

ENGLISH 

Reactors



TTR



TTO



OTN, OTR, OTF



REACTORS



TTH

PRODUCTION RANGE

Several industrial and electrical applications require the use of reactors. The word “reactors” is quite generic, in fact its construction feature is strictly based on the type of reactor considered.

SEA has designed a wide range of reactors fit for any kind of application required and they are available both in the threephase or singlephase version, dry version (with windings impregnated or inglobated with varnishes and resins, F or H class) or oil immersed.

Here are our main models:

- Shunt reactors, up to 25 MVAR and voltage up to 150 kV.
- Limiting reactors for short circuit current up to 4000 A and 36 kV systems.
- Reactors for special applications.
- Neutral earthing reactor.
- Petersen coils.
- Petersen plunger type coils.
- Electronic unit for surveying and tuning of earth faults.

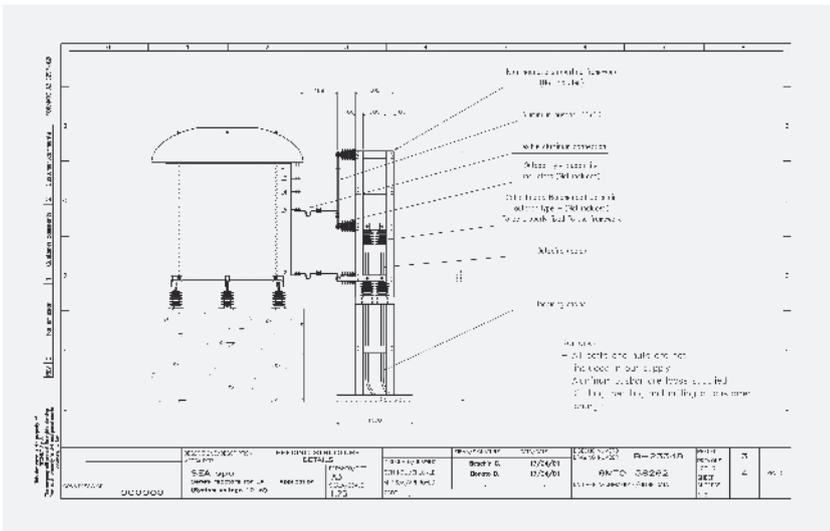


SHUNT REACTORS, UP TO 25 MVAR AND VOLTAGE UP TO 150 KV

They feature a shunt connection to the line. Their purpose is to compensate the reactive capacitive power generated by long transmission overhead lines when operated with a reduced load, in order to prevent a voltage increase at the end of the line itself. They generally include a magnetic core with air gaps, with a standard stacking of magnetic sheet for low powers and radial stacking for higher ones. The design of the core and gaps should be carried out with great care to ensure stability in time of the nominal performances and prevent abnormal noises and vibrations.

LIMITING REACTORS FOR SHORT CIRCUIT CURRENT UP TO 4000 A AND 36 KV SYSTEMS

They are connected in series to the line. In case of short circuit, they limit the current at a prefixed value, protecting the line itself. They are generally large single-phase coils, without a magnetic core and possibly grouped in threephase group. The installation requires a series of precautions because the coils produce high magnetic field, therefore the basement and segregation structures should be designed with great care. For low power applications, it's possible to realize threephase liquid immersed reactors, which allow saving of space and a greater freedom of installation since the magnetic field near the reactor becomes negligible.



REACTORS FOR SPECIAL APPLICATIONS

SEA can design and manufacture either air-insulated or oil immersed reactors for special applications (e.g. filter or laboratory applications) on customer's specification.

NEUTRAL EARTHING REACTOR

They are connected in parallel to the line.

They generally include a three-phase core with a zig-zag winding on each column. A neutral point is so obtained; it may be earth connected directly or through a resistance, based on customer's installation requirements. Oil immersed construction allows a very compact unit, enables the installation of additional CT's and cable box to prevent accidental contacts to the bushings. In other words, it enables a very complete, reliable and cheap installation.

PETERSEN COILS

These are singlephase reactors (with or without magnetic core) that are connected between an existing neutral point and the ground. If the value of the Petersen coil is correctly calculated the current of a possible earth fault can be substantially reduced and the immediate protection tripping delayed.

In 2004/2005 the Petersen coils SEA have been subjected to a strict validation protocol by ENEL obtaining the homologation.

PETERSEN PLUNGER TYPE COILS

From plant-engineering point of view, they have the same function as the Petersen coils but the reactance value can be adjusted within a certain field.

The circuit is therefore tuned, reducing so the fault current.

The adjustment is carried out by moving the core within the coil. The

shift is activated by an electric motor connected to an appropriate reducer which ensure great precision and reliability of the mechanism.

In 2004/2005 the Petersen coils made by SEA have been subjected to the strict validation protocol by ENEL and have obtained the homologation.

ELECTRONIC UNIT FOR SURVEYING AND TUNING

In order to carry out a timely and correct adjustment of the Petersen plunger type coil, the line should be equipped with the devices required to survey earth fault. During the last few years the close commercial collaboration between SEA and A. Eberle GmbH & Co. KG has enabled us to present our Petersen coil equipped with Eberle control unit, undoubtedly one of the most complete and innovative present on the market.



REGULATIONS AND SPECIFICATIONS OF REFERENCE

SEA reactors comply with the EN60289 regulations based on the Customer's specifications.

Please contact our commercial departments for further details.

TESTING

All reactors are tested at our test room in compliance with the applicable regulations or in agreement with the customer's specification

Test and homologation certificates of some of our reactors are available in our files for consultation.

CUSTOMER SERVICE

SEA provides a qualified Technical Assistance for any problem or need that might arise during the assembly or maintenance of reactors

Telephone assistance

Contact our offices (mon-fri 09,00 a.m. ÷ 5,30 p.m.) at +39 0444 482100 or Email: info@seatrasformatori.it

On-site assistance

In case of problems and based on the site conditions and type of problem, our technicians will repair or supervise the product on site in order to minimize the installation stop times.

