

varixx

ZYGGOT[®] Arc

Electric Arc Protection System



ZYGOT® Arc

Intelligent Detection of Electric Arcs

ZYGOT Arc protects electrical systems and components through a smart network of sensors that detect electrical arcing using ultraviolet radiation.

This radiation is present in any electrical arc during its initial moments, resulting from the ionization of the surrounding air, even before visible light appears (a phase already associated with air expansion and overheating).

It can be used in low-, medium-, and high-voltage electrical panels and in outdoor applications.

> Features



Ultra-fast response, in less than 0.3 milliseconds



It does not detect visible light, preventing false trips



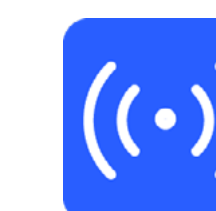
No need to read the current



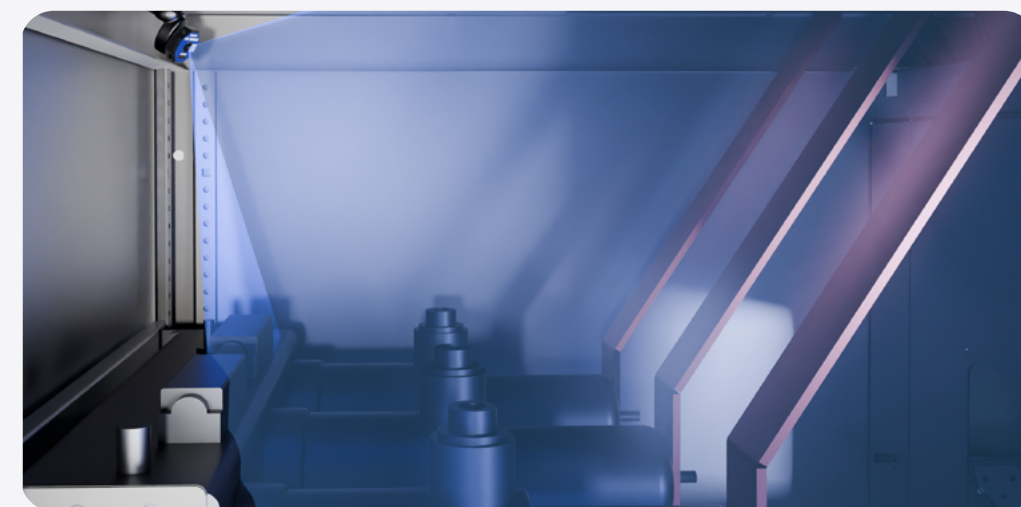
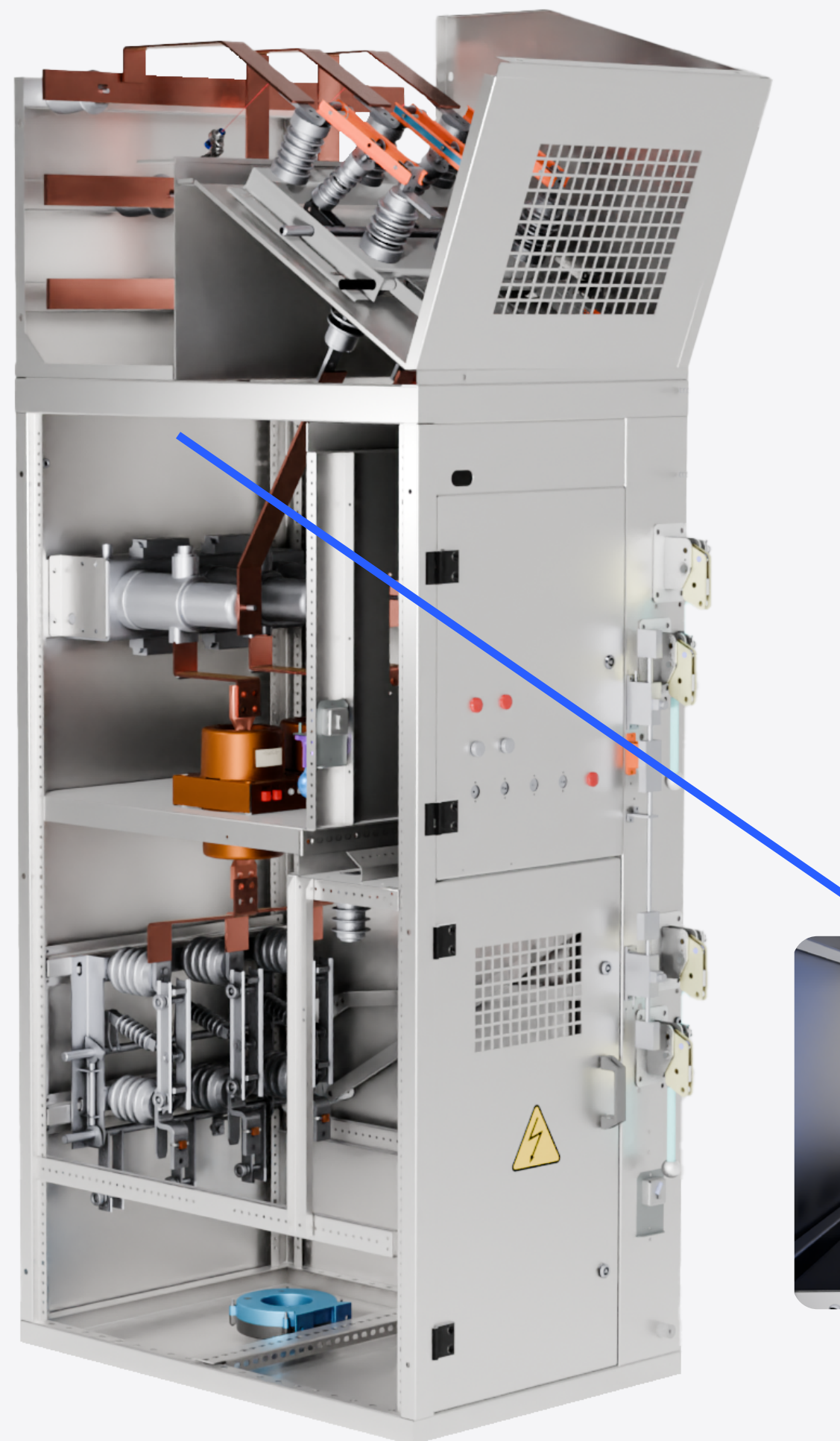
Wide detection area (90°)



