

Monitoring system

testo 160 – Monitoring system for the monitoring of temperature, humidity, light intensity, UV radiation, CO₂ concentration and shock.

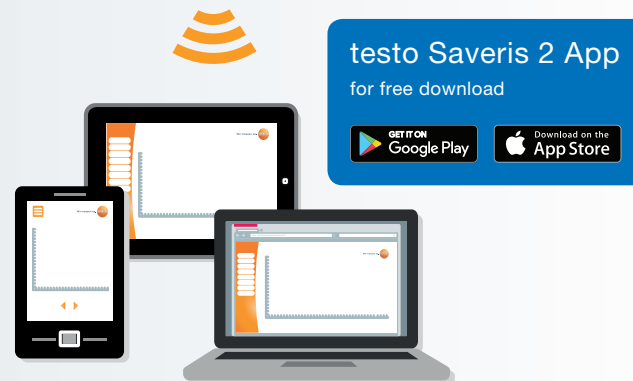
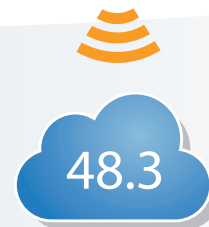
Measurement value transfer by wireless LAN to the Cloud store

Measurement values can be called up on all end devices

Alarm notification by SMS or e-mail

Inconspicuous design and small dimensions

Deco-cover for optimum individual adaptation of the loggers to the surroundings

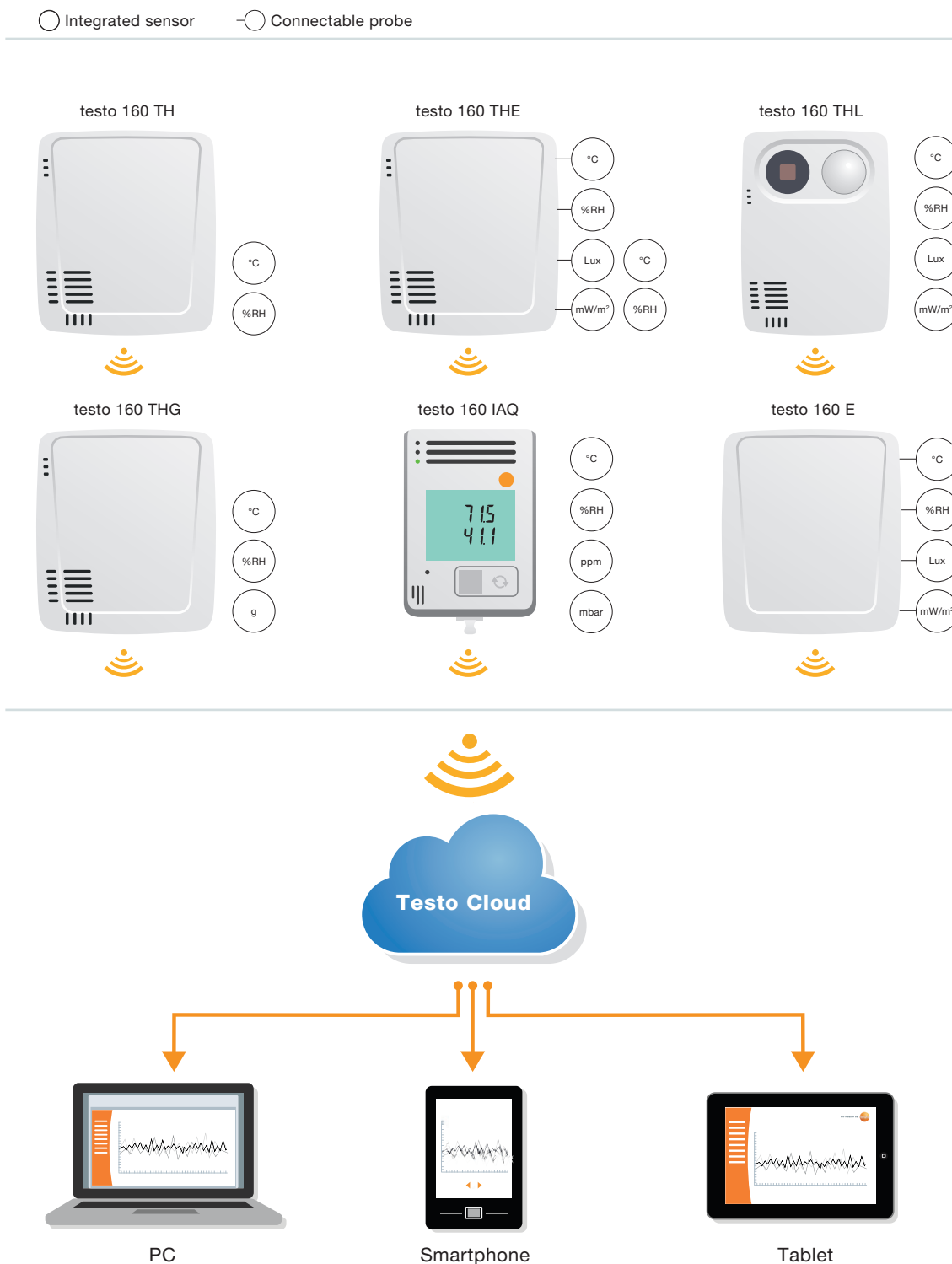


The monitoring system testo 160 monitors ambient conditions in display cases, exhibition rooms, depots and during transport. The loggers transfer measurement values by wireless LAN to the online store (Testo Cloud). You can access all data at any time with the testo Saveris 2 App or by PC/tablet/smartphone and a normal browser. If limit values are exceeded, an alarm is immediately provided by SMS and/or e-mail. For light intensity, an alarm can also be triggered if the accumulated light quantity within a day, a week or a month exceeds a limit value.

Thanks to the optional, individually designable deco-cover, the loggers can be integrated inconspicuously in exhibitions and display cabinets. The temperature and humidity probe with wall bushing is ideal for monitoring small display cabinets in which a data logger cannot be placed. The testo 160 thus enables you to check all relevant ambient conditions, in order to safeguard the value of the exhibits and fulfil the obligation of documentation.

How indoor climate monitoring with **testo 160** works.

With the monitoring system testo 160 you easily have full control of all relevant ambient conditions - no matter where you are.





The testo 160 Cloud

Our packages

The testo 160 Cloud is the central operating element of the testo 160 monitoring system. Here you can configure your WiFi data loggers, set limit value alarms and analyze measurement data. You must first register at www.museum.saveris.net to have access to the testo 160 Cloud.

