

DC Link Capacitors

APPLICATIONS

- Hybrid vehicles
- Wind plants
- Solar power plants
- Electric energy generation from sea waves
- Medical equipment
- Industrial equipment
- Car electronics
- Railway and turbines (generators)
- Frequency inverters
- DC filtering applications

FEATURES

- High capacitance
- Self-healing properties
- High reliability
- Low losses
- Low dissipation factor of dielectric

CHARACTERISTICS

- Rated capacitance: 1 μF to 100 μF
- Capacitance tolerance: $\pm 5\%$, $\pm 10\%$
- Rated voltage: 450 V DC, 700 V DC, 900 V DC, 1100 V DC
- Operating temperature range: - 55 °C to 85 °C
- Climatic category: 55/085/56 according to IEC 60068-1
- Life expectancy: ≥ 100.000 hours at U_n
- Rated temperature: 85 °C
- Max. operating temperature (case): 105 °C

REFERENCE STANDARD

- IEC 61071



Dimensional data

Un at 85° = 450V DC

| C | DIMENSIONS (mm) | | | P | P1 | d |
|------------|-----------------|------|----|------|--------------|----------|
| (μ F) | L | H | W | (mm) | (mm) | (mm) |
| 1 | 32 | 19 | 10 | 27.5 | - | 0.8 |
| 2 | 32 | 19 | 10 | 27.5 | - | 0.8 |
| 3 | 32 | 19 | 10 | 27.5 | - | 0.8 |
| 4 | 32 | 21 | 12 | 27.5 | - | 0.8 |
| 5 | 32 | 22 | 13 | 27.5 | - | 0.8 |
| 6 | 32 | 24.5 | 15 | 27.5 | - | 0.8 |
| 7 | 32 | 24.5 | 15 | 27.5 | - | 0.8 |
| 8 | 32 | 26.5 | 17 | 27.5 | - | 0.8 |
| 9 | 32 | 28 | 18 | 27.5 | - | 0.8 |
| 10 | 32 | 28 | 18 | 27.5 | - | 0.8 |
| 12 | 32 | 32 | 18 | 27.5 | - | 0.8 |
| 14 | 32 | 33 | 20 | 27.5 | - | 0.8 |
| 15 | 32 | 35 | 20 | 27.5 | - | 0.8 |
| 20 | 32 | 40 | 25 | 27.5 | - | 0.8 |
| 22 | 32 | 40 | 25 | 27.5 | - | 0.8 |
| 12 | 42 | 27 | 16 | 37.5 | - | 1 or 1.2 |
| 15 | 42 | 31 | 18 | 37.5 | 10.2 | 1 or 1.2 |
| 22 | 42 | 38 | 21 | 37.5 | 10.2 | 1 or 1.2 |
| 25 | 42 | 38 | 21 | 37.5 | 10.2 | 1 or 1.2 |
| 35 | 42 | 43 | 28 | 37.5 | 10.2 | 1 or 1.2 |
| 40 | 42 | 45 | 30 | 37.5 | 10.2 or 20.3 | 1 or 1.2 |
| 50 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 55 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 60 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 75 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 80 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 85 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 100 | 57.5 | 55 | 40 | 52.5 | 20.3 | 1.2 |

Un at 85° = 700V DC

| C | DIMENSIONS (mm) | | | P | P1 | d |
|------------|-----------------|------|----|------|------|----------|
| (μ F) | L | H | W | (mm) | (mm) | (mm) |
| 1 | 32 | 19 | 10 | 27.5 | - | 0.8 |
| 2 | 32 | 19 | 10 | 27.5 | - | 0.8 |
| 3 | 32 | 21 | 12 | 27.5 | - | 0.8 |
| 4 | 32 | 22 | 13 | 27.5 | - | 0.8 |
| 5 | 32 | 24.5 | 15 | 27.5 | - | 0.8 |
| 6 | 32 | 26.5 | 17 | 27.5 | - | 0.8 |
| 7 | 32 | 28 | 18 | 27.5 | - | 0.8 |
| 8 | 32 | 28 | 18 | 27.5 | - | 0.8 |
| 9 | 32 | 32 | 18 | 27.5 | - | 0.8 |
| 10 | 32 | 33 | 20 | 27.5 | - | 0.8 |
| 12 | 32 | 35 | 20 | 27.5 | - | 0.8 |
| 15 | 32 | 40 | 25 | 27.5 | - | 1 or 1.2 |
| 8 | 42 | 27 | 16 | 37.5 | - | 1 or 1.2 |
| 12 | 42 | 31 | 18 | 37.5 | 10.2 | 1 or 1.2 |
| 15 | 42 | 38 | 21 | 37.5 | 10.2 | 1 or 1.2 |
| 20 | 42 | 40 | 21 | 37.5 | 10.2 | 1 or 1.2 |

