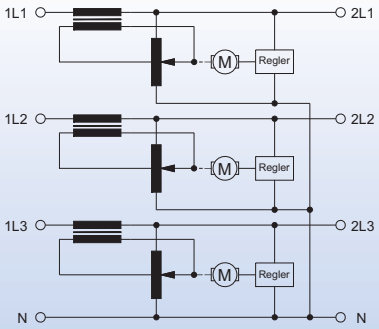

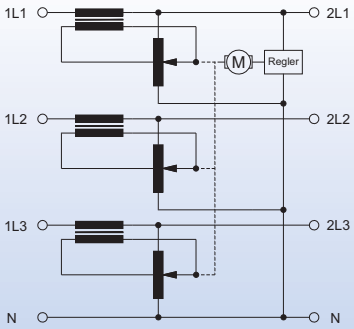

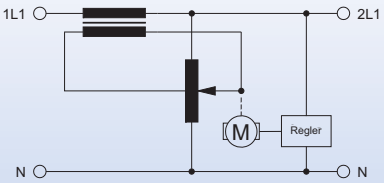

Single-phase and 3-phase voltage stabiliser according to VDE 0552/69

RSKH in output range from 1kVA:

Riedel RSKH voltage stabilisers are used as line-side (upstream) series elements in grids with fluctuating voltages. At the output of the voltage stabiliser a constant voltage which is independent of fluctuations in the grid is available to the consumer.

Design:

Riedel voltage stabilisers consist of a variable transformer with motor drive and a booster transformer as well as an electronic controller. As soon as this controller records a voltage deviation from the set point on the output of the stabiliser the motor of the variable transformers becomes activated by the controller and a voltage is induced in the primary winding of the booster transformer. As a result the secondary winding adds or subtracts voltage to or from the grid. This continues until the output voltage corresponds to its set point.

The controller itself works as a proportional control amplifier with PI control and is located on a plug-in card which contains the power supply unit and the actual value processing unit. The set point setting for adaptation to the dynamic behavior of the control path is made via multi-turn trimmer. The motor of the variable transformer is controlled in a contactless manner, with the adjustment speed dependent upon the nominal voltage (i.e. high control speed at high deviation and low control speed at low deviation). This yields a high control accuracy without control oscillations.

Technical data:

Nominal input voltages:	all typical low-voltage grids
Grid voltage fluctuations:	e.g. ±10%, ±15%, ±20%...
Grid frequency:	50/60 Hz or 400 Hz
Output precision:	±1%
Loading type:	ohmic, inductive or capacitive
Efficiency:	98-99% depending upon controller type
Duty cycle:	S1 Operation (100%)
Protection class:	IP 00

Main applications:

machine controls	data processing systems
test field and laboratory	medical electronics
monitoring systems	remote signalling systems
process controls	remote controls
air traffic controls	furnace heaters

Possible options:

Protection class to max. IP 65, analogue or digital measuring instruments, main switch and fuse, galvanic separation, maintenance service etc.

Principle schematic:

see above: 3-phase AC grid with single-phase control, 3-phase AC grid with master control, single-phase grid (from left to right)