

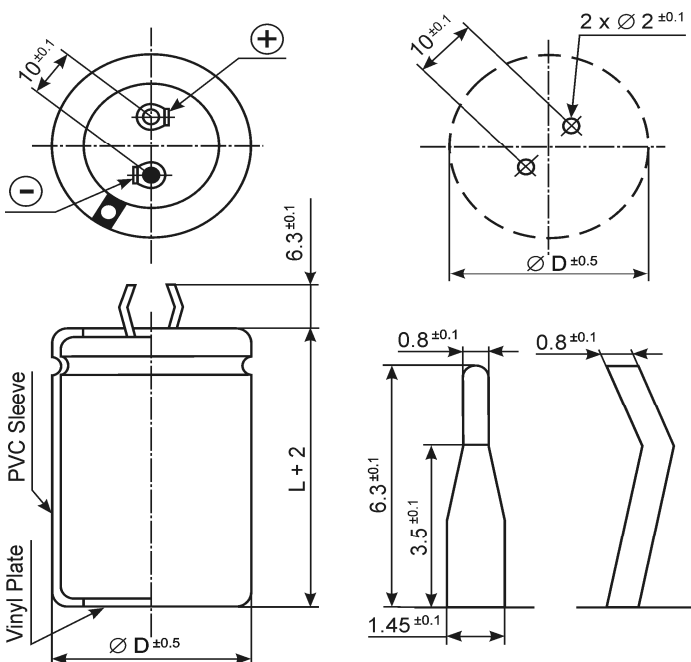
SNAP-IN TYPE EA-16 Series

CONIS ELCO Ltd.
Snap-In Terminal, For General Purpose

- * Aluminum Electrolytic Capacitors
- * Standard Series for General Purpose
- * Load Life of 1000 hours at 85°C
- * Snap-In terminal series

● SPECIFICATION

Item	Characteristics									
Operating Temperature Range	- 40 ÷ + 85°C									
Rated Working Voltage	10 ÷ 100 VDC									
Nominal Capacitance Range (120Hz, 20°C)	680 ÷ 22000 µF									
Capacitance Tolerance (120Hz 20°C)	± 20%									
Leakage Current (max) (20°C)	$I = 0,02C_n U_r$ * Whichever is smaller after 5 minutes I - Leakage Current (µA) C _n - Rated Capacitance (µF) U _r - Working Voltage (V)									
Dissipation Factor (max) (20°C)	Rated Voltage (V)	10	16	25	35	50	63	80	100	
	tan δ	0.25			0.20		0.15			
Low Temperature Stability impedance ratio at 100Hz	VDC	10	16	25	35	50	63	80	100	
	Z - 25°C/Z +20°C	4	3	2	2	2	2	2	2	
	Z - 40°C/Z +20°C	8	6	6	4	3	3	3	3	
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 150% specified value								
Shelf Life	After 1000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.									



● RIPPLE CURRENT COEFFICIENTS

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
Coefficient	0.75	1.00	1.35	1.55	2.00

