

Control Board Manual

Control board usually include three, middle one-main card,while ones on both sides-driver cards,

Control board replacement requires switch off phase advancer power supply.Function of four DIP switches from main control cards is to control related motor rotation and trial status(like non- run motor).

Adjustment of DIP switches needs switch-off of air break switch.

DIP Switches Status:

| | | | | |
|----|--------------------------|--------------------------|--------------------------|--------------------------|
| ON | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | <input type="checkbox"/> | | | |
| | 1 | 2 | 3 | 4 |

Trial Status

| | | | | |
|----|--------------------------|--------------------------|--------------------------|--------------------------|
| ON | | | | |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 1 | 2 | 3 | 4 |

Running Status

Switch on phase advancer power after installation:first to status of free load test of phase advancer power to check indicator lights(inspection of SCR trigger voltage, current of transformer, main bar and sub-bars etc). Run with load should be carried out when above inspections normal.

Meaning of each indicator light from the control board as follow:

Indicator lights of main cards(from top to bottom)

L 1 、 L 2 、 L 3 :three phases current indicators of motor rotor

L 4 : + 5 V :power indicator

L 5 :Thermal failure indicator

L 6 : indicator for Phase loss and auto protection against failure

L 7 : + 1 5 V power indicator

L 8 : - 1 5 V power indicator

driver cards: Trigger signals of 12 pieces of SCRs

Indicator Status as follow under normal conditions:

main card : all rest 5 indicators remain on except above three indicators cyclical circularly on-off(L1 、 L2,L3),kindly note above status under load status,if motor does not work,these three indicators turns to

random status. Control cards: all 12 indicators bright with slight blink.

Several Possible causes if control board abnormal

a. Insert control board meets certain spring resistance or spring clip not observed when board is pulled out: insert connection may get broken, repair work needed.

b. all indicators from three cards not on: 1) free load of motor check

Whether fully folded or short connection contactor from starter cabinet or NO auxiliary contact (phase advancer terminal bar W111) switch on

c. if completely inserted

d. some of indicators on: double check if control board fully inserted

e. In case of L1, L2, L3, L6 becomes abnormal, first check if motor load too low, then check if DIP switches remain running status, in addition, check if big contactor unfolded due to rotor under open circuit status, lastly if output signal of sensor connects to main board or not

f. In case L5, L6 indicators become abnormal, please check if excessively heat of phase advancer control cabinet (e.g. output TM terminal copper bar over 75°C), and temperature switch failure or not

* Frequently on and off of phase advancer power is strictly forbidden: interval should be at least over 2 minutes

* Preparing work under motor load run status not allowed, immediately withdraw if problem occurs

** Start motor first, then switch on phase advancer power, "stop motor after withdraw phase advancer power"; not allowed on the contrary.