


**ST-301 Temperature and
Humidity Transmitter**



ems kontrol ST-301 Temperature and Humidity Transmitter User Manual

[Home](#) » [ems kontrol](#) » [ems kontrol ST-301 Temperature and Humidity Transmitter User Manual](#) 

Contents

- [1 EMS kontrol ST-301 Temperature and Humidity Transmitter](#)
- [2 RULES TO BE CONSIDERED FOR SAFETY](#)
- [3 INSTALLATION](#)
- [4 CALIBRATION](#)
- [5 DECLARATION OF CONFORMITY](#)
- [6 WARRANTY TERMS](#)
- [7 Documents / Resources](#)
 - [7.1 References](#)



EMS kontrol ST-301 Temperature and Humidity Transmitter



Product Code	Output Signal
ST-301	0-10 V
ST-341	4-20 mA
ST-361	Modbus RTU

WHAT IS IT?

Temperature and humidity transmitter precisely measures temperature and relative humidity values and outputs them as analog.

HOW DOES IT WORK?

It can operate with a supply between 12 V DC and 24 V DC. Measurement values are taken from the analog output terminals and transferred to the desired location.

GENERAL FEATURES

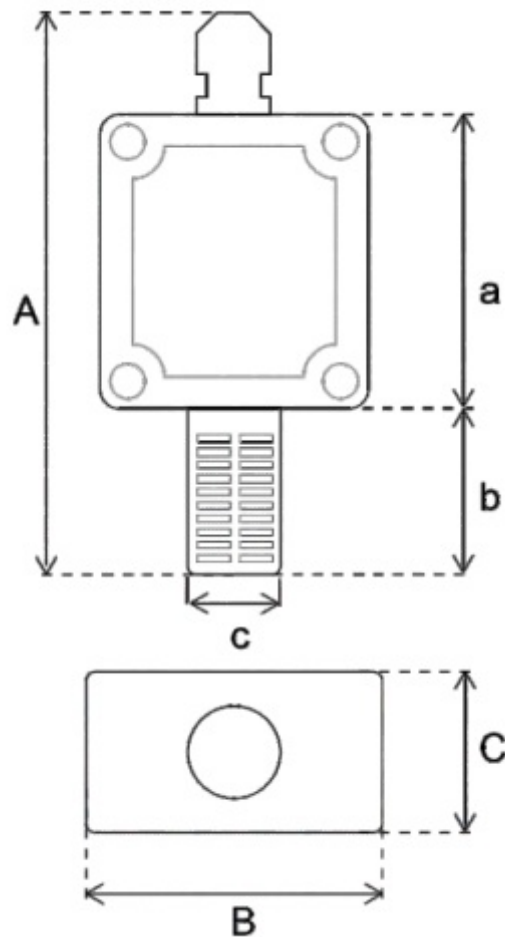
Accurate and Precise Measuring, Analog Output, Long Operating Life, Cleanable Filter, Easy Assembling, IP 67 Plastic Case (Excluding Sensor)

AREAS OF USE

HVAC Applications, Poultry Automation and Poultry Farms, Cold Storage, Incubation Rooms, Food Storage, Air Conditioning Cabinets, Clean Rooms and Laboratories.

RULES TO BE CONSIDERED FOR SAFETY

1. Always read the user manual before using the device and its apparatus.
2. Damages caused by opening, breaking or misuse of the plastic parts of the device and its apparatus are considered out of warranty.
3. Keep the device and its apparatus away from external influences such as liquid, high dust, high temperature, etc. and protect them.
4. Do not expose the device cables to any jamming and pressure.
5. Disconnect the electrical power when your device is not used for a long time.
6. Our devices and apparatus should be used by paying attention to the points in the user manual. In case of damages and malfunctions arising from external use (liquid contact, falling to the ground, etc.), ask for help from the service.
7. Failures due to electrical connection errors and electrical voltage or current errors are not covered by the warranty.



