

EBH-NV

Large can, Screw terminals, Endurance 4.000h at 105°C
 Rated voltage range: 6,3V to 100V, Nominal capacitance range: 1.500µF to 560.000µF
 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	6,3V to 100V									
Capacitance tolerance	±20% (at 20°C, 100Hz)									
Leakage current I_{ra}	I _{ra} =0,006·C _R ·V _R + 4µA (I _{ra} [µA], C _R : Rated capacitance [µF], V _R : Rated voltage [V]) (at 20°C, 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 4.000hours at 105°C.									
	Capacitance change	ΔC/C0 ≤ ±20%								
	D.F. (tan δ)	Δtan δ ≤ +200% of the initial specification value								
	Leakage current (I _{ra})	I _{ra} ≤ 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	ΔC/C0 ≤ ±20%								
	D.F. (tan δ)	Δtan δ ≤ +200% of the initial specification value								
	Leakage current (I _{ra})	I _{ra} ≤ +200% of the initial specification value								
Surge voltage test	Rated voltage (V _R)	6,3V	10V	16V	25V	35V	40V	50V	63V	100V
	Surge voltage (V _S)	7,2V	11,5V	18,4V	28,8V	40,3V	46V	57,5V	72,5V	115V
	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	ΔC/C0 ≤ ±10%								
	D.F. (tan δ)	Δtan δ ≤ the initial specified value								
	Leakage current (I _{ra})	I _{ra} ≤ the initial specified value								

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ISO 9001

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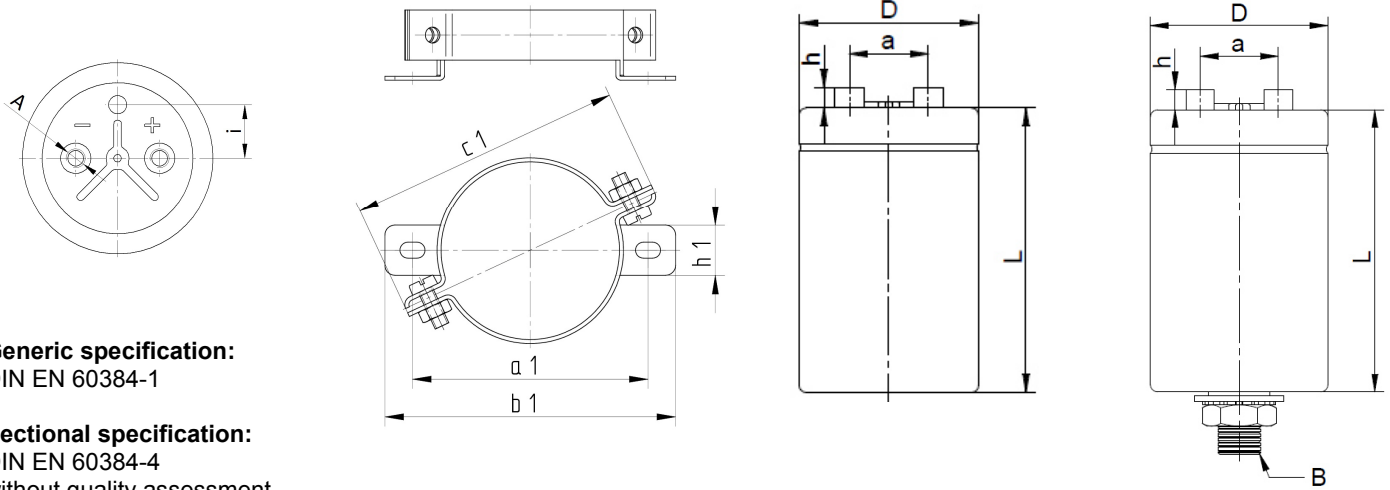
e-Mail: info@frolyt.de

FROLYT



Large size type, Insulated, Polarized, Pulse proof,
Endurance at least 4.000h at +105°C

EBH-NV



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 :
 $V_S = 1,15 \cdot V_R$

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	max	± 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	400.000h
+85°C	16.000h
+105°C	4.000h

