

## GENERAL DESCRIPTION

The E50 series capacitors can be universally used for the assembly of low-inductance DC buffer circuits and DC filters; with its high energy density it can replace banks of series-connected electrolytic capacitors as well as large film capacitors in rectangular cases. Thanks to its compact cylindrical aluminium (N1/N5) or plastic (N4) can design this capacitor is ideal for both the electrical and mechanical requirements of high-speed IGBT converters. Its robust terminals and the robust fixing stud allow for very simple and reliable mounting that unites lowest inductance an highest current strength.



Photo non-contractual

The particularly large clearance and creepage distances make this design suitable for a wide range of operating voltages. As a result, existing standard converter concepts can easily be adapted to new applications without having to change the principal construction and to re-approve the entire system.

## GENERAL CHARACTERISTICS

<b>Standars:</b>	IEC 61071
<b>Can:</b>	aluminium/plastic (UL94:V0)
<b>Mounting position:</b>	optional
<b>Filling material:</b>	solid, based on vegetable oil, non-PCB
<b>Internal proteccion:</b>	none
<b>Fire load:</b>	40 MJ/Kg
<b>C<sub>N</sub> tolerance:</b>	±10% (optional ±5%)
<b>Insulation strength (CxRis):</b>	5000 s
<b>tan δ<sub>0</sub>:</b>	2x10 <sup>-4</sup>
<b>Operating temperatures (min/max):</b>	-25°C / +85°C
<b>Operating temperatures (hotspot):</b>	≤85°C
<b>Storing temperature:</b>	-40 to 85°C
<b>service life (hotspot ≤65°C):</b>	100000 h.

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**STANDARD TYPES**

$C_N$ ( $\mu F$ )	$R_S$ (m $\Omega$ )	$R_{th}$ (K/W)	$I_{max}$ (A)	$\hat{I}$ (kA)	$I_S$ (kA)	$W_n$ (Ws)	$L_e$ (nH)	$D_1 \times H$ (mm)	Design	m (kg)	Order code	Box
<b><math>U_N</math> 600V DC</b>		<b><math>U_S</math> 900V</b>		<b><math>U_r</math> 100V</b>		<b><math>U_{BB}</math> 900V DC</b>		<b><math>U_{BG}</math> 3000V AC</b>				
500	2,5	5,8	20	1,5	5	90	50	$\varnothing$ 67x114	N4	0,4	E50.L11-504N4G	10
900	1,3	4,3	35	3	10	162	55	$\varnothing$ 85x136	N5	0,8	E50.N13-904N5G	10
1800	0,47	2,3	60	5,5	17	324	60	$\varnothing$ 85x232	N5	1,5	E50.N23-185N5G	5
<b><math>U_N</math> 700V DC</b>		<b><math>U_S</math> 1050V</b>		<b><math>U_r</math> 200V</b>		<b><math>U_{BB}</math> 1050V DC</b>		<b><math>U_{BG}</math> 3000V AC</b>				
350	3	5,8	20	1,5	5	86	50	$\varnothing$ 67x114	N4	0,4	E50.L11-354N4G	10
760	1,3	4,3	35	3,3	10	186	55	$\varnothing$ 85x136	N5	0,8	E50.N13-764N5G	10
1450	1,1	2,1	60	5,5	17	355	60	$\varnothing$ 85x252	N5	1,6	E50.N25-155N5G	5
1450	0,65	2,3	80	11	33	355	40	$\varnothing$ 116x165	N1	1,9	E50.R16-155N1G	3
2100	0,6	1,7	100	16,5	50	515	50	$\varnothing$ 116x230	N1	2,5	E50.R23-215N1G	3
2900	0,5	1,3	100	16,5	50	711	70	$\varnothing$ 116x295	N1	3,2	E50.R29-295N1G	3
<b><math>U_N</math> 900V DC</b>		<b><math>U_S</math> 1350V</b>		<b><math>U_r</math> 200V</b>		<b><math>U_{BB}</math> 1350V DC</b>		<b><math>U_{BG}</math> 3000V AC</b>				
300	3	5,8	20	1,5	5	122	50	$\varnothing$ 67x114	N4	0,4	E50.L11-304N4G	10
500	1,6	3,9	35	3	10	203	55	$\varnothing$ 85x136	N5	0,8	E50.N13-504N5G	10
580	1,4	3,9	35	3	10	235	55	$\varnothing$ 85x136	N5	0,8	E50.N13-584N5G	10
1060	1,4	2,6	60	5	25	429	60	$\varnothing$ 85x232	N5	1,5	E50.N23-115N5G	5
1100	0,47	2,3	80	10	30	446	40	$\varnothing$ 116x165	N1	1,9	E50.R16-115N1G	3
1160	1,1	2,1	60	5	25	470	60	$\varnothing$ 85x252	N5	1,6	E50.N25-125N5G	5
1700	0,63	1,7	100	15	45	689	50	$\varnothing$ 116x230	N1	2,5	E50.R23-175N1G	3
2000	0,5	1,3	100	15	45	810	70	$\varnothing$ 116x295	N1	3,2	E50.R29-205N1G	3
<b><math>U_N</math> 1100V DC</b>		<b><math>U_S</math> 1650V</b>		<b><math>U_r</math> 250V</b>		<b><math>U_{BB}</math> 1650V DC</b>		<b><math>U_{BG}</math> 3000V AC</b>				
200	2,8	5,8	20	1,5	5	121	50	$\varnothing$ 67x114	N4	0,4	E50.L11-204N4G	10
370	1,7	3,9	35	2,3	7	224	55	$\varnothing$ 85x136	N5	0,8	E50.N13-374N5G	10
420	1,05	5,4	75	4,5	15	254	45	$\varnothing$ 85x155	N5	1	E50.N15-424N5G	5
650	1,1	2,2	60	4	24	393	60	$\varnothing$ 85x232	N5	1,5	E50.N23-654N5G	5
750	1,7	2,1	60	3,7	23	454	60	$\varnothing$ 85x252	N5	1,6	E50.N25-754N5G	5
750	0,55	2,3	80	8	24	454	40	$\varnothing$ 116x165	N1	1,9	E50.R16-754N1G	3
1100	0,4	1,7	100	12	35	666	50	$\varnothing$ 116x230	N1	2,5	E50.R23-115N1G	3
1670	0,75	1,1	100	10	30	676	70	$\varnothing$ 116x345	N1	3,5	E50.R34-175N1G	3
<b><math>U_N</math> 1300V DC</b>		<b><math>U_S</math> 1950V</b>		<b><math>U_r</math> 300V</b>		<b><math>U_{BB}</math> 1950V DC</b>		<b><math>U_{BG}</math> 3000V AC</b>				
500	0,6	2,3	80	6,8	20	423	40	$\varnothing$ 116x165	N1	1,9	E50.R16-504N1G	3
750	0,45	1,7	100	10	30	634	50	$\varnothing$ 116x230	N1	2,5	E50.R23-754N1G	3
1000	0,5	1,4	120	12	36	845	60	$\varnothing$ 116x295	N1	3,2	E50.R29-105N1G	3

