.5 | 50.0 | 2250 | 6750 | 185 | 84.4 | 1.2 | 4 | 1 and 3 |
| 1.1-650 | 650 | 1100 | 0.8 | 2.7 | 50.0 | 2220 | 6660 | 235 | 84.4 | 1.6 | 4 | 1 and 3 |
| 1.1-720 | 720 | 1100 | 0.5 | 2.2 | 75.0 | 3375 | 10 125 | 260 | 84.4 | 1.7 | 4 | 1 and 3 |
| 1.1-1310 | 1310 | 1100 | 1.5 | 1.8 | 72.0 | 4485 | 13 455 | 235 | 116 | 3.0 | 4 | 2 and 4 |
| 1.1-1425 | 1425 | 1100 | 0.6 | 1.7 | 114.0 | 6680 | 20 045 | 260 | 116 | 3.3 | 4 | 2 and 4 |
| HDMKP 1.35, U_{NDC} = 1350 V, U_N = 325 V_{RMS} | | | | | | | | | | | | |
| 1.35-160 | 160 | 1350 | 3.2 | 6.7 | 26.0 | 900 | 2699 | 105 | 84.4 | 0.7 | 4 | 1 and 3 |
| 1.35-200 | 200 | 1350 | 1.2 | 4.6 | 51.0 | 893 | 2680 | 135 | 84.4 | 0.9 | 4 | 1 and 3 |
| 1.35-320 | 320 | 1350 | 1.7 | 3.5 | 50.0 | 900 | 2699 | 185 | 84.4 | 1.2 | 4 | 1 and 3 |
| 1.35-400 | 400 | 1350 | 2.4 | 3.1 | 45.0 | 820 | 2460 | 235 | 84.4 | 1.6 | 4 | 1 and 3 |
| 1.35-480 | 480 | 1350 | 1.2 | 2.4 | 72.0 | 900 | 2699 | 260 | 84.4 | 1.7 | 4 | 1 and 3 |
| 1.35-910 | 910 | 1350 | 1.6 | 1.9 | 70.0 | 3735 | 11 205 | 235 | 116 | 3.0 | 4 | 2 and 4 |
| 1.35-990 | 990 | 1350 | 0.7 | 1.8 | 108.0 | 5565 | 16 695 | 260 | 116 | 3.3 | 4 | 2 and 4 |
| HDMKP 2.0, U_{NDC} = 2000 V, U_N = 500 V_{RMS} | | | | | | | | | | | | |
| 2.0-70 | 70 | 2000 | 4.4 | 7.2 | 21.0 | 593 | 1778 | 105 | 84.4 | 0.7 | 4 | 1 and 3 |
| 2.0-90 | 90 | 2000 | 5.8 | 5.9 | 20.0 | 585 | 1755 | 135 | 84.4 | 0.9 | 4 | 1 and 3 |
| 2.0-140 | 140 | 2000 | 2.3 | 3.8 | 41.0 | 593 | 1778 | 185 | 84.4 | 1.3 | 4 | 1 and 3 |
| 2.0-180 | 180 | 2000 | 3.0 | 3.1 | 39.0 | 586 | 1757 | 235 | 84.4 | 1.6 | 4 | 1 and 3 |
| 2.0-210 | 210 | 2000 | 1.6 | 2.7 | 60.0 | 593 | 1780 | 260 | 84.4 | 1.7 | 4 | 1 and 3 |
| 2.0-390 | 390 | 2000 | 2.0 | 2.1 | 60.0 | 2455 | 7365 | 235 | 116 | 3.0 | 4 | 2 and 4 |
| 2.0-420 | 420 | 2000 | 0.9 | 1.9 | 90.0 | 3650 | 10 955 | 260 | 116 | 3.3 | 4 | 2 and 4 |
| HDMKP 2.25, U_{NDC} = 2250 V, U_N = 550 V_{RMS} | | | | | | | | | | | | |
| 2.25-55 | 55 | 2250 | 4.8 | 7.4 | 20.0 | 530 | 1590 | 105 | 84.4 | 0.7 | 4 | 1 and 3 |
| 2.25-75 | 75 | 2250 | 6.4 | 6.0 | 19.0 | 523 | 1568 | 135 | 84.4 | 0.9 | 4 | 1 and 3 |
| 2.25-110 | 110 | 2250 | 2.5 | 3.9 | 39.0 | 530 | 1590 | 185 | 84.4 | 1.2 | 4 | 1 and 3 |
| 2.25-150 | 150 | 2250 | 3.3 | 3.2 | 37.0 | 523 | 1568 | 235 | 84.4 | 1.6 | 4 | 1 and 3 |
| 2.25-165 | 165 | 2250 | 1.7 | 2.7 | 56.0 | 530 | 1590 | 260 | 84.4 | 1.7 | 4 | 1 and 3 |
| 2.25-320 | 320 | 2250 | 2.4 | 2.4 | 56.0 | 2235 | 6705 | 235 | 116 | 3.0 | 4 | 2 and 4 |
| 2.25-345 | 345 | 2250 | 1.1 | 2.0 | 90.0 | 3330 | 9990 | 260 | 116 | 3.3 | 4 | 2 and 4 |
| HDMKP 2.7, U_{NDC} = 2700 V, U_N = 660 V_{RMS} | | | | | | | | | | | | |
| 2.7-40 | 40 | 2700 | 5.1 | 8.4 | 18.0 | 464 | 1391 | 105 | 84.4 | 0.7 | 4 | 1 and 3 |
| 2.7-50 | 50 | 2700 | 7.4 | 6.5 | 17.0 | 419 | 1258 | 135 | 84.4 | 0.9 | 4 | 1 and 3 |
| 2.7-80 | 80 | 2700 | 5.1 | 6.8 | 20.0 | 464 | 1391 | 185 | 84.4 | 1.2 | 4 | 1 and 3 |
| 2.7-100 | 100 | 2700 | 7.4 | 5.3 | 19.0 | 419 | 1258 | 235 | 84.4 | 1.6 | 4 | 1 and 3 |
| 2.7-120 | 120 | 2700 | 5.2 | 6.2 | 21.0 | 450 | 1349 | 260 | 84.4 | 1.7 | 4 | 1 and 3 |
| 2.7-220 | 220 | 2700 | 2.4 | 2.4 | 52.0 | 925 | 2775 | 235 | 116 | 3.0 | 4 | 2 and 4 |
| 2.7-240 | 240 | 2700 | 1.1 | 2.0 | 84.0 | 927 | 2781 | 260 | 116 | 3.3 | 4 | 2 and 4 |

Note

- Other voltage, current and capacitance values are available on request



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