

6.7 Power Supply and Miscellaneous

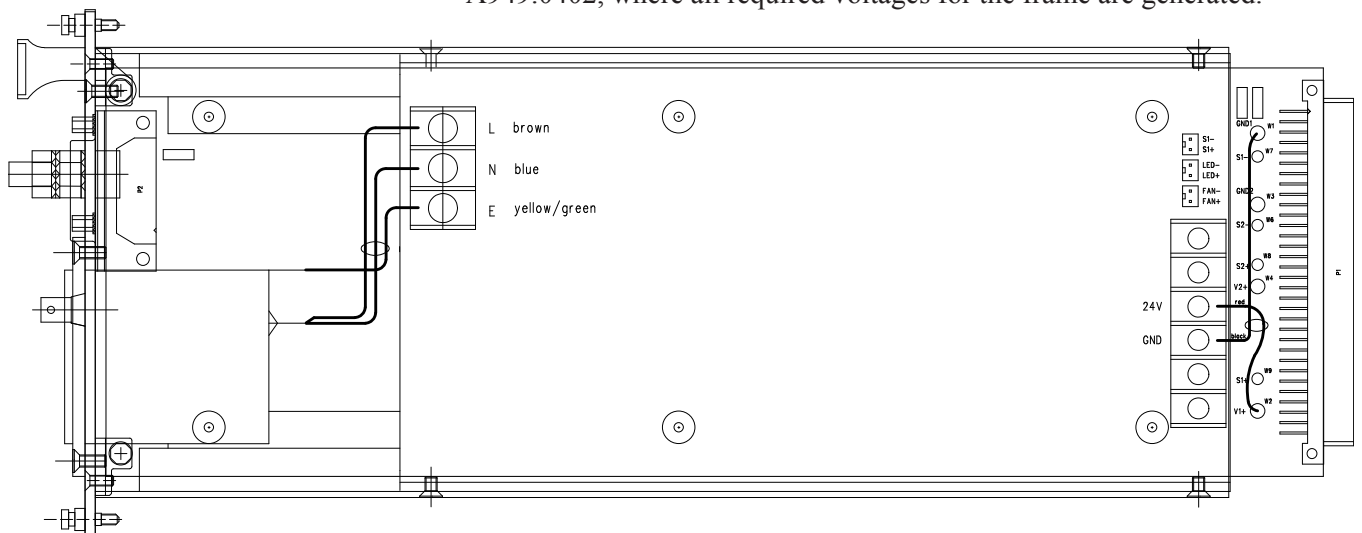
6.7.1 Primary Power Supply

A949.0404 (earlier version: A949.0403)

The D21m I/O frame may be equipped with either one or, for redundancy purposes, with two primary power supply units.

The module used is a primary switching AC/DC converter with an input voltage range of 90-264 VAC/50-60 Hz, automatic power factor correction and a standard IEC mains inlet. Output is 24 VDC/max. 8.5 A. *It contains no adjustable elements; if the internal primary fuse should fail, the unit must be returned to the factory for repair.*

The primary power supply unit(s) is/are plugged directly into the PSII PCB A949.0402, where all required voltages for the frame are generated.



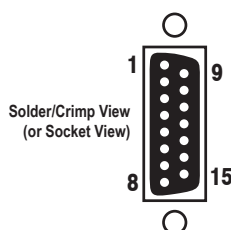
FAN/STATUS Connector

This front-panel connector (15-pin D-type f for A949.0404; 9-pin D-type f for A949.0403) is used to output an electrically isolated status signal when the primary power supply (or one of them) should fail. The contacts of a relay located on the LED/PSII PCB are available on this connector, as well as a +24 VDC supply and ground. The relay is energized as long as all supply voltages are ok, pins 4 and 6 (or pins 1 and 2 on A949.0403) are connected then. In case of failure of any of the frame's supply voltages, pins 6 and 8 (or pins 2 and 3 on A949.0403) are connected. The connector in addition allows supplying a fan unit (A949.0597); for the 15-pin connector on the current version A949.0404 a 1:1 m/f cable (C089.201167) is used.

Please note that only the connector of the right-hand primary PSU can be used for the status and supply signals, even if two primary power supply units are installed in the D21m I/O frame.

