

EBH-HV

Large can, Screw terminals, Endurance 3.000h at 105°C
 Rated voltage range: 160V to 450V, Nominal capacitance range: 100µF to 13.000µF
 Size range: Ø 36 x 58mm to Ø 66 x 123mm
 RoHS compliant
 Special types on request



Specifications

	Characteristics						
Temperature Range	- 40°C to +105°C						
Rated Voltage Range	160V to 450V						
Capacitance Tolerance	±20% (at 20°C, 100Hz)						
Leakage Current	$I_{ra}=0,006 \cdot C_R \cdot V_R + 4\mu A$, (I_{ra} [µA], C_R : Rated capacitance [µF], V_R : Rated voltage [V]) (at 20°C, after 5 minutes)						
Dissipation Factor (tan δ)	Less than shown in Standard Ratings (at 20°C, 100Hz)						
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage is applied for 3.000 hours at 105°C.						
	Capacitance change	$\Delta C/C_0 \leq \pm 20\%$					
	D.F. (tan δ)	$\Delta \tan \delta \leq +200\%$ of the initial specification value					
	Leakage current (I_{ra})	$I_{ra} \leq$ the initial specified value					
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1.000 hours at 105°C without voltage applied.						
	Capacitance change	$\Delta C/C_0 \leq \pm 20\%$					
	D.F. (tan δ)	$\Delta \tan \delta \leq +200\%$ of the initial specification value					
	Leakage current (I_{ra})	$I_{ra} \leq +200\%$ of the initial specification value					
Surge Voltage Test	Rated voltage (V_R)	160V	200V	250V	350V	400V	450V
	Surge voltage (V_S)	176V	220V	275V	385V	440V	495V
	The capacitors shall be subjected to 1.000 cycles each consisting of charging with the specified surge voltage for 30±5 seconds through a protective resistor ($R=0,1/C_R$) and open-circuiting for 330 seconds at 105°C. The following specifications shall be satisfied when the capacitors are restored to 20°C.						
	Appearance	No significant damage					
	Capacitance change	$\Delta C/C_0 \leq \pm 10\%$					
	D.F. (tan δ)	$\Delta \tan \delta \leq$ the initial specified value					
	Leakage current (I_{ra})	$I_{ra} \leq$ the initial specified value					

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ISO 9001

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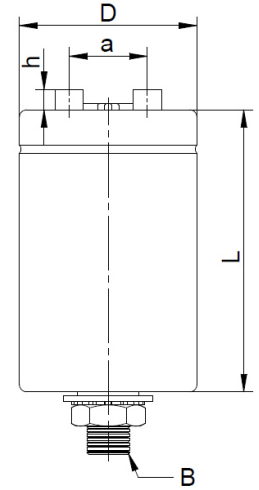
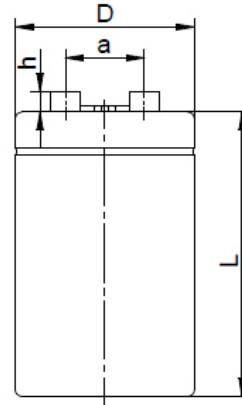
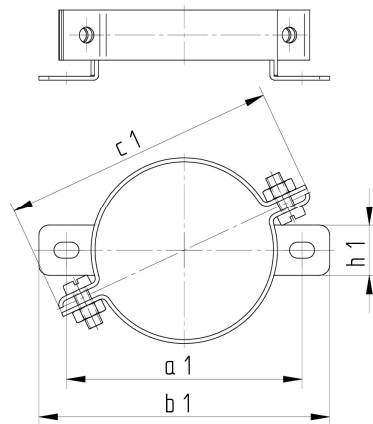
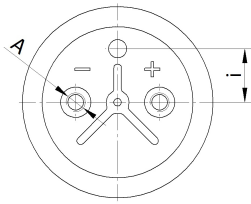
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FROLYT



Large size type, Insulated, Polarized, Pulse proof,
Endurance at least 3.000h at +105°C