A solution that results in the lowest incident energy on the market

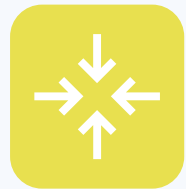


Early-stage arc detection



Ultra-fast
electric arc mitigation

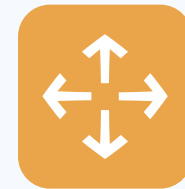
> Phases of the



1. Compression

The discharge of the arc increases the internal pressure.

During this phase, the ionization of the air produces ultraviolet waves that are detected by the sensors.



2. Expansion

High pressure causes the relief valves to open.



3. Expulsion

The internal pressure drops.

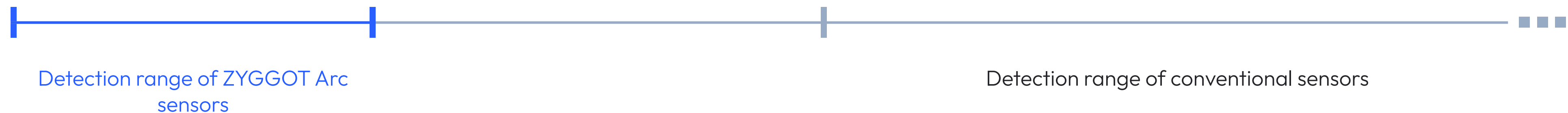
The exhaust effect continues at a constant pressure until the internal temperatures of the panel and the arc are equalized.



