

400V Capacitor Banks data sheet Characteristics

ZD-DWM Capacitor Bank 400V/440V 50/60Hz



Main

Grid rated voltage	400V AC 50Hz/ 440V AC 60Hz
Rated reactive power	30~420Kvar
Operating mode	Automatic
Brand	ZDDQ
Model	ZD-DWM
Product type	Capacitor bank

Complementary

Network pollution level	Low polluted
Harmonic pollution rate	15...25% [Gh/Sn]
Total harmonic distortion of voltage	3...4% [THDU]
Power per step	10~50kvar
Step composition	Compound switch
Location of connection	Bottom
Controller type	ZDDQ PF Controller ZD-MC
Capacitor technology	3 phase capacitors
Poles description	3P
Capacitance tolerance	-5% to 10%
Detuned reactors	7%
[Uimp] rated impulse withstand voltage	8kV
Maximum permissible voltage	1.1 xUn(8 hours over 24 hours) conforming to IEC60831
[Imp] maximum permanent current	Capacitor: 1.8 x In at480V conforming to IEC 60831 Battery: 1.43 x In at400V conforming to IEC 61439-2 Battery: 1.19 x In at415V conforming to IEC 61439-2
Main incomer protection	Circuit breaker protection
Breaking capacity	Icu 35kA
Control type	Rotary handle

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user application.

LV CAPACITOR BANKS (ZD-DWM Compound switch)

ZD-R&D-con-file-LV-SVC-CS-2

Step protection type	Overload: harmonic control Short-circuit: main circuit breaker
Accessibility for operation	Front
Colour	Grey (RAL 7032)
Maximum weight	300kg
Height	2200mm
Width	800mm
Depth	800mm
Provided equipment	Auxiliary transformer
Internal voltage transformer	400/230 V-400 VA
Function available	Alarm contact

Environment

Standards	IEC 61439-1 IEC 61921 IEC 61439-2
Product certifications	CCC
Mounting location	Indoor
IP degree of protection	IP3X
Relative humidity	0...95%
Operating altitude	<= 2000m
Ambient air temperature for operation	-5...45 °C
Average ambient air temperature for operation	35 °C (annual) 45 °C (over24hours)

Key features & benefits

Modular design

Allows installation of additional power and switch modules as well as various options. Additional units may be connected in parallel.

Options

Can be factory installed; anti-resonance reactors, filters, fans, blown fuse indication, non-fused, fused disconnect switches and circuit breakers.

Low losses

Capacitor total losses are less than 0.5 watts per kvar. Auto bank total losses (without reactors), including accessories such as Power Factor Controller and contactors are less than 1.5watts per kvar.

Unique sequential protection system

Ensures that each individual capacitor element is selectively and reliably disconnected from the circuit at the end of its life.

Life cycle

Low losses and the self-healing properties of capacitor elements help to ensure long operating life.

Safety

Capacitors are manufactured with vermiculite, a non-flammable and nontoxic material. The dry vermiculite safely absorbs any energy produced within the capacitor enclosure and prevents any fire hazard in case of failure. Unique cooling fans are fitted to surround each capacitor element providing effective heat dissipation