Dimensions Overview D x L

Capacitance C_R [μF]	Rated Voltage V_R [V]								
	6,3	10	16	25	35	40	50	63	100
1 500									36 x 58
1 800									36 x 58
2 200						36 x 58	36 x 58	36 x 58	36 x 58
3 300						36 x 58	36 x 58	36 x 58	36 x 83
3 900						36 x 58	36 x 58	36 x 58	36 x 83
4 700						36 x 58	36 x 58	36 x 58	36 x 103
5 600									51 x 83
5 600						36 x 58	36 x 58	36 x 58	36 x 103
6 800						36 x 58	36 x 58	36 x 83	36 x 103
6 800									51 x 83
8 200					36 x 58	36 x 58	36 x 58	36 x 83	51 x 83
10 000					36 x 58	36 x 58	36 x 58	36 x 103	51 x 83
10 000							36 x 83	51 x 83	
12 000					36 x 58	36 x 58	36 x 83	36 x 103	51 x 83
15 000				36 x 58	36 x 83	36 x 83	36 x 83	51 x 83	51 x 103
15 000							36 x 103		
18 000				36 x 58	36 x 83	36 x 83	36 x 103	51 x 83	66 x 103
22 000			36 x 58	36 x 83	36 x 83	36 x 103	51 x 83	51 x 83	66 x 103
22 000					51 x 83	51 x 83		51 x 103	

Dimensions overview D x L

Capacitance C_R [μ F]	Rated voltage V_R [V]								
	6,3	10	16	25	35	40	50	63	100
27 000			36 x 58	36 x 83	36 x 103	36 x 103	51 x 83	51 x 103	66 x 103
33 000		36 x 58	36 x 83	36 x 83	36 x 103	51 x 83	51 x 83	51 x 103	66 x 123
39 000		36 x 58	36 x 83	36 x 103	51 x 83	51 x 83	51 x 103	66 x 103	
47 000	36 x 58	36 x 58	36 x 58	36 x 103	36 x 103	51 x 83	51 x 103		
56 000	36 x 58	36 x 83	36 x 103	51 x 83	51 x 103	51 x 103	66 x 103	66 x 103	
68 000	36 x 83	36 x 83	36 x 103	51 x 83	51 x 103	51 x 103	66 x 103	66 x 123	
82 000	36 x 83	36 x 103	51 x 83	51 x 103	66 x 103	66 x 103	66 x 103	66 x 123	
100 000	36 x 83	36 x 103	51 x 83	51 x 103	66 x 103	66 x 103	66 x 123	66 x 123	
	36 x 103	51 x 83							
120 000	36 x 103	51 x 83	51 x 83	66 x 103	66 x 123	66 x 123			
150 000	51 x 83	51 x 83	51 x 103	66 x 103					
180 000	51 x 83	51 x 103	66 x 103	66 x 103					
220 000	51 x 83	51 x 103	66 x 103	66 x 103					
	51 x 103								
270 000	51 x 103	66 x 103	66 x 103						
330 000	51 x 103	66 x 103	66 x 103						
390 000	66 x 103	66 x 103							
470 000	66 x 103	66 x 103							
560 000		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_{\sim} [A $_{rms}$]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
47 000	6,3	36 x 58	0,60	33,0	5,3	<ul style="list-style-type: none"> • Series • Rated capacitance / Rated voltage • Capacitance tolerance • Dimensions (Diameter x Length) • Additional requirements Ordering example: EBH 47.000 μ F 6,3V \pm 20%, 36 x 58mm, Stud mounting
56 000	6,3	36 x 58	0,66	30,5	5,6	
68 000	6,3	36 x 83	0,72	28,0	6,5	
82 000	6,3	36 x 83	0,79	23,0	6,8	
100 000	6,3	36 x 83	0,85	18,0	7,2	
		36 x 103	0,85	18,0	7,4	
120 000	6,3	36 x 103	0,95	17,0	7,6	
150 000	6,3	51 x 83	1,05	16,0	9,0	
180 000	6,3	51 x 83	1,15	14,0	9,5	
220 000	6,3	51 x 83	1,25	12,0	10,0	
		51 x 103	1,25	12,0	10,6	
270 000	6,3	51 x 103	1,35	11,5	11,3	
330 000	6,3	51 x 103	1,45	11,0	12,1	
390 000	6,3	66 x 103	1,55	10,0	13,9	
470 000	6,3	66 x 103	1,65	9,0	14,8	
33 000	10	36 x 58	0,35	26,3	5,9	
39 000	10	36 x 58	0,40	25,0	6,0	
47 000	10	36 x 58	0,45	22,0	6,2	
56 000	10	36 x 83	0,50	20,0	7,1	
68 000	10	36 x 83	0,55	18,0	7,4	
82 000	10	36 x 103	0,60	15,0	7,9	
100 000	10	36 x 103	0,65	12,0	8,4	
		51 x 83	0,65	12,0	9,4	
120 000	10	51 x 83	0,70	11,5	9,9	
150 000	10	51 x 83	0,75	11,0	10,7	
180 000	10	51 x 103	0,83	10,0	11,8	
220 000	10	51 x 103	0,90	9,0	12,5	
270 000	10	66 x 103	0,98	8,5	14,5	
330 000	10	66 x 103	1,05	8,0	15,5	
390 000	10	66 x 103	1,10	7,5	16,5	
470 000	10	66 x 103	1,20	7,0	17,3	
560 000	10	66 x 123	1,30	6,5	19,6	

