



-ELYRA[®]6

All-in-one intelligent grid automation solutions

The next evolution of digital substations

Performance. Flexibility. Total control. ELYRA6 drives every stage of your power system assets, from first design to long-term maintenance.

Performance

Sub-cycle protection and state-of-the-art processing.

Reliability

Self-monitoring across the lifecycle.

Innovation

IEC 61850 digital substation, ready to evolve.

WHY ELYRA6

All-in-one protection, control,
and automation platform

Designed for IEC 61850
digital substations

High performance,
state-of-the-art technology

Flexible and scalable
architecture

Reduced lifecycle cost
and complexity

One platform. Multiple capabilities.

ELYRA6 is a next-generation protection and automation platform designed to meet the evolving demands of modern digital substations.

Combining protection, control, monitoring, and automation into a single, flexible product, it enables utilities to simplify operations, improve reliability, and future-proof their grid infrastructure.

Engineered for performance, designed for flexibility, and built for long-term reliability, ELYRA6 supports the full lifecycle of power system assets, from engineering to operation and maintenance.

Key Features

- Wide set of protection functions for line, feeder, transformer and other applications
- Automation schemes for single and multi-breaker topologies
- Control, supervision and monitoring of several switching devices
- Accurate synchronized measurements and PMU-based functions
- IEC 61131 user-programmable automation
- Event log, disturbance recorder and other large capacity recording functions
- IEC 61850 edition 2.1 full data model and services
- IEC 61850-9-2LE and IEC 61869-9 Sampled Values publisher/subscriber
- High-speed binary outputs
- Current inputs with short-circuiting capability
- Multiple communication interface options and protocols
- Dual power supply and redundant communication schemes
- Supervision of the secondary system
- Self-tests, self-monitoring and watchdog
- Web-based user interface
- Built-in firewall, RBAC, secure communications and security log
- State-of-the-art configuration and management software

Customer benefits

Built for today. Ready for tomorrow.

Built for Efficiency & Reliability

- ✓ Single platform reduces hardware variants and spare parts
- ✓ Integrated features simplify system design, configuration, testing and maintenance
- ✓ Seamless legacy product configuration migration
- ✓ High availability and redundancy options tailored to digital substation

Designed for Flexibility

- ✓ Modular architecture and composable software packages, adaptable to any application
- ✓ Flexible and easily expandable I/O and communication options
- ✓ Full-fledged IEC 61850 and digital substation support
- ✓ Advanced custom logic using IEC 61131-3

Future-Ready Technology

- ✓ State-of-the-art technology, prepared for continuous future platform evolution
- ✓ Proactive obsolescence management through modular upgrades
- ✓ Cybersecurity compliance with applicable standards
- ✓ Web-based interface and advanced diagnostics, no preventive maintenance needed

Built-in Functions

Integrated engineering, distributed automation, and modular hardware design.

01 Field-Proven Protection Functions

Drawing on the experience gained from previous field-proven product families, the protection algorithms included in ELYRA6 provide the best balance between speed, sensitivity and accuracy. Advanced protection with sub-cycle tripping times and built-in three-phase or single-phase tripping logic, together with a large set of auxiliary and backup functions, make ELYRA6 suitable for a broad range of applications.

02 Advanced Control and Supervision

A comprehensive set of automation functions such as synchronism-check, automatic reclosing, or voltage regulation and tap changer control, complemented with full-featured secondary system supervision, enables the control and supervision of complex bays with several topologies and multiple switching devices. Select-before-operate, multi-level authority sources and secure hardwired or distributed interlocking ensure safe operation.

03 Enhanced Measurement, Metering and Monitoring

With accurate measurement of all electric quantities, which can be complemented with power quality functions, condition monitoring of the switchgear, non-revenue metering and synchronized phasor measurements (PMU), no additional devices other than ELYRA6 are required for the enhanced monitoring of the grid. In addition, a high precision fault locating algorithm with load compensation is offered.

04 Extended Recording and Fault Analysis

Large capacity recording of all power system fault data can be achieved through a flexible multi-source event recorder, full-featured disturbance records configured according to complex trigger options and stored in native COMTRADE format and a general-purpose statistical trend recorder. Enhanced fault summary is stored after each power system incident, summarizing relevant data for post-mortem analysis.

05 Stand-Alone Merging Unit and Digital Process Interface Unit

Enabling the integration of conventional current and voltage transformers in digital substation architectures, ELYRA6 can be configured as a Stand-Alone Merging Unit (SAMU), according to both IEC 61850-9-2LE and IEC 61869-9 standards. It can also interface all input/output associated with the switchyard, taking advantage of its expansion capability, and provide fast GOOSE messaging and tripping for demanding protection applications.