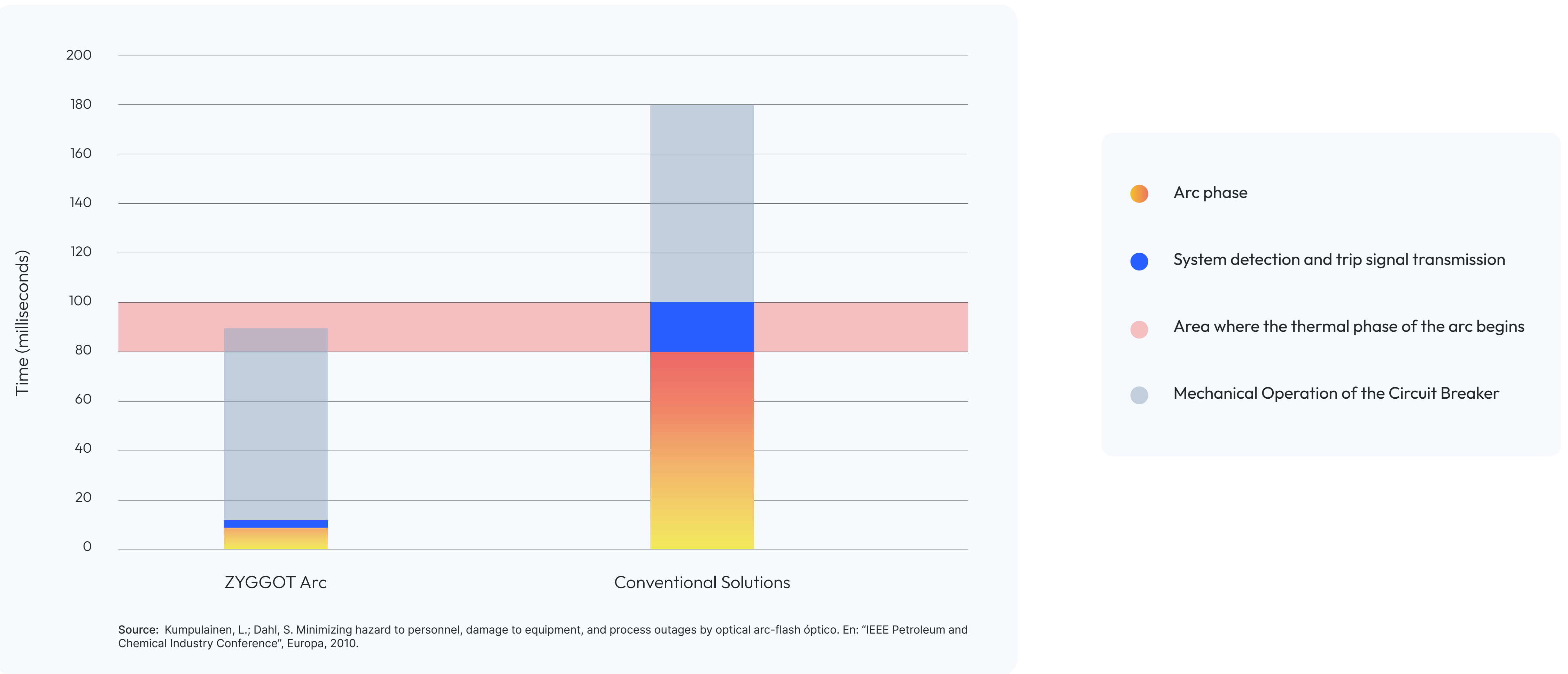
4. Thermal

The arc completely damages insulation, conductive, and structural materials.

The temperature rises to several thousand degrees Celsius. This phase is due to the dissipation of thermal energy.



