

RADIAL TYPE EA-7

Series



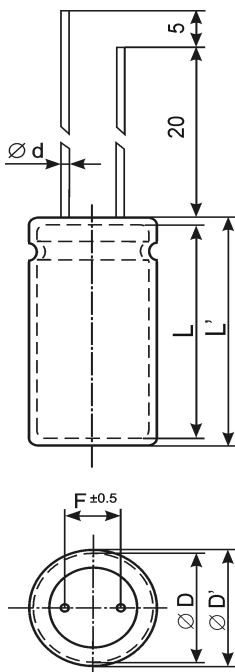
CONIS ELCO Ltd.

Radial Terminal, For General Purpose

- * Aluminum Electrolytic Capacitors
- * Standard Series for General Purpose
- * Load Life of 1000 hours at 85°C
- * Single Ended

● SPECIFICATION

Item	Characteristics								
Operating Temperature Range	- 40 ÷ + 85°C								
Rated Working Voltage	6,3 ÷ 100 VDC								
Nominal Capacitance Range (120Hz, 20°C)	0,1 ÷ 10000 µF								
Capacitance Tolerance (120Hz 20°C)	≤ 0,68µF + 100% - 10%	1 ÷ 2,2µF + 50% - 10%			≥ 3,3µF ± 20%				
Leakage Current (max)	≤ 35V CnUr ≤ 1000 I = 0,05CnUr or 5µA		≥ 50V CnUr ≤ 1000 I = 0,05CnUr + 3µA			6,3 ÷ 100V CnUr > 1000 I = 0,03CnUr + 3µA			
(20°C)	*Whichever is smaller after 5 minutes I - Leakage Current (µA) Cn - Rated Capacitance (µF) Ur - Working Voltage (V)								
Dissipation Factor (max)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
(20°C)	tan δ	0.25	0.25	0.20	0.20	0.15	0.15	0.15	0.10
Low Temperature Stability	VDC	6.3	10	16	25	35	50	63	100
impedance ratio at 100Hz	Z - 25°C/Z +20°C	4	3	2	2	2	2	2	2
	Z - 40°C/Z +20°C	8	8	6	4	3	3	3	3
Load Life	Leakage Current	Less than specified value							
after application of the rated	Capacitance Change	± 20%							
voltage for 1000 hours at 85°C	tan δ	Less than 150% specified value							
Shelf Life	After 1000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.								



● DIMENSIONS

Ø D	5	6.3	8	10	12.5	16	18
Ø d	0.5			0.65			0.8
F	2	2.5	3.5	5.0		7.5	
Ø D'	D+0,5			D+0,6			
L	L+1,5					L+2	

● RIPPLE CURRENT COEFFICIENTS

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
µF ≤ 47	0.75	1.00	1.35	1.55	2.00
68 ÷ 220	0.80	1.00	1.25	1.34	1.50
≥ 1000	0.85	1.00	1.10	1.13	1.15

Temp (°C)	40	60	70	85
Coefficient	2.0	1.5	1.3	1.0

RADIAL TYPE

EA-8

Series



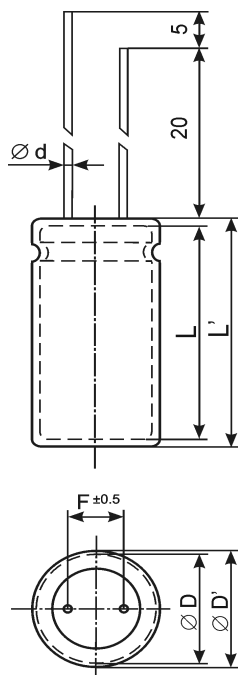
CONIS ELCO Ltd.

Radial Terminal, Wide Temperature Range

- * Aluminum Electrolytic Capacitors
- * Wide operating temperature range
- * High performance and excellent temperature characteristics
- * Load Life of 1000 hours at 105°C
- * Single Ended

SPECIFICATION

Item	Characteristics								
Operating Temperature Range	- 55 ÷ + 105°C								
Rated Working Voltage	6,3 ÷ 100 VDC								
Nominal Capacitance Range (120Hz, 20°C)	0,47 ÷ 10000 µF								
Capacitance Tolerance (120Hz 20°C)	≤ 0,68µF	+ 100%		1 ÷ 2,2µF	+ 50%		≥ 3,3µF		± 20%
Leakage Current (max) (20°C)	I = 0,03CnUr or 5µA			I ≤ 0,03CnUr + 5µA (mA)					
	*Whichever is smaller after 5 minutes I - Leakage Current (µA) Cn - Rated Capacitance (µF) Ur - Working Voltage (V)								
Dissipation Factor (max) (20°C)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	tan δ	0.25	0.25	0.18	0.16	0.13	0.10	0.10	0.09
Low Temperature Stability impedance ratio at 100Hz	VDC	6.3	10	16	25	35	50	63	100
	Z - 25°C/Z +20°C	4	3	2	2	2	2	2	2
	Z - 40°C/Z +20°C	8	8	6	4	3	3	3	3
Load Life after application of the rated voltage for 1000 hours at 105°C	Leakage Current	Less than specified value							
	Capacitance Change	± 20%							
	tan δ	Less than 200% specified value							
Shelf Life	After 1000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.								