* 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 [$m\Omega$] 10kHz +20°C (max)	I_{\sim} [A_{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
22 000	16	36 x 58	0,36	29,0	4,7	<ul style="list-style-type: none"> • Series • Rated capacitance / Rated voltage • Capacitance tolerance • Dimensions (Diameter x Length) • Additional requirements
27 000	16	36 x 58	0,37	26,2	5,2	
33 000	16	36 x 83	0,38	23,8	6,2	
39 000	16	36 x 83	0,40	20,5	6,6	
47 000	16	36 x 58	0,65	25,0	5,1	
		36 x 83	0,41	17,1	7,1	
56 000	16	36 x 103	0,43	16,2	7,7	
68 000	16	36 x 103	0,45	15,2	8,3	
82 000	16	51 x 83	0,50	12,4	9,7	
100 000	16	51 x 83	0,54	9,5	10,3	
120 000	16	51 x 83	0,59	9,1	10,8	
150 000	16	51 x 103	0,63	8,6	12,4	
180 000	16	66 x 103	0,70	8,1	14,0	
220 000	16	66 x 103	0,77	7,6	14,8	
270 000	16	66 x 103	0,85	7,2	15,6	
330 000	16	66 x 103	0,94	6,7	16,4	
15 000	25	36 x 58	0,29	25,7	4,3	
18 000	25	36 x 58	0,31	23,3	4,6	
22 000	25	36 x 83	0,32	20,9	5,5	
27 000	25	36 x 83	0,33	18,1	6,0	
33 000	25	36 x 83	0,36	15,2	6,4	
		36 x 103	0,36	15,2	6,5	
39 000	25	36 x 103	0,39	13,4	6,8	
47 000	25	36 x 103	0,45	12,0	6,9	
		51 x 103	0,40	11,4	8,7	
56 000	25	51 x 83	0,41	11,0	8,8	
68 000	25	51 x 83	0,43	10,5	9,5	
82 000	25	51 x 103	0,47	9,1	10,6	
100 000	25	51 x 103	0,50	7,6	11,3	
120 000	25	66 x 103	0,54	7,2	13,1	
150 000	25	66 x 103	0,59	6,7	14,0	
180 000	25	66 x 103	0,63	6,2	14,8	
220 000	25	66 x 103	0,67	5,7	15,9	
8 200	35	36 x 58	0,18	34,0	4,1	
10 000	35	36 x 58	0,20	26,6	4,3	
12 000	35	36 x 58	0,23	24,3	4,4	
15 000	35	36 x 83	0,25	21,9	5,2	
18 000	35	36 x 83	0,26	18,6	5,6	
22 000	35	36 x 83	0,27	15,2	6,0	
		51 x 83	0,30	16,0	6,5	
27 000	35	36 x 103	0,29	13,8	6,5	
33 000	35	36 x 103	0,30	12,4	7,1	
39 000	35	51 x 83	0,32	11,0	8,3	
47 000	35	36 x 103	0,33	9,5	8,1	
		51 x 83	0,37	10,0	8,5	
56 000	35	51 x 103	0,35	9,1	10,2	
68 000	35	51 x 103	0,36	8,6	11,0	
82 000	35	66 x 103	0,41	7,7	12,4	
100 000	35	66 x 103	0,45	6,7	13,1	
120 000	35	66 x 123	0,49	6,4	14,8	