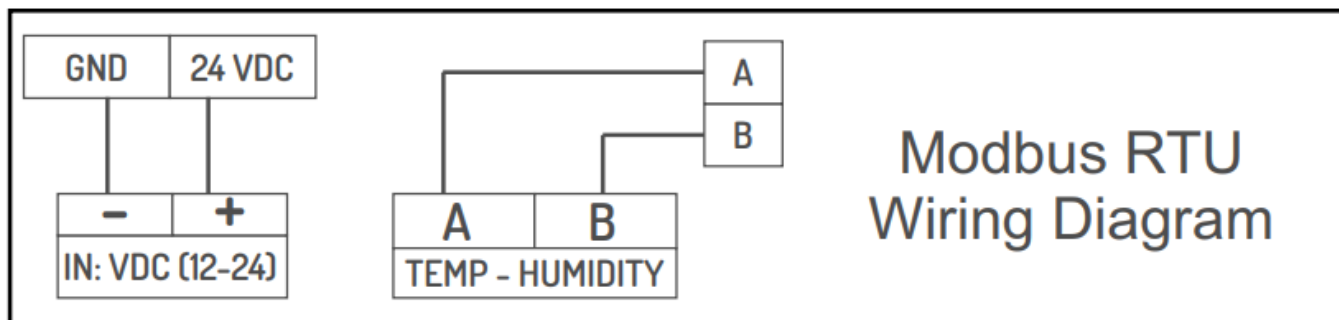
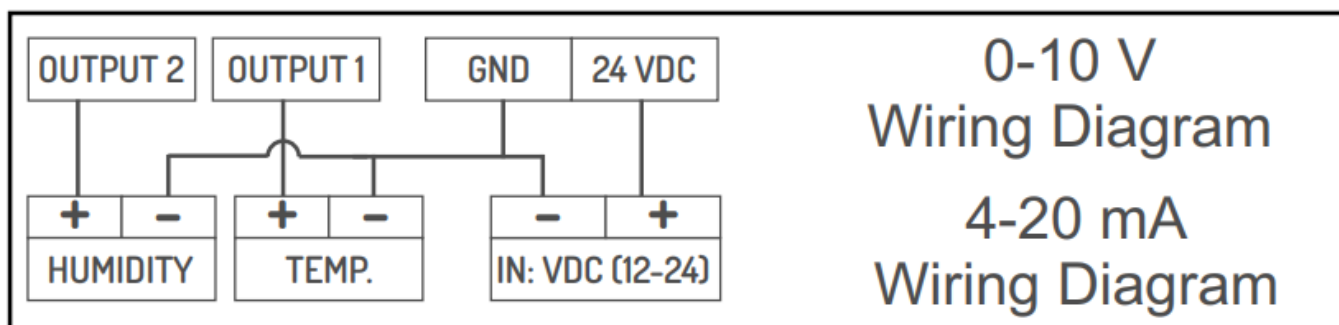
sizes	
A	122 mm
B	58 mm
C	35 mm
a	64 mm
b	36 mm
c	20 mm

Technical Data	
Product Name:	Temperature and Humidity Transmitter
Supply Voltage:	12-24 V DC
Output:	0-10 V / 4-20 mA / Modbus
Measurement Range (Temperature):	0 – 50°C / (-20) – (+80)°C
Prec s on (Temperature):	± 0,1 °C
Accuracy (Temperature):	± 0,3 °C
Measurement Range (Hum d ty):	0 – 100 %
Prec s on (Hum d ty):	± % 1
Accuracy (Hum d ty):	± % 3
Operating Temperature:	(-10°C) – (+55°C)
Storage Temperature:	(-20°C) – (+60°C)
Protect on Class:	IP 67 (Excluding Sensor)

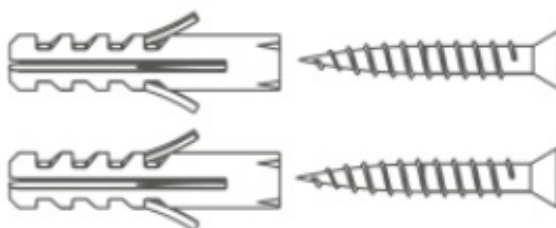
If the device is to be used outside the operating

Temperature, the manufacturer must be informed and approval must be obtained.

INSTALLATION



1. Unpack the product and open the top cover.
2. Make cable connections accordingly.



3. If the product will be mounted on the wall, you can use the screws and dowels in the package.
4. It starts measuring 30 seconds after the product is energized. It is recommended that the product remains in the environment for at least 5 minutes to get healthy measurement values..
5. It is recommended to use shielded cable as communication cable as it will prevent communication signals from being affected by external influences.
6. Since the communication cable will create resistance, check the measurement values again after cable installation.

MODBUS RTU COMMUNICATION STRUCTURE RS485

Baud rate value in Modbus communication is 9600 by default. Stop bit: 1, Parity:

NONE. Default Slave ID is 82. Temperature value is kept in the holding register at address 2 (40003) and humidity value is kept in the holding register at address 3 (40004). Temperature and humidity information can be obtained by reading these registers.



