nichicon

LQR

Screw Terminal Type,
85°C High speed charge-discharge

Smaller | High Ripple Current | Long Life

LQR
Hi speed charge-discharge
LNX

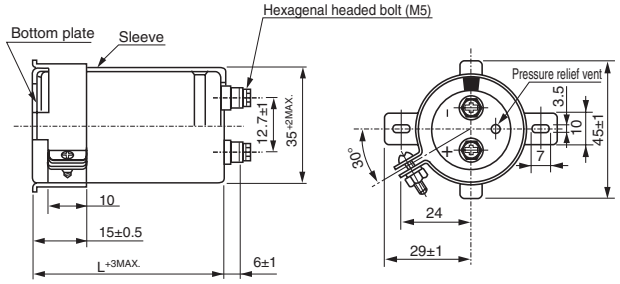
- Suited for high frequency regenerative voltage for AC servomotor, general inverter.
- Suited for equipment used at valtage fluctuating area.
- Suited for rectifier circuit of voltage doubler
- Compliant to the RoHS directive (2011/65/EU,(EU)2015/863).

■Specifications

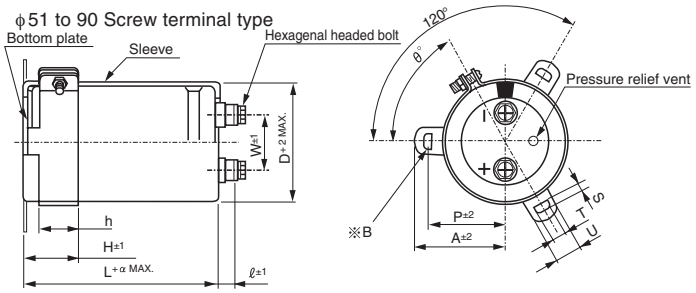
Item	Performance Characteristics
Category Temperature Range	– 25 to +85°C
Rated Voltage Range	350 to 450V
Rated Capacitance Range	680 to 15000μF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 5 minutes' application of rated voltage, leakage current is not more than $3\sqrt{CV}$ (μA) 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	Rated voltage (V): 350 to 450 / Impedance ratio ZT/Z20(MAX.): Z – 25°C / Z+20°C: 8 — Measurement frequency : 120Hz
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. — Capacitance change: Within ±20% of the initial capacitance value; tan δ: 300% 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 specified value for endurance characteristics listed above.
Endurance of charge-discharge behavior	After an application of charge-discharge voltage for 20million times (charge-discharge voltage difference(ΔV)=rated voltage × 0.3, cycle 3Hz)capacitors shell meet the characteristics requirement listed at right — Capacitance change: Within ±20% of the initial capacitance value; tan δ: 300% or less than the initial specified value; Leakage current: Less than or equal to the initial specified value; Appearance: There shell be found to remarkable abnormality on the capacitor
Marking	Printed with white color letter on darkbrown sleeve.

■Drawing

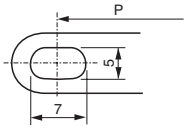
φ35 Screw terminal type

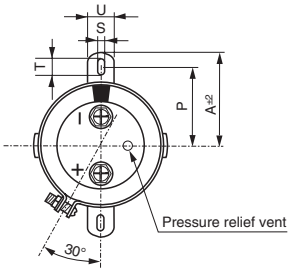


φ51 to 90 Screw terminal type



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





Type numbering system (Example : 400V 1800μF)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
L	Q	R	2	G	1	8	2	M	S	E	F		

Mounting bracket
(φ35)

Code less	2-leg brackets
BN	No brackets

Case dia. code

φD	Code
35	C
51	F
63.5	G
76.2	H
90	J

Configuration※
Capacitance tolerance (±20%)
Rated Capacitance (1800μF)
Rated voltage (400V)
Series name
Type

(φ51 to φ90)

Code less	3-leg brackets
BB	2-leg brackets
BN	No brackets

※Configuration

Cr (III) Plating (RoHS compliant)
SE

Please refer to page 348 for schematic of dimensions.
※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	M5
63.5	28.6	6	3	M5
76.2	31.8	6	3	M5
90	31.8	6	3	M5

● Dimension of mounting bracket (mm)

Leg shape	3–Leg				2–Leg			
Symbol \ φD	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.