DIMENSIONS

$\varnothing D$	5	6.3	8	10	12.5	16	18
$\varnothing d$	0.5			0.65			0.8
F	2	2.5	3.5	5.0		7.5	
$\varnothing D'$	D+0,5			D+0,6			
L	L+1,5					L+2	

RIPPLE CURRENT COEFFICIENTS

µF \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
≤ 47	0.75	1.00	1.35	1.55	2.00
68 ÷ 220	0.80	1.00	1.25	1.34	1.50
≥ 1000	0.85	1.00	1.10	1.13	1.15

Temp (°C)	40	60	70	85	105
Coefficient	2.4	2.1	1.8	1.7	1.0

RADIAL TYPE EA-9

Series

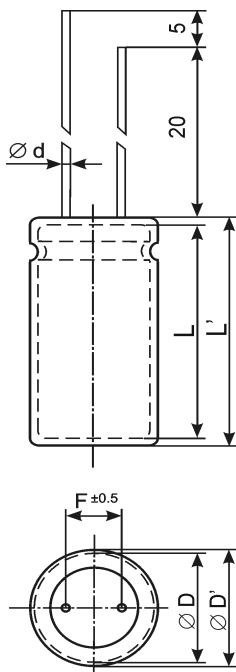


Radial Terminal, Wide Temperature Range

- * Aluminum Electrolytic Capacitors
- * Wide operating temperature range
- * High performance and excellent temperature characteristics
- * Low ESR. High Reliability
- * Load Life of 2000 hours at 105°C
- * Single Ended

● SPECIFICATION

Item	Characteristics							
Operating Temperature Range	- 55 ÷ + 105°C							
Rated Working Voltage	6,3 ÷ 63 VDC							
Nominal Capacitance Range (120Hz, 20°C)	0,47 ÷ 4700 µF							
Capacitance Tolerance (120Hz 20°C)	≤ 0,68µF + 100% - 10%	1 ÷ 2,2µF + 50% - 10%			≥3,3µF ± 20%			
Leakage Current (max)	≤35V CnUr≤1000 I = 0,02CnUr or 5µA		50÷63V CnUr≤1000 I = 0,02CnUr + 3µA			6,3÷63V CnUr>1000		
(20°C)	*Whichever is smaller after 5 minutes I - Leakage Current (µA) Cn - Rated Capacitance (µF) Ur - Working Voltage (V)							
Dissipation Factor (max)	Rated Voltage (V)	6.3	10	16	25	35	50	63
(20°C)	tan δ	0.25	0.20	0.15	0.12	0.10	0.08	0.08
Low Temperature Stability	VDC	6.3	10	16	25	35	50	63
impedance ratio at 100Hz	Z - 25°C/Z +20°C	4	3	2	2	2	1.5	1.5
	Z - 40°C/Z +20°C	6	4	3	2	2	2	2
Load Life	Leakage Current	Less than specified value						
after application of the rated	Capacitance Change	± 20%						
voltage for 2000 hours at 105°C	tan δ	Less than 200% specified value						
Shelf Life	After 1000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.							



● DIMENSIONS

Ø D	5	6.3	8	10	12.5	16	18
Ø d	0.5			0.65			0.8
F	2	2.5	3.5	5.0		7.5	
Ø D'	D+0,5			D+0,6			
L	L+1,5					L+2	

● RIPPLE CURRENT COEFFICIENTS

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
µF ≤ 47	0.75	1.00	1.35	1.55	2.00
68 ÷ 220	0.80	1.00	1.25	1.34	1.50
≥ 1000	0.85	1.00	1.10	1.13	1.15
Temp (°C)	40	60	70	85	105
Coefficient	2.4	2.1	1.78	1.65	1.0