Pin Assignment

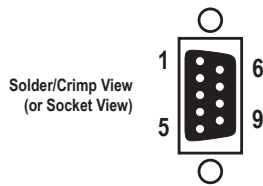
FAN/STATUS (15pin D-type, female, UNC 4-40 thread) on A949.0404:



Pin	Signal	Pin	Signal
1	+24 VDC (fan supply, 650 mA max.)	9	GND
2	reserved - do not connect!	10	n.c.
3	GND	11	n.c.
4	* Relay NO (normally open)	12	reserved - do not connect!
5	** Fan supply OK (active low)	13	** Fan in (active low)
6	* Relay COMMON	14	reserved - do not connect!
7	GND	15	n.c.
8	Relay NC (normally closed)		

* Connected if everything is ok ** Status signals, foreseen for fan supervision

STATUS (9pin D-type, female, UNC 4-40 thread) on earlier version A949.0403:

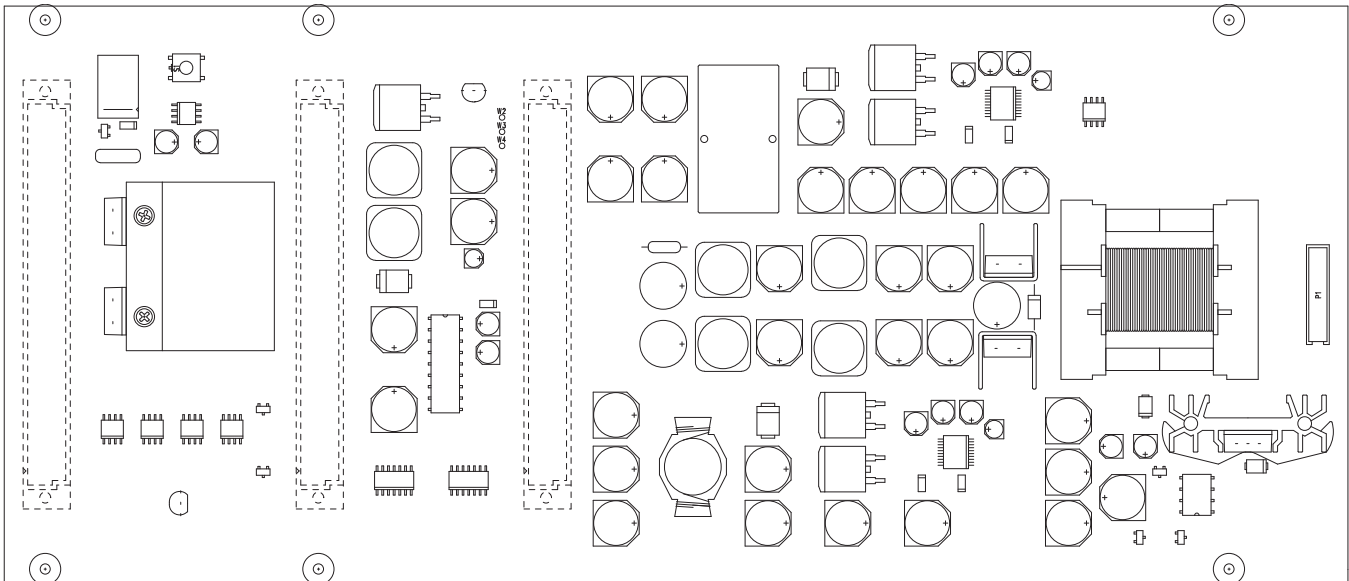


Pin	Signal
1	* Relay NO ('normally open')
2	* Relay COMMON
3	Relay NC ('normally closed')
4	n.c.
5	n.c.
6	+24 VDC (650 mA max.)
7	n.c.
8	GND
9	GND
* Closed if everything is ok	

6.7.2 LED/PSII PCB

A949.0402

The primary power supply unit(s) as well as the frame's backplane PCB are directly plugged to the PSII PCB. It generates all the DC voltages required by the frame from the 24 VDC delivered by the primary power supply unit(s), and it constantly monitors all supply voltages. As long as everything is ok, a relay is energized. In case of failure of any one of the supply voltages, the relay releases. Both NO and NC relay contacts are available on the **FAN/STATUS** front panel connector of *the right-hand primary PSU only*.



The PSII PCB contains no adjustable elements.

The LED part of the PCB (not shown here) is located behind the frame's front panel and connected with a ribbon cable to P1 of the PSII PCB; it indicates available/missing cards and supply voltages as well as the boot sequence and errors while booting.