

## SWX Series

### Screw Terminal Type(螺釘型), Long Life Assurance(長壽命保證)

#### FEATURES

1. High voltage and capacitance, high ripple, high reliability, guarantee 5000 hrs load life at 85°C.
2. Suit for use in changeable current circuits in changeable frequencies air-condition etc.



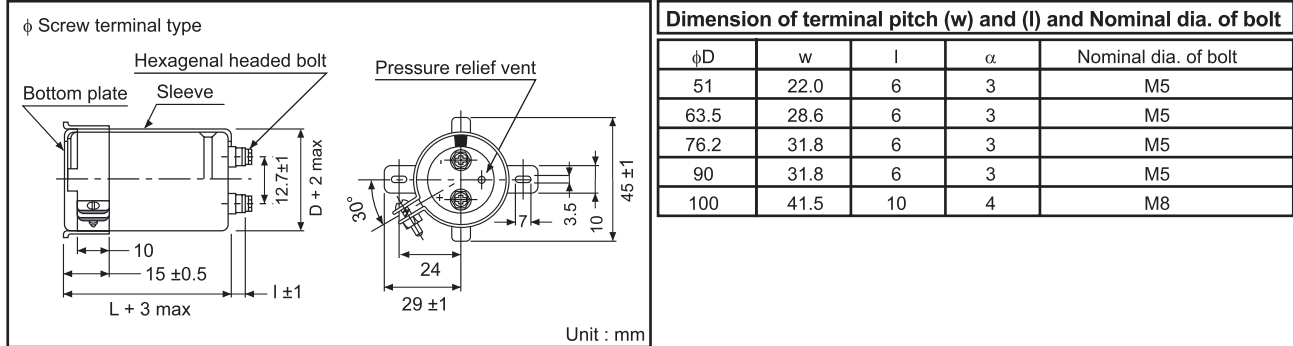
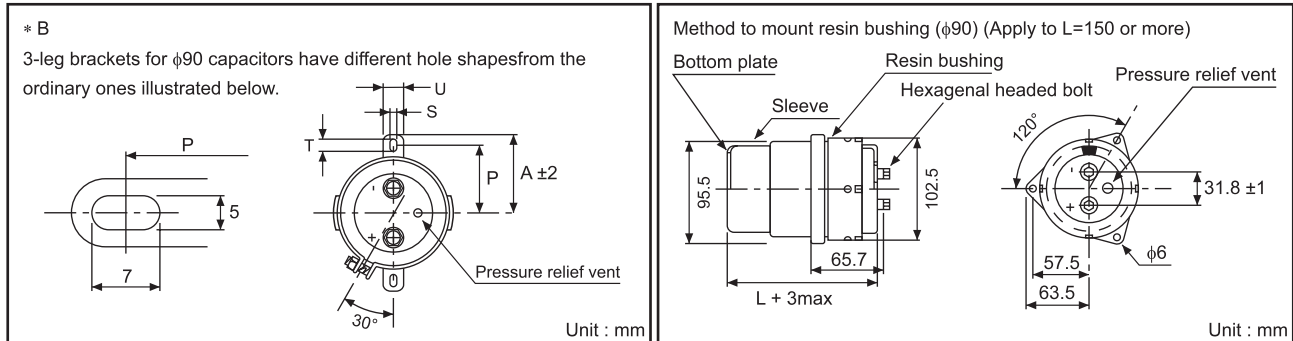
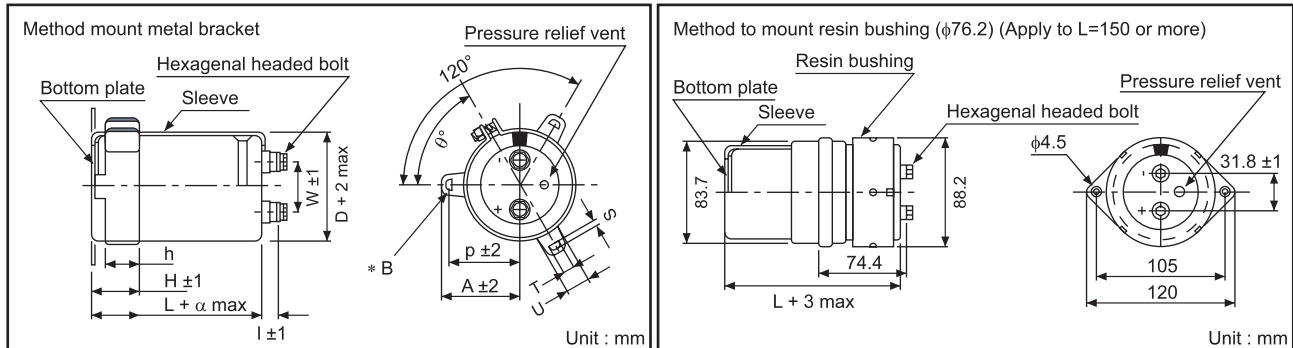
| SPECIFICATIONS                             |  |          |           |           |      |  |     |     |     |     |     |
|--|--|----------|-----------|-----------|------|--|-----|-----|-----|-----|-----|
| Item                                       | Performance Characteristics  |          |           |           |      |  |     |     |     |     |     |
| Operating Temperature Range                | -40 to +85°C   |          |           |           |      | -25 to +85°C   |     |     |     |     |     |
| Rated Working Voltage Range                | 10 to 100V   |          |           |           |      | 160 to 450V  |     |     |     |     |     |
| Nominal Capacitance Range                  | 1000 to 2200000µF  |          |           |           |      |  |     |     |     |     |     |
| Capacitance Tolerance                      | ±20% (120Hz, +20°C)  |          |           |           |      |  |     |     |     |     |     |
| Leakage Current                            | I ≤ 0.02CV or 5(mA)<br>after 5 minutes application of rated working voltage at +20°C, which is smaller   |          |           |           |      |  |     |     |     |     |     |
| Dissipation Factor<br>tan δ (120Hz, +20°C) | φ d  | L \ V    | 10        | 16        | 25   | 35   | 50  | 63  | 80  | 100 |     |
|  |  |          | 80 ~ 100  | 0.6       | 0.4  | 0.4  | 0.3 | 0.3 | 0.3 | 0.2 | 0.1 |
|  | 35   | 120      | 0.7       | 0.6       | 0.4  | 0.3  | 0.3 | 0.3 | 0.2 | 0.2 |     |
|  |  |          | 51        | 70 ~ 100  | 0.9  | 0.6  | 0.5 | 0.4 | 0.3 | 0.3 | 0.2 |
|  | 120 ~ 140  | 1        |           |           | 0.8  | 0.5  | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 |
|  |  | 63.5     | 100       | 0.9       | --   | --   | 0.5 | 0.4 | 0.3 | 0.3 | --  |
|  | 120 ~ 140  |          |           | 1.2       | 0.8  | 0.7  | --  | --  | 0.3 | 0.3 | 0.2 |
|  |  | 76.2     | 100       | 1.6       | --   | --   | 0.7 | --  | --  | --  | --  |
|  | 120 ~ 140  |          |           | 1.6       | 1.1  | 0.8  | 0.8 | 0.6 | 0.5 | 0.4 | 0.3 |
|  |  | 90       | 140 ~ 220 | 2         | 1.5  | 1  | 0.9 | 0.8 | 0.6 | 0.4 | 0.3 |