● CASE SIZE & MAX RIPPLE CURRENT mA (rms) at 120Hz, 105°C

μF \ VDC	6.3		10		16		25		35		50		63	
0.47	5x11	6.2	5x11	6.2	5x11	6.2	5x11	6.2	5x11	6.2	5x11	6.2	5x11	6.2
0.68	5x11	7.5	5x11	7.5	5x11	7.5	5x11	7.5	5x11	7.5	5x11	7.5	5x11	7.5
1.0	5x11	9	5x11	9	5x11	9	5x11	9	5x11	9	5x11	10	5x11	10
1.5	5x11	13	5x11	13	5x11	13	5x11	13	5x11	14	5x11	15	5x11	15
2.2	5x11	18	5x11	18	5x11	18	5x11	18	5x11	19	5x11	19	5x11	18
3.3	5x11	22	5x11	22	5x11	22	5x11	24	5x11	25	5x11	27	5x11	27
4.7	5x11	30	5x11	30	5x11	30	5x11	33	5x11	35	5x11	36	5x11	35
6.8	5x11	35	5x11	38	5x11	40	5x11	43	5x11	45	5x11	49	5x11	48
10	5x11	36	5x11	40	5x11	45	5x11	53	5x11	57	5x11	61	6,3x11	61
15	5x11	44	5x11	55	5x11	60	5x11	70	5x11	80	6,3x11	87	6,3x11	87
22	5x11	54	5x11	60	5x11	70	5x11	80	6,3x11	85	8x11	93	8x11	104
33	5x11	58	5x11	70	5x11	90	6,3x11	100	8x11	120	8x11	126	10x16,5	147
47	5x11	63	5x11	80	6,3x11	110	8x11	140	8x11	160	8x14	180	10x16,5	188
68	5x11	78	6,3x11	100	8x11	130	8x11	180	8x14	200	10x16,5	220	10x16,5	263
100	5x11	103	6,3x11	130	8x11	163	8x14	210	10x16,5	235	10x16,5	165	12,5x21	315
150	8x11	153	8x11	180	8x11	215	10x16,5	274	10x20,5	290	10x20,5	380	12,5x24,5	390
220	8x11	203	8x11	242	8x14	293	10x16,5	340	10x20,5	395	12,5x21	438	16x25	490
330	8x14	290	10x16,5	331	10x16,5	375	10x20,5	445	12,5x21	493	12,5x24,5	570	16x31,5	690
470	10x16,5	380	10x16,5	415	10x20,5	490	10x20,5	565	12,5x21	610	16x25	765	16x35,5	850
680	10x20,5	435	10x20,5	495	10x20,5	590	12,5x21	715	12,5x24,5	860	16x25	983	18x37,5	1168
1000	10x20,5	595	10x20,5	654	12,5x21	785	12,5x24,5	825	16x25	975	16x35,5	1200	18x42	2200
1500	12,5x21	620	12,5x21	712	12,5x24,5	900	16x25	1160	16x35,5	1350	18x37,5	1600	22x42	2800
2200	12,5x21	755	12,5x24,5	900	16x25	1005	16x31,5	1600	18x37,5	2010	18x42	2200		
3300	12,5x24,5	880	16x25	1050	16x31,5	1550	18x37,5	2010	18x42	2200	22x42	2800		
4700	16x25	1250	16x31,5	1550	18x37,5	2050	18x42	2200	22x42	2800				

RADIAL TYPE EA-13

Series



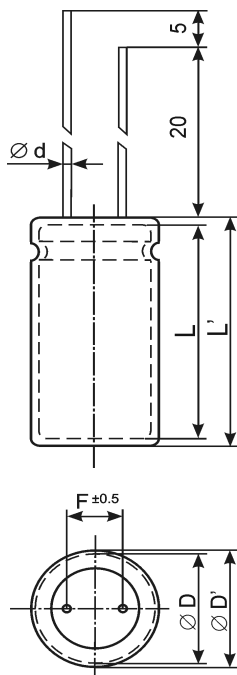
CONIS ELCO Ltd.

Radial Terminal, Wide Temperature Range

- * Aluminum Electrolytic Capacitors
- * Wide operating temperature range
- * Ideally suited for use of switching power supplies
- * Low ESR and Impedance at high frequency
- * Load Life of 3000 hours at 105°C
- * Single Ended

● SPECIFICATION

Item	Characteristics						
Operating Temperature Range	- 55 ÷ + 105°C						
Rated Working Voltage	10 ÷ 63 VDC						
Nominal Capacitance Range (120Hz, 20°C)	33 ÷ 4700 µF						
Capacitance Tolerance (120Hz 20°C)	± 20%						
Leakage Current (max) (20°C)	I = 0,01CnUr or 5µA (mA) *Whichever is smaller after 5 minutes I - Leakage Current (µA) Cn - Rated Capacitance (µF) Ur - Working Voltage (V)						
Dissipation Factor (max) (20°C)	Rated Voltage (V)	10	16	25	35	50	63
	tan δ	0.19	0.14	0.11	0.09	0.08	0.08
Low Temperature Stability impedance ratio at 100Hz	VDC	10	16	25	35	50	63
	Z - 55°C/Z +20°C	3	2	2	2	2	2
Load Life after application of the rated voltage for 3000 hours at 105°C	Leakage Current	Less than specified value					
	Capacitance Change	± 20%					
	tan δ	Less than 200% specified value					
Shelf Life	After 3000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.						



