Human-Machine Interface (HMI) for SEL Real-Time Automation Controllers (RTACs)

Device-level HMI for system visualization and control

- Deliver efficient HMI solutions by building effective operator interface screens through easy-to-use tools without the need for mapping data tags.
- Identify changing system conditions and make informed decisions based on real-time analysis without the need of any special software to view the HMI.
- Leverage powerful and reliable RTAC hardware with a cost-effective HMI option for local/remote monitoring, control, integrated alarms, and annunciation.
- Monitor your system and analyze performance anywhere, anytime with a secure, web-based, thin client user interface.

RTAC HMI

The RTAC HMI offers an easy way to visualize data and create custom diagrams to monitor and control your system. The HMI provides authenticated access for multiple users from multiple locations and is viewable from a web browser. It renders natively on browsers compatible with HTML5 web standard—no plugins required.

Browser-Based Local and Remote Access

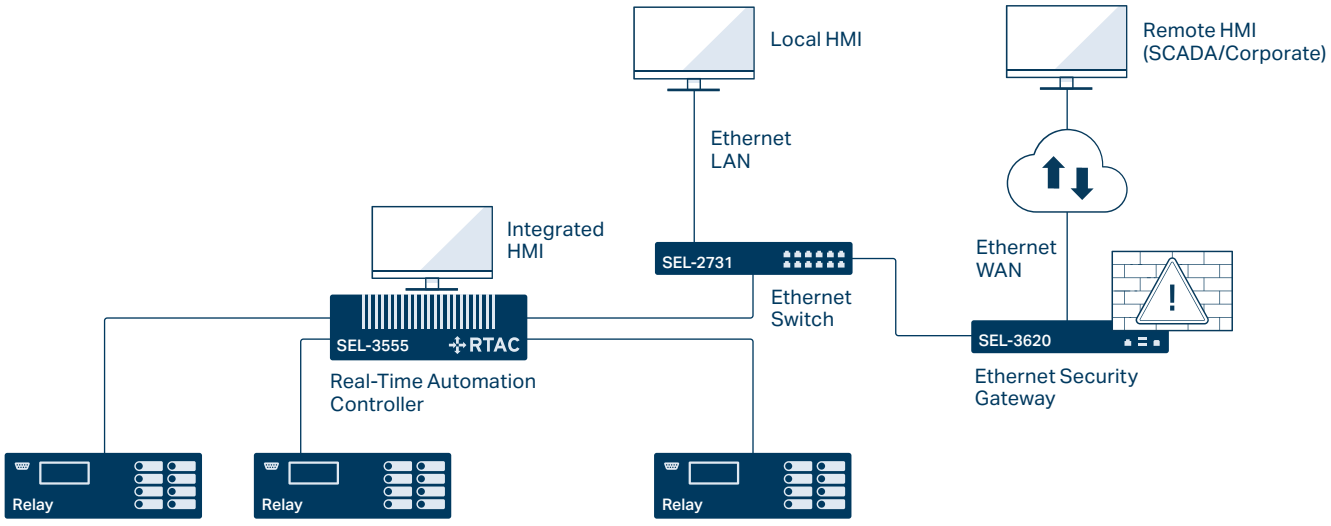
Access the RTAC HMI locally or remotely via a web browser interface from the web server on the RTAC unit. On-demand visualization and control makes monitoring and controlling your system a more efficient task. Role-based accounts provide appropriate security access. Since it is a thin client, no installation and no upkeep for a specific application are required.

All-in-One Box Solution

Combine your need for automation processing and HMI visualization into one box with the high-performance SEL-3555, SEL-3560, and SEL-3350 RTACs.

