

DC 85 B series

High Density, Low Inductance DC-Link Capacitors Cubic Plastic Case

his Cubic Box variant is powered by the tried and proven Ducati Energia PPMh technology making it a competitive and reliable solution to all common DC-Link applications.

When coupled with the exclusive Ducati Energia High Crystallinity Film the DC 85 B construction provides superior temperature performance with 100khrs life @ 90°C HotSpot or extended life of 400khrs @70°C HotSpot. The exclusive Ducati Energia metallization profiles guarantee high capacity stability and a controlled, open-circuit condition at the end of DC 85 B operational life, while maximizing the current capability.

Main characteristics:

- High Capacity Density
- Self-Healing Metallized Polypropylene Film
- V0 Plastic Case
- DRY Resin filling
- Low ESL

Main applications:

- DC-Link
- Energy Storage / Pulse Generation

DC 85 B Versions with Ducati Energia High Crystallinity Film:

- Standard Life expectancy 100.000hrs at 90°C HotSpot
- Extended Life expectancy 400.000hrs at 70°C HotSpot



General Characteristics

DC Voltage range	550÷6000 V
Maximum ripple current	120 A
Capacitance range	Up to 38000 µF
Capacitance tolerance	standard: +0%/-15%; others on request
Series resistance (RS)	< 5 mΩ
Thermal resistance natural cooling (R _{THC})	2.0 °C/W
Equivalent series inductance (ESL)	< 30 nH
Terminals	M10 screw-type bolts
Test voltage	U _{tt} = 1.5 x U _{nDC} 10 s
Working temperature (θ _{MIN} – θ _{MAX})	–25 / +85 °C
Storage temperature	–25 / +85 °C
Filling	Self-extinguishing (UL94 V0) polyurethane resin
Dielectric	Self healing PPMd film
Container	Self-extinguishing (UL94 V0) plastic box
Failure quota	50 /10E9
Life expectancy	100.000 h (*)
Maximum altitude	2000 m a.s.l.
Reference standard	IEC 1071-1/2 - IEC 1881 - UL 810
M10 screw terminals	Max 10 Nm
Fixing slots	Max 10 Nm
In according to fire protection standard 	EN 45545-2

Safety system: These capacitors are designed with a particular type of polypropylene metalized film (PPMd film) that assures an open circuit at the end of life, if the operation is within the specification.

(*) For details please refer to page 75.



Capacitance Cn [μF]	Rated DC Voltage Un [V]	Repet. Peak Voltage Up [kV]	Surge Voltage Us [kV]	Max. RMS Current I _{MAX} [A]	Repet. Peak Current Ip [A]	Surge Current Is [kA]	Series Resistance Rs [mΩ]	Thermal Resistance R _{THC} [°C/W]	Weight [kg]	Terminal solution A / B	Part n. 416.85.
3800	550	0.8	1.2	120	9800	25	< 0.80	1.65	< 5.0	A / B	001.x
2800	650	1.0	1.4	120	9300	25	< 0.80	1.65	< 5.0	A / B	005.x
2250	750	1.1	1.6	120	9500	25	< 0.80	1.65	< 5.0	A / B	090.x
1500	900	1.4	1.9	120	9500	25	< 0.80	1.65	< 5.0	A / B	190.x
1200	1100	1.7	2.3	120	9600	25	< 0.80	1.65	< 5.0	A / B	290.x
1000	1250	1.9	2.6	120	9000	20	< 0.85	1.65	< 5.0	A / B	390.x
800	1350	2.0	2.9	100	8800	20	< 1.20	1.65	< 5.0	A / B	405.X
750	1450	2.2	3.0	100	8500	20	< 1.20	1.65	< 5.0	A / B	490.x
420	1800	2.7	3.8	100	8200	15	< 1.20	1.65	< 5.0	A / B	590.x
280	2200	3.3	4.6	80	7000	15	< 1.80	1.65	< 5.0	A / B	690.x
180	2800	4.2	5.8	80	6300	15	< 1.90	1.65	< 5.0	A / B	790.x
80	4000	6.0	8.5	60	4000	10	< 3.20	1.65	< 5.0	A / B	890.x
50	5000	7.5	10.0	50	3500	10	< 4.60	1.65	< 5.0	A / B	990.x
40	5500	8.3	10.0	40	3200	8	< 7.50	1.65	< 5.0	A / B	A90.x
30	6000	9.0	10.0	35	2700	8	< 8.20	1.65	< 5.0	A / B	B90.x

NOTES:

(Cn) Tolerance standard value: -15 ... +0%. Other tolerance values on request.

(Cn) - (Un) Capacitance and rated voltage standard values, other values on request.

