El-Ci-Ar®

DC Link Capacitors

DCM-MT Series

APPLICATION:

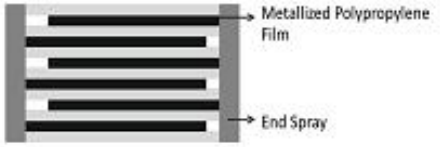
- The **DCM-MT** series is suitable for DC Link and DC Filter applications in power converters for: **Welding Equipment** (e.g. Inverter Welding Machine), Induction Heating Equipment, Traction and industrial drives, Solar power inverters, Electric vehicle inverters, Wind power inverters, Magnetising equipment, Uninterruptible power supplies.

FEATURES:

- High Current Capability, Low ESR
- Customised Terminations
- Dry construction, resin filled
- High Life expectancy, very low Failure Rate
- Flame retardant UL94 - V0, RoHS compliant
- Integrated mounting flanges available (flange-mount type)

REFERENCE STANDARD: **IEC 61071**

CONSTRUCTION:



Metallised polypropylene film, end spray

BASIC SPECIFICATIONS:

	A – Cylindrical DC Link	B – Flange-mount DC Link	C – 3000 VDC series	D – 5000 VDC series
Capacitance	20 µF to 265 µF	20 µF to 100 µF	1.0, 1.45, 2.0 µF	0.15, 0.22, 0.27, 0.33, 0.47 µF
Rated voltage	700 to 1800 VDC	350 to 1000 VDC	3000 VDC	5000 VDC / 1500 VAC
Capacitance tolerance	±5% (J), ±10% (K)		—	±10%
Dielectric	Polypropylene film			
Electrodes	Vacuum deposited zinc aluminum, heavy edge	Vacuum deposited zinc aluminum	—	DMPT + metallised polypropylene film
Casing	Polyester tape wrapped	Polyester adhesive tape wrapped with integrated mounting flanges (UL Class 94 V-0)	—	Polyester tape
Encapsulation	Thermosetting resin		—	Resin filled
Terminals	Brass stud (dimensions as per Type B design)	Brass stud, M6 × 10 female	M6 × 16 stud	Internal threaded stud, M6 × 10.5
Dissipation factor (tan δ)	≤ 0.001 at 100 Hz		—	≤ 0.0010 at 1 kHz, 25 °C
Test voltage between terminals (Vtt)	1.5 × rated voltage for 10 sec.		—	1.6 × U_R for 2 sec.
Withstanding voltage, terminals to case (Vtc)	3000 VAC for 10 sec.	3000 VDC for 10 sec.	—	—
Temperature range / climatic category	40/105/56	40/85/56	—	−40 °C to +105 °C
Reference standard	IEC 61071			
Drawing & dimensions	Page 3		Page 4	

— = not specified.

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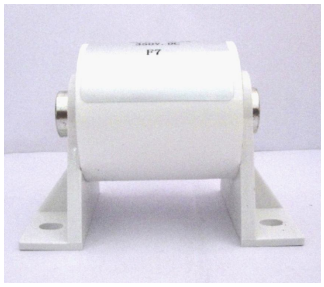
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DC Link Capacitors

