



DCH 86 PS series

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

Thanks to the exclusive Ducati Energia High Crystallinity Film DCH 86 PS Prismatic DC-link Capacitors provide leading Capacity Density without any de-rating or limitation, respective to standard makes.

The very high capacity density allows substantial cost reductions due to the reduction of capacitor size and/or number, as well as particularly low inductance values.

The exclusive Ducati Energia metallization profiles guarantee high capacity stability and a controlled, open-circuit condition at the end of DCH 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:

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

Main applications:

- DC-Link
- Energy Storage / Pulse Generation



General Characteristics

DC Voltage range	700÷2500 V
Maximum ripple current	165 A
Capacitance range	Up to 2100 µF
Capacitance tolerance	±10%
Thermal resistance natural cooling (RTHc)	2.60 °C/W
Equivalent series inductance (LESR)	< 30 nH
Terminals	M8 x 15 internal threads
Test voltage	$U_{tc} = 4.5 \text{ kVac @50 Hz 60 s}$ $U_{tt} = 1.5 \times U_{nDC} 10 \text{ s}$
Climatic Ambient Temperature	-25 / +45 °C
Working temperature ($\theta_{MIN} - \theta_{MAX}$)	-25 / +85 °C
Storage temperature	-25 / +85 °C
Filling	Self-extinguishing (UL94 V0) polyurethane resin
Container	Self-extinguishing (UL94 V0) plastic box
Failure quota	50/10E9
Life expectancy	100.000 h
Maximum altitude	100.000 h
Maximum altitude	2000 m a.s.l.
Reference standard	IEC 1071-1/2 - IEC 1881 - UL 810
M8 internal thread terminals	Max 4 Nm
M8 screw terminals	Max 6 Nm
Fixing slots	Max 10 Nm
UL - CSA approved ()	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.



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 [m Ω]	Thermal Resistance R _{THS} [°C/W]	Weight [kg]	Part number 416.86.V.xxxx
2.100	700	1.1	1.2	165	15.000	28.0	< 0.48	2.60	< 4.5	1095
1.500	850	1.0	1.5	155	13.800	26.0	< 0.50	2.60	< 4.5	1595
1.150	1100	1.7	2.3	150	12.000	25.0	< 0.55	2.60	< 4.5	2095
750	1250	1.9	2.625	140	11.400	23.0	< 0.59	2.60	< 4.5	2595
600	1400	2.1	2.9	130	11.000	21.5	< 0.66	2.60	< 4.5	3095
1100	1600	2.4	3.36	120	10.640	20.5	< 0.73	2.60	< 4.5	3595
380	1800	2.7	3.8	120	10.500	19.0	< 0.85	2.60	< 4.5	4095
300	2100	3.2	4.5	110	9.660	18.5	< 0.89	2.60	< 4.5	4595
230	2500	3.8	4.5	100	8.200	14.5	< 0.98	2.60	< 4.5	5095

NOTES:

- (Cn) Tolerance standard value: ±10%. 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) Releated at 1 KHz.
(R_{THS}) Thermal resistance AMBIENT - HOT SPOT (air forced cooling system).
(I_{max}) Maximum RMS @ 50 °C ambient temperature.