Un at 85° = 700V DC

| | | | | | | |
|---------|------|----|----|------|--------------|----------|
| 25 | 42 | 43 | 28 | 37.5 | 10.2 | 1 or 1.2 |
| 30 | 42 | 45 | 30 | 37.5 | 10.2 or 20.3 | 1 or 1.2 |
| 35(10%) | 42 | 45 | 30 | 37.5 | 10.2 or 20.3 | 1 or 1.2 |
| 40 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 45 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 50 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 55 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 60 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 65 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 75(10%) | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 75 | 57.5 | 55 | 40 | 52.5 | 20.3 | 1.2 |

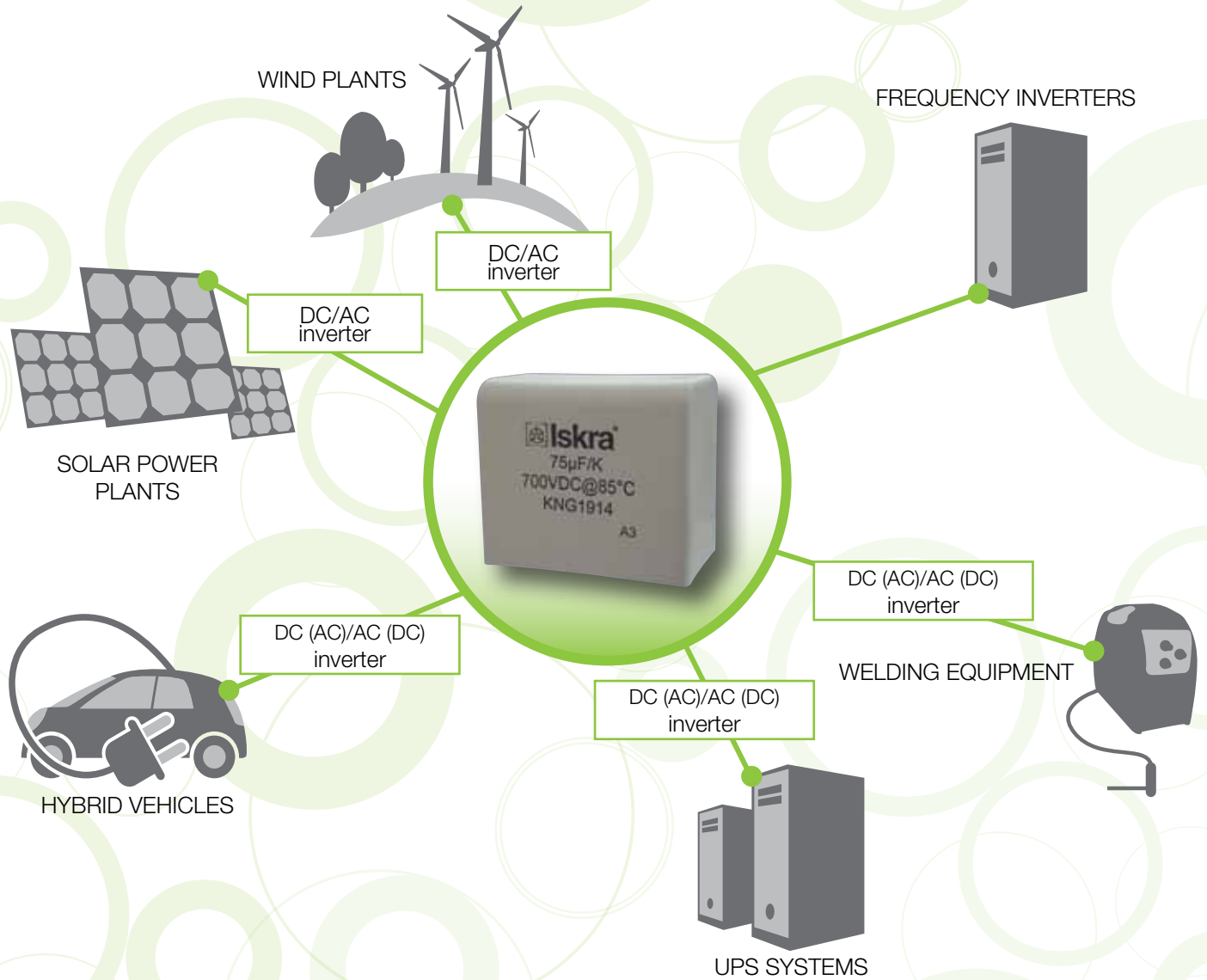
Un at 85° = 900V DC

| C | DIMENSIONS (mm) | | | P | P1 | d |
|------------|-----------------|------|----|------|--------------|----------|
