PRODUCT DATA SHEET

EVAR
POWER FACTOR CORRECTION EQUIPMENT (LV)

PQ100-500 EVAR

- Compact Design
- Energy Efficient
- Modular Concept

CERTIFICATIONS

c UL us LISTED

c ETL us

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PRINCIPLE

THIS SOLUTION INTRODUCES THE PQ100-500EVAR, PROVIDING USERS WITH A HIGHLY EFFICIENT AND RELIABLE CHOICE FOR:

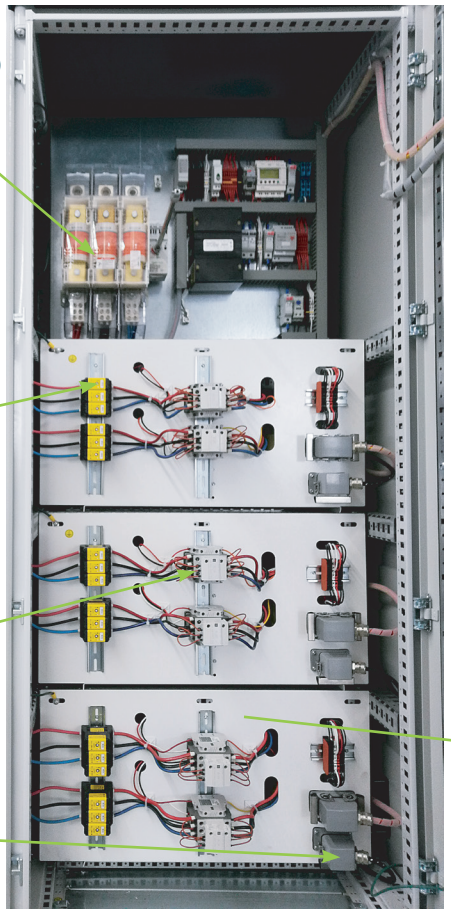
- REDUCING POWER FACTOR PENALTIES, LEADING TO DECREASED MONTHLY BILLS.
- IMPROVING POWER QUALITY.
- EXTENDING EQUIPMENT LIFETIME.
- EASY MAINTENANCE AND UPGRADE.

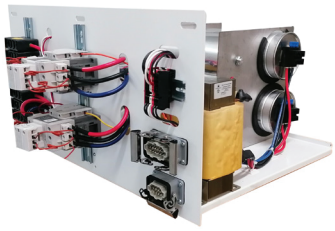
Our goal is to enhance the efficiency of electrical energy utilization by incorporating capacitors to correct the power factor of the distribution system. Our solution, the PQ100-500EVAR, comprises capacitor banks with automatic control in steps of up to 24 levels, adapting the reactive power to the installation's fluctuations. Control is typically carried out by an electronic device (power factor controller) that monitors the actual power factor and commands the connection or disconnection of capacitors in predetermined steps, as required by the load, to achieve the targeted power factor. Our PQ100-500EVAR is compatible with the DCRG8 controller, which continuously monitors the reactive power drawn from the electrical network and automatically switches the capacitors as needed.

SYSTEM COMPOSITION

Front Side (Door Closed)

Front Side (Door Opened)





SPECIFICATIONS

MAIN	
Nominal Voltage	600V AC 60Hz (480V AC upon request)
Reactive power ratings	100, 150, 200, 300, (400, 500 kvar Customized)
Mode of operation	Automatic
Equipment name	Automatic capacitor bank with detuned reactor
Type of product or equipment	Capacitor bank

COMPLEMENTARY	
Reactive power in steps of	25kvar, 50kvar
No. of steps	8 steps, expandable up to 24 steps
Harmonic load design	Voltages distortion based on Un: u1=106% u3=0,5% u5=5% u7=5%
Cable entry	Top
Type of controller	DCRG8 (Lovato)
Capacitor technology	Inert gas filled PFC capacitors + Detuned Reactor
No. of poles	3
Capacity tolerance	-5% to 10%
Insulation voltage	690V
Shock voltage	8kV
Overvoltages for capacitors	1,1 x Un (8 hours daily) 1,15 x Un (30 min. daily) 1,2 x Un (5 min. daily) conform to IEC 60831
Overcurrent	1,5 x In (including harmonics) conform to IEC 60831
Protection at main incomer	With protection (fused type) UL
Short-circuit withstand	36kA
Protection by step	Fuse
Accessible	Front door
Colour	(RAL 7035) for enclosure (RAL 5020) for roof, plinth and handle
Height	1800mm
Width	800mm
Depth	800mm
Equipment include	Auxilliary transformer for control
Voltage Internal transformer	600/120V 350VA
Power supply	AC/DC, 60W, 24Vdc, 2.5A
Capacitors (life expectancy)	135,000 hrs 5000 switchings per year

Optional:

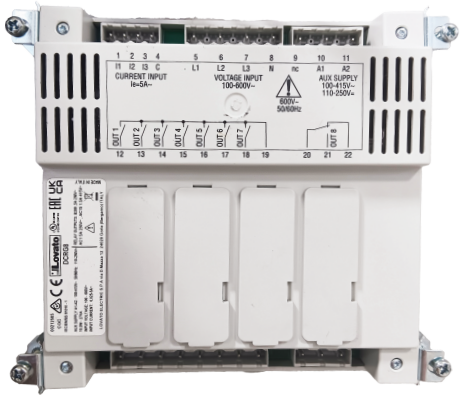
- Fast switching: optional solid-state relay (SSR) that can react in 1 to 2 seconds. Silent contactors
- Remote communication using USB key or Wi-Fi with your PC

DCRG 8 POWER FACTOR CONTROLLER

FEATURES:

- BOTH BALANCED AND UNBALANCED LOAD.
- COMPLETE 3 PHASE MEASUREMENT.
- GRAPHIC LCD SCREEN.
- NAVIGATION VIA 5 KEYS.
- UP TO 8 USER-PROGRAMMABLE ALARM .
- REAL TIME CLOCK.
- 8 STEPS, EXPANDABLE UP TO 24 STEPS.

Front View
DCRG8



Rear View
DCRG8

Rated Auxiliary	From 100Vac up to 415 Vac
Auxiliary rated frequency	50 /60 ±10%
Type of Measure	True RMS Value
Operating temperature	-20° to 70°C
Degree of protection	IP65 on front, IP 20 terminals
Certificates	cUL us, EAC, RCM

QUALITY AND TESTING

ENVIRONMENT	
Norms	EN 62208 E 154776 IEC 60831-1/2 UL 810
Product certificates	TUV Rheinland, UL, EAC, EX
Installation	Interior
IP rating	IP43 NEMA 12 (IP55 NEMA 3R available)
IK rating	IK10
Operating temperature	-5° to 45°C

WARRANTY	
Capacitors only	5 years
Equipment & parts	12 months

ORDERING INFORMATION

600V / 60Hz / 3 phases

EVAR Model	kvar rating	Qty / kvar
PQ100EVAR	100	4/25
PQ150EVAR	150	6/25
PQ200EVAR	200	4/25 + 2/50
PQ300EVAR	300	6/50
PQ400EVAR	400	8/50
PQ500EVAR	500	10/50