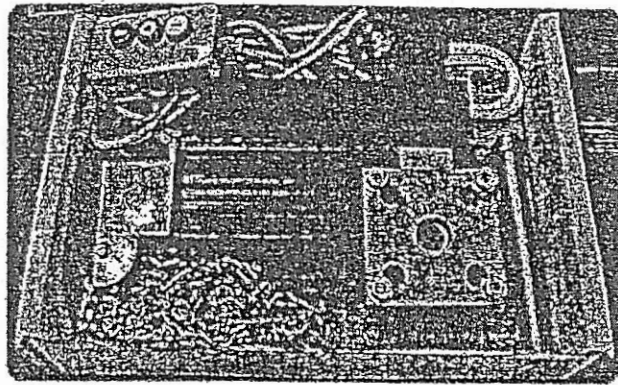




DKN Range of Rolling or Sectional Overhead Door Drives



Garog

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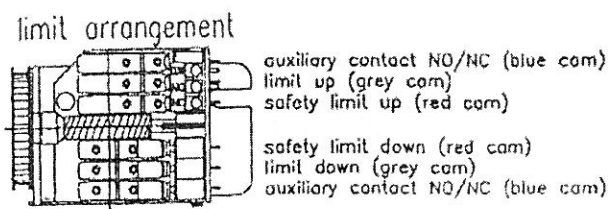
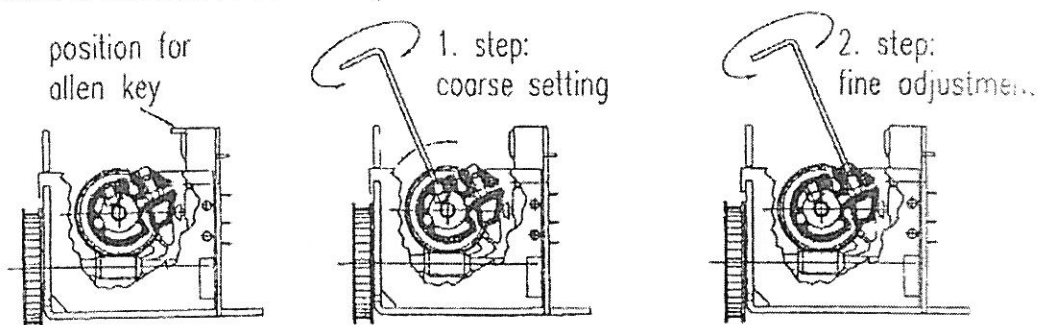


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Owners manual DKN range
with RTS1 relay door control board and CNE6.1 limit switches

To avoid any malfunction with this unit, please read the Owners Manual carefully before beginning any alterations.

Please note that the control voltage is 12V DC. Do not make any cross connections between the 12V AC output on the relay control board, as the 12V AC output is only intended to be a power source for additional electric units such as remote controls and light barriers. All incoming signals have to be wired in as 'normally closed' or 'normally open' contacts between the specially designed inputs and the terminal com. Please note that the contact edge has its own com and the contacts edge may not be wired in from another switching device.



1. Setting the limits: The RTS control board requires a cam limit switch type CNE6.1.

The cams are supplied in a non-adjusted state. As standard, it comes with two limits for the open and close positions, two safety limits and two auxiliary contacts.

To set the limits, read the following instructions.

First twist allen key out of black plastic block between the microswitches.

Drive door in deadman mode close to end position.

Position according grey cam until it almost actuates the plunger and tighten setting screw securely.

Turn fine adjustment screw to open the tips of the cams until switch is actuated.

Note: This is a fine adjustment only, do not turn in fine adjustment screw too much, as it might deform the cam permanently!

Make sure that the limit is set correctly driving the door up and down a couple of times by means of the push buttons located on the pcb.

Afterwards, adjust the safety limits (red cam) to be actuated shortly after the normal limit switch to prevent damage in case of a limit failure or wrong turning direction.

Repeat the procedure for the other end position as well.

Note: If one of the safety limits is actuated, the door can no longer be moved electrically. Use the manual override mechanism to get the door out of this position.

