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# **Instruction Manual**

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[E1]

## **Temperature Measuring Device** S2600

Read before usage!

- Please consider notes on safety!
- Store for future usage!

06.2009 0 854.001.0502

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### 1 About this instruction manual

This manual is part of the product.

- Read this manual before using the product.
- ► Keep this manual during the entire service life of the product and always have it readily available for reference.
- Always hand this manual over to future owners or users of the product.

### 1.1 Structure of warning

### WARNING The type and source of danger is shown here.

 Precautions to take in order to avoid the danger are shown here.

There are three different levels of warnings.

Warning	Meaning
DANGER	Imminent danger! Failure to observe the information will result in death or serious injuries.
WARNING	Possible imminent danger! Failure to observe the information may result in death or serious injuries.
ATTENTION	Dangerous situation! Non-observance may lead to light or medium inju- ries or physical damage.

### 1.2 Explanation of the symbols and notations

Symbol	Meaning	
$\mathbf{\nabla}$	Prerequisite for an activity	
	Activity consisting of a single step	
1.	Activity consisting of several steps	
Ъ\$	Result of an activity	
•	Bulleted list	
Text	Indication on a display	
Emphasis	Emphasis	

## 2 Safety

### 2.1 Intended use

This product is exclusively suitable for Temperature Measuring S2600.

Any use other than the use explicitly stated in this instruction manual is not permitted.

### 2.2 Predictable incorrect application

In particular, the temperature measurement device S2600 may not be used in the following cases:

- Areas in danger of explosions
   Spark formation in areas in danger of explosions may lead to deflagrations, fire or explosions.
- Use on humans and animals.

### 2.3 Safe handling

This product corresponds with the state of technology and the accepted safety-related rules. Each device is checked for functioning and safety before being commissioned.

This product is only to be used in immaculate state, in consideration with the user manual, the usual regulations and guidelines as well as the valid safety directions and accident prevention regulations.

External environmental conditions may impede the functioning of the product.

- Product to be protected from shocks.
- Product to be used only in indoor areas.
- Product to be protected from moisture.

### 2.4 Qualification of personnel

Assembly, start-up, operation, maintenance, shut-down and disposal may only be conducted through subject-specifically qualified operators.

Works on electric parts may only be conducted by a qualified specialist electrician in accordance with current regulations and guidelines.

### 2.5 Modifications to the product

Unauthorized product modifications may lead to failure and are prohibited due to safety reasons.

### 2.6 Use of spare parts and accessories

The product can be damaged through the use of unsuitable spare parts and accessories

Only use genuine spare parts and accessories from the manufacturer (see chapter 10, p.12)

### 2.7 Liability information

The manufacturer assumes no liability in case of damage and consequential damaged caused through ignoring technical regulations, instructions and recommendations.

The manufacturer and distributing company further assume no responsibility for costs or damages incurred by the user by third parties through the use of the device, in particular through the incorrect use of the device, through misuse or malfunction of the connection and through malfunctions in the device or in connected devices. Neither the manufacturer nor the distributing company assume liability for the misuse of the device.

The manufacturer assumes no liability for printing errors.

## 3 Product description

### 3.1 Scope of delivery

The scope of delivery includes: Measurement device (incl. batteries) and protective case with magnet

### 3.2 Properties and functions



Figure 1: Frontal view

- 1 Reset-key
- 2 Hold-key
- 3 ON/OFF-key
- 4 Protective case
- 5 Program-Selectionkey
- 6 Menu-key (unit selection)
- 7 Display
- 8 Connections

### 4 Technical Data

Table 1: Technical Data

Parameter	Value		
General data			
Case measurements incl. protective case (B x H x W)	66 x 37 x 143 mm		
Weight	Approx. 250 g		
Case material	Plastics		
Response delay	T 90 < 10 s		
Temperature range for application			
Environment	0 ℃ to +45 ℃ / +32 ℉ to +113 ℉		
Storage	-20 °C to +50 °C / -4 °F to +122 °F		
Power supply			
Nominal voltage	Through mains adaptor (USB)		
Electric safety			
Protection class	IP 40 EN 60529		
Electromagnetic compatibility (EMC)			
Transient emissions	EN 55011 (VDE 0875-11)		
Interference resistance	EN 61000 (VDE 0847-4-2)		
ESD	EN 61000-4-2		

Table 2: Product specifications (Basis-Version)

	S2600-12K (TM 7)	S2600-12KD (TMD 7)
Measurement range [°C] / [°F]		
- minimal	-50℃ / -58℉	-50℃ / -58°F
- maximal	+1100℃ / +2012℉	+1100℃ / +2012°F

$\wedge$

	S2600-12K	S2600-12KD
	(TM 7)	(TMD 7)
Resolution [℃] / [°F]		
-50.0℃ to +99.9℃ /	0.1 ℃ / 0.1 ℉	0.1 ℃ / 1 °F
-58°F to +212°F		
+100℃ to +1100℃ /	1℃ / 1°F	1℃/1℉
-212℉ to +2012℉		
Accuracy		
[% of Reading]		
-50.0℃ to 0.0℃	3.0% ± 2.0 ℃K	3.0% ± 2.0 °K
-58 °F to +32 °F		
0.0℃ to +99.9℃	0.5% ± 0.5 ℃	0.5% ± 0.5℃K
+32°F to +212°F		
+100℃ to +1100℃	0.5% ± 1.0 ℃	0.5% ± 1.0℃K
+212℉ to +2012℉		
Connections	1x Thermo connector	2x Thermo connector

#### Approvals, tests and conformities 4.1

The temperature measuring device S2600 is approved according to 1. BImSchV and EN 50379-2 and TÜV-certified. It is in accordance with the EMV-directive (2004/108/EG).

