S330/S331

Display and Data Logger

S330	Display
S331	Display & Data Logger

IIOT SUPPORT
Connection to S4M software

TOUCH SCREEN
5" large color LCD

WEB SERVER
Access from world wide

VERSATILE CONNECTION
Up to 16 sensors inputs

TIGHT PROTECTION
IP65

DATA LOGGER
100 million values

Benefits

- Central unit of a compressed air monitoring system, collecting, recording and visualizing all measurement data
- High-resolution 5" color touch screen for easy operation and on-site data visualization
- Connect up to 16 Modbus/RTU sensors, 2 analog sensors and 2 SDI sensors to a single data logger
- Modbus/RTU and Modbus/TCP output alway included for a seamless integration into existing monitoring and building management systems
- Alarm monitoring for all measurement channels with on-screen indication and 2 relay outputs

Plug and Play Data Logging – Process Visualization and Analysis

The S330/S331 Display and Data Logger provides an universal solution for displaying and recording all relevant parameter of a compressed air system, which includes flow, dew point, pressure, temperature, power consumption, compressor status, and so on.

The devices offer a powerful yet cost efficient data logger and display solution for optimal and reliable management and monitoring of your compressed air system.

Inputs

2 digital inputs:

- SDI Sensors (up to 2 SDI sensors)
- Modbus Sensors (up to 16 Modbus sensors)

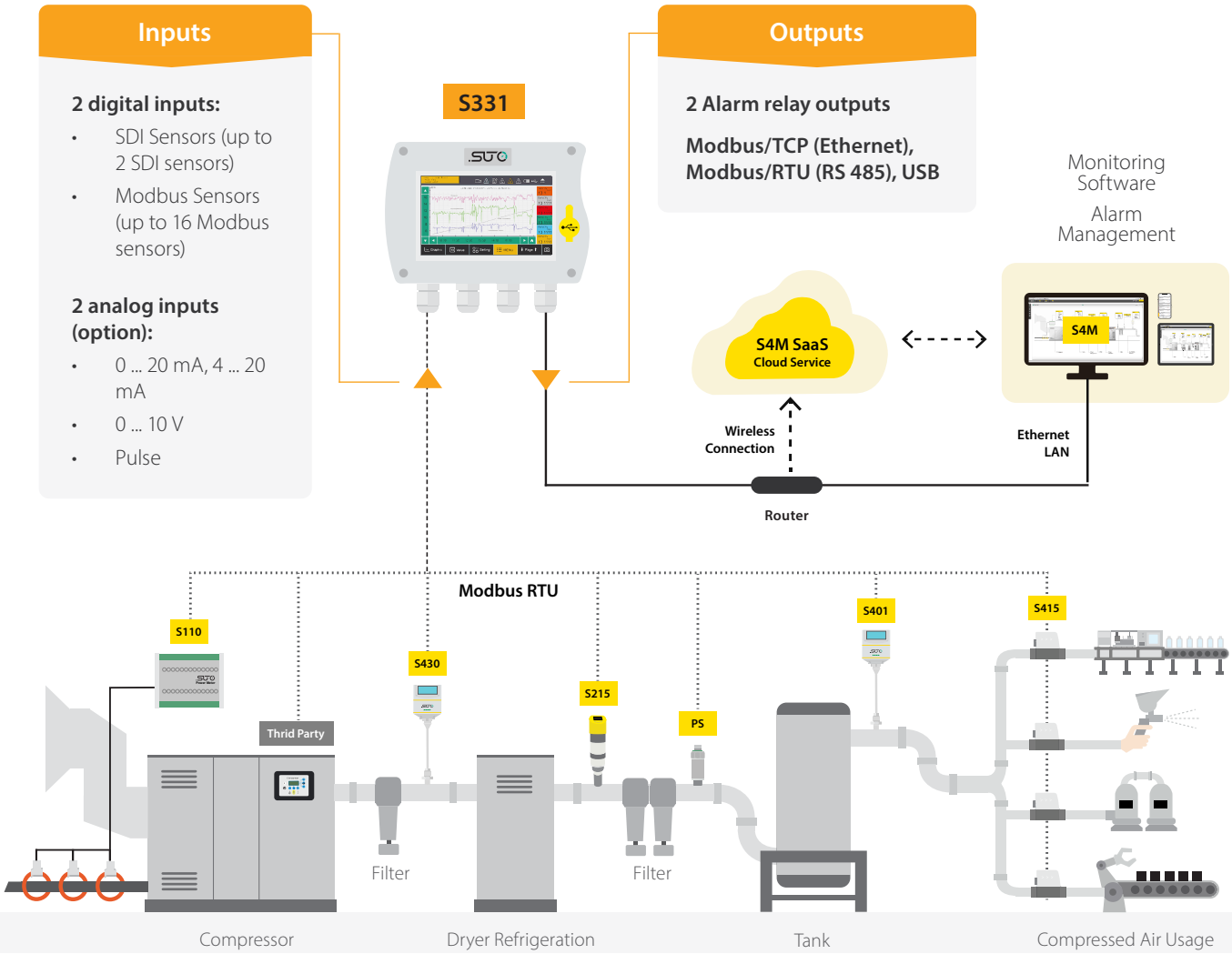
2 analog inputs (option):

