



# Compact and Versatile Controller for SCADA & Telemetry Solutions

## SCADAPack x70 Smart RTUs



### Unique Features

SCADAPack™ x70 Smart RTUs combine the monitoring and communications capabilities of remote terminal units (RTU) with the processing and data-logging power of programmable logic controllers (PLC), providing superior functionality wherever remote processes require automatic supervision and autonomous control.

Green Premium™ ecolabel product – Sustainable performance, by design

# Enhanced performance in oil/gas, water/wastewater, and wind/solar applications

SCADAPack x70 Smart RTUs are the foundation for a range of solutions offering specific software and configuration tools tailored to your needs in:

## Digital Oil Field Solutions:

- Electronic Flow Measurement
- Well Production Optimization



## Water/Wastewater Solutions:

- Optimized for Remote Pumping Networks
- Lift Station Control



## Wind/Solar Solutions:

- Optimized for Remote Control and Monitoring



# Multiple Applications - SCADAPack x70

## Oil & Gas:

- Tank monitoring and automation
- Well test automation
- Well production and optimization
- Measurement

## Water & Wastewater

- Leakage detection
- Equipment monitoring & control
- Water quality monitoring
- Irrigation
- DMAs (District Metering Areas), PMAs (Press. Monitoring Areas)
- Monitoring flow / level / pressure and temperature, etc.

## Wind & Solar

- Substation Control and Monitoring
- Wind, Solar, Radiation, and Monitoring

| SCADAPack RTU | Analog Input <sup>1</sup> | Analog Output <sup>1</sup> | Digital Input <sup>1</sup> | Digital Output <sup>1</sup> | Frequency Input <sup>1</sup> | Serial Port | Ethernet Port | USB Device Port | USB Host Port |
|---------------|---------------------------|----------------------------|----------------------------|-----------------------------|------------------------------|-------------|---------------|-----------------|---------------|
| 470           | 4                         | 0                          | 4                          | 2                           | 4 (shared with DIs)          | 5           | 2             | 1               | 1             |
| 474           | 12                        | 2                          | 20                         | 12                          | 8 (shared with DIs)          | 5           | 2             | 1               | 1             |
| 570           | 0                         | 0                          | 2                          | 1                           | 0                            | 4           | 3             | 1               | 1             |
| 575           | 6                         | 2 (option)                 | 18                         | 9                           | 8 (shared with DIs)          | 4           | 3             | 1               | 1             |
| 574           | 8                         | 2 (option)                 | 18                         | 11                          | 0                            | 4           | 3             | 1               | 1             |

Footnote:

<sup>1</sup> Number of on-board I/O may be further expanded for any SCADAPack using Expansion I/O Modules. Refer to individual product data sheets for detailed specifications.

**Note:** Accessories sold separately.

### Disclaimer:

The information provided in this document contains general descriptions and/or technical characteristics of the performance of the described products or services. For detailed specification, performance and instruction of use, refer to corresponding Catalogs and user guides if available.

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Life Is On







# Green Premium™

Schneider Electric's commitment to deliver products with best-in-class environmental performance.



More than 75% of our product sales offer superior transparency on the material content, regulatory information and environmental impact of our products:

- RoHS compliance
- REACH substance information
- Industry leading # of PEP's\*
- Circularity instructions



Learn more about  
**Green  
Premium**

Green Premium promises compliance with the latest regulations, transparency on environmental impacts as well as circular and low-CO<sub>2</sub> products.

#### **CO<sub>2</sub> and P&L impact through... Resource Performance**

Green Premium brings improved resource efficiency throughout an asset's lifecycle. This includes efficient use of energy and natural resources, along with the minimization of CO<sub>2</sub> emissions.

#### **Cost of ownership optimization through... Circular Performance**

We're helping our customers optimize the total cost of ownership of their assets. To do this, we provide IoT-enabled solutions, as well as upgrade, repair, retrofit, and remanufacture services.

#### **Peace of mind through... Well-being Performance**

Green Premium products are RoHS and REACH-compliant. We're going beyond regulatory compliance with step-by-step substitution of certain materials and substances from our products.

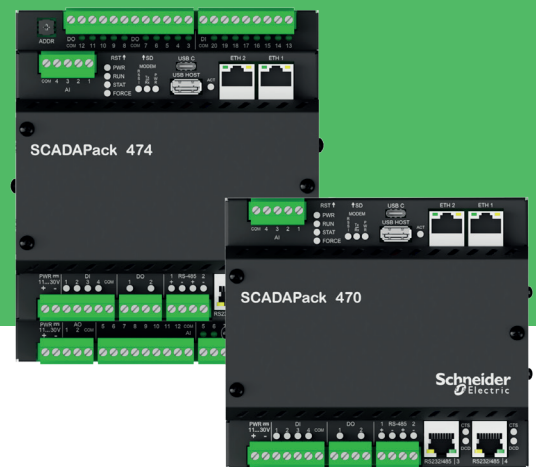
#### **Improved sales through... Differentiation**

Green Premium delivers strong value propositions through third-party labels and services. By collaborating with third-party organizations we can support our customers in meeting their sustainability goals such as green building certifications.

\*PEP: Product Environmental Profile (i.e. Environmental Product Declaration)

# SCADAPack 470 | 474

Remote Programmable  
Smart RTUs



## Product at a glance

SCADAPack™ x70 is the latest generation of SCADAPack Smart RTUs. Optimized for remote operations, the SCADAPack 470 and 474 Smart RTUs are the newest models to be introduced in this new series.

**Simple:** SCADAPack RemoteConnect configuration software facilitates configuration, logic development, data logging, and diagnostics in a single application, helping to reduce costs and overhead associated with maintaining multiple software applications for managing a single device. The SCADAPack 47x has ready-to-use Realflo™ Oil and Gas Flow Computer and Realift™ artificial lift solutions.

**Efficient:** The SCADAPack x70 Logic Editor within RemoteConnect software is based on EcoStruxure™ Control Expert software components, allowing for code reuse and sharing between Schneider Electric Modicon™ PLCs and SCADAPack Smart RTUs.

**Rugged:** Designed with Cybersecurity and ruggedized communications in mind, SCADAPack 47x hardware features conformal-coated boards and wide operating temperatures of -40...70 °C (-40...158 °F). Class I, Div. 2 and Zone 2 hazardous area certifications are included.

Green Premium™ ecolabel  
product – Sustainable  
performance, by design



# SCADAPack 470 | 474

## Remote Programmable Smart RTUs

### Product Highlights:

#### Flexible Protocol Implementation

- Open standard telemetry protocols such as DNP3 level 4 with Security Suite (Secure Authentication) and IEC 60870-5-104
- Easily associate Modbus™ and DNP3 protocols to database objects and variables
- DNP3 routing and Modbus Store and Forward facilitate communications bridge functionality using either protocol

#### Tagged (named) Object Database

- Improved readability and debugging of configuration and logic
- Easy-to-use object data logging

#### Microsoft® Excel Export and Import of Database Objects

- Create external templates for reuse and manipulation of configurations
- Reduce engineering time and costs for large systems with common configurations

#### SCADAPack x70 Logic Editor

- Based on EcoStruxure Control Expert (Unity Pro) software components with 5-language support for IEC 61131-3
- Code segment and function block export and import for code sharing between Schneider Electric Modicon PLCs and SCADAPack RTUs
- Leverage experience and personnel training across remote (RTU) and in-plant (PLC) projects

#### Remote Maintenance

- Update firmware, load/update logic, load configurations, and view diagnostics remotely or locally with RemoteConnect software
- Manage and configure multiple devices such as HART® instruments, actuators, variable frequency drives (VFDs), and other devices using plug-in DTMs for FDT2 or FDT1.2 within RemoteConnect software

#### Remote Ready Hardware

- 12...24 Vdc Input Power with input voltage monitor
- Wide operating temperature -40...70 °C (-40...158 °F)
- Conformal-coated circuit boards



### Typical applications for SCADAPack 470/474 RTUs

#### Oil and Gas:

- Tank monitoring and automation
- Well test automation
- Well production and optimization
- Measurement

#### Water and Wastewater

- Leakage detection
- Equipment monitoring and control
- Water quality monitoring
- Irrigation
- DMAs (District Metering Areas), PMAs (Press. Monitoring Areas)
- Monitoring flow / level / pressure and temperature, etc. and many others...

