

SCADAPack 50

Wireless Remote Data Logger



SCADAPack™ 50 Wireless Data Logger for Remote Process Monitoring

The SCADAPack 50 (SP50) data logger is a compact autonomous device that monitors analog, discrete, or Modbus inputs. Powered by internal batteries, the SP50 can offer up to five years of autonomy. The field units are IP68 rated for use in applications where environmental protection is required.

SP50 data loggers are used in a wide variety of applications including water infrastructure monitoring, gas distribution systems, bulk storage level monitoring, and more.

In a typical installation, data is logged periodically, stored in the unit and then transmitted to the host once per day as an example. The user can choose the desired sampling and transmission rates. The files are sent over a GSM network as binary data files using the SMS PDU format.

On the receiving end any GSM modem capable of using Hayes commands can be used. Both 2G and 3G options exist for network connectivity. For large systems (many hundreds of data loggers) direct connection to the local operator's SMS server over a WAN connection can be considered.

From a host perspective, SP50 networks are directly compatible with the Schneider Electric StruxureWare™ SCADA Expert ClearSCADA™ with its embedded drivers and easy to use interface. SCADA Expert ClearSCADA can also be used as a gateway into any third party host.

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Specifications

Operating conditions

Operating temperature	-25 to +60°C (-13 to +140°F)
Altitude	Less than 2000 m (≈ 6560 ft)
Relative humidity	90% (IEC 60068-2-3)
Protection	IP68: 1m for 96h
Resistance to vibration	5-150 Hz/3.5 mm amplitude/1 g (IEC 60068-2-6)
Resistance to shock	15 g/11ms/3 shocks/3 axis (IEC 60068-2-27)

Power supply

Lithium Thionyl Chloride battery Nominal voltage	3.6 V
Dimensions	Ø 33 mm (1.3"), L = 60 mm (2.36") [type D]
References	SAFT LSH20 (www.saftbatteries.com)
Consumption Basic (sleep mode)	< 30 µA
Measurement mode (without 4-20 mA)	< 30 mA
With GSM communication (SMS)	Maximum 400 mA

RS-485 port

Voltage	-7 to +12 V
Limits	± 250 mA
Max. transfer rate	38400 bit/s

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Specifications

Inputs*

Logic input	Dry contact
Status (On/Off wake up transition)	Maximum 50 Hz
Counter (pulse counting)	Mini pulse 10 ms
Flow	Auto powered 3.3 V (3 μ A)
Time counting	Input impedance > 1 M Ω
Analog voltage input	
0-100 mV	
0-1 V	\pm 40 V, 2 M Ω
+/-10 V	Accuracy \pm 0.25%
10 Vpp (peak-to-peak measurement of an alternating signal)	Measurement during 200 ms
Analog current input	
	Maximum 35 mA
0-20 mA	Accuracy \pm 0.05 mA
4-20 mA	Waste voltage < 2.5 V
Analog Resistance input	
0-2000 Ω	2000 Ω maximum
PT100 (2 and 3-wire)	Accuracy \pm 0.5 Ω or \pm 0.2 $^{\circ}$ C (0.36 $^{\circ}$ F)
PT1000 (2 and 3-wire)	Read with 0.4 mA during 200 ms
Modbus Variable input	
	Modbus Master RS-485 (1200 – 38400 baud)
System input	
Internal enclosure temperature	\pm 2 $^{\circ}$ C (3.6 $^{\circ}$ F)
Isolation between channels (GND are not separated)	250 V

* The theoretical maximum quantity of inputs supported by the SCADAPack 50, based on type, is as follows:

- 4 digital (discrete or counter)
- 4 analog
- 8 Modbus slave registers

However, the 7-pin bulkhead connector, used to pass process signal, Modbus communication and power lines into and out of the enclosure, is the ultimate determining factor in how many inputs are supported based on a particular application.

For example, if a mix of analog and digital inputs is required and 2 lines on the connector are required for the analog ground and digital ground signals, 5 signal lines therefore remain for the actual inputs. The AI and DI count can then be mixed to add up to 5, keeping in mind that the maximum quantity of each type can't be exceeded. Possible IO combinations in this case includes: 4 DIs + 1 AIN, 3 DINs + 2 AINs, 0 DINs + 4 AINs, etc.

See the SCADAPack 50 User Manual for further details.