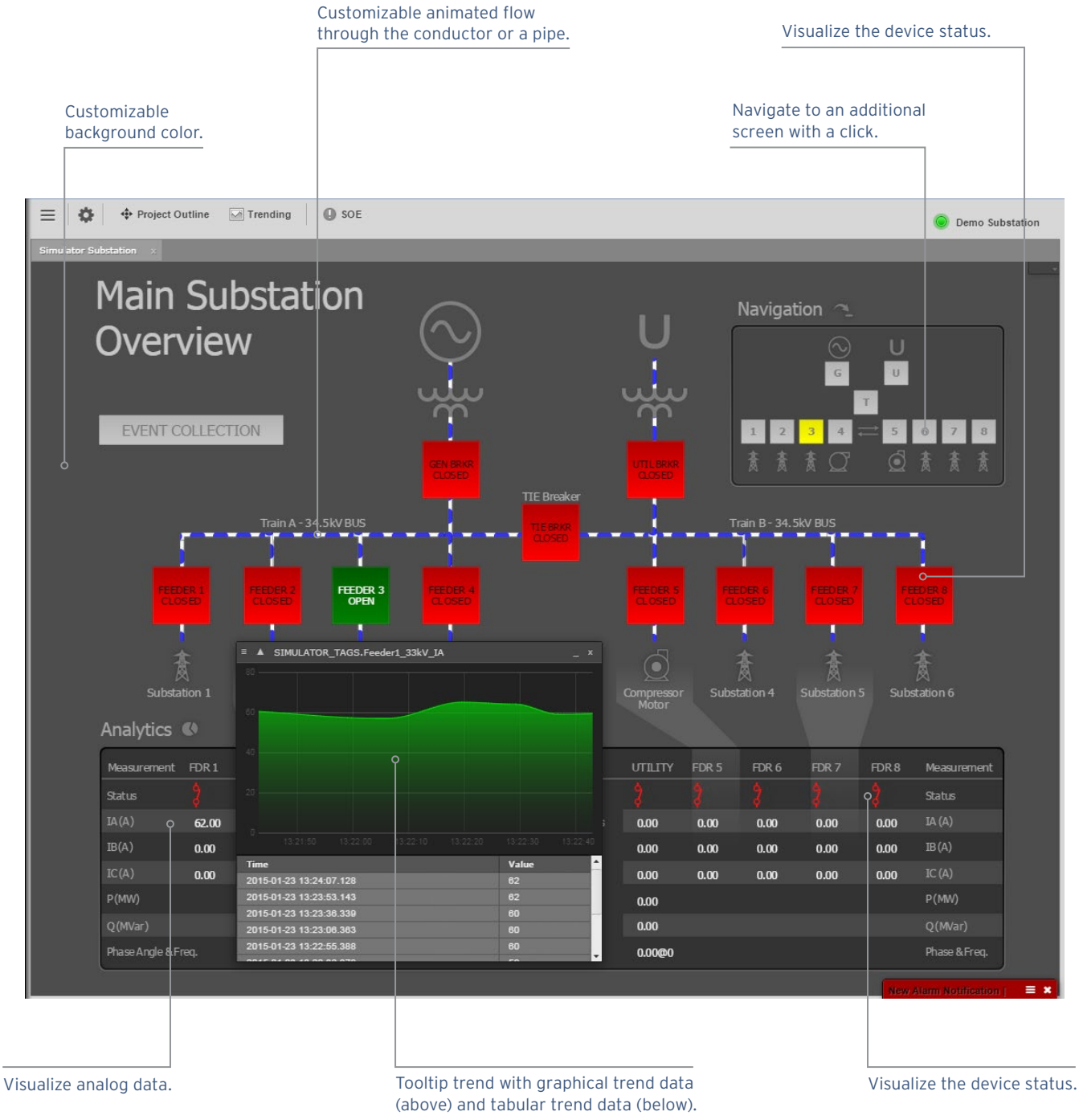
The video output port of these RTAC models directly connects to a monitor, eliminating the need to have an additional substation computer dedicated to running the HMI. This reduces capital expenditures and operational cost while increasing reliability by reducing points of failure in your substation.

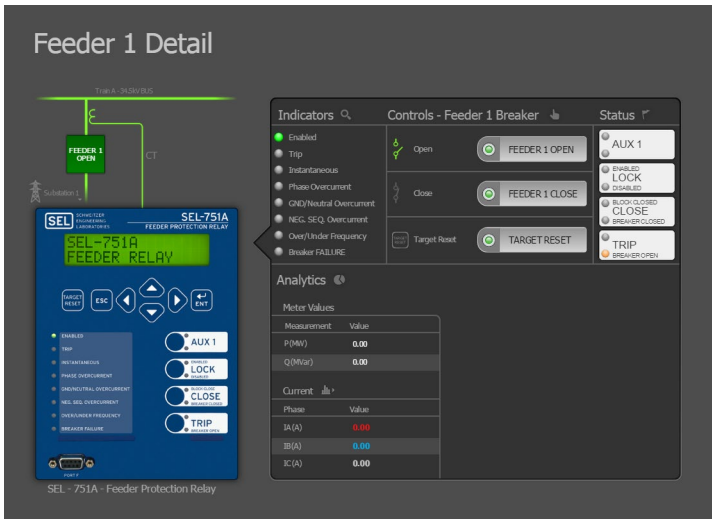
Note, this all-in-one functionality is specific to the SEL-3555, SEL-3560, and SEL-3350 RTACs. Other members of the SEL RTAC family require an additional computer for video output.