Depending on the range of functions you require, you have a choice between the free Basic and the more extensive Advanced functionality: In both packages, you have access to an API interface, in order to export measurement data to your systems.

Promo: Register by 30. June 2017 and get the first year free.

| | Basic | Advanced | | | |
|--|---|--|--------------------------------------|--------------------------------------|--------------------------------------|
| Measuring cycle | 15 min. (fixed) | 1 min. to 24 h (flexible) | | | |
| Communication cycle | 15 min. (fixed) | 1 min. to 24 h (flexible) | | | |
| Data storage | Max. 3 months | Max. 2 years | | | |
| Reports | Manual (.pdf/.csv) | Manual (.pdf/.csv) Automatic (.pdf/.csv) | | | |
| Data analysis | For one measurement channel in each case | For up to 10 measurement channels simultaneously | | | |
| Number of users per account | 1 | 10 | | | |
| Number of WiFi data loggers per account | Unlimited | Unlimited | | | |
| Alarm options | Upper/lower alarm limits | <ul style="list-style-type: none"> • Upper/lower alarm limits • Alarm delay • Time control of alarms | | | |
| System notifications | <ul style="list-style-type: none"> • Notification of low battery • Radio link interrupted • Power supply interrupted | <ul style="list-style-type: none"> • Notification of low battery • Radio link interrupted • Power supply interrupted | | | |
| E-mail alarm | Yes | Yes | | | |
| SMS alarm | No | <ul style="list-style-type: none"> • Including 25 SMS per logger and year • More SMS packages purchasable | | | |
| | | <table border="1"> <tr> <td>12-month licence order no. 0526 0735</td> <td>24-month licence order no. 0526 0732</td> <td>36-month licence order no. 0526 0733</td> </tr> </table> | 12-month licence order no. 0526 0735 | 24-month licence order no. 0526 0732 | 36-month licence order no. 0526 0733 |
| 12-month licence order no. 0526 0735 | 24-month licence order no. 0526 0732 | 36-month licence order no. 0526 0733 | | | |