#### Solution Ready

- Available Realflo Oil and Gas flow computer
- Available Realift artificial lift control system

# SCADAPack 470 | 474

## Remote Programmable Smart RTUs

### Configuring and programming SCADAPack 47x RTUs

#### RemoteConnect software

RemoteConnect software facilitates configuration, diagnostics, logic development, and device management:

- Locally through any of the communication ports (default: USB device port)
- Remotely through serial or TCP/IP networks and modems

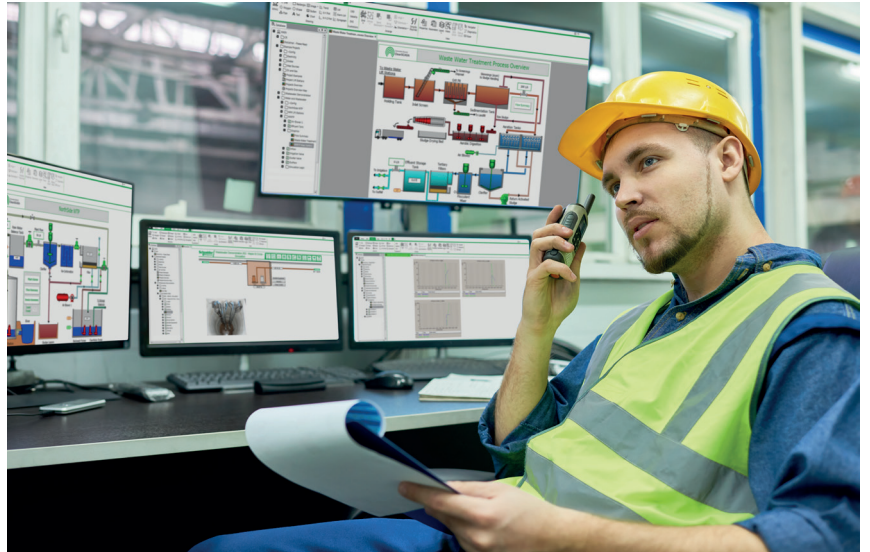
#### Device Management

- Upgrade of SCADAPack firmware
- Upgrade of I/O expansion module firmware<sup>1</sup>
- HART device configuration and data monitoring via vendor-supplied plug-in DTMs<sup>2</sup>
- Asset Management Software (AMS) TCP/IP network access to HART instruments and actuators via HART pass-through

#### Logic Development

RemoteConnect includes the SCADAPack x70 Logic Editor with which users can:

- Choose from five IEC 61131-3 compliant languages
- Use compiled run-time code for fast execution
- Import and export logic code segments for use in other SCADAPack projects or sharing<sup>3</sup> with Modicon PLC projects
- Perform online debugging and logic modifications from the SCADAPack x70 Logic Editor
- Develop and write logic to a running system without interruption to the logic
- Deploy new logic code between scans with minimal effect on execution time
- Using the EFB Toolkit, C programming can be used to create custom functions and function blocks



#### Configuration

- Use descriptive naming of objects to enhance development, debugging, and translation to host systems
- Import or export configurations for templating and bulk editing externally in Excel
- Group, filter, and sort objects for easy editing and viewing with RemoteConnect software object browsers

#### Datalogging

- RemoteConnect includes the SCADAPack x70 data logger. This feature can be used to provide a detailed record of a remote asset when investigating its operation remotely or on site.
- Use the RemoteConnect object browser to configure database objects for periodic or event-driven data logging.
- RemoteConnect's visualization tool can be used to display logged data when connected to the SCADAPack.
- Store up to 1,000,000<sup>4</sup> event records using internal memory and over 100,000,000 records using a USB drive or MicroSD card.

#### Diagnostics

- View system information and status from object browsers within RemoteConnect software
- View advanced diagnostics using the Telnet command line interface, including built-in protocol analyzers for DNP3, IEC 60870-5-104 and Modbus

# SCADAPack 470 | 474

## Remote Programmable Smart RTUs

### Specifications

#### Architecture

|  |   |
|--|---|
| Processor                                    | Dual ARM® Cortex® A7, plus ARM Cortex M3; 500 Mhz   |
| Memory                                       | <ul style="list-style-type: none"> <li>• SRAM – 4 MB, battery backed static RAM</li> <li>• DDR3 RAM – 256 MB, dynamic RAM</li> <li>• NAND Flash – 256 MB, flash memory</li> </ul>   |
| Events and datalogging                       | <ul style="list-style-type: none"> <li>• DNP3 and IEC 60870-5-104 events: 40,000<sup>5</sup>, store up to 1,000,000 events using internal file system</li> <li>• Store up to 100,000,000 events using USB drive or MicroSD card</li> </ul>  |
| Database capacity                            | <ul style="list-style-type: none"> <li>• Maximum number of database objects: Typically 15,000</li> <li>• Maximum number of database objects linked with logic programming: Typically 6,000</li> <li>• Object memory: <ul style="list-style-type: none"> <li>• Typical 2,600,000 bytes (event buffer at 5000 events)</li> <li>• Maximum: 2,756,800 bytes (event buffer at 100 events)</li> <li>• Minimum: 1,480,000 bytes (event buffer at 40,000 events)</li> </ul> </li> </ul> |
| Maximum DNP3 Outstation devices <sup>5</sup> | Approximately 90  |
| Maximum DNP3 Outstation objects <sup>5</sup> | Approximately 15,000 <sup>6</sup> across DNP3 Outstation devices  |
| Maximum Modbus Server Devices <sup>7</sup>   | 150   |
| Maximum objects mapped from Modbus devices   | 3,000 <sup>6</sup>  |
| File system storage                          | Approximately 70 MB   |
| USB host storage                             | <ul style="list-style-type: none"> <li>• Single-partition plug-in USB mass storage devices up to 32 GB<sup>8</sup></li> <li>• File format: FAT32</li> </ul>   |
| MicroSD card                                 | Up to 32 GB formatted with the FAT32 file system. MicroSD cards larger than 32 GB can be used by preparing a 32 GB volume on the card.  |

#### Communications

|                            |   |
|----------------------------|---|
| Serial Ports: 1, 2         | RS-485: 2-wire half-duplex operation. 4-pin removable terminal block, maximum baud rate 115,200 bps.  |
| Serial Ports: 3, 4         | <ul style="list-style-type: none"> <li>• RS-232: TxD, RxD, CTS, RTS, DCD, DTR</li> <li>• RS-485: 2-wire half-duplex operation</li> <li>• 8-pin modular RJ45 jack, maximum baud rate 115,200 bps</li> </ul>  |
| Serial Port: 5             | <ul style="list-style-type: none"> <li>• RS-232: TxD, RxD, CTS, RTS, DCD, DTR</li> <li>• Switched power out for modem, 350 mA available at RTU inputs voltage 12...24 Vdc, 8-pin removable terminal block under top cover.</li> </ul>                                 |
| Serial Protocols           | DNP3 level 4 outstation/client and peer-to-peer, Modbus RTU server/client   |
| Ethernet Ports: Eth1, Eth2 | 8-pin modular RJ45 jack, 10/100 Mbps UTP (10/100 Base-T), transformer-isolated, switched or independent ports   |
| IP Protocols               | <ul style="list-style-type: none"> <li>• DNP3 level 4 in TCP or in UDP Controlling Station/Outstation and peer-to-peer,</li> <li>• Modbus/TCP Server, Modbus/TCP Client</li> <li>• IEC 60870-5-104 controlled station</li> <li>• Telnet Server, FTP Server</li> </ul> |
| USB Device Port            | <ul style="list-style-type: none"> <li>• USB 2.0-compliant C-type receptacle</li> <li>• Supports communications at 1.5 Mb/s and 12 Mb/s</li> </ul>  |
| USB Host Port              | <ul style="list-style-type: none"> <li>• USB 2.0-compliant A-type receptacle</li> <li>• Supports USB mass storage devices up to 32 GB</li> <li>• Supports communications at 1.5 Mb/s and 12 Mb/s</li> </ul>   |