| (μ F) | L | H | W | (mm) | (mm) | (mm) |
| 1 | 32 | 19 | 10 | 27.5 | - | 0.8 |
| 2 | 32 | 21 | 12 | 27.5 | - | 0.8 |
| 3 | 32 | 24.5 | 15 | 27.5 | - | 0.8 |
| 4 | 32 | 26.5 | 17 | 27.5 | - | 0.8 |
| 5 | 32 | 28 | 18 | 27.5 | - | 0.8 |
| 6 | 32 | 33 | 20 | 27.5 | - | 0.8 |
| 7 | 32 | 33 | 20 | 27.5 | - | 0.8 |
| 5 | 42 | 27 | 16 | 37.5 | - | 0.8 |
| 8 | 42 | 31 | 18 | 37.5 | 10.2 | 1 or 1.2 |
| 12 | 42 | 38 | 21 | 37.5 | 10.2 | 1 or 1.2 |
| 15 | 42 | 43 | 28 | 37.5 | 10.2 | 1 or 1.2 |
| 20 | 42 | 45 | 30 | 37.5 | 10.2 or 20.3 | 1 or 1.2 |
| 25 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 30 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 35 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 40 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 50(10%) | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 50 | 57.5 | 55 | 40 | 52.5 | 20.3 | 1.2 |