- 0 ... 20 mA, 4 ... 20 mA
- 0 ... 10 V
- Pulse

Outputs

2 Alarm relay outputs

Modbus/TCP (Ethernet), Modbus/RTU (RS 485), USB



Applications

The S331 Display and Data Logger is used to gather and collect measurement data of various field devices. It acts as the central unit where all measurement data is safely stored and visualized. The digital communication outputs are not making it a display and data logger, but also a gateway to connect to IIoT services, as well as to connect it to modern software solutions

Available Installation Options

2 different wall mountable casings to fit customers needs.

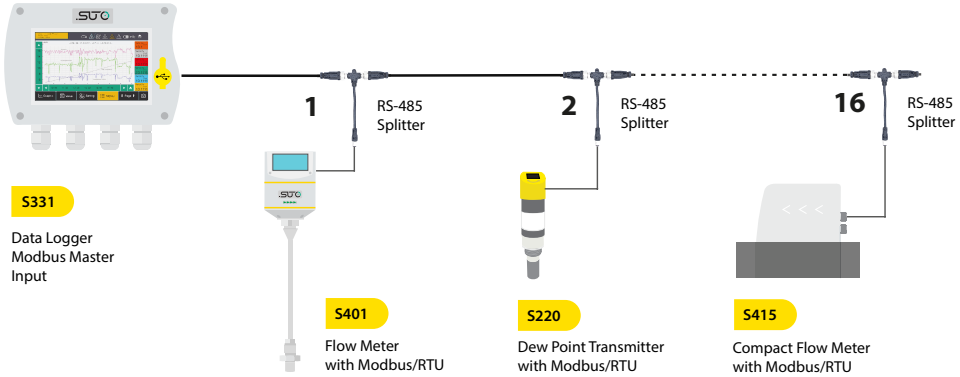
The Display can be installed in existing wall cabinets or machines via panel mounting options.

The DIN rail option is used to install the Display inside of electrical cabinets.

1 SUTO Modbus/RTU Sensor Input

The S330 / S331 includes digital inputs for SUTO SDI sensors and Modbus/RTU sensors. To connect the Modbus/RTU sensors properly on an RS 485 bus system, it's recommended to daisy-chain the sensors to one of the inputs. For this purpose, SUTO offers a RS 485 splitter to simplify the connection.

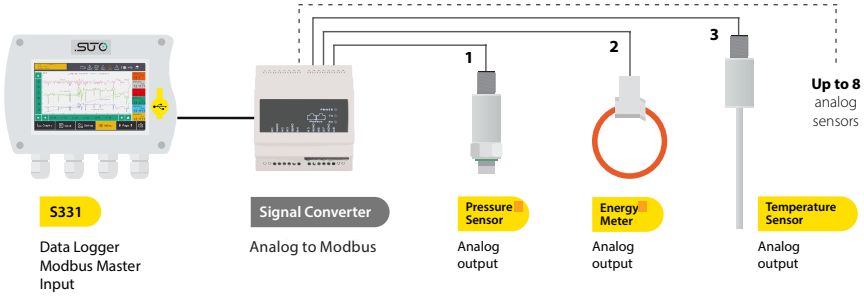
Through this method, users can add up to 16 sensors to the master input, making it most versatile and allowing to monitor whole plants with a single data logger. (Additional power supplies for field devices might be necessary)



2 Analog Sensor Input

The S330 / S331 can be equipped with an analog input option, allowing to connect 0/4... 20 mA, 0...10 V and pulse signals from field sensors. If more analog sensors need to be connected, a Analog-Modbus/RTU converter module can be easily connected, allowing to connect additionally 8 analog sensors.

