Data sheet
testo 160

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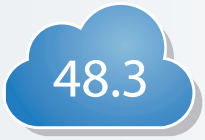
Museum and Archives Monitoring system

testo 160 – Monitoring system for the monitoring of temperature, humidity, light intensity, barometric pressure, UV radiation, and CO_2 concentration.

°C / °F
%RH
Lux
UV
CO_2
mbar



- Measurement values transfer by wireless LAN to the Cloud storage
- Measurement values can be accessed on any device with a browser
- Text message or email alarms
- Small devices designed to blend in with surroundings
- Paintable deco-cover to match surrounding color

testo Saveris 2 App
for free download

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Download on the App Store

The testo 160 Museum and Archives Monitoring System monitors ambient conditions in display cases, exhibition rooms, and depots. The loggers transfer measurement values by wireless LAN to the 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 email. 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.

Testo 160 loggers can be easily hidden within the exhibit area thanks to paintable deco-covers. 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 enables you to check all relevant ambient conditions, in order to safeguard the value of the exhibits and fulfill the obligation of documentation.

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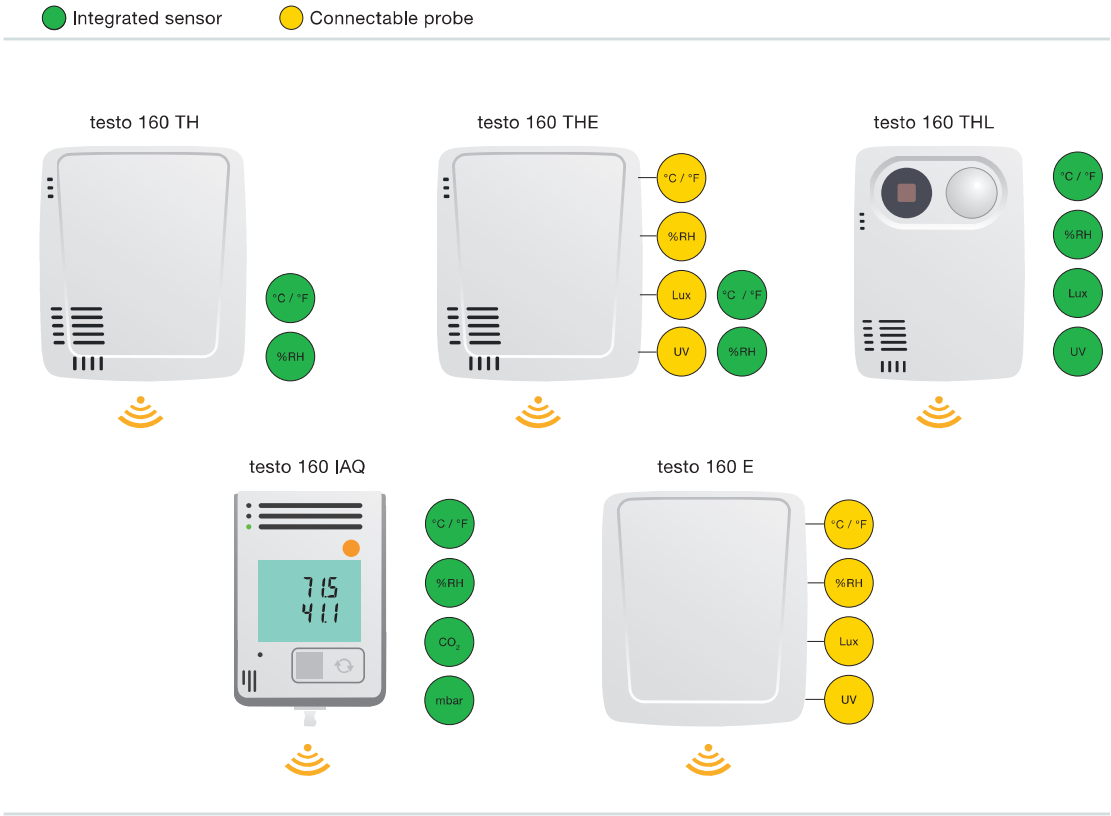
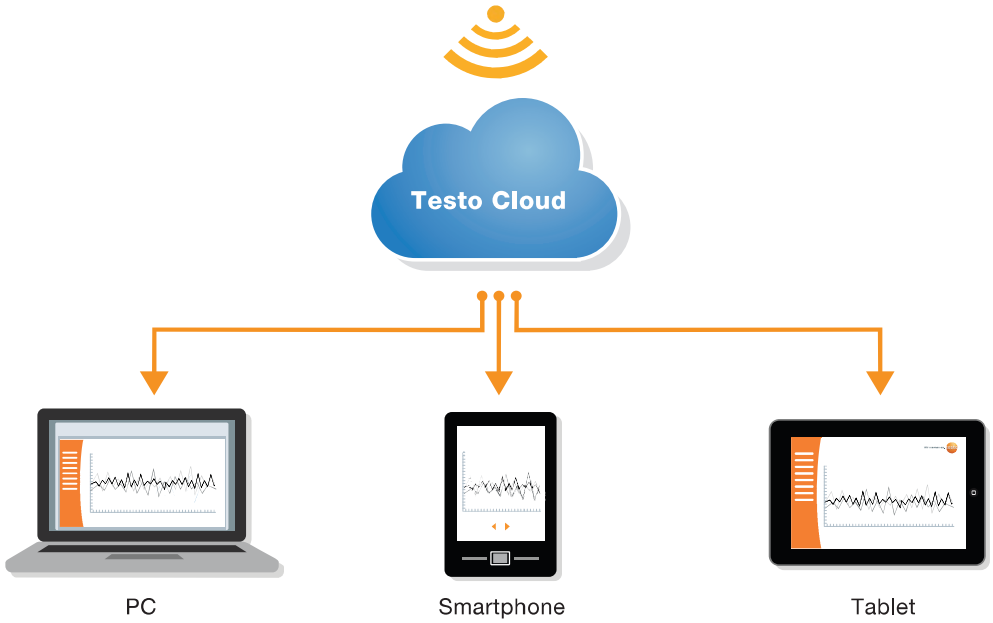
How indoor climate monitoring works with testo 160.