# SCADAPack 470 | 474

## Remote Programmable Smart RTUs

### Specifications – cont'd

#### General

|                  |   |
|------------------|---|
| Logic Control    | RemoteConnect software (SCADAPack x70 Logic with five IEC 61131-3 languages)  |
| I/O Terminations | 3.3...0.08 mm <sup>2</sup> (12...28 AWG), solid or stranded   |
| Dimensions       | <ul style="list-style-type: none"> <li>SCADAPack 470: 142 mm W x 127 mm H x 67 mm D (5.59 in. x 5.00 in. x 2.64 in.)</li> <li>SCADAPack 474: 142 mm W x 166 mm H x 88 mm D (5.59 in. x 6.54 in. x 3.46 in.)</li> </ul>  |
| Packaging        | <ul style="list-style-type: none"> <li>Corrosion-resistant; zinc-plated steel base and stainless steel cover with black enamel paint</li> <li>G3 conformal-coated circuit boards</li> </ul>   |
| Environment      | <ul style="list-style-type: none"> <li>-40...70 °C (-40...158 °F) operating temperature when the unit is mounted horizontally on a vertical surface</li> <li>-40...65 °C (-40...149 °F) operating temperature when the unit is mounted in any other position</li> <li>-40...85 °C (-40...185 °F) storage temperature</li> <li>5...95% relative humidity, non-condensing</li> <li>Pollution Degree 2, Installation Category I, Indoor use</li> </ul> |
| Shock            | IEC 61131-2 ½ sine, 15 ms, 15 g   |
| Vibration        | <ul style="list-style-type: none"> <li>IEC 61131-2</li> <li>5...8.4 Hz: Amplitude controlled, 7.0 mm (0.28 in) peak-to-peak</li> <li>8.4...150 Hz: Acceleration controlled, 1.0 g peak</li> </ul>   |

#### Power Supply

|   |   |
|---|---|
| Input voltage                                       | <ul style="list-style-type: none"> <li>Rated Voltage 14...29 Vdc</li> <li>Turn-on 10...11.5 Vdc</li> <li>Turn-off 9...10 Vdc</li> </ul> |
| Power requirements                                  | <ul style="list-style-type: none"> <li>2.8 W (SCADAPack 470)</li> <li>4 W (SCADAPack 474)</li> </ul>                                    |
| Maximum power input to controller (excluding modem) | 8.4 W   |

#### Certifications

|                                    |   |
|------------------------------------|---|
| Industrial Standards               | <p>Requirements specific to the SCADAPack functional characteristics, immunity, robustness, and safety:</p> <ul style="list-style-type: none"> <li>IEC/EN 61131-2</li> <li>CAN/CSA 22.2 No. 61010-1-12 and CAN/CSA 22.2 No. 61010-2-201</li> <li>UL 61010-1 and UL 61010-2-201</li> </ul>   |
| CE Marking Compliance              | <ul style="list-style-type: none"> <li>For the latest information regarding product compliance with European Directives for CE marking, refer to the EU Declaration of Conformity issued for your product at <a href="https://se.com">se.com</a></li> <li>For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at <a href="https://checkaproduct.se.com/">https://checkaproduct.se.com/</a></li> </ul>   |
| Installation in Classified Ex Area | <ul style="list-style-type: none"> <li>North America: Hazardous locations Class I, Division 2, groups A, B, C, and D, T4 and Class I, Zone 2, T4, -40 °C ≤ Tamb ≤ 70 °C (-40 °F ≤ Tamb ≤ 158 °F) and Class I, Zone 2, IIC T4 according to CSA C22.2 No. 213-17, UL 12.12.01</li> <li>ATEX, UKEX: Zone 2, II 3G, Ex ec nC IIC T4 Gc according to EN IEC 60079- 0, EN IEC 60079-7 and EN IEC 60079-15</li> <li>IECEX: Zone 2, Ex ec nC IIC T4 Gc according to IEC 60079- 0, IEC 60079-7 and IEC 60079-15</li> <li>For Eurasian Economic Union: EAC </li> </ul> |
| Specific Countries                 | <ul style="list-style-type: none"> <li>For Australia and New Zealand: ACMA requirements for RCM marking</li> <li>For United States: FCC Part 15 Subpart B Class A</li> </ul>  |

# SCADAPack 470 | 474

## Remote Programmable Smart RTUs

### Specifications – cont'd

#### Digital and Analog Inputs/Outputs

| SCADAPack Smart RTU | Digital inputs<br>12...24 Vdc |           | Digital outputs |           | Pulse counter inputs<br>(shared with DIs) |           | Analog inputs |           | Analog outputs |
|---------------------|-------------------------------|-----------|-----------------|-----------|---|-----------|---------------|-----------|----------------|
|                     | DI 1...4                      | DI 5...20 | DO 1...2        | DO 3...12 | DI 1...4                                  | DI 5...12 | AI 1...4      | AI 5...12 | AO 1...2       |
| 470                 | 4                             | -         | 2               | -         | 4   | -         | 4             | -         | -              |
| 474                 | 4                             | 16        | 2               | 10        | 4   | 8         | 4             | 8         | 2              |

|                                 |  |
|---------------------------------|--|
| Digital Inputs                  | <p><b>DI 1...4</b><br/>12...24 Vdc</p> <p><b>DI 5...20 (SCADAPack 474 only)</b><br/>12...24 Vdc</p>  |
| Pulse Counter Inputs            | <p><b>DI 1...4</b><br/>Max. 10 kHz (@ 50% duty cycle)<br/>Built-in turbine preamplifier<sup>10</sup> for direct connection to turbine coils using short, shielded cable only.</p> <p><b>Shared with first 8 digital input channels on lower I/O board</b><br/><b>DI 5...8 (SCADAPack 474 only)</b><br/>Max. 1.5 kHz (@ 50% duty cycle)</p> <p><b>DI 9...12 (SCADAPack 474 only)</b><br/>Max. 150 Hz (@ 50% duty cycle)</p>   |
| Digital Outputs                 | <p><b>DO 1...2</b><br/>Form A, NO (Normally Open) relays, 2 A @ 30 Vdc,</p> <p><b>DO 3...12 (SCADAPack 474 only)</b><br/>Form A, NO (Normally Open) relays, 2 A @ 30 Vdc</p>   |
| Analog Inputs                   | <p><b>AI 1...4</b><br/>0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc, 12-bit resolution, unipolar, non-isolated, voltage/current selectable by software, configurable for 30 mSec high speed update rate</p> <p><b>AI 5...12 (SCADAPack 474 only)</b><br/>0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc, 24-bit resolution, single-ended, isolated from logic and chassis.<br/>Filtering configuration 'none' results in fast sampling @100 mSec total for all 8 channels, '50/60Hz' filter configuration results in sampling @ 500mSec for all 8 channels</p> |
| Analog Outputs                  | <p><b>AO 1...2 (SCADAPack 474 only)</b><br/>0...20 mA, 4...20 mA (voltage output with external resistor), 12-bit resolution over 0...20 mA range, single-ended, isolated from logic and chassis</p>  |
| Internal (System) Analog Inputs | <ul style="list-style-type: none"> <li>• Input power supply voltage monitor, 36 Vdc full scale</li> <li>• Memory/RTC battery voltage monitor</li> <li>• Internal temperature monitor, measurement range -40...75 °C (-40...167 °F)</li> </ul>  |
| Clock calendar                  | ±15 seconds per month at -40...70 °C (-40...158 °F)  |

#### Additional I/O

|                                   |  |
|-----------------------------------|--|
| Supported Modules                 | <ul style="list-style-type: none"> <li>• Supported modules: 5304, 5405, 5410, 5414, 5415, 5505, 5506, 5606, 5607, 6601, 6602, 6607</li> <li>• When SCADAPack 47x controller is used with 5000-series I/O Expansion modules, order one Inter Module Cable (IMC) adaptor cable (ref. TBUM297138), to adapt from 20 signal lines (used by SCADAPack x70 Smart RTUs) to 16 signal lines (used by 5000-series IO modules)</li> <li>• Maximum number of external expansion modules per unit: 15</li> </ul> |
| I/O Expansion Limits <sup>9</sup> | <ul style="list-style-type: none"> <li>• Refer to the SCADAPack x70 Documentation Set &gt; Hardware Manuals for further details.</li> <li>• Maximum intermodule cable length (not including the short cables that come with each module) is 1.82 m (75 in.)</li> </ul>   |

