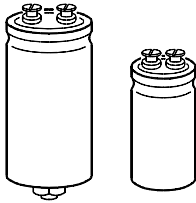


Maximum reliability and long useful life
Operating temperature up to 105 °C

Construction

- Charge-discharge proof, polar
- Aluminum case with insulating sleeve
- Poles with screw terminal connections
- Mounting with ring clips, clamps or threaded stud
- The bases of types with threaded stud and $d \leq 76,9$ mm are not insulated, types with $d = 91$ mm have fully insulated bases



KAL0272-T

B 43 570 B 43 550

Features

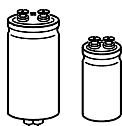
- Maximum reliability
- Good thermal characteristics and high ripple current characteristics
- Long useful life
- Wide temperature range
- All-welded construction ensures reliable electrical contact

Applications

- Highly professional power supplies
- Power electronics, e. g. capacitor banks in current converters

Specifications and characteristics in brief

Rated voltage U_R	160 to 400 V–
Surge voltage U_S	$1,15 \cdot U_R$ (for $U_R \leq 250$ V–) $1,10 \cdot U_R$ (for $U_R \geq 350$ V–)
Rated capacitance C_R	150 to 15 000 μ F
Capacitance tolerance	– 10/+ 30 % $\triangle$ Q
Useful life 40 °C, U_R 85 °C, U_R , I_{-max} 105 °C, U_R , I_{-R}	> 200 000 h ($3 \cdot I_{-R, 105 \text{ °C}}$) > 15 000 h > 6 000 h
Failure percentage	≤ 1 % (during useful life)
Failure rate	≤ 20 fit ($\leq 20 \cdot 10^{-9}$ /h)
Voltage endurance test	2 000 h, 105 °C (at U_R , I_{-R})
Leakage current I_{lka} (5 min, 20 °C)	$1\,000 \mu\text{C} \leq C_R \cdot U_R < 470\,000 \mu\text{C}$: $I_{lka} \leq 0,006 \mu\text{A} \cdot \left(\frac{C_R}{\mu\text{F}} \cdot \frac{U_R}{V} \right) + 4 \mu\text{A}$



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Specifications and characteristics in brief

Leakage current I_{lka} (5 min, 20 °C)	$C_R \cdot U_R \geq 470\,000\ \mu\text{C}$ $I_{lka} \leq 0,3\ \mu\text{A} \cdot \left(\frac{C_R}{\mu\text{F}} \cdot \frac{U_R}{\text{V}} \right)^{0,7} + 4\ \mu\text{A}$
Self-inductance L_{ESL}	$d = 35,7\ \text{mm}$: approx. 10 nH $d = 51,6\ \text{mm}$: approx. 15 nH $d \geq 64,3\ \text{mm}$: approx. 20 nH
IEC climatic category	in accordance with IEC 68-1 $\leq 350\ \text{V}$ –: 40/105/56 (–40 °C/+105 °C, 56 days damp heat test) ¹⁾ $400\ \text{V}$ –: 25/105/56 (–25 °C/+105 °C, 56 days damp heat test)
Detail specifications	similar to CECC 30 301-803, CECC 30 301-807, (similar to CECC 30 301-046, similar to DIN 45 910 part 128)
Sectional specifications	IEC 384-4 (DIN 45 910 part 12)
Vibration resistance	in accordance with IEC 68-2–6, test Fc: displacement amplitude 0,75 mm, frequency range 10 to 55 Hz, acceleration max. 10 g, duration $3 \times 2\ \text{h}$

Due to the current load capability of the contact elements, the following current limits must not be exceeded, even if the frequency and temperature factors have been taken into account:

Capacitor diameter	$\leq 51,6\ \text{mm}$	64,3 mm	76,9 mm	91,0 mm
Maximum current	30 A	40 A	50 A	60 A

Accessories

The following items are included in the delivery package, but are not fastened to the capacitors:

	Thread	Toothed washers	Screws/Nuts	Maximum torque
For terminals	M 5	A 5,1 DIN 6797	Cylinder-head screw M 5 × 8 DIN 84-4.8	2 Nm
	M 6	A 6,4 DIN 6797	Cylinder-head screw M 6 × 12 DIN 85-4.8	2,5 Nm
For mounting	M 8	J 8,2 DIN 6797	Hex nut BM 8 DIN 439	4 Nm
	M 12	J 12,5 DIN 6797	Hex nut BM 12 DIN 439	10 Nm

The following must be ordered separately:

Ring clips

B 44 030 ([cf. page 142](#))

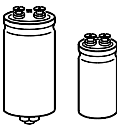
Clamps for capacitors with $d \geq 64,3\ \text{mm}$

B 44 030 ([cf. page 146](#))