|  | 100  | 250      | 2.4       | 1.5       | 1    | 0.9  | 0.8 | 0.6 | 0.4 | 0.3 |     |
|  | φ d  | L \ V    | 160 ~ 250 | 350 ~ 450 |      |  |     |     |     |     |     |
|  |  |          | 35        | 80 ~ 100  | 0.15 | 0.25   |     |     |     |     |     |
|  | 120  | 0.15     |           |           | 0.25 |  |     |     |     |     |     |
|  |  | 51       | 70 ~ 100  | 0.15      | 0.25 |  |     |     |     |     |     |
|  | 120 ~ 140  |          |           | 0.15      | 0.25 |  |     |     |     |     |     |
|  |  | 63.5     | 100       | 0.2       | 0.25 |  |     |     |     |     |     |
|  | 120 ~ 140  |          |           | 0.2       | 0.25 |  |     |     |     |     |     |
|  |  | 76.2     | 100       | 0.2       | 0.25 |  |     |     |     |     |     |
|  | 120 ~ 140  |          |           | 0.2       | 0.25 |  |     |     |     |     |     |
|  |  | 90       | 140 ~ 220 | 0.25      | 0.25 |  |     |     |     |     |     |
|  | 100  | 250      | 0.25      | 0.25      |      |  |     |     |     |     |     |
| Low Temperature Characteristics            | Impedance ratio max. at 120Hz  |          |           |           |      |  |     |     |     |     |     |
|  | Working Voltage (V)  | 10 ~ 100 | 160 ~ 450 |           |      |  |     |     |     |     |     |
|  | Z-25°C / Z+20°C  | --       | 8         |           |      |  |     |     |     |     |     |
|  | Z-40°C / Z+20°C  | 12       | --        |           |      |  |     |     |     |     |     |
| High Temperature Loading                   | Test conditions  |          |           |           |      | Post test requirements at +20°C  |     |     |     |     |     |
|  | The following specifications shall be satisfied when the capacitors are restored to 20°C after the rated voltage with the rated ripple current applied for 5000 hours at 85°C  |          |           |           |      | Leakage current : ≤ Initial specified value<br>Cap. change : within ±20% of initial measured value<br>tan δ : ≤ 200% of initial specified value<br>(350~450V : ≤ 300%) |     |     |     |     |     |
| Shelf Life                                 | At 85°C no voltage applied after 1000 hours the capacitors shall meet the following limits<br>Leakage current : ≤ Initial specified value<br>Cap. change : within ±20% of initial measured value<br>tan δ : ≤ 200% of initial specified value<br>(350~450V : ≤ 300%) |          |           |           |      |  |     |     |     |     |     |
| Others                                     | JIS C - 5141 JIS C - 5102  |          |           |           |      |  |     |     |     |     |     |