Insulation spacing

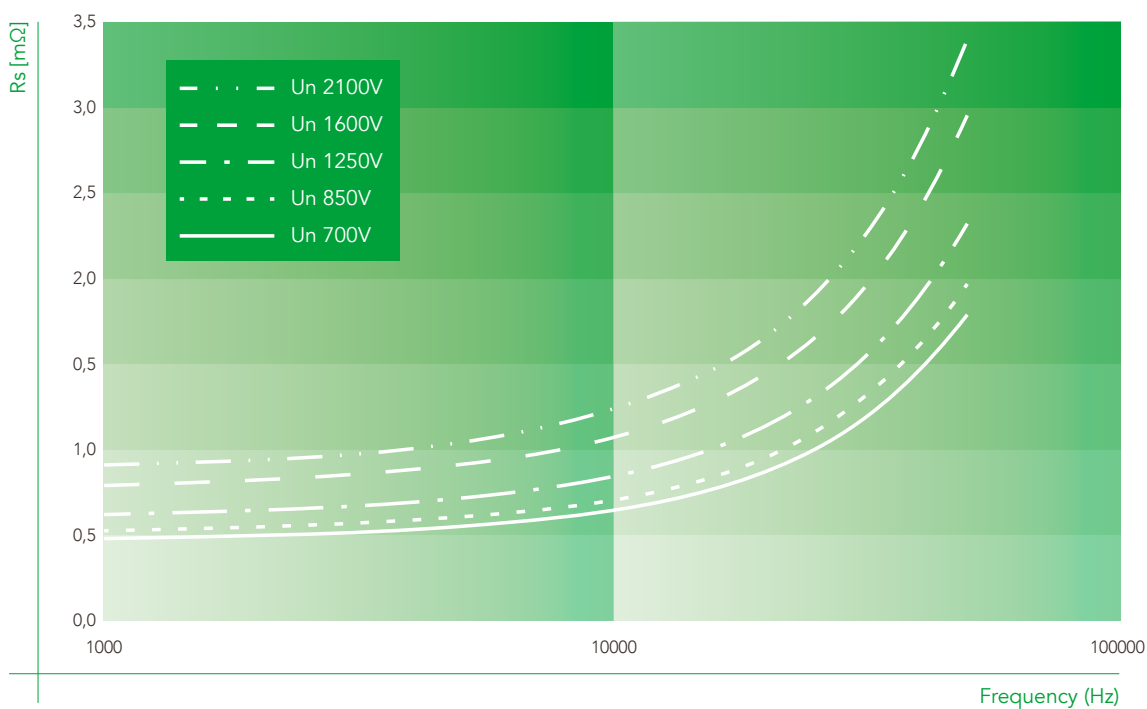
Surface (mm)	Air (mm)
37	27

Box TYPE

Standard box dimensions: mm 195 x 390 x 250

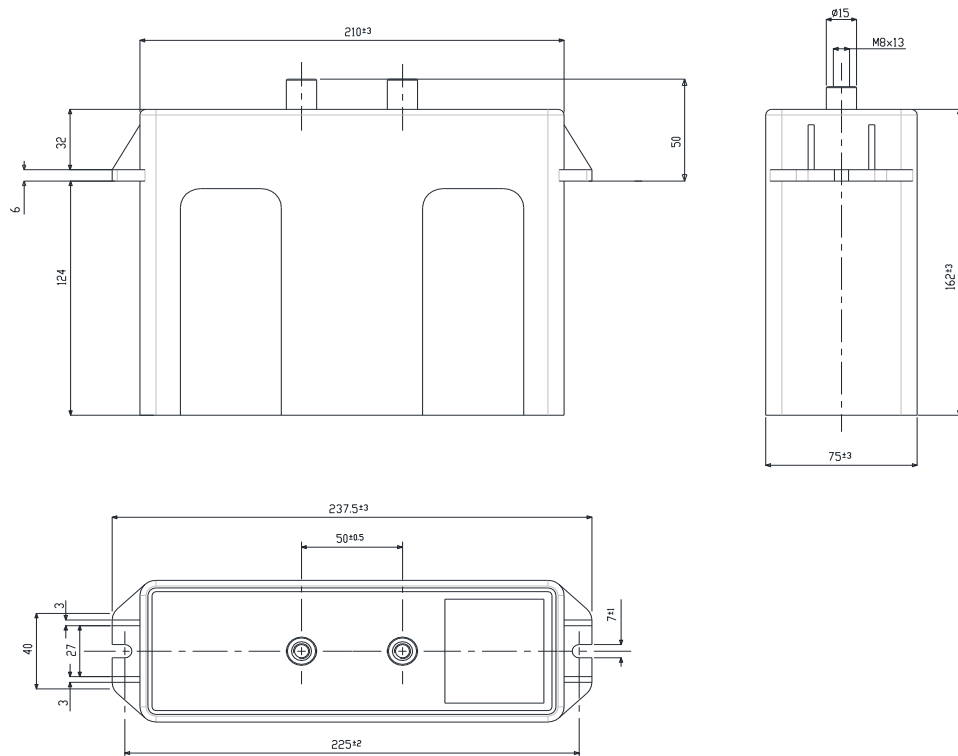
No. pieces per box: 16

Typical Series Resistance at 23 °C





M8 standard terminals solution:



Available on request: M8 staggered terminals solution:

