

# Safety Instructions Fixturlaser SMC



# Fixturlaser

ACOEM Group



# SAFETY INSTRUCTIONS FOR FIXTURLASER SMC AND ITS ACCESSORIES




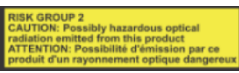






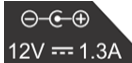
The safety instructions described in this manual should be adhered to and the instruments should always be used within the limits specified hereafter. Instrument and operator safety is at risk when the instrument is used in conditions that are not intended by ACOEM.



# LIST OF SYMBOLS AND WARNING ON THE INSTRUMENT



**Warning:** Whenever this symbol is present on the device, it is essential to refer to the safety instructions documentation and the user manual.

Symbol	Signification	Position
	Laser radiation Refer to section "Laser Class 3R"	Rear side (bottom)
	Laser radiation class 3R Refer to section "Laser Class 3R"	Rear side (bottom)
	Avoid exposure to beam Refer to section "Laser Class 3R"	Rear side (bottom)
	Light Hazard Group 2 Refer to section "High-power white LED flash and stroboscope"	Rear side (bottom)
	Refer to the safety instructions documentation and the user manual before connecting	Rear side (bottom)
	Laser aperture Refer to section "Laser Class 3R"	Rear side (top)
	Battery replacement Refer to section "Battery pack set-up"	Battery compartment
	CE certification data. Refer to the copy of the CE APT2069 type certificate	Rear side (center)
	Do not dispose of this product as unsorted household waste. Refer to section "Dismantling/recycling"	Rear side (center)
	FCC and IC number. Refer to section "Radio"	Rear side (center)
	External power connection: refer to section "Main Power supply block"	Rear side (bottom)

## GENERAL RULES

- Comply with the safety instructions listed hereafter.
- Comply with the operating instructions listed in the printed "Quick start guide" and in the electronic user manual provided with FIXTURLASER SMC.



## VERIFICATION OF THE OVERALL CONDITION



- Upon each use, check the overall condition of FIXTURLASER SMC and its accessories.
- Check that the housing is not cracked, broken or abnormally distorted.
- Check that the display window is not broken.
- Check the condition of the seals every time a hatch is opened and check their proper positioning when closing the hatch(es).
- Check the condition of the cables: they should not show any cut, trace of pinching, crushing or tearing at the connectors.
- In case of a defect, have the defective part(s) repaired or replaced.
- Dismantling the instrument for an internal operation is forbidden. The only parts for which dismantling is allowed are the battery hatch, the battery and the hatch providing access the connectors
- All the spare parts must be provided by the manufacturer.

## ELECTRIC CONNECTIONS

- All external circuits connected to the FIXTURLASER SMC must be non-hazardous voltage sources and be energy limited as explained in Sections 6.3, 6.6 and 9.4 of Standard IEC61010-1
- Do not exceed maximum input voltage on the A/B/C/D connectors: Maximum input voltage  $\pm 24$  V DC,  $\pm 24$  V AC peak.



- Do not exceed maximum input voltage and current intensity for the power supply delivered by the mains block (see mains power block) either on the inner socket (jack) or external (connector C).



- Use the cables designed for the different types of measurement.
- If possible, protect the unused connectors using the plastic caps provided.

## OPERATING ENVIRONMENT

The instrument is designed to operate in normal environmental conditions as described in Standard IEC61010-1

- Altitude up to 2,000 m.
- Temperature from 5°C to 40°C without charger; 5°C to 35°C during battery charging.
- Voltage fluctuations of the NETWORK power supply up to  $\pm 10\%$  of the rated voltage.
- Transient overvoltages up to levels of overvoltage category II.
- Temporary overvoltages occurring on the power supply network.
- Pollution rating 2.

And the following extended conditions:

- Outdoor use only on battery and without the charger.
- Ambient temperatures from -10°C to 55°C without the charger, -10 to 35°C during battery charging.
- 95% humidity, no condensation.



In an industrial environment, always use the instrument equipped with its two battery and computer hatches. Check the presence of the seals and their condition prior to any use. Check the tightening of the hatches.