EBH-HV



Generic specification:
DIN EN 60384-1

Sectional specification:
DIN EN 60384-4
without quality assessment

Operating temperature range:
- 40°C to +105°C

Climatic category:
40/105/56

Capacitance tolerance:
±20%

Surge voltage V_S :
 $V_S = 1,1 \cdot V_R$

Leakage current I_{ra} :
measured at V_R at +20°C
 $I_{ra} \leq 0,01 \cdot C_R \cdot V_R + 4\mu A$
(typical after 1 min.)
 $I_{ra} \leq 0,006 \cdot C_R \cdot V_R + 4\mu A$
(after 5 min.)
 C_R : Rated capacitance (μF)
 V_R : Rated voltage (V)

D x L	D	L	a	h	A	B	i	c1	h1	a1	b1
	max	max	±0,2	+0,1	± 0,2	+ 1,0	± 0,2	max	± 0,2	± 0,2	max
36 x 58	36,0	58,0	13,0	6,0	M5 x 8,0	M8 x 12,0	8,0	55,0	10,0	47,0	58,0
36 x 83	36,0	83,0	13,0	6,0	M5 x 8,0	M8 x 12,0	8,0	55,0	10,0	47,0	58,0
36 x 103	36,0	103,0	13,0	6,0	M5 x 8,0	M8 x 12,0	8,0	55,0	10,0	47,0	58,0
51 x 83	51,0	83,0	22,0	6,0	M5 x 8,0	M12 x 18,0	14,0	75,0	12,0	62,0	72,0
51 x 103	51,0	103,0	22,0	6,0	M5 x 8,0	M12 x 18,0	14,0	75,0	12,0	62,0	72,0
51 x 123	51,0	123,0	22,0	6,0	M5 x 8,0	M12 x 18,0	14,0	75,0	12,0	62,0	72,0
66 x 103	66,0	103,0	28,5	6,0	M5 x 8,0	M12 x 18,0	15,0	90,0	15,0	77,0	87,0
66 x 123	66,0	123,0	28,5	6,0	M5 x 8,0	M12 x 18,0	15,0	90,0	15,0	77,0	87,0

Endurance at least	
Ambient temperature	
≤ +40°C	300.000h
+85°C	12.000h
+105°C	3.000h

Dimensions Overview D x L

Capacitance C_R [μF]	Rated Voltage V_R [V]					
	160	200	250	350	400	450
100	36 x 58	36 x 58	36 x 58	36 x 58	36 x 58	36 x 58
220	36 x 58	36 x 58	36 x 58	36 x 58	36 x 58	36 x 58
				36 x 83	36 x 83	
270	36 x 58	36 x 58	36 x 58	36 x 58	36 x 83	36 x 83
				36 x 83	36 x 103	
330	36 x 58	36 x 58	36 x 58	36 x 58	36 x 83	36 x 83
				36 x 83	36 x 103	
390	36 x 58	36 x 58	36 x 58	36 x 83	36 x 83	36 x 103
				36 x 103	51 x 83	
470	36 x 58	36 x 58	36 x 58	36 x 83	36 x 103	36 x 103
				36 x 103	51 x 83	
560	36 x 58	36 x 58	36 x 83	36 x 103	36 x 103	51 x 83
			36 x 103	51 x 83	51 x 83	
680	36 x 58	36 x 58	36 x 83	36 x 103	36 x 103	51 x 83
	36 x 83		36 x 103	51 x 83	51 x 83	
820	36 x 58	36 x 83	36 x 83	51 x 83	51 x 83	51 x 83
	36 x 83	36 x 103	51 x 83	51 x 103	51 x 103	
1 000	36 x 58	36 x 83	36 x 103	51 x 83	51 x 103	51 x 103
	36 x 103		51 x 83	51 x 103	66 x 103	

Dimensions overview D x L

Capacitance C_R [μ F]	Rated voltage V_R [V]					
	160	200	250	350	400	450
1 200	36 x 83	36 x 103	36 x 103	51 x 83	51 x 103	51 x 103
	36 x 103			51 x 103	66 x 103	
1 500	36 x 83	36 x 103	51 x 83	51 x 103	51 x 123	51 x 123
	36 x 103		51 x 103	66 x 103		
1 800	36 x 103	51 x 83	51 x 83	51 x 123	66 x 103	66 x 103
	51 x 83		51 x 103	66 x 103		
2 200	51 x 83	51 x 83	51 x 103	51 x 123	66 x 103	66 x 103
	51 x 103		66 x 103	66 x 103		
2 700	51 x 83	51 x 83	51 x 103	66 x 103	66 x 123	66 x 123
	51 x 103		66 x 103			
3 300	51 x 103	51 x 103	51 x 123	66 x 103	66 x 123	
	66 x 103		66 x 103	66 x 123		
3 900	51 x 123	51 x 123	66 x 103	66 x 123	66 x 123	
	66 x 103					
4 700	51 x 123	66 x 103	66 x 103			
	66 x 103					
5 600	66 x 103	66 x 103	66 x 123			
6 800	66 x 103	66 x 123				
8 200	66 x 123	66 x 123				
10 000		66 x 123				
13 000		66 x 123				

