

Indoor Environment Quality

MI 6201 Multinorm



The MI 6201 Multinorm is a portable multifunctional handheld instrument for measuring microclimate, sound and light parameters and it is an invaluable tool for the monitoring and evaluation of indoor environmental conditions according to national and European standards. Specially designed housing enables connection of a few probes at the same time for testing of several parameters simultaneously. A large selection of measuring probes allows to measure variety of different environmental conditions. The SensorLink PRO and SoundLink LITE software come as standard accessories and enable downloading data stored in the memory, plotting and printing test results in table and graphic form, on-screen graph plotting for straightforward data comparison and export of data in text file format. The MI 6201EU set comes complete with full ISO accredited calibration certificate while the MI 6201PS set comes complete with ISO calibration certificate and an upgraded sound probe (class 1).

MEASURING FUNCTIONS

- Air temperature;
- Air velocity;
- Air flow;
- Relative humidity;
- Dew point;
- Temperature difference (option);
- K thermocouple temperature (option);
- Illuminance;
- Luminance (option);
- Contrast (option);
- Black globe radiant temperature (option);
- CO and CO₂ concentration (option);
- Sound level;
- Real time 1/1 and 1/3 octave analysis.

KEY FEATURES

- **Adaptable:** MI 6201 Multinorm can be used as either a sound meter or environmental meter to reduce the amount of measuring equipment to move between locations.
- **Environmental:** using various standard and optional probes, the MI 6201 can be adapted to measure and calculate a combination of up to 16 different environment parameters (maximum 11 at the same time).
- **Sound:** the instrument can simultaneously measure and calculate 19 different sound parameters (displaying maximum 6 at the same time).

- **Long lasting:** record up to 160 days worth of data.
- **Accommodating:** due to optional prolongation cable or telescopic rod measurements in hard-to-reach spots are possible, while mounting on a tripod enables long-lasting recording.
- **Versatile:** can be used for spot checking of different locations or performing long investigations in a specific location.
- **Easy to use:** plug in the suitable probes and the device will automatically adjust for appropriate measurements.
- **PPD and PMV calculations:** predicted Percentage of Dissatisfied People (PPD) and Predicted Mean Vote (PMV) calculations are performed automatically.
- **Weighting:** A, C, Z frequency weightings and fast, slow and impulse time weightings.
- **Octave frequency analysis:** instrument performs real time octave and one third octave frequency analysis in accordance with EN 61260 standard.
- **Logger:** logging memory module allows to save up to 4000 measurements with adjustable integration period.
- **Downloadable:** up to 4000 test results can be stored in a two level memory structure and then downloaded to the PC with the help of the PC software.

APPLICATION

- Indoor air quality testing;
- Testing of factory climatic conditions;
- Testing of heating, ventilation and air conditioning systems;
- Testing of lighting conditions;
- Emergency lighting systems testing;
- Indoor or dry outdoor sound level measurement;
- Industrial sound measurement;
- Band-pass and acoustic filter testing;
- Acoustic equipment testing.

STANDARDS

Functionality

- DIN 5032 P1; DIN 5032 P2; DIN 5032 P3; DIN 5032 P4; DIN 5032 P6; DIN 5032 P7; EN 60751; EN 60584-1; EN 12599; EN ISO 7726; ISO 10526; ISO 10527

Electromagnetic compatibility:

