



Power Electronic, Standard AC Capacitors

STANDARD CAPACITORS IN CYLINDRICAL CASING, OIL IMPREGNATED, SELF-HEALING, WITH FUSE

AC-CAPACITORS, COMMUTATION AND DAMPING CAPACITORS

Series KMKP/KA 900 V - 3500 V, higher voltages upon request.

Capacitance range from 0.1 to 100 μ F, in relation to rated voltage and dimension. Other capacitance values, upon request.

GENERAL

Vishay ESTA Commutation capacitors are used in static frequency changers. They act, for example, as quenching capacitors taking over for a short time the current of the main thyristor thus making sure that the latter will safely block when the voltage returns.

The current load is very high on commutation and damping capacitors. Owing to the non-sinusoidal characteristic of the voltage path, high pulse-shaped recharge currents occur. With regard to ohmic and dielectric losses, the commutation capacitors have to be of a particularly high quality. Since modern low-loss dielectrics are applied and also the current paths are generously dimensioned, Vishay ESTA commutation capacitors are ideal for such extreme loads.

TECHNICAL DATA OPERATING MODE

continuous operation

CLASS OF APPLICATION

HSF (refer to general information)

IMPREGNATION

Oil (NON-PCB, refer general information)

PERMISSIBLE TEMPERATURE RANGE

Min./max. casing temperature: - 25 °/70 °C

Min./max. storage temperature: - 40 °/85 °C

SELF-DISCHARGE TIME CONSTANT

> 10.000 s

PERMISSIBLE RELATIVE AIR HUMIDITY

95 %

LIFE EXPECTANCY WITH 3% FAILURE RATE

100000h

CONNECTIONS

AMP plugs 6.3 x 0.8

Threaded bolts M10

MOUNTING POSITION

Vertical/Horizontal

Upside down position, upon request only

PROTECTION

Overpressure tear-off fuse, refer to general information

LOSS FACTOR

(50 Hz) 1.5×10^{-4}

(10k Hz) 5.0×10^{-4}

CAPACITANCE TOLERANCE

$\pm 10 \%$

TEST VOLTAGE

terminal/ terminal $2.15 \times U_n / \sqrt{2}$ AC/10 s

terminal/casing $2 \times U_n / \sqrt{2} + 1000$ VAC/60 s

min. 3.000VAC/10 sec.

PEAK CURRENT (periodical) $du/dt \times C$ [A]

STANDARD

VDE 0560/12 IEC 61071-1 EN 61071-1

DIELECTRIC

metallized polypropylene film, refer to general information



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CAPACITORS SERIES KMKP/KA 900 V - 3500 V

RATED VOLTAGE U_n 900 V

RMS voltage U_{rms} 640 V

Peak voltage (periodical) U_s 1344 V

Surge peak voltage (not periodical) U_{smax} 2688 V

DC voltage U_{DC} 1800 V

| MODEL | C μF | I A | du / dt V / μs | DIMENSIONS Ø d x h (mm) | WEIGHT kg | FIGURE* |
|--------------------|---------|--------|-------------------|----------------------------|--------------|---------|
| KMKP 900 - 0.10 IA | 0.10 | 12.0 | 750 | 30 x 52 | 0.04 | 1 |
| KMKP 900 - 0.22 IA | 0.22 | 12.0 | 750 | 30 x 52 | 0.04 | 1 |
| KMKP 900 - 0.33 IA | 0.33 | 12.0 | 600 | 30 x 52 | 0.04 | 1 |
| KMKP 900 - 0.47 IA | 0.47 | 12.0 | 500 | 30 x 52 | 0.04 | 1 |
| KMKP 900 - 0.68 IA | 0.68 | 15.0 | 500 | 30 x 52 | 0.04 | 1 |
| KMKP 900 - 1.0 IA | 1.0 | 16.0 | 500 | 35 x 52 | 0.05 | 1 |
| KMKP 900 - 2.2 IA | 2.2 | 16.0 | 500 | 35 x 72 | 0.07 | 1 |
| KMKP 900 - 3.3 IA | 3.3 | 16.0 | 500 | 35 x 82 | 0.08 | 1 |
| KMKP 900 - 4.7 IA | 4.7 | 18.0 | 300 | 40 x 97 | 0.12 | 1 |
| KMKP 900 - 6.8 IA | 6.8 | 18.0 | 300 | 50 x 92 | 0.18 | 4 |
| KMKP 900 - 10 IA | 10.0 | 18.0 | 300 | 60 x 97 | 0.27 | 4 |
| KMKP 900 - 15 IA | 15.0 | 18.0 | 300 | 60 x 127 | 0.31 | 4 |
| KMKP 900 - 15 IB | 15.0 | 40.0 | 300 | 64 x 109 | 0.31 | 6 l |
| KMKP 900 - 22 IB | 22.0 | 80.0 | 300 | 64 x 140 | 0.45 | 6 l |
| KMKP 900 - 33 IB | 33.0 | 80.0 | 300 | 64 x 240 | 0.68 | 6 l |
| KMKP 900 - 47 IB | 47.0 | 80.0 | 300 | 64 x 240 | 1.06 | 6 l |
| KMKP 900 - 68 IB | 68.0 | 80.0 | 300 | 84 x 240 | 1.33 | 6 l |
| KMKP 900 - 100 IB | 100.0 | 80.0 | 300 | 84 x 340 | 1.42 | 6 l |

*See dimensional drawings document number :13104

Other values available upon request. Standard capacitors types usually, available ex stock. Non-standard and custom styles to be manufactured in accordance with specific orders. Minimum order quantities are applicable depending on the various capacitor types. Vishay reserve the right to change any dimensions without notice.