Register now: www.museum.saveris.net

Ordering data WiFi data loggers

testo 160 TH

testo 160 TH
WiFi data logger with
integrated temperature
and humidity sensors



Order no. 0572 2021

testo 160 THE

testo 160 THE
WiFi data logger with
integrated temperature
and humidity sensors
as well as connection
possibility for two probes
(S-TH, S-LuxUV or
S-Lux)



Order no. 0572 2023

testo 160 THL

testo 160 THL
WiFi data logger with
integrated temperature
and humidity sensors
as well as Lux and
UV sensor



Order no. 0572 2024

testo 160 THG

testo 160 THG
WiFi transport logger
with integrated
temperature and
humidity sensors as
well as shock and
position sensor



Order no. 0572 2025

testo 160 IAQ

testo 160 IAQ
WiFi air quality logger
with display and
integrated sensors for
temperature, humidity,
CO₂ and atmospheric
pressure



Order no. 0572 2014

testo 160 E

testo 160 E
WiFi data logger with
connection possibility
for two probes (S-TH,
S-LuxUV or S-Lux)



Order no. 0572 2022

Technical data WiFi data loggers

| | WiFi data logger testo 160 TH | WiFi data logger testo 160 THE | WiFi data logger testo 160 THL | WiFi transport logger testo 160 THG | WiFi air quality logger testo 160 IAQ | WiFi data logger testo 160 E |
|-----------------------------------|--|--------------------------------|---|-------------------------------------|---|------------------------------|
| Temperature measurement | | | | | | |
| Measuring range | -10 to +50 °C | | | | | see external probe |
| Accuracy | ± 0.5 °C | | | | | |
| Resolution | 0.1 °C | | | | | |
| Humidity measurement | | | | | | |
| Measuring range | 0 to 100 %RH | | | | | see external probe |
| Accuracy | ±2 %RH at +25 °C and 20 to 80 %RH ±3 %RH at +25 °C and < 20 %RH and > 80 %RH ±1 %RH hysteresis ±1 %RH / year drift | | | | | |
| Resolution | 0.1% RH | | | | | |
| Lux measurement | | | | | | |
| Measuring range | | see external probe | 0 to 20,000 Lux | | | see external probe |
| Accuracy | | | DIN 5032-7 Class C-compliant. ±3 Lux or ±3 % of reference (DIN 5032 A) | | | |
| Resolution | | | 0.1 lux | | | |
| UV measurement | | | | | | |
| Measuring range | | see external probe | 0 to 10,000 mW/m ² | | | see external probe |
| Accuracy | | | ±5 % of reference | | | |
| Resolution | | | 0.1 mW/m ² | | | |
| Shock measurement | | | | | | |
| Measuring range | | | | 0 to 16 g / axis | | |
| Accuracy | | | | ±0.1 g + 5 % at +22 °C | | |
| Resolution | | | | 0.1 g | | |
| CO₂ measurement | | | | | | |
| Measuring range | | | | | 0 to 5,000 ppm | |
| Accuracy | | | | | ±(50 ppm + 3 % of m.v.) at +25 °C Without external power supply: ±(100 ppm + 3 % of m.v.) at +25 °C | |
| Resolution | | | | | 1 ppm | |
| Pressure measurement | | | | | | |
| Measuring range | | | | | 600 to 1100 mbar | |
| Accuracy | | | | | ±3 mbar at +22 °C | |
| Resolution | | | | | 1 mbar | |
| WLAN | | | | | | |
| Standard | 802.11 b/g/n | | | | | |
| Security | WPA2 Enterprise: EAP-TLS, EAP-TTLS-TLS, EAP-TTLS-MSCHAPv2, EAP-TTLS-PSK, EAP-PEAP0-TLS, EAP-PEAP0-MSCHAPv2, EAP-PEAP0-PSK, EAP-PEAP1-TLS, EAP-PEAP1-MSCHAPv2, EAP-PEAP1-PSK, WPA Personal, WPA2 (AES), WPA (TKIP), WEP | | | | | |
| General | | | | | | |
| Operating temperature | -10 to +50 °C | | | | | |
| Storage temperature | -20 to +50 °C | | | | | |
| Protection class | IP20 | | | | | |
| Measuring cycle | Dependent on Cloud licence / Basic: 15 min fix / Advanced: 1 min to 24 h flexible | | | | | |
| Communication cycle | Dependent on Cloud licence / Basic: 15 min fix / Advanced: 1 min to 24 h flexible | | | | | |
| Memory | 40,000 readings (sum of all channels) | | | | | |
| Voltage supply | 4 x AAA (testo 160 IAQ: 4 x AA) alkaline manganese batteries 1.5 V, alternatively mains unit via USB connection | | | | | |
| Battery life | 12 months | | | | | |
| Dimensions | 64 x 76 x 22 mm | 64 x 76 x 22 mm | 64 x 92 x 24 mm | 64 x 76 x 22 mm | 82 x 117 x 32 mm | 64 x 76 x 22 mm |
| Weight (including batteries) | 94 g | 94 g | 113 g | 94 g | 269 g | 96 g |