(Ur) Maximum peak to peak alternating voltage component on the DC working voltage.

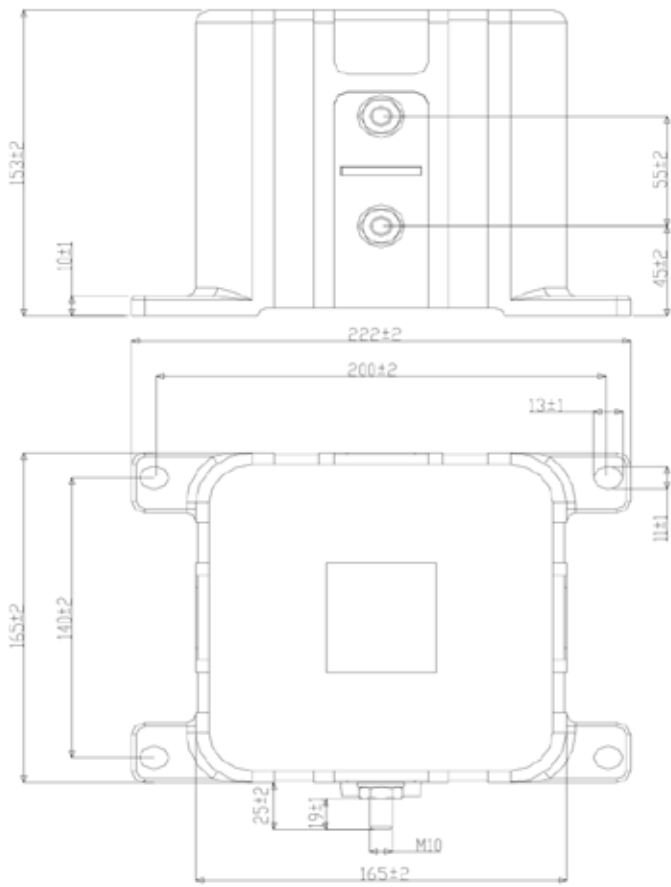
(Rs) Related at 1 KHz.

(R_{THC}) Thermal resistance CASE TO AMBIENT in natural cooling environment.

(A/B solut) .X="5" for A SOLUTION (M10 terminals on surface without handles) / .x="6" for B SOLUTION (M10 terminals on handle surface).

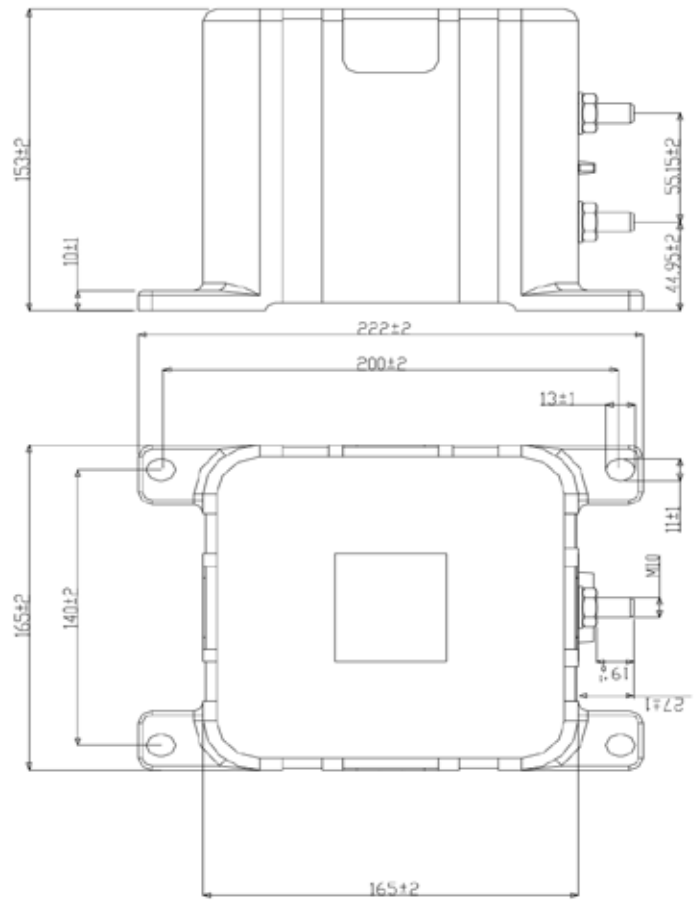
Box TYPE	
Standard box dimensions	mm 450 x 470 x 220
No. pieces x box:	4





A SOLUTION

41685.xxx.5
M10 terminals on handles surface



B SOLUTION

41685.xxx.6
M10 terminals on handle surface