Insulating parts

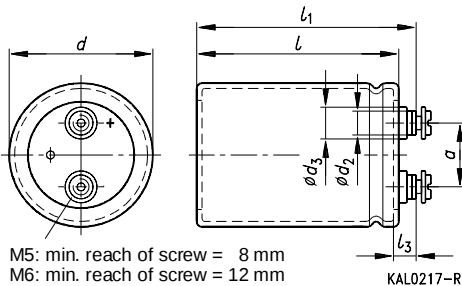
B 44 020 ([cf. page 139](#))

1) For case size 76,9 mm × 220,7 mm and Ø 91 mm: IEC climatic category 25/105/56

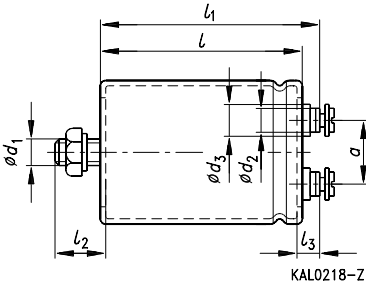


Outline drawings

Type B 43 550
Ring clip/clamp mounting



Type B 43 570
Threaded stud mounting



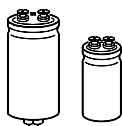
Positive pole marking: +

The base of all types with stud mounting and $d = 91$ mm is fully insulated (the lengths l and l_1 are increased by 0,5 mm in these cases). Also refer to the notes on mounting given [on page 141](#).

Ter- minal	Dimensions (mm) with insulating sleeve									Approx. wt. (g)
	d	$l \pm 1$	$l_1 \pm 1$	$l_2^{+0}_{-1}$	l_3	d_1	$d_2 \text{ max}$	$d_3 \text{ max}$	$a^{+0,2}_{-0,4}$	
M 5	35,7+ 0/- 0,8	55,7	62,2	13	7,0+ 0,2/- 1	M 8	8,2	13,5	12,7	65
M 5	35,7+ 0/- 0,8	80,7	87,2	13	7,0+ 0,2/- 1	M 8	8,2	13,5	12,7	105
M 5	35,7+ 0/- 0,8	105,7	112,2	13	7,0+ 0,2/- 1	M 8	8,2	13,5	12,7	135
M 5	51,6+ 0/- 0,8	80,7	87,2	17	7,0+ 0,2/- 1	M 12	8,2	13,5	22,2	220
M 5	51,6+ 0/- 0,8	105,7	112,2	17	7,0+ 0,2/- 1	M 12	8,2	13,5	22,2	280
M 5	64,3+ 0/- 0,8	105,7	112,2	17	7,0+ 0,2/- 1	M 12	8,2	13,5	28,5	440
M 6	76,9+ 0/- 0,7	97,0	103,3	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	540
M 6	76,9+ 0/- 0,7	143,2	149,0	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	840
M 6	76,9+ 0/- 0,7	220,7	226,5	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	1300
M 6	91,0+ 0/- 2	144,5	149,8	17	6,4+ 1,1/- 0,8	M 12	17,7	17,7	31,7	1200

Packing units

Capacitor diameter d	Packing units (pieces)
35,7 mm	72
51,6 mm	36
64,3 mm	20
76,9 mm	16
91,0 mm	8

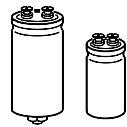


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Overview of available types

U_R (V–)	160	250	350	400
C_R (μF)	Case dimensions $d \times l$ (mm)			
150			$35,7 \times 55,7$	$35,7 \times 55,7$
220		$35,7 \times 55,7$	$35,7 \times 80,7$	$35,7 \times 80,7$
330	$35,7 \times 55,7$	$35,7 \times 55,7$	$35,7 \times 105,7$	$35,7 \times 105,7$
470	$35,7 \times 55,7$	$35,7 \times 80,7$	$51,6 \times 80,7$	$51,6 \times 80,7$
680	$35,7 \times 80,7$	$51,6 \times 80,7$	$51,6 \times 105,7$	$51,6 \times 105,7$
1 000	$35,7 \times 80,7$	$51,6 \times 80,7$	$51,6 \times 105,7$	$64,3 \times 105,7$
1 500	$51,6 \times 80,7$	$51,6 \times 80,7$	$64,3 \times 105,7$	$76,9 \times 105,7$
2 200	$51,6 \times 80,7$	$64,3 \times 105,7$	$76,9 \times 105,7$	$76,9 \times 143,2$
3 300	$64,3 \times 105,7$	$76,9 \times 105,7$	$76,9 \times 143,2$	$76,9 \times 220,7$ $91,0 \times 144,5$
4 700	$64,3 \times 105,7$	$76,9 \times 143,2$	$76,9 \times 220,7$ $91,0 \times 144,5$	$76,9 \times 220,7$
6 000			$76,9 \times 220,7$	
6 800	$76,9 \times 105,7$	$76,9 \times 143,2$		
10 000	$76,9 \times 143,2$	$76,9 \times 220,7$ $91,0 \times 144,5$		
15 000	$76,9 \times 220,7$ $91,0 \times 144,5$			

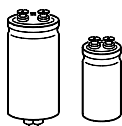
The capacitance and voltage ratings listed above are available in smaller cases upon request. Other voltage and capacitance ratings are also available upon request.