Accessories

| | Order no. |
|--|------------------|
| Deco-cover for testo 160 TH / testo 160 THE / testo 160 THG / testo 160 E | 0554 2006 |
| Deco-cover for testo 160 THL | 0554 2009 |
| Deco-cover for testo 160 IAQ | 0554 2012 |
| Wall bracket for testo 160 TH / testo 160 THE / testo 160 E / testo 160 THL / testo 160 THG | 0554 2013 |
| Wall bracket for testo 160 THG | 0554 2014 |
| Wall bracket for testo 160 IAQ | 0554 2015 |
| Extension cable for probes, length 0.6 m (included with every probe) | 0554 2004 |
| Extension cable for probes, length 2.5 m | 0554 2005 |
| Display cabinet bushing for temperature and humidity probes (included with every probe) | 0554 2016 |
| Alkaline manganese microcell AAA batteries up to -10 °C, order 4 off | 0515 0009 |
| Alkaline manganese mignoncell AA batteries up to -10 °C, order 4 off | 0515 0414 |
| External USB power supply | 0572 2020 |
| ISO calibration certificate temperature -18 °C, 0 °C, +40 °C | 0520 0153 |
| DAkkS calibration certificate temperature -18 °C, 0 °C, +40 °C | 0520 0262 |
| ISO calibration certificate humidity at +25 °C, humidity points 11.3 %RH and 75.3 %RH | 0520 0076 |
| DAkkS calibration certificate humidity at +25 °C, humidity points 11.3 %RH and 75.3 %RH | 0520 0246 |
| ISO calibration certificate light intensity, calibration points 0; 500; 1000; 2000; 4000 Lux | 0520 0010 |
| ISO calibration certificate CO ₂ , calibration points 0; 1000; 5000 ppm | 0520 0033 |

Probe

| Probe type | Temperature and humidity probes | Lux and UV sensors | Lux sensor |
|------------------------|--|--|---|
| |  |  |  |
| Measuring range | -10 to +50 °C 0 to 100 %RH | 0 to 20,000 Lux 0 to 10,000 mW/m ² | 0 to 20,000 Lux |
| Accuracy | ± 0.5 °C ±2 %RH at +25 °C and 20 to 80 %RH ±3 %RH at +25 °C and < 20 %RH and > 80 %RH ±1 %RH hysteresis ± 1% RH / year drift | DIN 5032-7 Class C-compliant. ±3 Lux or ±3 % of reference (DIN 5032 A) ±5 % of reference (for UV) | DIN 5032-7 Class C-compliant. ±3 Lux or ±3 % of reference (DIN 5032 A) |
| Order no. | 0572 2156 | 0572 2157 | 0572 2158 |

Data management

The testo Saveris 2 App

With the testo Saveris 2 App for iOS and Android, you now operate the wireless LAN data logger system testo 160 even more easily and flexibly.

