

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 (D.F.)	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					

FROLYT

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ISO 9001

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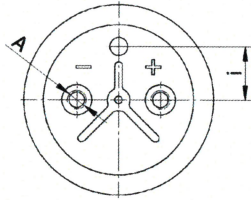
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Adress: Dammstraße 46

Germany-09599 Freiberg/ Saxony

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

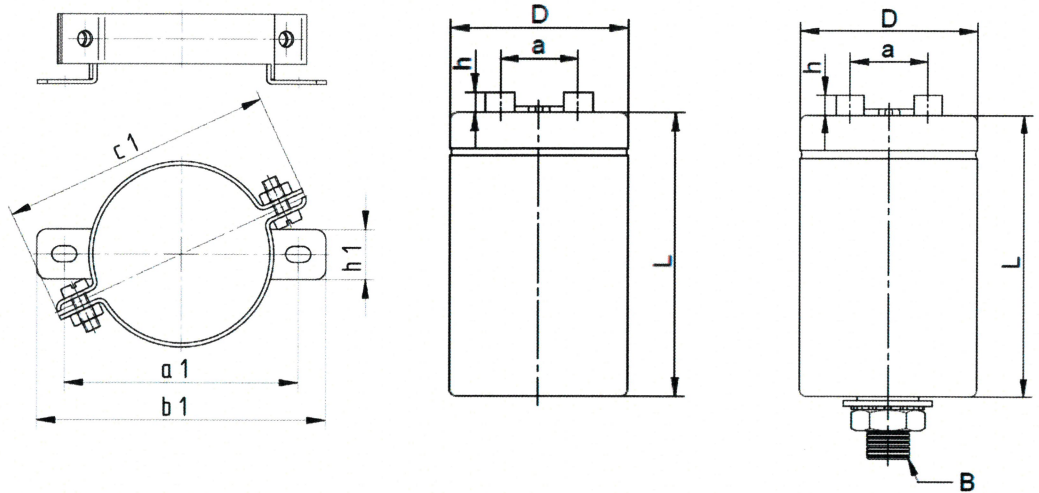
Operating temperature range:
- 40°C to +105°C

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
270	36 x 58	36 x 58	36 x 58	36 x 83	36 x 83	36 x 83
330	36 x 58	36 x 58	36 x 58	36 x 83	36 x 103	36 x 83
390	36 x 58	36 x 58	36 x 58	36 x 83	36 x 103	36 x 103
470	36 x 58	36 x 58	36 x 58	36 x 83	36 x 103	36 x 103
560	36 x 58	36 x 58	36 x 83	36 x 103	36 x 103	51 x 83
680	36 x 58	36 x 58	36 x 83	36 x 103	36 x 103	51 x 83
820	36 x 58	36 x 83	36 x 83	51 x 83	51 x 83	51 x 83
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	- Series - Rated capacitance / Rated voltage - Capacitance tolerance - Dimensions (Diameter x Length) - Additional requirements Ordering example: EBH 100μF 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~ [A_{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
100	200	36 x 58	0,09	230,0	0,6	- Series - Rated capacitance / Rated voltage - Capacitance tolerance - Dimensions (Diameter x Length) - Additional requirements
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~ (Rated ripple current) refers to an increase in temperature of 3K, special requirements or special types on request

Ordering example: EBH 100 μ F 450V $\pm$ 20%, 36 x 58mm, Stud mounting

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~ [A_{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
100	350	36 x 58	0,09	465,0	0,6	- Series - Rated capacitance / Rated voltage - Capacitance tolerance - Dimensions (Diameter x Length) - Additional requirements Ordering example: EBH 100μF 450V $\pm$20%, 36 x 58mm, Stud mounting
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	

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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~ [A_{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
100	400	36 x 58	0,09	465,0	0,6	- Series - Rated capacitance / Rated voltage - Capacitance tolerance - Dimensions (Diameter x Length) - Additional requirements Ordering example: EBH 100μF 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	

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Rated ripple current: Frequency multipliers

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

All information provided in printed form requires a written confirmation in order to be legally binding within the meaning of §§463 and 480 II BGB (German Civil Code). Hence, the given data imply exclusively a product description and are not to be understood as assured qualities.