

ESTAdry DC-Capacitor

NOMINAL RATINGS

Capacitance/tolerance	C_N	3000 μ F	0 %/+10 %
Rated DC voltage	U_{NDC}	2050 V	

OVER VOLTAGES ACCORDING TO STANDARD

$1.1 \times U_N$	U_1	2255 V (30 % of the working time)
$1.15 \times U_N$	U_2	2358 V (30 min/day)
$1.2 \times U_N$	U_3	2460 V (5 min/day)
$1.3 \times U_N$	U_4	2665 V (1 min/day)
$1.5 \times U_N$	U_6	3075 V (30 ms; max. 1000 x per LT)

CHARACTERISTICS

Maximum current	$I_{max.}$	320 A_{RMS} ⁽¹⁾
Maximum peak current	\hat{i}	12.5 kA
Maximum surge current	\hat{I}_S	37.4 kA; 100 x per LT
Series resistance	R_S	< 0.6 m Ω
Thermal resistance	R_{th}	0.3 K/W (hotspot-ambient)
Tangent of the loss angle	$\tan \delta_0$	2×10^{-4}
Self inductance	L_S	< 40 nH

ROUTINE TEST

Terminal/terminal	UT/T	3075 V_{DC} , 10 s
Terminal/casing	UT/C	6150 V_{AC} , 60 s

OPERATING TEMPERATURE

Minimum temperature	$\theta_{min.}$	- 45 °C
Maximum temperature	$\theta_{max.}$	+ 70 °C
Maximum hotspot temp.	θ_{hs}	+ 85 °C ⁽¹⁾

STORAGE TEMPERATURE

Minimum temperature	$\theta_{min.}$	- 45 °C
Maximum temperature	$\theta_{max.}$	+ 85 °C

Note

⁽¹⁾ Calculation of hotspot temperature:

$$P_D = U_{RMS}^2 \times 2\pi f \times C_N \times \tan \delta_0 + I^2 \times R_S$$

$$\theta_{hs} = \theta_{amb} + R_{th} \times P_D$$

TECHNOLOGY

Dielectric	Polypropylene; metallized selfhealing
Filling material	N_2 ; resin; dry

BUSHINGS D-242

Amount	8
Flash over distance T/C	38 mm
Creepage distance	61 mm
Terminal	M8 x 17 mm (female)
Maximal torque	10 Nm
Height	22 mm

MECHANICAL DATA

Dimensions	650 mm x 175 mm x 245 mm
Drawing	07-B-841
Weight	36 kg
Casing material	Stainless steel, antimagnetic
Painting	RAL 7033
Mounting position	Every position

LIFE EXPECTANCY

> 180 000 h at 65 °C

FAILURE RATE

100 FIT

STANDARD

IEC 61071-2007-1
IEC 61881-2007-1

SPECIFICATION

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REFERENCE

5192-28538-xx

DIMENSIONS

