

RWV Series



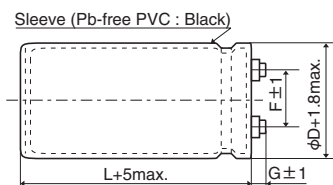
- For frequently change of regenerative voltage from AC servo amplifier and inverter control
- Improved the resistance for charge and discharge from same dimension of RWF series
- Endurance with ripple current : 5,000 hours at 85°C
- Rated voltage range : 350 to 450V_{dc}, Capacitance 820 to 18,000μF
- RoHS Compliant

◆ SPECIFICATIONS

Items	Characteristics										
Category Temperature Range	-25 to +85°C										
Rated Voltage Range	350 to 450V _{dc}										
Capacitance Tolerance	±20% (M) (at 20°C, 120Hz)										
Leakage Current	I=0.02CV or 5mA, whichever is smaller. Where, I : Max. leakage current (μA), C : Nominal capacitance (μF), V : Rated voltage (V) (at 20°C after 5 minutes)										
Dissipation Factor (tan δ)	0.25 max. (at 20°C, 120Hz)										
Low Temperature Characteristics	Capacitance change $C(-25°C)/C(+20°C) \geq 0.7$ (at 120Hz)										
Insulation Resistance	When measured between the terminals shorted each other and the mounting clamp on the insulating sleeve covering the case by using an insulation resistance meter of 500V _{dc} , the insulation resistance shall not be less than 100MΩ.										
Insulation Withstanding Voltage	When a voltage of 2,000V _{ac} is applied for 1 minute between the terminals shorted each other and the mounting clamp on the insulating sleeve covering the case, there shall not be electrical damage.										
Charge and Discharge	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to charge and discharge test with the voltage waveform shown below at room temperature (15 to 35°C). <table border="1" style="width: 100%; margin-top: 5px;"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table> <table border="1" style="width: 100%; margin-top: 5px;"> <tr> <td>Frequency</td> <td>3Hz</td> </tr> <tr> <td>Number of cycles</td> <td>50 million times</td> </tr> </table> <div style="margin-top: 5px;"> <p>Voltage waveform</p> </div>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value	Frequency	3Hz	Number of cycles	50 million times
Capacitance change	≤ ±20% of the initial value										
D.F. (tan δ)	≤ 200% of the initial specified value										
Leakage current	≤ The initial specified value										
Frequency	3Hz										
Number of cycles	50 million times										
Endurance	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied (the peak voltage shall not exceed the rated voltage) for 5,000 hours at 85°C. <table border="1" style="width: 100%; margin-top: 5px;"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value				
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D.F. (tan δ)	≤ 200% of the initial specified value										
Leakage current	≤ The initial specified value										
Shelf Life	The following specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 500 hours at 85°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of JIS C 5101-4. <table border="1" style="width: 100%; margin-top: 5px;"> <tr> <td>Capacitance change</td> <td>≤ ±20% of the initial value</td> </tr> <tr> <td>D.F. (tan δ)</td> <td>≤ 200% of the initial specified value</td> </tr> <tr> <td>Leakage current</td> <td>≤ The initial specified value</td> </tr> </table>	Capacitance change	≤ ±20% of the initial value	D.F. (tan δ)	≤ 200% of the initial specified value	Leakage current	≤ The initial specified value				
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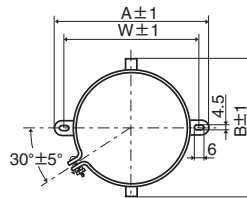
◆ DIMENSIONS (Screw-Mount) [mm]

● Terminal Code : LG



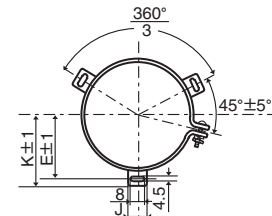
φ50 & φ63.5 : G=6
φ76.2 & φ89 : G=5

● Mounting Clamp Code : B



φD	A	B	W	F
50	78.0	64.0	68.0	22.4
63.5	90.0	76.0	80.0	28.0
76.2	104.5	90.0	93.5	31.5

● Mounting Clamp Code : C



φD	E	K	F	J
50	32.5	37.0	22.4	14.0
63.5	38.1	43.5	28.0	14.0
76.2	44.5	50.0	31.5	14.0
89	50.8	56.5	31.5	16.0

<Screw specifications>

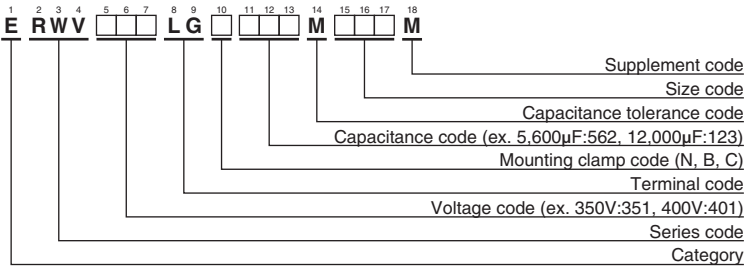
Plus hexagon-headed screw :M5×0.8×10

Maximum screw tightening torque :3.23Nm

* The screw and the mounting clamp are separately supplied and not attached to the product.