● DIMENSIONS

Ø D	10	12.5	16	18
Ø d	0.65	0.65	0.65	0.80
F	5.0		7.5	
Ø D'	D+0,6		D+0,6	
L	L+1,5		L+2	

● RIPPLE CURRENT COEFFICIENTS

µF \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
≤ 47	0.75	1.00	1.35	1.55	2.00
68 ÷ 220	0.80	1.00	1.25	1.34	1.50
≥ 1000	0.85	1.00	1.10	1.13	1.15

Temp (°C)	40	60	70	85	105
Coefficient	2.40	2.10	1.78	1.65	1.00

● CASE SIZE & MAX RIPPLE CURRENT mA (rms) at 120Hz, 105°C & Resr & Zmax

Capacitance (µF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Z MAX (Ω) 100kHz, 20°C	MAX Ripple Current mA (rms)	
150	10	10x16,5	1.600	0.500	210	
220		10x16,5	1.100	0.400	280	
330		10x20,5	0.610	0.300	370	
470		10x25,0	0.350	0.190	460	
680		10x35,0	0.210	0.150	580	
1000		12,5x35,5	0.160	0.100	780	
1500		12,5x35,5	0.100	0.080	995	
2200		16x35,5	0.075	0.060	1280	
3300		18x37,5	0.050	0.040	1560	
4700		18x37,5	0.045	0.035	1890	
100		16	10x16,5	1.600	0.500	210
150			10x16,5	1.000	0.400	285
220	10x20,5		0.700	0.300	380	
330	10x25,0		0.510	0.200	480	
470	12,5x24,5		0.280	0.150	570	
680	12,5x35,5		0.200	0.110	790	
1000	12,5x35,5		0.145	0.100	1000	
1500	16x35,5		0.097	0.080	1250	
2200	18x37,5		0.066	0.060	1600	
3300	18x37,5		0.044	0.054	1750	
4700	18x37,5		0.037	0.037	2100	
68	25		10x16,5	1.600	0.500	185
100		10x16,5	1.300	0.350	240	
150		10x20,5	0.900	0.230	330	
220		10x25,0	0.500	0.160	430	
330		10x35,0	0.350	0.120	565	
470		12,5x24,5	0.205	0.100	740	
680		12,5x35,5	0.180	0.080	930	
1000		16x35,5	0.120	0.060	1260	
1500		18x37,5	0.085	0.050	1530	
2200		18x37,5	0.055	0.045	1750	
47		35	10x16,5	2.290	0.500	160
68			10x16,5	1.390	0.400	210
100	10x20,5		0.900	0.230	280	
150	10x25,0		0.650	0.160	380	
220	10x35,0		0.420	0.110	495	
330	12,5x24,5		0.290	0.080	660	
470	12,5x35,5		0.180	0.060	870	
680	16x35,5		0.165	0.050	1150	
1000	18x37,5		0.110	0.040	1560	
1500	18x37,5		0.065	0.035	1850	
33	50		10x16,5	2.950	0.600	150
47			10x16,5	1.900	0.430	200
68		10x16,5	1.200	0.320	250	
100		12,5x21	0.700	0.230	340	
150		12,5x21	0.600	0.160	480	
220		12,5x35,5	0.370	0.100	580	
330		16x35,5	0.250	0.080	800	
470		16x35,5	0.150	0.060	1100	
680		16x35,5	0.120	0.050	1380	
1000		18x37,5	0.090	0.040	1600	
33		63	10x16,5	1.800	0.500	150
47			10x16,5	1.600	0.400	190
68	10x16,5		1.100	0.300	240	
100	12,5x21		0.550	0.230	360	
150	12,5x21		0.510	0.160	580	
220	12,5x35,5		0.320	0.100	610	
330	16x31,5		0.200	0.080	960	
470	16x35,5		0.130	0.060	1300	
680	18x37,5		0.100	0.050	1500	

The values shown for Resr & Z are the maximum permitted. The typical value of the different parameters shown are from 15 to 50% of the maximum ones.

RADIAL TYPE EA-19

Series

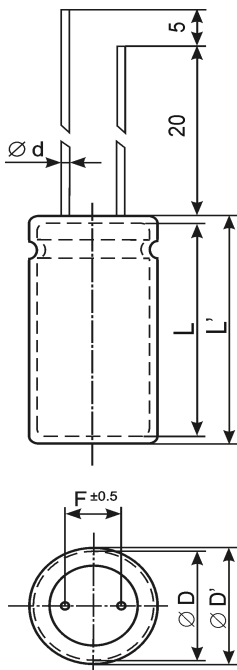


Radial Terminal, For General Purpose

- * Aluminum Electrolytic Capacitors
- * Standard Series for General Purpose
- * Load Life of 1000 hours at 85°C
- * Single Ended

