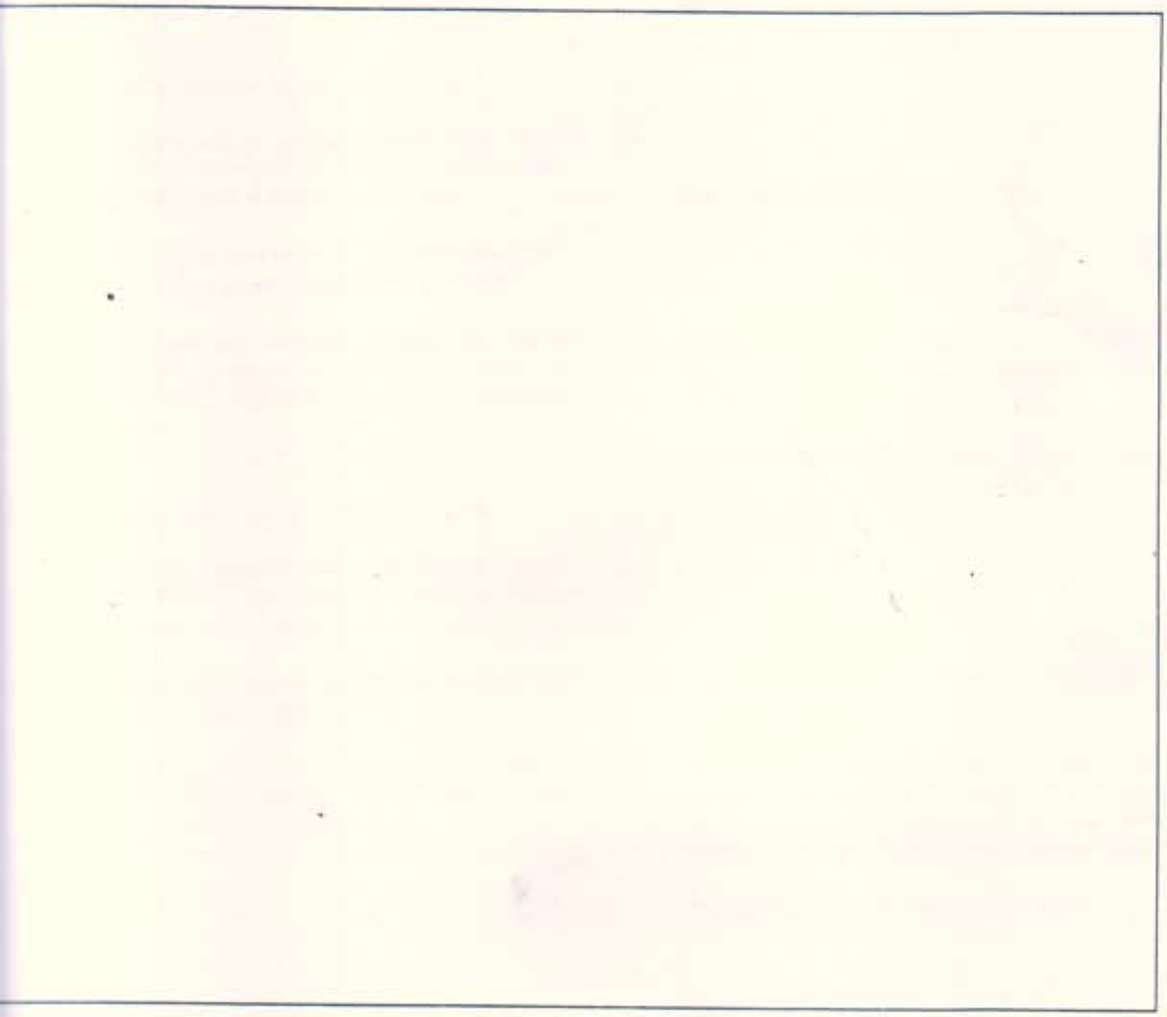
AVK

scription and adjusting instructions
ditional module *"CUN1"*
voltage regulator *"COSIMAT N"*



General

'N1" module is an additional component for the "COSIMAT N" age regulator. *"CUN1"* and *"COSIMAT N"* are intercon- ed by a screened 4 pole signal wire.

ing synchronizing procedure of a AC alternator with the ns, equal frequencies and phase position as well as age balance are essential to prevent high reactive currents he instant of synchronization.

using module *"CUN1"* balancing of the alternator voltage be automated.

mains voltage is measured and the rated value of the rnator voltage will be adjusted automatically to match the ins voltage by *"CUN1"*.

voltage balance must be released by a potential free ntact and this is indicated at the *"CUN1"* by a LED.

er synchronization of the alternator, the release is switched again.

ilization with power factor regulator:

The external voltage setting potentiometer of the *"COSIMAT N"* voltage regulator is set to rated voltage when the alternator is running without load.