Note: The auxiliary contacts may be used for i.e. light contacts and provides a NO/NC changeover contact for max. 230VAC / 300 mA. If blue cams should be over-travelled do not use fine setting screw.

2. Contact Edge: A fail safe safety edge with a normally closed, potential free safety (e.g. GAROG EMK) can be directly wired into the control board RTS 1 between the two terminals marked SKS. The actuation of this safety edge leads to a stop in the downwards movement.

Having no contact edge connected causes the door to close in dead-man circuit only.

External LED: To monitor the correct function of the door control, it is advisable to connect an additional LED (5V) to the control board. Ideally this should be mounted in the three push button station at eye level.

LED state:	Funktion:
OFF	Everything OK
ON	Thermal trip in the motor winding, safety limit switch or hand chain switch (hand crank switch) will interrupt the electrical operation
ON	While the operator is running, the LED is permanently illuminated

4. Dead-Man Mode Downwards Movement: If there is no safety edge wired in between the terminals SKS and no wire bridge has been inserted, the control board automatically switches over to deadman mode in the downwards movement.

5. Dead Man Mode Upwards Movement: If the jumper J 1, above the transformer on the PCB is opened and only plugged in one part (don't remove jumper, you might need it later) the door opens only in deadman mode.

6. Connection of single-channel remote control or pull cord switch: When the door has reached the top end position and the limit has actuated, this will cause the door to close again. This allows the door to be operated with a single-channel remote control or a pull cord switch.

Note: Do not connect latching contacts as an UP function as that may cause the door to constantly open and close as long as the contact is closed.

7. Push Buttons for Installation Use: Above the transformer two miniature push buttons are mounted on the printed circuit board. The upper one marked "AB" is to close the door and the lower one marked "AUF" is to open the door. All stop functions and the light barrier connection should be closed during this procedure. The wire bridge between the terminals SKS for the safety edge as well as the jumper J 1 on the pcb should also be opened to prevent the door opening or closing in impulse mode, which may lead to problems as there is no stop button on the printed circuit board.

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Note: Allow up to one second delay for the UP command on pcb pushbutton as well as on external command. Commands shorter than one second may not be registered!

Note: The Open command given from the button on the printed circuit board will lead to a closing movement of the door when the door has reached the top end position as described in the paragraph above!

8.12V AC Output: The control voltage of the RTS unit is 12V DC. The 12V AC output is solely meant for the connection of additional electrical appliances such as light barriers or remote controls. The maximum current supplied by the transformer is 150 mA at 12V AC. This will be sufficient for a light barrier and a remote control. Refer to the manual of those devices for details about their power consumption.

9. Photocell: A light barrier can be connected, to monitor the closing movement of the door. The light barrier should be wired in between the terminals LIS and COM. The photocell should be wired in such a way, that an interruption of the light beam leads the potential free contact in the light barrier to open, causing the RTS unit to stop the door.

10. Emergency handchain: The GAROG DKN operator comes with a automatically engaging handchain mechanism. Pulling the handchain will cause the control voltage to be interrupted, to prevent automatic use of the door while manual override. When the haul chain is pulled further, the chainwheel automatically engages on the motor shaft. Then the door can be opened without power. To disengage the unit, pull handchain approximately 10 to 15 cm into the other direction to release the interrupter switch. (see LED in push button station, on = handchain engaged, off = electrical operation possible)

Note: The handchain is intended to be used for emergencies only. Permanent use or usage in extremely dirty conditions (during the construction time of a building) might lead to misfunctions and thus has to be prevented.

Note: Secure chain in spring hook between idle rollers when not in use. Free hanging chain may be pulled accidentally, which will cause the door to stop.

11. Declaration of Conformity:

The RTS1 unit conforms to the following- European standards:

Radiation emittance: EN50082-1 dated 1992, EN5501 1 class A dated 03/91

Radiation reception: EN50082-2 dated 03/95.

Ensure the conformity of the entire door including safety functions with the current safety standards before handing over to the customer.

This manual must be kept with the door.