● SPECIFICATION

Item	Characteristics							
Operating Temperature Range	- 40 ÷ + 85°C							
Rated Working Voltage	160 ÷ 450 VDC							
Nominal Capacitance Range (120Hz, 20°C)	1 ÷ 470 µF							
Capacitance Tolerance (120Hz 20°C)	± 20%							
Leakage Current (max) (20°C)	$I \leq 0,02CnU_r + 5\mu A$ (mA) *Whichever is smaller after 5 minutes I - Leakage Current (µA) Cn - Rated Capacitance (µF) U _r - Working Voltage (V)							
Dissipation Factor (max) (20°C)	Rated Voltage (V)	160	200	250	350	385	400	450
	tan δ	0.15	0.15	0.15	0.17	0.20	0.20	0.20
Low Temperature Stability impedance ratio at 100Hz	VDC	160	200	250	350	385	400	450
	Z - 25°C/Z +20°C	6	6	6	8	8	8	8
	Z - 40°C/Z +20°C	8	8	8	10	12	12	12
Load Life after application of the rated voltage for 1000 hours at 85°C	Leakage Current	Less than specified value						
	Capacitance Change	± 20%						
	tan δ	Less than 200% specified value						
Shelf Life	After 1000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.							



● DIMENSIONS

Ø D	6.3	8	10	12.5	16	18	22
Ø d	0.5		0.65			0.8	0.8
F	2.5	3.5	5		7.5	7.5	7.5
Ø D'	D+0,5		D+0,6		D+0,6		
L	L+1,5			L+2			

● RIPPLE CURRENT COEFFICIENTS

µF \ Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
≤ 47	0.75	1.00	1.35	1.55	2.00
68 ÷ 220	0.80	1.00	1.25	1.34	1.50

Temp (°C)	40	60	70	85
Coefficient	2.0	1.5	1.3	1.0

● CASE SIZE & MAX RIPPLE CURRENT mA (rms) at 120Hz, 85°C & Resr & Zmax

Capacitance (µF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current mA (rms)	
1.0	160	5x11	238.00	37.30	17	
2.2		6,3x11	105.00	31.60	25	
3.3		6,3x11	72.00	23.00	37	
4.7		6,3x11	49.50	16.50	45	
6.8		8x11	35.50	11.50	62	
10		8x11	23.00	9.15	78	
22		10x16,5	8.50	6.18	135	
33		10x20,5	7.00	3.60	195	
47		12,5x21	4.95	2.75	235	
68		12,5x24,5	3.31	2.12	310	
100		16x25	2.21	1.10	410	
220		18x37,5	0.85	0.43	750	
330		18x42	0.80	0.40	700	
470		22x42	0.80	0.40	700	
1.0		200	5x11	230.00	36.50	17
2.2	6,3x11		103.50	30.60	27	
3.3	6,3x11		71.50	22.20	39	
4.7	8x11		49.00	16.00	52	
6.8	8x11		35.00	11.00	72	
10	8x14		22.50	8.80	85	
22	10x20,5		8.10	7.80	138	
33	12,5x21		6.80	3.15	195	
47	12,5x24,5		4.55	2.50	255	
68	16x25		3.00	2.00	375	
100	16x31,5		2.00	1.00	410	
220	18x37,5		0.81	0.40	800	
330	22x42		0.80	0.40	700	
1.0	250		5x11	228.50	35.60	19
2.2			6,3x11	101.50	29.90	30
3.3		6,3x11	71.00	21.80	42	
4.7		8x11	48.50	15.20	51	
6.8		8x14	34.50	10.30	70	
10		10x16,5	22.00	7.90	83	
22		10x25,0	7.85	5.00	160	
33		12,5x21	6.55	2.95	210	
47		16x25	4.25	2.10	255	
68		16x25	2.85	1.85	340	
100		16x35,5	1.95	0.90	450	
220		22x42	1.90	0.85	440	
1.0		350	5x11	226.00	33.90	19
2.2			6,3x11	100.00	29.00	33
3.3			8x11	70.60	21.00	39
4.7	8x14		48.20	14.80	47	
6.8	10x16,5		34.30	10.00	70	
10	10x20,5		21.60	7.00	98	
22	12,5x24,5		7.55	4.50	160	
33	16x25		6.25	2.75	188	
47	16x31,5		4.00	1.95	250	
68	18x37,5		2.65	1.75	340	
100	18x37,5		1.95	0.85	470	

The values shown for Resr & Z are the maximum permitted. The typical value of the different parameters shown are from 15 to 50% of the maximum ones.

