

Power Factor & Harmonic Filtration Components



Power-9 Heavy Duty Small Capacitors (1 to 4 KVAR)

- New compact Heavy Duty Series
- Cylindrical 3 phase capacitors
- Life expectancy $\geq 1,00,000$ hours
- Low losses ≤ 0.2 W/ KVAR
- Rating available in 1, 2, 3 & 4 KVAR



Power-9 Heavy Duty Capacitors

- New compact Heavy Duty Series
- Cylindrical 3 phase capacitors
- Life expectancy $\geq 1,00,000$ hours
- Low losses ≤ 0.2 W/ KVAR
- Rating available in 5, 10, 12.5, 15 & 25 KVAR



Duca Power XD Capacitors

- Withstand Harmonic overloads
- Max. overload $4x I_n$
- Life expectancy $\geq 1,70,000$ hours
- Low losses ≤ 0.2 W/ KVAR
- Capacitance tolerance $-5 +10\%$
- Temperature range -25°C to 70°C
- High capacitor performance in terms of heat dissipation
- Long life and excellent ground insulation
- IP20 protection
- Reference Standard IEC 831-1/2



NSL-10 Heavy Duty Capacitor

- Unique Modular Plastic Enclosure
- Discharge Resistor (50V after 1 minute)
- Operating Life 1,00,000 hours
- Safety, reliability, long life expectancy, easy handling and mounting
- Self extinguishing plastic container
- The dielectric consist of heavy film of polycarbonate
- Available in both Metal Enclosure and Plastic Enclosure
- Double protection safety device



Ultima - The Ultimate Capacitors

- Withstands high harmonics overload
- Life expectancy of more than 2,00,000 hours
- Low losses ≤ 0.2 W/KVAR
- The Metallization has been made in a special "Profile" to allow: an higher voltage stress on the film
- Temp. Range - 25°C + 70°C



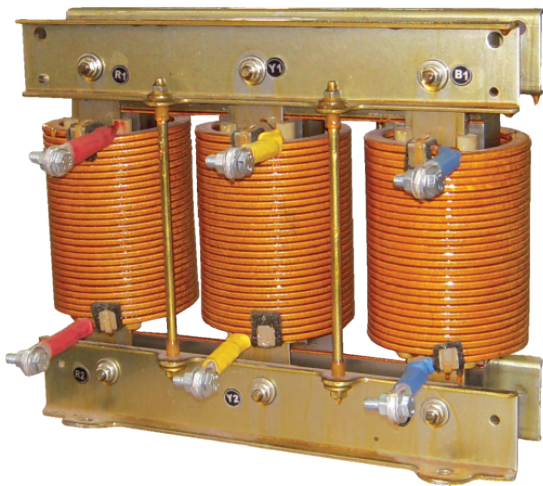
LLM Capacitors - Long Life Mixed Dielectric Capacitors

- Dielectric impregnated with biodegradable synthetic oil
- R.M.S Current level in excess of 4 In
- Withstand Harmonic Overloads
- Long operational Life $\geq 2,00,000$ hours
- Available in 450V - 550V
- Temperature range -25°C to 70°C



APP Capacitors

- Double hazy double thick polypropylene films
- 99.35% purity of Aluminum foil
- 3 KV Insulation Level
- Life Expectancy $\geq 1,50,000$ hours
- Impregnating oil adds to dielectric strength and provides cooling effect.

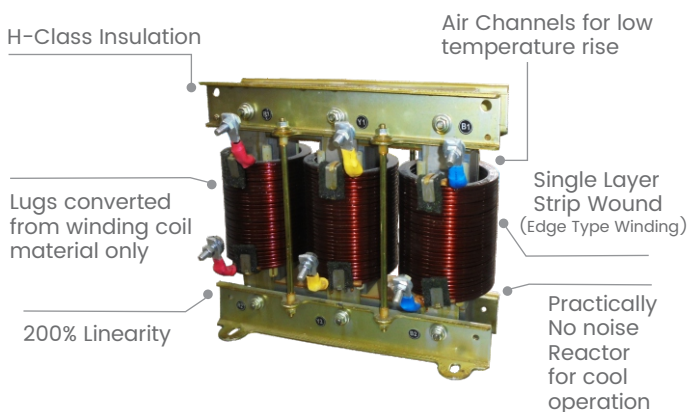


Design Features

Neptune Harmonic Filter Reactors, in terms of design, operational capabilities and losses leave all other reactors available in market way behind. The three-phase filter reactors are designed with an iron core and air gap. The Harmonic Filter Reactors are made out of high quality material and very stringent quality control. It has been designed with properties like low temperature rise and lower flux density so that it can operate in worst conditions of ambient and harmonic overloads. They offer a very good degree of linearity and low losses.

