SUPERCAPACITOR

# K58-31

SPECIAL PURPOSES

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**AZHYAR.673623.009 TU**


Commercially produced capacitors. Available to order.

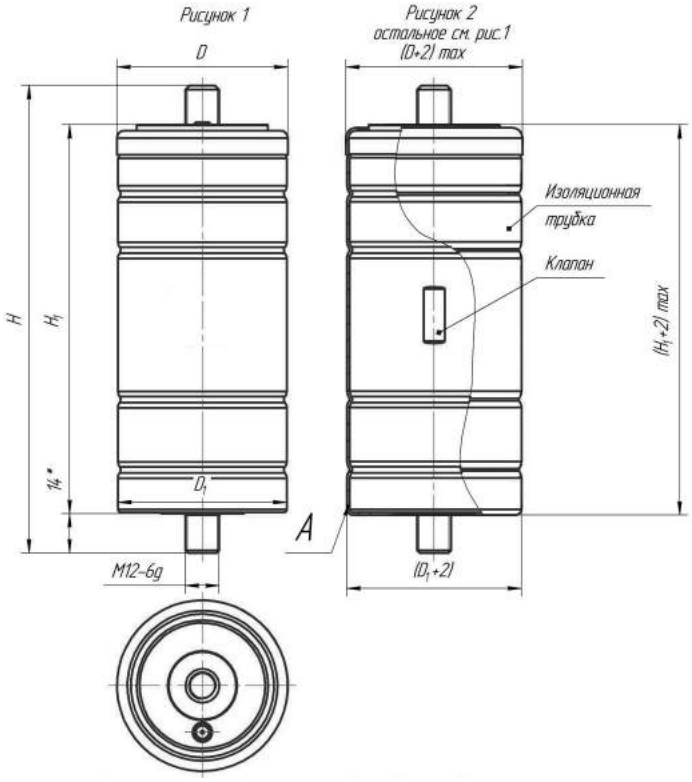
## APPLICATION

- Maintaining of the equipment operation when voltage depression occurs;
- Safely shutdown of machineries;
- Maintaining "a bridge" when switching between the power supplies;
- Providing high discharging current in the equipment;
- Rapid electrical energy accumulation and further providing to the grid;
- Providing temporary electricity power for equipment while operating in autonomous mode;
- As an energy storage device in difficult remote equipment;
- As an power supply in single-use system;
- To improve the operational reliability of the equipment;
- Are used together with chemical and other current sources to extend the service life;

## MAIN PARAMETERS

| Name | Value |
|---|---|
| Rated voltage, V | 2.7 |
| Rated capacitance, F | 680; 1 000; 1 500; 2 200; 3 300; 4 700 |
| Capacitance tolerance, % | +50...-20; ±20 |
| Maximum operating temperature Tenv, °C | 65 |
| Minimal operating temperature Tenv, °C | -60 |
| Maximum-permissible overvoltage, V | 2.85 |

## DIMENSIONAL DRAWING OF CAPACITOR




## CAPACITORS OVERALL DIMENSIONS AND MASS

| $U_R$, V | $C_R$, F | Size DxH, mm | Mass, g |
|---|---|---|---|
| 2.7 | 680 | 60x80 | 280 |
| 2.7 | 1 000 | 60x102 | 340 |
| 2.7 | 1 500 | 60x113 | 400 |
| 2.7 | 2 200 | 60x130 | 500 |
| 2.7 | 3 300 | 60x166 | 600 |
| 2.7 | 4 700 | 60x232 | 800 |

## CASE PROTECTION

| Climatic version | Lacquer coating | Jacketing with insulating tube | Figure |
|---|---|---|---|
| Capacitors are intended for internal wiring with resistance to high humidity of 98% at the temperature 25°C | - | - | 1 |
| Capacitors are intended for internal wiring with resistance to high humidity of 98% at the temperature 25°C | - | + | 2 |
| Capacitors are intended for internal wiring with resistance to high humidity of 98% at the temperature 35°C | + | - | 2 |
| Capacitors are intended for internal wiring with resistance to high humidity of 98% at the temperature 35°C | + | + | 2 |

## CAPACITOR ELECTRIC PARAMETERS VALUE

| $U_R$, V | $C_R$, F | Size DxH, mm | $I_{LEAK}$, mA T=25°C, 72h | Maximum charging and discharging current, A (discharge within 1sec. from $U_R$ to ½$U_R$) | Stored energy, Wh | Specific stored energy, Wh/kg | Specific output, W/kg |
|---|---|---|---|---|---|---|---|
| 2.7 | 680 | 60x80 | 2.7 | 45 | 0.689 | 2.46 | 111.58 |
| 2.7 | 1 000 | 60x102 | 3 | 60 | 1.013 | 2.98 | 122.52 |
| 2.7 | 1 500 | 60x113 | 4.2 | 70 | 1.519 | 3.8 | 121.5 |
| 2.7 | 2 200 | 60x130 | 6 | 90 | 2.228 | 4.46 | 124.97 |
| 2.7 | 3 300 | 60x166 | 10 | 500 | 3.341 | 5.57 | 145.8 |
| 2.7 | 4 700 | 60x232 | 20 | 500 | 4.759 | 5.95 | 136.69 |

## CAPACITORS RELIABILITY

| Reliability Operation modes | $t_\lambda$, hours | $t_\lambda$, cycles | λ, 1/hour, max |
|---|---|---|---|
| Maximum-permissible mode ($U_R$, Tenv=65°C) | 1 500 | | $5x10^{-5}$ |
| Maximum-permissible mode (charge to $U_R$, discharge to ½ $U_R$, Tenv=65°C) | | 30 000 | $3x10^{-6}$ |
| Typical operating mode ($U_R$, Tenv=25°C) | 90 000 | | $1x10^{-6}$ |
| Typical operating mode (charge to $U_R$, discharge to ½ $U_R$, Tenv=25°C) | | 500 000 | $3x10^{-7}$ |

Gamma-rated time of capacitor storageability Tcy at y=95%, 25 years

## EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

CAPACITOR K58-31 – 2.7V – 3300 F (+50-20)% – AZHYAR.673623.009 TU
CAPACITOR K58-31 – 2.7V – 4700 F ±20% – I AZHYAR.673623.009 TU
CAPACITOR K58-31 – 2.7V – 3300 F ±20% – B AZHYAR.673623.009 TU
CAPACITOR K58-31 – 2.7V – 4700 F (+50-20)% – IB AZHYAR.673623.009 TU