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# Schneider Electric Security Notification

## EcoStruxure™ Control Expert, EcoStruxure™ Process Expert, SCADAPack RemoteConnect™ for x70

**08 March 2022 (14 June 2022)**

## Overview

Schneider Electric is aware of multiple vulnerabilities in its EcoStruxure™ Control Expert, EcoStruxure™ Process Expert, SCADAPack RemoteConnect™ for x70 software products.

EcoStruxure™ Control Expert is the common programming, debugging and operating software for Modicon M340, M580, M580S, Premium, Momentum and Quantum ranges.

EcoStruxure™ Process Expert is the next-generation process automation system to engineer, operate and maintain an entire plant, a Distributed Control System (DCS), designed especially for water, mining, cement, power generation, consumer packaged goods, chemical, and oil and gas applications.

The SCADAPack RemoteConnect™ for x70 product is a Windows-based application based on EcoStruxure™ Control Expert software components that provides a programming and configuration environment for the SCADAPack x70 RTU series, which is comprised of the SCADAPack 470, 474, 570, 574 and 575 Smart RTUs.

Failure to apply the remediations provided below may risk a Denial-of-Service attack, which could cause a disruption of communication between the Modicon controller and the engineering software.

June 2022 Update: Added SCADAPack RemoteConnect™ to the list of affected products, which is impacted on versions prior to R2.7.3 through the integration of EcoStruxure™ Control Expert.

## Affected Products and Versions

| Product | Version | CVEs |
|---|---|---|
| EcoStruxure™ Control Expert | Version 15.0 SP1 and prior | CVE-2022-24322<br>CVE-2022-24323 |
| EcoStruxure™ Process Expert | Version 2021 and prior | CVE-2022-24323 |
| SCADAPack RemoteConnect™ for x70 | All Versions prior to R2.7.3 | CVE-2022-24322<br>CVE-2022-24323 |

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## Vulnerability Details

CVE ID: **CVE-2022-24322**

CVSS v3.1 Base Score 5.3 | Medium | CVSS:3.1/AV:N/AC:H/PR:N/UI:R/S:U/C:N/I:N/A:H

A *CWE-119: Improper Restriction of Operations within the Bounds of a Memory Buffer* vulnerability exists that could cause a disruption of communication between the Modicon controller and the engineering software when an attacker is able to intercept and manipulate specific Modbus response data.

CVE ID: **CVE-2022-24323**

CVSS v3.1 Base Score 5.3 | Medium | CVSS:3.1/AV:N/AC:H/PR:N/UI:R/S:U/C:N/I:N/A:H

A *CWE-754: Improper Check for Unusual or Exceptional Conditions* vulnerability exists that could cause a disruption of communication between the Modicon controller and the engineering software, when an attacker is able to intercept and manipulate specific Modbus response data.

## Remediation

| Affected Product & Version | Remediation |
|---|---|
| **EcoStruxure™ Control Expert**<br><br>*Versions prior to Version 15.0 SP1* | Version 15.1 of EcoStruxure™ Control Expert includes a fix for these vulnerabilities and is available for download here:<br><br>https://www.se.com/ww/en/download/document/EcoStruxureControlExpert_V15.1/<br><br>Customers using Unity Pro should strongly consider migrating to EcoStruxure™ Control Expert.<br><br>If customers choose not to apply the remediation provided above, they should immediately apply the following mitigations to reduce the risk of exploit:<br><br>To mitigate the risks associated to Modbus weaknesses, users should immediately:<br><br>• Setup network segmentation and implement a firewall to block all unauthorized access to port 502/TCP |