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Specifications

Output

Maximum output current (Power 15 V in SC) (limited by fold back set to 0.5 s)	0.6 A
Maximum output voltage	16 Vdc
Output specification	14 Vdc/35 mA 12 Vdc/40 mA
Maximum admissible output power	400 mW
Insulation (GND is not isolated)	250 V

Internal clock

Accuracy	± 5 ppm at 25°C (77°F) ± 40 ppm in the range -10°C to +60°C (+14 to +140°F)
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Modem

3G	<ul style="list-style-type: none"> • Five-Bands (800/850/900/1900/2100 MHz) UMTS/HSPA+ (WCDMA/FDD) • Quad-Band GSM (850/900/1800/1900 MHz)
2G	Quad-Band GSM (850/900/1800/1900 MHz)

General

Warranty	Up to 3 years on parts & labor*
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*Please refer to your local Schneider Electric sales conditions

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Model Code

TBUP50-1-2-0-0 represents a sample code for a SCADAPack 50 data logger with a 3G modem and external antenna

Model	Select: Data Logger
TBUP50	SCADAPack 50 Wireless Data Logger

Code	Select: GSM Modem
1	3G
2	2G

Code	Select: Antenna
1	Internal
2	External

Code	Future Option
0	None

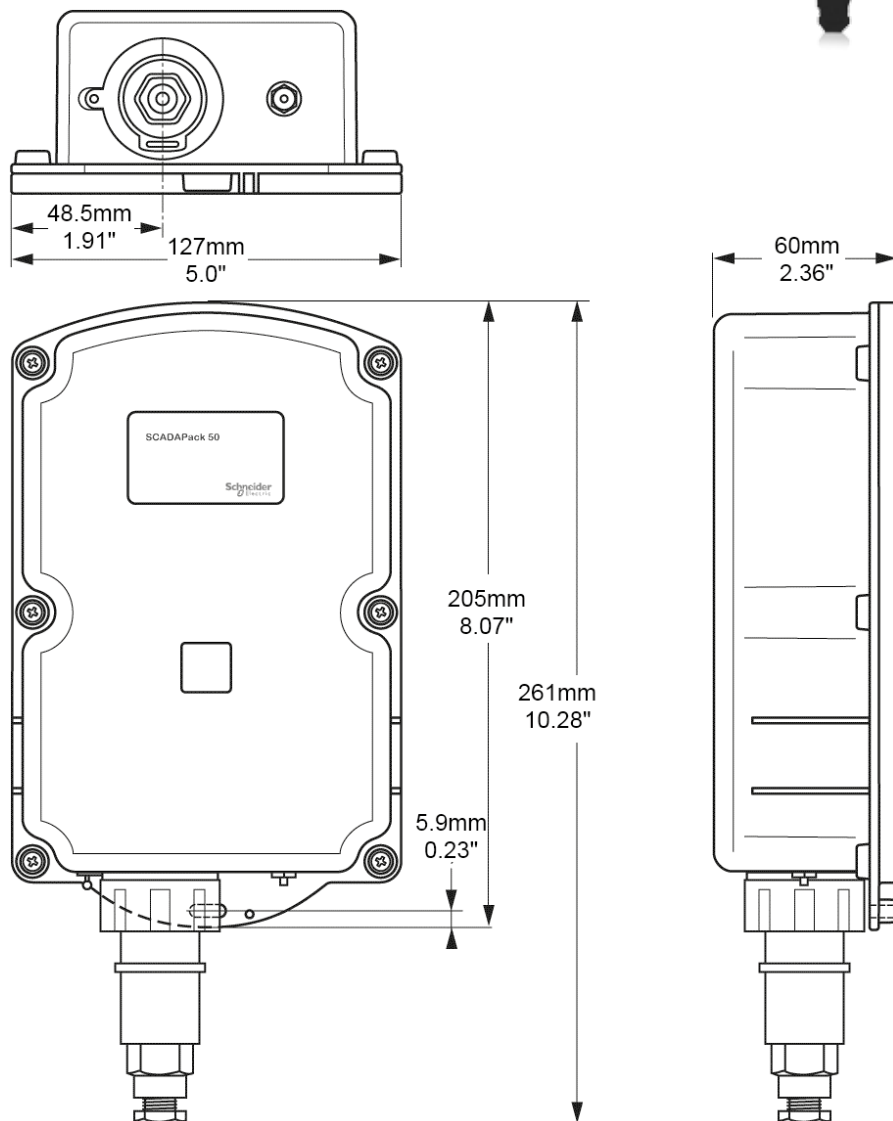
Code	Future Option
0	None

SCADAPack 50 Accessories

Part No.	Description
TBUM290073	Lithium Batteries, 10 pack
TBUM290074	IrDA Interface Kit
TBUM250313	SCADAPack 50 Documentation CD

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Disclaimer: Not all product features are available in every mode of operation.
Schneider Electric reserves the right to change product specifications. For more information visit www.schneider-electric.com.

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