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

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

Capacitance (μF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Resr TYP (Ω) 10kHz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current A (rms)	
10000	10	25x26	0.031	0.230	0.033	3.0	
15000		25x32	0.026	0.018	0.033	3.2	
22000		30x32	0.018	0.014	0.026	3.8	
22000		25x42	0.018	0.014	0.026	3.8	
10000	16	25x32	0.039	0.023	0.039	2.9	
15000		30x32	0.026	0.018	0.027	3.6	
15000		25x42	0.026	0.018	0.027	3.6	
22000		30x32	0.018	0.014	0.026	4.1	
4700	25	25x26	0.067	0.050	0.063	2.6	
6800		25x32	0.046	0.039	0.043	2.7	
10000		30x36	0.031	0.023	0.030	3.4	
10000		25x42	0.031	0.023	0.030	3.4	
15000		30x42	0.026	0.018	0.027	4.0	
22000		35x42	0.018	0.014	0.026	4.5	
22000		30x52	0.018	0.014	0.026	4.5	
4700		35	25x32	0.050	0.039	0.051	2.7
6800	30x32		0.046	0.035	0.033	3.3	
6800	25x42		0.046	0.035	0.033	3.3	
10000	30x42		0.031	0.023	0.031	3.8	
15000	35x52		0.026	0.018	0.028	4.5	
22000	35x52		0.018	0.014	0.026	4.9	
3300	50		25x32	0.072	0.060	0.050	2.6
4700		30x32	0.050	0.039	0.046	3.1	
4700		25x42	0.050	0.039	0.046	3.1	
6800		30x42	0.046	0.035	0.031	4.0	
6800		30x52	0.046	0.035	0.031	4.0	
10000		35x47	0.031	0.023	0.030	4.3	
15000		35x52	0.026	0.018	0.028	4.5	
2200		63	25x32	0.108	0.085	0.075	2.3
3300			30x32	0.072	0.060	0.050	2.7
3300	25x42		0.072	0.060	0.050	2.7	
4700	30x32		0.050	0.039	0.045	3.6	
6800	35x42		0.046	0.035	0.031	4.3	
6800	30x52		0.046	0.035	0.031	4.3	
10000	35x52		0.031	0.023	0.030	4.5	
1500	80		25x32	0.159	0.125	0.115	2.2
2200		30x32	0.108	0.090	0.073	2.8	
2200		25x42	0.108	0.090	0.073	2.8	
3300		30x32	0.072	0.060	0.050	3.5	
4700		30x42	0.050	0.039	0.045	4.2	
6800		35x52	0.046	0.034	0.031	4.4	
6800		30x57	0.046	0.034	0.031	4.4	
680		100	25x26	0.351	0.235	0.165	1.6
1000	25x32		0.238	0.195	0.115	1.9	
1500	30x32		0.159	0.125	0.073	2.5	
1500	25x42		0.159	0.125	0.073	2.5	
2200	30x36		0.108	0.090	0.051	3.1	
3300	35x42		0.072	0.060	0.038	3.7	
3300	30x52		0.072	0.060	0.038	3.7	
4700	35x52		0.050	0.039	0.033	4.4	

SNAP-IN TYPE EA-21

Series



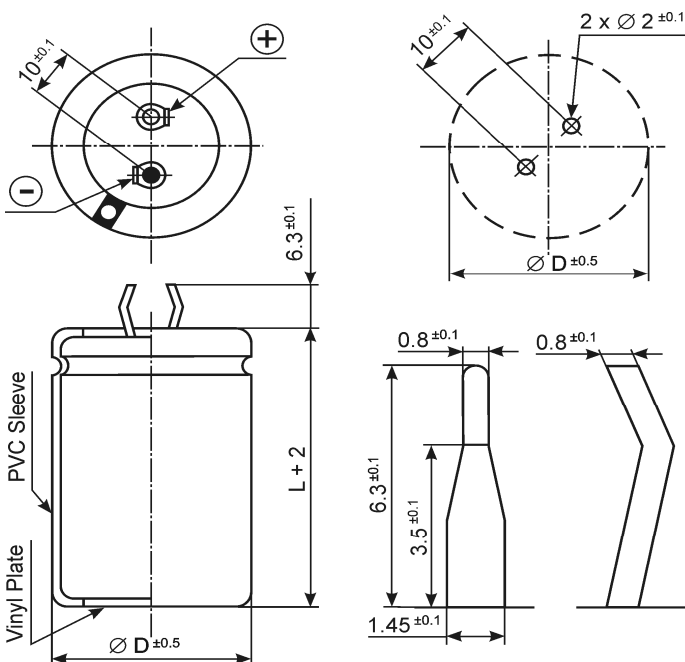
CONIS ELCO Ltd.

Snap-In 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
- * Snap-In terminal series

● SPECIFICATION

Item	Characteristics									
Operating Temperature Range	- 55 ÷ + 105°C									
Rated Working Voltage	10 ÷ 100 VDC									
Nominal Capacitance Range (120Hz, 20°C)	680 ÷ 22000 µF									
Capacitance Tolerance (120Hz 20°C)	± 20%									
Leakage Current (max) (20°C)	I = 0,02CnUr					* 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	80	100	
	tan δ	0.25			0.20		0.15			
Low Temperature Stability impedance ratio at 100Hz	VDC	10	16	25	35	50	63	80	100	
	Z - 25°C/Z +20°C	3	2	2	2	2	2	2	2	2
	Z - 55°C/Z +20°C	8	6	4	3	3	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 150% specified value								
Shelf Life	After 1000 hours no load test, leakage current, capacitance and tan δ are the same as load life values.									