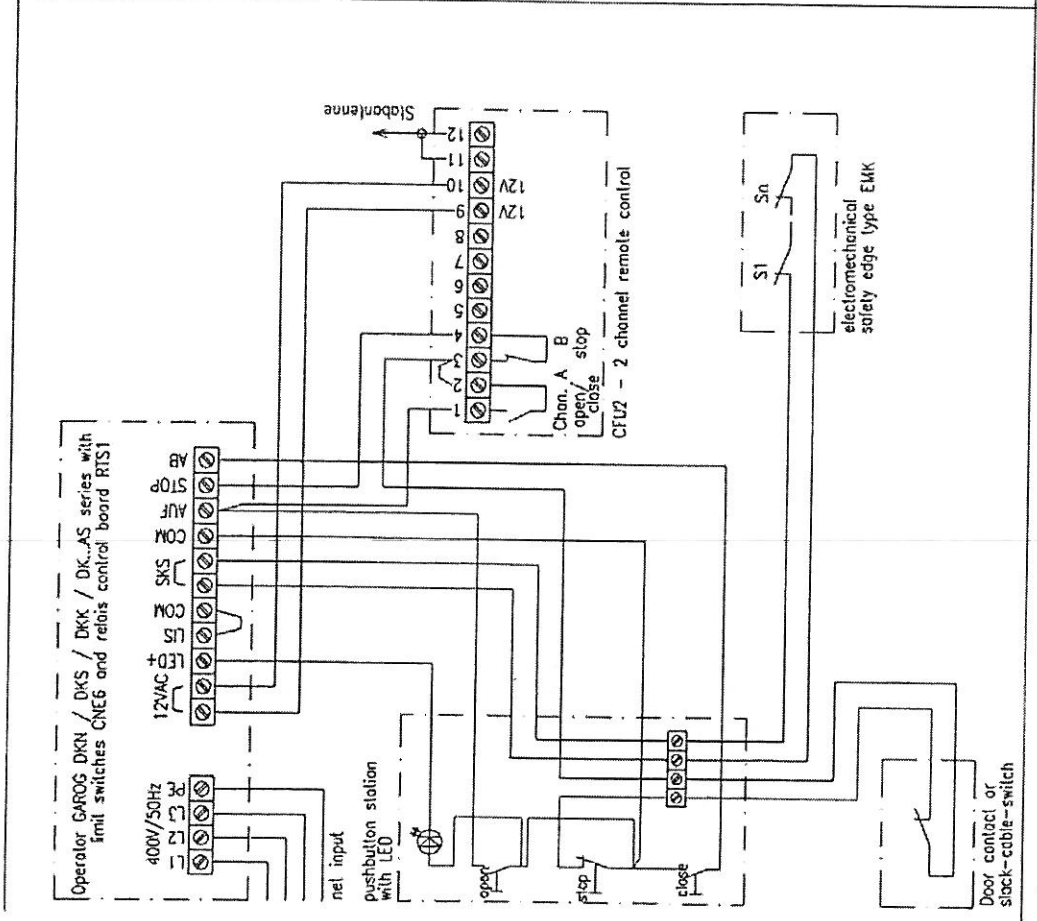


Note: Before working on the pcb, unplug the unit from mains electric supply. Electrical installation and any work on the control boards should be carried out by qualified personnel only.