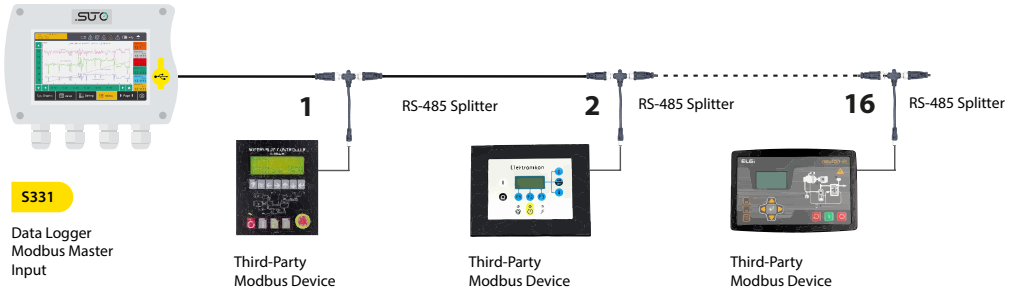
This makes the S330 / S331 most versatile and offers the possibility to connect existing field hardware and sensors seamlessly into the monitoring system.



3 Third-Party Sensor and Field Device Support

By relying on the industry standard protocol Modbus/RTU, the S330 / S331 does support third-party sensors to be easily integrated into the monitoring system. Field devices can be easily set up using the configuration software, allowing to add third-party sensor within seconds.

Of course, all connected sensor data can be logged to the internal memory, used for virtual channel calculations and real-time values are forwarded to connected software and monitoring solutions.



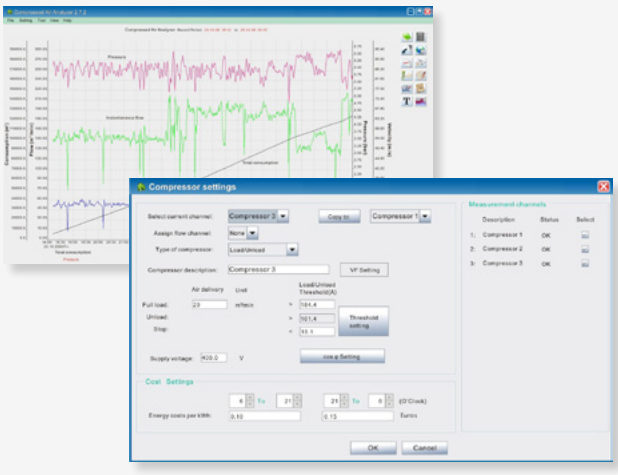
Data Analysis

Through the free SUTO S4A software recordings are downloaded to the PC via USB, LAN or wirelessly using the LTE/4G Modem. The basic analysis can be done in S4M.

For more sophisticated compressor analysis, the SUTO CAA software (incl. in S551) offers many advanced features such as:

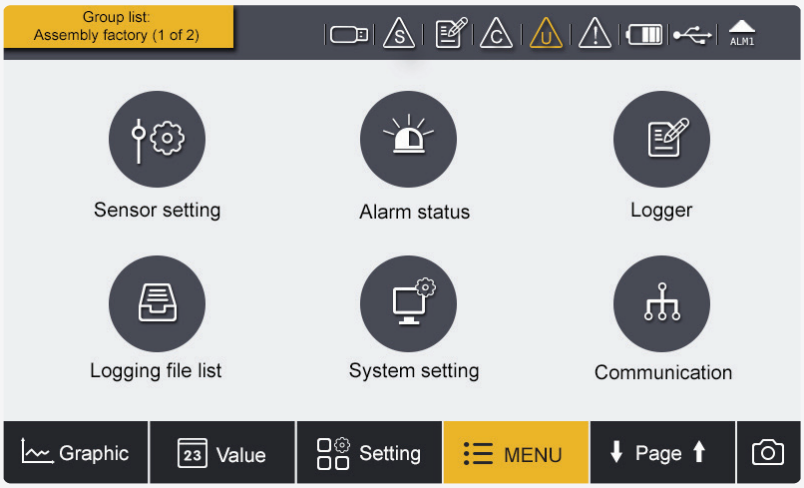
- Performance statistics of compressors (efficiency, air delivery, load/unload cycles)
- Leakage analysis
- Report generation
- and more...