Cheaper and non-linear reactors may trigger undesirable chain phenomena during periods of operation with high harmonic values, such as reduction in the inductance with consequent increase in the resonance frequency of the LC group, which would drain off more harmonic current, further reducing its inductance and overload the reactor more and more.

Neptune Harmonic Filter Reactors are available with filtering factor of 5.6%, 7% and 14% as per standard ratings. Any other filtering factor and rating can be developed on request.



Harmonic Circuit Filter Reactors 5.6%, 7% & 14%

Series Combination

Neptune Reactors are designed to be used in series with capacitor bank to make Tuned or De-Tuned Filter Circuit as per the design requirement.

Features

- Neptune Reactors are designed with many low loss features in comparison to other brands available in market
- Single layer strip wound type construction for better cooling and heat dissipation resulting in lower losses
- Capable of withstanding very high harmonic overload Ambient Temp. (Max. Temp. sustained) up to 60°C
- Step core type design for lower losses
- Vacuum Impregnated
- Linearity (withstand capability on resonance freq. and high harmonic current variation) – 200% ($L > 0.95 \times L_n$)
- Strip wound conductor (Al. / Cu.) has been converted into terminals (instead of Lugs) to avoid temperature rise across the joints
- H-Class Insulation, 180°C
- High Temp. disconnection above 155°C

Technical Specifications

Rated Voltage	: 3 x 415/440V
Rated (kVAR)	: 5 KVAR – 100 KVAR
Frequency	: 50 Hz
Constructional Max. Voltage	: 1000 V
Test Voltage	: 3000 V
Filtering factors / Tuning freq.	: 5.6% (210 Hz), 7% (189 Hz) 12.5% (141 Hz) 14% (133 Hz)
Tolerance of inductance	: ±3%
Linearity ($L > 0.95 \times L_n$)	: 200%
Ambient temperature	: + 60°C
Winding material	: AL. (Cu. on request)
Insulation class	: H, 180°C
Cooling method	: Natural cooling (AN)
Installation	: Indoor
Protection degree	: IP 00
Operating altitude	: 1000m above sea level at Rated operation \
Temp. sensor (NC)	: 155°C
Reference standard	: IEC 61558-2-20

*Specifications are subject to change without notifications

Automatic Power Factor Controllers



RM Series – Single CT

- LED type 7 segment 4 digit display
- 8 & 12 capacitors steps available in ON/OFF modes
- Measurement of A,V,PF, Cos Phi, W, Var, VA
- Automatic calculation of C/k values
- Program entry for targeted Cos phi value
- No. of capacitors steps user definable
- Automatic / Manual mode selection with indicator light
- Over voltage, insufficient compensation
- over compensation state alarm indicator lights with output contact



Rego Advance P.F. Controller – Single CT

- The series Rego Controller relays are fully static units controlled by an eight bit micro processor with HC mouse technology
- Self programming function for power stages and operating logic i.e no need to set C/K setting.
- Comprehensive displays with large, three-digit LED display
- 3 logis (1:1:1), (1:2:2), (1:2:4) to connect / disconnect banks, with automatic recognition or with standard programs
- RS-485 communication



NAAC 3P/REM Series – 3 CT Input

- 7 segment LCD display with 2 colors backlight
- Available in 8 stage and 12 stage with RS485 communication port
- Target PF 0.8 lag – 0.8 lead
- Display THD-I % and THD-V% along with power
- Intelligent switching between various capacitor banks
- Control Sensitivity 55 to 100%
- Dual Password protection.
- User can configure alarm settings accordingly



G8 / G8 Plus Advanced Power Factor Controller

- Backlight graphic display 128x80 pixels with excellent legibility and adjustable intensity
- Master slave function
- GSM / GPRS Model (optional)
- Optical port on front
- Current & Voltage Harmonic analysis
- Independent compensation for all 3 phases
- Capacitor over-current protection on all 3 phases
- The wide measurement range between 100 to 690VAC allows to use the controller in most types of applications
- USB and Wi-Fi communication interface for PC, Smartphone & tablet
- Rs232, RS485 communication interface (Optional)
- Modbus®-RTU and ASCII communication protocols
- Set-up and remote control software (Optional)
- SMS sending for alarm conditions with expansion module (Optional)

Neptune India Ltd.

Corporate & Mktg Office:

A-11, Sector-59, Noida - 201301, India

Tel: 0120-4205900, 9555500300 | E-mail: enquiry@neptuneindia.com