● CASE SIZE & MAX RIPPLE CURRENT mA (rms) at 120Hz, 85°C & Resr & Zmax

Capacitance (µF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current mA (rms)	
1.0	385	6,3x11	223.00	33.00	19	
2.2		8x11	98.00	28.50	33	
3.3		8x11	70.00	20.50	39	
4.7		10x16,5	48.00	14.20	49	
6.8		10x16,5	34.00	9.80	70	
10		10x20,5	21.20	6.80	99	
22		12,5x24,5	7.25	4.25	163	
33		16x25	6.00	2.55	195	
47		16x31,5	3.85	1.85	265	
68		18x37,5	2.50	1.65	360	
100		18x42	1.90	0.80	450	
1.0		400	6,3x11	223.00	33.00	19
2.2			8x11	98.00	28.50	33
3.3	8x14		70.00	20.50	39	
4.7	10x16,5		48.00	14.20	52	
6.8	10x16,5		34.00	9.80	70	
10	10x20,5		21.20	6.80	98	
22	12,5x24,5		7.25	4.25	165	
33	16x25		6.00	2.55	210	
47	16x31,5		2.85	1.85	280	
68	18x37,5		2.50	1.65	370	
100	18x42		2.40	1.60	350	
1.0	450		6,3x11	223.00	33.00	19
2.2			8x11	98.00	28.50	33
3.3		10x16,5	70.00	20.50	39	
4.7		10x16,5	48.00	14.20	52	
6.8		10x20,5	34.00	9.80	70	
10		12,5x21	21.20	6.80	98	
22		16x25	7.25	4.25	165	
33		16x31,5	6.00	2.55	210	
47		16x35,5	2.85	1.85	280	
68		18x37	2.50	1.65	370	
100		22x42	2.40	1.60	350	

The values shown for Resr & Z are the maximum permitted. The typical value of the different parameters shown are from 15 to 50% of the maximum ones.

RADIAL TYPE EA-20

Series

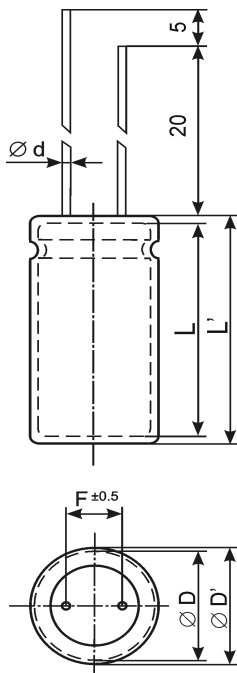


Radial Terminal, Wide Temperature Range

- * Aluminum Electrolytic Capacitors
- * Wide operating temperature range
- * High performance and excellent temperature characteristics
- * Load Life of 1000 hours at 105°C
- * Single Ended

● SPECIFICATION

Item	Characteristics							
Operating Temperature Range	- 40 ÷ + 105°C							
Rated Working Voltage	160 ÷ 450 VDC							
Nominal Capacitance Range (120Hz, 20°C)	1 ÷ 470 µF							
Capacitance Tolerance (120Hz 20°C)	± 20%							
Leakage Current (max) (20°C)	$I \leq 0,02CnUr + 5\mu A$ (mA) *Whichever is smaller after 5 minutes I - Leakage Current (µA) Cn - Rated Capacitance (µF) Ur - Working Voltage (V)							
Dissipation Factor (max) (20°C)	Rated Voltage (V)	160	200	250	350	385	400	450
	tan δ	0.15	0.15	0.15	0.17	0.20	0.20	0.20
Low Temperature Stability impedance ratio at 100Hz	VDC	160	200	250	350	385	400	450
	Z - 25°C/Z +20°C	4	4	6	6	6	6	6
	Z - 40°C/Z +20°C	8	8	8	10	12	12	12
Load Life after application of the rated voltage for 1000 hours at 105°C	Leakage Current	Less than specified value						
	Capacitance Change	± 20%						
	tan δ	Less than 200% specified value						
Shelf Life	After 1000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.							



● DIMENSIONS

Ø D	6.3	8	10	12.5	16	18	22
Ø d	0.5		0.65			0.8	0.8
F	2.5	3.5	5		7.5	7.5	7.5
Ø D'	D+0,5		D+0,6		D+0,6		
L	L+1,5			L+2			

● RIPPLE CURRENT COEFFICIENTS

Frequency µF	50Hz	120Hz	300Hz	1kHz	10kHz
≤ 47	0.75	1.00	1.35	1.55	2.00
68 ÷ 220	0.80	1.00	1.25	1.34	1.50
Temp (°C)	40	60	70	85	105
Coefficient	2.40	2.10	1.75	1.65	1.00