● RIPPLE CURRENT COEFFICIENTS

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
Coefficient	0.85	1.00	1.08	1.25	1.35
Temp (°C)	40	60	70	85	105
Coefficient	2.10	2.00	1.78	1.65	1.00

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

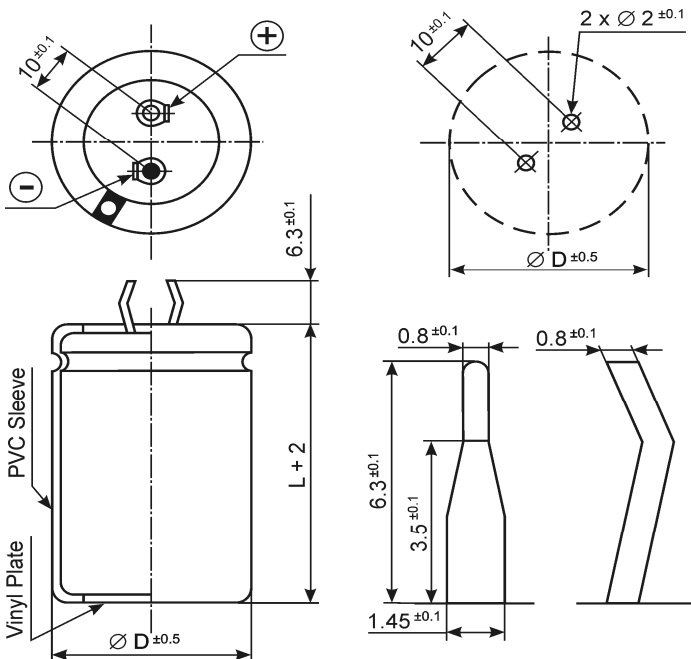
Capacitance (μF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Resr TYP (Ω) 10kHz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current A (rms)	
15000	10	25x32	0.026	0.018	0.033	2.4	
22000		30x32	0.018	0.014	0.026	2.8	
10000	16	25x32	0.039	0.029	0.039	2.2	
15000		30x32	0.026	0.018	0.027	2.7	
22000		30x47	0.018	0.014	0.026	3.1	
4700	25	25x32	0.067	0.050	0.063	1.9	
6800		25x32	0.046	0.039	0.043	2.1	
10000		30x36	0.031	0.023	0.030	2.6	
15000		30x42	0.026	0.018	0.027	3.4	
22000		30x42	0.018	0.014	0.026	4.0	
4700		35	25x32	0.050	0.039	0.051	2.0
6800	30x36		0.046	0.035	0.033	2.3	
10000	30x47		0.031	0.023	0.031	2.9	
15000	35x42		0.026	0.018	0.028	3.4	
22000	35x47		0.018	0.014	0.026	3.7	
3300	50		25x36	0.072	0.060	0.050	1.9
4700			30x36	0.050	0.039	0.046	2.3
6800		30x42	0.046	0.035	0.031	3.0	
10000		35x47	0.031	0.023	0.030	3.2	
2200	63	25x32	0.108	0.085	0.075	1.7	
3300		30x36	0.072	0.060	0.050	2.0	
4700		30x42	0.050	0.039	0.045	2.7	
6800		35x42	0.046	0.035	0.031	3.2	
1500	80	25x32	0.159	0.125	0.115	1.6	
2200		30x32	0.108	0.090	0.073	2.0	
3300		30x42	0.072	0.060	0.050	2.6	
4700		35x42	0.050	0.039	0.045	3.1	
6800		35x57	0.046	0.034	0.031	3.4	
680	100	25x32	0.351	0.235	0.165	1.2	
1000		25x32	0.238	0.195	0.115	1.4	
1500		30x32	0.159	0.125	0.073	1.9	
2200		30x36	0.108	0.090	0.051	2.3	
3300		35x43	0.072	0.060	0.038	2.8	
4700		35x57	0.050	0.039	0.033	3.3	

SNAP-IN TYPE EA-22 Series

- * 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
- * Snap-In terminal series

● SPECIFICATION

Item	Characteristics						
Operating Temperature Range	- 55 ÷ + 105°C						
Rated Working Voltage	10 ÷ 63 VDC						
Nominal Capacitance Range (120Hz, 20°C)	3300 ÷ 22000 µF						
Capacitance Tolerance (120Hz 20°C)	± 20%						
Leakage Current (max) (20°C)	$I = 0,02C_n U_r$ * Whichever is smaller after 5 minutes I - Leakage Current (µA) C _n - Rated Capacitance (µF) U _r - Working Voltage (V)						
Dissipation Factor (max) (20°C)	Rated Voltage (V)	10	16	25	35	50	63
	tan δ	0.20	0.15	0.12	0.12	0.12	0.12
Low Temperature Stability impedance ratio at 100Hz	VDC	10	16	25	35	50	63
	Z - 25°C/Z +20°C	3	2	2	2	1.5	1.5
	Z - 55°C/Z +20°C	4	3	2	2	2	2
Load Life after application of the rated voltage for 2000 hours at 105°C	Leakage Current	Less than specified value					
	Capacitance Change	± 20%					
	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.						



