Model 560 MC-X

60° Measuring geometry
3 Measuring modes

EN ISO 2813 · DIN 67 530 ·
ISO 7668 · ASTM D 523

Gloss Measuring Device

PICOGLOSS

562 MC

Gloss Measuring Device

PICOGLOSS
560 MC-X
560 MC-XS

Model 560 MC-XS

remarkably small measuring aperture
(Measurement on small parts)

60° Measuring geometry
2 Measuring modes

Model 562 MC

20°/60° Measuring geometry

3 Measuring modes

EN ISO 2813 · DIN 67 530 ·
ISO 7668 · ASTM D 523

testing equipment for quality management

ERICHSEN
since 1910

Technical Description

Integrated Mirror-gloss Measurement

Calibration with only one Standard

Automatic change-over to Mirrow-Gloss

Extremely small portable Gloss Meter

PICOGLOSS 560 MC-X

Design

Especially in the automotive industry, many users are obliged to arrange themselves with various prescriptions for gloss measurement. The small portable gloss meter **PICOGLOSS 560 MC-X** was designed for the non-complicated mobile gloss measurement in accordance with the most frequently requested, standardized measurement angle of 60°. But, it considers even also the requirements of some *uncommon* 60° gloss measurements deviating from the standard, which indeed a lot of users within their daily testing reality are faced with.

Special Features

• ***Handling***
Single-key operations make gloss measurements extremely easy and comfortable. The reading remains stored in the display for about 10 s and is then switched off automatically to save the battery. However, the last measured value is preserved and is shown in the display when the instrument is switched on again.

• ***Display***
In addition to the measuring and calibrating values the high-contrast LC display also shows messages and information. The display can be rotated by 180 degrees, so that the device is also comfortably to be used by left-handers.

• ***Calibration***
The **PICOGLOSS 560 MC-X** requires only one calibrating standard for normal two-position calibration. After key pressure the calibration routine runs automatically. The calibration value is stored on the standard (EPROM).

• ***60° Gloss measurement***
Across the branches, still the most commonly required measurement geometry, e.g for lacquers, plastics, etc.

• ***Mirror gloss measurement***
Mirror-gloss measurements can be conducted on metallic surfaces in the range of up to 1000 gloss units. There is an automatic change-over of the measuring range at 150 gloss units.

• ***Automatic switchover of the display resolution***
from 0,0 GU to 150,0 GU → from 150 GU to 1000 GU

• ***USB interface***
The measured data can be transferred to a PC by means of the USB cable supplied and evaluated using the software PICOSOFT III *) - only the supplied USB is suitable for that.

• ***Statistics function***
Number of measurements (max. 10), Min/Max, standard deviation

• ***Power supply***
The **PICOGLOSS 560 MC-X** is operated by a round cell. When using a PC, the power supply is taken over by the USB interface of the PC.

PICOGLOSS 560 MC-X
gloss measurements on lacquered sheets

PICOGLOSS 560 MC-XS

Design

The **PICOGLOSS 560 MC-XS** is as well as the PICOGLOSS 560 MC-X one of the smallest portable gloss-measuring devices ever designed.
Especially even due to the continuously increasing number of enquiries from the automotive range regarding gloss measurements on small parts, the **PICOGLOSS 560 MC-XS** provides with its remarkably small measuring aperture (round, 3 mm Ø) the possibility of gloss measurements. Up to now only a user-dependent non-communicable visual valuing of gloss values was possible.
Gloss measurements on small parts require some attention to a few essential facts:

It has to be considered, that a Glossmeter with such a small measuring aperture has a quite high sensitivity for all influences which could effect the measured value (flat- and evenness, radius, structures, slight mottling).

Therefore, it is essential that the surface to be measured is absolutely flat and even as well as with a possibly homogeneous appearance.

Otherwise, even already a slight change of the unit's position (distinctly less than 1 mm) could bring an area of the surface to be measured into the measuring focus, which has an other gloss appearance. This would immediately be recognized as a variation at the displayed measuring value, because due to its sensitivity the **PICOGLOSS 560 MC-XS** is able to measure/display the different/varying gloss of areas which are very close to each other .

The gloss impression through humans' eyes is the result of a mixed impression of an area with a minimum size which is distinctly larger than the **PICOGLOSS 560 MC-XS** measuring aperture .

So, also common Glossmeters measure a larger area and the value is an "average" of its mixed impression.

But, unfortunately, such common Glossmeters are not suitable to be used for the often enquired gloss measurements on a lot of small specimens to be measured, because their larger measuring aperture will be not completely covered by these specimens .

Due to the high sensitivity of the **Model 560 MC-XS**, it is recommended to take a sufficient number of measurements from the area to be measured, with slight positioning changes, and understand the average of all nearly similar values as the actual gloss value of the small specimens to be measured .

For bigger specimens, the common Glossmeters with their "less sensitive" larger measuring aperture are still the comfortable right choice .