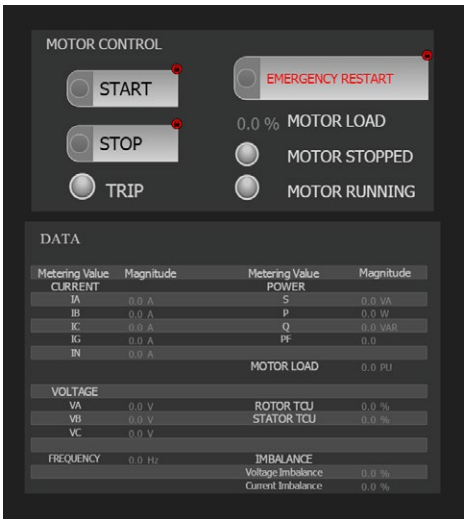


Monitor Substation Performance, and Execute Control Decisions

See the system status in a way that is customized to the individual user's preference. Detect system conditions as they change, and identify potential failure points. Integrated alarms will alert operators when there is a problem. Complete customization of the alarm response ensures that alarms provide the right information at the right time. The RTAC HMI provides the necessary information and the ability to execute control decisions from the HMI interface.

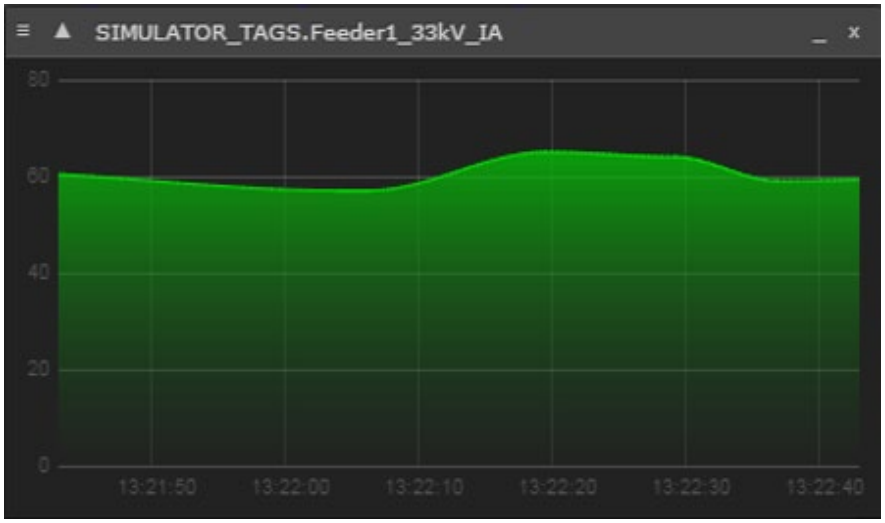






Promote Situational Awareness

Use the RTAC HMI to monitor critical industrial processes. Detect system misoperation and early warning signs for necessary system maintenance to improve system reliability.



Advanced Warning

Enable operators to be proactive versus reactive by using the available trending feature that provides quick and easy visualization of the data values over a definite period of time, configurable both at design time and at run time.

Get Instant Feedback

Promptly see the system response after taking a control action by analyzing data in real time via chart trending. Comparing system data over time against operating limits helps operators identify system dynamics and make more-informed control decisions.