More efficient commissioning*:

- Easy recognition and selection of the WiFi network
- Faster parallel commissioning of several loggers

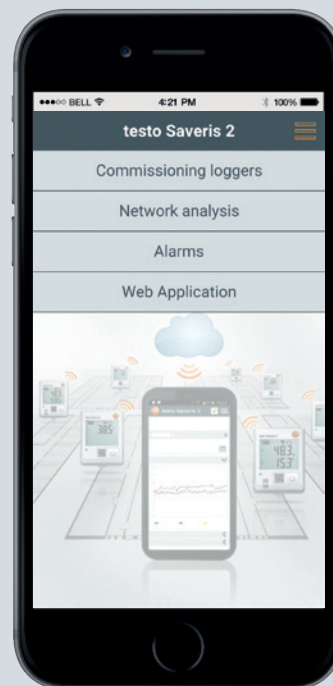
Easy network analysis*:

- Test the strength and range of your WiFi network
- Create and send status reports

Reliable alarm functions:

- Push notifications of limit value violations
- Combinable with e-mail or SMS alarms

*These functions are available only in the Android version of the testo Saveris 2 App.



testo Saveris 2 App

for free download



The testo 160 Cloud

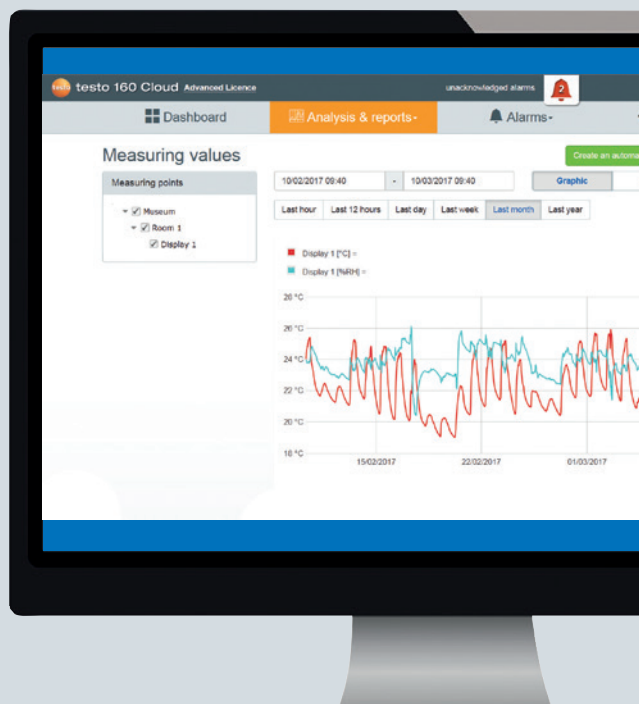
A free access to the testo 160 Cloud is included in delivery. In the Cloud you can view and manage the measurement values stored online, and use the alarm function via e-mail. The system can also be set up and configured here.

The advantages of the testo 160 Cloud at a glance:

- Central operating element for the monitoring, documentation and administration of all measurement locations
- Secure protection of your measurement data from unauthorized access by third parties
- Automatic storage of your measurement values, all measurement data are constantly available
- Alarm function for critical values
- Two licence packages (Basic, Advanced) with differing extent of functions

Maximum flexibility with the Advanced licence:

- Measurement rate freely selectable
- Reports automatically sent by e-mail fulfil the documentation obligation
- Several user profiles – important, for example in cases of several sites
- Alarm also by SMS



Deco-cover

For exhibitions in rooms with coloured walls or backgrounds, the deco-covers of the data loggers can be individually designed by painting or decorating.

This places the logger in the background, and does not distract from the exhibits.



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Subject to change without notice.

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