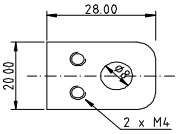
Laser Diode Controller

Type: ls11-la125v12-t19203g-v3-344



Laser max.: 125A, 12V
trise, tfall < 40µs
- supply voltage 110~230VAC - 50/60Hz
- External, Internal, Analog and Digital Modulation
- External triggered Pulses
- Current Monitor
- Bias Current option
- Pilot Laser Supply
- External Fan Support
- optional additional TEC-stages
- optional Trig-Out for Q-switch controll

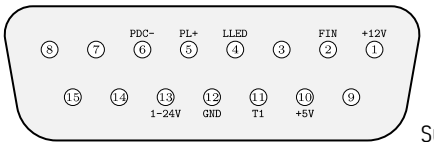
Laser Connector



Highcurrent contacts 3mm Cu-Ni plates

Contact#	Name	
1	ANODE	Laser Anode
2	CATHODE	Laser Cathode

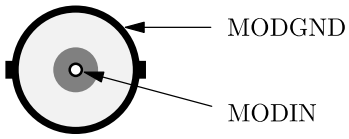
Support Connector



SubD-15 female

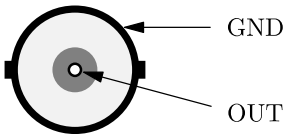
PIN.No	Abbr.	Function
1	n.c.	(optional) +12V - Fibre Sensor Supply
2	n.c.	(optional) FIN - Fibre Sensor Input
4	LLED	Laser ON LED Anode (+) ILED ca.5mA, vs. GND
5	PL+	Pilot Laser (+), vs. GND
6	PDC-	Photo Diode Cathode (-) Input
10	n.c.	(optional) +5V - Photo_Amp Supply 5V
11	T1	Temperature Sensor Input, vs. GND (default NTC10k)
12	GND	Common Ground
13	S1-24V	1..24V adjustable Supply, max. 500mA, vs. GND, for fan etc.

AMOD/DMOD-IN Connector



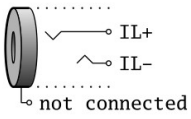
BNC-Socked
Input-Impdanz 10kOhm
Digital Modulation with TTL-Pegel
Analog Mod. 0-4[V] => 0-Imax[A]

MOD-OUT Connector



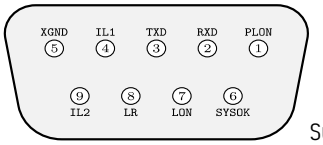
BNC-Socked, current monitor
0-Imax[A] -> 0-4[V]
Take care for laser isolation if you connect GND potential to an oscilloscope f.e.

Interlock Connector



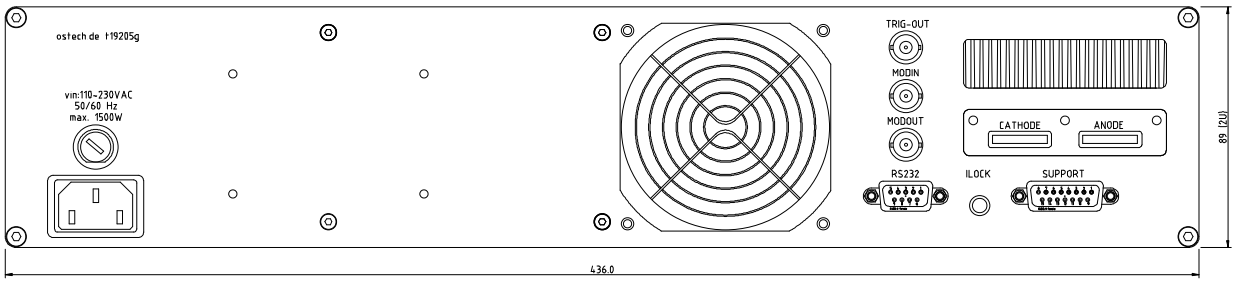
Jack Connector 3.5mm
Laser runs only if closed
(ca. 5mA over 2V -> R <= 400R)

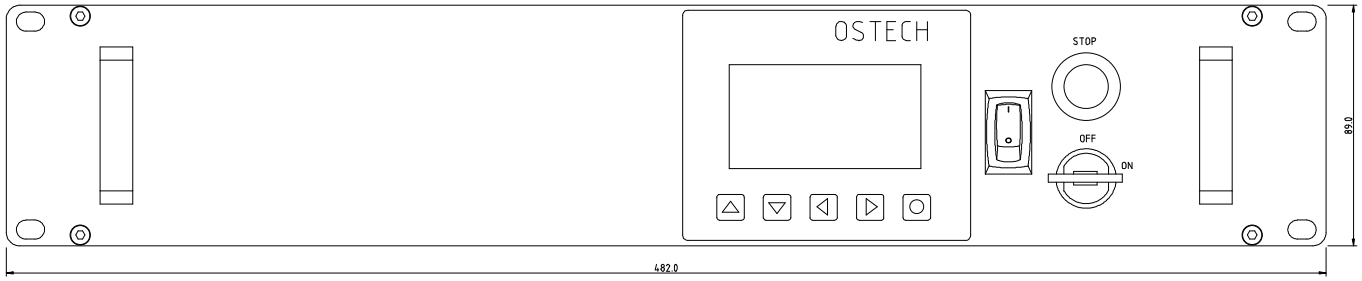
Control and RS232 (isolated Interface)



SubD-9 female

PIN.No	Abbr.	Function
1	PLON	Pilot Laser ON if TTL-High
2	RXD	RS232 RX
3	TXD	RS232 TX
4	IL1	Interlock 1 has to be closed to XGND
5	XGND	External GND
6	SYSOK	System OK output +5V over 4k7
7	LON	Laser ON (ready signal) TTL High
8	LR	Laser Run (start signal) TTL High
9	IL2	Interlock 2 has to be closed to XGND





Revision overview

- 2025-01-01 v3: change to ds0112-board and new high current contacts

References

http://www.ostech.de/en/products/laser-drivers/ds11-t192
http://www.ostech.de/en/downloads/manuals/ds-en.pdf
http://www.ostech.de/en/downloads/labview

Accessories

- acc-converter-usb-to-rs232-1m5-iso-417
  RS232 to USB converter optical isolated with FTDI-Chip cable 1.5m
- kab-lpa08-16pol-subd15m-oe-1.5m-39
  cable 16x0.35qmm / subd15-Gold-6,5A per pin to open end / length-1m