Technical specifications

Rated capacitance C_R [μ F]	Rated voltage V_R [V]	Size D x L [mm]	$\tan \delta$ 100Hz +20°C (max)	Z [m Ω] 10kHz +20°C (max)	I~ [A _{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
100	160	36 x 58	0,08	90,0	0,7	<ul style="list-style-type: none"> • Series • Rated capacitance / Rated voltage • Capacitance tolerance • Dimensions (Diameter x Length) • Additional requirements Ordering example: EBH 100 μ F 450V \pm 20%, 36 x 58mm, Stud mounting
220	160	36 x 58	0,08	89,0	1,0	
270	160	36 x 58	0,08	86,0	1,1	
330	160	36 x 58	0,08	84,0	1,2	
390	160	36 x 58	0,08	82,0	1,3	
470	160	36 x 58	0,08	80,0	1,5	
560	160	36 x 58	0,08	80,0	1,6	
680	160	36 x 58	0,08	78,0	1,8	
		36 x 83	0,08	78,0	1,9	
820	160	36 x 58	0,08	76,0	1,9	
		36 x 83	0,08	76,0	2,1	
1 000	160	36 x 58	0,10	75,0	1,9	
		36 x 103	0,10	75,0	2,1	
1 200	160	36 x 83	0,10	70,0	2,3	
		36 x 103	0,10	70,0	2,4	
1 500	160	36 x 83	0,11	65,0	2,5	
		36 x 103	0,11	65,0	2,5	
1 800	160	36 x 103	0,11	59,0	2,7	
		51 x 83	0,11	59,0	3,1	
2 200	160	51 x 83	0,11	53,0	3,4	
		51 x 103	0,11	53,0	3,6	
2 700	160	51 x 83	0,11	43,0	3,7	
		51 x 103	0,11	43,0	4,0	
3 300	160	51 x 103	0,10	38,0	4,6	
		66 x 103	0,10	38,0	5,0	
3 900	160	51 x 123	0,10	34,5	5,3	
		66 x 103	0,10	34,5	5,5	
4 700	160	51 x 123	0,10	32,7	5,8	
		66 x 103	0,10	32,7	6,0	
5 600	160	66 x 103	0,10	16,0	6,6	
6 800	160	66 x 103	0,10	13,0	7,2	
8 200	160	66 x 123	0,10	12,0	8,6	

* I~ (Rated ripple current) refers to an increase in temperature of 3K, special requirements or special types on request

