

Power Load Regulator LTR 3Phase

Functional Description

General

The 3 Phase LTR (PLR) Power Load Regulator consists of a Power Unit and a Control Unit.

The Power Unit comprises the following components:

3 thyristors (3 modules), inductance choke coils, anti-interference capacitors and a generator protective contact breaker.

The Control Unit comprises the following components:

Complete electronic control facility for the Power Unit. The Control Unit has been constructed as a plug-in type to the Power Unit.

The regulator equipment complete has been erected on a base plate and housed in a steel sheet metal cabinet.

The heat dissipator cooling devices for the thyristor modules have been mounted on an exterior panel of the cabinet to facilitate a direct deviation of the heat loss.

An additional ventilator can be installed for power loads in excess of 40kW.

All electrical connections are lead to a series of terminals and appropriately labelled. The wiring and cable entries are below the equipment.



The following control gauges have been built into the front panel:

- Voltmeter*
- Generator amperemeter*
- Surplus current amperemeter*
- Frequency meter gauge*

Function

The revolutions of the generator are controlled by the power output via the 3 Phase LTR (PLR) Power Load Regulator. This means that frequencies will rise in proportion to the increase in the revolutions of the synchronised generator as a result for example of the switching off of power loads.

As the electronic control unit is dependent on frequency ranges, greater impulses will be introduced to the thyristors and the phase-angle extended. The effective exit voltage of the regulator will thus also rise, i.e. there is a power increase at the connected up heat elements.

This has the effect of the electric power at the generator remaining constant, and therefore the revolutions inevitably also.

Should additional services be subsequently switched on, the revolutions of the generator will begin to fall, the power load regulator then compensates for this by inducing the opposite effect.

The characteristics of the regulator can be altered by means of the potentiometric pots (see Installation Settings State) on the printed circuit board.

The regulator can thus be adjusted to suit practically any generator to an optimum degree.