When in parallel operation with the mains, the power factor regulator controls the alternator excitation.

When a power factor regulator is used, the external voltage setting potentiometer of the *"COSIMAT N"* voltage regulator must not be re-adjusted during parallel operation.

tilization without power factor regulator:

The external voltage setting potentiometer of the *"COSIMAT N"* voltage regulator is set to rated voltage when the alternator is running without load.

After release, the *"CUN1"* adjusts the alternator voltage to the mains voltage.

After synchronization, the adjustment of the external voltage setting potentiometer of *"COSIMAT N"* determines the alternator reactive current.

2. Connecting, adjusting and indicating elements

US 500
US 250
US 0

Connection of the mains voltage in two ranges:

US 500 ⇔ US 0 = 250 VAC up to 500 VAC
US 250 ⇔ US 0 = 90 VAC up to 250 VAC

By adjusting once with the two trimmers "Coarse" and "Fine", the alternator voltage is adjusted to the mains voltage.

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The *"CUN1"* function is released by a potential free NO contact (switching capacity 24 VDC / 20 mADC).

220V
80V
0V

Supply of the *"CUN1"* in two ranges:

220V ⇔ 0V = 220 VAC ± 20 %
80V ⇔ 0V = 80 VAC ± 20 %

At the 80 V connection the *"CUN1"* can be direct supplied from the aux. excitation voltage (see connection diagram).

Consumption is 2 VA.

t
s
n
.

These are the control connections to the *"COSIMAT N"* voltage regulator.

Via a 4 pole screened wire the *"CUN1"* must be interconnected with the *"COSIMAT N"* voltage regulator (see connection diagram). At the same time connection "." at the *"CUN1"* is used as screen potential.

This control line must not be longer than 2 m.

... / Coarse

...ing potentiometer for coarse adjustment of the alternator ...age to the mains voltage.

...tion of force :

Left stop = position	minimum alternator voltage
Right stop = position	maximum alternator voltage

.../ Fine

Adjusting potentiometer for fine adjustment of the alternator voltage to the mains voltage.

Direction of force:

Left stop = position	minimum alternator voltage
Right stop = position	maximum alternator voltage

...wert / Set value

...potentiometer may be used instead of the external ...SIMAT N" setting rheostat. Stick the coding plug on the ...de near this potentiometer. If an external "COSIMAT N" ...g rheostat shall be used, delete the a/m coding plug.

...OTE

...when using the P.F. regulator "COS" in ...nnection with "CUN1", the alternator is ...erated mainly in parallel, the external ...OSIMAT N" setting rheostat may be dele... as during parallel operation the excita...n is automatically controlled by the P.F. ...gulator.

...the resistance of the external "COSIMAT N" ...ting rheostat must remain for functional ...sons, the internal "CUN1" potentiometer ...et value" must be activated

...on of action:

Left stop position =	Minimum alternator voltage
Right stop position =	Maximum alternator voltage.

Active

LED indication

The LED lights up when the "CUN1" is released

3. Setting into operation

Basic adjustment at the "CUN1"

① Poti "Grob/Coarse" = in left stop position

② Poti "Fein/Fine" = turn 10 to 15 times to the right from left stop position

③ Potentiometer "Sollwert/Set value" (mode of use see 2. connection, adjusting and monitoring device) in centre position.

④ Do not release "CUN1"

Basic adjustment at the "COSIMAT N":

① External voltage setting potentiometer in mid-position

② R4 in left stop position

Setting into operation:

① Start the alternator and adjust alternator rated voltage by turning R4 (at the "COSIMAT N") to the right.

② Release "CUN1" (LED Active is alight). The alternator voltage drops.

