

ALUMINUM ELECTROLYTIC CAPACITORS

LNU

Screw Terminal Type, 105°C
High Voltage, Smaller Sized.

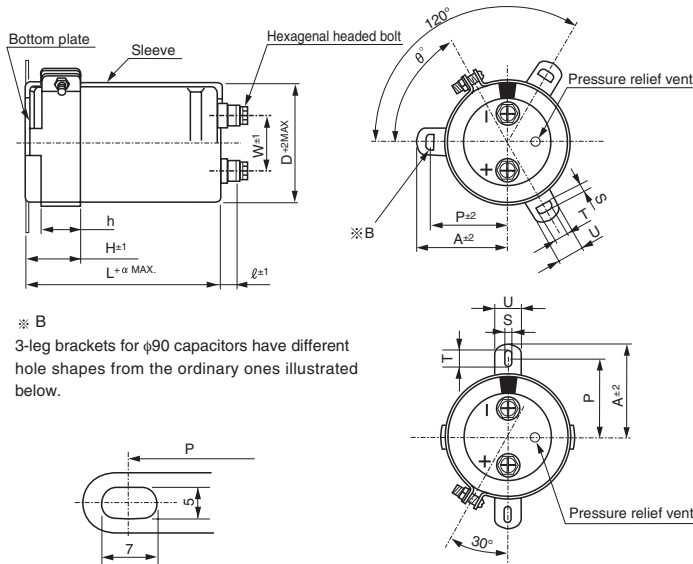


- Suited for use in industrial power supplies for inverter circuitry, etc.
- Rated voltage range up to DC525V.
- Load life of 5000 hours application of ripple current at 105°C.
- High voltage / Smaller sized than LNT.
- Coped with loading of high speed charge-discharge.
- Suited for high frequency regenerative voltage for AC servomotor, general inverter.
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

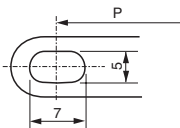
Specifications

| Item | Performance Characteristics | |
|--|--|--|
| Category Temperature Range | - 40 to +105°C | |
| Rated Voltage Range | 400 to 525V | |
| Rated Capacitance Range | 680 to 18000μF | |
| Capacitance Tolerance | ±20% (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 | Rated voltage(V) | 400 to 525 |
| | Impedance ratio ZT/Z20(MAX.) | $Z - 40^{\circ}\text{C} / Z + 20^{\circ}\text{C}$ 8 |
| Measurement frequency : 120Hz | | |
| 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 | 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 |
| Shelf Life | 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 |
| Endurance of charge - discharge behavior | 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 |
| 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.



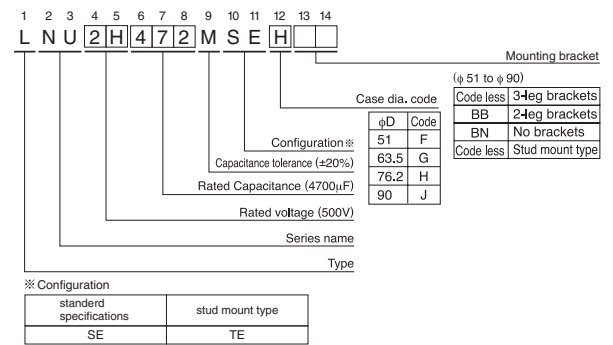
Note) The brackets will be supplied in the separate box.

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 | M5 |
| 63.5 | 28.6 | 6 | 3 | M5 |
| 76.2 | 31.8 | 6 | 3 | M5 |
| 90 | 31.8 | 6 | 3 | M5 |

About product of stud bolt
 * Nylon nut and nylon washer attachment become the standard specifications. (cf. P.348)
 * It is not attached to the bracket.
 * Field 13 and 14 become blank in Type number system.

Type numbering system (Example : 500V 4700μF)



Please refer to page 348 for schematic of dimensions.
 ※ Please contact to us if PVC less products are required.

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.

