



General

The increasing use of modern power electronic apparatus is producing non-linear current influences and loads the network with harmonics pollution. The capacitor forms a resonant with the feeding transformer (250-500Hz), which leads to overloading of the capacitor and transformer, interference, voltage distortion and so on. These can be avoided by filter reactors.

The function of the reactors is to protect capacitors in low voltage power factor correction systems.

The connection of these reactors in series with capacitors causes a shift of the resonance frequency of the circuit composed by feeding transformer-reactors capacitors, so that the resulting self-resonance frequency is well below the line harmonics foreseen by the ENV 61000-2-2 standard.

Resonance would create undesired effects as over-loading of capacitors, transformer and transmission equipment, amplification of harmonics and voltage distortion.

The reactors are connected in series with the capacitors to be protected and the inductive reactance determines the self resonance frequency of the L-C circuit. The locking factor P% is expressed by the ratio between inductive reactance and capacitive reactance and it corresponds to the increase of voltage applied to capacitors, with respect to line voltage. Due to circulation of capacitive current in the reactor.

The winding of SPGLr reactors are made by copper wire of double-layer enamel or by double Nomex tape. Insulation system in conformance the reactor is protected by a vacuum and pressure impregnation by solventless polyester resin, followed by thermosetting in oven, minimize losses in core & winding and lower noise due to the number & position of air gaps are selected and limbs, yokes & air-gaps are blocked by adhesives.

Features

- Long useful life
- High resistance to harmonics
- High linearity
- Easy mounting
- Low losses & low noise

Order example:

- SPGLr400-20/7
- SPGLr reactors
 - Rate voltage: 400V
 - Rate power: 20Kvar
 - Detuning P: 7%

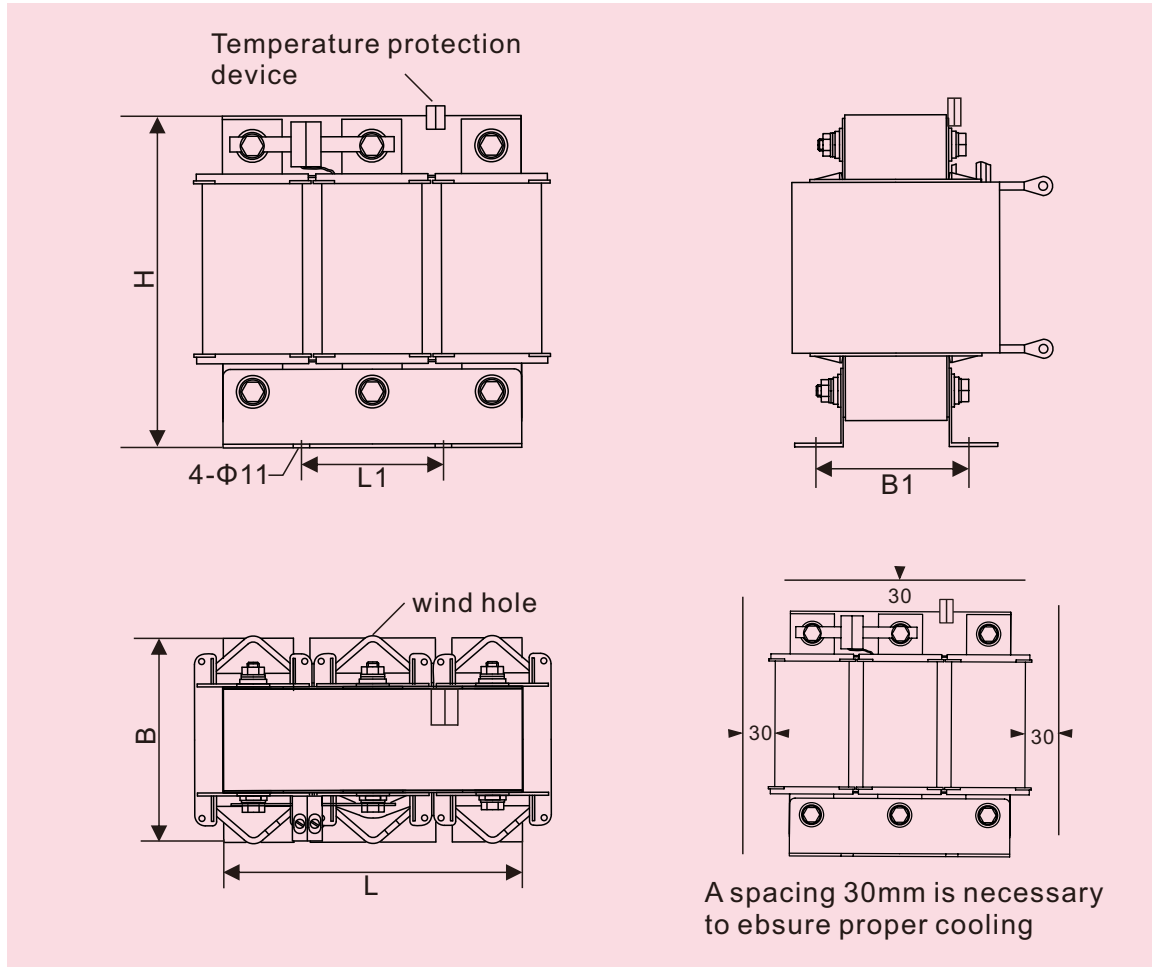
Specification

Operation Voltage	Un	100V to 1000V power system,50/60Hz
Inductance Tolerance	Ln	-3%+3%Ln
Insulation Level	UT-C	3kV terminal to core
Ambient Temperature Category	°C	T40/B, with forced cooling conditions higher ambient temperature possible
Detuning	%	5.67,7,14 etc.
Cooling		naturally air-cooled (of forced air cooling)
Maximum Permissible Altitude		normal 2000 m above sea level (Max.3000m)
Mounting Position		any position, normal mounting stand
Impregnation		polyester resin, class F(class H is available on request)
Safety Protection		over temperature protection, response temperature 120°C
Degree of Protection		IP00, indoor mounting (optionally with cover for IP55)
Terminals		cable lags, terminal block or copper bus bar
Operation		In operation an adequate air circulation to be guaranteed.
Coil		copper wire winding
Standards		IEC76, VDE0550/0532 (UL marking on request)

"Wind hole"

shape	conical
insulation level	3KV,between coil wire to core
production	automatic machine winding
mechanical	not to collide with one another

Mounting draw SPGLr low voltage reactors



Label specification:

Order No

- Reactor model
- Rate power
- Rate voltage
- Electric phase
- Rate frequency
- Safety protection
- Inductance tolerance
- Insulation level
- Impregnation
- Ambient temperature category
- Degree of protection
- Standards
- Production number