> Case Study: Comparison of the ZYGOOT® Arc System with Other Conventional Solutions



COMMUNICATION

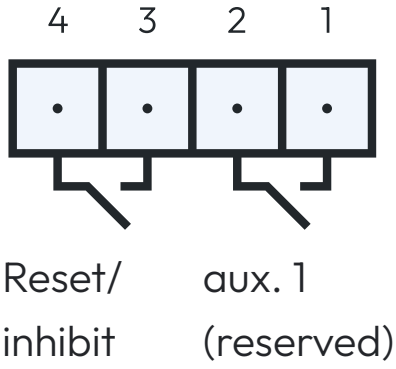
RS-485 Modbus-RTU (slave)

SENSOR INPUT

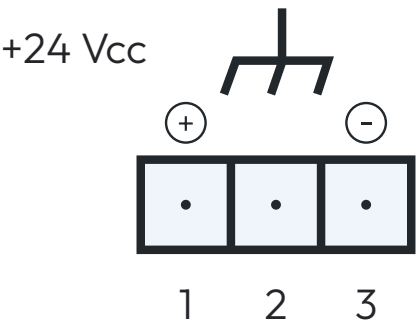
Mini USB connector for sensor communication



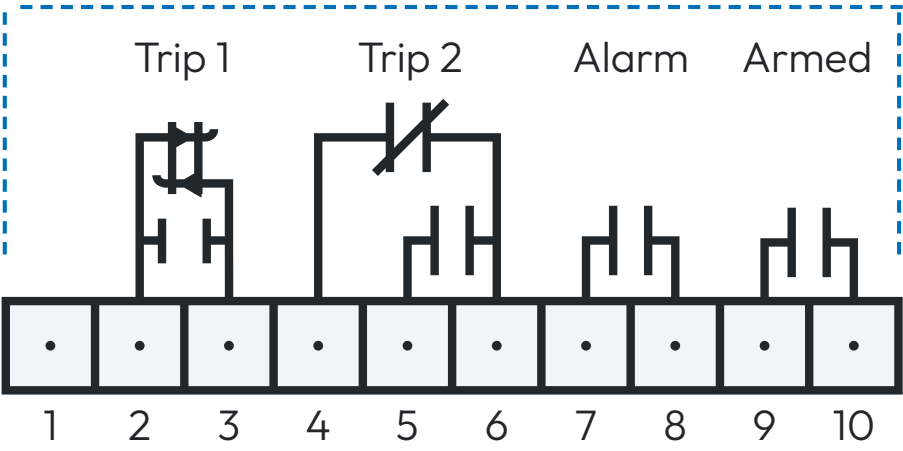
2 DIGITAL INPUTS



EXTERNAL (POWER SUPPLY)



INTERNAL (CIRCUIT)



> Relay Features

Designed to activate when the ZYGOT Arc sensor detects a trigger. Its response is ultra-fast, with a total trip signal transmission time of up to 0.3 milliseconds (300 microseconds). To ensure this response time, the system uses a static contact at the output in parallel with the dry contact and an ultra-fast digital communication network (CAN). Cables are available in lengths ranging from 0.3 to 8 meters.

The sensors come with mounting brackets, which allow for quick, error-free installation without the use of tools.