Comparisons with baseline measurements from last year or last month help to identify system changes.



User Friendly Handling

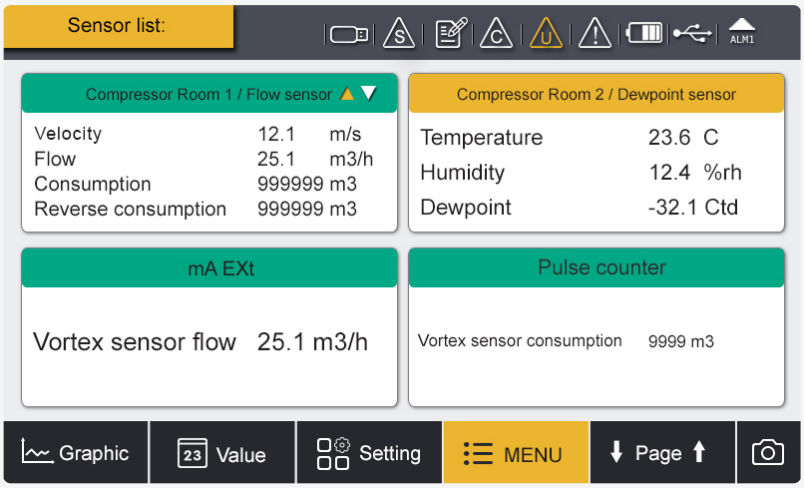
The S330 / S331 comes with a high resolution 5" color touch screen interface making the operation as simple as possible.



Sensor Data Overview

Up to 4 sensors can be viewed on one page and through page scrolling further sensors can be displayed.

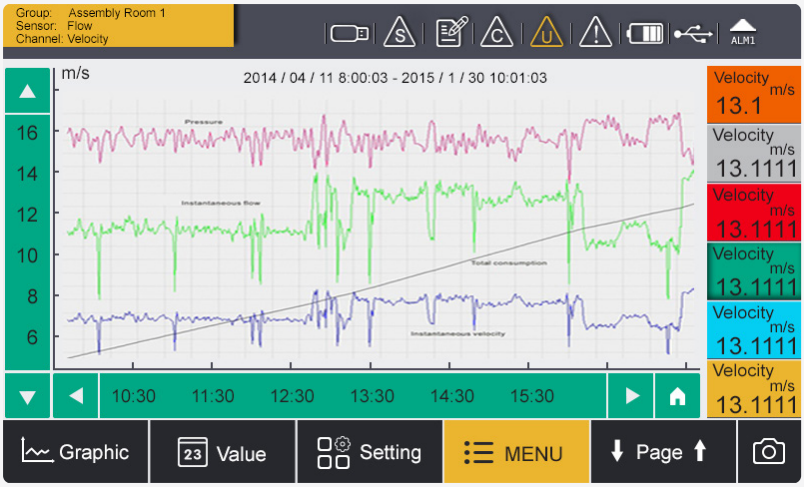
This makes it easy to monitor different sensors at the same time.



Graphic Charts for Quick Analysis

Select which channels you want to view or analyze and the built in graphic analyzer will help you identify problems immediately.

For detailed analysis we recommend using SUTO S4M software.