Register map and default values table

Reg ster	Address	Default Value	Read Write	M n. Value	Max. Value
Slave ID	0 (40001)	82	R/W	1	247
Baud rate	1 (40002)	3	R/W	0	8
Temp. Val.	2 (40003)	–	R	–	–
Hum. Val.	3 (40004)	–	R	–	–

Slave ID and Baud rate can be changed via Modbus communication. For this, the desired Slave ID is written to the register with address 0 (40001), which is the register where the Slave ID is located. Likewise, if the Baud rate is to be changed, the Baud rate can be changed by writing the value for the desired Baud rate according to the table below in the register with address 1 (40002).

M n.	Max.
Value	Value
0	1200
1	2400
2	4800
3	9600
4	14400
5	19200
6	38400
7	57600
8	115200

Press and hold the “Calibration” button to reset the changes made to the Slave ID or Baud rate to the default values. Wait until the Status (green) LED turns off (approx. 30 seconds). After the LED turns off, the button is released. Thus, Slave ID and Baud rate are returned to their default values.

LED Meanings		
Power (Red)	On	Normal Operating
	Off	No Energy (Error)
Status (Green)	 On	Measurement Preperation
	 On	Normal Measurement
	Off	Error - Fault

CALIBRATION

1. Temperature and humidity measurement, calibration cannot be done on the product. Calibration is done at the production site.
2. The need for calibration due to the communication cable during use should be done on the control panel, not on the product.

DECLARATION OF CONFORMITY

Headquarters and place of production, Halkapınar

Mah. 1376 Sok. Boran Plaza No: 1/L Konak / İZMİR TURKIYE, EMS KONTROL ELEKTRONİK

VE MAKİNE SAN. TİC. A.Ş. declares that the product marked with CE, whose name and specifications are given below, covers the specified directives and provisions.

Brand: EMS KONTROL

Product Name: ST- 3XX

Product Type: Temperature and Humidity Transmitter

Compatible Directives

Elektromagnetic Compatibility Directive

2014/30/EU (EMC EN 61000-6-3: 2007 + A1: 2011,
EN 61000-6-1: 2007)

Low Voltage Directive

2014/35/EU (LVD EN 60730-2-9:2010,
EN 60730-1:2011)

Additional information: This product can be used in combination with other devices and compliance with the directives covers only the product. EMS KONTROL is not responsible for the compliance of the entire system with the directives. This declaration is not valid if the product is modified without our approval.

**EMS KONTROL ELEKTRONİK
VE MAKİNE SAN. TİC. A.Ş.**
Halkapınar Mahallesi 1376 Sok. Boran Plaza
No: 1/L Konak / İZMİR
EGE V D. 134 104 4528
Mersis No 033410446280001

WARRANTY TERMS

1. The warranty period of the devices and apparatus starts from the invoice date and is guaranteed for 2 years.
2. Devices and apparatus are delivered to the customer in working condition in our company. On-site commissioning is subject to a service fee.
3. In case of repair or the devices and apparatus under warranty carried out in our company as a result of sending them with the transportation company contracted by your company. In on-site services, transportation and accommodation expenses of the service personnel belong to the customer. The cost of the working time spent on the road is added to the service fee, and the collection is made in advance.
4. Maintenance of devices and apparatus is done in our company. Transportation and transportation fees of the devices and apparatus to and from our company, y lol. Maintenance belongs to the customer.
5. In case of malfunction of the devices and apparatus, the warranty period continues, whether the malfunction is caused by the fault of the customer or manufacturer, 1 tested in our company, and reported with the response to be issued by our company.
6. In case of detection of manufacturer-induced faults of electronic devices and apparatus whose warranty period continues, the customer may request a replacement, or may request that the repair costs of the devices and

apparatus be fully covered by the manufacturer, provided that we do not exceed the product orise..