# SCADAPack 470 | 474

## Remote Programmable Smart RTUs

### Model Code

TBUP474-UA50-BB00S is an example of a SCADAPack 474 part number using the model codes below

| Code     | Select: Hardware platform  |
|----------|--|
| TBUP470U | SCADAPack 470, 32-bit controller, Dual Core, SCADAPack x70 Firmware (RemoteConnect Configuration & IEC 61131-3 programming software, included)                           |
| TBUP474U | SCADAPack 474, 32-bit controller, Dual Core comes with additional I/O, SCADAPack x70 Firmware (RemoteConnect Configuration & IEC 61131-3 programming software, included) |

| Code | Select: SCADA Security   |
|------|--|
| A    | Standard security features, includes DNP3 Secure Authentication SAv2 (Security Administrator application required) |

| Code | Select: Protocol Option  |
|------|--|
| 5    | DNP3 Serial/IP client/outstation/peer-to-peer, Modbus RTU/TCP client/server, TCP/IP, and IEC 60870-5-104 |

| Code | Select: License Option  |
|------|---|
| 0    | Standard DNP3 features, includes DNP3 Data Concentrator Controlling Station License |

| Code | Select: Analog & Digital Inputs/Outputs   |
|------|---|
| AA   | SCADAPack 470: <ul style="list-style-type: none"> <li>• 4 Analog Inputs, selectable as 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc</li> <li>• 4 Digital Inputs (12...24 Vdc)</li> <li>• 2 Digital Outputs Form A, NO (Normally Open) relays</li> </ul>   |
| BB   | SCADAPack 474, adds: <ul style="list-style-type: none"> <li>• 8 Analog Inputs, factory-shipped selectable as 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc</li> <li>• 2 Analog Outputs, selectable as 0...20 or 4...20 mA</li> <li>• 16 Digital Inputs (12...24 Vdc)</li> <li>• 10 Digital Outputs Form A NO (Normally Open) relays</li> </ul> |

| Code | Future Option |
|------|---------------|
| 0    | None          |

| Code | Select: Realflo Flow Computer - Flow Run License Options  |
|------|---|
| 0    | None  |
| 3    | 3 Runs - any combination of gas, liquid or water totaling 3 runs (gas runs include gas transmission option)   |
| 6    | 6 Runs - any combination of gas, liquid or water totaling 6 runs (gas runs include gas transmission option)   |
| T    | 12 Runs - any combination of gas, liquid or water totaling 12 runs (gas runs include gas transmission option) |
| V    | 20 Runs - any combination of gas, liquid or water totaling 20 runs (gas runs include gas transmission option) |

| Code | Select: Certifications  |
|------|---|
| S    | <ul style="list-style-type: none"> <li>• North America: Hazardous locations Class I, Division 2, groups A, B, C, and D, T4 and Class I, Zone 2, T4, -40 °C ≤ Tamb ≤ 70 °C (-40 °F ≤ Tamb ≤ 158 °F) and Class I, Zone 2, IIC T4 according to CSA C22.2 No. 213-17, UL 12.12.01</li> <li>• ATEX, UKEX: Zone 2, II 3G, Ex ec nC IIC T4 Gc according to EN IEC 60079- 0, EN IEC 60079-7 and EN IEC 60079-15</li> <li>• IECEx: Zone 2, Ex ec nC IIC T4 Gc according to IEC 60079- 0, IEC 60079-7 and IEC 60079-15</li> <li>• For Eurasian Economic Union: EAC</li> </ul> |



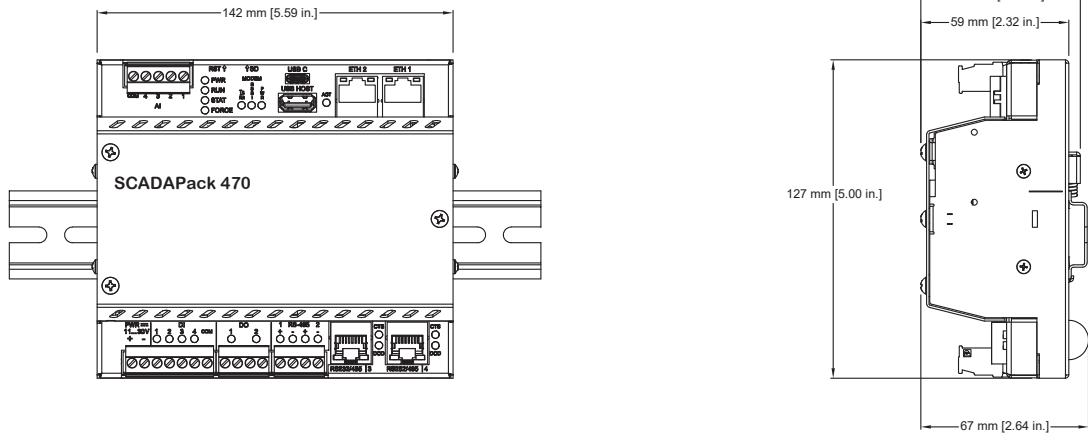
# SCADAPack 470 | 474

Remote Programmable Smart RTUs

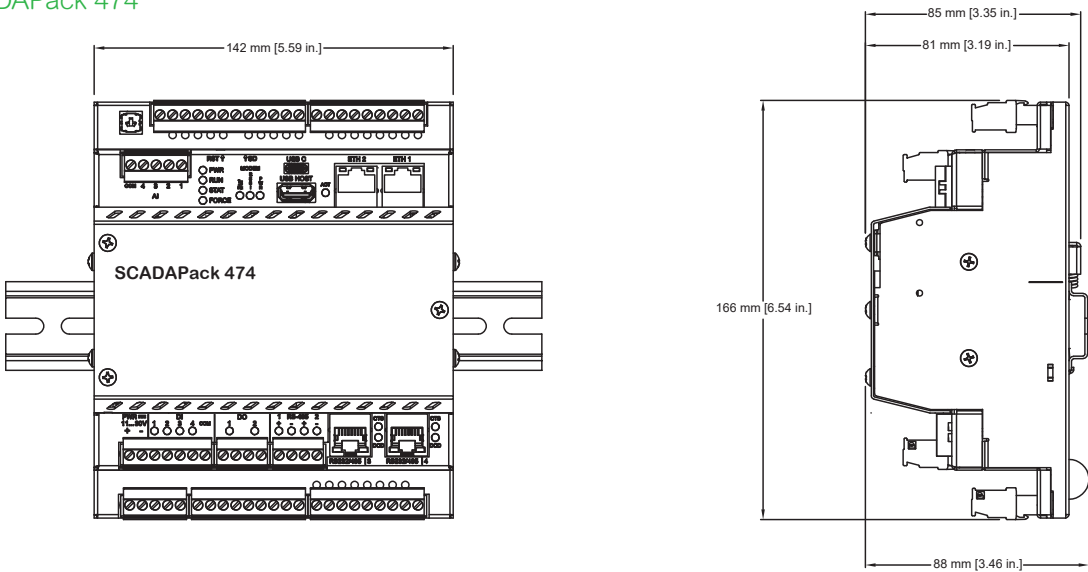
## Accessories

| Part Number | Description  |
|-------------|--|
| TBUM297310  | SCADAPack 47x Connector Kit - five complete sets of spare connectors for SCADAPack 470 and 474 RTUs, and 6607 I/O expansion module |
| TBUM297147  | SCADAPack Rod Pump Controller, Factory   |
| TBUM297148  | SCADAPack Rod Pump Controller, Field Upgrade   |

## Dimensions - SCADAPack 470



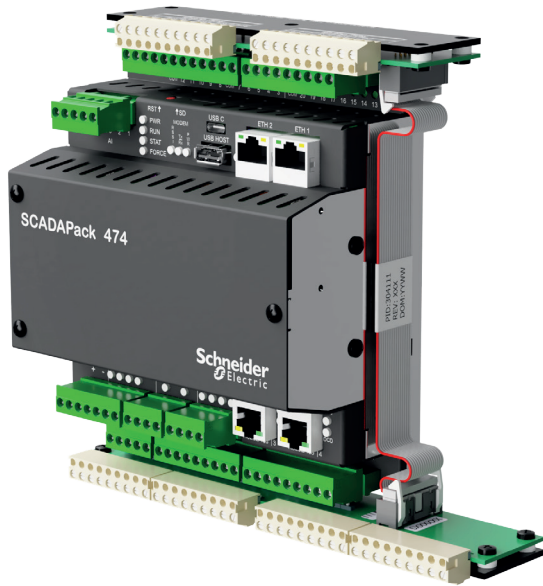
## Dimensions - SCADAPack 474



# SCADAPack 470 | 474

## Remote Programmable Smart RTUs

### Terminal Adaptors



Optional terminal adaptors provide the possibility for drop-in wiring replacement of existing SCADAPack P1, or SCADAPack P4 RTUs. This approach can save substantial time and costs when upgrading existing panels to SCADAPack 474.