Technical data and ordering codes

U_R	C_R	Case dimensions $d \times l$	$R_{ESR, typ}$ 100 Hz 20 °C mΩ	$R_{ESR, max}$ 100 Hz 20 °C mΩ	Z_{max} 10 kHz 20 °C mΩ	I_{max} 100 Hz 40 °C A	I_{max} 100 Hz 85 °C A	I_{max} 100 Hz 105 °C A	Ordering code ¹⁾
V-	μF	mm							Short code
B43550-, B43570-									
160	330	35,7 × 55,7	210	450	290	5,1	3,1	1,5	-A1337-Q
	470	35,7 × 55,7	150	240	200	6,0	3,7	1,8	-A1477-Q
	680	35,7 × 80,7	100	140	130	8,2	5,0	2,4	-A1687-Q
	1 000	35,7 × 80,7	70	100	98	9,8	6,0	2,9	-C1108-Q
	1 500	51,6 × 80,7	47	68	67	13	8,1	3,9	-A1158-Q
	2 200	51,6 × 80,7	33	50	49	16	9,7	4,7	-C1228-Q
	3 300	64,3 × 105,7	22	35	34	24	15	7,0	-A1338-Q
	4 700	64,3 × 105,7	16	27	26	28	17	8,2	-A1478-Q
	6 800	76,9 × 105,7	12	24	23	33	20	9,5	-B1688-Q
	10 000	76,9 × 143,2	9	18	17	43	26	12	-B1109-Q
	15 000	76,9 × 220,7	7	17	16	58	35	17	-C1159-Q
	15 000	91,0 × 144,5	7	17	16	58	35	17	-J1159-Q
250	220	35,7 × 55,7	220	440	330	5,0	3,0	1,5	-A2227-Q
	330	35,7 × 55,7	150	300	220	6,0	3,7	1,8	-C2337-Q
	470	35,7 × 80,7	100	190	160	8,2	5,0	2,4	-C2477-Q
	680	51,6 × 80,7	73	140	110	11	6,5	3,1	-A2687-Q
	1 000	51,6 × 80,7	50	100	82	13	7,9	3,8	-C2108-Q
	1 500	51,6 × 80,7	34	62	59	16	9,5	4,6	-J2158-Q
	2 200	64,3 × 105,7	24	45	44	23	14	6,7	-A2228-Q
	3 300	76,9 × 105,7	17	33	32	28	17	8,0	-B2338-Q
	4 700	76,9 × 143,2	12	27	26	37	22	11	-B2478-Q
	6 800	76,9 × 143,2	9	23	22	43	26	12	-E2688-Q
	10 000	76,9 × 220,7	9	23	22	50	31	15	-A2109-Q
	10 000	91,0 × 144,5	8	23	22	50	31	15	-J2109-Q

1) For instructions on how to determine ordering codes, refer to [page 130](#).



B 43 550 **B 43 570**

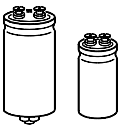
Technical data and ordering codes

U_R	C_R	Case dimensions $d \times l$ mm	$R_{ESR, typ}$ 100 Hz 20 °C mΩ	$R_{ESR, max}$ 100 Hz 20 °C mΩ	Z_{max} 10 kHz 20 °C mΩ	I_{-max} 100 Hz 40 °C A	I_{-max} 100 Hz 85 °C A	I_{-R} 100 Hz 105 °C A	Ordering code ¹⁾
V-	μF								Short code

