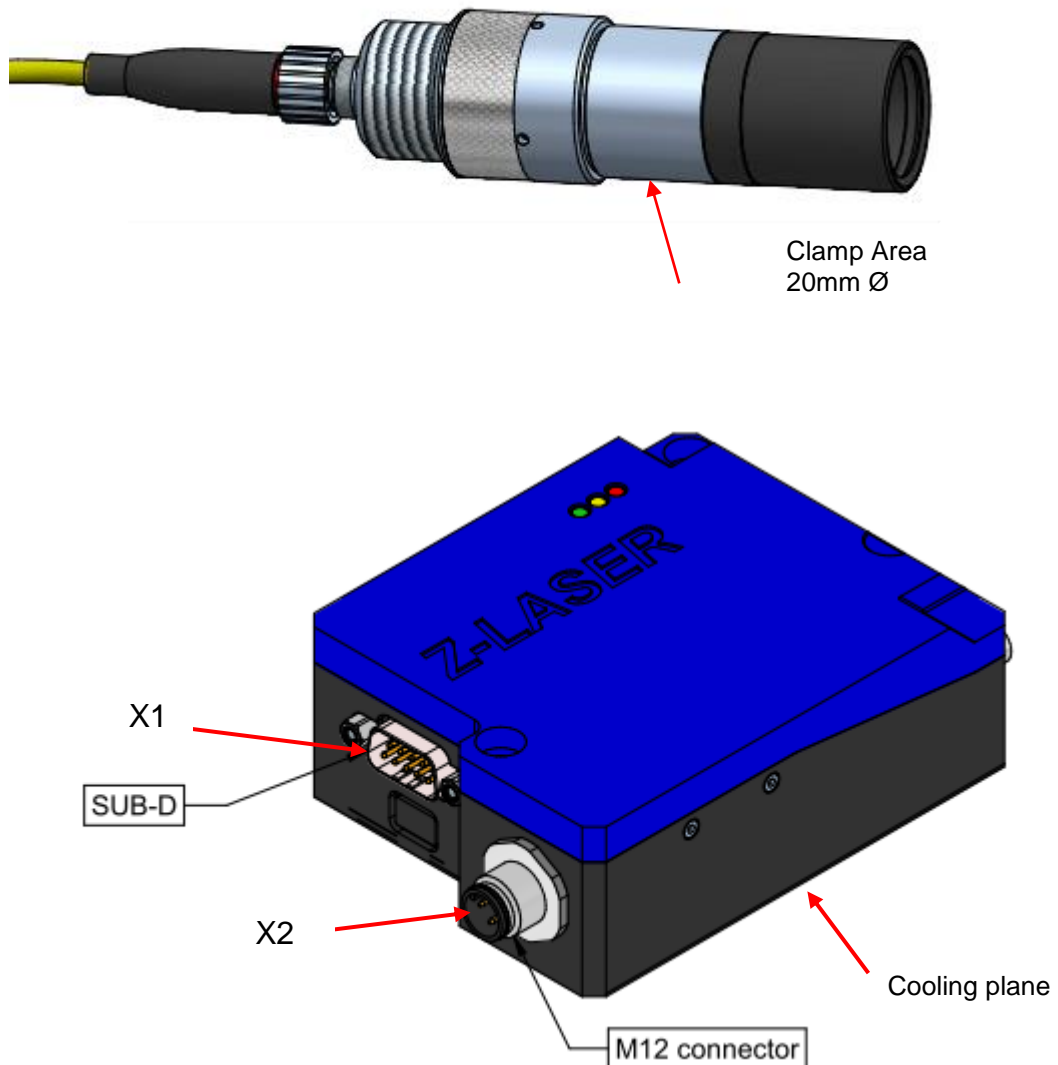
 Z-Laser Optoelektronik GmbH Merzhauser Str. 134 D-79100 Freiburg Tel.: (0761)29644-44 Fax: (0761)29644-55/56	Product <b>ZFSM</b>	Date: <b>2015.11.06</b>	Page: <b>1 of 3</b>
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## Introduction

This is a quick start guide for industrial applications. For “safety enabled” (labelled SFTY, i.e. medical applications) ZFSM configurations and all details refer to the User’s Manual (or advanced information). Please download the User’s Manual from [www.z-laser.com](http://www.z-laser.com) or contact our sales team.



## Housed version of ZFSM

An active, or very good passive, cooling capability must be provided and attached to the marked cooling plane. **Up to 20 W of thermal power must be dissipated for housed versions.** Any sort of condensation must be prevented though with open frame versions.

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## Handling of the product

- Prevent shocks, vibration and mechanical stress on the fiber. Don't bend the fiber.
- Always protect the open end of the fiber with a cap. Never touch the open end.
- Provide sufficient cooling capabilities. Up to 20 W of thermal power must be dissipated. Mount the laser according to the designated cooling planes using heat conducting compound.
- Please do not disassemble the ZFSM fiber laser module
- Before disconnecting the fiber from the barreled optics refer to the user's manual. Many important technical details must be taken into consideration. **The laser class of the product entity is void when the fiber is disconnected from the optics. It is voided as well by connecting the fiber to a different optics.**
- Electrical power supply and operation control signaling must be provided according to instructions given in the user's manual.

