ACS 600

Firmware Manual

This manual includes:
- Start-Up Data
- Software Description
- Signals
- Parameters
- Overview of the CDP312 Control Panel
- Fault Tracing
- Terms

System Application Program 6.x
for ACS 600 Frequency Converters

ABB

Indicator LEDs in the NINT Board

Following figure describes how to find the hottest phase or power plate by checking the LEDs of NINT-XX and NXPP-0X boards. This applies only to parallel connected phase modules and power plates of R8i – R12i modules.

R 8i...R 9i	NINT -67	
	PHASE and POWER PLATE U V W	

R 10i...R 11i	NINT -68 V-PHASE	NXPP-02 W-PHASE
NXPP-02 U-PHASE	PHASE T U T V T W	
POWER PLATE T 1 T 2	POWER PLATE T 1 T 2	POWER PLATE T 1 T 2

R 12i	NINT -70 V-PHASE	NXPP-03 W-PHASE
NXPP-03 U-PHASE	PHASE U V W	
POWER PLATE 1 2 3	POWER PLATE 1 2 3	POWER PLATE 1 2 3

Figure 7 - 3 LED Indicators of NINT Boards.

Interpretation of the LEDs

All LEDs are unlit on NINT-XX or NXPP-0X board:

- No DC-voltage connected.

- Possibly burned fuse on the NPOW-62 board.

- Connection between NRED-61 and NPOW-62 is faulty.

- Connection between NPOW-62 (X32) and NINT-XX (X42) is faulty.

Only one LED is lit on NINT-XX or NXPP-0X board: That phase or power plate is hotter than the other ones.

One LED is brighter than other ones on NINT-XX or NXPP-0X board: That phase or power plate is hotter than the other ones.

All LEDs are lit on NINT-XX or NXPP-0X board: That phase or power plate is hotter than the other ones.

R8i – R9i modules: The *three LEDs of NINT-XX* tell the hottest *phase* and also the hottest *power plate*, because on each phase there is only one power plate.

R10i – R11i modules: The *upper three LEDs of NINT-XX* board show, which *phase* is the hottest. The *lower two LEDs of NINT-XX* indicate the hottest *power plate on V-phase* and the *two LEDs of NXPP-0X* indicate the hottest *power plate on U-phase* (left NXPP-0X) and *W-phase* (right NXPP-0X). Two power plates are connected parallel in each phase module.

R12i module: The *upper three LEDs of NINT-XX* board show, which *phase* is the hottest. The *lower three LEDs of NINT-XX* tell the hottest *power plate on V-phase* and the *three LEDs of NXPP-0X* tell the hottest *power plate on U-phase* (left NXPP-0X) and *W-phase* (right NXPP-0X). Three parallel connected power plates are placed in each phase module.

The causes of overheated power plate are usually faulty NGDR-XX boards, damaged power plates or badly installed power plates (greasing or quality of the surface).

The colors of the three LEDs and the matching phases or power plates are:

U-phase / power plate 1	Green (left)
V-phase / power plate 2	Yellow (middle)
W-phase / power plate 3	Red (right)

For two power plates per phase (R10i – R11i):

Power plate T1	Yellow (left)
Power plate T2	Green (right)

Speed Measurement Fault

Speed Measurement Fault is activated, if

- no pulses are received within the time of Parameter **(50.11) ENCODER DELAY** and the drive is simultaneously at the current or torque limit.

- measured and estimated speed differ 20 % from nominal speed of motor.

- there is no communication between the pulse encoder module and NAMC board.

- there is observed big change in the pulse frequency of the pulse encoder during 1 ms.

The Fault/Alarm function is activated by Parameter **(50.05) ENCODER ALM/FLT**. In case of a fault, **FW_2 (09.02)** bit 5 is set to 1 and a fault "**ENCODER FLT**" is given.