Special Features

- ***Handling***
  Single-key operations make gloss measurements extremely easy and comfortable. The reading remains stored in the display for about 30 s and is then switched off automatically to save the battery. However, the last measured value is preserved and is shown in the display when the instrument is switched on again.
- ***Display***
  In addition to the measuring and calibrating values the high-contrast LC display also shows messages and information.
- ***Calibration***
  The **PICOGLOSS 560 MC-XS** requires only one calibrating standard for normal two-position calibration. After key pressure the calibration routine runs automatically. The calibration value is stored on the standard (EPROM).
- ***60°Gloss measurement***
  Specifically for gloss measurements on lacquers and plastics in the range of 0 up to approx. 15 GU* (display with two decimal places) and in the range of 0 up to 150 GU* (display with one decimal place).
- ***Mirror gloss measurements***
  Mirror-gloss measurements can be conducted on metallic surfaces in the range of up to 1000 gloss units. There is an automatic change-over of the measuring range at 150 gloss units.
- **Two times change-over of the display resolution**
  - ***from*** 0.00 GU to 15.00 GU → ***to*** 15.0 GU to 150.0 GU
  - ***from*** 15.0 GU to 150.0 GU → ***to*** 150 GU to 1000 GU
- ***USB interface***
  The measured data can be transferred to a PC by means of the USB cable supplied and evaluated using the software **PICOSOFT II *).**
- ***Statistics function***
  Number of measurements (max. 10), Min/Max, standard deviation
- ***Power supply***
  The **PICOGLOSS 560 MC-XS** is operated by a round cell, the capacity of which is adequate for at least 10,000 measurements. When using a PC, the power supply is taken over by the USB interface of the PC.

PICOGLOSS 560 MC-XS
gloss measurements on small parts

PICOGLOSS 562 MC

Design

The two-angle gloss meter **PICOGLOSS 562 MC** with the measuring geometries **20° and 60°,** is one of the smallest gloss measuring instruments that have ever been designed. As a consequent logical further development of the one-angle (60°) gloss meter PICOGLOSS 560 MC-X, also the Model 562 MC is as small as a PC mouse and therefore it is extremely suitable for on-site measurements. The 20°/60° measuring geometries and the automatic change-over of mirror-gloss meet the requirements of the gloss ranges “high gloss” (20°) and “medium gloss” (60°) that are mostly used.
Due to the compact dimensions of the measuring instrument and the measuring aperture, gloss measurements can be carried out without difficulties even on small or narrow specimens

Special Features

- ***Handling***
  Single-key operations make gloss measurements extremely easy and comfortable. The reading remains stored in the display for about 30 s and is then switched off automatically to save the battery. However, the last measured value is preserved and is shown in the display when the instrument is switched on again.
- ***Display***
  In addition to the measuring and calibrating values the high- contrast LC display also shows messages and information.
- ***Calibration***
  The **PICOGLOSS 562 MC** requires only one calibrating standard for normal two-position calibration. After key pressure the calibration routine runs automatically. The calibration value is stored on the standard (EPROM).
- ***20° gloss measurement***
  Especially for high gloss surfaces.
- ***60° gloss measurement***
  Successfully applied universally by a great number of users for many years, recommended, however, in accordance with the standard for the gloss range “medium gloss” (at 60°: 30 - 70 GU).
- ***Mirror-gloss measurement***

  Mirror-gloss measurements can be conducted on metallic surfaces. There is an automatic change-over of the measuring range at 150 gloss units (GU).
  Indicating range in the 20° measuring mode:
  150 - 2000 GU.
  Indicating range in the 60° measuring mode:
  150 - 1000 GU
- ***Detection of external light***
  The effect of external light can be determined by conducting measurements with the lamp switched off.
- ***Power supply***
  The **PICOGLOSS 562 MC** is operated by two round cells, the capacity of which is adequate for at least 10,000 measurements. When using a PC, the power supply is taken over by the USB interface of the PC.

PICOGLOSS 562 MC

Accessories for PICOGLOSS 560 MC-X and PICOGLOSS 562 MC

Adapter for gloss measurement on curved surfaces

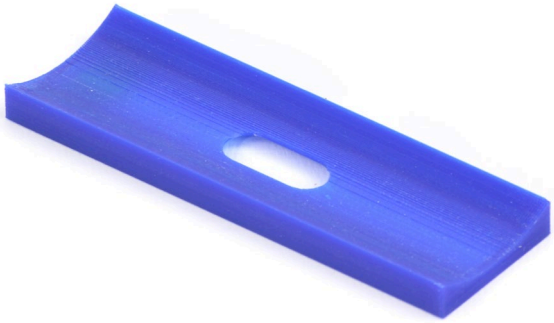
Due to the daily reality of various measurement requirements, the desire for a measurement on curved surfaces is successively increasing and a measurement limited by physical facts is still much more appreciated by many users, than purely visually “confirmed“ estimation.

