Moisture Sensor FHA 696 MF



- Moisture sensor for determination of the moisture content in mineral construction materials, wood and cardboard.
- Indirect measurement of the moisture through the determination of the dielectric constant.
- Capacity measurement through a high frequency electromagnetic field, which penetrates the material in a non-destructive way.

Technical Data

Measuring method:	capacitive
Resolution:	0.1 %
Measuring range (moisture):	0 to 50 % moisture, referenced to mass
Measuring range (material):	
mineral construction materials	0 to 20 %, moisture
woods	0 to 50 %, moisture
paper and cardboard	0 to 20 % moisture
Housing:	plastic handle with integrated electronics 40 mm Ø, 130 mm long
Terminal block:	aluminium/plastic 20 x 25 x 70 mm

Measuring comb:	stainless spring steel 0.5 mm, 70 x 35 mm
Weight:	260 g
Nominal temperature:	15 to 25 °C
Operative range:	0 to +60 °C
Storage temperature:	–20 to +80 °C
Signal output:	0 to 2 V
Power supply:	+8 to +12 V
Current consumption:	approx. 7 mA

Accessories	Order no.
Test block for min. construct. materials	**ZB9696PE05**
Test block for wood, paper, cardboard	**ZB9696PE30**

Type	Order no.
Moisture sensor	**FHA696MF**

Wood moisture probe FHA 636 MF Hand-held probe for mobile test measurements



- Moisture sensor for determination of the moisture content in wood.
- Indirect moisture measurement according to the principle of conductivity.
- Determination of the moisture content in the material through the dependence of the electrical resistance on the moisture.

Technical Data

Measuring method:	principle of conductivity
Measuring range:	7 to 30 % moisture, referenced to mass
Housing:	plastic handle 40 mm Ø, 130 mm long
Measuring tips:	stainless steel, uninsulated 3 mm Ø, 50 mm long
Weight:	260 g

Reproducibility:	± 1 %
Nominal temperature:	23 °C ±2 °C
Operating temperature:	0 to +60 °C
Storage temperature:	–20 to +80 °C
Signal output:	0 to 2 V
Power supply:	7.5 to +12 V
Current consumption:	max. 10 mA

Accessories	Order no.
PTFE-insulated measuring tip - helps avoid measuring errors in the event of surface moisture, 1 piece (2 pieces are needed per probe)	**ZB9636MFST**

Type	Order no.
Wood moisture probe	**FHA636MF**

11/2025 • We reserve the right to make technical changes.

03/2026 • We reserve the right to make technical changes.

Moisture content sensor - for wood, for stationary measuring operations FHA696MFS1
Capacitive sensor for applying onto the wood‘s surface



- Moisture content sensor for comparative measurement of moisture in wood materials
- The capacitive sensor with the measuring electronics is completely integrated in the damp-proof sensor housing. Plug-in ALMEMO® connecting cable
- This device is designed for stationary installation and long-term monitoring e.g. of wooden parts of buildings, roof structures (with laminated beams).
- It is also suitable for data logger operation in energy-saving sleep mode (intermittent mode).
- The sensor housing is quick and easy to install on the wooden surface in question.
- The material‘s moisture content is measured indirectly by determining its dielectric constant, which is moisture-dependent (but not temperature-dependent).
- Its capacity is measured via a high-frequency electrical field which penetrates the wood without destroying it.
- The ALMEMO® device acquires the material‘s moisture content based on the linearization curve stored in the ALMEMO® plug.

Technical Data

Measuring method	capacitive
Measuring range	0 to 50 % moisture percentage in wood with respect to total mass (at 23 °C)
Resolution	0.1 % moisture content
Reproducibility	±1 % moisture content
Nominal temperature	23 °C ±2 K
Suitable conditions	0 to +80 °C Air humidity 0 to 90 % RH (no dew formation, no ice formation)

Storage temperature	-20 to +80 °C
Housing	Plastic 51 x 53 x 36 mm (LxWxH)
Signal connection	Built-in plug
Protection	Housing and plug connection IP64
ALMEMO® connecting cable	Coupling, PVC cable, 5 meters
Supply voltage	via ALMEMO® plug (5 V)
Current consumption	approx. 7 mA

Variants	Order no.
Moisture content sensor for wood, sensor integrated in the sensor housing, with built-in plug, connecting cable 5 meters with ALMEMO® plug	**FHA696MFS1**

Moisture content sensor - for wood, for stationary measuring operations FHA 636-MFS1
Conductivity measurement with measuring tips that can be screwed into the wood
Sensor with integrated temperature sensor for automatic temperature compensation



- Moisture content sensor for comparative measurement of moisture in wood materials
- Two hanger bolts are screwed into the wood surface and connected via measuring lines to the measuring electronics in the damp-proof sensor housing.
- The sensor housing with the integrated temperature sensor is also fixed in position on the wood surface.
- Plug-in ALMEMO® connecting cable

- The material‘s moisture content is measured indirectly by determining its electrical conductivity, which is moisture-dependent.
- It is also temperature-dependent. However, the displayed moisture value is automatically temperature-compensated by means of an integrated temperature sensor.
- The ALMEMO® device acquires the material‘s moisture content based on the linearization curve stored in the ALMEMO® plug.