● RIPPLE CURRENT COEFFICIENTS

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
Coefficient	0.85	1.00	1.08	1.25	1.35
Temp (°C)	40	60	70	85	105
Coefficient	2.00	1.90	1.78	1.65	1.00

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

Capacitance (μF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Resr TYP (Ω) 10kHz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current A (rms)
15000	10	25x32	0.026	0.018	0.033	2.6
22000		30x32	0.018	0.014	0.026	3.1
10000	16	25x32	0.039	0.029	0.039	2.3
15000		30x32	0.026	0.018	0.027	2.8
22000		30x47	0.018	0.014	0.026	3.4
4700	25	25x32	0.067	0.050	0.063	1.9
6800		25x32	0.046	0.039	0.043	2.2
10000		30x36	0.031	0.023	0.030	2.7
15000		30x42	0.026	0.018	0.027	3.3
22000		30x42	0.018	0.014	0.026	4.0
4700		35	25x32	0.050	0.039	0.051
6800	30x36		0.046	0.035	0.033	2.5
10000	30x47		0.031	0.023	0.031	2.9
15000	35x42		0.026	0.018	0.028	3.4
3300	50		25x36	0.072	0.060	0.050
4700		30x36	0.050	0.039	0.046	2.5
6800		30x42	0.046	0.035	0.031	3.2
10000		35x47	0.031	0.023	0.030	3.9
2200		63	30x32	0.108	0.090	0.073
3300	30x42		0.072	0.060	0.050	2.6
4700	35x42		0.050	0.039	0.045	3.1
6800	35x57		0.046	0.034	0.031	3.4

SNAP-IN TYPE EA-17

Series



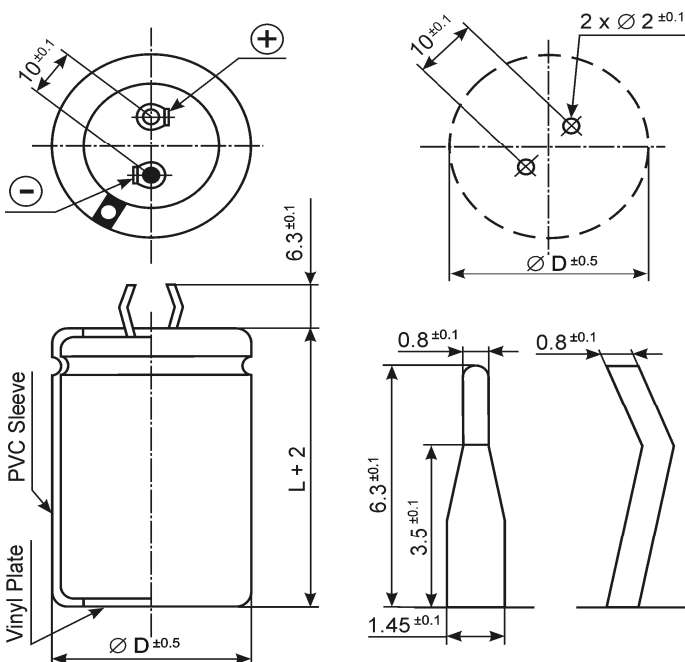
CONIS ELCO Ltd.

Snap-In Terminal, For General Purpose

- * Aluminum Electrolytic Capacitors
- * Standard Series for General Purpose
- * Load Life of 1000 hours at 85°C
- * Snap-In terminal series

SPECIFICATION

Item	Characteristics							
Operating Temperature Range	- 40 ÷ + 85°C							
Rated Working Voltage	160 ÷ 450 VDC							
Nominal Capacitance Range (120Hz, 20°C)	100 ÷ 2200 µ F							
Capacitance Tolerance (120Hz 20°C)	± 20%							
Leakage Current (max) (20°C)	$I = 0,02C_n U_r + 15\mu A$ * Whichever is smaller after 5 minutes I - Leakage Current (µA) C _n - 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	0.2
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 - 55°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.							