# SAMSON

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Screw Terminal Type(螺釘型), Long Life Assurance(長壽命保證)

### CASE SIZE TABLE



**Dimension of mounting bracket**

| Voltage (Code) |          | 3 - Leg |      |      |      |      | 2 - Leg |      |      |     |
|----------------|----------|---------|------|------|------|------|---------|------|------|-----|
| Symbol         | $\phi D$ | 51      | 63.5 | 76.2 | 90   | 100  | 51      | 63.5 | 76.2 | 90  |
| P              |          | 32.5    | 38.1 | 44.5 | 50.8 | 56.3 | 33.2    | 40.5 | 46.5 | 53  |
| A              |          | 38.5    | 43   | 49.2 | 58.5 | 62   | 40      | 46.5 | 53   | 59  |
| T              |          | 7.5     | 8.0  | 7.0  | 8.0  | 8.0  | 6.0     | 7.0  | 6.0  | 6.0 |
| S              |          | 5.0     | 5.0  | 5.0  | 5.0  | 5.0  | 4.5     | 4.5  | 4.5  | 4.5 |
| U              |          | 12      | 14   | 14   | 18   | 16   | 14      | 14   | 14   | 14  |
| $\theta^\circ$ |          | 60      | 60   | 60   | 60   | 60   | 30      | 30   | 30   | 30  |
| H              |          | 20      | 25   | 30   | 35   | 36   | 25      | 35   | 35   | 35  |
| h              |          | 15      | 20   | 24   | 25   | 30   | 15      | 20   | 20   | 20  |

### RIPPLE CURRENT MULTIPLIER

**Frequency Coefficient**

| Freq.(Hz)  | 60   | 120 | 360  | 1K   | 10k ~ |
|------------|------|-----|------|------|-------|
| 10 ~ 100V  | 0.9  | 1   | 1.08 | 1.15 | 1.2   |
| 160 ~ 250V | 0.88 | 1   | 1.08 | 1.15 | 1.2   |
| 350 ~ 450V | 0.8  | 1   | 1.1  | 1.3  | 1.4   |

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| DIMENSIONS     |      |            |                |            |                |            |                |            |                |
|----------------|------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| Voltage (Code) |      | 10V        |                | 16V        |                | 25V        |                | 35V        |                |
| SV             |      | 13         |                | 20         |                | 32         |                | 44         |                |
| Cap.( $\mu$ F) | Code | Case Size  | Ripple Current | Case Size  | Ripple Current | Case Size  | Ripple Current | Case Size  | Ripple Current |
| 33000          | 339  |            |                |            |                | 35 x 80    | 6.2            | 35 x 80    | 6.2            |
| 47000          | 479  | 35 x 80    | 6.0            | 35 x 80    | 6.4            | 35 x 100   | 8.2            | 35 x 120   | 8.2            |
| 68000          | 689  | 35 x 80    | 7.2            | 35 x 100   | 7.9            | 35 x 120   | 9.4            | 51 x 80    | 9.3            |
| 100000         | 10T  | 35 x 100   | 8.8            | 35 x 120   | 10.6           | 51 x 100   | 12.0           | 51 x 120   | 13.6           |
| 150000         | 15T  | 51 x 80    | 10.7           | 51 x 100   | 11.5           | 51 x 120   | 15.3           | 63.5 x 100 | 14.5           |
| 220000         | 22T  | 51 x 100   | 13.0           | 51 x 120   | 15.6           | 63.5 x 120 | 18.9           | 76.2 x 100 | 16.8           |
| 330000         | 33T  | 63.5 x 100 | 15.9           | 63.5 x 120 | 25.1           | 76.2 x 120 | 24.8           | 76.2 x 140 | 24.8           |
| 470000         | 47T  | 63.5 x 120 | 19.0           | 76.2 x 120 | 30.5           | 90 x 170   | 30.8           | 90 x 170   | 32.6           |
| 680000         | 68T  | 76.2 x 120 | 22.8           | 90 x 170   | 33.0           | 90 x 220   | 33.3           | 90 x 220   | 35.2           |
| 1000000        | 10M  | 90 x 170   | 27.7           | 90 x 220   | 36.0           | 100 x 250  | 36.4           | 100 x 250  | 38.5           |
| 1500000        | 15M  | 90 x 220   | 33.9           | 100 x 250  | 39.7           |            |                |            |                |
| 2200000        | 22M  | 100 x 250  | 41.1           |            |                |            |                |            |                |