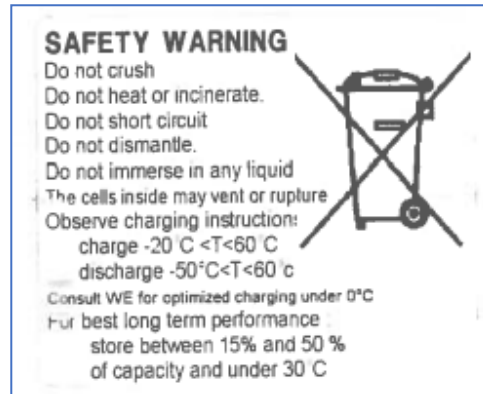
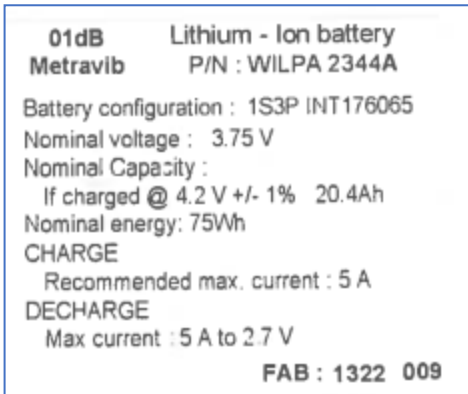


In an office environment (no water splashes), the instrument can be used when the office hatch is open.



## BATTERY

- Do not use any other battery than type PIL1133 designed for FIXTURLASER SMC and labelled 01dB-Metravib WILPA 2344A.



- Do not open or dismount the battery pack. The pack includes essential safety protections and assembly that should in no event be modified.
- The battery pack can only be replaced for maintenance purposes. The operating lifetime of the pack is long enough to guarantee a full day of continuous work. The pack shall not be changed periodically to artificially increase its operating lifetime. The pack is not designed for this operating mode, which would lead to dangerous mechanical wear.
- Do not short circuit the terminals of the battery connector.  
(**Note:** For safety reasons, the battery pack is equipped with an internal non-resettable fuse. A short circuit would make the battery pack unusable.)
- Respect the voltage, current and temperature ranges listed on the battery label.
- Do not exert excessive mechanical pressure on the battery pack.
- Do not expose the battery to water or condensation.
- Do not place the battery into fire or close to any other temperature source (> 70°C). This action may cause overheating, even start a fire. This type of use may also lead to degraded performances and to a significantly reduced lifetime for the battery.
- Immediately disconnect the battery and the charger in the event of one of the following situations:
  - Unusual odour
  - Unusually high temperature



## BATTERY PACK SET-UP

When setting up the battery, make sure not to pinch or crush the power supply cables.

Respect the orientation of the battery. The lead output of the pack should be placed on the connector's side to avoid any crushing by the closing hatch.



When inserting the battery, make sure not to harm the pack sheath. Insert the battery without any excessive force. When in doubt, pull the battery out and check that nothing hinders its insertion.

Respect the orientation of the connector.



To insert the connector, hold it by its conductors for easier handling.

Make sure the pack conductors are not crushed when resetting the battery hatch by moving them to the right.



Proceed in the reverse order to remove the battery. Remove the connector by slightly pulling the 2 conductors. It should come off easily. In case of abnormal resistance, do not force and call the after-sales department.



## MAINS POWER SUPPLY BLOCK

- The external power must be non-dangerous and energy limited as explained in Sections 6.3 and 9.4 of the IEC61010 standard.
- The power supply is the main disconnecting device in the system and, as such, should remain always perfectly accessible and disconnectable.
- Only use charger ZDL1201500 or ZD24W120150 to power up and recharge FIXTURLASER SMC.
- The mains power block should only be used away from rain or any other water splash.
- FIXTURLASER SMC should be used away from rain or any other water splash when connected to the mains power block.
- Comply with the network power supply specifications (listed on the charger) for the power supply of the mains block: Input: AC 100-240V 50/60Hz
- The power supply shall not be used in an environment with a temperature higher than 35°C.
- During charging, the operator shall limit the presence of flammable products next to FIXTURLASER SMC and the mains power block.



To connect AC power, open the hatch computer, plug the jack of the block onto the socket, then connect the power to the electrical outlet. Proceed in the reverse order to disconnect.

## HEADPHONES/MICROPHONE

- Before connecting the plug of the headphones, set the volume to the minimum.
- Avoid listening to extremely high volumes that can damage your hearing irremediably.
- Avoid wearing headphones during dangerous operations.



## RADIO

Radio (Wi-Fi) has been qualified to ensure EMC and personal safety. This qualification is valid only with the antenna delivered with the instrument.



- Replace the antenna only with an antenna of the same reference.
- Do not connect any other device than the antenna delivered with the instrument.
- The camera must not be used when cables are plugged on connector C or connector D.

**This device complies with FCC and IC RF radiation exposure limits set forth for general population. This device must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.**

**Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

Contains FCC ID : XF6-RS9110N1102	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
Contains IC : 8407A-91101102	

### FCC (USA):

**This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.**

**NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in an installation. If this equipment does cause harmful interference to radio or television reception which can be determined by turning the equipment off and on, the user is encouraged to try to correct interference by one or more of the following measures:**

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

## **IC: (Industry Canada)**

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter (IC: 8407A-91101102) has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

FIXTURLASER SMC is equipped with 2.4GHz Mini Stubby Antenna model ANT-24G-S21, 50 ohms, 0 dBi.