Technical Data

Signal / Interface & Supply

Data logger	
Storage	Internal, 100 million values
Sampling rate	Optional >=1s, Max 59 mm: 59 ss
Input signals	
Digital input	2 x SDI sensors 16 x RS-485 Modbus RTU Sensors 2 x 0 ... 20 mA / 4 ... 20 mA / 0 ... 10V
Analog input	2 x 0/4 ... 20 mA; 2 x 0 ... 10 V; 2 x pulse
Pulse input	100 Hz maximum; 28 V, 10 Ma
Output signals	
Analog / Pulse output	4 ... 20 mA signal and pulse signal of sensors can be looped through the display by using the connection board
Alarm output	2 relays, 230 VAC, 3 A, NC
Field bus Interface	
Protocol	Modbus/TCP (Ethernet), Modbus/ RTU (RS 485)
Electrical data	
Power supply	100 ... 240 VAC, 20 VA (option, KA66000A1663) 18 ... 30 VDC, 20 W (option, KA66000A1664)
Sensor supply	24 V, 10 W
Data interface	
Connection	Modbus/TCP (Ethernet), Modbus/ RTU (RS 485), USB

General data

Configuration	
PC Software	S4C-Display software
Display	
Integrated	Size: 5" high-resolution graphic display Resolution: 800 x 480 pixels touch screen
Material	
Housing	PC + ABS
Miscellaneous	
Electrical connection	Screw-Terminal connectors
Protection class	IP65
Approvals	CE
Weight	0.52 kg
Housing	Panel, wall mountable
Dimensions	See dimensional drawing
Cable entry diameter	4.5 ... mm
Cable	Supply: AWG 12 ... AWG 24, 0.2 ... 2.5 mm^2; Signals: AWG 16 ... AWG 28, 0.14 ... 1.5 mm^2
Weight	0.52 kg
Operating conditions	
Ambient temperature	0 ... +50°C
Ambient humidity	<90 %
Storage temperature	-20 ... +70°C
Transport temperature	-20 ... +60°C

Ordering

Please use the following tables to assist in placing your order with our sales staff.

S330 / S331 Display and Data Logger

Order No.	Description
KA66D5000333	S330 Display, Panel Version, 2 x SDI & 16 x Modbus/RTU input, Ethernet, RS 485, USB
KA66D5000331	S331 Display and Data Logger, Panel Version, 2 x SDI & 16 x Modbus/RTU input, Ethernet, RS 485, USB
Analog input	
KA66000A1672	No analog input
KA66000A1662	2 analog inputs 0/4 ... 20 mA, 0 ... 10 V + 2 pulse inputs
Power supply (must choose one option)	
KA66000A1663	Power supply input 100 ... 240 VAC, 20 VA, with 2 Alarm relays
KA66000A1664	Power supply input 18 ... 30 VDC, 20 W, with 2 Alarm relays
Wall casing	
KA66000A1673	No wall casing, Panel mounting
KA66000A1665	Wall mountable casing with 4 cable glands
KA66000A1666	Wall mountable casing with 7 cable glands
KA66000A1667	Wall mountable casing with 3 cable glands + Ethernet
KA66000A1668	Wall mountable casing with 6 cable glands + Ethernet
Hat rail	
KA66000A1674	No DIN rail holder
KA66000A1669	Hat rail holder (only in connection with wall mountable casing)

Accessories

Order No.	Description
Cables	
KA66C2190055	M12 connector with RS-485 termination resistor, 120 Ω , for Modbus daisy chain termination
KA66A5543310	M12 RS-485 (Modbus) splitter
KA66A5530130	USB cable for S330 / S331 (1 cable included in S330 / S331)
KA66A5530104	Sensor cable 5 m with M12 connector, open wires, AWG 24 (0.2 mm^2)
KA66A5530105	Sensor cable 10 m with M12 connector, open wires, AWG 24 (0.2 mm^2)
KA66A5530106	Power cable with mains plug, 1.8 m
KA66A5530120	Ethernet cable 5 m, RJ45 plug at both ends
Converters and gateways (Please contact our customer service for further converter/gateway options)	
KA66A5540011	RS-485 repeater
KA66A5540331	RS-485 / USB converter
Software	
KA66M5992031	S4M, data acquisition and analyzes software
KA66000A1102	Add-on Energy Manager for S4M
Others	
KA66D5540031	8-channel current input module, 0 ... 20 mA, Modbus/RTU
KA66A5540007	Power supply wall mountable
KA66A5540009	Power supply for hat rail
KA66A5543311	Line filter for EMC protection
KA66A5543313	Connection board for looping 4 ... 20 mA and pulse signals to PLC, mountable in wall casing KA66000A1666 or KA66000A1668

International Edition (EN) - 23-1. KOMPAUTO NORDIC