ACSELERATOR Diagram Builder™ SEL-5035 Software

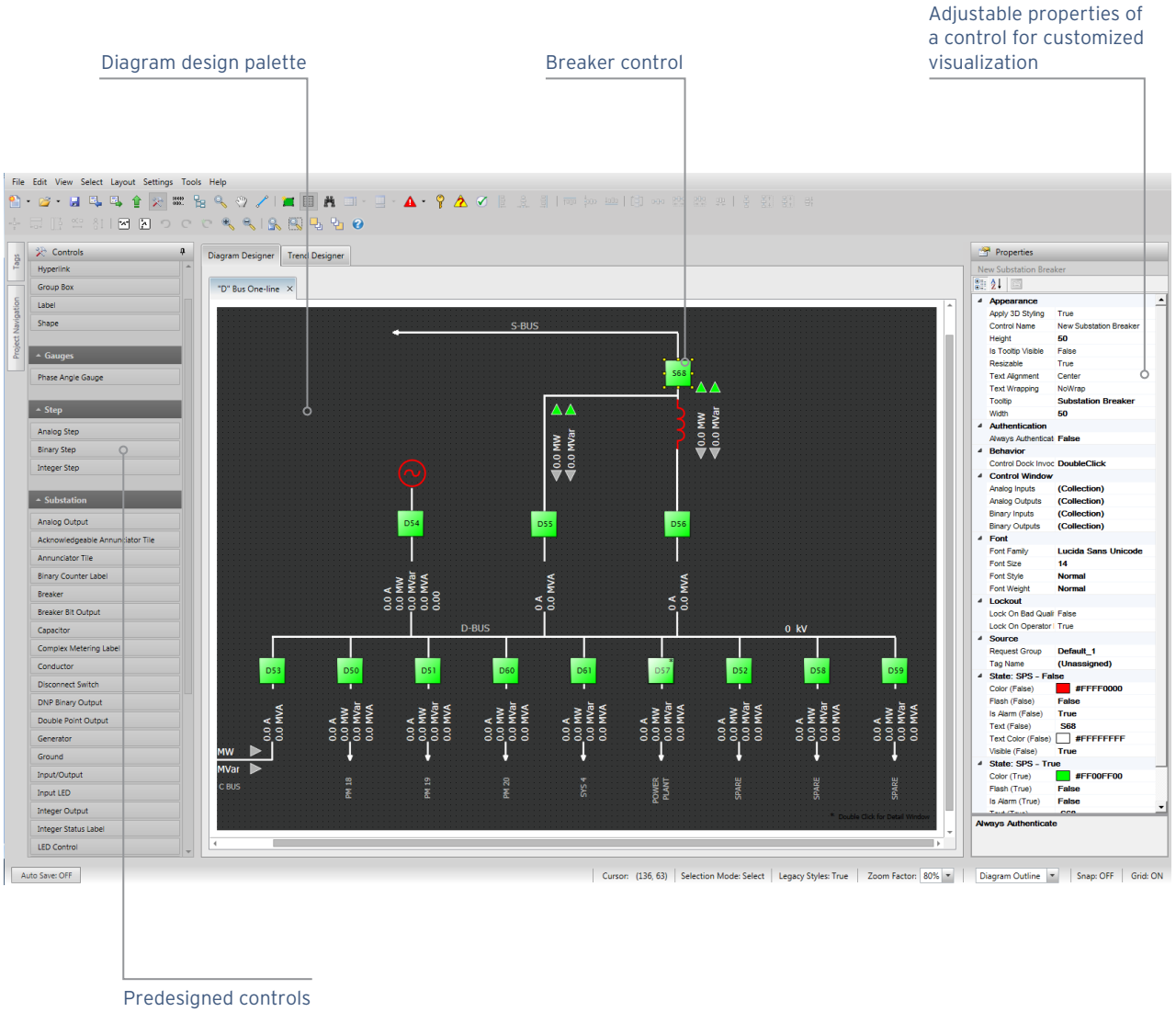
Design Your HMI System Using the Included Diagram Builder Software

Diagram Builder is a Microsoft Windows PC-based software application. It is a free configuration tool that is designed to simplify the process of HMI diagram creation. Drag and drop controls onto your diagram design palette, easily align and group diagram controls, and speed up tag assignment with the find-and-replace functionality.

Diagram Builder offers a predefined library with predesigned controls for power systems, including parameters tailored for the visualization and operation of power systems.