● CASE SIZE & MAX RIPPLE CURRENT mA (rms) at 120Hz, 105°C & Resr & Zmax

Capacitance (µF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current mA (rms)	
1.0	160	5x11	238.00	37.30	17	
2.2		6,3x11	105.00	31.60	20	
3.3		6,3x11	72.00	23.00	31	
4.7		6,3x11	49.50	16.50	38	
6.8		8x11	35.50	11.50	62	
10		8x11	23.00	9.15	70	
22		10x16,5	8.50	6.18	115	
33		10x20,5	7.00	3.60	160	
47		12,5x21	4.95	2.75	190	
68		12,5x24,5	3.31	2.12	250	
100		16x25	2.21	1.10	335	
220		18x37,5	0.85	0.43	590	
330		18x42	0.80	0.42	740	
470		22x42	0.80	0.40	700	
1.0		200	5x11	230.00	36.50	17
2.2	6,3x11		103.50	30.60	23	
3.3	6,3x11		71.50	22.20	32	
4.7	8x11		49.00	16.00	42	
6.8	8x11		35.00	11.00	72	
10	8x14		22.50	8.80	71	
22	10x20,5		8.10	7.80	127	
33	12,5x21		6.80	3.15	165	
47	12,5x24,5		4.55	2.50	205	
68	16x25		3.00	2.00	270	
100	16x31,5		2.00	1.00	365	
220	18x37,5		0.81	0.40	625	
330	22x42		0.80	0.40	800	
1.0	250		5x11	228.50	35.60	15
2.2			6,3x11	101.50	29.90	25
3.3		6,3x11	71.00	21.80	36	
4.7		8x11	48.50	15.20	47	
6.8		8x14	34.50	10.30	70	
10		10x16,5	22.00	7.90	68	
22		10x25,0	7.85	5.00	123	
33		12,5x21	6.55	2.95	153	
47		16x25	4.25	2.10	201	
68		16x25	2.85	1.85	295	
100		16x35,5	1.95	0.90	380	
220		22x42	0.80	0.90	380	
1.0		350	5x11	226.00	33.90	14
2.2			6,3x11	100.00	29.00	23
3.3			8x11	70.60	21.00	30
4.7	8x14		48.20	14.80	39	
6.8	10x16,5		48.00	14.00	38	
10	10x20,5		21.60	7.00	56	
22	12,5x24,5		7.55	4.50	110	
33	16x25		6.25	2.75	150	
47	16x31,5		4.00	1.95	190	
68	18x37,5		2.65	1.75	240	
100	18x37,5		1.95	0.85	330	

The values shown for Resr & Z are the maximum permitted. The typical value of the different parameters shown are from 15 to 50% of the maximum ones.

● CASE SIZE & MAX RIPPLE CURRENT mA (rms) at 120Hz, 105°C & Resr & Zmax

Capacitance (µF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current mA (rms)	
1.0	385	6,3x11	223.00	33.00	15	
2.2		8x11	98.00	28.50	24	
3.3		8x11	70.00	20.50	32	
4.7		10x16,5	48.00	14.20	39	
6.8		10x16,5	34.00	9.80	70	
10		12,5x21	21.20	6.80	58	
22		12,5x24,5	7.25	4.25	113	
33		16x25	6.00	2.55	155	
47		16x31,5	3.85	1.85	195	
68		18x37,5	2.50	1.65	245	
100		18x42	1.90	0.80	300	
1.0		400	6,3x11	223.00	33.00	15
2.2			8x11	98.00	28.50	25
3.3	8x14		70.00	20.50	33	
4.7	10x16,5		48.00	14.20	41	
6.8	10x16,5		34.00	9.80	70	
10	12,5x21		21.20	6.80	59	
22	12,5x24,5		7.25	4.25	115	
33	16x25		6.00	2.55	158	
47	16x31,5		2.85	1.85	200	
68	18x37,5		2.50	1.65	250	
100	18x42		1.85	1.60	300	
1.0	450		6,3x11	223.00	33.00	15
2.2			8x11	98.00	28.50	25
3.3		10x16,5	70.00	20.50	33	
4.7		10x16,5	48.00	14.20	41	
6.8		10x20,5	34.00	9.80	70	
10		12,5x21	21.20	6.80	59	
22		16x25	7.25	4.25	115	
33		16x31,5	6.00	2.55	158	
47		16x35,5	2.85	1.85	200	
68		18x37	2.50	1.65	250	
100		22x42	1.85	1.60	300	

The values shown for Resr & Z are the maximum permitted. The typical value of the different parameters shown are from 15 to 50% of the maximum ones.

RADIAL TYPE NP

Series



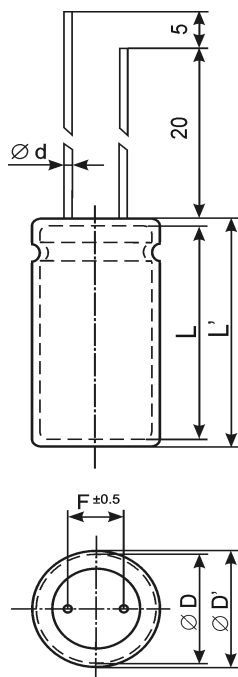
CONIS ELCO Ltd.

