

ALUMINUM ELECTROLYTIC CAPACITORS

LNC

Screw Terminal Type, 85°C Smaller-sized
Higher ripple current



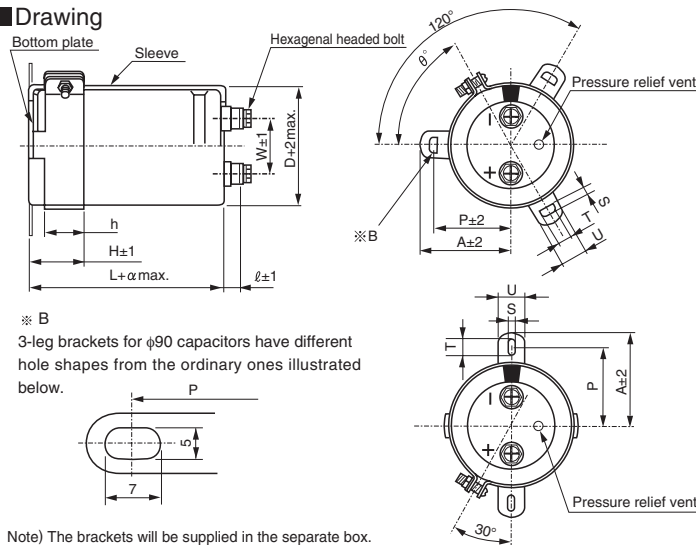
- Suited for use in industrial power supplies for inverter circuitry, etc.
- Load life 5000 hours application of ripple current at 85°C.
- Smaller sized / High ripple current than LNX, LNK.
- Coped with loading of high speed charge-discharge.
- Suited for high frequency regenerative voltage for AC servomotor, general inverter.
- Compliant to the RoHS directive (2011/65/EU, (EU)2015/863).



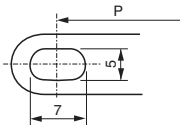
Specifications

Item	Performance Characteristics							
Category Temperature Range	- 40 to +85°C							
Rated Voltage Range	350 to 500V							
Rated Capacitance Range	1000 to 22000μF							
Capacitance Tolerance	±20% at 120Hz, 20°C							
Leakage Current	After 5 minutes' application of rated voltage, leakage current is not more than $3\sqrt{CV}$ (μA) or 5 mA, whichever is smaller (at 20°C). [C: Rated Capacitance(μF), V: Voltage (V)]							
Tangent of loss angle (tan δ)	See refer to next page (Measurement frequency : 120Hz at 20°C)							
Stability at Low Temperature	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>350 to 500</td> </tr> <tr> <td>Impedance ratio (max.)</td> <td>$Z(-40°C) / Z(+20°C)$ 8</td> </tr> </table>	Rated voltage (V)	350 to 500	Impedance ratio (max.)	$Z(-40°C) / Z(+20°C)$ 8	Measurement frequency : 120Hz		
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Impedance ratio (max.)	$Z(-40°C) / Z(+20°C)$ 8							
Insulation Resistance	The insulation resistance shall be more than 100MΩ at DC 500V application between terminal and bracket.							
Voltage proof	There is no abnormality during AC 2500V 1 minute's application between terminal and bracket.							
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 5000 hours at 85°C, the peak voltage shall not exceed the rated voltage.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	Capacitance change	Within ±20% of the initial capacitance value	tan δ	200% or less than the initial specified value	Leakage current	Less than or equal to the initial specified value
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tan δ	200% or less than the initial specified value							
Leakage current	Less than or equal to the initial specified value							
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the requirements listed at right.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	Capacitance change	Within ±20% of the initial capacitance value	tan δ	200% or less than the initial specified value	Leakage current	Less than or equal to the initial specified value
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Endurance of charge-discharge behavior	After an application of charge-discharge voltage for 50million times (charge-discharge voltage difference(ΔV)=rated voltage × 0.3, cycle 3Hz) capacitors shall meet the characteristics requirement listed at right.	<table border="1"> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial capacitance value</td> </tr> <tr> <td>tan δ</td> <td>200% or less than the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>Less than or equal to the initial specified value</td> </tr> </table>	Capacitance change	Within ±20% of the initial capacitance value	tan δ	200% or less than the initial specified value	Leakage current	Less than or equal to the initial specified value
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tan δ	200% or less than the initial specified value							
Leakage current	Less than or equal to the initial specified value							
Marking	Printed with white color letter on black sleeve.							

Drawing

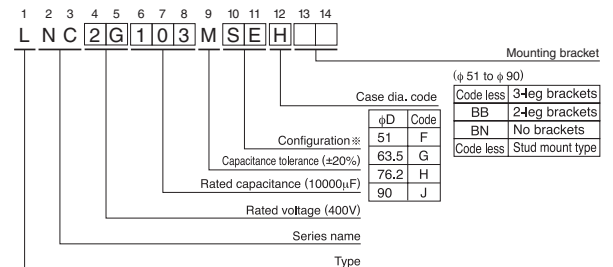


※ B
3-leg brackets for φ90 capacitors have different hole shapes from the ordinary ones illustrated below.