LQR

■Dimensions

350V (2V)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
820	35×80	3.3	0.15	1.60	LQR2V821MSEC
1000	35×100	4.3	0.15	1.77	LQR2V102MSEC
1800	51×80	7.2	0.15	2.38	LQR2V182MSEF
2200	51×100	9.1	0.15	2.63	LQR2V222MSEF
2700	51×110	10.8	0.15	2.91	LQR2V272MSEF
	63.5×80	10.6	0.15	2.91	LQR2V272MSEG
3300	51×130	12.4	0.15	3.22	LQR2V332MSEF
	63.5×90	11.9	0.15	3.22	LQR2V332MSEG
3900	63.5×110	14.6	0.15	3.50	LQR2V392MSEG
	76.2×80	14.1	0.15	3.50	LQR2V392MSEH
4700	51×170	17.0	0.15	3.84	LQR2V472MSEF
	76.2×90	16.4	0.15	3.84	LQR2V472MSEH
5600	63.5×150	20.4	0.15	4.20	LQR2V562MSEG
	76.2×110	19.7	0.15	4.20	LQR2V562MSEH
6800	63.5×170	23.5	0.15	4.62	LQR2V682MSEG
	76.2×130	22.9	0.15	4.62	LQR2V682MSEH
	90×100	22.5	0.15	4.62	LQR2V682MSEJ
8200	63.5×190	27.1	0.15	5.00	LQR2V822MSEG
	76.2×150	26.4	0.15	5.00	LQR2V822MSEH
10000	76.2×170	31.1	0.15	5.00	LQR2V103MSEH
	90×130	30.2	0.15	5.00	LQR2V103MSEJ
12000	76.2×190	35.7	0.15	5.00	LQR2V123MSEH
15000	90×190	40.5	0.15	5.00	LQR2V153MSEJ

400V (2G)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
680	35×80	3.2	0.15	1.56	LQR2G681MSEC
820	35×100	4.1	0.15	1.71	LQR2G821MSEC
1500	51×80	7.5	0.15	2.32	LQR2G152MSEF
1800	51×90	9.1	0.15	2.54	LQR2G182MSEF
2200	51×110	10.4	0.15	2.81	LQR2G222MSEF
2700	63.5×90	11.5	0.15	3.11	LQR2G272MSEG
3300	51×150	13.7	0.15	3.44	LQR2G332MSEF
	63.5×110	13.2	0.15	3.44	LQR2G332MSEG
3900	63.5×130	16.0	0.15	3.74	LQR2G392MSEG
	76.2×90	15.3	0.15	3.74	LQR2G392MSEH
4700	63.5×150	18.7	0.15	4.11	LQR2G472MSEG
	76.2×110	18.3	0.15	4.11	LQR2G472MSEH
5600	63.5×170	22.0	0.15	4.49	LQR2G562MSEG
	76.2×130	21.4	0.15	4.49	LQR2G562MSEH
6800	76.2×150	25.4	0.15	4.94	LQR2G682MSEH
8200	76.2×170	28.6	0.15	5.00	LQR2G822MSEH
	90×130	27.8	0.15	5.00	LQR2G822MSEJ
10000	90×150	32.7	0.15	5.00	LQR2G103MSEJ
12000	90×170	37.6	0.15	5.00	LQR2G123MSEJ
15000	90×220	43.0	0.15	5.00	LQR2G153MSEJ

450V (2W)					
Cap. (μF)	Size φD × L(mm)	Rated ripple (Arms)	tan δ	Leakage Current (mA)	Code
680	35×100	3.5	0.15	1.65	LQR2W681MSEC
820	35×110	3.9	0.15	1.82	LQR2W821MSEC
1200	51×80	5.2	0.15	2.20	LQR2W122MSEF
1500	51×100	6.3	0.15	2.46	LQR2W152MSEF
1800	51×110	7.4	0.15	2.70	LQR2W182MSEF
	63.5×80	7.9	0.15	2.70	LQR2W182MSEG
2200	51×130	8.7	0.15	2.98	LQR2W222MSEF
	63.5×100	8.6	0.15	2.98	LQR2W222MSEG
2700	51×150	10.2	0.15	3.30	LQR2W272MSEF
	76.2×80	10.0	0.15	3.30	LQR2W272MSEH
3300	63.5×130	12.4	0.15	3.65	LQR2W332MSEG
	76.2×100	11.8	0.15	3.65	LQR2W332MSEH
3900	63.5×150	13.7	0.15	3.97	LQR2W392MSEG
	76.2×110	14.1	0.15	3.97	LQR2W392MSEH
	90×90	13.6	0.15	3.97	LQR2W392MSEJ
4700	63.5×170	16.5	0.15	4.36	LQR2W472MSEG
	76.2×130	16.3	0.15	4.36	LQR2W472MSEH
	90×110	15.8	0.15	4.36	LQR2W472MSEJ
5600	63.5×190	19.4	0.15	4.76	LQR2W562MSEG
	90×130	19.1	0.15	4.76	LQR2W562MSEJ
6800	76.2×170	23.3	0.15	5.00	LQR2W682MSEH
8200	90×150	26.1	0.15	5.00	LQR2W822MSEJ
10000	90×190	31.3	0.15	5.00	LQR2W103MSEJ
12000	90×220	35.5	0.15	5.00	LQR2W123MSEJ

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