

AZHYAR.673541.019 TU



Are highly-reliable polar, radial screw capacitors. Polar sealed radial screw capacitor type in isolated and non-isolated case is used for operation in direct current and ripple current circuits, secondary power sources and converter equipment.

MAIN PARAMETERS

Name	Value
Rated voltage, V	250...450
Rated capacitance, µF	470...15 000
Temporary overvoltage within 10 sec., V	1.15 U _R (U _R =250) 1.1 U _R (U _R >250)
Capacitance tolerance (25 °C, 50 Hz), %	+50...-20; ±20
Maximum operating temperature Tenv, °C	+85
Minimal operating temperature Tenv, °C	-40

CAPASITOR PHYSICAL CONFIGURATION

Variant A (fastening with a clamp)

Isolated, non-isolated, with
moisture-resistant coatings

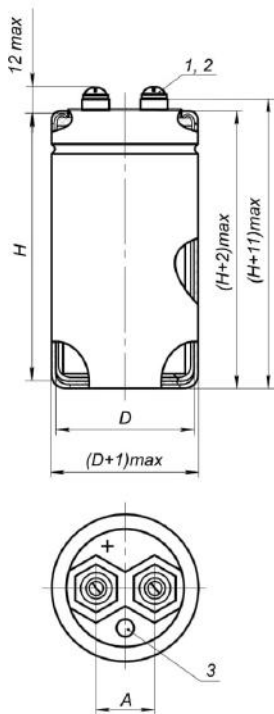


Fig. 1

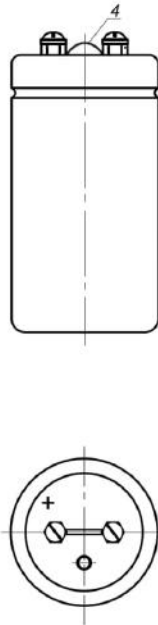


Fig. 2

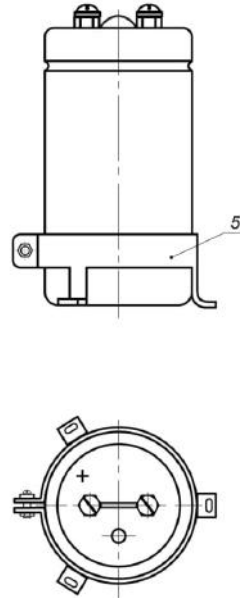


Fig. 3

Variant B (with end pin)

Isolated,
non-isolated

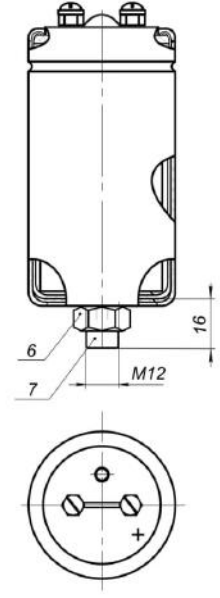


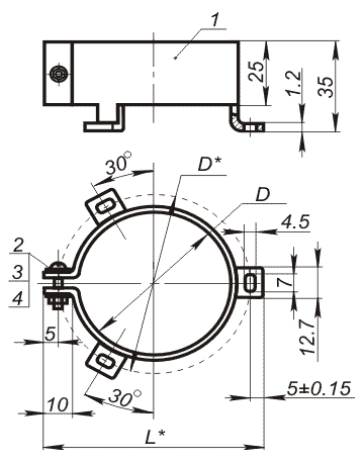
Fig. 4

- 1 – Screw VM5-6gx8.36.019 GOST 17473-80
- 2 – Washer 5.65G 019 GOST 6402-70
- 3 – Explosion proof valve
- 4 – Jumper for discharge
- 5 – Clamp
- 6 – Nut M12-6H.04.016 GOST 2526-70
- 7 – Butt pin

CAPACITORS DIMENSIONS

Figure	1		2			2,3,4								
D, mm	35		50			65			76					
H, mm	80	105	50	60	80	80	105	110	70	80	120	155	170	
A, mm	12.5		22			28.5			32					

OVERALL AND FITTING DIMENSIONS OF A CAPACITOR CLAMP



- 1 – clamp
 2 – screw BM4-6gx12.48.019 GOST 17473
 3 – washer A4,0.01.08 kp.019 GOST 11371
 4 – nut M4-6N.04.019 GOST 5916

D	D*	L*	Mass, g, max
66.2±0.2	78.6	88.6	59.7
77.2±0.2	89.6	99.6	69.6

CAPACITORS RELIABILITY

Reliability Operation modes	Minimal nonfailure operating time, t_{λ} , hours	Capacitor failure rate, λ , 1/hour, max
Maximum-permissible mode (U_R , $T_{env}=85^{\circ}\text{C}$) for capacitors $\varnothing 35\text{mm}$ and capacitors $\varnothing 50\text{mm}$, $H = 50; 60\text{mm}$	10 000	10^{-5}
Maximum-permissible mode (U_R , $T_{env}=85^{\circ}\text{C}$) for capacitors $\varnothing 50...76\text{mm}$; $H = 70...170\text{mm}$	15 000	10^{-5}
Light mode ($0.5U_R$, $T_{env}=60^{\circ}\text{C}$) for capacitors of all dimensions	50 000	10^{-6}
Light mode ($0.5U_R$, $T_{env}=50^{\circ}\text{C}$) for capacitors of all dimensions	100 000	10^{-7}
Storageability Gamma-rated time of capacitor storageability T_{cy} at $\gamma=99.5\%$, years, min	25	