All-in-one
intelligent grid
automation
solutions



Open Automation

Built for Performance and Flexibility.

Integrated Engineering

The configuration and management of ELYRA6 is fully integrated in the Automation Studio, a key enabler of top-down engineering that significantly cuts engineering time, reduces human error, and effectively manages system-wide configurations and testing through the deployment of machine-readable specifications and the overall automation of the engineering process.

Powerful IEC 61850 Distributed Automation

ELYRA6 was designed with IEC 61850 in mind in every aspect and thereby provides a rich object model and full compatibility with other compliant devices, engineering tools and systems. Fine-tuned communication performance regarding GOOSE and Sampled Values messaging, seamless network redundancy options and PMU-based functions allow sophisticated distributed PAC architectures to be deployed with full confidence.

Flexible Programmable Scheme Logic

Both high-speed protection scheme logic and complex user-defined algorithms are programmed in IEC 61131-3 languages with the powerful editors and compilers of the Automation Studio toolset. The optimized logic engine is conceived to meet diverse functional needs and priorities. All user functions may contain operational settings and specific IEC 61850 interface and may therefore be managed in the same way as built-in functions.

Device Platform

Built for Security and Scalability.

Modular and Scalable Hardware

Flexible configuration of I/O and communication interfaces and easily replaceable or expandable hardware modules allow ELYRA6 to match the specific needs of each application throughout the asset lifecycle. Designed with sustainability and circularity principles in mind, the product is rack-mountable, available in different sizes, and ideally suited for the harshest environments.

Advanced User Interface

Prepared for several optional HMI options, with multiple user-definable and fully interactive mimic, alarm or settings pages, ELYRA6 can provide sophisticated user interface and full operation and control capabilities. A built-in, standards compliant web interface allows the same intuitive access to all functions and user actions, both locally and remotely, without requiring external software tools.

Built-in Cybersecurity

Cybersecurity is a core priority of ELYRA6 and has been implemented in accordance with recognized industry standards and best practices. The product incorporates a comprehensive set of built-in security features, such as an integrated firewall, Role-Based Access Control (RBAC), and secure storage for certificates and other sensitive data. It also offers continuous security monitoring and audit capabilities through Syslog event publishing and security event lists. To further enhance system resilience, the solution supports secure communications and includes factory recovery mechanisms that ensure safe restoration and operational continuity.

Self-Diagnostics and Availability

Continuous supervision of all hardware components and built-in software modules is performed to guarantee operation reliability. Device health status and detailed diagnostic information are made available in local and web HMI, IEC 61850 interface or through SNMP protocol. A test mode can also be set. Furthermore, ELYRA6 can be delivered with optional redundant power supply or communication modules for increased availability.

Applications

All-in-one grid solutions

ELYRA6 is an all-in-one, modular, and universal protection, automation, and control product.

Due to its powerful configuration capabilities and flexible ordering options, ELYRA6 stands as the benchmark for state-of-the-art grid automation solutions. ELYRA6 is truly an all-in-one, modular, and universal protection, automation, and control product that supports different PAC functions and applications in a single device including protection, bay control, RTU, and merging unit through a versatile and dynamic selection of hardware and functional modules adapted to each use case.

The openness, scalability, and upgradeability of function packages, together with the support throughout the system life cycle makes it suitable for new or retrofit projects according to stepwise investment strategies.

It can thus offer the best fit solution for Transmission and Distribution grids, covering overhead line and underground cable, transformer, auto-transformer, shunt reactance, capacitor, motor and other asset applications, from simple to complex protection and automation schemes, and from conventional hardwired systems to fully digital substation or mixed architectures. ELYRA6 is also the best option for future architectures combining digital primary devices, advanced PAC functions at process level and virtualized platforms.

PACKAGES DESCRIPTION

MBK	Multi-Breaker Arrangements
SPT	Single-Phase Tripping
BCU	Bay Controller with Basic Protection
TR2	Two-Winding Transformer and Auto-Transformer Protection
TR3	Three-Winding Transformer and Auto-Transformer Protection
REF	Restricted Earth-Fault
LNF	Line Feeder Protection
DIS	Distance Protection and Teleprotection.
PSB	Power Swing Blocking/Out-of-Step Tripping
LND	Line Differential Protection
AEF	Advanced Earth-Fault Protection
AFD	Arc Flash Detection
SCH	Synchronism and Voltage Check
CAP	Capacitor Bank Protection and Control
MOT	Motor Protection and Control
VRP	Voltage Regulation
PMU	Synchronized Phasors (PMU)
PQT	Power Quality

SINGLE FUNCTION PACKAGES

In addition, it is possible to add any specific function using their unique 3-character code.



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automation
solutions

Engineered for **continuity**
Designed for easy **configuration**
Built for reliable **operation**



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