RIPPLE CURRENT COEFFICIENTS

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
Coefficient	0.85	1.00	1.08	1.25	1.35

Temp (°C)	40	60	70	85
Coefficient	2.00	1.50	1.30	1.00

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

Capacitance (μF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Resr TYP (Ω) 10kHz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current A (rms)	
330	160	25x26	0.579	0.295	0.303	1.6	
470		25x32	0.406	0.205	0.214	1.9	
680		25x42	0.281	0.150	0.148	2.3	
680		30x36	0.281	0.150	0.148	2.3	
1000		30x42	0.191	0.099	0.105	2.8	
1500		30x52	0.127	0.076	0.080	3.0	
1500		35x42	0.127	0.076	0.080	3.0	
2200		35x52	0.085	0.065	0.048	3.6	
220		200	25x26	0.868	0.455	0.460	0.9
330			25x36	0.579	0.295	0.303	1.2
470	25x42		0.406	0.205	0.214	1.6	
680	30x36		0.281	0.150	0.148	2.0	
1000	30x52		0.191	0.099	0.105	2.5	
1000	35x42		0.191	0.099	0.105	2.5	
1500	35x52		0.127	0.076	0.080	3.0	
2200	35x57		0.085	0.065	0.048	3.6	
150	250		25x26	1.273	0.640	0.670	0.8
220			25x32	0.868	0.455	0.460	0.9
330		25x36	0.579	0.295	0.303	1.2	
470		25x42	0.406	0.205	0.214	1.8	
470		30x32	0.406	0.205	0.214	1.8	
680		30x42	0.281	0.150	0.148	2.0	
1000		30x57	0.191	0.099	0.105	2.5	
1000		35x42	0.191	0.099	0.105	2.5	
1500		35x57	0.127	0.076	0.080	3.0	
100		350	25x26	1.910	0.880	1.010	0.9
150	25x32		1.237	0.640	0.669	1.1	
220	25x42		0.868	0.455	0.460	1.3	
220	30x32		0.868	0.455	0.460	1.3	
330	30x42		0.579	0.295	0.303	1.7	
470	30x52		0.406	0.200	0.214	2.0	
680	35x52		0.281	0.145	0.148	2.1	
100	385		25x32	1.910	0.880	1.010	0.9
150		25x42	1.273	0.640	0.669	1.1	
220		30x32	0.868	0.455	0.460	1.3	
330		30x52	0.579	0.293	0.303	1.8	
470		35x52	0.406	0.200	0.214	2.0	
680		35x62	0.281	0.145	0.148	2.1	
100	400	25x32	1.910	0.880	1.010	0.9	
150		25x42	1.273	0.640	0.669	1.1	
220		30x32	0.868	0.455	0.460	1.3	
330		30x52	0.579	0.293	0.303	1.8	
470		35x52	0.406	0.200	0.214	2.0	
680		35x62	0.281	0.145	0.148	2.1	
100		450	25x32	1.910	0.880	1.010	0.9
150	25x42		1.273	0.640	0.669	1.1	
220	30x32		0.868	0.455	0.460	1.3	
330	30x52		0.579	0.293	0.303	1.8	
470	35x52		0.406	0.200	0.214	2.0	
680	35x62		0.281	0.145	0.148	2.1	

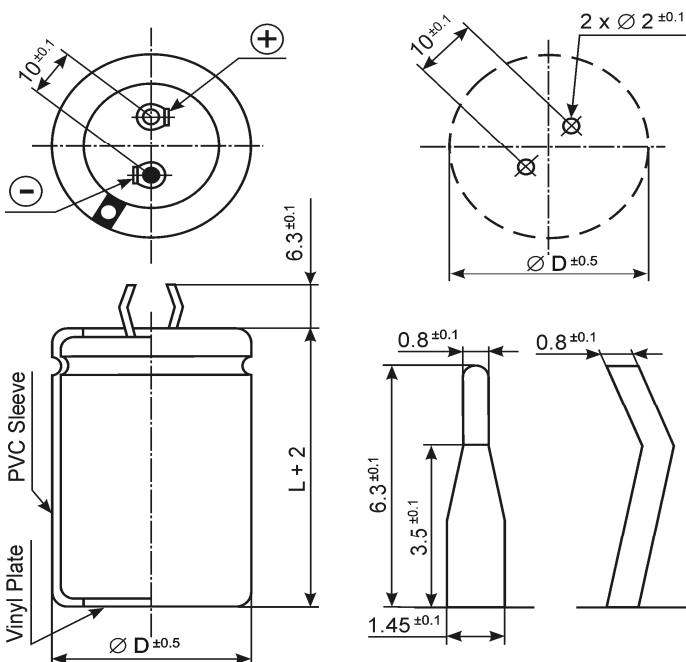
SNAP-IN TYPE EA-18 Series

CONIS ELCO Ltd.
Snap-In 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
- * Snap-In terminal series