DIMENSION SIZES AND CAPACITOR ELECTRIC PARAMETERS VALUE WHEN DELIVERED

U_R , V	C_R , μF	Size $D \times H$, mm	A, mm	$\text{tg } \delta$, %, 25°C, 50 Hz, max	I_{LEAK} , μA , 25°C, after 5 min., max	Mass, g, max	Z^* , Ohm, 25°C, max	I_R , A, 85°C, 50 Hz, max
250	1 000	35x80	12.5	25	1 840	160	0.50	0.9
250	1 000	50x50	22.0	25	1 840	185	0.50	0.9
250	1 500	35x105	12.5	25	2 430	195	0.30	1.2
250	1 500	50x60	22.0	25	2 430	230	0.30	1.2
250	2 200	50x80	22.0	25	3 170	300	0.20	1.7
250	3 300	65x80	28.5	25	4 200	450	0.15	2.7
250	4 700	65x105	28.5	25	5 360	610	0.08	3.4
250	6 800	65x110	28.5	25	6 930	750	0.05	3.4
250	10 000	76.1x120	32.0	25	9 070	1 050	0.03	4.8

U _R , V	C _R , µF	Size DxH, mm	A, mm	tg δ, %, 25°C, 50 Hz, max	I _{LEAK} , µA, 25°C, after 5 min., max	Mass, g, max	Z*, Ohm, 25°C, max	I _R , A, 85°C, 50 Hz, max
250	15 000	76.1x155	32.0	25	12 030	1 150	0.02	5.9
350	680	35x80	12.5	25	1 780	160	0.45	2.0
350	680	50x50	22.0	25	1 780	185	0.45	2.0
350	1 000	35x105	12.5	25	2 320	195	0.30	2.5
350	1 000	50x60	22.0	25	2 320	230	0.30	2.5
350	1 500	50x80	22.0	25	3 070	300	0.10	3.6
350	2 200	65x80	28.5	25	4 000	450	0.08	5.8
350	3 300	65x105	28.5	25	5 300	610	0.05	7.3
350	4 700	65x110	28.5	25	6 780	750	0.03	7.3
350	6 800	76.1x120	32.0	25	8 760	1 050	0.03	10.3
350	10 000	76.1x155	32.0	25	11 470	1 150	0.02	12.7
400	680	35x105	12.5	25	1 950	195	0.55	3.4
400	680	50x60	22.0	25	1 950	230	0.55	3.4
400	1 000	50x80	22.0	25	2 540	300	0.35	3.6
400	1 500	65x80	28.5	25	3 370	450	0.15	8.0
400	2 200	76.1x70	32.0	25	4 390	600	0.10	9.0
400	3 300	76.1x80	32.0	25	5 810	650	0.05	9.7
400	4 700	76.1x120	32.0	25	7 440	1 050	0.04	13.2
400	6 800	76.1x155	32.0	25	9 620	1 150	0.03	16.8
450	470	35x105	12.5	25	1 640	195	1.10	2.5
450	470	50x60	22.0	25	1 640	230	1.10	2.5
450	680	50x80	22.0	25	2 120	300	0.75	3.8
450	1 000	65x80	28.5	25	2 760	450	0.65	6.1
450	1 500	76.1x70	32.0	25	3 650	600	0.20	7.0
450	2 200	76.1x80	32.0	25	4 760	610	0.10	7.2
450	2 200	65x105	28.5	25	5 300	650	0.10	7.2
450	3 300	76.1x120	32.0	25	6 310	1 050	0.08	10.8
450	4 700	76.1x155	32.0	25	8 070	1 150	0.06	13.3
450	6 800	76.1x170	32.0	25	10 440	1 250	0.04	14.0

* Capacitor impedance Z is measured at frequency 100 kHz for capacitors C_R ≤ 1 000 µF, and at frequency 10 kHz for capacitors C_R > 1 000 µF

Ripple current effective value
versus temperature and frequency can be found from the formula $I_{R0} = I_R \times K_T \times K_F$, where

I_R – allowable ripple current at 85 °C, 50 Hz (See Table “Capacitor electric parameters”)

K_T - I_R CORRECTION FACTOR VERSUS TEMPERATURE

T _{env} , °C	25	40	50	60	70	85
K _T	1.43	1.37	1.31	1.25	1.17	1.0

K_F - I_R CORRECTION FACTOR VERSUS FREQUENCY

F, Hz	50	100	300	600	1 000	10 000	≥50 000
K _F	1	1.25	1.5	1.63	1.69	1.88	2.0

EXAMPLE OF REFERENCE DESIGNATION FOR ORDERING

- CAPACITOR K50-91 a – 450V – 1000µF (+50 -20)% (65×80) I B AZHYAR.673541.019 TU
- CAPACITOR K50-91 b – 250V – 3300µF ±20% (50×80) I AZHYAR.673541.019 TU
- CAPACITOR K50-91 a – 400V – 1500µF (+50 -20)% (65×80) AZHYAR.673541.019 TU
- CAPACITOR K50-91 a – 400V – 470µF (+50 -20)% (35×105) B AZHYAR.673541.019 TU