Customer Advisory

Life Is On | Schneider Electric

Our Ref. 121020IR

REF: Eycon Visual Supervisor enhanced for Cybersecurity Robustness

Dear Customer,

Cybersecurity is no longer a secondary requirement in the industrial control's world. Eurotherm considers cybersecurity to be as important as safety or high availability.

Industrial Control Systems (ICS) based on computer technology and industrial-grade networks have been in use for decades. Earlier control system architectures were developed with proprietary technology and were isolated from the outside world, thus making attacks more difficult. In many cases, physical perimeter security was deemed adequate and cybersecurity was not a primary concern.

Today, many control systems use open or standardized technologies such as Ethernet TCP/IP to reduce costs and improve performance. Many systems also employ direct communications between control and business systems to improve operational efficiency and manage production assets more cost effectively. This technical evolution exposes control systems to vulnerabilities previously thought to affect only office and business computers. Control systems are now vulnerable to cyberattacks from both inside and outside of the industrial control system network.

Consequently, many industrial control users are embarking on cybersecurity initiatives. Meanwhile, governments around the world are under pressure to address the ever increasing cybersecurity threat and there is an increasing demand for governments to introduce regulation.

For further information about cybersecurity, please refer to HA032968 – Cybersecurity Good Practices Guide.

What's new in the Eycon Firmware?

- New Instruments

  From November 2020, all units shipped will come with version V7/0 firmware. Units will power up with normal control, visualization and configuration functions inhibited until an Instrument Password and an Engineer Password have been set. These passwords are saved at the unit and they need only be set once. A blocking pop-up will be displayed on the Eycon HMI until the two Passwords are set.

  The Eycon HMI or Eurotherm Network Explorer supplied with Eurotherm PAC Software V9.6 can be used to set the Instrument Password. When using Eurotherm Network Explorer to set the password, it is recommended that the Ethernet connection is made through a dedicated point to point connection.

  The Eycon HMI is used to enter an Engineer Password.

- Default Passwords

  From Eycon firmware V7/0 onwards, there are no default passwords. For a new unit, as described above, you will be prompted to enter the Engineer Password of your choice at the Eycon HMI.

  If you enable the multi-user account system, then you will be prompted to enter the passwords for the initial accounts: OPERATOR, COMISSION, ENGINEER, ADMIN and ADMIN2 (Auditor option only). Entering the passwords for the ADMIN and ADMIN2 (Auditor option only) accounts is mandatory to complete enablement of the multi-user account system.

- Upgrading an Existing Instrument

  When upgrading firmware, any application files (Databases, Sequences etc.) will be retained, but the control application will not run until the Instrument Password has been set. The blocking pop-up for Engineer Password is shown until that password is set, but the control application can run.

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- Configuring Instruments

  Configuration of the instrument requires the use of computer-based tools (e.g. LINtools). To use the tools to manage the application (file listing, file copy, download, start, stop etc.), the computer connection to the instrument needs to be 'Authorized' by entering the Instrument Password.

  Each time the computer-based tools are used to configure the instrument, the password will need to be entered. Continued user activity at the tools will maintain the Authorized state which will otherwise timeout if not explicitly Unauthorized.

- Cloning Instruments

  Cloning between Eycon units from V7/0 onwards requires both units to be set with the same Instrument Password. Cloning from a pre V7/0 Eycon unit to an Eycon unit V7/0 and above requires the clone target passwords to be set as for a new unit (see above). Cloning from an Eycon V7/0 unit to Eycon units with older firmware is not supported. See also Legacy Operation Mode below.

- ELIN Runtime Communication

  ELIN Communication with other instruments (e.g. T2750), including legacy instruments via LIN bridges (e.g. T103), no matter what software versions are in use, requires no specific authorization and no passwords are required.

  Communication with computer runtime servers needs to be whitelisted as part of the instrument configuration. Each individual computer needs to be listed in the Instrument Options to specify the level of access: Data (cached blocks), File Transfer or Both. Whitelisted file transfers can be limited to those needed for runtime operation (e.g. setpoint programs). The whitelisting covers runtime data & file access, but not configuration access which always requires authorization.

- Lost Instrument Password

  There are no backdoor passwords and there is no means to discover a lost Instrument Password. With direct physical access to the instrument, it is possible to follow a procedure to reset the Instrument Password to the, as shipped, undefined state; the instrument will then behave as a new instrument and a password will need to be set before the instrument can be used.

- Legacy Operation Mode

  Users who order spares for a legacy system can enable a legacy operation mode in Eycon units running firmware V7/0 onwards for use until the system is updated to make use of the cybersecurity robustness enhancements. A new instrument will still require a password to be set once, before the legacy mode is enabled, thereafter the instrument will operate as for legacy versions i.e. no authentication required to use tools and no whitelisting required for computer runtime servers. Owing to the reduced security offered by this mode, it is not the preferred mode of operation, consider disabling the legacy mode as soon as practical.

Eurotherm PAC Software

Eurotherm PAC Software V9.6 has been released to provide all tools and documentation to support the new features of Eycon V7/0 firmware.

How can I get technical support?

For Technical Support or advice, either by telephone or email, please contact your local Eurotherm Helpdesk