- EN 61326

Safety

- EN 61010-1

TECHNICAL DATA

Function	Measuring range	Resolution	Accuracy
Microclimatic probe A 1091			
- Air temperature	-20 °C ... +60 °C	0.1 °C	±0.2 °C at 25°C ±0.5 °C over working range
- Relative humidity	0 %RH ... 10 %RH 10 %RH ... 90 %RH 90 %RH ... 100 %RH	0.1 %RH 0.1 %RH 0.1 %RH	±3 %RH ±2 %RH ±3 %RH
- Air velocity	0.10 m/s ... 9.99 m/s 10.0 m/s ... 20.0 m/s	0.01 m/s 0.1 m/s	±(0.05 m/s + 5 % of reading) ±(5 % of reading)
Temperature and humidity probe A 1127			
- Air temperature	-20 °C ... +60 °C	0.1 °C	±0.5 °C
- Relative humidity	0 %RH ... 100 %RH	0.1 %RH	±3 %RH
Black Globe temperature (A 1131)	10.0 °C ... 49.9 °C 50.0 °C ... 84.9 °C 85.0 °C ... 120.0 °C	0.1 °C 0.1 °C 0.1 °C	±0.5 °C ±1.0 °C ±1.5 °C
Illuminance (A 1092; DIN 5032, Class B)	0.01 Lux ... 19.99 Lux 20.0 Lux ... 199.9 Lux 200 Lux ... 1999 Lux 2000 Lux ... 20000 Lux	0.01 Lux 0.1 Lux 1 Lux 10 Lux	±(0.02 Lux + 8 % of reading) ±(8 % of reading) ±(8 % of reading) ±(8 % of reading)
Luminance (A 1132; DIN 5032, Class B)	0.1 cd/m ² ... 39.9 cd/m ² 40 cd/m ² ... 399 cd/m ² 400 cd/m ² ... 3999 cd/m ² 4000 cd/m ² ... 40000 cd/m ²	0.1 cd/m ² 1 cd/m ² 1 cd/m ² 1 cd/m ²	±(0.2 cd/m ² + 8% of reading) ±(8 % of reading) ±(8 % of reading) ±(8 % of reading)
CO ₂ concentration (A 1180)	0 ppm ... 5000 ppm	1 ppm	±(3 % of reading + 40 ppm)
CO concentration (A 1181)	0 ppm ... 500 ppm	1 ppm	±(5 % of reading + 5 ppm)
Sound level (A 1146)	30 dB ... 140 dB	0.1 dB	Corresponds to EN 61672 Class 1
Sound level (A 1151)	30 dB ... 140 dB	0.1 dB	Corresponds to EN 61672 Class 2
Sound probes A 1146 and A 1151	- Dynamic range: 80 dB - Frequency weighting: A, C, Zero - Time weighting: fast, slow, impulse		
COM port	USB		
Memory	up to 4000 values		
Display	Graphical LCD with backlight, 160 x 160 dots		
Power supply	6 x 1.2 V rechargeable batteries, type AA		
Protection degree	IP 40		
Dimensions	110 x 85 x 220 mm		
Weight	0.56 kg		

STANDARD SET



MI 6201ST

- Instrument Multinorm
- Carrying case
- Probe adapter
- Microclimatic probe

- Illumination probe, type B
- Sound probe, class 2, with foam windscreen
- Plastic shield for microphone
- Tripod adapter
- USB cable
- Power supply adapter
- 6 x NiMH rechargeable batteries, type AA
- PC SW SensorLink PRO
- PC SW SoundLink LITE
- Instruction manual
- Calibration certificate

MI 6201EU

- MI 6201ST
- ISO calibration certificate for complete system

MI 6201PS

- MI 6201EU
- Sound probe, class 1 (A 1146) instead of Sound probe, class 2 (A 1151)

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OPTIONAL ACCESSORIES

Photo	Order No.	Acc. description
	A 1180	CO ₂ probe
	A 1181	CO probe
	A 1127	Humidity and temperature probe
	A 1131	Black globe thermometer
	A 1132	Luminance probe
	A 1128	Thermocouple probe, type K
	A 1083	Power supply adapter with 6 pcs NiMH batteries, type AA
	A 1160	Fast charger for 8 AA batteries with a set of 6 NiMH bat., type AA
	A 1169	Fast charger for AA, C, D and 9 V block batteries
	A 1130	Telescopic rod with 2.5 m cable
	A 1145	Extension cable for A 1092 and A 1132, 1 m
	A 1159	Tripod
	A 1161	Tripod holder for black globe thermometer
	A 1162	PC SW SoundLink PRO