7. If the faults of the devices and apparatus Unloe wnamnoewloe conunueedekeiimeekee caused by the customer, all costs belong to the customer..
8. The customer does not indicate that he is aware of the defects in the devices and apparatus from the date the warranty period starts, or in cases where he/she is expected to be aware, he/she cannot benefit from Article 6.
9. Failures arising from the use of devices and apparatus contrary to the policies in tne user manual, are not covered. By the warranty.
10. Devices and apparatus are not covered by the warrant; they are beaten, broken, or scratched by the customer. Damages caused by the use of devices and appliances of other brands and models without the approval of the manufacturer are not covered by the warranty.
11. Errors caused by rusting, oxidation, and liquid contact not covered by the warranty.
12. Damages that may occur during the transportation of devices and apparatus are not covered by the warranty. If the customer wishes, he/she can have transportation.on
13. Damages caused by mains voltage / faulty electrical Installation is not covered by tne warranty.
14. Devices and apparatus are not covered by insurance, such as fire, flood, earthquake, etc.
15. All parts of the devices and apparatus, including the arts, are covered by our company's warranty.
16. If the devices and apparatus malfunction within the warranty period, the time spent in repair shall be added to the warranty period. The repair period of the goods shall not exceed 20 working days. This period starts from their date of nutrition or tthe moment of ne transaction or the coast to tne service station, in the absence of a service station, to the seller. Dealer, dealer, agent, representative, importer, anufacturer – manufacturer of the goods. It is for the consumer to notify the malfunction by telephone, fax, e-mail, registered letter with return receipt, or similar means. However, in case of a dispute, the burden of proof lies on the consumer. It is the malfunction of the codes if ot resolved within 20 business days, the manufacturer or importer, until the repair of the goods is completed, another good with similar characteristics must be allocated to the use of the consumer.
17. Despite the consumer's right to repair the goods, provided that it is within the warranty period from the Delivery to the consumer. It tails at least two times with ear or six times within the warranty period. The manufacturer, manufacturer, and/or importer, was also the fact that these failures make it impossible to benefit from the goods continuously, exceeding the maximum time required for repair. It is determined that it is not possible to repair the nonfunction with the report to be issued by the station of the company's service station, if the service station is not availablé, respectively,b y one of its dealers, manufacturer, it may request a refund or a price reduction at the rate of defect.
18. Customer may file complaints and objections to consumer courts or consumer arbitration committees.
19. The warranty certificate must be kept by the customer during the warranty period. In case of loss of the document, a second document will not be issued. In case of loss:repairr and replacement of devices and apparatus will b< made for a fee.

This device is a Waste Electrical and Electronic Equipment according to the directives applied in Europe 2002/96/EC. (WEEE) Before scrapping or throwing away this device, you must prevent its potential negative consequences for the environment and human health. Otherwise it would be inappropriate waste. This symbol on the product is intended to warn that the product should not be treated as household waste and should be delivered to electrical and electronic waste collection points. Disposal of the product must be done by local environmental regulations. You can obtain detailed information from the authorized unit now to destroy, reuse, and recycle the product.

Manufacturer's

Title: EMS KONTROL ELEKTRONİK VE
MAKİNE SAN. VE TİC. A.Ş.
Address: Halkapınar Mah. 1376 Sokak Boran
Plaza No:1/L Konak / İzmir-TÜRKİYE
Telephone: 0 (232) 431 2121
E-Mail: info@emskontrol.com
Company Stamp

EMS KONTROL ELEKTRONİK
VE MAKİNE SAN. TİC. A.Ş.
Halkapınar Mahallesi 1376 Sk.Boran Plaza
No:1/L Konak / İZ MİR
EĞE V D. 134 104 4828
Mersis No 033410446280001

Product's

Type: Temperature and Humidity Transmitter
Brand: EMS Kontrol
Model: ST-3XX
Warranty Duration: 2 Years
Maximum Repair Time: 20 Days
Banderol and Serial Number:

Product's

Type: Temperature and Humidity Transmitter
Brand: EMS Kontrol
Model: ST-3XX
Warranty Duration: 2 Years
Maximum Repair Time: 20 Days
Banderol and Serial Number:

Vendor Company

Title:.
Address:
Telephone:
Faks:
E-Mail:.

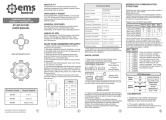
Invoice Date and Number:
Delivery Date and Place:.
Signature of Authorised Person:
Company Stamp:.

STAMP

Product's
Type: Temperature and Humidity Transmitter
Brand: EMS KONTROL
Model: ST-3XX

EMS Kontrol reserves the right to make changes, improvements to the product specifications and user manual.
For all changes, please vst emskontrol.com

Documents / Resources



[ems kontrol ST-301 Temperature and Humidity Transmitter](#) [pdf] User Manual
ST-301, ST-341, ST-361, ST-301 Temperature and Humidity Transmitter, ST-301, Temperature and Humidity Transmitter, Humidity Transmitter, Transmitter

References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

This website is an independent publication and is neither affiliated with nor endorsed by any of the trademark owners. The "Bluetooth®" word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. The "Wi-Fi®" word mark and logos are registered trademarks owned by the Wi-Fi Alliance. Any use of these marks on this website does not imply any affiliation with or endorsement.