Only use this model of antenna.

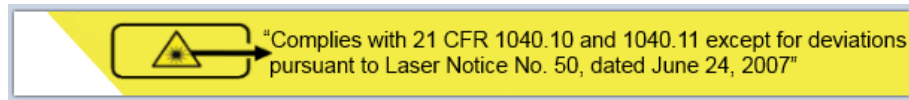
This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This class (B) digital apparatus complies with Canadian ICES-003

## RESET

In case the collector is blocked, gently press the RESET key using a paper clip. Do not insert the clip further than 5 mm into the housing.

## LASER CLASS 3R



- Do not stare into the laser beam.
- Do not point the laser beam to another person.
- Do not activate the laser beam before making sure that it does not point to anyone. Before activation, the software displays the following message:  
**“Caution: The laser is going to be activated”**
- Confirm only if safety is ensured.
- **Caution:** The range of the beam exceeds 10 meters.
- Laser maintenance: The laser does not need maintenance or adjustment excluding cleaning the glass with a cotton swab. Always shut off completely the device FIXTURLASER SMC before this operation.
- **Caution**--use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure
- FIXTURLASER SMC is equipped with a built-in laser source used for the contactless measurement of temperature. The generated laser beam can be dangerous if it is not used according to the guidelines presented in this manual. FIXTURLASER SMC is compliant with Standard NF EN 60825, which sorts instruments based on the output power of the laser source. The source used in FIXTURLASER SMC is a class 3R laser that emits a visible beam (650-660 nm, maximum power: < 5 mW)

# HIGH POWER WHITE LED FLASH AND STROBOSCOPE

**RISK GROUP 2**  
**CAUTION: Possibly hazardous optical radiation emitted from this product**  
**ATTENTION: Possibilité d'émission par ce produit d'un rayonnement optique dangereux**

Risk group 2
CAUTION: Possibly hazardous optical radiation emitted from this product. Do not stare at operating lamp. May be harmful to the eyes. Do not stare at operating lamp. May be harmful to the eyes.

- FIXTURLASER SMC is equipped with a high-power LED used for the flash of the camera and stroboscope. Some sampling frequencies can induce attacks with individuals sensitive to this type of attack.

## Exposition limits

Table 6.1		Emission limits for risk groups of continuous wave lamps "LXML-PWN2" (Bin: TSMB) , $\alpha=1,7$ mrad)							
Risk	Action spectrum	Symbol	Units	Emission Measurement					
				Exempt		Low risk		Mod risk	
				Limit	Result	Limit	Result	Limit	Result
Blue light, small source	B( $\lambda$ )	E <sub>B</sub>	W•m <sup>-2</sup>	1,0*	1,23	1,0	1,23	400	1,23

\* Small source defined as one with  $\alpha < 0,011$  radian. Averaging field of view at 10000 s is 0,1 radian.  
 \*\* Involves evaluation of non-GLS source

The measures present in this table have been conducted at 200mm from the light source.

## STORAGE

- Respect the storage temperature  $-20^{\circ}\text{C} < T_{\text{storage}} < 70^{\circ}\text{C}$
- Never store the instrument and its accessories in the hot areas of a car, in particular on the dashboard. Favor shady areas, such as the rear trunk.
- Never store the instrument and its accessories under direct sunlight.
- Do not store the instrument and its accessories in a wet area.

## TRANSPORT

For air transport, follow procedure UN3481 "Lithium-ion battery contained in equipment".

## DISMANTLING/RECYCLING

- FIXTURLASER SMC and its accessories shall be recycled as electronic products including a battery.
- FIXTURLASER SMC and its accessories shall not be burnt or thrown into fire.
- FIXTURLASER SMC and its accessories shall not be disposed of in a dump.



## OPERATING RISKS

- Since FIXTURLASER SMC is intended to be used in industrial settings, the operator shall wear required PPE (personal protective equipment) determined by the site manager.
- In particular, the use of the touch pad shall in no event justify not wearing gloves if those are required by the operating regulations.
- In particular, the use of the headphones shall in no event justify not wearing a hard hat if it is required by the operating regulations.
- The use of FIXTURLASER SMC shall in no event constitute a justification for not wearing this PPE.
- During measurements, the operator shall specifically see to his/her own safety. In particular, he/she must ensure that he/she is not in a dangerous situation (e.g., uncertain balance when taking a measurement).
- The use of FIXTURLASER SMC shall in no event constitute a justification for taking risks that would endanger the life of the operator or any other person.
- Operating FIXTURLASER SMC implies using connection cables. The operator shall see to it that no cable is caught by the moving part of a machine.
- **Instrument and operator safety is at risk when the instrument is used in conditions that are not intended by ACOEM.**





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