With the testo 160 monitoring system, you have instant access to the state of environmental conditions effecting your exhibits.





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The testo 160 Cloud

Our packages

The testo 160 Cloud is the central operating hub of the testo 160 monitoring system. This is where you can configure your WiFi data loggers, set alarms limits, and analyze measurement data. To start, you must register at www.museum.saveris.net to have access to the testo 160 Cloud.

Depending on the range of functions you need, you can choose between the free Basic and the more extensive Advanced functionalities. Both packages also allow access to an API interface enabling export of measurement data to your own database system.

	Basic	Advanced		
Measuring cycle	15 min. (fixed)	1 min. to 24 h (selectable)		
Communication cycle	15 min. (fixed)	1 min. to 24 h (selectable)		
Data storage	Max. 3 months	Max. 2 years		
Reports	Manual (.pdf/.csv)	Manual (.pdf/.csv) Automatic (.pdf/.csv)		
Data analysis	1 measurement channel	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	• Upper/lower alarm limits • Alarm delay • Time control of alarms		
System notifications	• Low battery notification • Radio link interrupted • Power supply interrupted	• Low battery notification • Radio link interrupted • Power supply interrupted		
Email alarm	Yes	Yes		
Text message alarm	No	• Incl. 25 text msgs per logger per year • Additional text msg packages available		
		12-month license order no. 0526 0735	24-month license order no. 0526 0732	36-month license order no. 0526 0733

Register now: **www.museum.saveris.net**

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Ordering data WiFi data loggers

testo 160 TH

testo 160 TH
Wi-Fi data logger with internal temperature and humidity sensors

Order no. 0572 2021

testo 160 THE

testo 160 THE
Wi-Fi data logger with internal temperature and humidity sensors and two external port connections (S-T/RH, S-Lux/UV or S-Lux Probes)

Order no. 0572 2023

testo 160 THL

testo 160 THL
Wi-Fi data logger with internal temperature and humidity sensors plus Lux and UV sensors

Order no. 0572 2024

testo 160 E

testo 160 E
Wi-Fi data logger with two external connections for S-T/RH, S-Lux/UV or S-Lux probes

Order no. 0572 2022

testo 160 IAQ

testo 160 IAQ
Wi-Fi air quality logger with display and internal sensors for temperature, humidity, CO_2 and atmospheric pressure

Order no. 0572 2014

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Technical data WiFi data loggers

	WiFi data logger testo 160 TH	WiFi data logger testo 160 THE	WiFi data logger testo 160 THL	WiFi air quality logger testo 160 IAQ	WiFi data logger testo 160 E
Temperature measurement					
Measuring range	-10 to +50 °C / 14 to 122 °F				see external probe
Accuracy	± 0.5 °C / 0.9 °F				
Resolution	0.1 °C / 0.1 °F				
Humidity measurement					
Measuring range	0 to 100 %RH				see external probe
Accuracy	±2 %RH at +25 °C / 77 °F at 20 to 80 %RH ±3 %RH at +25 °C / 77 °F at < 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/m²		see external probe
Accuracy			±5 % of reference		
Resolution			0.1 mW/m²		
CO_2 measurement					
Measuring range				0 to 5,000 ppm	
Accuracy				±(50 ppm + 2 % of m.v.) at +25 °C / 77 °F Without external power supply: ±(100 ppm + 2 % of m.v.) at +25 °C / 77 °F	
Resolution				1 ppm	
Pressure measurement					
Measuring range				600 to 1100 mbar	
Accuracy				±3 mbar at +22 °C / 71.6 °F	
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 / 14 to 122 °F				
Storage temperature	-20 to +50 °C / -4 to 122 °F				
Protection class	IP20				
Measuring cycle	Dependent on Cloud license / Basic: 15 min fixed / Advanced: 1 min to 24 h selectable				
Communication cycle	Dependent on Cloud license / Basic: 15 min fixed / Advanced: 1 min to 24 h selectable				
Memory	40,000 readings (sum of all channels)				
USB Power supply	Optional			Required	Optional
Battery	4 x AAA 1.5 V alkaline batteries			4 x AA 1.5 V alkaline batteries (optional backup)	4 x AAA 1.5 V alkaline batteries
Battery life	Up to 18 months*				
Dimensions	64 x 76 x 22 mm 2.51 x 2.99 x 0.87”	64 x 76 x 22 mm 2.51 x 2.99 x 0.87”	64 x 92 x 24 mm 2.51 x 3.62 x 0.94”	82 x 117 x 32 mm 3.29 x 4.6 x 1.26”	64 x 76 x 22 mm 2.51 x 2.99 x 0.87”
Weight (incl. batteries)	94 g / 3.31 oz.	94 g / 3.31 oz.	113 g / 3.99 oz.	269 g / 9.49 oz.	96 g / 3.39 oz.

