DC 86 PS series

High Density, Very Low Inductance DC-Link Capacitors
Prismatic Plastic Case

This Prismatic 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 86 PS operational life, while maximizing the current capability.
A special internal construction allows the minimization of field effects, thus guaranteeing real-life low ESL

Main characteristics:

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

Main applications:

- DC-Link
- Energy Storage / Pulse Generation

DC 86 PS 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÷2700 V
Maximum ripple current	165 A
Capacitance range	Up to 2100 µF
Capacitance tolerance	±10%
Thermal resistance natural cooling (R_{THc})	2.60 °C/W
Equivalent series inductance (ESL)	< 30 nH
Terminals	M8 x 15 internal threads
Test voltage	U_{tc}= 4.5 kVac @50 Hz 60 s U_{tt}= 1.5 x Un_{DC} 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
M6 internal thread terminals	Max 4 Nm
Fixing slots	Max 10 Nm
UL - CSA approved (c UL us)	File n. E192559
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.

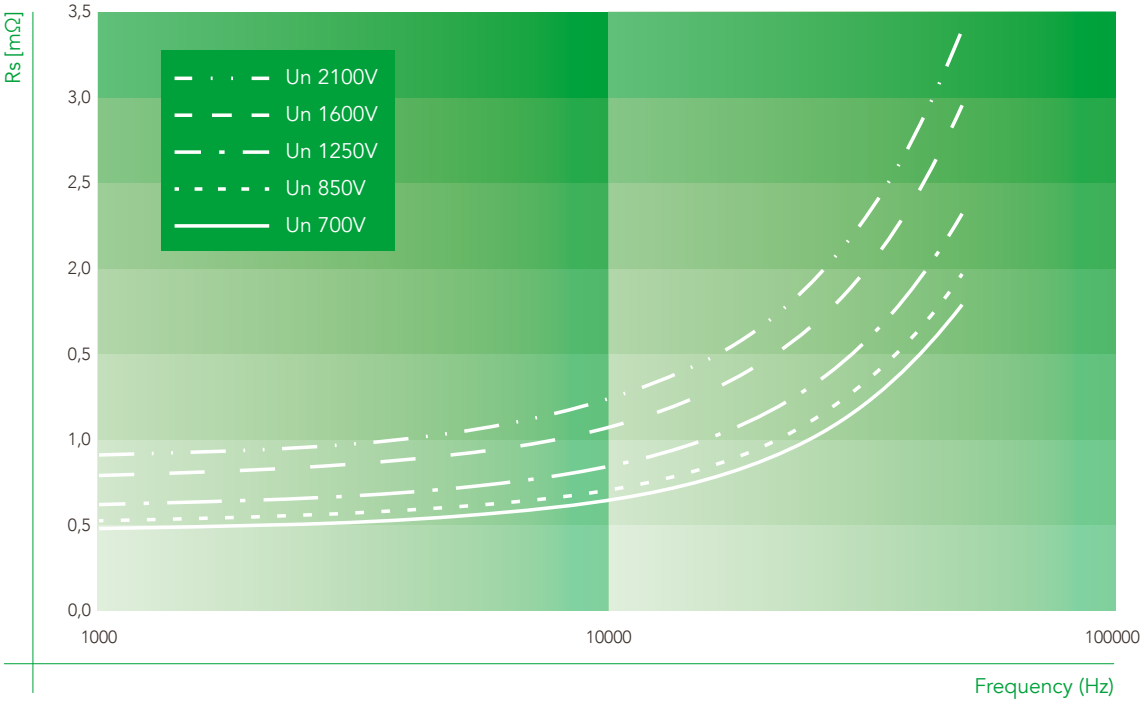
Capacitance Cn [µF]	Rated DC Voltage Un [V]	Repet. Peak Voltage Up [kV]	Surge Voltage Us [kV]	Max. RMS Current I_{MAX} [A]	Repet. Peak Current Ip [A]	Surge Current Is [kA]	Series Resistance Rs [mΩ]	Thermal Resistance R_{THC} [°C/W]	Weight [kg]	Part number 416.86.xxxx
2100	550	0.8	1.2	165	16800	29.5	< 0.48	2.60	< 4.5	0095
1500	700	1.0	1.5	165	15000	28.0	< 0.50	2.60	< 4.5	1095
1150	850	1.3	1.8	155	13800	26.0	< 0.55	2.60	< 4.5	1595
750	1100	1.7	2.3	150	12000	25.0	< 0.59	2.60	< 4.5	2095
600	1250	1.9	2.6	140	11400	23.0	< 0.66	2.60	< 4.5	2595
500	1400	2.1	2.9	130	11000	21.5	< 0.73	2.60	< 4.5	3095
380	1600	2.4	3.4	120	10640	20.5	< 0.85	2.60	< 4.5	3595
300	1800	2.7	3.8	120	10500	19.0	< 0.89	2.60	< 4.5	4095
230	2100	3.2	4.4	110	9660	18.5	< 0.98	2.60	< 4.5	4595
120	2700	4.1	5.7	100	7800	14.5	< 1.15	2.60	< 4.5	5095