Note) The brackets will be supplied in the separate box.

Type numbering system (Example : 400V 10000μF)



※ Configuration

SE	standard specifications
TE	stud mount type

Please refer to the Guidelines for Aluminum Electrolytic Capacitors for dimensions information.

※ Please contact to us if PVCless products are required.

• Dimension of terminal pitch (W) and length (ℓ) and Nominal dia. of bolt (mm)

φD	W	ℓ	α	Nominal dia. of bolt
51	22.0	6	3	M 5
63.5	28.6	6	3	M 5
76.2	31.8	6	3	M 5
90	31.8	6	3	M 5

About product of stud bolt
 • Nylon nut and nylon washer attachment are shown in the standard specifications.
 (Please refer to the Guidelines for Aluminum Electrolytic Capacitors)
 • It is not attached to the bracket.
 • Field 13 and 14 become blank in Type number system.

• Dimensions of mounting bracket (mm)

Symbol	Leg shape φD	3-Leg				2-Leg			
		51	63.5	76.2	90	51	63.5	76.2	90
P		32.5	38.1	44.5	50.8	33.2	40.5	46.5	53
A		38.5	43	49.2	58.5	40	46.5	53	59
T		7.5	8.0	7.0	8.0	6.0	7.0	6.0	6.0
S		5.0	5.0	5.0	5.0	4.5	4.5	4.5	4.5
U		12	14	14	18	14	14	14	14
θ °		60	60	60	60	30	30	30	30
H		20	25	30	35	25	35	35	35
h		15	20	24	25	15	20	20	20

• Dimension table in next page.

LNC

■ Dimensions

350V(2V)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
1000	51 × 55	8.4	0.20	1.77	LNC2V102MSEF
1200	51 × 60	8.6	0.20	1.94	LNC2V122MSEF
1500	51 × 65	9.3	0.20	2.17	LNC2V152MSEF
1800	51 × 75	10.3	0.20	2.38	LNC2V182MSEF
2200	51 × 85	11.9	0.20	2.63	LNC2V222MSEF
2700	51 × 95	13.3	0.20	2.91	LNC2V272MSEF
	63.5 × 70	13.7	0.20	2.91	LNC2V272MSEG
3300	51 × 115	13.6	0.20	3.22	LNC2V332MSEF
	63.5 × 80	14.0	0.20	3.22	LNC2V332MSEG
3900	63.5 × 85	14.9	0.20	3.50	LNC2V392MSEG
	76.2 × 70	14.3	0.20	3.50	LNC2V392MSEH
4700	63.5 × 100	16.4	0.20	3.84	LNC2V472MSEG
	76.2 × 80	15.7	0.20	3.84	LNC2V472MSEH
5600	63.5 × 115	18.1	0.20	4.20	LNC2V562MSEG
	76.2 × 90	17.6	0.20	4.20	LNC2V562MSEH
6800	63.5 × 135	20.3	0.20	4.62	LNC2V682MSEG
	76.2 × 100	19.7	0.20	4.62	LNC2V682MSEH
8200	76.2 × 115	22.2	0.20	5.00	LNC2V822MSEH
	90 × 90	24.2	0.20	5.00	LNC2V822MSEJ
10000	76.2 × 135	25.2	0.20	5.00	LNC2V103MSEH
	90 × 100	27.1	0.20	5.00	LNC2V103MSEJ
12000	76.2 × 155	28.2	0.20	5.00	LNC2V123MSEH
	90 × 120	30.1	0.20	5.00	LNC2V123MSEJ
15000	90 × 145	35.4	0.20	5.00	LNC2V153MSEJ
18000	90 × 165	39.2	0.20	5.00	LNC2V183MSEJ
22000	90 × 205	43.4	0.20	5.00	LNC2V223MSEJ

400V(2G)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
1000	51 × 60	8.6	0.20	1.89	LNC2G102MSEF
1200	51 × 65	9.3	0.20	2.07	LNC2G122MSEF
1500	51 × 80	10.8	0.20	2.32	LNC2G152MSEF
1800	51 × 85	12.0	0.20	2.54	LNC2G182MSEF
2200	51 × 100	13.0	0.20	2.81	LNC2G222MSEF
	63.5 × 70	12.8	0.20	2.81	LNC2G222MSEG
2700	63.5 × 80	14.5	0.20	3.11	LNC2G272MSEG
	76.2 × 65	14.3	0.20	3.11	LNC2G272MSEH
3300	63.5 × 90	14.9	0.20	3.44	LNC2G332MSEG
	76.2 × 70	15.3	0.20	3.44	LNC2G332MSEH
3900	63.5 × 100	16.5	0.20	3.74	LNC2G392MSEG
	76.2 × 80	17.1	0.20	3.74	LNC2G392MSEH
4700	63.5 × 120	18.8	0.20	4.11	LNC2G472MSEG
	76.2 × 90	18.3	0.20	4.11	LNC2G472MSEH
5600	63.5 × 135	20.9	0.20	4.48	LNC2G562MSEG
	76.2 × 100	20.2	0.20	4.48	LNC2G562MSEH
6800	63.5 × 165	23.8	0.20	4.94	LNC2G682MSEG
	76.2 × 120	23.1	0.20	4.94	LNC2G682MSEH
8200	90 × 90	26.3	0.20	4.94	LNC2G682MSEJ
	76.2 × 145	26.1	0.20	5.00	LNC2G822MSEH
10000	90 × 105	29.5	0.20	5.00	LNC2G822MSEJ
	76.2 × 165	29.5	0.20	5.00	LNC2G103MSEH
12000	90 × 120	33.2	0.20	5.00	LNC2G103MSEJ
	90 × 145	37.1	0.20	5.00	LNC2G123MSEJ
15000	90 × 185	42.9	0.20	5.00	LNC2G153MSEJ
18000	90 × 205	48.2	0.20	5.00	LNC2G183MSEJ

450V(2W)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
1000	51 × 70	9.3	0.20	2.01	LNC2W102MSEF
1200	51 × 80	9.9	0.20	2.20	LNC2W122MSEF
1500	51 × 90	10.4	0.20	2.46	LNC2W152MSEF
1800	51 × 105	11.5	0.20	2.70	LNC2W182MSEF
	63.5 × 70	11.9	0.20	2.70	LNC2W182MSEG
2200	63.5 × 85	12.3	0.20	2.98	LNC2W222MSEG
	76.2 × 65	12.5	0.20	2.98	LNC2W222MSEH
2700	63.5 × 90	13.7	0.20	3.30	LNC2W272MSEG
	76.2 × 75	13.7	0.20	3.30	LNC2W272MSEH
3300	63.5 × 115	15.6	0.20	3.65	LNC2W332MSEG
	76.2 × 85	15.5	0.20	3.65	LNC2W332MSEH
3900	63.5 × 135	17.3	0.20	3.97	LNC2W392MSEG
	76.2 × 90	17.0	0.20	3.97	LNC2W392MSEH
4700	63.5 × 145	19.2	0.20	4.36	LNC2W472MSEG
	76.2 × 115	19.2	0.20	4.36	LNC2W472MSEH
5600	63.5 × 165	21.4	0.20	4.76	LNC2W562MSEG
	76.2 × 135	21.6	0.20	4.76	LNC2W562MSEH
	90 × 95	24.2	0.20	4.76	LNC2W562MSEJ
6800	76.2 × 145	23.8	0.20	5.00	LNC2W682MSEH
	90 × 115	27.5	0.20	5.00	LNC2W682MSEJ
8200	76.2 × 185	27.2	0.20	5.00	LNC2W822MSEH
	90 × 135	30.5	0.20	5.00	LNC2W822MSEJ
10000	90 × 155	34.1	0.20	5.00	LNC2W103MSEJ
12000	90 × 185	38.2	0.20	5.00	LNC2W123MSEJ
15000	90 × 215	43.1	0.20	5.00	LNC2W153MSEJ

500V(2H)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
1000	51 × 85	10.3	0.20	2.12	LNC2H102MSEF
1200	63.5 × 70	10.4	0.20	2.32	LNC2H122MSEG
1500	63.5 × 80	11.6	0.20	2.59	LNC2H152MSEG
1800	63.5 × 90	12.7	0.20	2.84	LNC2H182MSEG
2200	63.5 × 100	14.2	0.20	3.14	LNC2H222MSEG
2700	76.2 × 90	15.8	0.20	3.48	LNC2H272MSEH
3300	76.2 × 105	17.8	0.20	3.85	LNC2H332MSEH
3900	76.2 × 120	19.9	0.20	4.18	LNC2H392MSEH
4700	90 × 105	23.6	0.20	4.59	LNC2H472MSEJ
5600	90 × 120	26.4	0.20	5.00	LNC2H562MSEJ
6800	90 × 145	30.0	0.20	5.00	LNC2H682MSEJ
8200	90 × 165	33.7	0.20	5.00	LNC2H822MSEJ
10000	90 × 205	38.3	0.20	5.00	LNC2H103MSEJ

Rated ripple current (Arms) at 85°C 120Hz

● Frequency coefficient of rated ripple current

Frequency (Hz)	50	60	120	360	1k	10k or more
Coefficient	0.80	0.82	1.00	1.20	1.35	1.40