**DESIGN & DIMENSIONS**


N4

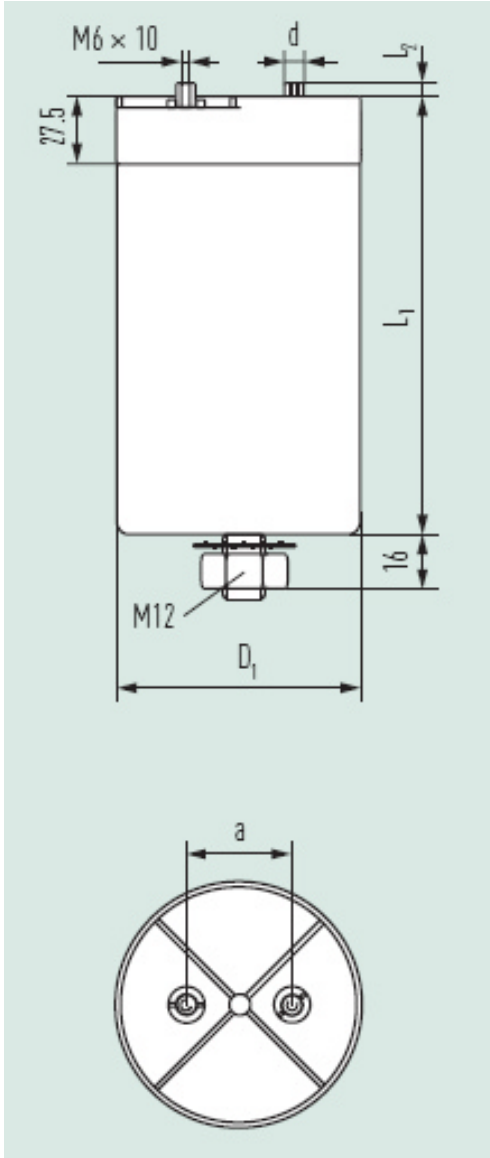


N5

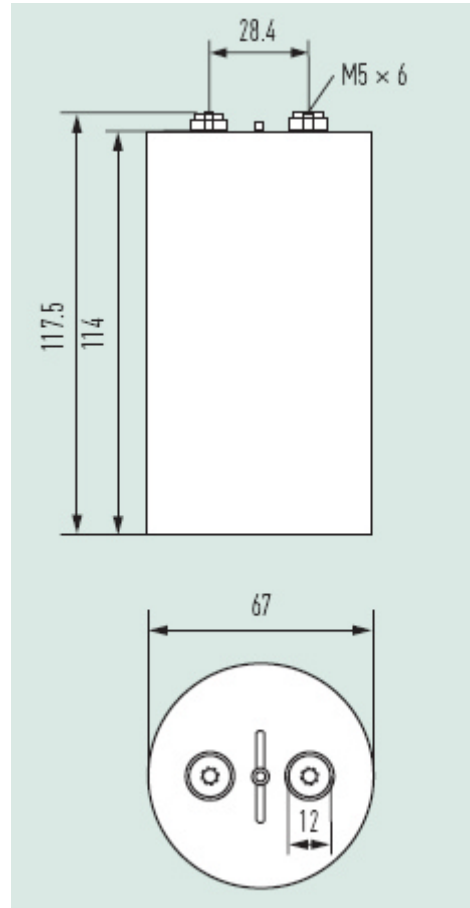


N1

**N1/N5**



**N4**



	$D_1$	$a$	$d$	$L_2$	$K$	$L$
<b>N1</b>	116	50	14	5	45	35
<b>N5</b>	85	32	12	6	36	20

Can material ..... aluminium, filled with solidified PUR resin  
 Base mounting stud ..... M12  
 Lid ..... plastic (UL94: V0)  
 Terminals ..... internal thread  $M6 \times 10$  mm  
 $I_{max}$  (Terminals)  
 N5 ..... 60 A  
 N1 ..... 100 A  
 Degree of protection ..... IP 00  
 K/L ..... see chart  
 Humidity class ..... C

Can material ..... plastic, filled with solidified PUR resin  
 ..... (UL94: V0)  
 Terminals ..... internal thread  $M5 \times 6$  mm  
 $I_{max}$  (Terminals) ..... 30 A  
 Degree of protection ..... IP 00  
 K ..... 25 mm  
 L ..... 16 mm  
 Humidity class ..... C

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