New DC 90 P series

DC-Link Capacitors, high density and low inductance, resin filled in box plastic case

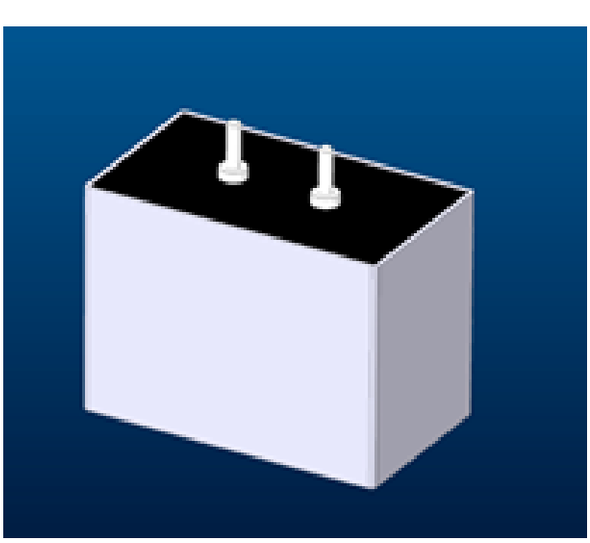
Ducati, in order to expand its Power Electronic Capacitors' product line, is introducing the new DC90P series, a DC-Link capacitor in a new prismatic plastic case. The new form factor is designed for common DC-Link applications and the internal design, based on the exclusive Ducati Energia High Crystallinity Film, guarantees high capacity stability while maximizing the current capability.
A special internal construction allows the minimization of field effects, thus guaranteeing real-life low ESL.
The exclusive Ducati Energia metallization profiles guarantee high capacity stability and a controlled, open-circuit condition at the end of 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



General Characteristics	
DC Voltage range	800 - 3500 V
Maximum ripple current (Imax)	150 Arms
Capacitance range	120 - 3000 µF
Equivalent series inductance (ESL) - typical	< 30 nH
Tinned copper terminals	M8x10 internal thread
Container	Self-extinguishing (UL94 V0) plastic box
Filling	Self-extinguishing (UL94 V0) Polyurethane resin
Film Dielectric type	PPMDh film (*)
Maximum altitude	2000 m a.s.l.
Mounting position	Any position
Maximum torque for fixing	6 Nm
Maximum torque for M10 terminals	8 Nm
Maximum Hotspot temperature	+85 °C
Storage temperature	-25 .. +85 °C
Humidity category class (DIN 40040)	F
Life expectancy (@Un / 70°C hot spot)	100.000 h
Failure quota	50FIT
Reference standards	IEC 61071-1/2 IEC 61881 UL810
Material and insulation distance designed according to:	UL 810
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.

DC 90 P

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 [kA]	Surge Current Is [kA]	Series Resistance Rs [mΩ]	Thermal Resistance R_{THS} [°C/W]	Weight [kg]
3000	800	1,2	1,6	150	15	20	< 0.32	2,70	< 7
1250	1200	1,8	2,4	150	9,5	18	< 0.46	2,70	< 7
650	1600	2,4	3,2	150	6,5	15	< 0.63	2,70	< 7
400	2000	3,0	4,0	150	10	15	< 0.45	2,70	< 7
300	2400	3,6	4,8	150	13	16	< 0.68	2,70	< 7
220	2700	4,1	5,4	150	11	16	< 0.70	2,70	< 7
200	2800	4,2	5,6	150	10	15	< 0.35	2,70	< 7
150	3200	4,8	6,4	150	8,5	13	< 0.30	2,70	< 7
120	3500	5,3	7,0	150	8	12	< 0.41	2,70	< 7

NOTES:
(Cn) Tolerance standard value: ±10%. Other tolerance values on request.
(Cn) - (Un) Capacitance and rated voltage standard values, other values on request.
(Rs) Related at 1 KHz.
(R_{THS}) Thermal resistance AMBIENT - HOT SPOT (air forced cooling system).
(I_{MAX}) Maximum RMS Current @ 50°C ambient temperature.