LNU

■ Dimensions

| 400V (2G) | | | | | |
|-----------|-----------------|---------------------|-------|----------------------|--------------|
| Cap. (μF) | Size φD × L(mm) | Rated ripple (Arms) | tan δ | Leakage Current (mA) | Code |
| 2700 | 63.5 × 80 | 11.9 | 0.20 | 3.12 | LNU2G272MSEG |
| 3300 | 63.5 × 95 | 13.6 | 0.20 | 3.45 | LNU2G332MSEG |
| | 76.2 × 75 | 13.1 | 0.20 | 3.45 | LNU2G332MSEH |
| 3900 | 63.5 × 100 | 14.6 | 0.20 | 3.75 | LNU2G392MSEG |
| | 76.2 × 85 | 14.3 | 0.20 | 3.75 | LNU2G392MSEH |
| 4700 | 63.5 × 120 | 16.1 | 0.20 | 4.11 | LNU2G472MSEG |
| | 76.2 × 95 | 15.8 | 0.20 | 4.11 | LNU2G472MSEH |
| 5600 | 63.5 × 135 | 17.7 | 0.20 | 4.49 | LNU2G562MSEG |
| | 76.2 × 105 | 17.1 | 0.20 | 4.49 | LNU2G562MSEH |
| 6800 | 76.2 × 125 | 19.5 | 0.20 | 4.95 | LNU2G682MSEH |
| | 90 × 105 | 18.8 | 0.20 | 4.95 | LNU2G682MSEJ |
| 8200 | 76.2 × 170 | 24.2 | 0.20 | 5.00 | LNU2G822MSEH |
| | 90 × 125 | 23.1 | 0.20 | 5.00 | LNU2G822MSEJ |
| 10000 | 90 × 145 | 25.9 | 0.20 | 5.00 | LNU2G103MSEJ |
| 12000 | 90 × 165 | 30.1 | 0.20 | 5.00 | LNU2G123MSEJ |
| 15000 | 90 × 195 | 33.5 | 0.20 | 5.00 | LNU2G153MSEJ |
| 18000 | 90 × 235 | 38.0 | 0.20 | 5.00 | LNU2G183MSEJ |

| 450V (2W) | | | | | |
|-----------|-----------------|---------------------|-------|----------------------|--------------|
| Cap. (μF) | Size φD × L(mm) | Rated ripple (Arms) | tan δ | Leakage Current (mA) | Code |
| 2700 | 63.5 × 100 | 13.1 | 0.20 | 3.31 | LNU2W272MSEG |
| 3300 | 63.5 × 120 | 15.0 | 0.20 | 3.66 | LNU2W332MSEG |
| | 76.2 × 95 | 14.4 | 0.20 | 3.66 | LNU2W332MSEH |
| 3900 | 63.5 × 135 | 16.3 | 0.20 | 3.97 | LNU2W392MSEG |
| | 76.2 × 105 | 15.4 | 0.20 | 3.97 | LNU2W392MSEH |
| 4700 | 63.5 × 165 | 18.5 | 0.20 | 4.36 | LNU2W472MSEG |
| | 76.2 × 130 | 17.9 | 0.20 | 4.36 | LNU2W472MSEH |
| 5600 | 76.2 × 150 | 20.5 | 0.20 | 4.76 | LNU2W562MSEH |
| | 90 × 105 | 19.6 | 0.20 | 4.76 | LNU2W562MSEJ |
| 6800 | 76.2 × 170 | 23.4 | 0.20 | 5.00 | LNU2W682MSEH |
| | 90 × 125 | 22.5 | 0.20 | 5.00 | LNU2W682MSEJ |
| 8200 | 76.2 × 195 | 25.7 | 0.20 | 5.00 | LNU2W822MSEH |
| | 90 × 145 | 24.7 | 0.20 | 5.00 | LNU2W822MSEJ |
| 10000 | 90 × 165 | 27.3 | 0.20 | 5.00 | LNU2W103MSEJ |
| 12000 | 90 × 195 | 29.9 | 0.20 | 5.00 | LNU2W123MSEJ |
| 15000 | 90 × 235 | 34.5 | 0.20 | 5.00 | LNU2W153MSEJ |