#### 5 Transportation and storage



Only store device in dry and clean working environment.

Only store device within the approved temperature range.



### 6 Operation

- 1. Connect battery.
- 2. Switch on device: Press ON/OFF-key Office for approx. 1 second.
- 3. Segment test

All available display segments are shown for approx. 2 seconds. For control purposes, the display of all segments can be pro-

longed through holding the ON/OFF-key 🥝.



4. Serial No. and Firmware-Version This screen displays the serial no. (e.g. 123) of the device as well as the firmware version (e.g. V1.0.12).



 Device type and measuring mode It follows the display of the device type (e.g. S2601) and of the measurement range (e.g. 1100 ℃).



S2600-12K (TM 7)



S2600-12K (TMD 7)

#### 6.1 Measuring mode

There are several functions available in the measuring mode. The functions "Min" (display of the minimum measured temperature) and "Max" (display of the maximum measured temperature), the unit conversion ( $^{\circ}$ C to  $^{\circ}$ F and  $^{\circ}$ F to  $^{\circ}$ C) as well as the Hold-function (securing of the current reading) are available for all device types. The device type S2600-12KD (TMD 7), which has two temperature sensors, is additionally equipped with the "-function to display the differential temperature.

#### Functions "Min", "Max" and ""

The functions "Min" and "Max" allow a switching of the display between the minimum, maximum and currently measured value.

With each pressing of the Program-Selection-key the display changes to one of the available readings (minimum, maximum, current reading). If the minimum or maximum value is displayed a corresponding symbol appears on the display ("min" or "max"). If none of these symbols is active then the current reading is displayed. In the device type S2600-12KD (TMD 7) the Program-Selection-key

can also be used to display the differential temperature reading, which is denoted by the "-symbol and indicates the temperature difference between the two temperature sensors.





S2600-12KD (TM 7)

S2600-12KD (TMD 7)

min



### Unit conversion (°C to °F and °F to °C)

Through pressing the Menu-key the temperature display can be switched to °Celsius or °Fahrenheit.



#### **Hold-Function**

The reading can be secured with the Hold-key in all measuring modes.

Press the same key again to release the reading.



S2600-12K (TM 7)

S2600-12KD (TMD 7)

### 6.2 Display light

The display light can be switched on or off with the ON/OFF-key O. Thereby, pressing the key shortly is sufficient.

#### 6.3 Device shut-down

Press the ON/OFF-key Of for approx. 2 seconds.

A time-dependent auto shut-down function is currently not implemented.

### 7 Maintenance

### 7.1 Maintenance intervals

Table 3: Maintenance intervals

When	Activity	
If required	<ul> <li>Batteries replacement.</li> </ul>	
	<ul> <li>Device cleaning.</li> </ul>	



#### Maintenance activities 7.2

### Replacing the battery

Remove the old battery and replace with a new battery (refer to 6. chapter Fehler! Verweisquelle konnte nicht gefunden werden., page Fehler! Textmarke nicht definiert.).



Batteries may not be disposed of together with unsorted 7. household waste. Return empty batteries to a collection point or to your dealer for environmentally compatible disposal.

#### Troubleshooting 8

Repair work may only be carried out by qualified, specially trained personnel.

Problem	Possible reason	Error repair	
Device doesn't switch on.	Empty batteries.	<ul> <li>Replace batteries.</li> </ul>	
No temperature displayed.	Temperature sen- sor defective.	<ul> <li>Send device to manufacturer.</li> </ul>	
Other errors.	_	Return the device to the manufacturer (refer to chap- ter Fehler! Ver- weisquelle konnte nicht gefunden werden., page Fehler! Textmarke nicht definiert.).	

#### Table 4: Troubleshooting

#### Disposal 9

Remove batteries.

### 10 Spare parts and accessories

Article

Art.-No.

Connecting set for S2600

XXXXX[E2]

### **11 Warranty**

The manufacturer's warranty for this product is 24 months from date of purchase. This warranty applies to all countries in which this product is sold by the manufacturer or its authorised representatives.

## 12 Copyright

The manufacturer holds the copyright to this manual. This manual may only be reprinted, translated, copied in part or in whole with the prior written consent of the manufacturer.

We reserve the right to modify any specifications or alter any illustrations in this manual without prior notice.

### 13 Customer satisfaction

Customer satisfaction is our prime objective. Please get in touch with us if you have any questions, suggestions or problems regarding your product.

### **14 Addresses**

The addresses of our worldwide representatives can be found on the Internet at <u>www.afriso.com</u>.