Actual battery life depending on user settings for measurement and communication cycles

Accessories

	Order no.	
Deco-cover for testo 160 TH / testo 160 THE / 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	0554 2013	
Wall bracket for testo 160 IAQ	0554 2015	
Extension cable for probes, length 0.6 m / 1.7 ft (included with every probe)	0554 2004	
Extension cable for probes, length 2.5 m / 8.2 ft.	0554 2005	
Display cabinet bushing for temperature and humidity probes (included with every probe)	0554 2016	
AAA Alkaline batteries, up to -10 °C / 14 °F, set of 4	0515 0009	
AA Alkaline batteries, up to -10 °C / 14 °F, set of 4	0515 0414	
External USB power supply	0572 2020	
ISO calibration certificate temperature -18 °C, 0 °C, +40 °C	0520 0153	
ISO calibration certificate humidity at +25 °C, humidity points 11.3 %RH and 75.3 %RH	0520 0076	
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 / 14 to 122 °F 0 to 100 %RH	0 to 20,000 Lux 0 to 10,000 mW/m²	0 to 20,000 Lux
Accuracy	± 0.5 °C / 0.9 °F ±2 %RH at +25 °C / 77 °F at 20 to 80 %RH ±3 %RH at +25 °C / 77 °F at < 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

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Data management

The testo Saveris 2 App

testo Saveris 2 Apps for iOS and Android, enable access and function operation to the testo 160 Wi-Fi data logger system

Efficient commissioning*:
- Selection of the Wi-Fi network, network strength indicators
- Fast parallel commissioning of several loggers

Easy network analysis*:
- Test the strength and range of your Wi-Fi network
- Create and send status reports

Full alarm functionality:
- Push notifications when alarm points are crossed
- Selection of email or text message alarms

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

testo Saveris 2 App
for free download go to:

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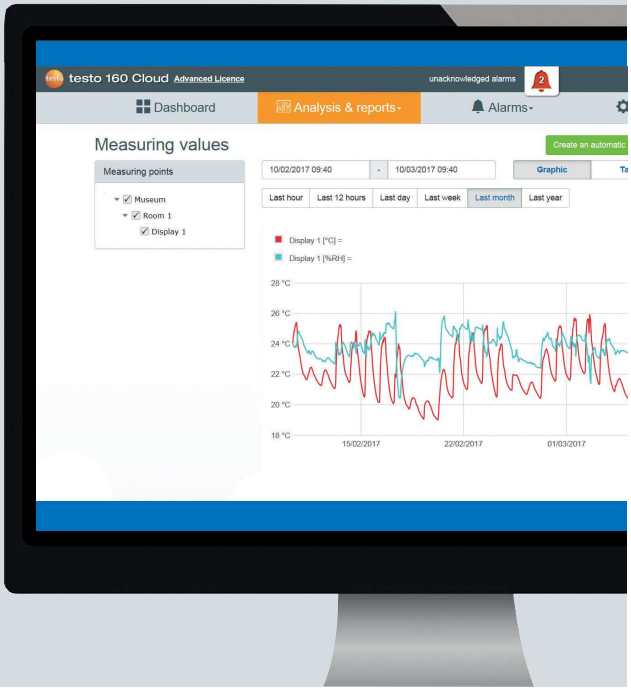
The testo 160 Cloud

System purchase includes free access to the testo 160 Cloud account website. In the Cloud account, you can view and manage the measurement values stored online and use the email alarm function. The system can also be set up and configured here.

The advantages of the testo 160 Cloud at a glance:
- Central operating hub for the monitoring, documentation, and administration of all measurement locations
- Measurement data security - your measurement data is protected from unauthorized access by third parties
- Automatic storage of your measurement values, all measurement data is constantly available for display and reports
- Alarm function for critical pre-set values
- Two license packages, Basic or Advanced with different ranges of operating functions

Maximum flexibility with the Advanced license:
- Measurement timing is freely selectable
- Reports automatically sent by email, report features are selectable
- Management of user profiles – user level authorizations
- Additional text message alarms functionality



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Deco-cover

For exhibit halls with colored walls or backgrounds, the paintable deco-covers install over the data loggers to make them blend into your exhibit environment.

The loggers stay masked in the background as not to distract from the artwork or exhibits.

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