B43550-, B43570-

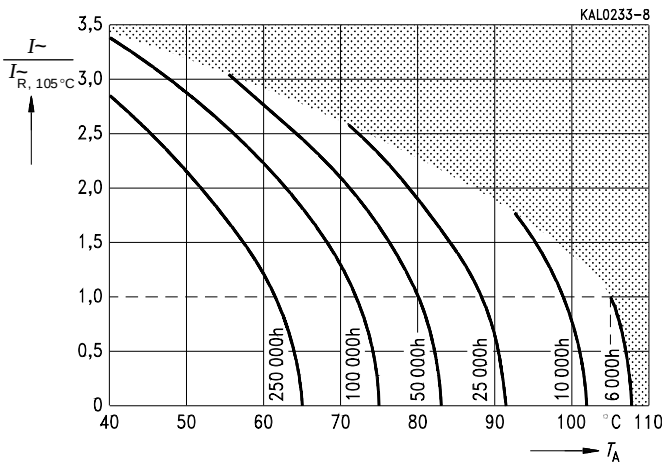
350	150	35,7 × 55,7	270	600	410	4,5	2,7	1,3	-A4157-Q
	220	35,7 × 80,7	180	420	290	6,1	3,7	1,8	-A4227-Q
	330	35,7 × 105,7	120	280	190	8,3	5,0	2,4	-A4337-Q
	470	51,6 × 80,7	87	190	140	9,9	6,0	2,9	-A4477-Q
	680	51,6 × 105,7	60	130	100	13	7,9	3,8	-A4687-Q
	1 000	51,6 × 105,7	42	90	72	16	9,4	4,5	-J4108-Q
	1 500	64,3 × 105,7	29	60	52	21	13	6,1	-A4158-Q
	2 200	76,9 × 105,7	20	45	40	25	15	7,4	-B4228-Q
	3 300	76,9 × 143,2	14	30	29	34	21	9,9	-B4338-Q
	4 700	76,9 × 220,7	18	24	23	46	28	14	-C4478-Q
400	4 700	91,0 × 144,5	18	24	23	46	28	14	-J4478-Q
	6 000	76,9 × 220,7	14	20	19	50	32	15	-C4608-Q
	150	35,7 × 55,7	410	820	660	4,5	2,7	1,3	-F157-Q
	220	35,7 × 80,7	280	560	430	6,1	3,7	1,8	-F227-Q
	330	35,7 × 105,7	190	380	290	8,2	5,0	2,4	-F337-Q
	470	51,6 × 80,7	140	280	230	9,6	5,8	2,8	-F477-Q
	680	51,6 × 105,7	100	200	160	13	7,6	3,6	-F687-Q
	1 000	64,3 × 105,7	75	150	120	16	10	4,7	-F108-Q
	1 500	76,9 × 105,7	50	100	80	20	12	5,8	-J158-Q
	2 200	76,9 × 143,2	36	72	60	26	16	7,7	-J228-Q
	3 300	76,9 × 220,7	26	52	45	37	22	11	-J338-Q
	3 300	91,0 × 144,5	22	52	45	37	22	11	-L338-Q
	4 700	76,9 × 220,7	20	40	36	42	26	12	-H478-Q

1) To obtain the required ordering code, prefix the type number to the short code. E. g.: B43550-A4157-Q
B43550-.... (ring clip/clamp mounting)
B43570-.... (with threaded stud)

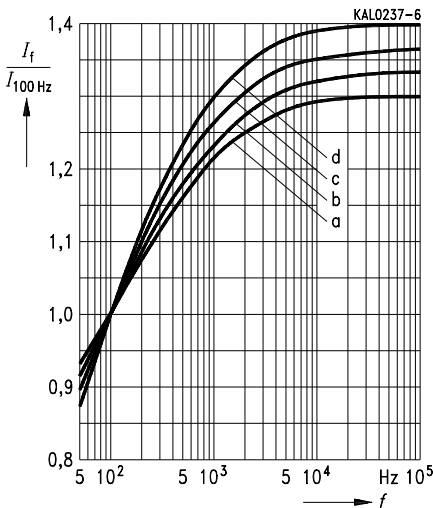


Useful life

versus ambient temperature T_A under ripple current operating conditions¹⁾

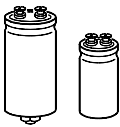


**Permissible ripple current $I_{\sim}$
versus frequency f**



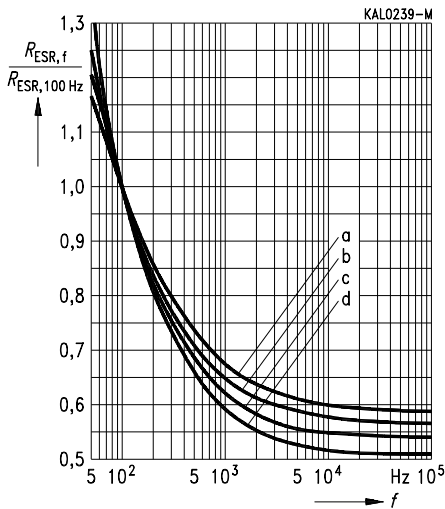
d (mm)	35,7	51,6	64,3	76,9	91,0
Curve	d	c	b	a	c

1) Refer to [page 34](#) for an explanation on how to interpret the useful life graphs.



B 43 550 **B 43 570**

Equivalent series resistance R_{ESR} versus frequency f Typical behavior



d (mm)	35,7	51,6	64,3	76,9	91,0
Curve	d	c	b	a	a

Impedance Z versus frequency f Typical behavior