POWER SUPPLY

24 Vcc

HUMIDITY

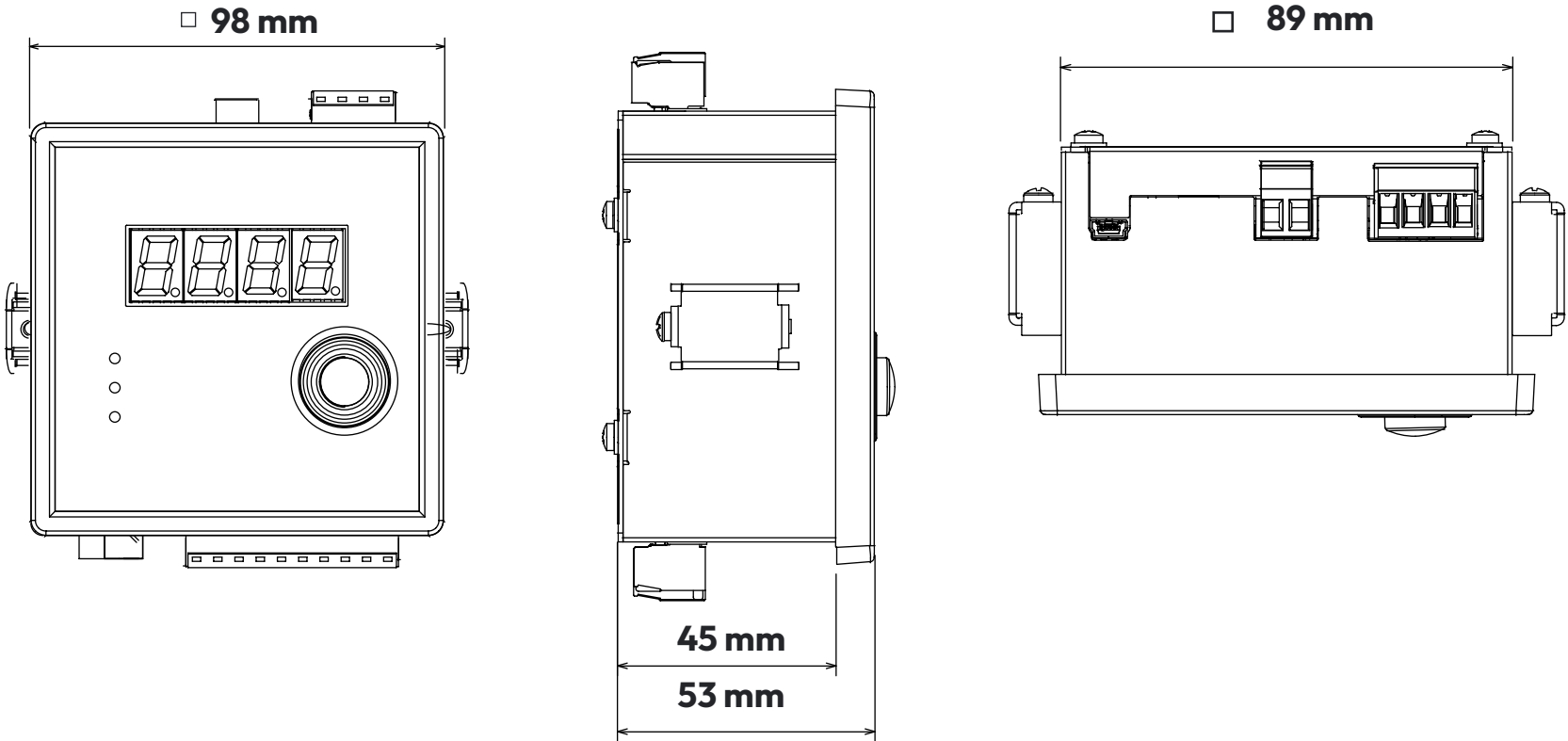
5 % to 95%

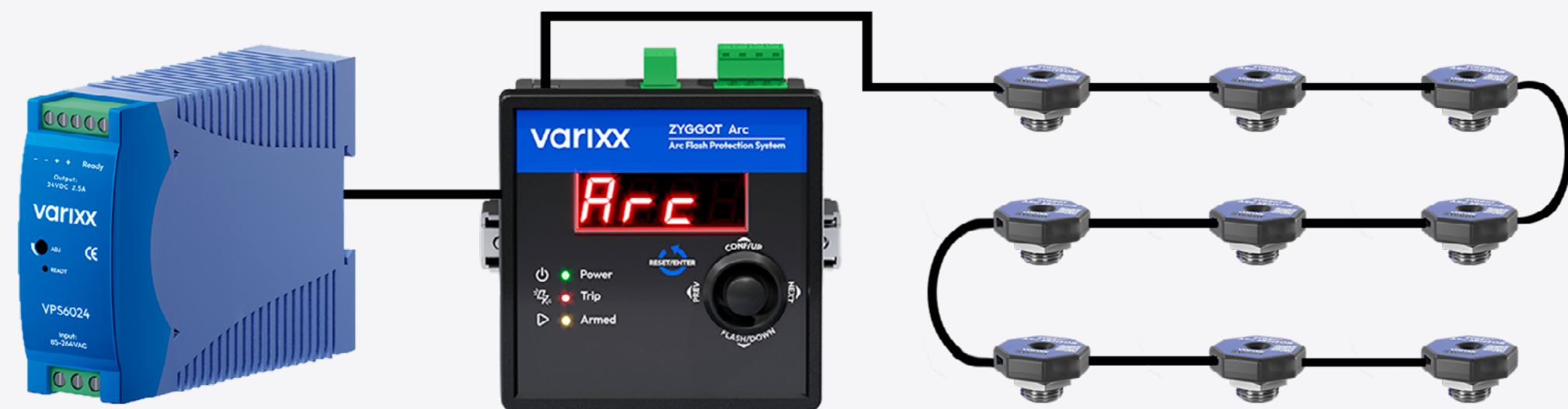
NUMBER OF SENSORS

Up to 50 sensors

OUTPUTS

2 trip outputs: one static contact and one dry contact





The cables are available in lengths ranging from 0.3 to 8 meters.



Octo Sensor

A sensor with improved architecture and construction for superior immunity in highly electromagnetically “polluted” environments, while maintaining full compatibility with existing systems.

> Sensor Features

The ZYGGOT Arc sensors do not require current measurement and provide protection by detecting ultraviolet radiation, which is produced in any electric arc before visible light (which is already associated with the phase of air expansion and overheating).

