

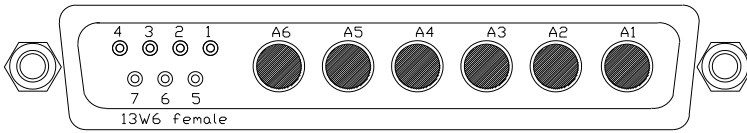
Laser Diode Controller

Type: ls11-la100v30-t19215-v0-880



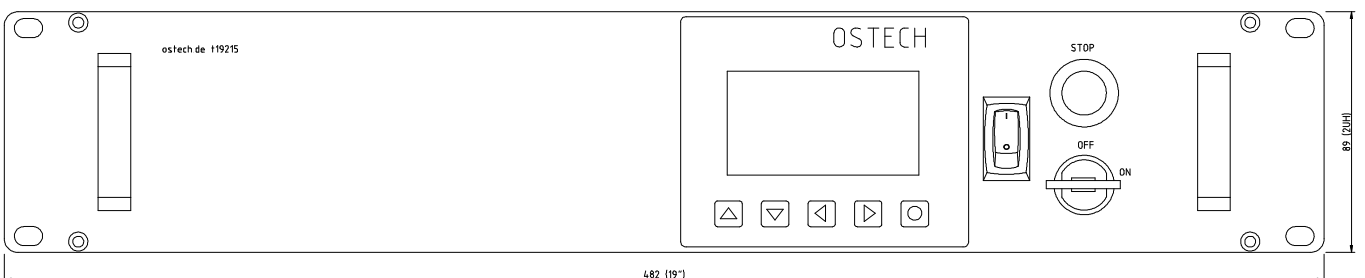
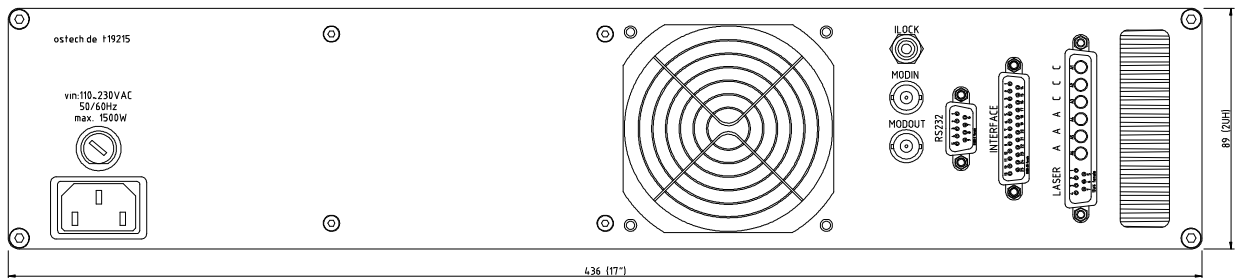
- Laser max.: 100A, 30V
- trise, tfall < 30µs
- supply voltage 110~230VAC - 50/60Hz
- max. power 3000W@220V and 2000W@120V input
- External, Internal, Analog and Digital Modulation
- Current Monitor
- Bias Current option
- Pilot Laser Supply
- External Fan Support
- optional additional TEC-stages

Laser Connector



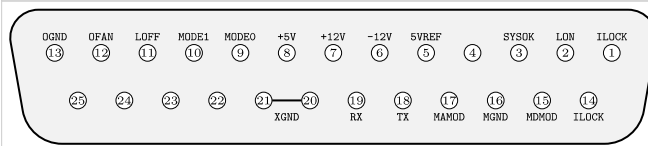
Sub-D 13W6. female Type as viewed from backside

PIN.No	Abbr.	Function
A4 A5 A6	ANODE	Laser Anode
A1 A2 A3	CATHODE	Laser Cathode
1	LEDA+	Laser Run LED-Anode (+) ILED ca.5mA ref. to GND
5	TSEN	Temperatur Sensor (default NTC10k)
6	GND	Common Ground
7	1..24V	1..24V adjustable Supply - fan supply, max. 800mA ref. to GND
2	PL+	Pilot Laser Supply
	SCR	Common Screen



Laser Diode Controller

Support Connector - Isolated Industrial Interface - 1st version



SubD-25 female

PIN.No	Abbr.		Function
1	ILOCK	out	Interlock Output max. 12V 100mA
2	LON	out	Laser On - TTL- Output High = Laser On (pull-up resistor at 5V with 270R for LED f.e.)
3	SYSOK	out	System Ok - TTL-Output High = Laser, Temp. & System OK (pull-up resistor at 5V with 270R)
4		n.c.	
5	5VREF	sup	External Reference 5V +-1% max. 20mA - as potentiometer supply f.e.
6	-12V	sup	External Supply Output -12V max. 250mA for free usage
7	+12V	sup	External Supply Output+12V max. 250mA for free usage
8	+5V	sup	External Supply Output 5V max. 250mA for free usage
9	MODE0	in	TTL-Input - multipurpose mode select input
10	MODE1	in	TTL-Input - multipurpose mode select input
11	LOFF	in	TTL-Input - Laser OFF = TTL-High (internally pulled up)
12	OFAN	sup	optional Universal Supply - 2V..22V up to 800mA for external Fan etc. (! not isolated)
13	OGND	sup	optional Universal Supply GND (! not isolated)
14	ILOCK	in	Interlock Input - has to be connected to XO_ILOCK
15	MDMOD	in	Modulation Digital Input TTL-high=Laser ON (ref. to MGND)
16	MGND	sup	Modulation GND
17	MAMOD	in	Modulation Analog Input 0-4V → 0A-Imax (ref. to MGND)
18	TX	in	RS232-Tx
19	RX	out	RS232-Rx
20,21	GND	sup	GND
22,23,24,25	n.c.		

RS232 Connector	AMOD/DMOD Connector	Interlock Connector
<p>SubD-9, female</p>	<p>MODGND MODIN BNC</p>	<p>IL+ IL- not connected Jack Connector 3.5mm</p>
<p>Standard RS232-Connector connected to PC 9600-Baud-8N1(No Null-Modem Cable !)</p>	<p>Input-Impdanz 10kOhm Digital Modulation with TTL-Pegel Analog Modulation 0-4[V] => 0-Imax[A]</p>	<p>Interlock - Laser runs only if closed (ca. 5mA over 2V → R_{Interlock} ≤400R)</p>



Laser Diode Controller

Revision overview:

- 20191201 v0: first derivation from type 478
- 20191201 v99: customized version with 105 instead of 100A I_{max}

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