RWV Series

◆PART NUMBERING SYSTEM



Please refer to "Product code guide (screw-mount terminal type)"

◆STANDARD RATINGS

WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	Rated ripple current (Arms/85°C, 120Hz)	Max. charge current and Max. discharge current (Arms/3Hz)	Part No.	WV (V _{dc})	Cap (μF)	Case size φD×L(mm)	Rated ripple current (Arms/85°C, 120Hz)	Max. charge current and Max. discharge current (Arms/3Hz)	Part No.	
350	1,200	50 × 60	4.70	1.56	ERWV351LGC122MC60M	400	5,600	63.5 × 170	17.1	5.99	ERWV401LGC562MDH0M	
	1,500	50 × 70	5.50	1.83	ERWV351LGC152MC70M		5,600	76.2 × 105	15.2	5.35	ERWV401LGC562MEA5M	
	1,800	50 × 80	6.40	2.13	ERWV351LGC182MC80M		6,800	76.2 × 130	18.4	6.47	ERWV401LGC682MED0M	
	2,200	50 × 96	7.60	2.53	ERWV351LGC222MC96M		8,200	76.2 × 155	21.9	7.68	ERWV401LGC822MEF5M	
	2,700	50 × 105	8.80	2.94	ERWV351LGC272MCA5M		8,200	76.2 × 170	22.8	8.02	ERWV401LGC822MEH0M	
	2,700	50 × 115	9.20	3.06	ERWV351LGC272MCB5M		8,200	89 × 115	20.9	7.35	ERWV401LGC822MFB5M	
	3,300	50 × 130	10.8	3.58	ERWV351LGC332MCD0M		10,000	89 × 130	24.3	8.26	ERWV401LGC103MFD0M	
	4,700	63.5 × 115	13.2	4.61	ERWV351LGC472MDB5M		12,000	89 × 155	28.7	10.0	ERWV401LGC123MFF5M	
	5,600	63.5 × 130	15.2	5.30	ERWV351LGC562MDD0M		12,000	89 × 170	29.9	10.5	ERWV401LGC123MFH0M	
	5,600	76.2 × 105	15.2	5.36	ERWV351LGC562MEA5M		15,000	89 × 190	35.2	12.3	ERWV401LGC153MFK0M	
	6,800	63.5 × 155	18.1	6.32	ERWV351LGC682MDF5M		420	820	50 × 60	3.80	1.29	ERWV421LGC821MC60M
	8,200	63.5 × 170	20.7	7.25	ERWV351LGC822MDH0M			1,000	50 × 70	4.40	1.50	ERWV421LGC102MC70M
	8,200	76.2 × 130	20.2	6.57	ERWV351LGC822MED0M			1,200	50 × 80	5.20	1.75	ERWV421LGC122MC80M
	10,000	76.2 × 155	24.2	8.47	ERWV351LGC103MEF5M			1,800	50 × 96	6.80	2.30	ERWV421LGC182MC96M
10,000	89 × 115	23.1	8.10	ERWV351LGC103MFB5M	1,800	50 × 105		7.10	2.40	ERWV421LGC182MCA5M		
12,000	76.2 × 170	27.6	9.66	ERWV351LGC123MEH0M	2,200	50 × 115		8.20	2.77	ERWV421LGC222MCF5M		
12,000	89 × 130	26.6	9.33	ERWV351LGC123MFD0M	2,700	50 × 130		9.60	3.25	ERWV421LGC272MCD0M		
15,000	89 × 155	32.1	11.2	ERWV351LGC153MFF5M	3,300	63.5 × 115		11.0	3.87	ERWV421LGC332MDB5M		
15,000	89 × 170	33.5	11.7	ERWV351LGC153MFH0M	3,900	63.5 × 130		12.7	4.44	ERWV421LGC392MDD0M		
18,000	89 × 190	38.5	13.5	ERWV351LGC183MFK0M	4,700	63.5 × 155		15.0	5.28	ERWV421LGC472MDF5M		
375	1,000	50 × 60	4.30	1.42	ERWV3H1LGC102MC60M	4,700		76.2 × 105	13.9	4.92	ERWV421LGC472MEA5M	
	1,200	50 × 70	4.90	1.64	ERWV3H1LGC122MC70M	5,600		63.5 × 170	17.1	6.02	ERWV421LGC562MDH0M	
	1,500	50 × 80	5.80	1.94	ERWV3H1LGC152MC80M	5,600		76.2 × 130	16.6	5.90	ERWV421LGC562MED0M	
	2,200	50 × 96	7.60	2.54	ERWV3H1LGC222MC96M	6,800		76.2 × 155	19.8	7.02	ERWV421LGC682MEF5M	
	2,200	50 × 105	8.00	2.65	ERWV3H1LGC222MCA5M	6,800	89 × 115	19.0	6.73	ERWV421LGC682MFB5M		
	2,700	50 × 115	9.20	3.06	ERWV3H1LGC272MCB5M	8,200	76.2 × 170	22.7	8.04	ERWV421LGC822MEH0M		
