



ALUMINUM CAPACITORS

104 PHL-ST



High Power, High Ripple Current, Long Life Aluminum Capacitors with Screw Terminals

KEY BENEFITS

- Long lifetime: 5000 h at 105 °C
- High reliability
- High ripple current up to 35 A at 100 Hz, 105 °C
- Available with high capacitance/voltage combinations (33 000 µF, 200 V to 6800 µF, 450 V; both in 90 mm x 220 mm cases)
- Available with 8 mm, M5 terminals and 13 mm, M6 terminals

APPLICATIONS

- Motor control (power from mains): single phase and three phase
- Inverter (power to mains): solar/wind and fuel cell
- Back-up power supplies, UPS
- Traction (trains, subways)
- Pulsed power supplies for X-rays, plasma physics, welding, and other medical/ industrial applications

Aluminum Capacitors

Power High Ripple Current Long Life Screw Terminals

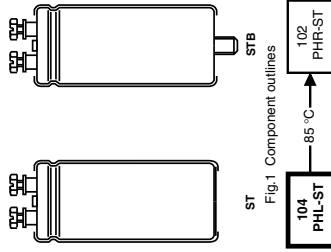


Fig.1 Component outlines



FEATURES

- Polarized aluminum electrolytic capacitors, non-solid electrolyte
- Large types, cylindrical aluminum case, insulated with a blue sleeve
- Also available in bolt version (104 PHL-STB)
- Pressure relief in the sealing
- Long useful life
- Compliant to RoHS Directive 2002/95/EC

APPLICATIONS

- Telecom and industrial, high temperature systems
- Smoothing and filtering
- Standard and switched mode power supplies
- Energy storage in pulse systems

MARKING

The capacitors are marked with the following information:

- Rated capacitance (in μF)
- Tolerance on rated capacitance, code letter in accordance with IEC 60062 ($\pm 20\%$)
- Rated voltage (in V)
- Date code (YYMM)
- Name of manufacturer
- Code for factory of origin
- '-' sign to identify the negative terminal, visible from the top and side of the capacitor
- Code number
- Climatic category in accordance with IEC 60068
- "LL" for long life grade

DESCRIPTION	VALUE
Nominal case size (\varnothing D x L in mm)	35 x 60 to 90 x 220
Rated capacitance range (E6 series), C_R	150 μF to 33 000 μF
Tolerance on C_R	$\pm 20\%$
Rated voltage range, U_R	200 V to 450 V
Category temperature range	-40 °C to 105 °C
Endurance test at 105 °C	2000 h
Useful life at 105 °C	5000 h
Shelf life at 0 V, 105 °C	1000 h
Based on sectional specification	IEC 60384-4/EN130300
Climatic category IEC 60068	40/105/56

C_R (μF)	U_R (V)			
	200	250	350	450
2200	35 x 105	50 x 80	65 x 105	85 x 105
	50 x 80	35 x 105	-	76 x 105
3300	50 x 80	50 x 105	-	76 x 105
	50 x 105	65 x 105	-	76 x 146
4700	50 x 105	65 x 105	-	76 x 146
	65 x 105	76 x 105	76 x 146	90 x 146
6900	65 x 105	76 x 105	76 x 146	90 x 146
	76 x 105	76 x 146	-	-
10 000	76 x 105	76 x 146	76 x 220	90 x 220
	76 x 146	-	90 x 146	-
15 000	-	90 x 146	-	-
	76 x 220	90 x 220	-	-
22 000	90 x 146	-	-	-
	90 x 220	-	-	-
33 000	-	-	-	-
	90 x 220	-	-	-

DIMENSIONS in millimeters AND AVAILABLE FORMS

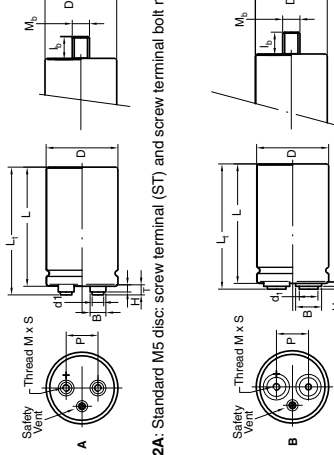


Fig. 2A: Standard M5 disc, screw terminal (ST) and screw terminal bolt nut (STB)

Fig. 2B: High current M6 disc, screw terminal (ST) and screw terminal bolt nut (STB)

Maximum permissible torque which may be applied to the termination screws: 2 Nm for M5; 2.5 Nm for M6
For accessories refer to datasheet "Mounting Accessories".
The capacitors are delivered with screws and washers.

Revision 08-Dec-10

C_R (μF)	U_R (V)			
	200	250	350	450
150	-	-	-	35 x 60
220	-	-	-	35 x 60
330	-	-	-	35 x 80
470	-	-	-	35 x 105
680	35 x 60	35 x 60	35 x 105	50 x 105
	35 x 60	35 x 80	50 x 105	50 x 105
1000	35 x 80	35 x 105	-	65 x 105
	35 x 80	-	-	-
1500	35 x 80	35 x 105	50 x 105	65 x 105
	35 x 105	50 x 80	-	76 x 105

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