DCM-MT Series – Cylindrical, 700 to 1800 VDC

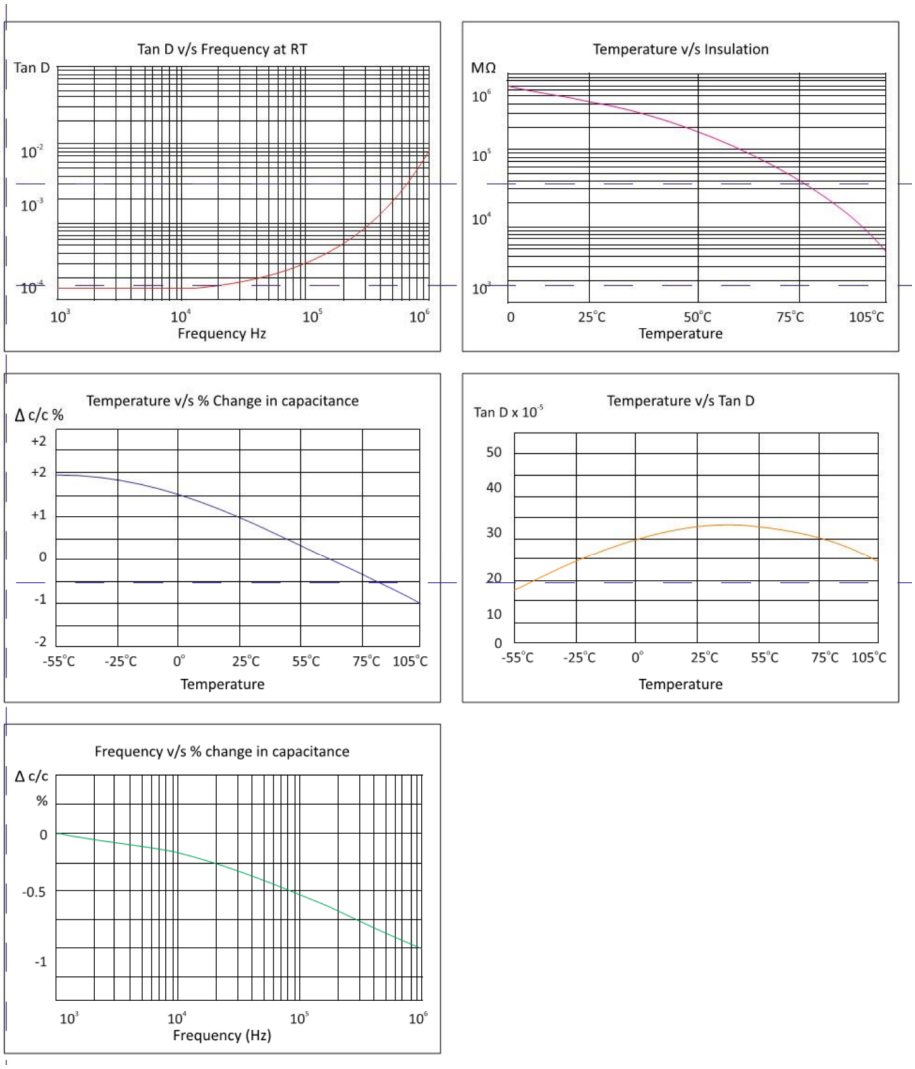


Type A – cylindrical (85 µF / 900 VDC shown)



Type B – flange-mount

TYPICAL PERFORMANCE GRAPHS (Type A)



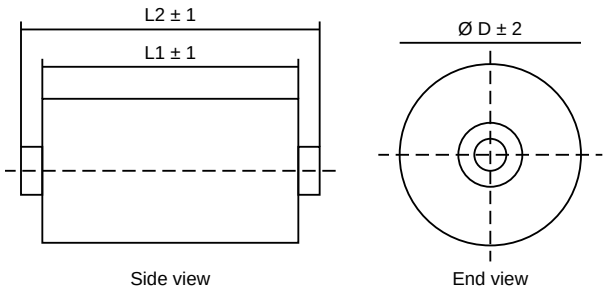
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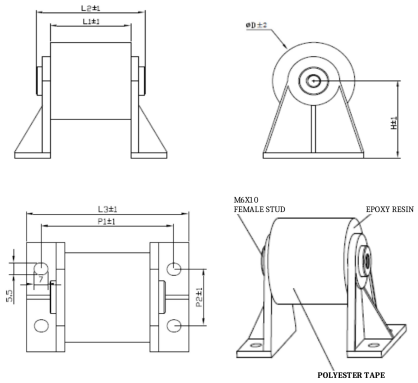
DC Link Capacitors

DCM-MT Series – Cylindrical and Flange Mount

CAPACITOR DRAWING & DIMENSIONS



Type A – cylindrical (without flange)



Type B – flange-mount

Note: The diameter (Ø D) and length (L1, L2) dimensions of the cylindrical type (Type A, 700 to 1800 VDC) match those of the flanged capacitors (Type B) given in the table below; the cylindrical type has no mounting flange.