Technical specifications

Rated capacitance C_R [μ F]	Rated voltage V_R [V]	Size D x L [mm]	$\tan \delta$ 100Hz +20°C (max)	Z [$m\Omega$] 10kHz +20°C (max)	I_{\sim} [A_{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
100	200	36 x 58	0,09	230,0	0,6	<ul style="list-style-type: none"> • Series • Rated capacitance / Rated voltage • Capacitance tolerance • Dimensions (Diameter x Length) • Additional requirements <p>Ordering example: EBH 100μF 450V \pm20%, 36 x 58mm, Stud mounting</p>
220	200	36 x 58	0,09	210,0	0,9	
270	200	36 x 58	0,09	195,0	1,0	
330	200	36 x 58	0,09	179,0	1,2	
390	200	36 x 58	0,09	157,0	1,3	
470	200	36 x 58	0,09	148,0	1,4	
560	200	36 x 58	0,09	139,0	1,5	
680	200	36 x 58	0,09	128,0	1,7	
820	200	36 x 83	0,09	106,0	2,0	
		36 x 103	0,09	106,0	2,0	
1 000	200	36 x 83	0,09	97,0	2,2	
1 200	200	36 x 103	0,09	91,0	2,5	
1 500	200	36 x 103	0,09	85,0	2,8	
1 800	200	51 x 83	0,09	62,0	3,4	
2 200	200	51 x 83	0,09	38,0	3,7	
2 700	200	51 x 83	0,10	36,0	3,9	
3 300	200	51 x 103	0,10	34,0	4,6	
3 900	200	51 x 123	0,10	33,5	5,3	
4 700	200	66 x 103	0,10	32,7	6,0	
5 600	200	66 x 103	0,10	20,0	6,6	
6 800	200	66 x 123	0,10	15,0	7,8	
8 200	200	66 x 123	0,10	13,5	8,6	
10 000	200	66 x 123	0,10	12,0	9,5	
13 000	200	66 x 123	0,10	10,0	10,8	
100	250	36 x 58	0,09	465,0	0,6	
220	250	36 x 58	0,09	397,0	0,9	
270	250	36 x 58	0,09	323,0	1,0	
330	250	36 x 58	0,09	265,0	1,2	
390	250	36 x 58	0,09	224,0	1,3	
		36 x 83	0,09	224,0	1,4	
470	250	36 x 58	0,09	186,0	1,4	
		36 x 83	0,09	186,0	1,5	
560	250	36 x 83	0,09	156,0	1,7	
		36 x 103	0,09	156,0	1,7	
680	250	36 x 83	0,09	128,0	1,8	
		36 x 103	0,09	128,0	1,9	
820	250	36 x 83	0,09	106,0	2,0	
		51 x 83	0,09	106,0	2,3	
1 000	250	36 x 103	0,09	87,4	2,3	
		51 x 83	0,09	87,4	2,5	
1 200	250	36 x 103	0,09	72,8	2,5	
		51 x 83	0,09	72,8	2,8	
1 500	250	51 x 83	0,10	64,5	2,9	
		51 x 103	0,10	64,5	3,1	
1 800	250	51 x 83	0,10	53,8	3,2	
		51 x 103	0,10	53,8	3,4	
2 200	250	51 x 103	0,11	48,3	3,6	
		66 x 103	0,11	48,3	3,9	
2 700	250	51 x 103	0,12	42,8	3,8	
		66 x 103	0,12	42,8	4,2	
3 300	250	51 x 123	0,13	37,3	4,3	
		66 x 103	0,13	37,3	4,4	
3 900	250	66 x 103	0,13	35,0	4,8	
4 700	250	66 x 103	0,16	32,2	4,7	
5 600	250	66 x 123	0,16	27,0	5,6	

* I_{\sim} (Rated ripple current) refers to an increase in temperature of 3K, special requirements or special types on request

Technical specifications

Rated capacitance C_R [μ F]	Rated voltage V_R [V]	Size D x L [mm]	$\tan \delta$ 100Hz +20°C (max)	Z [m Ω] 10kHz +20°C (max)	I_{\sim} [A_{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
100	350	36 x 58	0,09	465,0	0,6	<ul style="list-style-type: none"> • Series • Rated capacitance / Rated voltage • Capacitance tolerance • Dimensions (Diameter x Length) • Additional requirements <p>Ordering example: EBH 100μF 450V \pm20%, 36 x 58mm, Stud mounting</p>
220	350	36 x 58	0,09	397,0	0,9	
		36 x 83	0,09	397,0	1,0	
270	350	36 x 58	0,09	323,0	1,0	
		36 x 83	0,09	323,0	1,2	
330	350	36 x 58	0,09	264,0	1,2	
		36 x 83	0,09	264,0	1,3	
390	350	36 x 83	0,09	224,0	1,4	
		36 x 103	0,09	224,0	1,4	
470	350	36 x 83	0,09	186,0	1,5	
		36 x 103	0,09	186,0	1,6	
560	350	36 x 103	0,09	156,0	1,7	
		51 x 83	0,09	156,0	1,9	
680	350	36 x 103	0,09	128,0	1,9	
		51 x 83	0,09	128,0	2,1	
820	350	51 x 83	0,09	106,0	2,3	
		51 x 103	0,09	106,0	2,4	
1 000	350	51 x 83	0,09	87,4	2,5	
		51 x 103	0,09	87,4	2,7	
1 200	350	51 x 83	0,09	75,7	2,8	
		51 x 103	0,09	72,8	2,9	
1 500	350	51 x 103	0,09	58,2	3,3	
		66 x 103	0,09	58,2	3,6	
1 800	350	51 x 123	0,09	48,5	3,8	
		66 x 103	0,09	48,5	3,9	
2 200	350	51 x 123	0,09	40,4	4,2	
		66 x 103	0,09	40,4	4,3	
2 700	350	66 x 103	0,09	35,0	4,8	
3 300	350	66 x 103	0,09	29,4	5,3	
		66 x 123	0,09	25,0	5,7	
3 900	350	66 x 123	0,09	20,0	6,2	

