

## Synchronizing Check Relay DSP300



### Application

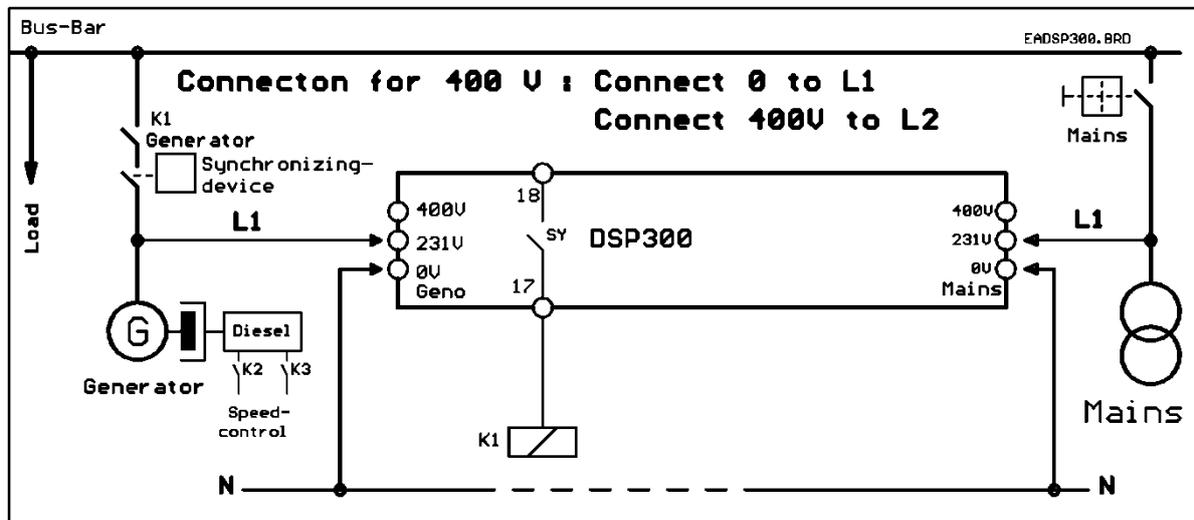
The Synchronizing Check Relay DSP300 is used for the manual synchronization of an aggregate with the network of an electricity supply company or as an additional safeguard for the synchronization process. The unit assesses the mains voltages applied and switches on the output relay SY if both systems are in phase. The control Phi adjusts the phase difference between both systems within which the relay is operated. 20° means that the relay switches on if there is a phase difference of less than 20° between the two systems.

The electronic evaluation logic ensures that clearance can only take place during a certain defined period. Operation stops if the adjustable voltage difference dU between both networks is exceeded by 2-10%. Efficient filters in the inputs ensure secure zero crossing recognition even in the case of seriously disturbed networks. Optionally, the DSP300 can be connected to 231V or 400V networks.

### Technical Data

Type	Synchronizing Check Relay DSP300
Construction	Plastic housing on 35mm hat rail as per DIN EN 50022 or DIN 46277
Material of housing	Bayblend FR 1439/0240 modified ABS with burning protection UL 94 VO
Dimensions, Weight	104x68x110mm (WxHxD), appr. 0,4 kg
Rated voltage generator	231V (L1-N) or 400V (L-L) for generator and mains, other values on request
Rated frequency	50 Hz ( 60 Hz on request)
Phase Setting	5° - 20° between Generator and Mains
Voltage Difference	2% - 10% between Generator and Mains
Repeat accuracy	+/- 0,5% ( 0 - 60°C )
Power consumption	2,5 VA from generator voltage
On period	100 %
Contact ratings	3A/250VAC , 3A/30VDC , 0,03 Ohms , 10 <sup>5</sup> switchings
Isolating voltage	2000V (coil-contact), 1000V (open contact)
Connecting terminals	Potentialfree, for wire connections up to 2,5 mm <sup>2</sup>
Type of protection	Housing IP 40 , Terminals IP 20 ( VDE 0106T100/VBG4 )
Ambient temperatures	-10 °C bis +55°C, 95% Hum
Mains isolating acc. to	EN 60 742 (save transformers)
General regulations	EN 50 178 (electrical units in power current installation)
Radio interference	EN 55 022/B
EMV acc. to	EN 61000 und EN V 50 140
Installation position	Any
Maintenance	None

## Circuit Diagram



### Safety note:

**When installing the unit or taking it into operation, please check for correct assignment of the mains and generator voltage terminals. The wrong polarity can cause considerable damage to equipment and injury to persons.**

Note: This unit is not suitable as a replacement for an automatic synchronizing device as it does not meet the requirements for leading time, differential frequency and other characteristics.