The terminal adaptors provide pin headers that accept the older style 'gray' plug-in terminal blocks. The adaptors position the terminal headers to approximately the same physical position as they are on the existing SCADAPacks. If panel space allows, and the wiring scheme is compatible with the terminal adaptors, the SCADAPack 474 can be placed into the existing panel, and existing wiring to the lower I/O board can be plugged onto the terminal adaptors without removing the wires from the terminal blocks.

For further details on the TBUM297915 terminal adaptor kit, refer to its data sheet (TBULM08038-10).

1. I/O expansion module firmware upgrades are supported on 6xxx modules only.
2. DTM is Device Type Manager – vendor-supplied device driver for device-specific configuration and data display. RemoteConnect software is an FDT1.2 (Field Device Tool version 1.2) and FDT2 (Field Device Tool version 2) container for compatible DTMs.
3. Sharing of logic code does not include hardware specific functions or system variables that are not common to both platforms.
4. Internal memory can be configured to limit internal event storage. External events are stored on a device formatted to 32 GB.
5. Polled by the SCADAPack when it is operating as a DNP3 Controlling Station
6. Varies depending on object types, event storage, and integrated application memory usage.
7. Refer to product manual for details as actual maximum number of Modbus server devices depends on polling method(s) and port type (serial or Ethernet).
8. Larger USB mass storage devices may be formatted to 32 GB FAT32.
9. Additional power supply modules (model 5103 or 6103) may be required for additional bus power, depending on how many expansion modules are included on the bus.
10. Turbine preamplifier supported on DI1 and DI2 only.

**Note:** Refer to the SCADAPack x70 Documentation Set for further details.

#### Disclaimer:

The information provided in this document contains general descriptions and/or technical characteristics of the performance of the described products or services. For detailed specification, performance and instruction of use, refer to corresponding Catalogs and user guides if available.

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Part Number: TBULM08030-06 v36

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\*PEP: Product Environmental Profile (i.e. Environmental Product Declaration)



# SCADAPack 570 | 574 | 575

Remote Programmable  
Smart RTUs



## Product at a glance

SCADAPack™ x70 is the latest generation of SCADAPack Smart RTUs. Optimized for remote operations, the SCADAPack 570, 574 and 575 Smart RTUs are included in this series.

**Simplicity:** SCADAPack RemoteConnect configuration software facilitates configuration, logic development, data logging, and diagnostics in a single application, helping to reduce costs and overhead associated with maintaining multiple software applications for managing a single device. The SCADAPack 57x has ready-to-use Realflo™ Oil and Gas Flow Computer solutions.

**Efficiency:** The SCADAPack x70 Logic Editor within RemoteConnect software is based on EcoStruxure™ Control Expert software components, allowing for code reuse and sharing between Schneider Electric Modicon™ PLCs and SCADAPack Smart RTUs.

**Rugged:** Designed with Cybersecurity and ruggedized communications in mind, SCADAPack 47x hardware features conformal-coated boards and wide operating temperatures of -40...70 °C (-40...158 °F). Class I, Div. 2 and Zone 2 hazardous area certifications are included.

Green Premium™ ecolabel  
product – Sustainable  
performance, by design

# SCADAPack 570 | 574 | 575

## Remote Programmable Smart RTUs

### Product Highlights:

#### Flexible Protocol Implementation

- Open standard telemetry protocols such as DNP3 level 4 with Security Suite (Secure Authentication) and IEC 60870-5-104
- Easily associate Modbus™ and DNP3 protocols to database objects and variables
- DNP3 routing and Modbus Store and Forward facilitate communications bridge functionality using either protocol

#### Tagged (named) Object Database

- Improved readability and debugging of configuration and logic
- Easy-to-use object data logging

#### Microsoft® Excel Export & Import of Database

##### Objects

- Create external templates for reuse and manipulation of configurations
- Reduce engineering time and costs for large systems with common configurations

#### x70 Logic Editor

- Based on EcoStruxure Control Expert (Unity Pro) software with 5-language support for IEC 61131-3
- Code segment and function block export & import for code sharing between Schneider Electric Modicon PLCs and SCADAPack RTUs
- Leverage experience and personnel training across remote (RTU) and in-plant (PLC) projects

#### Remote Maintenance

- Update firmware, load/update logic, load configurations, and view diagnostics remotely or locally with RemoteConnect software
- Manage and configure multiple devices such as HART® instruments, actuators, variable frequency drives (VFDs), and other devices using plug-in DTMs for FDT2 and FDT1.2 within RemoteConnect software

#### Remote Ready Hardware

- 12...30 Vdc Input Power with input voltage monitor
- Wide operating temperature -40...70 °C (-40...158 °F)
- Conformal-coated circuit boards



### Typical applications for SCADAPack 570/575 RTUs

#### Oil and Gas

- Support for Realflo™ Flow Computer, SCADAPack Smart RTU-based flow measurement application, providing flow computation for natural gas, hydrocarbon liquids and produced water
- Tank monitoring & automation
- Well test automation
- Well production and optimization

#### Water & Wastewater

- Leakage detection
- Equipment monitoring & control
- Water quality monitoring
- Irrigation
- DMAs (District Metering Areas), PMAs (Pressure Monitoring Areas)
- Monitoring flow / level / pressure and temperature, and many others...

#### Solution Ready

- Available Realflo Oil and Gas flow computer

# SCADAPack 570 | 574 | 575

## Remote Programmable Smart RTUs

### Configuring and programming SCADAPack 57x RTUs

#### RemoteConnect Software

RemoteConnect software facilitates configuration, diagnostics, logic development, and device management:

- Locally through any of the communication ports
- Remotely through serial or TCP/IP networks, modems and radios

#### Device Management

- Upgrade of SCADAPack firmware
- Upgrade of I/O expansion module firmware<sup>1</sup>
- HART device configuration and data monitoring via vendor supplied plug-in DTMs<sup>2</sup>
- Asset Management Software (AMS) TCP/IP network access to HART instruments and actuators via HART pass through

#### Logic Development

RemoteConnect includes the SCADAPack x70 Logic Editor with which users can:

- Choose from five IEC 61131-3 compliant languages
- Use compiled run-time code for fast execution
- Import and export logic code segments for use in other SCADAPack projects or sharing<sup>3</sup> with Modicon PLC projects
- Perform online debugging and logic modifications from the x70 Logic Editor
- Develop and write logic to a running system without interruption to the logic
- Deploy new logic code between scans with minimal effect on execution time
- Using the EFB Toolkit, C programming can be used to create custom functions and function blocks



#### Configuration

- Use descriptive naming of objects to enhance development, debugging, and translation to host systems
- Import or export configurations for templating and bulk editing externally in Excel
- Group, filter, and sort objects for easy viewing and editing with RemoteConnect software object browsers

#### Datalogging

- RemoteConnect includes the SCADAPack x70 data logger. This feature can be used to provide a detailed record of a remote asset when investigating its operation remotely or on site.
- Use the RemoteConnect object browser to configure database objects for periodic or event-driven data logging.
- RemoteConnect's visualization tool can be used to display logged data when connected to the SCADAPack.
- Store up to 1,000,000<sup>4</sup> event records using internal memory and over 100,000,000 records using a USB drive.

