ESTAdry DC-Capacitor

NOMINAL RATINGS

Capacitance/tolerance	C_N	1500 µF	± 3 %
Rated DC voltage	U_{NDC}	3630 V	

OVER VOLTAGES ACCORDING TO STANDARD

1.1 x U_N	U_1	3993 V (30 % of the working time)
1.15 x U_N	U_2	4175 V (30 min/day)
1.2 x U_N	U_3	4356 V (5 min/day)
1.3 x U_N	U_4	4719 V (1 min/day)
1.5 x U_N	U_6	5445 V (30 ms; max. 1000 x per LT)

CHARACTERISTICS

Maximum current	$I_{max.}$	420 A_{RMS} (1)
Maximum peak current	$\hat{I}$	20 kA
Maximum surge current	$\hat{I}_S$	285 kA; 100 x per LT
Series resistance	R_S	< 0.5 mΩ
Thermal resistance	R_{th}	0.3 K/W (hotspot-ambient)
Tangent of the loss angle	tan δ_0	2 x 10^{-4}
Self inductance	L_S	< 30 nH

ROUTINE TEST

Terminal/terminal	UT/T	5455 V_{DC}, 10 s
Terminal/casing	UT/C	14 500 V_{AC}, 10 s

OPERATING TEMPERATURE

Minimum temperature	$\theta_{min.}$	0 °C
Maximum temperature	$\theta_{max.}$	+ 65 °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 hospot 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-283

Amount	8
Flash over distance T/C	51 mm
Creepage distance	96 mm
Terminal	M16
Maximal torque	25 Nm
Height	83 mm

MECHANICAL DATA

Dimensions	800 mm x 170 mm x 315 mm
Drawing	07-B-1134
Weight	56 kg
Casing material	Stainless steel, antimagnetic
Painting	RAL 7033
Mounting position	Every position

LIFE EXPECTANCY

> 200 000 h at 65 °C

FAILURE RATE

< 200 FIT

STANDARD

IEC 61071-2007-1

IEC 61881-2007-1

SPECIFICATION

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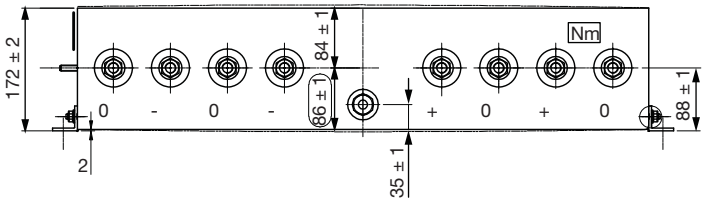
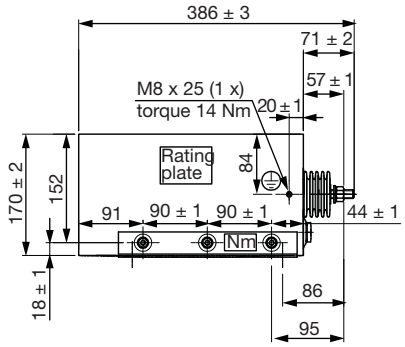
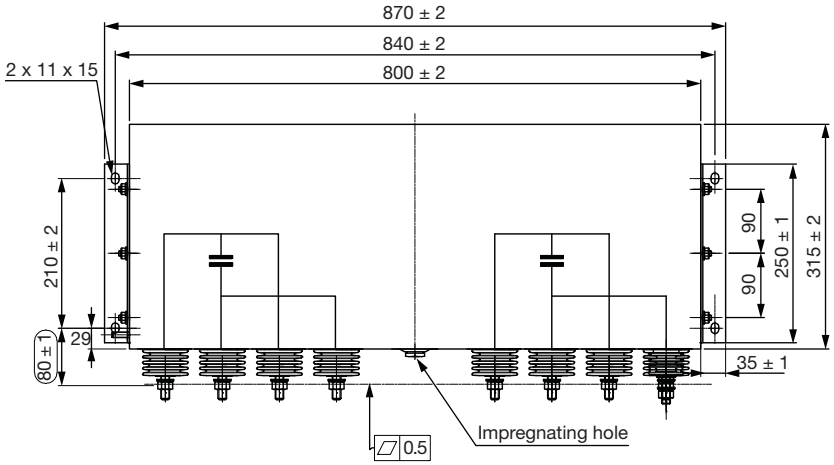
REFERENCE

5192-31664-xx

DIMENSIONS


172 ± 2
84 ± 1
86 ± 1
Nm
0 - 0 - + 0 + 0
88 ± 1
2
35 ± 1


386 ± 3
71 ± 2
57 ± 1
M8 x 25 (1 x)
torque 14 Nm
20 ± 1
Rating plate
84
170 ± 2
152
91
90 ± 1
90 ± 1
44 ± 1
Nm
18 ± 1
86
95


870 ± 2
840 ± 2
800 ± 2
2 x 11 x 15
210 ± 2
90
90
250 ± 1
315 ± 2
29
80 ± 1
35 ± 1
0.5
Impregnating hole