## Operating the laser module

Please be certain that before operating the laser module you have taken all aspects of laser safety into consideration. (Refer to Chapter **Fehler! Verweisquelle konnte nicht gefunden werden.** of the user's manual). Keep the safety cap closed at the fiber output or mount it in fixed position in front of a photo detector. Make sure that no human being is accidentally exposed to laser radiation.

First steps to a basic operation of the laser module could be as follows:

1. Be certain that the "ZFSM" module is assembled correctly and mounted on a proper heat sink. Mounting must be flat and air gaps should be avoided by using heat sink compound.
2. Prepare a proper cabling for X1 and X2, refer to chapter 0 of the user's manual for details
3. Connect a 5 to 30 VDC power supply to the X1 or X2 connector. Be sure it can source more than 20 Watt.
4. Connect X2.2 and apply appropriate signals to the digital trigger input to switch the laser on (green LED starts blinking)

### X2:




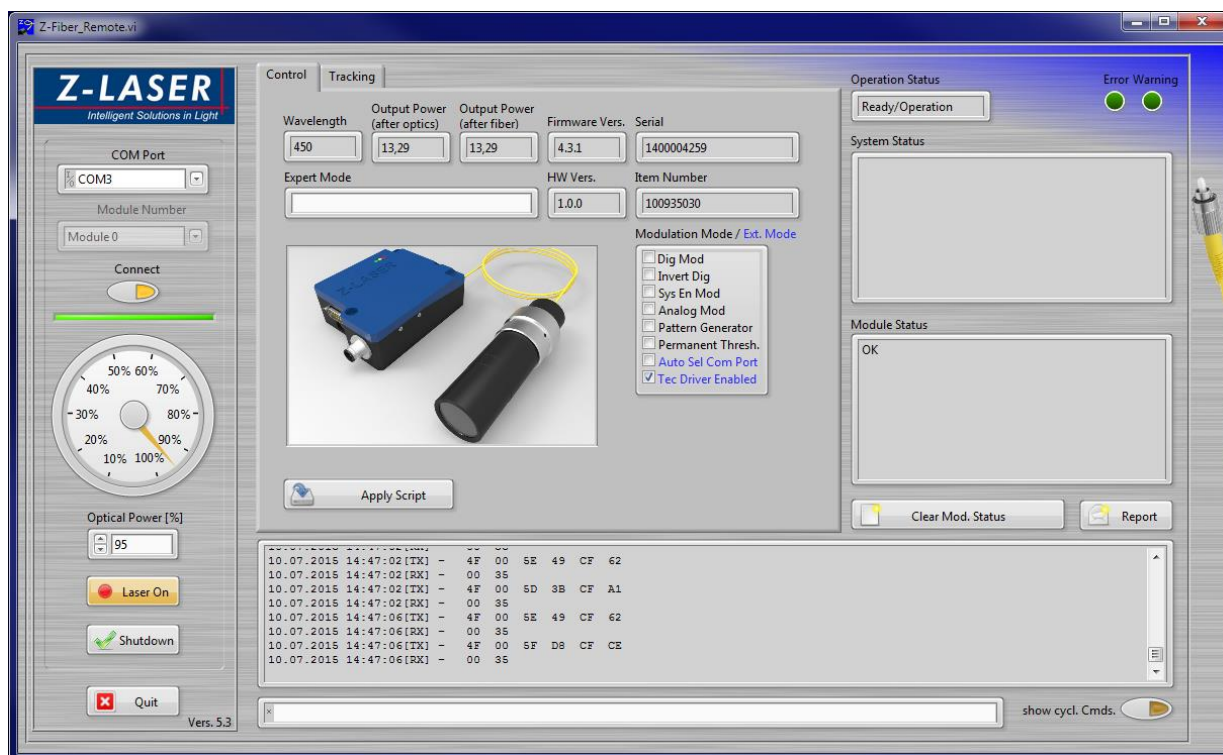
- X2.1 VCC (5-30 Volt, capable of sourcing 20 VA)
- X2.2 Digital-Modulation (TTL signaling level related to Signal-GND)
- X2.3 GND
- X2.4 Analog Modulation (0-2V signaling level related to Signal-GND)

For an exhaustive access to system data and controls you should download and install the ZFSM remote control software from

[http://www.z-laser.com/fileadmin/user\\_upload/zfsm\\_software\\_2014/2015-07-14\\_Z-Fibre\\_Remote\\_Installer\\_V\\_5\\_3.zip](http://www.z-laser.com/fileadmin/user_upload/zfsm_software_2014/2015-07-14_Z-Fibre_Remote_Installer_V_5_3.zip)

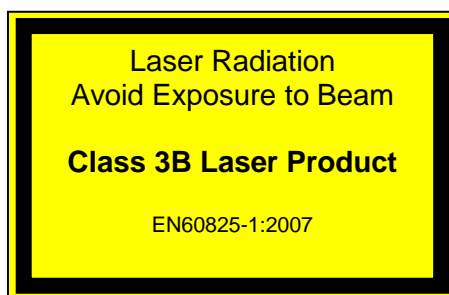
Please refer to the GUI manual for further help

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## Product Labelling

This “ZFSM” product is labelled as follows. If one of these labels is missing, do not operate the laser.



Z-Laser declares the conformity to a laser safety class according to EN ISO 60825-1 only for the complete product entity (fiber laser module and barreled optics module). Whenever this entity is changed the laser safety class is voided.