| | |
|---|---|
| **EcoStruxure™ Process Expert**<br><br>*Versions prior to Verson 2020* | Version 2021 of EcoStruxure™ Process Expert includes a fix for these vulnerabilities and is available for download here:<br><br>https://www.se.com/myschneider/documentsDownloadCenterDetail/in/en/EPE2021Release<br><br>It is recommended to first read the ReadMe in its entirety before proceeding with the software installation.<br><br>If customers choose not to apply the remediation provided above, they should immediately apply the following mitigations to reduce the risk of exploit:<br><br>To mitigate the risks associated to Modbus weaknesses, users should immediately:<br><br>• Setup network segmentation and implement a firewall to block all unauthorized access to port 502/TCP |
| **SCADAPack RemoteConnect ™ for x70**<br><br>*All versions prior to Version R2.7.3* | Version *R2.7.3* of *SCADAPack RemoteConnect* includes a fix for this vulnerability and is available for download here:<br><br>RemoteConnect for the SCADAPack x70 \| Schneider Electric Exchange Marketplace (se.com)<br><br>There is no need to reboot.<br><br>Note: Users no longer need to update the RemoteConnect application when there is a Control Expert update.<br><br>If customers choose not to apply the remediation provided above, they should immediately apply the following mitigations to reduce the risk of exploit:<br><br>To mitigate the risks associated to Modbus weaknesses, users should immediately:<br><br>• Setup network segmentation and implement a firewall to block all unauthorized access to port 502/TCP |

Customers should use appropriate patching methodologies when applying these patches to their systems. We strongly recommend the use of back-ups and evaluating the impact of these patches in a Test and Development environment or on an offline infrastructure. Contact Schneider Electric's Customer Care Center if you need assistance removing a patch.

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## General Security Recommendations

We strongly recommend the following industry cybersecurity best practices.

- Locate control and safety system networks and remote devices behind firewalls and isolate them from the business network.
- Install physical controls so no unauthorized personnel can access your industrial control and safety systems, components, peripheral equipment, and networks.
- Place all controllers in locked cabinets and never leave them in the “Program” mode.
- Never connect programming software to any network other than the network intended for that device.
- Scan all methods of mobile data exchange with the isolated network such as CDs, USB drives, etc. before use in the terminals or any node connected to these networks.
- Never allow mobile devices that have connected to any other network besides the intended network to connect to the safety or control networks without proper sanitation.
- Minimize network exposure for all control system devices and systems and ensure that they are not accessible from the Internet.
- When remote access is required, use secure methods, such as Virtual Private Networks (VPNs). Recognize that VPNs may have vulnerabilities and should be updated to the most current version available. Also, understand that VPNs are only as secure as the connected devices.

For more information refer to the Schneider Electric Recommended Cybersecurity Best Practices document.

## Acknowledgements

Schneider Electric recognizes the following researchers for identifying and helping to coordinate a response to these vulnerabilities:

| CVE | Researchers |
|---|---|
| CVE-2022-24322 | Jie Chen (NSFOCUS) |
| CVE-2022-24323 | CNCERT |

## For More Information

This document provides an overview of the identified vulnerability or vulnerabilities and actions required to mitigate. For more details and assistance on how to protect your installation, contact your local Schneider Electric representative or Schneider Electric Industrial Cybersecurity Services: https://www.se.com/ww/en/work/solutions/cybersecurity/. These organizations will be fully aware of this situation and can support you through the process.

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For further information related to cybersecurity in Schneider Electric's products, visit the company's cybersecurity support portal page:
https://www.se.com/ww/en/work/support/cybersecurity/overview.jsp

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Schneider's purpose is to empower all to make the most of our energy and resources, bridging progress and sustainability for all. We call this Life Is On.

Our mission is to be your digital partner for Sustainability and Efficiency.

We drive digital transformation by integrating world-leading process and energy technologies, end-point to cloud connecting products, controls, software and services, across the entire lifecycle, enabling integrated company management, for homes, buildings, data centers, infrastructure and industries.

We are the most local of global companies. We are advocates of open standards and partnership ecosystems that are passionate about our shared Meaningful Purpose, Inclusive and Empowered values.
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Revision Control:

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|---|---|
| **Version 1.0**<br>*08 March 2022* | Original Release |
| **Version 2.0**<br>*14 June 2022* | Added SCADAPack RemoteConnect™ to the list of affected products, which is impacted on versions prior to R2.7.3 through the integration of EcoStruxure™ Control Expert. |

Product Security Office

Digitally signed by Product Security Office
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