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

Ordering example: EBH 47.000 μ F 6,3V \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_{\sim} [A_{rms}]* 100Hz +105°C (max)	Ordering information for FROLYT electrolytic capacitors
2 200	40	36 x 58	0,08	28,0	3,2	<ul style="list-style-type: none"> • Series • Rated capacitance / Rated voltage • Capacitance tolerance • Dimensions (Diameter x Length) • Additional requirements Ordering example: EBH 47.000 μ F 6,3V \pm 20%, 36 x 58mm, Stud mounting
3 300	40	36 x 58	0,10	28,0	3,5	
3 900	40	36 x 58	0,12	28,0	3,4	
4 700	40	36 x 58	0,14	28,0	3,5	
5 600	40	36 x 58	0,17	27,5	3,5	
6 800	40	36 x 58	0,19	27,0	3,6	
8 200	40	36 x 58	0,20	27,0	3,9	
10 000	40	36 x 58	0,20	26,0	4,3	
12 000	40	36 x 58	0,20	20,0	4,7	
15 000	40	36 x 83	0,20	14,0	5,8	
18 000	40	36 x 83	0,22	14,0	6,0	
22 000	40	36 x 103	0,24	14,3	6,5	
		51 x 83	0,27	14,7	6,8	
27 000	40	36 x 103	0,30	13,0	6,4	
33 000	40	51 x 83	0,33	11,0	7,6	
39 000	40	51 x 83	0,34	10,5	8,1	
47 000	40	51 x 83	0,34	10,0	8,9	
56 000	40	51 x 103	0,35	9,5	10,2	
68 000	40	51 x 103	0,35	9,0	11,2	
82 000	40	66 x 103	0,36	7,5	13,2	
100 000	40	66 x 103	0,36	6,0	14,6	
120 000	40	66 x 123	0,38	5,7	16,8	
2 200	50	36 x 58	0,16	38,0	2,2	
3 300	50	36 x 58	0,17	36,0	2,7	
3 900	50	36 x 58	0,18	34,0	2,8	
4 700	50	36 x 58	0,19	32,0	3,0	
5 600	50	36 x 58	0,20	30,0	3,2	
6 800	50	36 x 58	0,22	28,0	3,4	
8 200	50	36 x 58	0,23	27,0	3,6	
10 000	50	36 x 58	0,23	19,0	4,0	
		36 x 83	0,23	19,0	4,4	
12 000	50	36 x 83	0,23	19,0	4,8	
15 000	50	36 x 83	0,24	19,0	5,3	
	50	36 x 103	0,24	19,0	5,4	
18 000	50	36 x 103	0,26	16,7	5,6	
22 000	50	51 x 83	0,27	14,3	6,8	
27 000	50	51 x 83	0,27	12,4	7,6	
33 000	50	51 x 83	0,28	10,5	8,2	
		51 x 103	0,28	10,5	8,7	
39 000	50	51 x 103	0,28	9,6	9,5	
47 000	50	51 x 103	0,28	9,0	10,4	
		66 x 103	0,29	8,6	11,1	
56 000	50	66 x 103	0,29	8,0	12,2	
68 000	50	66 x 103	0,29	7,2	13,4	
82 000	50	66 x 103	0,29	6,5	14,7	
100 000	50	66 x 123	0,30	6,0	17,3	

* 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
2 200	63	36 x 58	0,12	40,0	2,6	<ul style="list-style-type: none"> • Series • Rated capacitance / Rated voltage • Capacitance tolerance • Dimensions (Diameter x Length) • Additional requirements Ordering example: EBH 47.000 μ F 6,3V \pm 20%, 36 x 58mm, Stud mounting
3 300	63	36 x 58	0,13	36,1	3,0	
3 900	63	36 x 58	0,13	34,7	3,3	
4 700	63	36 x 58	0,14	33,3	3,5	
5 600	63	36 x 58	0,15	30,0	3,7	
6 800	63	36 x 83	0,16	28,0	4,3	
8 200	63	36 x 83	0,17	23,0	4,6	
10 000	63	36 x 103	0,18	17,0	5,1	
		51 x 83	0,18	17,0	5,6	
12 000	63	36 x 103	0,21	15,7	5,1	
15 000	63	51 x 83	0,21	14,3	6,4	
18 000	63	51 x 83	0,23	13,0	6,7	
22 000	63	51 x 83	0,24	10,0	7,2	
		51 x 103	0,24	9,0	7,7	
27 000	63	51 x 103	0,26	9,0	8,2	
33 000	63	51 x 103	0,26	8,0	9,0	
		66 x 103	0,26	8,0	9,9	
39 000	63	66 x 103	0,28	7,0	10,3	
47 000	63	66 x 103	0,29	6,0	11,1	
56 000	63	66 x 123	0,29	5,5	13,1	
68 000	63	66 x 123	0,29	4,7	14,5	
82 000	63	66 x 123	0,29	4,5	15,9	
100 000	63	66 x 123	0,29	4,3	17,6	
1 500	100	36 x 58	0,06	30,0	3,0	
1 800	100	36 x 58	0,06	30,0	3,3	
2 200	100	36 x 58	0,07	25,0	3,4	
3 300	100	36 x 83	0,08	21,0	4,3	
3 900	100	36 x 83	0,08	18,0	4,7	
4 700	100	36 x 103	0,08	14,0	5,2	
		51 x 83	0,08	14,0	5,8	
5 600	100	36 x 103	0,10	14,0	5,1	
6 800	100	36 x 103	0,12	14,0	5,1	
		51 x 83	0,13	14,0	5,5	
8 200	100	51 x 83	0,14	12,5	5,8	
10 000	100	51 x 83	0,15	11,0	6,2	
12 000	100	51 x 83	0,15	10,0	6,8	
15 000	100	51 x 103	0,15	10,0	8,0	
18 000	100	66 x 103	0,15	9,0	9,6	
22 000	100	66 x 103	0,15	8,0	10,6	
27 000	100	66 x 103	0,16	7,0	11,4	
33 000	100	66 x 123	0,16	6,0	13,6	

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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 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.