! This device is designed for stationary installation and long-term monitoring e.g. of wooden parts of buildings, roof structures (with laminated beams).
Data logger operation in sleep mode (intermittent mode) is required in order to protect the wood from salinization or drying out!

Technical Data

Measuring method	Electrical conductivity
Measuring range	5 to 50 % moisture percentage in wood with respect to total mass (at 23 °C)
Resolution	0.2 % moisture content
Reproducibility	±1 % moisture content
Nominal temperature	23 °C ±2 K
Temperature sensor	NTC, integrated in sensor housing
Temperature compensation	in range 0 to +80 °C
Suitable conditions	0 to +80 °C Air humidity 0 to 90 % RH (no dew formation, no ice formation)
Storage temperature	-20 to +80 °C
Housing	Plastic 51 x 53 x 36 mm (LxWxH)

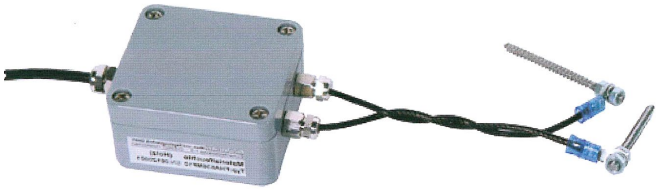
Measuring connection	2 built-in sockets, 4 mm, with transverse hole
Measuring lines	2 lines, PTFE-insulated, length = 0.5 meters with circular cable lugs 4 mm
Measuring tips	2 stainless-steel M4 hanger bolts Total length = 60 mm including 4 stainless-steel nuts, 4 stainless-steel lock washers
Clearance	2.5 cm at right angles to the grain
Signal connection	Built-in plug
Protection	Housing, including connectors IP63
ALMEMO® connecting cable	Coupling, PVC cable, 5 meters
Supply voltage	via ALMEMO® plug (5 V)
Current consumption	approx. 5 mA

Variants	Order no.
Moisture content sensor for wood, with measuring tips, measuring line, sensor housing, connecting cable 5 meters with ALMEMO® plug	**FHA636MFS1**

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Moisture content sensor - for wood, for stationary measuring operations FHA 636-MF10 Conductivity measurement with measuring tips that can be screwed into the wood. Interval operation for long-term measurements.



- Wood moisture probe for long-term measuring
- Switched measuring current (intermittent mode) prevents salinization or dehydration of the material.
- For long-term monitoring of wooden parts of buildings (e.g. roof structures with laminated beams)

! Operation with the device in SLEEP-mode is not possible.

Technical Data

Measuring method	Principle of conductivity Intermittent mode for long-term measuring Every 120 minutes the measuring current is activated very briefly and a new measured value is acquired; during the pauses the measuring current remains OFF.
Measuring range	5...50 % moisture content wood, mass related (at 23 °C)
Housing	Metal case 65 x 60 x 35 mm (LxWxH) with cable bushings
Measuring cable	Permanently fitted, 2 sensor lines, PTFE insulated Length = 0.5 meters (= maximum possible length) with cable lugs in circular form, diameter 4 mm

Measuring tips	2 stainless-steel hanger bolts M4 Total length = 60 mm including 4 stainless-steel nuts 2 stainless-steel locking washers
Clearance	2.5 cm at right angles to the grain
Operating temperature	0 to +60 °C
Voltage supply	via ALMEMO® connector
Connecting cable	PVC Length = 5 meters with ALMEMO® connector

Variants	Order no.
Moisture content sensor for wood for long-term measurements (interval operation), with measuring tips, measuring line, connecting cable 5 m with ALMEMO® connector	**FHA636MF10**

Water Detection Probe FHA 936 WD



- Water detection probe for instant detection of uncombined water.
- Particularly suitable for construction applications, especially in locations that are difficult to check visually, e.g. at sealing joints, under cement floors etc.
- Indirect moisture measurement according to the principle of conductivity.
- Probe with two collets for easy electrode replacements.
- Electrodes in three different designs for matching any required application.

Technical Data

Measuring method:	detection of water
Meas. values:	<10 % no water >10 % water
Housing:	plastic handle 40 mm Ø, 130 mm long
Electrodes:	stainless steel
Electrode types:	uninsulated with rounded tip: 200 mm long, 3 mm Ø uninsulated with sharp-edged tip: 50 mm long, 3 mm Ø spring steel strap: 200 mm long, 6 mm wide, 0.5 mm high

Weight:	260 g
Nominal temperature:	23 °C ±2 °C
Operating temperature:	0 to +60 °C
Storage temperature:	–20 to +80 °C
Signal output:	ALMEMO® (approx. 0 to 2 V)
Power supply:	7.5 to 15 V
Current consumption:	max. 10 mA

Type	Order no.
Water detection probe	**FHA936WD**