#### Diagnostics

- View system information and status from object browsers within RemoteConnect software
- View advanced diagnostics using the Telnet command line interface, including built-in protocol analyzers for DNP3, IEC 60870-5-104 and Modbus



# SCADAPack 570 | 574 | 575

## Remote Programmable Smart RTUs

### Specifications

#### Architecture

|  |   |
|--|---|
| Processor                                    | SPEAr 1380 32-bit dual-core Cortex A9 microcontroller, 500 MHz  |
| Memory                                       | <ul style="list-style-type: none"> <li>128 MB NAND FLASH, 128 MB DDR3 RAM</li> <li>Non-Volatile RAM CMOS SRAM with lithium battery retains contents for 2 years with no power</li> </ul>  |
| Events and datalogging                       | <ul style="list-style-type: none"> <li>DNP3 and IEC 60870-5-104 events: 40,000<sup>5</sup>, store up to 1,000,000 events using internal file system</li> <li>Store up to 100,000,000 events using USB drive</li> </ul>  |
| Database capacity                            | <ul style="list-style-type: none"> <li>Maximum number of database objects: Typically 15,000</li> <li>Maximum number of database objects linked with logic programming: Typically 6,000</li> <li>Object memory: <ul style="list-style-type: none"> <li>Typical 2,600,000 bytes (event buffer at 5000 events)</li> <li>Maximum: 2,756,800 bytes (event buffer at 100 events)</li> <li>Minimum: 1,480,000 bytes (event buffer at 40,000 events)</li> </ul> </li> </ul> |
| Maximum DNP3 Outstation devices <sup>5</sup> | Approximately 90  |
| Maximum DNP3 Outstation objects <sup>5</sup> | Approximately 15,000 <sup>6</sup> across DNP3 Outstation devices  |
| Maximum Modbus Server Devices <sup>7</sup>   | 150   |
| Maximum objects mapped from Modbus devices   | 3,000 <sup>6</sup>  |
| File system storage                          | Internal: 70 MB usable; External: 32 GB (using optional USB memory stick)   |
| USB host storage                             | <ul style="list-style-type: none"> <li>Single-partition plug-in USB mass storage devices up to 32 GB<sup>8</sup></li> <li>File format: FAT32</li> </ul>   |


#### Communications

|                                  |   |
|----------------------------------|---|
| Serial Ports: Serial1, Serial2   | <ul style="list-style-type: none"> <li>RS-232 port, 8-pin modular RJ45 jack, +5 Vdc power control, hardware handshaking, maximum baud rate 115,200 bps</li> <li>Rated to ±15 kV (IEC 61000-4-2, Air Discharge) static protection</li> </ul>   |
| Serial Ports: Serial3, Serial4   | Configurable as: <ul style="list-style-type: none"> <li>RS-232 or RS-485 two-wire, half-duplex, maximum baud rate 115,200 bps</li> <li>8-pin modular RJ45 jack, rated to ±15 kV (IEC 61000-4-2, Air Discharge) static protection</li> </ul>   |
| Serial Protocols                 | DNP3 level 4 server/client and peer-to-peer, Modbus RTU server/client   |
| Ethernet Ports: Eth1, Eth2, Eth3 | 8-pin modular RJ45 jack, 10/100 Mbps UTP (10/100 Base-T), transformer-isolated  |
| IP Protocols                     | <ul style="list-style-type: none"> <li>DNP3 level 4 in TCP or in UDP Client/Server and peer-to-peer,</li> <li>Modbus/TCP Server, Modbus/TCP Client</li> <li>IEC 60870-5-104 controlled station</li> <li>Telnet Server, FTP Server</li> <li>HART pass through over TCP when connected to SCADAPack 6602 modules</li> </ul> |
| USB Device Port                  | USB 2.0 compliant "B"-type receptacle, for local configuration  |
| USB Host Port                    | USB 2.0-compliant "A"-type receptacle, supports USB memory sticks up to 32 GB <sup>6</sup>  |

# SCADAPack 570 | 574 | 575

## Remote Programmable Smart RTUs

### Specifications – cont'd

| <b>General</b>               |  |
|------------------------------|--|
| Logic Control                | RemoteConnect software (five IEC 61131-3 languages)  |
| I/O Terminations             | Plug-in terminal blocks 0.0810...3.31 mm <sup>2</sup> (28...12 AWG), solid or stranded   |
| Dimensions                   | <ul style="list-style-type: none"> <li>SCADAPack 570: 150.5 mm x 134.8 mm x 74.9 mm (5.93 in. wide x 5.31 in. high x 2.95 in. deep)</li> <li>SCADAPack 574: 150.5 mm x 181.7 mm x 91.0 mm (5.93 in. wide x 7.15 in. high x 3.58 in. deep)</li> <li>SCADAPack 575: 150.5 mm x 182.3 mm x 86.5 mm (5.93 in. wide x 7.18 in. high x 3.41 in. deep)</li> </ul>   |
| Packaging                    | <ul style="list-style-type: none"> <li>Corrosion-resistant; zinc-plated steel base and stainless steel cover with black enamel paint</li> <li>G3 conformal-coated circuit boards</li> </ul>  |
| Environment                  | <ul style="list-style-type: none"> <li>Operating temperature -40...70 °C (-40...158 °F), storage temperature, -40...85 °C (-40...185 °F)</li> <li>5% RH to 95% RH, non-condensing</li> </ul>   |
| Shock                        | IEC 61131-2 mechanical shock (tested up to 15 g shock)   |
| Vibration                    | <ul style="list-style-type: none"> <li>IEC 61131-2</li> <li>5...8.4 Hz: Amplitude controlled, 7.0 mm (0.28 in) peak-to-peak</li> <li>8.4...150 Hz: Acceleration controlled, 1.0 g peak</li> </ul>  |
| Realflo Flow Computer        | <p>Flow Run License Options:</p> <ul style="list-style-type: none"> <li>3 Runs - any combination of gas, liquid or water totaling 3 runs (gas runs include gas transmission option)</li> <li>6 Runs - any combination of gas, liquid or water totaling 6 runs (gas runs include gas transmission option)</li> <li>12 Runs - any combination of gas, liquid or water totaling 12 runs (gas runs include gas transmission option)</li> <li>20 Runs - any combination of gas, liquid or water totaling 20 runs (gas runs include gas transmission option)</li> </ul>  |
| <b>Power Supply</b>          |  |
| Rated Voltage and Power      | <p>12...30 Vdc:</p> <ul style="list-style-type: none"> <li>SCADAPack 570 typical 4.3 W</li> <li>SCADAPack 574 typical 6.5 W, Max. 9.2 W</li> <li>SCADAPack 575 typical 5.4 W, Max. 9.1 W</li> <li>Class 2 power supply required</li> </ul>   |
| <b>Certifications</b>        |  |
| EMC & Radio Frequency        | <ul style="list-style-type: none"> <li>FCC 47 CFR Part 15, Subpart B</li> <li>ICES-003</li> <li>CE and RCM markings</li> </ul>   |
| General Safety               | <ul style="list-style-type: none"> <li>SCADAPack 570 and 575: UL 508</li> <li>SCADAPack 574: IEC 61010-2-201; UL; CSA</li> </ul>   |
| Hazardous locations (option) | <ul style="list-style-type: none"> <li>cCSAus Non-Incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2</li> <li>SCADAPack 570 and 575: IECEx/ATEX Ex nA IIC T4 Gc -40 °C ≤ Ta ≤ +70 °C</li> <li>SCADAPack 574: ATEX Ex nA IIC T4 Gc -40 °C ≤ Ta ≤ +70 °C</li> <li>For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at <a href="https://checkaproduct.se.com/">https://checkaproduct.se.com/</a></li> <li>For Eurasian Economic Union: EAC </li> </ul> |

# SCADAPack 570 | 574 | 575

## Remote Programmable Smart RTUs

### Specifications – cont'd

#### Digital and Analog Inputs/Outputs

|               | Digital inputs                    |                              | Digital outputs   |                  | Counter inputs                          |   |  | Analog inputs<br>Lower IO<br>Module: | Analog outputs<br>(option)<br>Lower IO<br>Module: |
|---------------|-----------------------------------|------------------------------|-------------------|------------------|---|---|--|--------------------------------------|---|
|               | Controller Board:<br>10 ms<br>SOE | Lower IO Module:<br>1 ms SOE | Controller Board: | Lower IO Module: | Controller Board:<br>10 KHz<br>(shared) | Lower IO Module:<br>1.5 KHz<br>(shared) | Lower IO Module:<br>150 Hz<br>(shared) |                                      |   |
| SCADAPack 570 | 2                                 | -                            | 1                 | -                | 2                                       | -                                       | -                                      | -                                    | -   |
| SCADAPack 574 | 2                                 | 16                           | 1                 | 10               | 2                                       | -                                       | -                                      | 8                                    | 2   |
| SCADAPack 575 | 2                                 | 16                           | 1                 | 8                | 2                                       | 4                                       | 4                                      | 6                                    | 2   |

|                 |   |
|-----------------|---|
| Digital Inputs  | <p>Controller Board: 2</p> <ul style="list-style-type: none"> <li>Din1...2</li> <li>12...24 Vdc</li> <li>DC input current: 0.4 mA at 12 Vdc, 0.8 mA at 24 Vdc</li> <li>Ground return connected to Chassis Ground</li> </ul> <p>Lower IO Module 574: 16</p> <ul style="list-style-type: none"> <li>DI0...15</li> <li>12...24 Vdc, Turn-on voltage: 9 Vdc (minimum), Turn off voltage: 4 Vdc (maximum)</li> <li>Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage</li> <li>DC input current: 0.67 mA typical at 24 Vdc</li> <li>Isolation: in groups of 8, 1500 Vac from logic supply and chassis</li> </ul> <p>Lower IO Module 575: 16</p> <ul style="list-style-type: none"> <li>DI1...16</li> <li>12...24 Vdc</li> <li>DC input current: 1.2 mA at 12 Vdc, 2.4 mA at 24 Vdc</li> <li>Isolation: in 2 groups of 8. Isolation from RTU logic and chassis: 1000 Vac/ 1500 Vdc</li> </ul>   |
| Counter Inputs  | <p>Controller Board: 2</p> <ul style="list-style-type: none"> <li>DI1...2</li> <li>Shared with 2 digital input channels</li> <li>0...10 kHz</li> </ul> <p>Lower IO Module 575: 8</p> <ul style="list-style-type: none"> <li>DI1...4: 0...1.5 kHz</li> <li>DI5...8: 0...150 Hz</li> <li>Shared with first 8 digital input channels on lower I/O board</li> </ul>   |
| Digital Outputs | <p>Controller Board: 1</p> <ul style="list-style-type: none"> <li>Dout</li> <li>Sinking MOSFET output, rated 30 Vdc, 0.5 A, ground return connected to Chassis Ground</li> </ul> <p>Lower IO Module 574: 10</p> <ul style="list-style-type: none"> <li>DO0...9</li> <li>Dry-contact or solid-state relays (Form A - normally open)</li> <li>5 contacts share one common</li> <li>Isolation: Chassis or logic to contact 1500 Vac (1 min.)</li> <li>Controls: (DNP3 protocol) Direct Operate, Select Before Operate, Trip/Close, Latch, Pulse</li> </ul> <p>Dry-contact relays:</p> <ul style="list-style-type: none"> <li>Contact rating 3 A, 30 Vdc (resistive), 12 A maximum per common</li> </ul> <p>Solid-state relays:</p> <ul style="list-style-type: none"> <li>Load voltage 30 Vdc maximum</li> <li>Load current 2 A continuous max at 50 °C (122 °F), or 1.33 A at 70 °C (158 °F) ambient</li> </ul> <p>Lower IO Module 575: 8</p> <ul style="list-style-type: none"> <li>DO1...8</li> <li>2 Form C relays: SPDT, separate Normally Open/Normally Closed/Common</li> <li>6 Form A relays: Normally Open, one shared common</li> <li>Isolation: 500 Vac minimum to RTU logic</li> <li>Maximum Switching Voltage: 30 Vdc or 25 Vac</li> <li>Maximum Switching Load: 60 W or 50 VA (2 A)</li> <li>Status &amp; Reporting: Individual relay status feedback to software for quality indication</li> <li>Controls (DNP3 Protocol): Direct Operate, Select Before Operate, Trip/Close, Latch, Pulse</li> </ul> |



# SCADAPack 570 | 574 | 575

## Remote Programmable Smart RTUs

### Specifications – cont'd

#### Digital and Analog Inputs/Outputs

|                                   |   |
|-----------------------------------|---|
| Analog Inputs                     | <p>Lower IO Module 574: 8</p> <ul style="list-style-type: none"> <li>• AI0...7</li> <li>• Software-configurable: 0...20 mA, 4...20 mA, 0...5 Vdc or 0...10 Vdc, plus over range</li> <li>• Resolution: 15-bit ADC (15-bit in measurement range 0...10 Vdc, and 14-bit in 5 Vdc or 20 mA input ranges)</li> <li>• Accuracy: <math>\pm 0.1\%</math> of full scale at 25 °C (77 °F), <math>\pm 0.2\%</math> over temperature range</li> <li>• Input Resistance: 250 <math>\Omega</math> in current ranges, 20 k<math>\Omega</math> in voltage ranges</li> <li>• Normal mode rejection: 27 dB at 60 Hz</li> <li>• Sampling rate: 170 ms</li> <li>• Isolation: 500 Vac from logic and chassis</li> </ul> <p>Lower IO Module 575: 6</p> <ul style="list-style-type: none"> <li>• AI1...6</li> </ul> <p>Dipswitch-configurable to current or voltage input</p> <ul style="list-style-type: none"> <li>• Input ranges: 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc</li> <li>• Uni-polar, differential</li> <li>• Resolution: 24-bit ADC (19-bit over the measurement range)</li> <li>• Accuracy: <math>\pm 0.1\%</math> of full scale at 25 °C (77 °F), <math>\pm 0.2\%</math> over temperature range</li> <li>• Isolation: 250 Vac isolation from channel to channel and from logic and chassis</li> <li>• Input Resistance: 250 <math>\Omega</math> or 800 k<math>\Omega</math> in current/voltage configurations</li> <li>• Under range: 4...20 mA measures to 0 mA</li> <li>• Common Mode Rejection: -80 dB @ 50/60 Hz</li> <li>• Sampling rate: software-selectable to 30 ms (unfiltered) or 500 ms (filtered)</li> </ul> |
| Analog Outputs                    | <p>Lower IO Module 574: 2</p> <ul style="list-style-type: none"> <li>• AO0...1</li> <li>• Optional</li> <li>• 0...20 mA or 4...20 mA, voltage output may be accomplished with external precision resistor.</li> </ul> <p>Lower IO Module 575: 2</p> <ul style="list-style-type: none"> <li>• AO1...2</li> <li>• Optional</li> <li>• Output ranges: 0...20 mA, 4...20 mA, voltage output may be accomplished with external precision resistor</li> <li>• Uni-polar</li> <li>• Resolution: 12-bit over 0...20 mA range</li> <li>• Accuracy: <math>\pm 0.15\%</math> at 25 °C, <math>\pm 0.35\%</math> of full scale over temperature range</li> <li>• Power Supply: 12...30 Vdc, external, Current: 50 mA</li> <li>• Isolation: transformer, 500 Vdc maximum to RTU logic and chassis</li> <li>• Load Range: 12 Vdc: 0...475 <math>\Omega</math>, 24 Vdc: 0...1075 <math>\Omega</math></li> <li>• Status &amp; Reporting: Individual Open Loop status to software for quality indication</li> <li>• Controls DNP3 Protocol: Direct Operate, Select Before Operate</li> </ul>  |
| Internal Power Monitor            | <ul style="list-style-type: none"> <li>• Input voltage monitor with low voltage indication</li> <li>• Memory/RTC battery voltage monitor with low voltage indication</li> </ul>   |
| Internal Temperature Monitor      | Measurement range -40...75 °C (-40...167 °F)  |
| <b>Additional I/O</b>             |   |
| Supported Modules                 | <ul style="list-style-type: none"> <li>• Supported modules: 5304, 5405, 5410, 5414, 5415, 5505, 5506, 5606, 5607, 6601, 6602, 6607</li> <li>• When SCADAPack 57x controller is used with 5000 series modules, order one adaptor cable ref. TBUM297138 to adapt from 20 conductors to 16 conductors).</li> </ul>   |
| I/O Expansion Limits <sup>9</sup> | <ul style="list-style-type: none"> <li>• Refer to the SCADAPack x70 Documentation Set &gt; Hardware Manuals for further details.</li> <li>• Maximum intermodule cable length (not including the short cables that come with each module) is 1.82 m (75 in.)</li> </ul>  |

# SCADAPack 570 | 574 | 575

## Remote Programmable Smart RTUs

### Model Code

TBUP575UA50AB00S is an example of a SCADAPack 575 part number using the model codes below

| Code     | Select: Hardware platform   |
|----------|---|
| TBUP570U | SCADAPack 570, 32-bit controller, Dual Core, SCADAPack x70 Firmware (RemoteConnect Configuration & IEC 61131-3 programming software, included)                            |
| TBUP574U | SCADAPack 574, 32-bit controller, Dual Core, comes with additional I/O, SCADAPack x70 Firmware (RemoteConnect Configuration & IEC 61131-3 programming software, included) |
| TBUP575U | SCADAPack 575, 32-bit controller, Dual Core, comes with additional I/O, SCADAPack x70 Firmware (RemoteConnect Configuration & IEC 61131-3 programming software, included) |

| Code | Select: SCADA Security   |
|------|--|
| A    | Standard security features, includes DNP3 Secure Authentication SAv2 (Security Administrator application required) |

| Code | Select: Protocol Option  |
|------|--|
| 5    | DNP3 Serial/IP client/server/peer-to-peer, Modbus RTU/TCP client/server, TCP/IP, and IEC 60870-5-104 |

| Code | Select: License Option  |
|------|---|
| 0    | Standard DNP3 features, includes DNP3 Data Concentrator Controlling Station License |

| Code | Select: Analog Inputs  |
|------|--|
| A    | SCADAPack 570: None<br>SCADAPack 574: adds 8, selectable as 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc, or 0...10 Vdc<br>SCADAPack 575: adds 6, selectable as 0...20 mA or 4...20 mA |
| B    | SCADAPack 575: adds 6, shipped selectable as 0...5 Vdc or 1...5 Vdc  |

| Code | Select: Digital Inputs/Outputs   |
|------|--|
| A    | SCADAPack 570:<br><ul style="list-style-type: none"> <li>• 2 Digital Inputs (12...24 Vdc)</li> <li>• 1 Digital Output (open collector)</li> </ul>  |
| B    | SCADAPack 574 adds:<br><ul style="list-style-type: none"> <li>• 16 Digital Inputs (12...24 Vdc)</li> <li>• 10 Digital Outputs (Dry Contact relays)</li> </ul> SCADAPack 575 adds:<br><ul style="list-style-type: none"> <li>• 16 Digital Inputs (12...24 Vdc)</li> <li>• 8 Dry Contact Relay outputs (6 Form A, 2 Form C)</li> </ul> |
| C    | SCADAPack 574 adds:<br><ul style="list-style-type: none"> <li>• 16 Digital Inputs (12...24 Vdc)</li> <li>• 10 Digital Outputs (Solid State relays)</li> </ul>  |

# SCADAPack 570 | 574 | 575

## Remote Programmable Smart RTUs

### Model Code cont'd

TBUP575UA50AB00S is an example of a SCADAPack 575 part number using the model codes below

| Code | Select: Analog Outputs  |
|------|---|
| 0    | None  |
| 1    | SCADAPack 574 and SCADAPack 575: 2 channel, shipped selectable as 0...20 mA or 4...20 mA, external DC supply required |

| Code | Select: Realflo Flow Computer - Flow Run License Options   |
|------|--|
| 0    | None   |
| 3    | 3 Runs - any combination of gas, liquid or water totalling 3 runs (gas runs include gas transmission option)   |
| 6    | 6 Runs - any combination of gas, liquid or water totalling 6 runs (gas runs include gas transmission option)   |
| T    | 12 Runs - any combination of gas, liquid or water totalling 12 runs (gas runs include gas transmission option) |
| V    | 20 Runs - any combination of gas, liquid or water totalling 20 runs (gas runs include gas transmission option) |

| Code | Select: Certifications   |
|------|--|
| S    | <ul style="list-style-type: none"> <li>IEC 61010-2-201; UL; CSA; EMC and radio frequency; FCC 47 CFR Part 15, Subpart B; ICES-003; CE and RCM markings</li> <li>For Eurasian Economic Union: EAC</li> </ul>  |
| X    | <ul style="list-style-type: none"> <li>SCADAPack 570 and 575: Adds IECEx/ATEX: Ex nA IIC T4 Gc -40 °C ≤ Ta ≤ +70 °C</li> <li>SCADAPack 574<sup>9</sup>: Adds ATEX: Ex nA IIC T4 Gc -40 °C ≤ Ta ≤ +70 °C</li> <li>For Eurasian Economic Union: EAC</li> </ul> |
| U    | <ul style="list-style-type: none"> <li>Adds cCSAus Non-Incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2</li> <li>For Eurasian Economic Union: EAC</li> </ul>  |

### I/O Expansion Modules (6xxx)<sup>7</sup>

| Part No.  | Expansion Modules (complete the following part numbers with an S, U, or X suffix depending on certification required) |
|---|---|
| Models supported by SCADAPack 530E/535E/570/574/575 models only |   |
| TBUX297583  | Model 6601-20mA, 16 D/I 12...24 Vdc, 8 Dry Contact Relay O/P, 6 config. A/I (0/4...20 mA)                             |
| TBUX297585  | Model 6601-20mA, 16 D/I 12...24 Vdc, 8 Dry Contact Relay O/P, 6 config. A/I (0/4...20 mA), 2 A/O (external DC supply) |
| TBUX297590  | Model 6602, Analog I/O, HART, 8 A/I, 4 A/O, 4...20 mA (requires external DC supply)                                   |
| TBUX297591  | Model 6602, Analog I/O, HART, 8 A/I, 4...20 mA  |

1. I/O expansion module firmware upgrades are supported on 6xxx modules only.

2. DTM is Device Type Manager – vendor-supplied device driver for device-specific configuration and data display. RemoteConnect software is an FDT1.2 (Field Device Tool version 1.2) and FDT2 (Field Device Tool version 2) container for compatible DTMs.

3. Sharing of logic code does not include hardware specific functions or system variables that are not common to both platforms.

4. Internal memory can be configured to limit internal event storage. External events are stored on a device formatted to 32 GB.

5. Polled by the SCADAPack when it is operating as a DNP3 Controlling Station

6. Varies depending on object types, event storage, and integrated application memory usage.

7. Refer to product manual for details as actual maximum number of Modbus server devices depends on polling method(s) and port type (serial or Ethernet).

8. Larger USB mass storage devices may be formatted to 32 GB FAT32.

9. Additional power supply modules (model 5103 or 6103) may be required for additional bus power, depending on how many expansion modules are included on the bus.

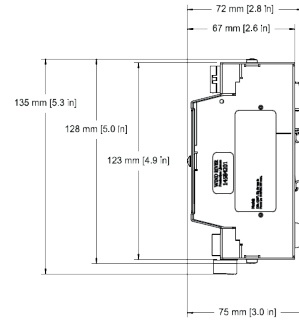
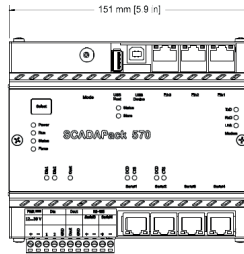


# SCADAPack 570 | 574 | 575

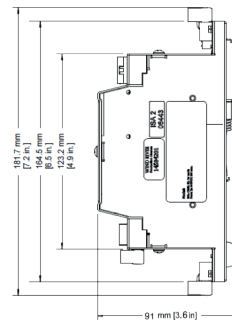
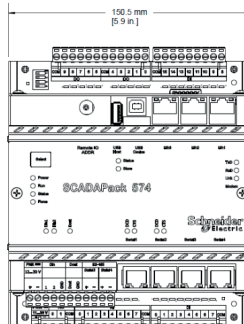
## Remote Programmable Smart RTUs

### Dimensions

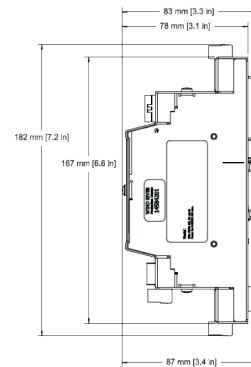
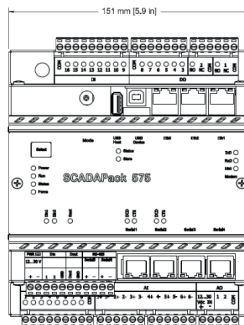
SCADAPack 570



SCADAPack 574



SCADAPack 575



**Note:** Refer to the SCADAPack x70 Documentation Set for further details.

**Disclaimer:**

The information provided in this document contains general descriptions and/or technical characteristics of the performance of the described products or services. For detailed specification, performance and instruction of use, refer to corresponding Catalogs and user guides if available.

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\*PEP: Product Environmental Profile (i.e. Environmental Product Declaration)