③ Adjust the alternator voltage coarse to the mains voltage by turning poti "Grob/Coarse" (at the "CUN1") to the right.

④ Thereafter fine adjustment with poti "Fein/Fine" (at the "CUN1").

Connection diagram

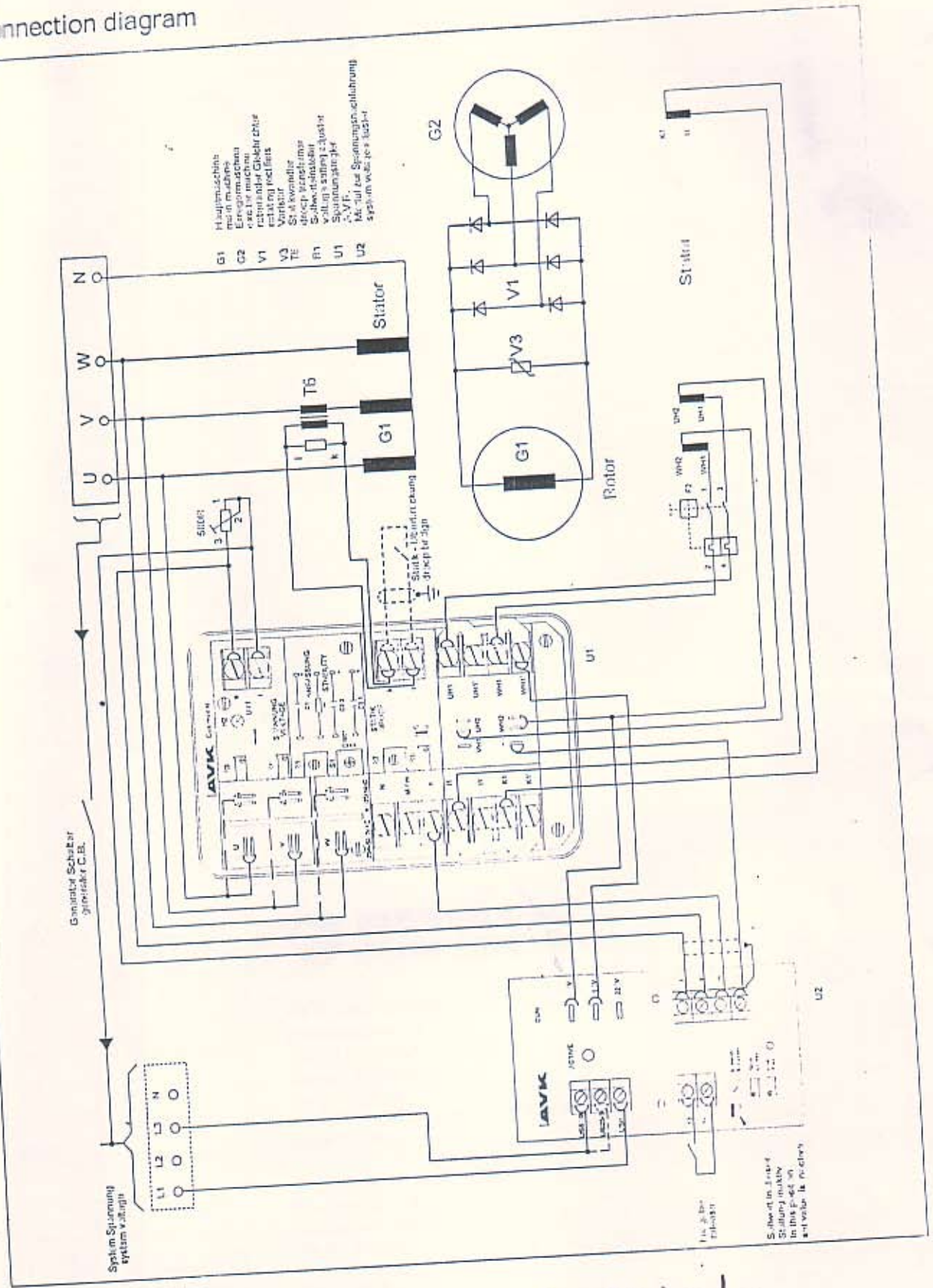

FIG. 1 - Connection diagram

CUN-1.