Radial Terminal, Non-Polarized

- * Aluminum Electrolytic Capacitors
- * Standard Non-Polarized Series
- * Designed for use in circuits with reversing polarity
- * Load Life of 1000 hours at 85°C
- * Single Ended

● SPECIFICATION

Item	Characteristics								
Operating Temperature Range	- 40 ÷ + 85°C								
Rated Working Voltage	6,3 ÷ 100 VDC								
Nominal Capacitance Range (120Hz, 20°C)	0,1 ÷ 4700 µF								
Capacitance Tolerance (120Hz 20°C)	≤ 0,68µF	+ 100%		1 ÷ 2,2µF	+ 50%		≥3,3µF		± 20%
Leakage Current (max) (20°C)	I = 0,03CnUr + 3µA *Wichever is smaller after 5 minutes I - Leakage Current (µA) Cn - Rated Capacitance (µF) Ur - Working Voltage (V)								
Dissipation Factor (max) (20°C)	Rated Voltage (V)	6.3	10	16	25	35	50	63	100
	tan δ	0.24	0.20	0.16	0.16	0.14	0.12	0.10	0.09
Low Temperature Stability	VDC	6.3	10	16	25	35	50	63	100
	Z - 25°C/Z +20°C	4	3	2	2	2	2	2	2
impedance ratio at 100Hz	Z - 40°C/Z +20°C	8	6	6	4	4	4	4	3
Load Life	Leakage Current	Less than specified value							
after application of the rated	Capacitance Change	± 20%							
voltage for 1000 hours at 85°C	tan δ	Less than 200% specified value							
	Test method	Polarity reverse every 250 hours							
Shelf Life	After 1000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.								



● DIMENSIONS

Ø D	5	6.3	8	10	12.5	16	18
Ø d	0.5			0.65			0.8
F	2	2.5	3.5	5.0		7.5	
Ø D'	D+0,5			D+0,6			
L	L+1,5					L+2	

● RIPPLE CURRENT COEFFICIENTS

µF \ Frecuency	50Hz	120Hz	300Hz	1kHz	10kHz
≤ 47	0.75	1.00	1.35	1.55	2.00
68 ÷ 220	0.80	1.00	1.25	1.34	1.50
≥ 1000	0.85	1.00	1.10	1.13	1.15

Temp (°C)	40	60	70	85
Coefficient	2.0	1.5	1.3	1.0

RADIAL TYPE BP

Series



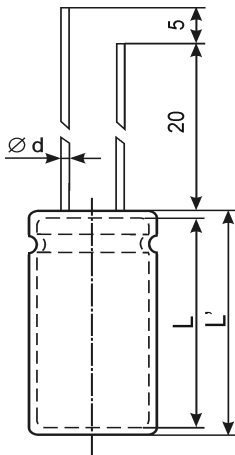
CONIS ELCO Ltd.

Radial Terminal, For Speaker Networks

- * Aluminum Electrolytic Capacitors
- * Non-Polarized series for crossover networks in Hi-Fi sound systems
- * Excellent frequency characteristics
- * Load Life of 2000 hours at 85°C
- * Close capacitance tolerance
- * BP series have voltage range of 35V, 50V & 63V

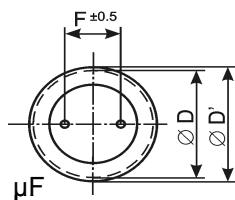
● SPECIFICATION

Item	Characteristics	
Operating Temperature Range	- 40 ÷ + 85°C	
Rated Working Voltage	35 ÷ 63 VDC	
Nominal Capacitance Range (120Hz, 20°C)	1 ÷ 100 µF	
Capacitance Tolerance (1kHz 20°C)	±10%; ±20%	
Leakage Current (max) (20°C)	I = 0,03CnUr or 5µA *Wichever is smaller after 5 minutes I - Leakage Current (µA) Cn - Rated Capacitance (µF) Ur - Working Voltage (V)	
Dissipation Factor (max) (20°C)	tan δ = 0,12 at 1kHz; tan δ = 0,35 at 10kHz	
Load Life after application of the rated voltage for 2000 hours at 85°C	Leakage Current	Less than specified value
	Capacitance Change	± 20%
	tan δ	Less than 200% specified value
	Test method	Polarity reverse every 250 hours
Shelf Life	After 2000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.	



● DIMENSIONS

Ø D	10	12.5	16	18
Ø d	0.65	0.65	0.65	0.80
F	5.0		7.5	
Ø D'	D+0,6		D+0,6	
L	L+1,5		L+2	



VDC \ µF	1.0	1.5	2.2	3.3	4.7	6.8	10	15	22	33	47	68	100
35	10x16,5 90	10x16,5 115	10x16,5 140	10x16,5 170	10x16,5 215	10x20,5 260	12,5x21 345	12,5x21 405	12,5x21 500	12,5x24,5 615	16x31,5 770	16x31,5 930	16x35,5 1150
50	10x16,5 100	10x16,5 130	10x16,5 150	10x16,5 190	10x16,5 230	10x20,5 280	12,5x21 340	12,5x21 430	12,5x21 510	12,5x24,5 635	16x31,5 795	16x31,5 960	18x37,5 1170
63	10x16,5 100	10x16,5 130	10x16,5 155	10x20,5 190	10x20,5 230	10x20,5 285	12,5x21 350	12,5x24,5 440	12,5x24,5 580	16x25 780	16x31,5 810	16x35,5 1010	18x37,5 1350