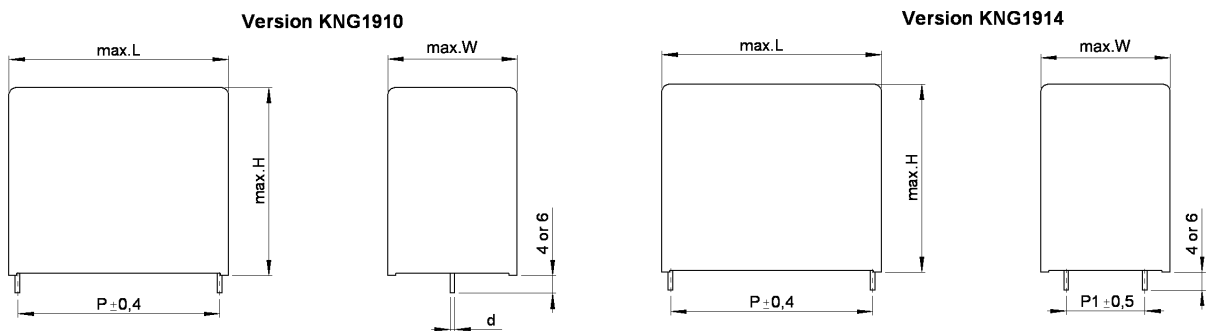
Un at 85° = 1100V DC

| C | DIMENSIONS (mm) | | | P | P1 | d |
|------------|-----------------|------|----|------|--------------|----------|
| (μ F) | L | H | W | (mm) | (mm) | (mm) |
| 1 | 32 | 19 | 10 | 27.5 | - | 0.8 |
| 2 | 32 | 24.5 | 15 | 27.5 | - | 0.8 |
| 3 | 32 | 28 | 18 | 27.5 | - | 0.8 |
| 4 | 32 | 32 | 18 | 27.5 | - | 0.8 |
| 5 | 32 | 33 | 20 | 27.5 | - | 0.8 |
| 5 | 42 | 31 | 18 | 37.5 | 10.2 | 1 or 1.2 |
| 8 | 42 | 38 | 21 | 37.5 | 10.2 | 1 or 1.2 |
| 12 | 42 | 43 | 28 | 37.5 | 10.2 | 1 or 1.2 |
| 14 | 42 | 45 | 30 | 37.5 | 10.2 or 20.3 | 1 or 1.2 |
| 20 | 57.5 | 45 | 30 | 52.5 | 20.3 | 1.2 |
| 25 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |
| 27 | 57.5 | 50 | 35 | 52.5 | 20.3 | 1.2 |

Applications and Dimensions



DIMENSIONS

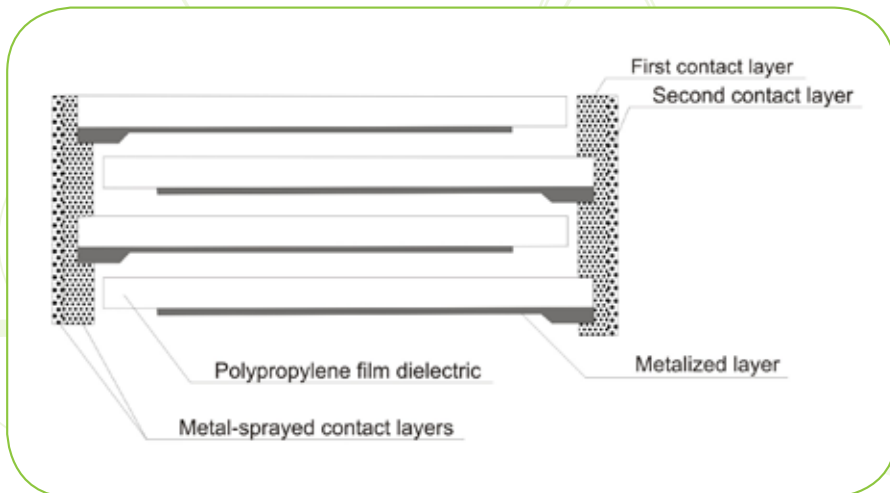


Construction, Cautions and Warnings

CONSTRUCTION

- Dielectric: Polypropylene film
- Capacitor electrodes: Vacuum deposited
- Casing: Plastic case with epoxy resin sealing flame retardant (UL94 V-0)
- Terminal: Parallel tinned copper, 2 and 4 pins

INTERNAL CONSTRUCTION:



CAUTIONS AND WARNINGS:

Mechanical overloads



Attention: The capacitor is designed for mounting on a PC board. After it has been soldered to the PC board do not move the capacitor. The capacitor shall not be mounted on places where vibrations or accelerations occur. Do not exceed the tested ability to withstand vibration. Avoid any compressive, tensile or flexural stress.

Note: Movement of the capacitor within the case can cause low insulation resistance, shorts, failure on terminals and the capacitor case.

Overload



Attention: Do not overload the capacitor. Avoid overload of the capacitor and consider the flammability of materials.

Impulses



Attention: If electric energy impulses are higher, dielectric breaks down. Avoid external electric energy impulse. The peak voltage (U_p , AC) shall not be higher than the rated DC voltage (U_N , DC).

Environmental conditions



Attention: Do not exceed operating temperature. Do not expose the capacitor to humidity longer than it is recommended. Do not expose the capacitor to increased temperature more than it is recommended. The dissipation factor may change up and down with increased temperature. Avoid external fire or electricity.

Note: If the capacitor is exposed to humidity longer than it is recommended, the insulation resistance can occur. The place around the capacitor units must have good air circulation.