

Konverge

Case Study

Overview

Industrial
Testing
Software for
Injection
Moulding
Cabinet
Validation



The Challenge

An engineering company working with injection moulding machines needed to upgrade their testing process for electrical cabinet validation. Their legacy method involved time-consuming manual checks across various control cabinets, leading to inconsistencies and a higher risk of undetected wiring or communication errors.

They required a software interface for a new hardware Universal Tester that would:

- Test cabinet wiring, power connections, and communication lines (PROFIBUS & EtherCAT)
- Work across multiple models (Hyletric, HyPET, P10)
- Support multilingual users and future customization

Contact Us



1-866-640-2345



info@konverge.com



400 University Ave, Suite 103,
Toronto, ON

Our Solution

Konverge developed a custom software solution to interface with the Universal Tester hardware. Built from an HTML prototype and aligned with detailed client documentation, the application delivered:

- **Device interface logic:** For accurate signal interpretation across different cabinet types
- **Multilingual support:** With language packs to be supplied by the client
- **Modular screen flows:** For each cabinet type, with dynamic testing stages
- **Quality assurance loop:** Tested on five cabinets pre-signoff, with a feedback process for further refinements

Key Features

- Communication protocol compatibility (PROFIBUS, EtherCAT)
- Dynamic test flows based on machine type
- Readable error logs and status dashboards
- Lightweight, responsive interface for fast operator usage
- Clear documentation and support for internal testing teams

Business Outcomes

- Streamlined the cabinet testing process across all machine models
- Reduced manual error-checking time and improved wiring validation
- Increased testing consistency and documentation
- Provided a scalable digital foundation for future equipment testing needs



Why it Matters

Precision testing in industrial environments requires specialized digital tools.

This project highlights how bespoke software aligned with hardware testing workflows can dramatically improve quality assurance and operational efficiency.

“Even small software tools can have a massive operational impact in the industrial space. This solution bridged the gap between hardware validation and real-time insights.”

— Sonia Couto, Managing Director, Konverge Digital Solutions

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