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Case Size  $\phi$ D x L(mm)

| Voltage (Code) |      | 50V        |                | 63V        |                | 80V        |                | 100V       |                |
|----------------|------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| SV             |      | 63         |                | 79         |                | 100        |                | 125        |                |
| Cap.( $\mu$ F) | Code | Case Size  | Ripple Current | Case Size  | Ripple Current | Case Size  | Ripple Current | Case Size  | Ripple Current |
| 4700           | 478  |            |                |            |                |            |                | 35 x 80    | 3.8            |
| 6800           | 688  |            |                |            |                |            |                | 35 x 100   | 4.5            |
| 10000          | 109  |            |                | 35 x 80    | 4.1            | 35 x 80    | 4.2            | 35 x 120   | 5.3            |
| 15000          | 159  | 35 x 80    | 5.4            | 35 x 100   | 5.5            | 35 x 120   | 6.0            | 51 x 80    | 6.0            |
| 22000          | 229  | 35 x 100   | 6.1            | 35 x 120   | 7.1            | 51 x 80    | 6.5            | 51 x 100   | 6.8            |
| 33000          | 339  | 51 x 70    | 7.0            | 51 x 80    | 8.8            | 51 x 120   | 9.2            | 51 x 140   | 10.0           |
| 47000          | 479  | 51 x 90    | 8.6            | 51 x 120   | 11.7           | 63.5 x 100 | 12.7           | 63.5 x 140 | 14.4           |
| 68000          | 689  | 51 x 100   | 11.0           | 63.5 x 100 | 15.0           | 63.5 x 140 | 15.5           | 76.2 x 140 | 18.2           |
| 100000         | 10T  | 63.5 x 100 | 14.2           | 63.5 x 140 | 20.8           | 76.2 x 140 | 21.3           | 90 x 170   | 22.1           |
| 150000         | 15T  | 76.2 x 120 | 18.6           | 76.2 x 140 | 26.0           | 90 x 170   | 26.5           | 90 x 220   | 27.0           |
| 220000         | 22T  | 90 x 140   | 20.3           | 90 x 170   | 28.3           | 90 x 220   | 28.9           | 100 x 250  | 32.7           |
| 330000         | 33T  | 90 x 170   | 25.3           | 90 x 220   | 31.2           | 100 x 250  | 31.8           |            |                |
| 470000         | 47T  | 90 x 220   | 33.2           | 100 x 250  | 33.6           |            |                |            |                |
| 680000         | 68T  | 100 x 250  | 36.0           |            |                |            |                |            |                |

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Case Size  $\phi$ D x L(mm)