Unfortunately, **a standard-compliant measurement on curved surfaces** is not really possible, although it also provides measured values that can, however, be quite useful for individual solutions, in which case the following specifications for the measurement are indispensable:

1. Only possible on one-dimensional convex radii.
2. Positioning over the radius as accurately as possible, for uniform distribution of the reflection ***before*** and ***after*** the radius.
3. Avoid any influence by light from sources outside the Glossmetert, as this would be misinterpreted by the sensor and added to the gloss value.
4. Positioning the measurement aperture as close as possible to the surface to be measured in order to minimise displacement of the measuring area’s focus.
5. Acceptance of the fact that only measurements on **one-dimensionally** curved surfaces can be measured in a meaningful manner, as any further curvature.
   would make any trial of quantifiable gloss (= reflection) measurement absurd.
6. Acceptance of the fact that there can be NO generally valid type of correlation between measured values determined in this way and measurements on flat surfaces.

The design of the adapter, which can be ordered as required, enables a measurement that is closely adapted to the radius in the best possible repeatable manner.

The slightly elastic character as well as its tight fit hold the adapter after simple mounting on the base plate of the gloss meter, even without any further device on the unit, so that freehand working remains unaffected.

Figure	Art.-No.	Product description
	32280132	**Adapter for gloss measurement on one-dimensional curved surfaces** **(for Mod. 560 MC-X / 562 MC)** **with contact fitting in the desired radius (please specify when ordering);** **for radially (direction following the radius, 90° to the axis) oriented measurement.**
	32290132	**Adapter for gloss measurement on one-dimensional curved surfaces** **(for Mod. 560 MC-X / 562 MC)** **with contact fitting in the desired radius (please specify when ordering);** **for axially (following the axis) oriented measurement.**

Technical Data and Order Information PICOGLOSS 560 MC-X / 560MC-XS

Technical Data

Dimensions (L x W x H):		(105 x 31 x 59) mm
Weight, net:		200 g
Measuring aperature:	560 MC-X	(10 x 24) mm
	560 MC-XS	3 mm Ø (round)
Measuring spot:	560 MC-X	(8 x 16) mm
	560 MC-XS	3 mm Ø (round)
Measuring geometry:		60°
Light source:		LED
Detector:		Si photo cell
Display:		graphic LCD height of digits 11 mm
PC interface:		USB
Power supply:		1 micro cell (LR03)
Permissible temperature range:		
	Storage:	-10 °C to +60 °C
	Operation (non-dewy):	23 °C +/- 2 °C
Reproducibility:		0.2 GU in the range of 0 - 150 GU 0.2 GU in the range of 0 - 150 GU 0.5 GU in the range of 150 - 1000 GU
Reproducibility in case of interfering irradiation (EN 61000-4-3):		1 GU

(GU = gloss unit)

Order Information	
Art.-No.	**Product-Description**
02950131	**Gloss Measuring Device PICOGLOSS 560 MC-X, measuring geometry 60°** (incl. Manufacturer's Certificate M acc. to DIN 55 350-18)
02950231	**Gloss Measuring Device PICOGLOSS 560 MC-XS, measuring geometry 60°** for measurements on small parts
	Included in the scope of supply: High gloss standard Battery (round cell LR03) USB cable Lens cloth Transport case Operating instructions

The software PICOSOFT IV for model 560 MC-X / 560 MC-XS is availlable free of charge at www.erichsen.de.

Technical Data and Order Information PICOGLOSS 562 MC

Technical Data

Dimensions (L x W x H):		(105 x 31 x 73) mm
Weight, net:		820 g
Measuring aperture:		(10 x 24) mm
Measuring spot:	Measuring geometry 20°	(9 x 9) mm
	Measuring geometry 60°	(8 x 16) mm
Measuring geometry:		20°/60°
Light source:		LED
Detector:		Si-Fotoelement
Display:		graphic LCD Height of digits 11 mm
PC interface:		USB
Power supply:		2 micro cells (LR03)
Permissible temperature range:		
	Storage:	-10 °C to +60 °C
	Operation (non-dewy):	23 °C +/- 2 °C
Reproducibility:		0.2 GU in the range of 0 - 150 GU 0.5 GU in the range of 150 - 1000 GU 1 GU in the range of 1000 - 2000 GU
Reproducibility in case of interfering irradiation (EN 61000-4-3):		
	Measuring geometry 20°	2 GU
	Measuring geometry 60°	1 GU

(GU* = gloss unit)

Order Information	
Art.-No.	**Product-Description**
02610131	**Gloss Measuring Device PICOGLOSS 562 MC,** **measuring geometry 20°/60°** (incl. Manufacturer's Certificate M acc. to DIN 55 350-18**)**
	Included in the scope of supply: High gloss standard Battery (2 round cells LR03) USB cable Lens cloth Transport case Operating instructions

The software PICOSOFT III for model 562 MC is availlable free of charge at www.erichsen.de.

The right of technical modifications is reserved.
TBE 560 MC-X/560 MX-XS/562 MC – VI/2023

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