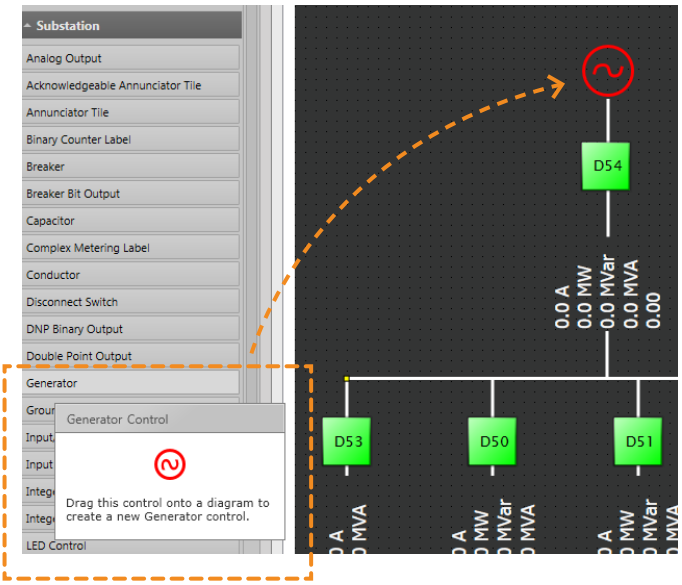
Logical User Interface

When designing diagrams for HMI systems, the configuration software interface needs to support an efficient and intuitive workflow. Diagram Builder tools are arranged for the convenience of the designer, with the most commonly used capabilities readily available from the main interface.



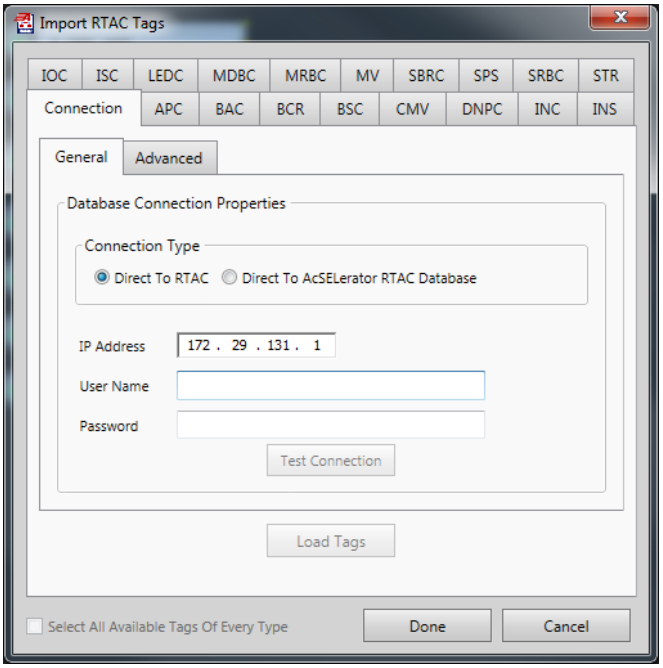
Rich Object Template

Quickly deploy a new display using the library of controls available in Diagram Builder. Just drag a control onto the diagram design palette and adjust the properties in order to achieve the desired customized visualization. Predefined templates are available upon request from your SEL customer service representative.



Automatic Tag Mapping

Save time and reduce errors with automatic tag mapping between the RTAC tag database and Diagram Builder. You can choose to import the entire tag list or just the needed items, depending on your workflow.



Specifications

Client Hardware Requirements for HMI[1] Visualization	Rendered in HTML5
Web Browsers	Chromium based browsers, such as Google Chrome 40+ and Microsoft Edge 13+
Operating Systems	Microsoft Windows 10 Ubuntu Linux Version 14.04
Minimum Client PC Processor	Intel Core Duo 2 GHz
Minimum RAM	4 GB

Minimum System Requirements for Diagram Builder Software	
Operating Systems	Microsoft Windows 10[2] Microsoft Windows Server 2019[2]
Processor	2.0 GHz dual core processor, GPU-enabled video driver
RAM	8 GB
Disk Space	100 MB

[1] The integrated video port of the SEL-3555, SEL-3560, and SEL-3350 RTACs uses an embedded web browser native to the RTAC to render the HMI graphics. For all other web client connections, the RTAC will determine the type and version of web browser you are using and will automatically render the HMI graphics.

[2] Requires user accounts with administrator permissions or higher.

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