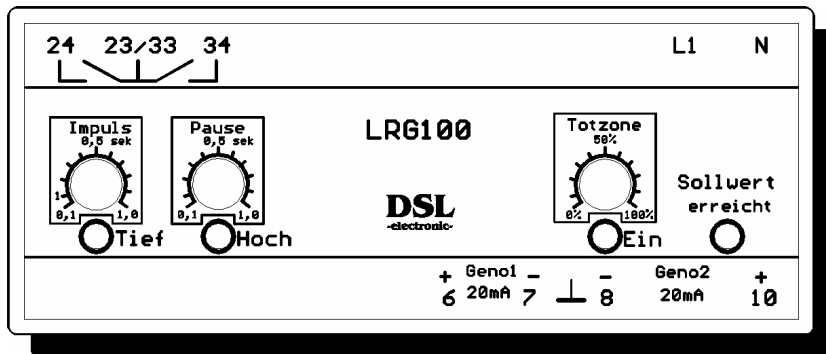


## Power Control Unit (three-point) LRG100



### Function

The LRG100 compares the two input values GENO1 and GENO2 (+/-20mA each) and outputs adjustable pulses (Up or Down) at the output contacts via which generator GENO1 is set to the power value of generator GENO2. "Dead zone" sets an area in the setpoint for which no control impulses are output. This is necessary in order to stabilise the system in the area of the setpoint and in order not to output too many (unnecessary) control pulses in this area. The user can adjust the area within a wide range.

### Application

The LRG100 control unit is used in dual-generator systems for power control with a reference variable. The requirement for this is the presence of power converters with a +/-20mA output. The driven generator is adjusted to the same power as the leading generator.

The power of the controlled generator is adjusted in such a way that the consumer power is divided up among both generators after an initial control time. If generators of different sizes are used, the smaller generator does not achieve half of the total power but half minus the ratio between the two maximum powers.

As an alternative to the "leading generator" GENO2, an adjustable 20mA supply can also be applied externally. This serves as a "reference variable".

Protective circuits on the input side make the unit suitable for heavy-duty operation in disturbed environments.

### Functional Circuits

- Functional circuit **Up**: becomes active if the input value of GENO1 (terminal 6/7) falls below that of GENO2 (terminal 8/10).
- Functional circuit **Down**: becomes active if the input value of GENO1 (terminal 6/7) exceeds that of GENO2 (terminal 8/10).
- Functional circuit **Setpoint reached**: LED display lights up if the generator controlled has reached the setpoint.
- Functional circuit **Dead zone**: adjustable from 0-10% of the final value (20mA). No control pulse is output within the dead zone.
- Functional circuit **Pulse**: adjustable from 0.1-1 seconds, pulse length of the output contact and display LED involved.
- Functional circuit **Pause**: adjustable from 0.1-1 seconds, pause length of the output contact and display LED involved.

### Standard Settings

For vibration-free control operation, the Pulse, Pause and Dead zone potentiometers are set according to the specifications of the generator manufacturers or operators. It is also necessary to take the setting rate of the motor potentiometer as well as the time delay into account.

### Technical Data

Type	Power Control Unit (Three point) LRG100
Construction	Plastic housing on 35 mm hat rail acc. to DIN EN 50022 bzw. DIN 46277
Material of housing	Bayblend FR 1439/0240 modified ABS with burning prozection UL 94 VO
Dimensions, Weight	104x68x110mm (BxHxT), ca. 0.4 kg
Rated voltage	231VAC (L1-N) Other voltages on request
Power Consumption	appr. 2.5W
Input Signal (actual value)	+/- 20mA , 50 Ohm (Geno1)
Input Signal (set value)	+/- 20mA , 50 Ohm (Geno2)
Dead Zone	0.1 – 10% of total range
Hysteresis	appr. 2%
Switching Accuracy	0.5% for 0 – 55°C
Pulse duration	0.1 – 1 sec
Pause duration	0.1 – 1 sec
On period	100 %
Contact rating	5A/250VAC , 5A/30VDC , 0,015 Ohms , 10 <sup>5</sup> switchings
Isolating voltage	3000V (Coil-Contact), 1000V (open contact)
Connecting terminals	Potentialfree, for wire connection up to 2,5 mm <sup>2</sup>
Type of protection	Housing IP 40 , Terminals IP 20 (or VDE 0106T100/VBG4 )
Ambient temperature	-10 °C bis +55°C, 95% Hum
Mains isolating	EN 60 742 (Safety transformers)
General regulations	EN 50 178 (Electrical units in power current installation)
Radio interference	EN 55 022/B
EMV	EN 61000 und EN V 50 140
Installation position	Any
Maintenance	Maintenancefree

## Anschlußbilder