NOTES:
(**Cn**
(**Cn** **Un**
(**Rs**
(R_{THS}
(I_{MAX}

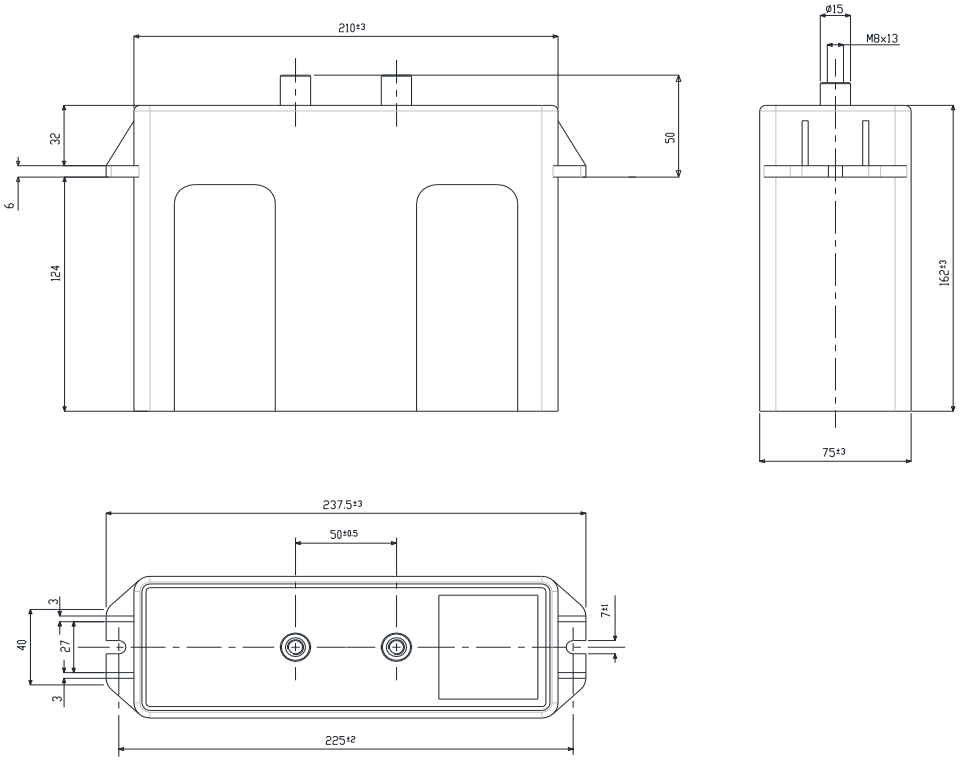
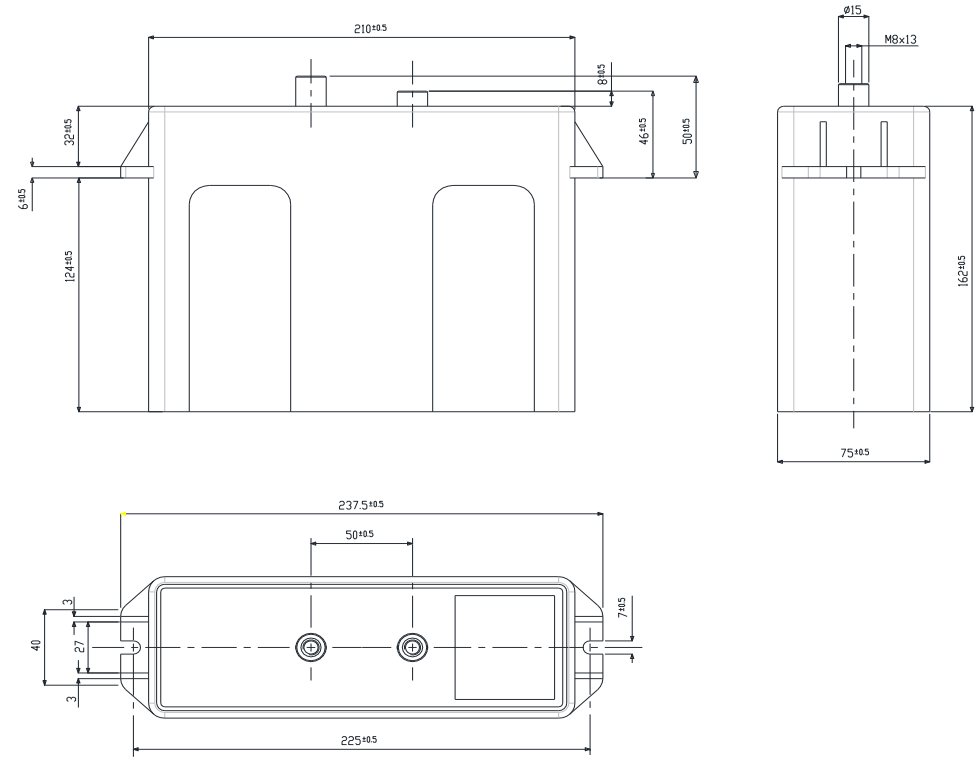
Insulation spacing	
	Air (mm)
37	27

Box TYPE	
	mm 195 x 390 x 250
No. pieces per box:	16

Typical Series Resistance at 23 °C



M8 standard terminals solution:



Available on request: M8 staggered terminals solution: