



Compact and Versatile Controller for SCADA & Telemetry Solutions

SCADAPack Smart RTUs



Unique Features

SCADAPack™ 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

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Enhanced performance in oil/gas and water/wastewater applications

SCADAPack 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 Optimisation



Water/Wastewater Solutions:

- Optimised for Remote Pumping Networks
- Lift Station Control



Oil & Gas Applications - SCADAPack 3xx

- Modbus™ core database, DNP3 level 2 layer, optional DF1 support
- Programming and configuration: Telepace™ Studio, IEC61131-3, C/C++
- O&G-focused app: Realflo™

SCADAPack RTU	Analog Input ¹	Analog Output ¹	Digital Input ¹	Digital Output ¹	Frequency Input ¹	Counter Input ¹	Serial Port	Ethernet Port	USB Device Port	USB Host Port
330	0	0	0	0	1	2	3	1	1	1
334	8	2 (optional)	16	10	1	2	3	1	1	1
350	6	2 (optional)	8 (shared with digital outputs)	8 (shared with digital inputs)	1	2	3	1	1	1
357	14	2 or 4 (optional)	8 (shared with digital outputs) + 32	8 (shared with digital inputs) + 16	1	2	3	1	1	1

Footnotes:

¹ 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.

Water Applications - SCADAPack 3xxE & 53xE

- DNP3 Level 4 core database, Modbus layer, IEC 60870-5-101/103/104, optional DF1 support
- Programming: IEC61131-3, configuration: E Configurator
- DNP3 Secure Authentication & IEEE 1711 (AGA12) support

SCADAPack RTU	Analog Input ¹	Analog Output ¹	Digital Input ¹	Digital Output ¹	Frequency Input ¹	Counter Input ¹	Serial Port	Ethernet Port	USB Device Port	USB Host Port
330E	0	0	0	0	1	2	3	1	1	1 ²
334E	8	2 (optional)	16	10	1	2	3	1	1	1 ²
337E	8	2 (optional)	32	16	1	2	3	1	1	1 ²
350E	6	2 (optional)	8 (shared with digital outputs)	8 (shared with digital inputs)	1	2	3	1	1	1 ²
357E	14	2 or 4 (optional)	8 (shared with digital outputs) + 32	8 (shared with digital inputs) + 16	1	2	3	1	1	1 ²
530E	0	0	2	1	0	0	4	3	1	1
535E	6	2 (optional)	8 (shared with counter inputs) + 10	9	0	8 (shared with digital inputs)	4	3	1	1

Footnotes:

¹ 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.

² Component present but not supported.

Multiple Applications - SCADAPack x70

Oil and 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.
- and many others...

SCADAPack RTU	Analog Input ¹	Analog Output ¹	Digital Input ¹	Digital Output ¹	Frequency Input ¹	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:

¹ 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.

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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



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Green Premium promises compliance with the latest regulations, transparency on environmental impacts as well as circular and low-CO₂ products.

CO₂ 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 CO₂ 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

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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

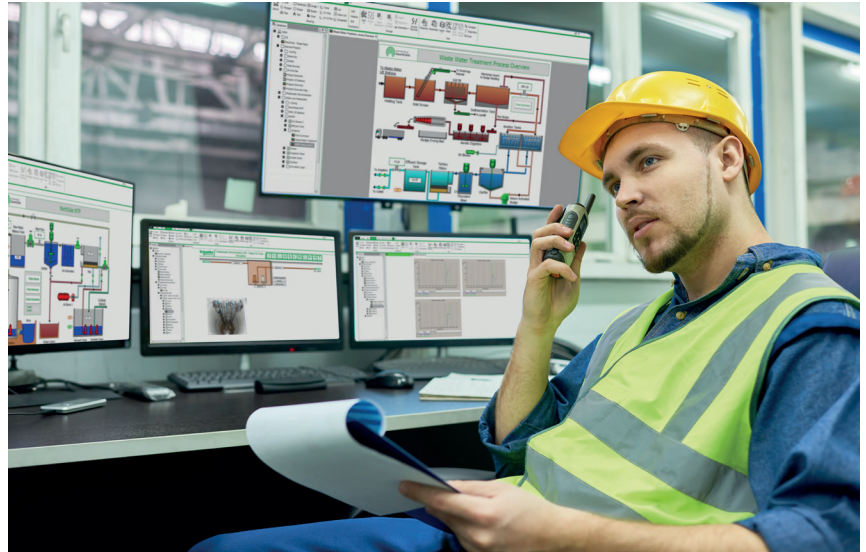
Device Management

- Upgrade of SCADAPack firmware
- Upgrade of I/O expansion module firmware¹
- HART device configuration and data monitoring via vendor-supplied plug-in DTMs²
- 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 sharing³ 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 1,000,000⁴ 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

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Remote Programmable Smart RTUs

Specifications

Architecture

Processor	Dual ARM® Cortex® A7, plus ARM Cortex M3; 500 Mhz
Memory	• SRAM – 4 MB, battery backed static RAM • DDR3 RAM – 256 MB, dynamic RAM • NAND Flash – 256 MB, flash memory
Events and datalogging	• DNP3 and IEC 60870-5-104 events: 40,000⁵, store up to 1,000,000 events using internal file system • Store up to 100,000,000 events using USB drive or MicroSD card
Database capacity	• Maximum number of database objects: Typically 15,000 • Maximum number of database objects linked with logic programming: Typically 6,000 • Object memory: • Typical 2,600,000 bytes (event buffer at 5000 events) • Maximum: 2,756,800 bytes (event buffer at 100 events) • Minimum: 1,480,000 bytes (event buffer at 40,000 events)
Maximum DNP3 Outstation devices ⁵	Approximately 90
Maximum DNP3 Outstation objects ⁵	Approximately 15,000 ⁶ across DNP3 Outstation devices
Maximum Modbus Server Devices ⁷	150
Maximum objects mapped from Modbus devices	3,000 ⁶
File system storage	Approximately 70 MB
USB host storage	• Single-partition plug-in USB mass storage devices up to 32 GB⁸ • File format: FAT32
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	• RS-232: Tx/D, Rx/D, CTS, RTS, DCD, DTR • RS-485: 2-wire half-duplex operation • 8-pin modular RJ45 jack, maximum baud rate 115,200 bps
Serial Port: 5	• RS-232: Tx/D, Rx/D, CTS, RTS, DCD, DTR • Switched power out for modem, 350 mA available at RTU inputs voltage 12...24 Vdc, 8-pin removable terminal block under top cover.
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	• DNP3 level 4 in TCP or in UDP Controlling Station/Outstation and peer-to-peer, • Modbus/TCP Server, Modbus/TCP Client • IEC 60870-5-104 controlled station • Telnet Server, FTP Server
USB Device Port	• USB 2.0-compliant C-type receptacle • Supports communications at 1.5 Mb/s and 12 Mb/s
USB Host Port	• USB 2.0-compliant A-type receptacle • Supports USB mass storage devices up to 32 GB • Supports communications at 1.5 Mb/s and 12 Mb/s

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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 ² (12...28 AWG), solid or stranded
Dimensions	- SCADAPack 470: 142 mm W x 127 mm H x 67 mm D (5.59 in. x 5.00 in. x 2.64 in.) - SCADAPack 474: 142 mm W x 166 mm H x 88 mm D (5.59 in. x 6.54 in. x 3.46 in.)
Packaging	- Corrosion-resistant; zinc-plated steel base and stainless steel cover with black enamel paint - G3 conformal-coated circuit boards
Environment	-40...70 °C (-40...158 °F) operating temperature when the unit is mounted horizontally on a vertical surface -40...65 °C (-40...149 °F) operating temperature when the unit is mounted in any other position -40...85 °C (-40...185 °F) storage temperature 5...95% relative humidity, non-condensing - Pollution Degree 2, Installation Category I, Indoor use
Shock	IEC 61131-2 ½ sine, 15 ms, 15 g
Vibration	- IEC 61131-2 5...8.4 Hz: Amplitude controlled, 7.0 mm (0.28 in) peak-to-peak 8.4...150 Hz: Acceleration controlled, 1.0 g peak

Power Supply

Input voltage	- Rated Voltage 14...29 Vdc - Turn-on 10...11.5 Vdc - Turn-off 9...10 Vdc
Power requirements	2.8 W (SCADAPack 470) 4 W (SCADAPack 474)
Maximum power input to controller (excluding modem)	8.4 W

Certifications

Industrial Standards	Requirements specific to the SCADAPack functional characteristics, immunity, robustness, and safety: - IEC/EN 61131-2 - CAN/CSA 22.2 No. 61010-1-12 and CAN/CSA 22.2 No. 61010-2-201 - UL 61010-1 and UL 61010-2-201
CE Marking Compliance	- 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 se.com - For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at https://checkaproduct.se.com/
Installation in Classified Ex Area	- 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 - 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 - IECEx: Zone 2, Ex ec nC IIC T4 Gc according to IEC 60079- 0, IEC 60079-7 and IEC 60079-15 - For Eurasian Economic Union: EAC 
Specific Countries	- For Australia and New Zealand: ACMA requirements for RCM marking - For United States: FCC Part 15 Subpart B Class A

SCADAPack 470 | 474

Remote Programmable Smart RTUs

Specifications – cont'd

Digital and Analog Inputs/Outputs

SCADAPack Smart RTU	Digital inputs 12...24 Vdc		Digital outputs		Pulse counter inputs (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	DI 1...4 12...24 Vdc DI 5...20 (SCADAPack 474 only) 12...24 Vdc
Pulse Counter Inputs	DI 1...4 Max. 10 kHz (@ 50% duty cycle) Built-in turbine preamplifier ¹⁰ for direct connection to turbine coils using short, shielded cable only. Shared with first 8 digital input channels on lower I/O board DI 5...8 (SCADAPack 474 only) Max. 1.5 kHz (@ 50% duty cycle) DI 9...12 (SCADAPack 474 only) Max. 150 Hz (@ 50% duty cycle)
Digital Outputs	DO 1...2 Form A, NO (Normally Open) relays, 2 A @ 30 Vdc, DO 3...12 (SCADAPack 474 only) Form A, NO (Normally Open) relays, 2 A @ 30 Vdc
Analog Inputs	AI 1...4 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 AI 5...12 (SCADAPack 474 only) 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc, 24-bit resolution, single-ended, isolated from logic and chassis. 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
Analog Outputs	AO 1...2 (SCADAPack 474 only) 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
Internal (System) Analog Inputs	- Input power supply voltage monitor, 36 Vdc full scale - Memory/RTC battery voltage monitor - Internal temperature monitor, measurement range -40...75 °C (-40...167 °F)
Clock calendar	±15 seconds per month at -40...70 °C (-40...158 °F)

Additional I/O

Supported Modules	- Supported modules: 5304, 5405, 5410, 5414, 5415, 5505, 5506, 5606, 5607, 6601, 6602, 6607 - 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) - Maximum number of external expansion modules per unit: 15
I/O Expansion Limits ⁹	- Refer to the SCADAPack x70 Documentation Set > Hardware Manuals for further details. - Maximum intermodule cable length (not including the short cables that come with each module) is 1.82 m (75 in.)

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: 4 Analog Inputs, selectable as 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc 4 Digital Inputs (12...24 Vdc) 2 Digital Outputs Form A, NO (Normally Open) relays
BB	SCADAPack 474, adds: 8 Analog Inputs, factory-shipped selectable as 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc 2 Analog Outputs, selectable as 0...20 or 4...20 mA 16 Digital Inputs (12...24 Vdc) 10 Digital Outputs Form A NO (Normally Open) relays

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	- 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 - 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 - IECEX: Zone 2, Ex ec nC IIC T4 Gc according to IEC 60079- 0, IEC 60079-7 and IEC 60079-15 - For Eurasian Economic Union: EAC

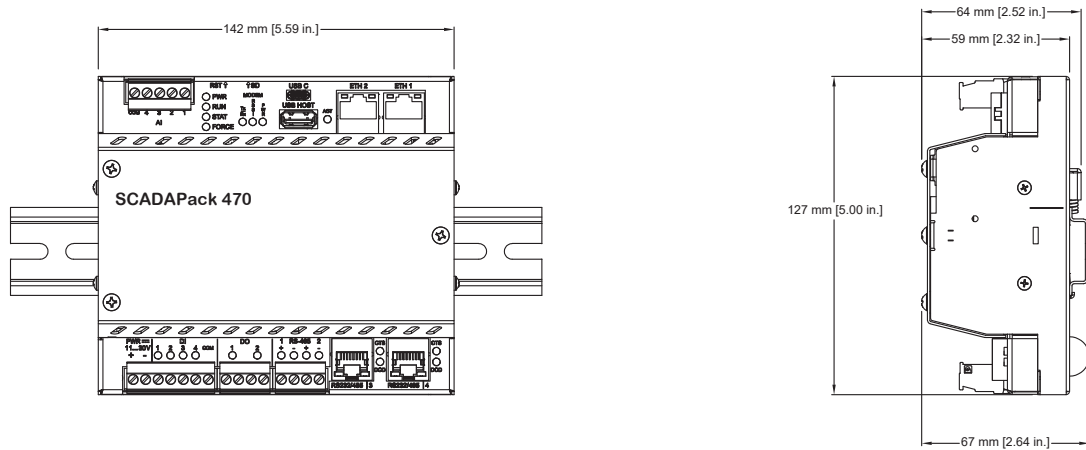
SCADAPack 470 | 474

Remote Programmable Smart RTUs

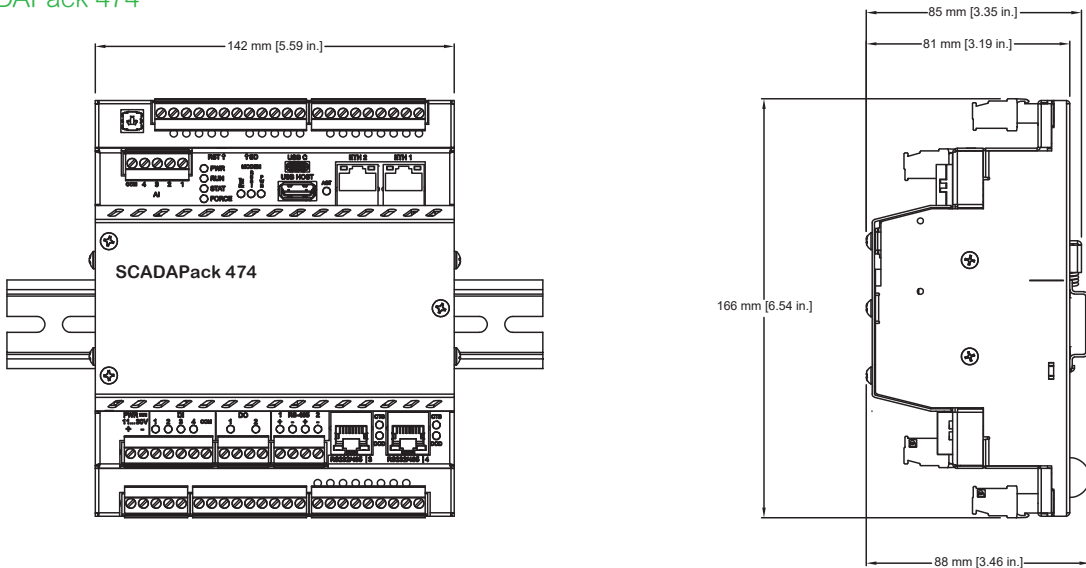
Accessories

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



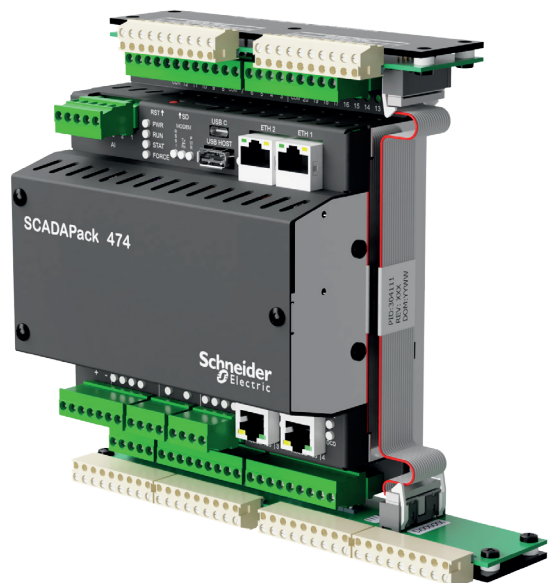
Dimensions - SCADAPack 474



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.

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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



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Green Premium promises compliance with the latest regulations, transparency on environmental impacts as well as circular and low-CO₂ products.

CO₂ 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 CO₂ 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 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 firmware¹
- HART device configuration and data monitoring via vendor supplied plug-in DTMs²
- 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 sharing³ 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 1,000,000⁴ 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	128 MB NAND FLASH, 128 MB DDR3 RAM - Non-Volatile RAM CMOS SRAM with lithium battery retains contents for 2 years with no power
Events and datalogging	- DNP3 and IEC 60870-5-104 events: 40,000⁵, store up to 1,000,000 events using internal file system - Store up to 100,000,000 events using USB drive
Database capacity	- Maximum number of database objects: Typically 15,000 - Maximum number of database objects linked with logic programming: Typically 6,000 - Object memory: - Typical 2,600,000 bytes (event buffer at 5000 events) - Maximum: 2,756,800 bytes (event buffer at 100 events) - Minimum: 1,480,000 bytes (event buffer at 40,000 events)
Maximum DNP3 Outstation devices ⁵	Approximately 90
Maximum DNP3 Outstation objects ⁵	Approximately 15,000 ⁶ across DNP3 Outstation devices
Maximum Modbus Server Devices ⁷	150
Maximum objects mapped from Modbus devices	3,000 ⁶
File system storage	Internal: 70 MB usable; External: 32 GB (using optional USB memory stick)
USB host storage	- Single-partition plug-in USB mass storage devices up to 32 GB⁸ - File format: FAT32

Communications

Serial Ports: Serial1, Serial2	- RS-232 port, 8-pin modular RJ45 jack, +5 Vdc power control, hardware handshaking, maximum baud rate 115,200 bps - Rated to ±15 kV (IEC 61000-4-2, Air Discharge) static protection
Serial Ports: Serial3, Serial4	Configurable as: - RS-232 or RS-485 two-wire, half-duplex, maximum baud rate 115,200 bps 8-pin modular RJ45 jack, rated to ±15 kV (IEC 61000-4-2, Air Discharge) static protection
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	- DNP3 level 4 in TCP or in UDP Client/Server and peer-to-peer, - Modbus/TCP Server, Modbus/TCP Client - IEC 60870-5-104 controlled station - Telnet Server, FTP Server - HART pass through over TCP when connected to SCADAPack 6602 modules
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 ⁶

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Remote Programmable Smart RTUs

Specifications – cont'd

General

Logic Control	RemoteConnect software (five IEC 61131-3 languages)
I/O Terminations	Plug-in terminal blocks 0.0810...3.31 mm ² (28...12 AWG), solid or stranded
Dimensions	- 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) - 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) - 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)
Packaging	- Corrosion-resistant; zinc-plated steel base and stainless steel cover with black enamel paint - G3 conformal-coated circuit boards
Environment	- Operating temperature -40...70 °C (-40...158 °F), storage temperature, -40...85 °C (-40...185 °F) 5% RH to 95% RH, non-condensing
Shock	IEC 61131-2 mechanical shock (tested up to 15 g shock)
Vibration	- IEC 61131-2 5...8.4 Hz: Amplitude controlled, 7.0 mm (0.28 in) peak-to-peak 8.4...150 Hz: Acceleration controlled, 1.0 g peak
Realflo Flow Computer	Flow Run License Options: 3 Runs - any combination of gas, liquid or water totaling 3 runs (gas runs include gas transmission option) 6 Runs - any combination of gas, liquid or water totaling 6 runs (gas runs include gas transmission option) 12 Runs - any combination of gas, liquid or water totaling 12 runs (gas runs include gas transmission option) 20 Runs - any combination of gas, liquid or water totaling 20 runs (gas runs include gas transmission option)

Power Supply

Rated Voltage and Power	12...30 Vdc: - SCADAPack 570 typical 4.3 W - SCADAPack 574 typical 6.5 W, Max. 9.2 W - SCADAPack 575 typical 5.4 W, Max. 9.1 W - Class 2 power supply required
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Certifications

EMC & Radio Frequency	- FCC 47 CFR Part 15, Subpart B - ICES-003 - CE and RCM markings
General Safety	- SCADAPack 570 and 575: UL 508 - SCADAPack 574: IEC 61010-2-201; UL; CSA
Hazardous locations (option)	- cCSAus Non-Incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2 - SCADAPack 570 and 575: IECEx/ATEX Ex nA IIC T4 Gc -40 °C ≤ Ta ≤ +70 °C - SCADAPack 574: ATEX Ex nA IIC T4 Gc -40 °C ≤ Ta ≤ +70 °C - For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at https://checkaproduct.se.com/ - For Eurasian Economic Union: EAC



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Remote Programmable Smart RTUs

Specifications – cont'd

Digital and Analog Inputs/Outputs

	Digital inputs		Digital outputs		Counter inputs			Analog inputs Lower IO Module:	Analog outputs (option) Lower IO Module:
	Controller Board: 10 ms SOE	Lower IO Module: 1 ms SOE	Controller Board:	Lower IO Module:	Controller Board: 10 KHz (shared)	Lower IO Module: 1.5 KHz (shared)	Lower IO Module: 150 Hz (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	Controller Board: 2 - Din1...2 12...24 Vdc - DC input current: 0.4 mA at 12 Vdc, 0.8 mA at 24 Vdc - Ground return connected to Chassis Ground Lower IO Module 574: 16 - DI0...15 12...24 Vdc, Turn-on voltage: 9 Vdc (minimum), Turn off voltage: 4 Vdc (maximum) - Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage - DC input current: 0.67 mA typical at 24 Vdc - Isolation: in groups of 8, 1500 Vac from logic supply and chassis Lower IO Module 575: 16 - DI1...16 12...24 Vdc - DC input current: 1.2 mA at 12 Vdc, 2.4 mA at 24 Vdc - Isolation: in 2 groups of 8. Isolation from RTU logic and chassis: 1000 Vac/ 1500 Vdc
Counter Inputs	Controller Board: 2 - DI1...2 - Shared with 2 digital input channels 0...10 kHz Lower IO Module 575: 8 - DI1...4: 0...1.5 kHz - DI5...8: 0...150 Hz - Shared with first 8 digital input channels on lower I/O board
Digital Outputs	Controller Board: 1 - Dout - Sinking MOSFET output, rated 30 Vdc, 0.5 A, ground return connected to Chassis Ground Lower IO Module 574: 10 - DO0...9 - Dry-contact or solid-state relays (Form A - normally open) 5 contacts share one common - Isolation: Chassis or logic to contact 1500 Vac (1 min.) - Controls: (DNP3 protocol) Direct Operate, Select Before Operate, Trip/Close, Latch, Pulse Dry-contact relays: - Contact rating 3 A, 30 Vdc (resistive), 12 A maximum per common Solid-state relays: - Load voltage 30 Vdc maximum - Load current 2 A continuous max at 50 °C (122 °F), or 1.33 A at 70 °C (158 °F) ambient Lower IO Module 575: 8 - DO1...8 2 Form C relays: SPDT, separate Normally Open/Normally Closed/Common) 6 Form A relays: Normally Open, one shared common - Isolation: 500 Vac minimum to RTU logic - Maximum Switching Voltage: 30 Vdc or 25 Vac - Maximum Switching Load: 60 W or 50 VA (2 A) - Status & Reporting: Individual relay status feedback to software for quality indication - Controls (DNP3 Protocol): Direct Operate, Select Before Operate, Trip/Close, Latch, Pulse

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Remote Programmable Smart RTUs

Specifications – cont'd

Digital and Analog Inputs/Outputs

Analog Inputs	Lower IO Module 574: 8 • AI0...7 • Software-configurable: 0...20 mA, 4...20 mA, 0...5 Vdc or 0...10 Vdc, plus over range • Resolution: 15-bit ADC (15-bit in measurement range 0...10 Vdc, and 14-bit in 5 Vdc or 20 mA input ranges) • Accuracy: $\pm 0.1\%$ of full scale at 25 °C (77 °F), $\pm 0.2\%$ over temperature range • Input Resistance: 250 Ω in current ranges, 20 kΩ in voltage ranges • Normal mode rejection: 27 dB at 60 Hz • Sampling rate: 170 ms • Isolation: 500 Vac from logic and chassis
	Lower IO Module 575: 6 • AI1...6 Dipswitch-configurable to current or voltage input • Input ranges: 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc • Uni-polar, differential • Resolution: 24-bit ADC (19-bit over the measurement range) • Accuracy: $\pm 0.1\%$ of full scale at 25 °C (77 °F), $\pm 0.2\%$ over temperature range • Isolation: 250 Vac isolation from channel to channel and from logic and chassis • Input Resistance: 250 Ω or 800 kΩ in current/voltage configurations • Under range: 4...20 mA measures to 0 mA • Common Mode Rejection: -80 dB @ 50/60 Hz • Sampling rate: software-selectable to 30 ms (unfiltered) or 500 ms (filtered)
Analog Outputs	Lower IO Module 574: 2 • AO0...1 • Optional • 0...20 mA or 4...20 mA, voltage output may be accomplished with external precision resistor.
	Lower IO Module 575: 2 • AO1...2 • Optional • Output ranges: 0...20 mA, 4...20 mA, voltage output may be accomplished with external precision resistor • Uni-polar • Resolution: 12-bit over 0...20 mA range • Accuracy: $\pm 0.15\%$ at 25 °C, $\pm 0.35\%$ of full scale over temperature range • Power Supply: 12...30 Vdc, external, Current: 50 mA • Isolation: transformer, 500 Vdc maximum to RTU logic and chassis • Load Range: 12 Vdc: 0...475 Ω, 24 Vdc: 0...1075 Ω • Status & Reporting: Individual Open Loop status to software for quality indication • Controls DNP3 Protocol: Direct Operate, Select Before Operate
Internal Power Monitor	• Input voltage monitor with low voltage indication • Memory/RTC battery voltage monitor with low voltage indication
Internal Temperature Monitor	Measurement range -40...75 °C (-40...167 °F)
Additional I/O	
Supported Modules	• Supported modules: 5304, 5405, 5410, 5414, 5415, 5505, 5506, 5606, 5607, 6601, 6602, 6607 • When SCADAPack 57x controller is used with 5000 series modules, order one adaptor cable ref. TBUM297138 to adapt from 20 conductors to 16 conductors).
I/O Expansion Limits ⁹	• Refer to the SCADAPack x70 Documentation Set > Hardware Manuals for further details. • Maximum intermodule cable length (not including the short cables that come with each module) is 1.82 m (75 in.)

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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 SCADAPack 574: adds 8, selectable as 0...20 mA, 4...20 mA, 0...5 Vdc, 1...5 Vdc, or 0...10 Vdc 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: • 2 Digital Inputs (12...24 Vdc) • 1 Digital Output (open collector)
B	SCADAPack 574 adds: • 16 Digital Inputs (12...24 Vdc) • 10 Digital Outputs (Dry Contact relays) SCADAPack 575 adds: • 16 Digital Inputs (12...24 Vdc) • 8 Dry Contact Relay outputs (6 Form A, 2 Form C)
C	SCADAPack 574 adds: • 16 Digital Inputs (12...24 Vdc) • 10 Digital Outputs (Solid State relays)

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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: Realflow 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	- IEC 61010-2-201; UL; CSA; EMC and radio frequency; FCC 47 CFR Part 15, Subpart B; ICES-003; CE and RCM markings - For Eurasian Economic Union: EAC
X	- SCADAPack 570 and 575: Adds IECEx/ATEX: Ex nA IIC T4 Gc -40 °C ≤ Ta ≤ +70 °C - SCADAPack 574⁸: Adds ATEX: Ex nA IIC T4 Gc -40 °C ≤ Ta ≤ +70 °C - For Eurasian Economic Union: EAC
U	- Adds cCSAus Non-Incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D and Class I, Zone 2 - For Eurasian Economic Union: EAC

I/O Expansion Modules (6xxx)⁷

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.

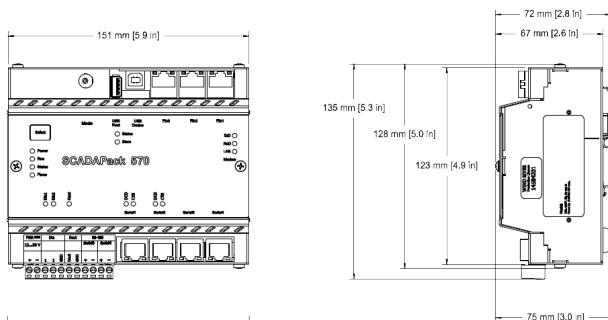
9. Additional power supply modules (model 5103 or 6103) may be required for additional bus power, depending on how many expansion modules are included on the bus.

SCADAPack 570 | 574 | 575

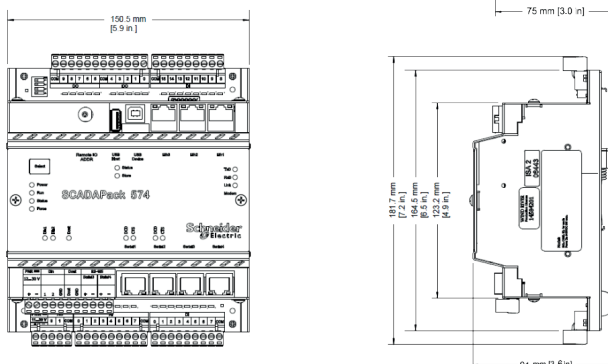
Remote Programmable Smart RTUs

Dimensions

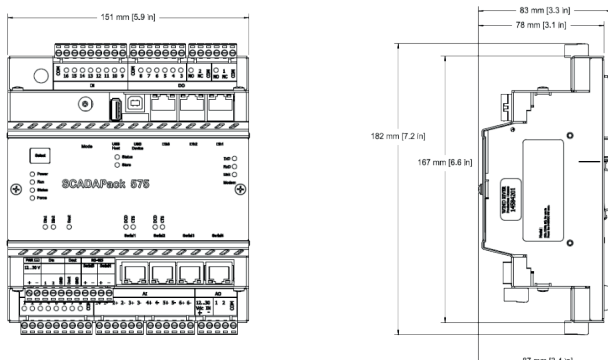
SCADAPack 570



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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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 330 | 334

Smart Remote Terminal Units



Built on the proven SCADAPack™ 300 controller platform that adheres to open standards and can operate in the harsh demands of a remote environment, the SCADAPack 330 and 334 Smart RTUs feature various communication links, a wide range of analog and digital I/O and a 12...30 Vdc supply.

The SCADAPack 330/334 Smart RTU helps to ease operations with:

- Simple ladder logic option (Telepace™ Studio)
- 28,192 permanent Modbus™ registers for use with logic and C++ applications
- USB host port (on SCADAPack 330/334) for data logging to USB memory stick
- Up to 39 integrated digital/analog inputs/outputs, and more with I/O expansion modules
- Advanced power management
- Tool-less DIN rail mounting system
- IP2x terminal blocks
- Operation from -40...+70 °C (-40...+158 °F)
- Cost-effective, compact form factor

And provides powerful software tools and firmware features:

- EcoStruxure™ Geo SCADA Expert driver for Realflo™ remote configuration and data acquisition
- Optional open-standard IEC 61131-3 programming environment
- C/C++ programming support
- Open-standard industrial protocols Modbus RTU/TCP/UDP and DF1 Client/Server, and open-standard telemetry protocol DNP3 level 2
- Store & forward mechanism between upstream and downstream SCADAPack 300 controllers
- Realflo flow computer for gas and liquids (including specific protocols used for Flow Measurement: Realflo Modbus and Modbus EFM)

Green Premium™ ecolabel
product – Sustainable
performance, by design

SCADAPack

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Smart Remote Terminal Units

Specifications – General characteristics

Controller

Processor	32-bit ARM7 microcontroller, 32 MHz clock, integrated watchdog timer - Microcontroller, co-processor, 20 MHz clock
Memory	16 MB FLASH ROM, 4 MB CMOS RAM, 4 kB EEPROM - CMOS SRAM with lithium battery retains contents for 2 years with no power
Datalog Capacity	465,000 words
File system Typical storage	Internal: 6 MB, external : up to 32 GB on USB memory stick

Communications

Serial Port : COM1, COM2	RS-232 port, 8-pin modular RJ45 jack, full or half duplex, or RS-485 port, 2-wire, half-duplex, supports baud rates up to 115,200 bps in RS-232 mode
Serial Port : COM3	RS-232 port, 8-pin modular RJ45 jack, full or half duplex with RTS/CTS control and operator interface power control, supports baud rates up to 115,200 bps
Serial Protocols	Modbus Client/Server, DF1Client/Server, DNP3 level 2 Server
Ethernet port	8-pin modular RJ45 jack, 10/100 Mbps UTP (10/100Base-T), transformer-isolated
IP Protocols	- Modbus/TCP Server, Modbus/TCP Client, Modbus RTU in TCP Client , DNP3 level 2 in TCP Server - FTP Server
Store & Forward	Stores & forwards frames between upstream and downstream SCADAPack 300 Smart RTUs
USB Device	USB 2.0 compliant "B"-type receptacle, for local configuration
USB Host	USB 2.0 compliant "A"-type receptacle, supports USB devices up to 32 GB (specific memory sticks supported)

General

Logic Control	SCADAPack Telepace Studio ladder logic or IEC 61131-3 SCADAPack Workbench programming suite (LD, ST, FBD & SFC)
I/O Terminations	SCADAPack 330: 6-pole connector, 0.0810...3.31 mm ² (28...12 AWG), solid or stranded SCADAPack 334: 5, 6, 7, 9-pole connectors, 0.0810...3.31 mm ² (28...12 AWG), solid or stranded
Dimensions	SCADAPack 330: 144.0 mm x 140.04 mm x 46.5 mm (5.65 in. wide x 5.53 in. high x 1.83 in. deep) SCADAPack 334: 144.0 mm x 181.0 mm x 66.0 mm (5.65 in. wide x 7.13 in. high x 2.60 in. deep)
Enclosure	Corrosion-resistant; zinc-plated steel base and stainless steel cover with black enamel paint
Environment	- Conformal coated; 5% RH to 95% RH, non-condensing -40...+70 °C (-40...+158 °F) operating, -40...+85 °C (-40...+185 °F) storage
Shock & Vibration	IEC 60068-2-27 (tested up to 15 g), IEC 60068-2-6

SCADAPack

330 | 334

Smart Remote Terminal Units

Specifications – General characteristics

Power Supply

Rated Voltage	12...30 Vdc. Limit voltage: 11.5...32 Vdc; turn on voltage: 10...11.5 Vdc; turn off voltage: 9...10 Vdc
Maximum Power	7 W at 24 Vdc (internal 5 Vdc supply fully loaded)

SCADAPack 330 and 334 support 3 power modes: sleep, normal clock speed and reduced clock speed

- Typical power consumption (at 20 °C/ 68 °F):

Power Requirements

SCADAPack Model	Ethernet/ USB	DO Relays	At normal clock speed		At reduced clock speed	
			12 Vdc	24 Vdc	12 Vdc	24 Vdc
Sleep mode			80 mW	240 mW	80 mW	240 mW
330	OFF		0.7 W	0.9 W	0.5 W	0.7 W
	ON	—	1.8 W	2.0 W	1.6 W	1.8 W
334	OFF		0.9 W	1.2 W	0.7 W	1.0 W
	OFF	ON	2.9 W	3.4 W	2.7 W	3.2 W
	ON	OFF	2.4 W	2.8 W	2.3 W	2.6 W
	ON		4.0 W	4.5 W	3.8 W	4.3 W

Certifications

EMC and Radio Frequency	• ICES-003 Issue 5 August 2012 • CE and RCM markings
General Safety	UL 508
Hazardous Locations	• cCSAus Non-incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D • IECEx/ATEX Class I, Zone 2 • For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at https://checkaproduct.se.com/

SCADAPack

330 | 334

Smart Remote Terminal Units

Specifications – Digital and Analog Inputs/Outputs

Controller Board

Counter Inputs	1, 0...10 Hz (dry contact) 2, 0...10 kHz (turbine or dry contact)
Internal Power monitor	Power input - analog input and low indication, onboard lithium battery - low indication
Internal Temperature Monitor	Controller temperature range -40...+75 °C (-40...+167 °F)

I/O board (334 only)

Analog Inputs	8, software-configurable to 0...20, 4...20 mA , 0...5 or 0...10 V, plus over range - Resolution: 15-bit ADC (15-bit over the measurement range in 10 V, 14-bit in 20 mA) - Accuracy: $\pm 0.1\%$ of full scale at 25 °C (77 °F), $\pm 0.2\%$ over temperature range - Input Resistance: 250 Ω or 20 kΩ in 20 mA or 10 V configurations (60 kΩ for 32.768 V) - Normal rejection mode: 27 dB at 60 Hz - Sampling rate: 170 ms - Isolation: 500 Vac from logic and chassis
Analog Outputs	2 (optional), 0...20/4...20 mA, voltage output may be accomplished with external precision resistor Same features as for the analog outputs located on the controller board
Digital Inputs	16, 12...24 Vdc - Turn on voltage: 9 Vdc (minimum), Turn off voltage: 4 Vdc (maximum) - Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage - DC input current: 0.67 mA at 24 Vdc - Time stamping : 170 ms - Isolation: in group of 8, 1500 Vac from logic supply and chassis
Digital Outputs	10, dry-contact relays or solid-state relays (Form A - normally open) 5 contacts share one common - Isolation: Chassis or logic to contact 1500 Vac (1 min.) Dry-contact relays: - Contact rating 3 A, 30 Vdc (resistive), 12 A maximum per common Solid state relays: - Load voltage 60 Vdc maximum - Load current 3 A continuous max at 50 °C (122 °F) or 2 A at 70 °C (158 °F)

Additional I/O

I/O Expansion	- Supported modules: 5502, 5504, 5505, 5506, 5304, 5403, 5404, 5405, 5410, 5414, 5406A, 5407, 5409, 5411, 5415, 5401, 5402, 5606, 5607 - A maximum of 16 I/O modules (excluding the integrated I/O module) can be added. Additional power supply modules may be required.
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SCADAPack

330 | 334

Smart Remote Terminal Units

Model Code

SCADAPack 330/334

Model	Select: Controller
TBUP330	SCADAPack 330, Controller 32-bit
TBUP334	SCADAPack 334, Controller 32-bit

Code	Select: Future Option
1	None

Code	Select: Gas & Liquids Flow Run-Time Option
A	none
Gas Only Flow Computer Options	
G	2 Run Gas Flow
F	4 Run Gas Flow
V	2 Run Gas Flow - Gas Transmission Version
W	4 Run Gas Flow - Gas Transmission Version
Gas & Liquids Flow Computer Options	
L	Gas & Liq. 1: Supports 1 Gas run, 1 Liquid run, and 1 Water run
M	Gas & Liq. 2: Supports 2 Gas runs, 2 Liquid runs, and 2 Water runs
N	Gas & Liq. 3: Supports 3 Gas runs, 3 Liquid runs, and 3 Water runs
P	Liq. 4: Supports 4 Liquid runs and 4 Water runs

Code	Select: Protocol Option
2	Modbus and DNP3 level 2 protocol emulation

SCADAPack

330 | 334

Smart Remote Terminal Units

Model Code continued

SCADAPack 330/334

Code	Select: Programming Environment
0	Telepace Ladder logic and C language firmware loaded – IEC 61131-3-enabled (Programming tools sold separately)
1	IEC 61131-3 and C language firmware loaded – Telepace-enabled (Programming tools sold separately)

Code	Select: Analog Inputs
A	P330: none. P334 : 8 selectable as 0...20 mA, 4...20 mA, 0...5 Vdc or 0...10 Vdc

Code	Select: Digital Inputs/Outputs
A	P330 only: none
B	P334 only: adds 32 16 digital inputs (12...24 Vdc), 10 digital outputs (Dry Contact relay for Class I Div 2, Solid State relay for IECEx/ATEX)

Code	Select: Analog Outputs
0	None
1	P334 only: 2-channel Analog Output, 0...20 mA, external DC supply

Code	Select: Future Option
0	None

Code	Select: Certifications
S	With FCC, UL508, CE marking and RCM
X	Adds IECEx/ATEX Class I, Zone 2
U	Adds cCSAUS Nonincendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D

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



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about
**Green
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Green Premium promises compliance with the latest regulations, transparency on environmental impacts as well as circular and low-CO₂ products.

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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 CO₂ emissions.

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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.

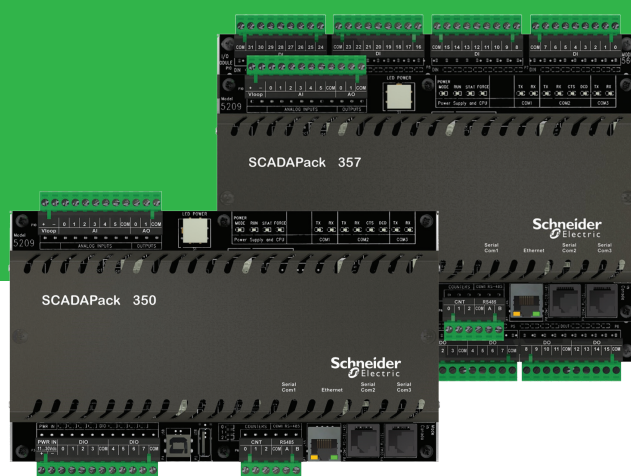
Improved sales through... Differentiation

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 350 | 357

Smart Remote Terminal Units



Built on the proven SCADAPack™ 300 controller platform that adheres to open standards and can operate in the harsh demands of a remote environment, the SCADAPack 350/357 Smart RTUs feature various communication links, a wide range of analog and digital I/O and a 12...30 Vdc supply.

The SCADAPack 350/357 Smart RTU helps to ease operations with:

- Simple ladder logic option (Telepace™ Studio)
- 28,192 permanent Modbus™ registers for use with logic and C++ applications
- USB host port for data logging to USB memory stick
- Up to 76 integrated digital/analog inputs/outputs, and more with I/O expansion modules
- Advanced power management
- Auxiliary supply for up to 7 analog loops
- Tool-less DIN rail mounting system
- IP2x terminal blocks
- Operation from -40...+70 °C (-40...+158 °F)
- Cost-effective, compact form factor

And provides powerful software tools and firmware features:

- EcoStruxure™ Geo SCADA Expert driver for RealFlo™ software remote configuration and data acquisition
- Optional open-standard IEC 61131-3 programming environment
- C/C++ programming support
- Open-standard industrial protocols Modbus RTU/TCP/UDP and DF1 client/server, and open-standard telemetry protocol DNP3 level 2
- Store & forward mechanism between upstream and downstream SCADAPack 300 controllers
- RealFlo flow computer for gas and liquids (including specific protocols used for Flow Measurement: RealFlo Modbus and Modbus EFM)

Green Premium™ ecolabel
product – Sustainable
performance, by design

SCADAPack

350 | 357

Smart Remote Terminal Units

Specifications – General characteristics

Controller

Processor	32-bit ARM7 microcontroller, 32 MHz clock, integrated watchdog timer - Two microcontroller IO co-processors, 20 MHz clock
Memory	16 MB FLASH ROM, 4 MB CMOS RAM, 4 kB EEPROM - CMOS SRAM with lithium battery retains contents for 2 years with no power
Datalog Capacity	465,000 words
File system Typical storage	Internal: 6 MB, external : up to 32 GB on USB memory stick

Communications

Serial Port : COM1 Serial Port : COM2	- RS-485, 2-pole removable terminal block, 2-wire, half duplex, supports baud rates up to 115,200 bps - RS-232 port, 8-pin modular RJ45 jack, full or half duplex, or RS-485 port, 2-wire, half-duplex, supports baud rates up to 115,200 bps in RS-232 mode
Serial Port : COM3	RS-232 port, 8-pin modular RJ45 jack, full or half duplex with RTS/CTS control and operator interface power control, supports baud rates up to 115,200 bps
Serial Protocols	Modbus client/server, DF1 client/server, DNP3 level 2 server
Ethernet Port	8-pin modular RJ45 jack, 10/100 Mbps UTP (10/100 Base-T), transformer-isolated
IP Protocols	- Modbus/TCP Server, Modbus/TCP Client, Modbus RTU in TCP Client , DNP3 level 2 in TCP Server - FTP Server
Store & Forward	Stores & forwards frames between upstream and downstream SCADAPack 300 Smart RTUs
USB Device	USB 2.0 compliant "B"-type receptacle, for local configuration
USB Host	USB 2.0 compliant "A"-type receptacle, supports USB devices up to 32 GB (specific memory sticks supported)

General

Logic Control	SCADAPack Telepace Studio ladder logic or IEC 61131-3 SCADAPack Workbench programming suite: (LD, ST, FBD & SFC)
I/O Terminations	SCADAPack 350: 6, 12-pole connector, 0.0810...3.31 mm ² (28...12 AWG), solid or stranded SCADAPack 357: 5, 6, 7, 9, 10, 12-pole connectors, 0.0810...3.31 mm ² (28...12 AWG), solid or stranded
Dimensions	SCADAPack 350: 211.8 mm x 140.4 mm x 46.5 mm (8.34 in. wide x 5.53 in. high x 1.83 in. deep) SCADAPack 357: 211.8 mm x 181.0 mm x 66.0 mm (8.34 in. wide x 7.13 in. high x 2.60 in. deep)
Enclosure	Corrosion-resistant; zinc-plated steel base and stainless steel cover with black enamel paint
Environment	- Conformal coated -40...+70 °C (-40...+158 °F) operating, -40...+85 °C (-40...185 °F) storage 5% RH to 95% RH, non-condensing
Shock & Vibration	IEC 60068-2-27 (tested up to 15 g), IEC 60068-2-6

SCADAPack

350 | 357

Smart Remote Terminal Units

Specifications – General characteristics

Power

Rated Voltage	12...30 Vdc. Limit voltage: 11.5...32 Vdc; turn on voltage: 10...11.5 Vdc; turn off voltage: 9...10 Vdc						
Maximum Power	12 W at 24 Vdc (internal 5 Vdc supply fully loaded and Vloop on and boosted, fully loaded)						
SCADAPack 350/357 support 3 power modes: sleep, normal clock speed and reduced clock speed							
SCADAPack 350 typical power consumption (at 20 °C/ 68 °F):							
Power Requirements	SCADAPack 350			At normal clock speed		At reduced clock speed	
	Ethernet	Controller LEDs	Vloop fully loaded	12 Vdc	24 Vdc	12 Vdc	24 Vdc
	Sleep mode			15 mW	27 mW	15 mW	27 mW
	Use case 1			0.7 W	0.6 W	0.5 W	0.4 W
	Use case 2			1.6 W	1.5 W	1.4 W	1.3 W
	Use case 3			4.3 W	4.1 W	4.1 W	3.9 W
	Use case 4			5.2 W	5.0 W	5.0 W	4.8 W
	SCADAPack 357 typical power consumption: from 15 mW at 12 Vdc in sleep mode to 8.9 W (with up to 7 analog input/output loops powered from Vloop supply)						
Power outputs	Vloop Maximum 140 mA at 12 V (booster turned off) or 24 Vdc (booster turned on); can power up to 7 analog input/output loops						

Certifications

EMC and Radio Frequency	- ICES-003 Issue 5 August 2012 - CE and RCM markings
General Safety	UL 508
Hazardous Locations	- cCSAus Non-incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D - IECEX/ATEX Class I, Zone 2 - For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at https://checkaproduct.se.com/

SCADAPack

350 | 357

Smart Remote Terminal Units

Specifications – Digital and Analog Inputs/Outputs

Controller board (350 and 357)

Analog Inputs	5, user-selectable 0...10 V or 0...20 mA plus over range 1, 0...32.7 Vdc (15-bit) for DC supply monitoring - Resolution: 15-bit ADC (15-bit over the measurement range in 10 V, 14-bit in 20 mA) - Accuracy: $\pm 0.1\%$ of full scale at 25 °C (+77 °F), $\pm 0.2\%$ over temperature range - Input Resistance: 250 Ω or 20 kΩ in 20 mA or 10 V configurations (60 kΩ for 32.768 V) - Normal rejection mode: 27 dB at 60 Hz
Analog Outputs	2 (optional), 0...20 mA, 4...20 mA, voltage output may be accomplished with external precision resistor - Resolution: 12-bit over 0...20 mA range - Accuracy: $\pm 0.15\%$ at 25 °C (+77 °F), $\pm 0.35\%$ of full scale over temperature range - Response Time: less than 10 μs for 10% to 90% signal change - Power Supply: 12...30 Vdc, external - Power (Current) Requirements: 10 mA plus up to 20 mA per output - Isolation: isolated from RTU logic and chassis - Load Range: 12 Vdc: 0...375 Ω, 24 Vdc: 0...925 Ω, - Logic End-Of- Scan to Signal Update Latency: typically 18... 27 ms
Digital Inputs/Outputs	8, user-selectable as inputs or outputs (open drain) As Digital Inputs - Dry contact As Digital Outputs - Sinking MOSFET output, rated 30 V, 0.5 A, ground return connected to Chassis Ground
Counter Inputs	1, 0...10 Hz (dry contact) 2, 0...10 kHz (turbine or dry contact)
Internal Power monitor	Power input - analog input and low indication, onboard lithium battery - low indication
Internal Temperature Monitor	Controller temperature range -40 °C...+75 °C (-40...+167 °F)

I/O board (357 only)

Analog Inputs	8, software-configurable to 0...20, 4...20 mA , 0...5 or 0...10 V Same features as for the 5 analog inputs located on the controller board (see above) except the following: Isolation: 500 Vac from logic and chassis
Analog Outputs	2 (optional), 0...20/4...20 mA, voltage output may be accomplished with external precision resistor Same features as for the analog outputs located on the controller board
Digital Inputs	32, 12...24 Vdc - Turn on voltage: 9 Vdc (minimum), Turn off voltage: 4 Vdc (maximum) - Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage - DC input current: 0.67 mA at 24 Vdc - Time stamping : 170 ms - Isolation : in group of 8, 1500 Vac from logic supply and chassis
Digital Outputs	16, relays (Form A) 4 contacts share one common - Isolation : isolated in groups of 4. Isolated from RTU logic, RTU chassis and other groups to 1500 Vac - Contact Rating: 3 A, 30 Vdc

Additional I/O

I/O Expansion	Supported modules : - Current 5000 modules (except 5608 and 5610 models) Maximum number of modules per unit: - SCADAPack 350: 8 (*) - SCADAPack 357: 7 (*) (*): to reach this limit, additional power supply modules (reference: 5103) are required
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SCADAPack

350 | 357

Smart Remote Terminal Units

Model Code

SCADAPack 350/357

Model	Select : Controller
TBUP350	SCADAPack 350, Controller 32-bits, 5 Analog Inputs, 8 Digital I/O, 3 High Speed Counter Inputs
TBUP357	SCADAPack 357, Controller 32-bits, comes with the above plus additional I/Os

Code	Select : Future Option
1	None

Code	Select : Gas & Liquids Flow Run-Time Option
A	None

Gas Only Flow Computer Options

G	2 Run Gas Flow
F	4 Run Gas Flow
V	2 Run Gas Flow - Gas Transmission Version
W	4 Run Gas Flow - Gas Transmission Version

Gas & Liquids Flow Computer Options

L	Gas & Liq 1: Supports 1 Gas run, 1 Liquid run, and 1 Water run
M	Gas & Liq. 2: Supports 2 Gas runs, 2 Liquid runs, and 2 Water runs
N	Gas & Liq. 3: Supports 3 Gas runs, 3 Liquid runs, and 3 Water runs
P	Liq. 4: Supports 4 Liquid runs and 4 Water runs

Code	Select : Protocol Option
2	Modbus and DNP3 level 2 protocol emulation

Code	Select : Programming Environment
0	Telepace Ladder logic and C language firmware loaded – IEC 61131-3 enabled (Programming tools sold separately)
1	IEC 61131-3 and C language firmware loaded – Telepace enabled (Programming tools sold separately)

SCADAPack

350 | 357

Smart Remote Terminal Units

Model Code - continued

SCADAPack 350/357

Code	Select : Analog Inputs
A	P350 : 5 selectable as 0...10 V or 0...20 mA *P357 : adds 8 selectable as 0...20 mA, 4...20 mA, 0...5 V or 0...10 V

Code	Select : Digital Inputs/Outputs
A	P350: 8 Digital I/O, individually selectable as digital input (Dry Contact) or digital output (Open Drain)
B	P357: adds 32 digital inputs (12-24 V), 16 digital outputs (Dry Contact relay for Class I Div 2, Solid State relay for IECEx/ATEX)

Code	Select : Analog Outputs
0	None
1	2 channel Analog Output, 0..20 mA, external DC supply
2	P357 only : 4 channel Analog Output, 0..20 mA, external DC supply

Code	Select : Future Option
0	None

Code	Selection : Certifications
S	With FCC, UL508, CE marking and RCM
X	Adds IECEx/ATEX Class I, Zone 2
U	Adds cCSA _{US} Nonincendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D

Note: Accessories sold separately.

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CO₂ 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 CO₂ 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.

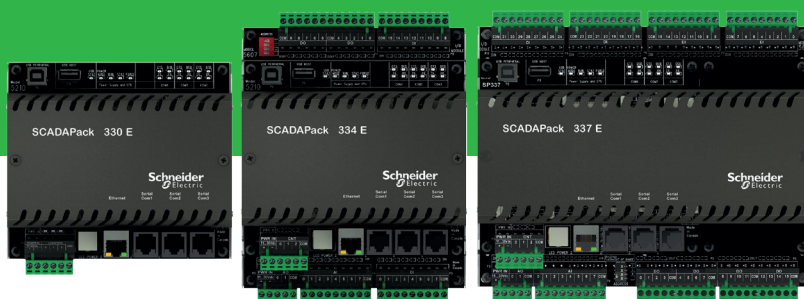
Improved sales through... Differentiation

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 330E | 334E | 337E

Smart Remote Terminal Units



The SCADAPack™ 300E Smart RTU is a platform built on a 32-bit processor and fitted with a 12...30 Vdc supply, a variety of communication links and a wide range of analog and digital I/O that adhere to open standards and can operate in the harsh demands of a remote environment.

The SCADAPack 300E may be configured and programmed locally or remotely and is optionally configurable directly from EcoStruxure™ Geo SCADA Expert host software. It can play multiple roles simultaneously: end point, automation point, data concentrator, protocol converter, peer-to-peer device, telemetry router; and use Secure Authentication.

The SCADAPack 330E/334E/337E provide the following features:

- Open-standard telemetry protocols IEC 60870-5-101/-104 and DNP3 level 4 with Security Suite (Secure Authentication and/or Data Encryption)
- Open-standard industrial protocols Modbus™ RTU/TCP, DNP3 and DF1 client
- Open-standard IEC 61131-3 programming environment
- Data concentrator for DNP3, Modbus and DF1 devices
- Communication with up to 13 active SCADA clients, 10 remote/local server devices and 100 remote DNP3 devices in peer-to-peer mode
- Remote management suite (revise configuration, modify programs and update firmware remotely, using open standard DNP3)
- Up to 33 integrated digital/analog inputs/outputs, and more with I/O expansion modules
- 1 Ethernet, 3 Serial, 1 USB configuration port
- IP2x terminal blocks
- Operation from -40...+70 °C (-40...+158 °F)
- Cost-effective, compact form factor

Green Premium™ ecolabel
product – Sustainable
performance, by design

SCADAPack

330E | 334E | 337E

Smart Remote Terminal Units

Specifications – General characteristics

Controller

Processor	32-bit ARM7 microcontroller, 32 MHz clock, integrated watchdog timer - Two microcontroller IO co-processors, 20 MHz clock
Memory	16 MB FLASH ROM, 4 MB CMOS RAM, 4 kB EEPROM - CMOS SRAM with lithium battery retains contents for 2 years with no power
Event Logging Capacity (events)	20,000 events
Database Capacity	Up to 1,000 points
Data Concentrator Capacity (points)	Up to 500 in DNP3
Data Concentrator Capacity (devices)	Up to 10 in DNP3 and up to 100 in Modbus or DF1
File System Typical Storage	Internal: 6 MB

Communications

Serial Ports : COM1, COM2	RS-232 port, 8-pin modular RJ45 jack, full or half duplex, or RS-485 port, 2-wire, half-duplex, supports baud rates up to 115,200 bps in RS-232 mode
Serial Port : COM3	RS-232 port, 8-pin modular RJ45 jack, full or half duplex with RTS/CTS control and operator interface power control, supports baud rates up to 115,200 bps
Serial Protocols	DNP3 level 4 server/client and peer-to-peer, IEC 60870-5-101 server, Modbus server/client, DF1 client
Ethernet port	8-pin modular RJ45 jack, 10/100 Mbps UTP (10/100 Base-T), transformer-isolated
IP Protocol	- DNP3 level 4 in TCP Client/Server, UDP Client/Server and peer-to-peer, IEC 60870-5-104 Server, Modbus/TCP Server, Modbus/TCP Client, Modbus RTU in TCP Client - NTP Client/Server, Telnet Server, FTP Server, BOOTP Server
Client - Server Capability	- Can simultaneously report to up to multiple independent active clients: 3 in DNP3, 2 in IEC 60870-5-101/-104, 5 in Modbus TCP and 3 in Modbus RTU, and connect to up to 100 remote devices in DNP3 peer-to-peer - As a data concentrator it can manage up to 10 local or remote DNP3 servers, and up to 10 local servers communicating with Modbus RTU, Modbus TCP or DF1 serial
USB Device	USB 2.0 compliant "B"-type receptacle, for local configuration

General

Logic Control	IEC 61131-3 SCADAPack Workbench programming suite (LD, ST, FBD & SFC)			
I/O Terminations	SCADAPack model	330E	334E	337E
	Connectors, 0.0810...3.31 mm ² (28...12 AWG), solid or stranded	6-pole	5, 6, 9, 12-pole	5, 6, 9, 10-pole
Dimensions	SCADAPack model	330E	334E	337E
	Width mm (in.)	144 (5.65)	144 (5.65)	211.8 (8.34)
	Height mm (in.)	140.4 (5.53)	181.0 (7.13)	181.0 (7.13)
	Depth mm (in.)	46.5 (1.83)	66.0 (2.60)	66.0 (2.60)

SCADAPack

330E | 334E | 337E

Smart Remote Terminal Units

Specifications – General characteristics

General (continued)

Enclosure	Corrosion-resistant; zinc-plated steel base and stainless steel cover with black enamel paint
Environment	- Conformal coated -40...+70 °C (-40...+158 °F) operating, -40...+85 °C (-40...+185 °F) storage 5% RH to 95% RH, non-condensing
Shock & Vibration	IEC 60068-2-27 (tested up to 15 g), IEC 60068-2-6

Power Supply

Rated Voltage	12...30 Vdc. Limit voltage: 11.5...32 Vdc; turn on voltage: 10...11.5 Vdc; turn off voltage: 9...10 Vdc			
Maximum Power	7 W at 24 Vdc (internal 5 Vdc supply fully loaded and Vloop on and boosted, fully loaded)			
Power Requirements	Typical power consumption (at 20 °C/ 68 °F)			
	SCADAPack model	DO relays	12 Vdc	24 Vdc
	330E	–	1.8 W	2.0 W
	334E	OFF	2.4 W	2.8 W
		ON	4.0 W	4.5 W
	337E	OFF	2.8 W	3.1 W
		ON	5.3 W	5.8 W
	SCADAPack internal 5 Vdc supply may be used to power SCADAPack options, such as I/O expansion modules through the I/O expansion bus connector			

Certifications

EMC and Radio Frequency	- ICES-003 Issue 5 August 2012 - CE and RCM markings
General Safety	UL 508
Hazardous Locations	- cCSAus Non-incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D - IECEX/ATEX Class I, Zone 2 - For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at https://checkaproduct.se.com/

SCADAPack

330E | 334E | 337E

Smart Remote Terminal Units

Specifications – Digital and Analog Inputs/Outputs

Controller board

Counter Inputs	1, 0...10 Hz (dry contact) 2, 0...10 kHz (turbine or dry contact)
Internal Power Monitor	Power input - analog input and low indication, onboard lithium battery - low indication
Internal Temperature Monitor	Controller temperature range -40...+75 °C (-40...+167 °F)

I/O board (334E and 337E only)

	SCADAPack model	334E	337E
	Analog inputs	8	8
	Analog outputs (option)	2	2
	Digital inputs	16	32
	Digital outputs	10	16
Analog Inputs	- Software-configurable to 0...20, 4...20 mA , 0...5 or 0...10 Vdc, plus over range - Software-configurable to 0...20, 4...20 mA , 0...5 or 0...10 Vdc, plus over range - Resolution: 15-bit ADC (15-bit over the measurement range in 10 Vdc, 14-bit in 20 mA) - Accuracy: $\pm 0.1\%$ of full scale at 25 °C (77 °F), $\pm 0.2\%$ over temperature range - Input Resistance: 250 Ω or 20 kΩ in 20 mA or 10 V configurations (60 kΩ for 32.768 Vdc) - Normal rejection mode: 27 dB at 60 Hz - Sampling rate: 170 ms - Isolation: 500 Vac from logic and chassis		
Analog Outputs	0...20/4...20 mA, voltage output may be accomplished with external precision resistor - Resolution: 12-bit over 0...20 mA range - Accuracy: $\pm 0.15\%$ at 25 °C (77 °F), $\pm 0.35\%$ of full scale over temperature range - Response Time: less than 10 μs for 10% to 90% signal change - Power Supply: 12...30 Vdc, external - Power (Current) Requirements: 10 mA plus up to 20 mA per output - Isolation: isolated from RTU logic and chassis - Load Range: 12 Vdc: 0...375 Ω, 24 Vdc: 0...925 Ω - Logic End-Of- Scan to Signal Update Latency: typically 18... 27 ms - Status & Reporting: output value - Controls: Direct Operate, Select Before Operate		
Digital Inputs	12...24 Vdc - Turn on voltage: 9 Vdc (minimum), Turn off voltage: 4 Vdc (maximum) - Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage - DC input current: 0.67 mA at 24 Vdc - Time stamping : 170 ms - Isolation : in group of 8, 1500 Vac from logic supply and chassis		
Digital Outputs	- Relays (Form A) 4 contacts share one common - Isolation : isolated in groups of 4 (P337E) or 5 (334E). Isolated from RTU logic, RTU chassis and other groups to 1500 Vac - Maximum Switching Voltage: 30 Vdc or 250 Vac (resistive) - Maximum Switching Load: 150 W or 1250 VA (5 A) - Controls: Direct Operate, Select Before Operate, Trip/Close, Latch, Pulse		

Additional I/O

I/O Expansion	5606, 5607, 5608 and 5610, and 5304, 5404, 5411, 5414, 5415, 5505 and 5506 Maximum number of modules per unit: - SCADAPack 330E: 8 (*) - SCADAPack 334E and 337E: 7 (*) (*): to reach this limit, additional power supply modules are required
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SCADAPack

330E | 334E | 337E

Smart Remote Terminal Units

Model Code

SCADAPack 330E/334E/337E

Model	Select: Controller
TBUP330	SCADAPack 330E, Controller 32-bit, 3 High Speed Counter Inputs
TBUP334	SCADAPack 334E, Controller 32-bit, comes with the above plus additional I/Os
TBUP337	SCADAPack 337E, Controller 32-bit, comes with the above plus additional I/Os

Code	Select: Platform
E	SCADAPack E Firmware (Configuration Software included), executes two IEC 61131 kernels, Workbench required

Code	Select: SCADA Security
A	none
B	AGA-12 Encryption for DNP3 (Security Administrator application required)
C	DNP3 Secure Authentication SAV2 (Security Administrator application required)
D	DNP3 Secure Authentication with AGA-12 (Security Administrator application required)

Code	Select: Protocol Option
5	DNP3 Serial/IP client/server/peer-to-peer, IEC 60870-5-101/104 Server, Modbus RTU/TCP client/server, TCP/IP

Code	Select: License Option *
5	IEC61131 (executes two kernels, SCADAPack Workbench required), and DF1 client

Code	Select: Analog Inputs
A	P334 (8) and P337 (8): selectable as 0...20 mA, 4...20 mA, 0...5 Vdc or 0...10 Vdc

Code	Select: Digital Inputs/Outputs
A	P330 only: None
B	P334 only: 16 inputs, 10 outputs; P337: 32 inputs, 16 outputs Inputs: 12/24 Vdc; Outputs: either Dry Contact relay (for Class I Div 2) or Solid State relay (for IECEx/ATEX)

* Includes DNP3 Data Concentrator License (limit of 500 points from 10 IEDs) Multiple DNP3 Client License (up to 3 Clients)

SCADAPack

330E | 334E | 337E

Smart Remote Terminal Units

Model Code

SCADAPack 330E/334E/337E

Code	Select: Analog Outputs
0	None
1	P334/P337 only: 2 channel Analog Output, 0...20 mA, external DC supply

Code	Select: Future Option
0	None

Code	Selection : Certifications
S	FCC, UL508, CE marking and RCM
X	Adds IECEx/ATEX Class I, Zone 2
U	Adds cCSAus Non-incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D

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

SCADAPack 530E | 535E

Remote Programmable Automation Controllers



With the SCADAPack™ 500E range, Schneider Electric introduces the first ever remote Programmable Automation Controller (rPAC). This data sheet presents the first two models of that new range, the SCADAPack 530E and the SCADAPack 535E.

The ARC Advisory Group has defined the rPAC as a whole new way to look at remote site automation. An rPAC combines the power of a PAC with the versatility of an RTU.

The SCADAPack 500E rPAC is a platform that dramatically increases performance (execution speed, connectivity, number of remote/local I/O), adheres to open standards, and can operate in the harsh demands of a remote environment.

SCADAPack 500E provides:

- Open standard telemetry protocols such as DNP3 level 4 with Security Suite (Secure Authentication and/or Data Encryption) and IEC 60870-5-101/-104
- Open standard industrial protocols such as Modbus™ RTU, Modbus TCP and DF1

- Open standard IEC 61131-3 programming environment
- Data concentrator for any DNP3, Modbus or DF1 devices
- Up to 29 active SCADA clients, up to 100 remote/local server devices and up to 100 remote DNP3 devices in peer-to-peer mode
- Remote management suite (ability to amend configuration, modify programs and update firmware remotely, using open standard DNP3)
- Up to 515 internal digital/analog inputs/outputs
- 1 ms resolution time-stamped digital inputs, 30 ms sampled analog inputs with 16-bit ADC
- 3 Ethernet and 4 Serial ports, 1 USB device port for configuration
- 1 USB host port for external storage (memory stick up to 32 GB)
- Tool-free DIN rail mounting system
- Withstands 15 g acceleration
- IP2x terminal blocks
- Operation from -40...+70 °C (-40...+158 °F)
- Compact form factor

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product – Sustainable
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SCADAPack 530E | 535E

Remote Programmable Automation Controller

Specifications – General characteristics

Controller

Processor	SPEAr 1380 32-bit dual-core Cortex A9 microcontroller, up to 600 MHz
Memory	• 128 MB NAND FLASH, 128 MB DDR3 RAM • Non-Volatile RAM CMOS SRAM with lithium battery retains contents for 2 years with no power
Event Logging Capacity (events)	40,000 (this number decreases if the database is greater than 10,000 points)
Database Capacity (points)	Up to 20,000 (this number decreases if the event pool is above 7,000 events)
Data Concentrator Capacity (points)	Approximately 15,000
Data Concentrator Capacity (devices)	Approximately 100
File System Typical Storage	Internal: 10 MB; External: 32 GB (on optional memory stick)

Communications

Serial Ports: Serial1, Serial2	RS-232 port, 8-pin modular RJ45 jack, full or half duplex with RTS/CTS control and operator interface power control, supports baud rates up to 115,200 bps. Rated to ± 15 kV (IEC 61000-4-2, Air Discharge) static protection
Serial Ports: Serial3, Serial4	• RS-232 port, 8-pin modular RJ45 jack, full or half duplex, or RS-485 port, 2-wire, half-duplex, supports baud rates up to 115,200 bps • In RS-232 mode, rated to ± 15 kV (IEC 61000-4-2, Air Discharge) static protection
Embedded Wireless	The controller board is fitted with Socket Modem support, for future use
Serial Protocols	• DNP3 level 4 Client/Server and Peer-to-Peer, IEC 60870-5-101 Server, Modbus Client/Server, DF1 Client
Ethernet Ports: Eth1, Eth2, Eth3	8-pin modular RJ45 jack, 10/100 Mbps UTP (10/100 Base-T), transformer-isolated
IP Protocols	• DNP3 level 4 in TCP Client/Server, UDP Client/Server and Peer-to-Peer, IEC 60870-5-104 Server, Modbus/TCP Server, Modbus/TCP Client, Modbus RTU in TCP Client • NTP Client/Server, Telnet Server, FTP Server, BOOTP Server
Client - Server Capability	• Can simultaneously report to up to 29 independent clients (3 in DNP3, 2 in IEC 60870-5-101/104, 20 in Modbus TCP and 4 in Modbus RTU) and connect to up to 100 remote devices in DNP3 Peer-to-Peer • As a data concentrator it can manage up to 100 local or remote DNP3 servers, and up to 100 local servers communicating with Modbus RTU, Modbus TCP or DF1 serial
USB Device	USB 2.0 compliant "B"-type receptacle, for local configuration
USB Host	USB 2.0 compliant "A"-type receptacle, supports USB devices up to 32GB (specific memory sticks supported)

SCADAPack 530E | 535E

Remote Programmable Automation Controller

Specifications – General characteristics continued

General

Logic Control	IEC 61131-3 SCADAPack Workbench programming suite (LD, ST, FBD & SFC)
I/O Terminations	SCADAPack 530E: 11-pole connector, 0.0810...3.31 mm ² (28...12 AWG), solid or stranded SCADAPack 535E: 5, 6, 7, 9, 11-pole connectors, 0.0810...3.31 mm ² (28...12 AWG), solid or stranded
Dimensions	SCADAPack 530E: 150.5 mm wide x 134.8 mm high x 74.9 mm deep (5.93 in. x 5.31 in. x 2.95 in.) SCADAPack 535E: 150.5 mm wide x 182.3 mm high x 86.5 mm deep (5.93 in. x 7.18 in. x 3.41 in.)
Packaging	Corrosion-resistant; zinc-plated steel base and stainless steel cover with black enamel paint
Environment	-40...+70 °C (-40...+158 °F) operating, -40...+85 °C (-40...+185 °F) storage 5% RH to 95% RH, non-condensing
Shock & Vibration	IEC 60068-2-27 (tested up to 15 g), IEC 60068-2-6

Power

Rated Voltage	12...30 Vdc, 5 W typical. Limit voltage: 11.5...32 Vdc; turn on voltage: 10...11.5 Vdc; turn off voltage: 9...10 Vdc
Maximum Power	SP530E + 4 x 6601 expansion IO modules + USB: 8.7 W

SP530E (Controller) 3.7 W
 SP535E (Controller with integrated IO) 4.8 W
 6601 (Expansion IO) 1.1 W
 USB (5 Vdc at 100 mA) 0.6 W
 Serial port (5V at 250 mA) 1.5 W
 For analog output power requirements see the Analog Output specifications

Power Consumption (W)

Power Requirements	Power Consumption (W)				
	Voltage input	530E	535E	535E + 6601	535E + 2 x 6601
	11.5 V	3.0	4.1	5.2	6.3
	13.8 V	3.0	4.1	5.2	6.3
	24 V	3.4	4.5	5.6	6.7
	30 V	3.7	4.8	5.9	7.0

Certifications

EMC and radio frequency	FCC 47 CFR Part 15, Subpart B ICES-003 Issue 5 August 2012 CE and RCM markings
General safety	UL 508
Hazardous locations	- cCSAus Non incendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D - IECEx/ATEX Class I, Zone 2 - For the latest information regarding product environmental compliance visit the Schneider Electric Check a Product portal at https://checkaproduct.se.com/

SCADAPack 530E | 535E

Remote Programmable Automation Controller

Specifications – Digital and Analog Inputs/Outputs

Controller board (530E and 535E)

Digital Inputs	2, 12...24 Vdc • Turn on voltage: 8 Vdc (minimum), Turn off voltage: 4 Vdc (maximum) • Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage • DC input current: 0.4 mA at 12 Vdc, 0.8 mA at 24 Vdc • Time stamping: 10 ms • Ground return connected to Chassis Ground
Digital Output	1, Sinking MOSFET output, rated 30 V, 0.5 A, ground return connected to Chassis Ground
Internal Power monitor	Power input - analog input and low indication, onboard lithium battery - low indication
Internal Temperature Monitor	Controller temperature range -40...+75 °C (-40...+167 °F)

I/O board (535E and 6601 standalone module)

Analog Inputs	6, dipswitch-configurable to 4...20 mA, 0...20 mA, 1...5 V, or 0...5 V • Uni-polar, differential, voltage or current • Resolution: 24-bit ADC (16-bit over the measurement range) • Accuracy: $\pm 0.1\%$ of full scale at 25 °C (77 °F), $\pm 0.2\%$ over temperature range • Isolation: 250 Vac isolation from channel to channel and from rPAC logic and chassis • Input Resistance: 250 Ω or 800 kΩ in current/voltage configurations • Under range: 4...20 mA measures to 0 mA • Common Mode Rejection: -80 dB (50/60 Hz) • 30 ms sampling rate
Analog Outputs	2 (optional), 0...20 mA, 4...20 mA, voltage output may be accomplished with external precision resistor • Uni-polar • Resolution: 12-bit over 0...20 mA range • Accuracy: $\pm 0.15\%$ at 25 °C, $\pm 0.35\%$ of full scale over temperature range • Response Time: less than 10 μs for 10% to 90% signal change • Power Supply: 12...30 Vdc, external • Power (Current) Requirements: 10 mA plus up to 20 mA per output • Isolation: transformer, 500 Vdc maximum to RTU logic and chassis • Load Range: 12 Vdc: 0...475 Ω, 24 Vdc: 0...1075 Ω, 30 Vdc: 250...1375 Ω • Logic End-Of- Scan to Signal Update Latency: less than 10 ms (typically 5...8 ms) • Status & Reporting: Open Loop status, output value poll • Controls: Direct Operate, Select Before Operate
Digital Inputs	16, 12...24 Vdc • Turn on voltage: 9 Vdc (minimum), Turn off voltage: 4 Vdc (maximum) • Over-voltage tolerance: 150% sustained over-voltage without foreseeable damage • DC input current: 0.9...1.2 mA at 12 Vdc, 2.1...2.4 mA at 24 Vdc • Time stamping: 1 ms Sequence of Event • Isolation: in 2 groups of 8. Isolation from RTU logic and chassis: 1000 Vac/1500 Vdc
Digital Outputs	8, relays (2 Form C, 6 Form A) • Form C: SPDT, separate Normally Open/Normally Closed/Common • Form A: Normally open, one common • Isolation: 500 Vac minimum to RTU logic • Maximum Switching Voltage: 30 Vdc or 25 Vac • Maximum Switching Load: 60 W or 50 VA (2A) • Status & Reporting: Individual relay pole feedback to software, output state poll • Controls: Direct Operate, Select Before Operate, Trip/Close, Latch, Pulse
Counter Inputs	8, shared with digital input channels 1 to 4: 0...1.5 kHz, 5 to 8: 0...150 Hz

Additional I/O

I/O Expansion	Supported modules: • 6601 external module Maximum number of modules per unit: • SCADAPack 530E: 16 (*) • SCADAPack 535E: 15 (*) (*): to reach this limit, additional power supply modules are required
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SCADAPack 530E | 535E

Remote Programmable Automation Controller

Model Code

SCADAPack 530E/535E

Model	Select : Controller
TBUP530	SCADAPack 530E, 32-bit controller, Dual Core
TBUP535	SCADAPack 535E, 32-bit controller, Dual Core, comes with additional I/O

Code	Select : Platform
E	SCADAPack E Firmware (Configuration Software included), executes two IEC 61131 kernels, Workbench required

Code	Select: SCADA Security
A	None
B	AGA-12 Encryption for DNP3 (Security Administrator application required)
C	DNP3 Secure Authentication SA v2 (Security Administrator application required)
D	DNP3 Secure Authentication with AGA-12 (Security Administrator application required)

Code	Select: Protocol Option
5	DNP3 Serial/IP Client/Server/Peer-to-Peer, IEC 60870-5-101/104 Server, Modbus RTU/TCP Client/Server, TCP/IP, DF1 Client

Code	Select: License Option
6	Full DNP3 Data Concentrator License, Multiple DNP3 Client License (up to 3 Clients)

Code	Select : Analog Inputs
A	P530: None P535: adds 6, shipped selectable as 0-20 mA or 4-20 mA
B	P535 only: adds 6, shipped selectable as 0...5 Vdc or 1...5 Vdc

Code	Select: Digital Inputs/Outputs
A	P530: 2 Digital Inputs (12/24 V), 1 Digital Output (open collector)
B	P535: 16 Digital Inputs (12/24 V) and 8 Dry Contact Relay outputs (6 Form A, 2 Form C)

SCADAPack 530E | 535E

Remote Programmable Automation Controller

Model Code - continued

SCADAPack 530E/535E

Code	Select: Analog Outputs
0	None
1	P535 only: 2 channel Analog Output option, shipped selectable as 0...20 mA or 4...20 mA, external DC supply

Code	Select : Integrated Communications Interfaces
0	None

Code	Selection: Certifications
S	With FCC, UL508, CE marking and RCM
X	Adds IECEx/ATEX Class I, Zone 2
U	Adds cCSAus Nonincendive Electrical Equipment for use in Class I, Division 2, Groups A, B, C and D

6000-Series I/O Expansion Modules (Supported by SCADAPack 530 & 535 Controllers only)

Part No.	6000-Series Expansion Modules (complete the following part numbers with S, U or X depending on certification required)
TBUX297583	Model 6601-20 mA, 16 D/I 12...24 Vdc, 8 Dry Contact relay O/P, 6 config. A/I (0/4...20 mA)
TBUX297585	Model 6601-20 mA, 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)

SCADAPack 530E | 535E

Remote Programmable Automation Controller

Model Code - continued

5000-Series I/O Expansion Modules

Part No.	5000-Series Expansion Modules
TBUX297248	Model 5304-20, 4-channel isolated analog output, 0...20 mA
TBUX297252	Model 5304-10, 4-channel isolated analog output, 0...10 Vdc
TBUX297253	Model 5304-5, 4-channel isolated analog output, 0...5 Vdc
TBUX297254	Model 5304-C, 4-channel isolated analog output, custom (specify range of each input)
TBUX297249	Model 5405-120, 32-point digital input, 120 Vac discrete digital input
TBUX297247	Model 5405-24, 32-point digital input, 12...24 Vdc discrete digital input
TBUX297378	Model 5414-24, 16-point 12/24 Vac/Vdc, ATEX and IECEx
TBUX297382	Model 5415, 12-point compact mechanical relay output
TBUX297384	Model 5415-A, 12-point compact solid state relay output
TBUX297319	Model 5506, 8-channel analog input

I/O expansion and distributed architecture

1. Depending on the options chosen (with or without the future socket modem), SCADAPack 535E embedded DC supply can power either two (2) or four (4) 6601 IO expansion modules. When more 6601 IO expansion modules are required in any of these two configurations, then it is necessary to use one of our power supply extensions (one unit can power up to 8x 6601 modules).
2. SCADAPack 535E can be used as a Remote I/O client, managing up to 15 SCADAPack ES server units: SCADAPack 535E automatically downloads the corresponding configuration into these server devices (which is very useful when replacing devices, as the operator does not have to do any firmware setting).

Note: Accessories sold separately.

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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)