

VISHAY ESTA POWER CAPACITORS

PhMKP and PhMKPg

ESTAprop / ESTAdry Low Voltage Power Capacitors



KEY BENEFITS

- Compact design to fit 300 mm cubicle modules
- Very low losses and small diameters for excellent heat dissipation
- Stacked assembled winding elements reduce the risk of device breakdown
- Highest overcurrent capability of up to three times rated current, and inrush current capability of 300 times rated current
- Life expectancy of > 150 000 operating hours
- Highest outputs of up to 37 kvar
- Two versions available: oil-filled and dry, gas-filled
- ESTAspring: screwless, lever-operated, spring-connection terminal block; IP20

APPLICATIONS

- Recommended for power factor correction and filters in low voltage applications $\leq 1000 V_{RMS}$

RESOURCES

- Datasheet: PhMKP..., PhMKPg... - www.vishay.com/doc?13004
- Datasheet: PhMKP...-S, PhMKPg...-S - www.vishay.com/doc?13203
- For technical questions contact esta@vishay.com

**VISHAY ESTA POWER CAPACITORS**

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**ESTAprop / ESTAdry
Low Voltage Power Capacitors****CAPACITORS IN CYLINDRICAL CASING**

TECHNICAL DATA	
STANDARDS	IEC 60831-1 + 2, EN 60831- 1 + 2, UL 810 LATEST EDITIONS, UL / ULC - FILE E97723
Overvoltages (in accordance with the above standards)	U _{cn} + 10 % (up to 8 h daily) U _{cn} + 15 % (up to 30 min daily) U _{cn} + 20 % (up to 5 min, only 200 times in the life of the capacitor) U _{cn} + 30 % (up to 1 min, only 200 times in the life of the capacitor)
Overcurrent (in accordance with the above standards)	1.3 x I _n , 1.43 x I _n with 10 % overvoltages, 10 % over capacitance and harmonics included, continuous operation
Tolerance on capacitance	-5 % / +10 % in accordance with the standards ± 5 % as Vishay ESTA standard
Test voltage, terminal / terminal	2.15 x U _{cn} , VAC, 2 s (routine test)
Test voltage, terminal / casing	4800 VAC, 2 s (routine test)
Inrush current	300 times rated current I _n
Losses	≤ 0.25 W/kvar to 0.45 W/kvar (without discharge resistors)
Statistical life expectancy ⁽¹⁾	> 150 000 operating h (ESTAprop) > 130 000 operating h (ESTAdry)
Degree of protection	IP00 or IP20
Ambient temperature category	-40 / D (max. 55 °C) according to IEC 60831
Permitted casing temperature	Max. 65 °C (measured on top of the can)
Cooling	Naturally air-cooled
Permissible relative humidity	Maximum 95 %
Maximum allowed altitude	2000 m above sea level
Mounting position	Vertical and horizontal
Mounting and grounding	Threaded M12 stud at the bottom of the container
Safety features	All-phase overpressure tear-off fuse, self-healing
Casing	Aluminum can
Dielectric	Polypropylene film, self-healing
Filling agent	Natural oil, non-PCB, biodegradable (ESTAprop) or dry / gasfilled (ESTAdry)

Note

⁽¹⁾ Statements about product lifetime are based on calculations and internal testing. They should only be interpreted as estimations. Also due to external factors, the lifetime in the field application may deviate from the calculated lifetime. In general, nothing stated herein shall be construed as a guarantee of quality or durability.

QUICK REFERENCE DATA	
Voltage max. (V)	1000
Capacitance min. (µF)	3-phase D: 3 x 11.5, 3-phase Y: 3 x 83.6, 1-phase: 49.7
Capacitance max. (µF)	3-phase D: 3 x 335.0, 3-phase Y: 3 x 219.3, 1-phase: 332.2
Output min. (kvar)	2
Output max. (kvar)	37.1

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