| Voltage (Code) |      | 160V       |                | 200V       |                | 250V       |                | 350V       |                |
|----------------|------|------------|----------------|------------|----------------|------------|----------------|------------|----------------|
| SV             |      | 200        |                | 250        |                | 300        |                | 400        |                |
| Cap.( $\mu$ F) | Code | Case Size  | Ripple Current | Case Size  | Ripple Current | Case Size  | Ripple Current | Case Size  | Ripple Current |
| 1000           | 108  |            |                |            |                | 35 x 80    | 2.4            |            |                |
| 1500           | 158  |            |                | 35 x 80    | 2.9            | 35 x 100   | 3.0            |            |                |
| 2200           | 228  | 35 x 80    | 3.2            | 35 x 100   | 3.5            | 51 x 80    | 4.0            | 51 x 96    | 7.7            |
| 2700           | 278  |            |                |            |                |            |                | 51 x 115   | 9.3            |
| 3300           | 338  | 35 x 120   | 4.7            | 51 x 80    | 4.8            | 51 x 100   | 5.4            | 51 x 130   | 10.8           |
| 3900           | 398  |            |                |            |                |            |                | 63.5 x 115 | 12.1           |
| 4700           | 478  | 51 x 80    | 5.0            | 51 x 100   | 6.3            | 63.5 x 100 | 7.3            | 63.5 x 130 | 14.0           |
| 5600           | 568  |            |                |            |                |            |                | 63.5 x 155 | 16.6           |
|                |      |            |                |            |                |            |                | 76.2 x 115 | 16.1           |
| 6800           | 688  | 51 x 100   | 6.4            | 51 x 140   | 7.3            | 63.5 x 120 | 8.9            | 63.5 x 190 | 20             |
|                |      |            |                |            |                |            |                | 76.2 x 130 | 18.6           |
| 8200           | 828  |            |                |            |                |            |                | 76.2 x 155 | 22.2           |
| 10000          | 109  | 63.5 x 100 | 9.1            | 63.5 x 120 | 9.8            | 76.2 x 120 | 11.8           | 76.2 x 170 | 25.2           |
| 12000          | 129  |            |                |            |                |            |                | 90 x 155   | 29.1           |
| 15000          | 159  | 76.2 x 100 | 12.0           | 76.2 x 120 | 13.0           | 90 x 140   | 16.4           | 90 x 190   | 35.7           |
| 18000          | 189  |            |                |            |                |            |                | 100 x 190  | 36.9           |
| 22000          | 229  | 76.2 x 140 | 16.9           | 90 x 140   | 15.9           | 90 x 170   | 17.9           | 100 x 250  | 46.1           |
| 33000          | 339  | 90 x 140   | 19.2           | 90 x 170   | 19.5           | 90 x 220   | 19.7           |            |                |
| 47000          | 479  | 90 x 170   | 20.6           | 90 x 220   | 20.9           | 100 x 250  | 21.2           |            |                |
| 68000          | 689  | 90 x 220   | 22.3           | 100 x 250  | 22.6           |            |                |            |                |
| 100000         | 10T  | 100 x 250  | 24.4           |            |                |            |                |            |                |

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Case Size  $\phi$ D x L(mm)

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## SWX Series

Screw Terminal Type(螺釘型), Long Life Assurance(長壽命保證)

| DIMENSIONS     |      |            |                |            |                |  |  |  |  |
|----------------|------|------------|----------------|------------|----------------|--|--|--|--|
| Voltage (Code) |      | 400V       |                | 450V       |                |  |  |  |  |
| SV             |      | 450        |                | 500        |                |  |  |  |  |
| Cap.( $\mu$ F) | Code | Case Size  | Ripple Current | Case Size  | Ripple Current |  |  |  |  |
| 1200           | 128  |            |                | 51 x 96    | 5.7            |  |  |  |  |
| 1500           | 158  |            |                | 51 x 96    | 6.3            |  |  |  |  |
| 1800           | 188  | 51 x 96    | 7.0            | 51 x 115   | 7.6            |  |  |  |  |
| 2200           | 228  | 51 x 105   | 8.0            | 51 x 130   | 8.8            |  |  |  |  |
| 2700           | 278  | 51 x 130   | 9.8            | 63.5 x 115 | 10.1           |  |  |  |  |
| 3300           | 338  | 63.5 x 115 | 11.1           | 63.5 x 130 | 11.7           |  |  |  |  |
| 3900           | 398  | 63.5 x 130 | 12.7           | 63.5 x 155 | 13.8           |  |  |  |  |
|                |      |            |                | 76.2 x 115 | 13.4           |  |  |  |  |
| 4700           | 478  | 63.5 x 155 | 15.2           | 63.5 x 190 | 16.7           |  |  |  |  |
|                |      | 76.2 x 115 | 14.7           | 76.2 x 130 | 15.5           |  |  |  |  |
| 5600           | 568  | 63.5 x 190 | 18.2           | 76.2 x 155 | 18.3           |  |  |  |  |
|                |      | 76.2 x 130 | 16.9           |            |                |  |  |  |  |
| 6800           | 688  | 76.2 x 155 | 20.2           | 76.2 x 170 | 20.7           |  |  |  |  |
| 8200           | 828  | 76.2 x 170 | 22.8           | 90 x 155   | 24.1           |  |  |  |  |
| 10000          | 109  | 90 x 155   | 26.6           | 90 x 170   | 27.8           |  |  |  |  |
| 12000          | 129  | 90 x 170   | 30.0           | 100 x 190  | 29.3           |  |  |  |  |
| 15000          | 159  | 100 x 190  | 33.7           | 100 x 250  | 37.0           |  |  |  |  |
| 18000          | 189  | 100 x 220  | 37.4           |            |                |  |  |  |  |

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz

Case Size  $\phi$ D x L(mm)

SWX Large Can Aluminum Electrolytic Capacitors