● SPECIFICATION

Item	Characteristics							
Operating Temperature Range	- 40 ÷ + 105°C							
Rated Working Voltage	160 ÷ 450 VDC							
Nominal Capacitance Range (120Hz, 20°C)	100 ÷ 2200 μ F							
Capacitance Tolerance (120Hz 20°C)	± 20%							
Leakage Current (max) (20°C)	$I = 0,02C_n U_r + 15\mu A$ * Whichever is smaller after 5 minutes I - Leakage Current (μA) C _n - 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	0.2
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 - 55°C/Z +20°C	6	6	8	8	8	8	8
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.							



● RIPPLE CURRENT COEFFICIENTS

Frequency	50Hz	120Hz	300Hz	1kHz	10kHz
Coefficient	0.75	1.00	1.35	1.55	2.00
Temp (°C)	40	60	70	85	100
Coefficient	2.40	2.10	1.75	1.65	1.00

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

Capacitance (μF)	Voltage (V)	DxL (mm)	Resr MAX (Ω) 120Hz, 20°C	Resr TYP (Ω) 10kHz, 20°C	Z MAX (Ω) 10kHz, 20°C	MAX Ripple Current A (rms)	
330	160	25x26	0.579	0.295	0.303	0.9	
470		25x32	0.406	0.205	0.214	1.1	
680		25x42	0.281	0.150	0.148	1.5	
680		30x36	0.281	0.150	0.148	1.5	
1000		30x42	0.191	0.099	0.105	2.0	
1500		30x52	0.127	0.076	0.080	2.2	
1500		35x42	0.127	0.076	0.080	2.2	
2200		35x52	0.085	0.065	0.048	2.7	
220		200	25x26	0.868	0.455	0.460	0.6
330			25x36	0.579	0.295	0.303	0.9
470	25x42		0.406	0.205	0.214	1.2	
680	30x42		0.281	0.150	0.148	1.5	
1000	30x52		0.191	0.099	0.105	2.0	
1000	35x42		0.191	0.099	0.105	2.0	
1500	35x52		0.127	0.076	0.080	2.5	
2200	35x57		0.085	0.065	0.048	3.0	
150	250		25x26	1.273	0.640	0.670	0.6
220			25x32	0.868	0.455	0.460	0.7
330		25x36	0.579	0.295	0.303	0.9	
470		25x42	0.406	0.205	0.214	1.2	
470		30x32	0.406	0.205	0.214	1.2	
680		30x42	0.281	0.150	0.148	1.6	
1000		30x57	0.191	0.099	0.105	1.9	
1000		35x42	0.191	0.099	0.105	1.9	
1500		35x57	0.127	0.076	0.080	2.2	
100		350	25x26	1.910	0.880	1.010	0.5
150	25x32		1.237	0.640	0.669	0.6	
220	25x42		0.868	0.455	0.460	0.7	
220	30x32		0.868	0.455	0.460	0.7	
330	30x42		0.579	0.295	0.303	1.1	
470	30x52		0.406	0.200	0.214	1.3	
680	35x52		0.281	0.145	0.148	1.9	
100	385		25x32	1.910	0.880	1.010	0.5
150		25x42	1.273	0.640	0.669	0.6	
220		30x32	0.868	0.455	0.460	0.7	
330		30x52	0.579	0.293	0.303	1.1	
470		35x52	0.406	0.200	0.214	1.3	
680		35x62	0.281	0.145	0.148	1.4	
100	400	25x32	1.910	0.880	1.010	0.5	
150		25x42	1.273	0.640	0.669	0.6	
220		30x32	0.868	0.455	0.460	0.7	
330		30x52	0.579	0.293	0.303	1.1	
470		35x52	0.406	0.200	0.214	1.3	
680		35x62	0.281	0.145	0.148	1.4	
100		450	25x32	1.910	0.880	1.010	0.5
150	25x42		1.273	0.640	0.669	0.6	
220	30x32		0.868	0.455	0.460	0.7	
330	30x52		0.579	0.293	0.303	1.1	
470	35x52		0.406	0.200	0.214	1.3	
680	35x62		0.281	0.145	0.148	1.4	