	3,300	50 × 130	10.8	3.58	ERWV3H1LGC332MCD0M	8,200	89 × 130	22.0	7.78	ERWV421LGC822MFD0M		
	4,700	63.5 × 115	13.2	4.61	ERWV3H1LGC472MDB5M	10,000	89 × 155	26.2	9.24	ERWV421LGC103MFF5M		
	5,600	63.5 × 130	15.2	5.30	ERWV3H1LGC562MDD0M	12,000	89 × 170	29.9	10.5	ERWV421LGC123MFH0M		
	5,600	76.2 × 105	15.2	5.36	ERWV3H1LGC562MEA5M	12,000	89 × 190	31.5	11.0	ERWV421LGC123MFK0M		
	6,800	63.5 × 155	18.1	6.32	ERWV3H1LGC682MDF5M	450	820	50 × 60	3.80	1.29	ERWV451LGC821MC60M	
	6,800	63.5 × 170	18.9	6.60	ERWV3H1LGC682MDH0M		1,000	50 × 70	4.40	1.50	ERWV451LGC102MC70M	
	8,200	76.2 × 130	20.2	7.09	ERWV3H1LGC822MCD0M		1,200	50 × 80	5.20	1.74	ERWV451LGC122MCF80M	
	8,200	89 × 115	20.9	7.35	ERWV3H1LGC822MFB5M		1,500	50 × 96	6.20	2.10	ERWV451LGC152MC96M	
10,000	76.2 × 155	24.2	8.48	ERWV3H1LGC103MEF5M	1,800		50 × 105	7.10	2.41	ERWV451LGC182MCA5M		
10,000	76.2 × 170	25.2	8.85	ERWV3H1LGC103MEH0M	1,800		50 × 115	7.40	2.51	ERWV451LGC182MCB5M		
10,000	89 × 130	24.3	8.54	ERWV3H1LGC103MFD0M	2,200		50 × 130	8.70	2.93	ERWV451LGC222MCD0M		
12,000	89 × 155	28.7	10.0	ERWV3H1LGC123MFF5M	3,300		63.5 × 115	11.0	3.88	ERWV451LGC332MDB5M		
15,000	89 × 170	33.5	11.7	ERWV3H1LGC153MFH0M	3,900		63.5 × 130	12.7	4.44	ERWV451LGC392MDD0M		
15,000	89 × 190	35.2	12.3	ERWV3H1LGC153MFK0M	3,900		76.2 × 105	13.2	4.49	ERWV451LGC392MEA5M		
400	1,000	50 × 60	4.30	1.42	ERWV401LGC102MC60M		4,700	63.5 × 155	15.0	5.27	ERWV451LGC472MDF5M	
	1,200	50 × 70	4.90	1.64	ERWV401LGC122MC70M		4,700	63.5 × 170	15.6	5.50	ERWV451LGC472MDH0M	
	1,500	50 × 80	5.80	1.95	ERWV401LGC152MC80M		5,600	76.2 × 130	16.6	5.88	ERWV451LGC562MED0M	
	1,800	50 × 96	6.90	2.29	ERWV401LGC182MC96M		6,800	76.2 × 155	19.8	7.04	ERWV451LGC682MEF5M	
	2,200	50 × 105	8.00	2.65	ERWV401LGC222MCA5M	6,800	89 × 115	19.0	6.72	ERWV451LGC682MFB5M		
	2,200	50 × 115	8.30	2.77	ERWV401LGC222MCB5M	8,200	76.2 × 170	22.7	7.97	ERWV451LGC822MEH0M		
	2,700	50 × 130	9.80	3.23	ERWV401LGC272MCD0M	8,200	89 × 130	22.0	7.72	ERWV451LGC822MFD0M		
	3,900	63.5 × 115	12.0	4.21	ERWV401LGC392MDB5M	10,000	89 × 155	26.2	9.22	ERWV451LGC103MFF5M		
	4,700	63.5 × 130	13.9	4.86	ERWV401LGC472MDD0M	10,000	89 × 170	27.3	9.66	ERWV451LGC103MFH0M		
	5,600	63.5 × 155	16.4	5.75	ERWV401LGC562MDF5M	12,000	89 × 190	31.5	11.1	ERWV451LGC123MFK0M		



RWV Series

◆ RATED RIPPLE CURRENT MULTIPLIERS

● Frequency Multipliers

Frequency (Hz)	50	120	300	1k	3k
Coefficient	0.8	1.0	1.1	1.3	1.4

Note : The endurance of capacitors is shortened with internal heating produced by ripple current at the rate of halving the lifetime with every 5 to 10°C rise. When long life performance is required in actual use, the rms ripple current has to be reduced. Also, for the RWV series capacitors, using them at operating voltage less than their rated voltage can extend their lifetime. For the details, please contact a representative of Nippon Chemi-Con.