

# EU General Product Safety Regulation (GPSR) Risk Assessment

**Product Name:** Joulescope JS220 USB Front Panel (FP02-USB)

**Manufacturer:** Jetperch LLC ([www.joulescope.com](http://www.joulescope.com))

**Document Version:** 1.0

**Date:** December 3, 2024

## 1. Introduction

This risk assessment evaluates the Joulescope JS220 USB Front Panel to ensure compliance with the EU General Product Safety Regulation. The document identifies potential risks, assesses their severity and likelihood, and proposes mitigations to ensure product safety.

## 2. Product Description

**Functionality:** This front panel is a Joulescope JS220 accessory used to provide USB connections.

**Key Features:** Provides USB pass-through connectivity from a type A to a type B connector while measuring the current and voltage between the connectors.

**Intended Use:** Laboratory, educational, and development environments for electronics and IoT systems testing.

**User Demographics:** Trained professionals, researchers, and engineers.

**Operational Environment:** Indoor use; non-hazardous, non-condensing environments.

## 3. Hazard Identification

Hazard Type	Description
Electrical Shock	Potential risk due to incorrect use with high voltages.
Overheating	Risk of overheating during prolonged or high-power operation.
Fire	Associated with electrical faults, overheating, or incorrect use of the device.
Mechanical Damage	Risk of sharp edges or loose components leading to physical injury.
Data Integrity / Safety	Risk of misleading readings due to incorrect operation or faulty calibration.
USB Interface	Potential for improper connection causing damage to the host device or Joulescope JS220.
Hazardous Materials	Risk of exposure to harmful substances.

## 4. Risk Assessment Table

Hazard	Likelihood	Severity	Risk Level	Mitigation Measures
<b>Electrical Shock</b>	Low	High	Low	Low voltage design: product voltage limited to USB supply, which should not exceed 5.5 V.
<b>Overheating</b>	Low	Medium	Low	Relies on the USB host protection features required by USB.
<b>Fire</b>	Low	High	Low	Low voltage design. Ensure components meet flame-retardant standards (UL94).
<b>Mechanical Damage</b>	Low	Low	Low	Exposed features are consistent with other accessories in this product class.
<b>Data Integrity</b>	Medium	Low	Low	Each unit is individually tested in the factory.
<b>USB Interface</b>	Low	Medium	Low	Passthrough connection only. Relies on USB standard protection provided by host and device.
<b>Hazardous Materials</b>	Low	High	Low	The product is EU RoHS3 and REACH compliant. Conduct material testing. Include safety data in product documentation. Manufacturing documents specify lead-free solder.

## 5. Residual Risk Evaluation

After implementing the mitigations above, the residual risks are deemed acceptable for the intended use and user demographic. Additional risk mitigation will be applied if new hazards are identified during production or customer feedback.

## 6. Conformity Declaration

The Joulescope JS220 USB Front Panel complies with the applicable standards and regulations, ensuring safety and performance under the conditions of intended use. Compliance testing and certification include:

Electrical Safety: IEC 61010-1

RoHS2 and RoHS3 Compliance: Directive 2011/65/EU and Directive 2015/863

This product does not materially alter the Joulescope JS220. As an accessory with no active components, it was not tested for compliance with CE.

## 7. Conclusion

This document will be updated periodically to reflect changes in product design, usage, and safety standards. Regular reviews will ensure continued compliance with the EU GPSR.

## 8. References

EU General Product Safety Regulation (GPSR)

IEC 61010-1 (Safety requirements for electrical equipment for measurement, control, and laboratory use)

EN 61326-1 (EMC requirements for electrical equipment)

IEC 61000-4-2:2008: (Electromagnetic compatibility)

CISPR 11:2015, Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment, Amendment 1:2016

Product documentation:

[Joulescope JS220 USB Front Panel Datasheet](#)

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