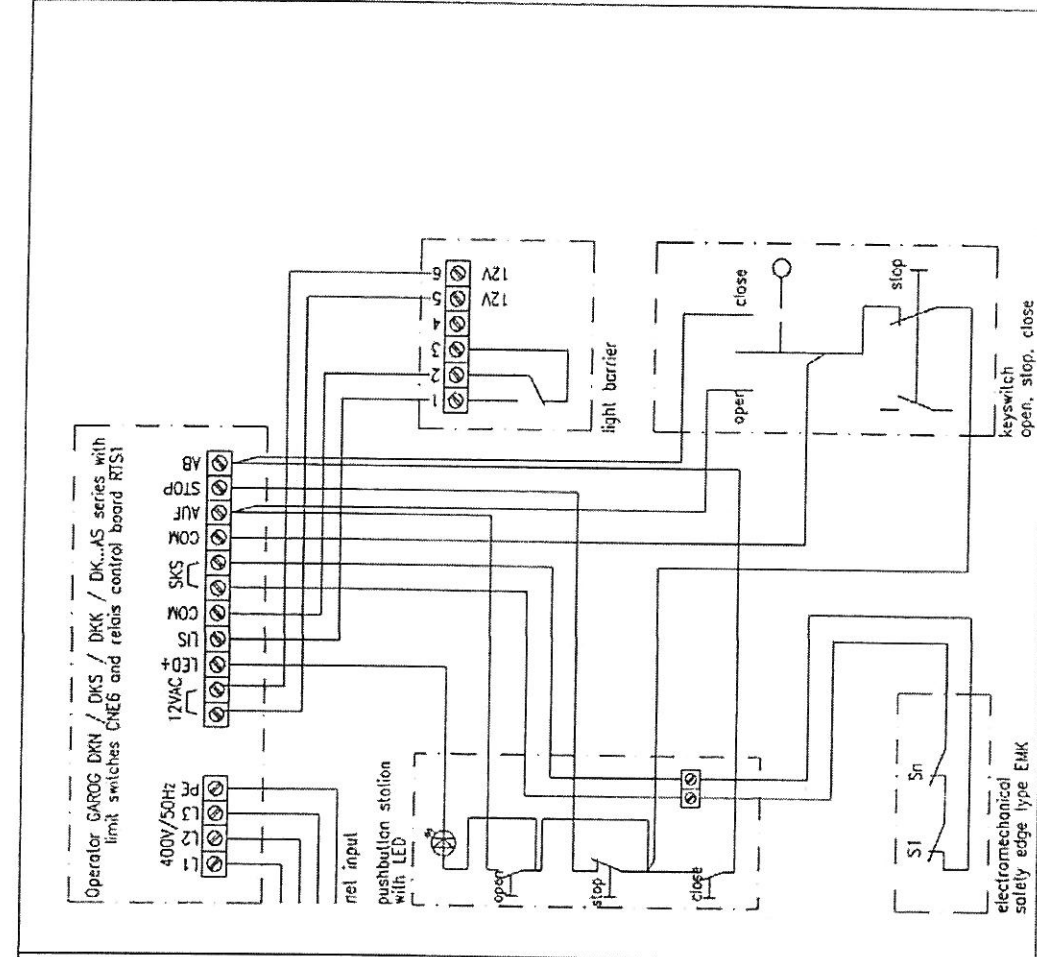
<p>Operator CAROG DKN / DKS / DKX / DK...AS series with limit switches CHEB and relais control board R1S1</p> <p>400V/50Hz</p> <p>12VAC</p> <p>net input</p> <p>pushbutton station with LED</p> <p>oper stop close</p> <p>S1 S2</p> <p>electromechanical safety edge type EMK</p>	<p>Operator CAROG DKH / DKS / DKX / DK...AS series with limit switches CHEB and relais control board R1S1</p> <p>400V/50Hz</p> <p>12VAC</p> <p>net input</p> <p>pushbutton station with LED</p> <p>oper stop close</p> <p>S1 S2</p> <p>electromechanical safety edge type EMK</p>	<p>Operator CAROG DKN / DKS / DKX / DK...AS series with limit switches CHEB and relais control board R1S1</p> <p>400V/50Hz</p> <p>12VAC</p> <p>net input</p> <p>pushbutton station with LED</p> <p>oper stop close</p> <p>S1 S2</p> <p>electromechanical safety edge type EMK</p> <p>keyswitch oper, stop, close</p>
<p>Connecting scheme 1: RTS1 control with pb station</p>	<p>Connecting scheme 2: RTS1 control with pb station and safety edge</p>	<p>Connecting scheme 3: RTS1 control with pb station keyswitch and safety edge</p>

SKS terminals open = close in deadman mode

Jumper J1 (on pcb)
closed = impulse mode open
opened = deadman mode open



Connecting scheme 4:
RTS1 with pb station, safety edge type EMK, door contact, and 2 channel remote



Connecting scheme 5:
RTS1 with pb station, safety edge type EMK and light barrier