POWER SUPPLY

24 Vcc

MEASUREMENT ANGLE

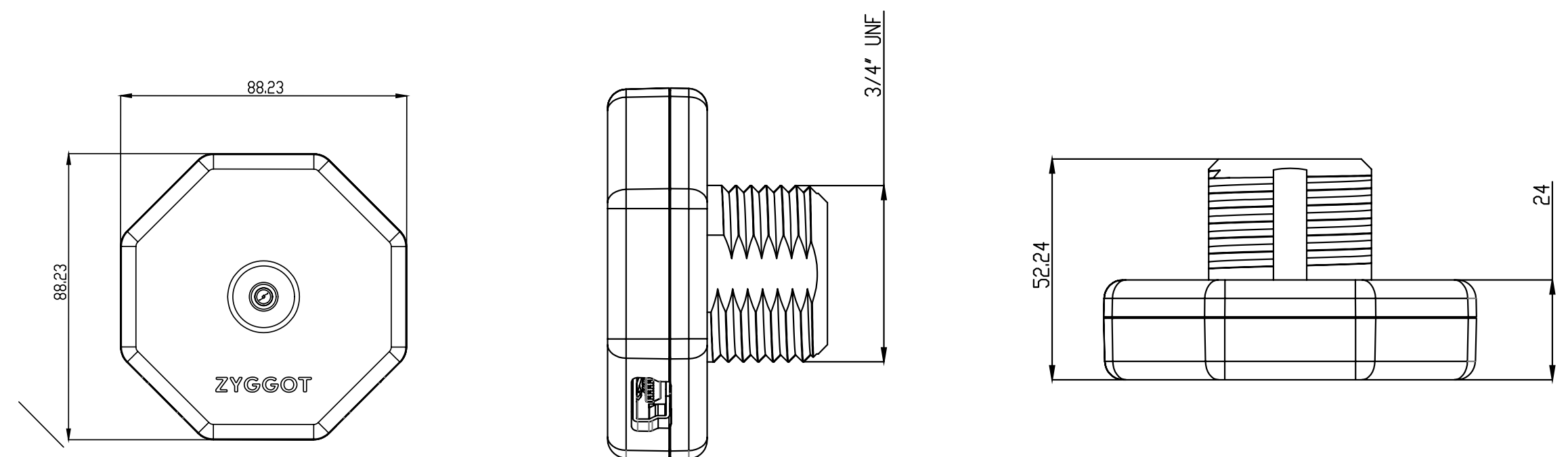
90°

COMMUNICATION

CAN

MATERIAL

Stainless Steel
LNP Faradex





Since 1976, Varixx has been developing high-tech products backed by solid expertise in power electronics. Throughout its history, the company has built a broad portfolio recognized for innovation, quality, and long service life.

Holder of several technology patents, Varixx transforms technology into functional and intelligent solutions for both domestic and international markets.



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