STANDARD CAPACITOR VALUES AND DIMENSIONS (mm)

V (VDC)	µF	L1	L2	L3	D	H	P1	P2
350	20	35	50	71	35	41	56	26
	30	35	50	71	43	41	56	26
	40	48	63	84	39	41	69	26
	50	48	63	84	43	41	69	26
	60	48	63	84	46	41	69	26
	70	60	75	96	43	41	81	26
	100	60	75	96	52	41	81	26
400	20	35	50	71	35	41	56	26
	30	35	50	71	43	41	56	26
	40	48	63	84	39	41	69	26
	50	48	63	84	43	41	69	26
	60	48	63	84	46	41	69	26
	70	60	75	96	43	41	81	26
	100	60	75	96	52	41	81	26
500	20	35	50	71	35	41	56	26
	30	35	50	71	43	41	56	26
	40	48	63	84	39	41	69	26
	50	48	63	84	43	41	69	26
	60	48	63	84	46	41	69	26
	70	60	75	96	43	41	81	26
	100	60	75	96	52	41	81	26
600	30	48	63	84	38	41	69	26
	40	48	63	84	43	41	69	26
	50	60	75	96	41	41	81	26
	60	60	75	96	45	41	81	26
	70	60	75	96	48	41	81	26
	80	60	75	96	51	41	81	26
	90	60	75	96	54	41	81	26
	100	60	75	96	57	41	81	26

V (VDC)	µF	L1	L2	L3	D	H	P1	P2
700	30	48	63	84	38	41	69	26
	40	48	63	84	43	41	69	26
	50	60	75	96	41	41	81	26
	60	60	75	96	45	41	81	26
	70	60	75	96	48	41	81	26
	80	60	75	96	51	41	81	26
	90	60	75	96	54	41	81	26
	100	60	75	96	57	41	81	26
800	30	48	63	84	38	41	69	26
	40	48	63	84	43	41	69	26
	50	60	75	96	41	41	81	26
	60	60	75	96	45	41	81	26
	70	60	75	96	48	41	81	26
	80	60	75	96	51	41	81	26
	90	60	75	96	54	41	81	26
	100	60	75	96	57	41	81	26
900	50	45	60	81	55	41	66	26
	60	45	60	81	59	41	66	26
	70	60	75	96	53	41	81	26
	80	60	75	96	56	41	81	26
	90	60	75	96	59	41	81	26
	100	60	75	96	63	41	81	26
1000	50	45	60	81	55	41	66	26
	60	45	60	81	59	41	66	26
	70	60	75	96	53	41	81	26
	80	60	75	96	56	41	81	26
	90	60	75	96	59	41	81	26
	100	60	75	96	63	41	81	26

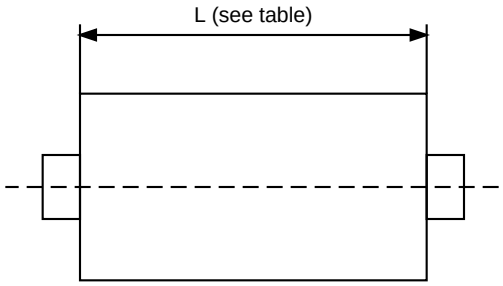
Tolerances: L1, L2, L3, H, P1, P2 ± 1 mm; Ø D ± 2 mm. Mounting holes Ø 5.5 / 7 as per drawing. Terminal: M6 × 10 female stud.

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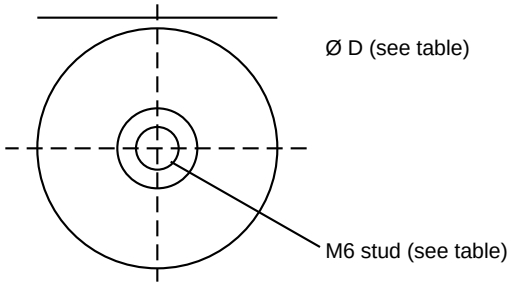
DC Capacitors

DCM-MT Series – 3000 VDC and 5000 VDC

CAPACITOR DRAWING & DIMENSIONS (mm)



Side view



End view

Schematic, not to scale.

Rated voltage	Capacitance (µF)	Ø D (mm)	L (mm)	Terminal
3000 VDC	**1.0**	68	53	M6 × 16 stud
	1.45	74	53	M6 × 16 stud
	2.0	87	53	M6 × 16 stud
5000 VDC / 1500 VAC	**0.15**	32 max	53.0 max	M6 × 10.5 internal thread, Ø 12.0
	0.22	39 max	53.0 max	M6 × 10.5 internal thread, Ø 12.0
	0.27	42 max	53.0 max	M6 × 10.5 internal thread, Ø 12.0
	0.33	47 max	53.0 max	M6 × 10.5 internal thread, Ø 12.0
	0.47	54 max	53.0 max	M6 × 10.5 internal thread, Ø 12.0

Type designation: <value> µF / <voltage> DCM-MT. All dimensions in mm (D x L).

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