| 500V (2H) | | | | | |
|-----------|-----------------|---------------------|-------|----------------------|--------------|
| Cap. (μF) | Size φD × L(mm) | Rated ripple (Arms) | tan δ | Leakage Current (mA) | Code |
| 680 | 51 × 75 | 4.0 | 0.20 | 1.75 | LNU2H681MSEF |
| 1000 | 51 × 90 | 5.0 | 0.20 | 2.12 | LNU2H102MSEF |
| 1200 | 51 × 115 | 5.7 | 0.20 | 2.32 | LNU2H122MSEF |
| | 63.5 × 80 | 5.7 | 0.20 | 2.32 | LNU2H122MSEG |
| 1500 | 51 × 135 | 6.6 | 0.20 | 2.60 | LNU2H152MSEF |
| | 63.5 × 90 | 6.6 | 0.20 | 2.60 | LNU2H152MSEG |
| 1800 | 63.5 × 100 | 7.4 | 0.20 | 2.85 | LNU2H182MSEG |
| | 76.2 × 70 | 7.4 | 0.20 | 2.85 | LNU2H182MSEH |
| 2200 | 63.5 × 120 | 8.5 | 0.20 | 3.15 | LNU2H222MSEG |
| | 76.2 × 95 | 8.5 | 0.20 | 3.15 | LNU2H222MSEH |
| 2700 | 63.5 × 135 | 9.6 | 0.20 | 3.49 | LNU2H272MSEG |
| | 76.2 × 105 | 9.6 | 0.20 | 3.49 | LNU2H272MSEH |
| 3300 | 63.5 × 165 | 10.9 | 0.20 | 3.85 | LNU2H332MSEG |
| | 76.2 × 130 | 10.9 | 0.20 | 3.85 | LNU2H332MSEH |
| 3900 | 76.2 × 145 | 12.4 | 0.20 | 4.19 | LNU2H392MSEH |
| | 90 × 105 | 12.4 | 0.20 | 4.19 | LNU2H392MSEJ |
| 4700 | 76.2 × 165 | 13.9 | 0.20 | 4.60 | LNU2H472MSEH |
| | 90 × 125 | 13.9 | 0.20 | 4.60 | LNU2H472MSEJ |
| 5600 | 90 × 145 | 15.8 | 0.20 | 5.00 | LNU2H562MSEJ |
| 6800 | 90 × 165 | 18.5 | 0.20 | 5.00 | LNU2H682MSEJ |
| 8200 | 90 × 205 | 20.2 | 0.20 | 5.00 | LNU2H822MSEJ |

| 525V (N7) | | | | | |
|-----------|-----------------|---------------------|-------|----------------------|--------------|
| Cap. (μF) | Size φD × L(mm) | Rated ripple (Arms) | tan δ | Leakage Current (mA) | Code |
| 680 | 51 × 85 | 4.4 | 0.20 | 1.75 | LNUN7681MSEF |
| 1000 | 51 × 95 | 5.4 | 0.20 | 2.12 | LNUN7102MSEF |
| 1500 | 63.5 × 95 | 7.2 | 0.20 | 2.60 | LNUN7152MSEG |
| 1800 | 63.5 × 105 | 8.0 | 0.20 | 2.85 | LNUN7182MSEG |
| 2200 | 63.5 × 135 | 9.2 | 0.20 | 3.15 | LNUN7222MSEG |
| | 76.2 × 100 | 9.2 | 0.20 | 3.15 | LNUN7222MSEH |
| 2700 | 76.2 × 115 | 10.6 | 0.20 | 3.49 | LNUN7272MSEH |
| 3300 | 76.2 × 140 | 12.1 | 0.20 | 3.85 | LNUN7332MSEH |
| 4700 | 76.2 × 185 | 15.2 | 0.20 | 4.60 | LNUN7472MSEH |
| | 90 × 135 | 15.2 | 0.20 | 4.60 | LNUN7472MSEJ |
| 5600 | 90 × 155 | 17.5 | 0.20 | 5.00 | LNUN7562MSEJ |

Rated ripple current (Arms) at 105°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 | 1.30 | 1.40 |