Power Interface board SDCS-PIN-H01 (H1 ... H5)

The SDCS-PIN-H01 is designed for DCS880 converter modules sizes H1 ... H5 (20 A ... 1190 A).
It has 4 different functions:

1. The power supply for all internal voltages of the whole drive and the connected options (H1 ... H5).

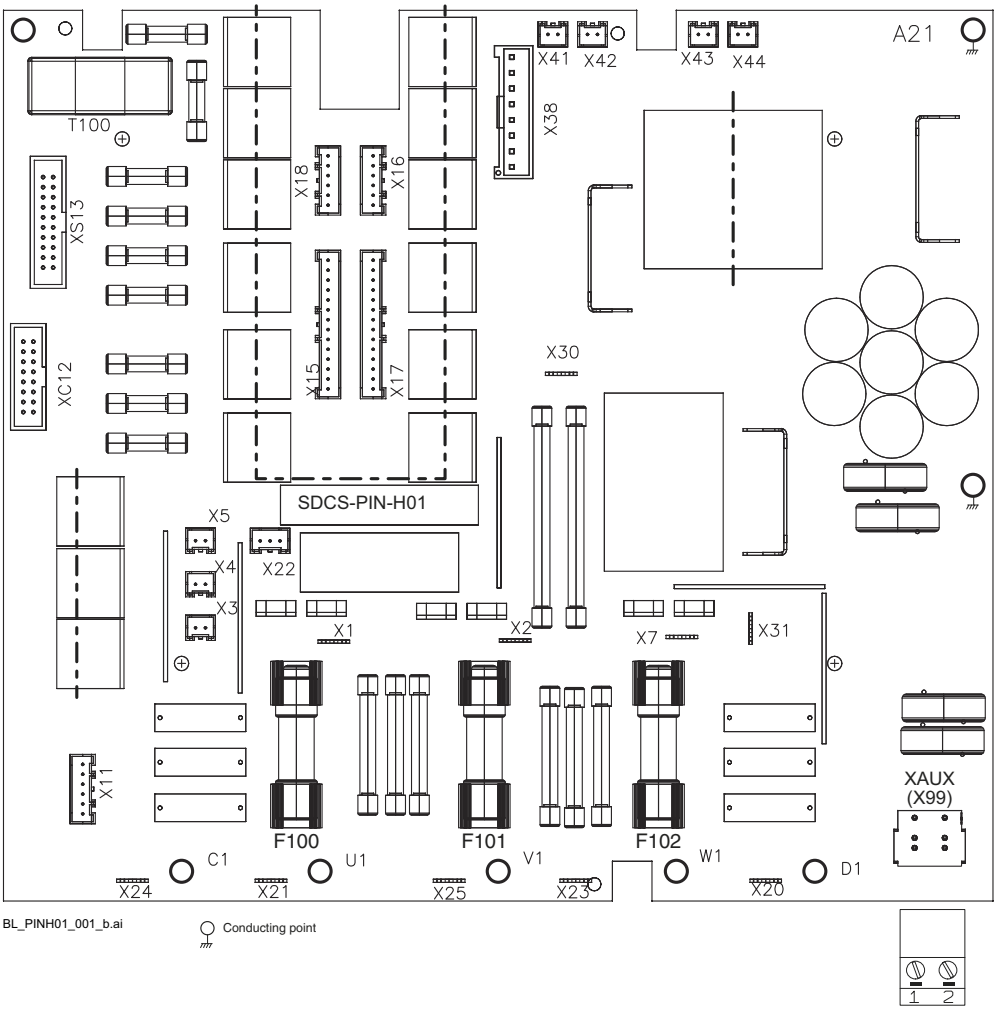
2. Control of armature bridge including high ohmic measurement of DC- and AC voltage and an interface for the current transformer measuring the armature current (H1 ... H5).

3. Control of the OnBoard field exciter and field current measurement (H1 ... H4).

4. An automatic adaptation of the auxiliary voltage of either 230 V_{AC} or 115 V_{AC} (H1 ... H5).

The board is connected to ground at points (⏚) inside the module.
The board is used for mains supply voltages from 100 V up to 500 V (IEC) / 525 V (UL) and 600 V.
The DCS880 provides an automatic adjustment for current and voltage measurement, burden resistor settings and 2-Q or 4-Q operation by means of setting parameters in the firmware.

Layout SDCS-PIN-H01



Technical data

Auxiliary supply voltage XAUX (X99)

Auxiliary voltage	**115 V_{AC}**	**230 V_{AC}**	**230 V_{DC}**
Tolerance	-15 % / +10 %	-15 % / +10 %	-15 % / +10 %
Frequency	45 Hz ... 65 Hz	45 Hz ... 65 Hz	-
Power consumption	120 VA	120 VA	-
Power loss	≤ 60 W	≤ 60 W	≤ 60 W
Inrush current	20 A / 20 ms	10 A / 20 ms	10 A / 20 ms
Recommended fusing	6 AT	6 AT	6 AT
Mains buffering	min. 30 ms	min. 300 ms	min. 150 ms
Powerfail	< 95 V_{AC}	< 95 V_{AC}	< 140 V_{DC}

Input circuit XAUX (X99)

Features a hardware filter
and a voltage limitation

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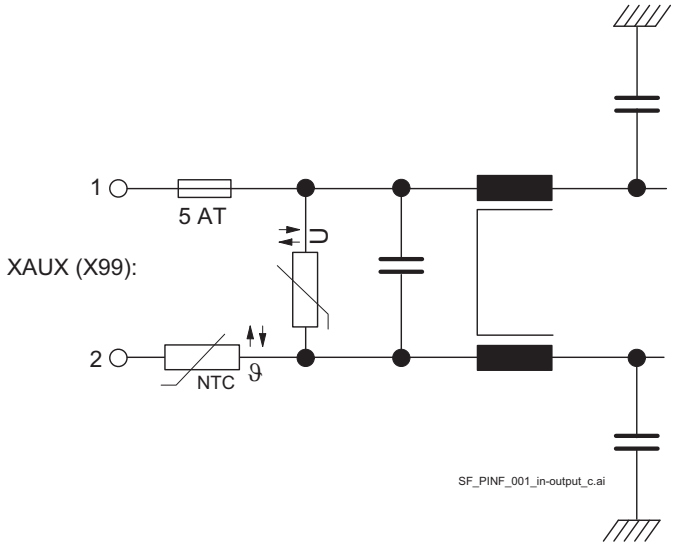

Armature circuit interface

The function for the armature circuit interface consist of:

- Firing the armature bridge of 6 or 12 thyristors.
- High ohmic measurement of DC and AC voltages.
- Residual current measurement of armature circuit to ground = 5 mA at 500 V supply (≈ 1 MΩ).
- Interface for the current transformers for current measurement.
- Snubber circuit for the thyristor protection together with R1 on the heatsink.
- Interface for heatsink temperature measurement with a PTC.
- Fuses for overvoltage protection and field circuit.