KMKP/KA



Vishay ESTA

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CAPACITORS SERIES KMKP/KA 900 V - 3500 V

| | | |
|-------------------------------------|------------|---------------|
| RATED VOLTAGE | U_n | 1400 V |
| RMS voltage | U_{rms} | 1000 V |
| Peak voltage (periodical) | U_s | 2100 V |
| Surge peak voltage (not periodical) | U_{smax} | 4200 V |
| DC voltage | U_{DC} | 3000 V |

| MODEL | C μF | I A | du / dt V / μs | DIMENSIONS Ø d x h (mm) | WEIGHT kg | FIGURE* |
|----------------------|---------|--------|-------------------|----------------------------|--------------|---------|
| KMKP 1400 - 0.10 SA | 0.10 | 10.0 | 900 | 40 x 52 | 0.07 | 3 |
| KMKP 1400 - 0.22 SA | 0.22 | 10.0 | 900 | 40 x 52 | 0.07 | 3 |
| KMKP 1400 - 0.33 SA | 0.33 | 10.0 | 900 | 40 x 52 | 0.07 | 3 |
| KMKP 1400 - 0.47 SA | 0.47 | 10.0 | 750 | 40 x 52 | 0.07 | 3 |
| KMKP 1400 - 0.68 IA | 0.68 | 18.0 | 500 | 50 x 72 | 0.16 | 4 |
| KMKP 1400 - 1.0 IA | 1.0 | 18.0 | 500 | 50 x 72 | 0.16 | 4 |
| KMKP 1400 - 2.2 IA | 2.2 | 18.0 | 500 | 50 x 97 | 0.19 | 4 |
| KMKP 1400 - 3.3 IA | 3.3 | 18.0 | 450 | 50 x 127 | 0.25 | 4 |
| KMKP 1400 - 4.7 IB | 4.7 | 40.0 | 450 | 64 x 140 | 0.45 | 6 I |
| KMKP 1400 - 6.8 IB | 6.8 | 60.0 | 450 | 64 x 190 | 0.61 | 6 I |
| KMKP 1400 - 6.8 IBK | 6.8 | 80.0 | 450 | 84 x 140 | 0.78 | 6 I |
| KMKP 1400 - 10 IB | 10.0 | 60.0 | 250 | 64 x 190 | 0.61 | 6 I |
| KMKP 1400 - 15 IB | 15.0 | 80.0 | 250 | 84 x 190 | 1.05 | 6 I |
| KMKP 1400 - 22 IB | 22.0 | 80.0 | 250 | 84 x 190 | 1.16 | 6 I |
| KMKP 1400 - 30 IB | 30.0 | 80.0 | 250 | 84 x 240 | 1.33 | 6 I |
| KMKP 1400 - 0.10 IAX | 0.10 | 10.0 | 900 | 35 x 52 | 0.05 | 2 |
| KMKP 1400 - 0.22 IAX | 0.22 | 10.0 | 900 | 35 x 52 | 0.05 | 2 |
| KMKP 1400 - 0.33 IAX | 0.33 | 10.0 | 900 | 40 x 52 | 0.07 | 2 |
| KMKP 1400 - 0.47 IAX | 0.47 | 10.0 | 750 | 40 x 52 | 0.07 | 2 |
| KMKP 1400 - 1.0 IAX | 1.0 | 10.0 | 500 | 40 x 75 | 0.09 | 2 |

| | | |
|-------------------------------------|------------|---------------|
| RATED VOLTAGE | U_n | 3500 V |
| RMS voltage | U_{rms} | 2480 V |
| Peak voltage (periodical) | U_s | 5208 V |
| Surge peak voltage (not periodical) | U_{smax} | 10416 V |
| DC voltage | U_{DC} | 7200 V |

| MODEL | C μF | I A | du / dt V / μs | DIMENSIONS Ø d x h (mm) | WEIGHT kg | FIGURE* |
|---------------------|---------|--------|-------------------|----------------------------|--------------|---------|
| KMKP 3500 - 0.10 SA | 0.10 | 12.0 | 1900 | 40 x 97 | 0.16 | 3 |
| KMKP 3500 - 0.22 SA | 0.22 | 12.0 | 1900 | 40 x 127 | 0.16 | 3 |
| KMKP 3500 - 0.33 SA | 0.33 | 12.0 | 900 | 50 x 127 | 0.25 | 3 |
| KMKP 3500 - 0.47 SA | 0.47 | 15.0 | 750 | 50 x 127 | 0.25 | 3 |
| KA 3500 - 0.68 SA | 0.68 | 15.0 | 750 | 60 x 127 | 0.36 | 3 |
| KA 3500 - 1.0 SB | 1.0 | 30.0 | 500 | 64 x 190 | 0.61 | 7 II |
| KA 3500 - 1.5 SB | 1.5 | 60.0 | 400 | 84 x 190 | 1.05 | 7 II |
| KA 3500 - 2.0 SB | 2.0 | 80.0 | 400 | 84 x 190 | 1.05 | 7 II |
| KA 3500 - 3.0 SB | 3.0 | 80.0 | 400 | 84 x 210 | 1.16 | 7 II |

*See dimensional drawings document number :13104

Other values available upon request. Standard capacitors types usually, available ex stock. Non-standard and custom styles to be manufactured in accordance with specific orders. Minimum order quantities are applicable depending on the various capacitor types. Vishay reserve the right to change any dimensions without notice.



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