* I_{\sim} (Rated ripple current) refers to an increase in temperature of 3K, special requirements or special types on request

Technical specifications

Rated capacitance C_R [μ F]	Rated voltage V_R [V]	Size D x L [mm]	$\tan \delta$ 100Hz +20°C (max)	Z [m Ω] 10kHz +20°C (max)	I~ [A _{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
100	400	36 x 58	0,09	465,0	0,6	<ul style="list-style-type: none"> • Series • Rated capacitance / Rated voltage • Capacitance tolerance • Dimensions (Diameter x Length) • Additional requirements Ordering example: EBH 100 μ F 450V \pm 20%, 36 x 58mm, Stud mounting
220	400	36 x 58	0,09	397,0	0,9	
		36 x 83	0,09	397,0	1,0	
270	400	36 x 83	0,09	323,0	1,2	
		36 x 103	0,09	323,0	1,2	
330	400	36 x 83	0,09	264,0	1,3	
		36 x 103	0,09	264,0	1,3	
390	400	36 x 83	0,09	224,0	1,4	
		51 x 83	0,09	224,0	1,6	
470	400	36 x 103	0,09	186,0	1,6	
		51 x 83	0,09	186,0	1,7	
560	400	36 x 103	0,09	156,0	1,7	
		51 x 83	0,09	156,0	1,9	
680	400	36 x 103	0,09	128,0	1,9	
		51 x 83	0,09	128,0	2,1	
820	400	51 x 83	0,09	106,0	2,3	
		51 x 103	0,09	106,0	2,4	
1 000	400	51 x 103	0,09	87,4	2,7	
		66 x 103	0,09	87,4	2,9	
1 200	400	51 x 103	0,09	72,8	2,9	
		66 x 103	0,09	72,8	3,2	
1 500	400	51 x 123	0,09	68,0	3,5	
1 800	400	66 x 103	0,09	60,0	3,9	
2 200	400	66 x 103	0,09	50,0	4,3	
2 700	400	66 x 123	0,09	50,0	5,2	
3 300	400	66 x 123	0,09	50,0	5,7	
3 900	400	66 x 123	0,09	50,0	6,2	
100	450	36 x 58	0,12	620,0	0,6	
220	450	36 x 58	0,12	500,0	0,8	
270	450	36 x 83	0,12	380,0	1,0	
330	450	36 x 83	0,12	190,0	1,1	
390	450	36 x 103	0,12	180,0	1,2	
470	450	36 x 103	0,12	170,0	1,3	
560	450	51 x 83	0,12	156,0	1,6	
680	450	51 x 83	0,12	142,0	1,8	
820	450	51 x 83	0,12	128,0	2,0	
1 000	450	51 x 103	0,12	115,0	2,3	
1 200	450	51 x 103	0,12	103,0	2,5	
1 500	450	51 x 123	0,12	92,0	3,0	
1 800	450	66 x 103	0,12	81,0	3,4	
2 200	450	66 x 103	0,12	70,0	3,7	
2 700	450	66 x 123	0,12	54,0	4,5	

* I~ (Rated ripple current) refers to an increase in temperature of 3K, special requirements or special types on request

Rated ripple current: Frequency multipliers

Frequency	Multipliers
100Hz	1,0
1kHz	1,3
10kHz to 100kHz	1,4

All information provided in printed form needs for her legal obligation for the purposes of §§463 and 480 II Civil Code of the explicit written confirmation. Hence, the given data imply exclusively a product description and are not to be understood as assured qualities.