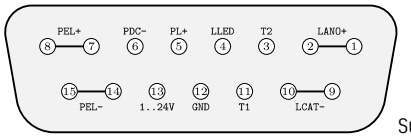
Tabletop Laser & Peltier Controller

Type: ds11-la08v20-pa08v16-t8545-169

Laser max. : 8A – 20V
TEC max. : 8A – 16V
- t-rise-fall <20µs (optional < 2µs)
- Supply Voltage: 100~230VAC – 50/60Hz
- External, Analog and Digital Modulation
- Internal Pulse Generator
  Continuouse Pulses, Single Pulse, Pulse Bursts,
  Internal or External Triggered
- Bias Current option
- Pilot Laser Support
- External Supply max. 1..22V – 800mA for Fan etc.
- Photo Diode Current Monitor max. 4mA
- optional additional TEC stage

Laser & Peltier Connector

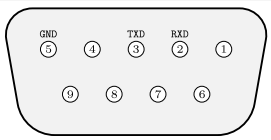


SubD-15 female

PIN.No	Abbr.	Function
1;2	LANO+	Laser Diode Anode(+)
3	T2	Temperature Sensor 2 Input, default NTC10kΩ, v.s. GND
4	LLED	Laser Active LED - Anode (+), 5V over 470R, v.s. GND
5	PL+	Pilot Laser (+), v.s. GND
6	PDC-	Photo Diode Cathode (-), v.s. GND
7;8	PEL+	Peltier element (+)
9;10	LCAT-	Laser Diode Kathode (-)
11	T1	Temperature Sensor 1 Input, default NTC10kΩ, v.s. GND
12	GND	Common Ground
13	1-24V	1 to 24V Supply, max. 500mA, vs. GND, supports fan etc.
14;15	PEL-	Peltier element (-)

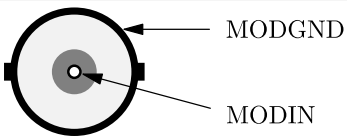
Annotation: The laser ignores by default the 2nd temp. sensor state. If you want to activate this you need to send "2SMC4" command over the RS232.

RS232 Connector



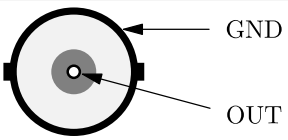
SubD-9 female
Standard RS232-Connector
9600-Baud-8N1
(No Null-Modem Cable !)

AMOD/DMOD-IN Connector



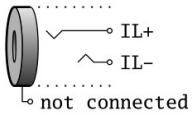
BNC-Socked
Input-Impdanz 10kOhm
Digital Modulation with TTL-Pegel
Analog Mod. 0-4[V] => 0-Imax[A]

MOD-OUT Connector



BNC-Socked, current monitor
0-Imax[A] -> 0-4[V]
Take care for laser isolation if you connect GND potential to an oscilloscope f.e.

Interlock Connector



Jack Connector 3.5mm
Laser runs only if closed
(ca. 5mA over 2V -> R <= 400R)

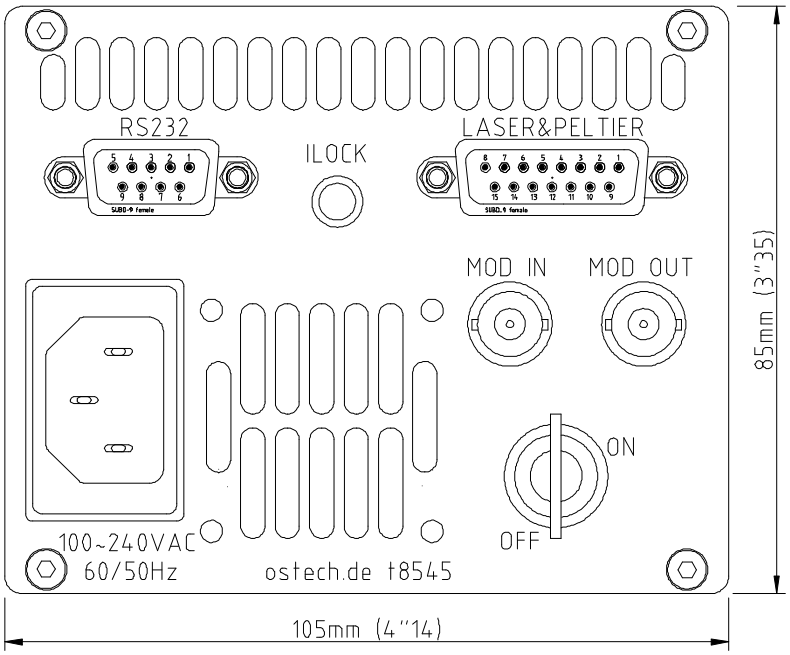


fig: ds11-t85-rear; length 200mm (7"8)

Revision overview:

2011.04.28: "v1" Photo Diode max. Current increased from 2mA to 4mA
2015.10.30: Housing changed from t8611 to t8535
2015.11.13: "v2" Laser Voltage Increased to from 6 to 14V and 8A at Laser& TEC
2018.11.13: "v4" Laser Voltage Increased to from 14V to 20V and TEC Voltage from 14V to 16V

References:

http://www.ostech.de/en/products/laser-drivers/ds11-t85
http://www.ostech.de/en/downloads/manuals/ds-en.pdf
http://www.ostech.de/en/downloads/labview

Accessories

- kab-lpa08-16pol-subd15m-oe-1.5m-39
  cable 16x0.35qmm SUBD15-Gold-6,5A/Pin to open end length 1m5
- acc-converter-usb-to-rs232-1m5-iso-417
  RS232 to USB converter optical isolated with FTDI-Chip cable 1.5m