



M5

Industrial displays for dimensional measurement

The precision of the laboratory, the ruggedness of the workshop.

M5

INDUSTRIAL DISPLAYS FOR DIMENSIONAL MEASUREMENT

- 5" capacitive touchscreen
- Up to 3 characteristics displayed simultaneously
- 10 programs in memory
- Several versions available depending on the type of sensor to be connected

The M5 can be used in a wide variety of applications, from the simplest to the most complex.



Intuitive and colorful interface

AT A GLANCE

Display and inputs

- 1 or 2 measurement inputs depending on the version (up to 4 via external M-BUS modules)
- Simultaneous display of up to 3 characteristics
- Digital readout, colored bar graph, analog dial (galvanometer)
- Color-coded indicators based on the part tolerance

Interface and connectivity

- 5-inch capacitive touchscreen (800×480px)
- USB connectivity (keyboard emulation, CSV export to USB drive)
- RS232 port → ASCII or Modbus RTU protocol
- Compatible with barcode and QR code readers
- Network connectivity via optional MB-NET module

Software function

- Manage up to 10 programs in memory
- Administrator password protection
- Sorting by classes, mathematical functions, temperature compensation, ...
- Fully customizable interface

Instruments connectivity

- Inductive probes, Heidenhain sensors, air gage
- Compatible with Sylvac Bluetooth instruments via a USB dongle
- Compatible with Sylvac, Mahr, and Tesa USB instruments
- Optional external modules → I/O, relay, temperature

Adapts to all your measuring equipment

The M5 connects to a very wide range of measuring equipment, from classic inductive probes to wireless portable instruments.

Inductive and digital probes

Metro, Tesa, Mahr, Marposs, Peter Hirt, ...

Incremental scales / Encoders

Heidenhain, Magnescale, Mitutoyo LG

Air gages (all brands)

Air gages, rings, forks

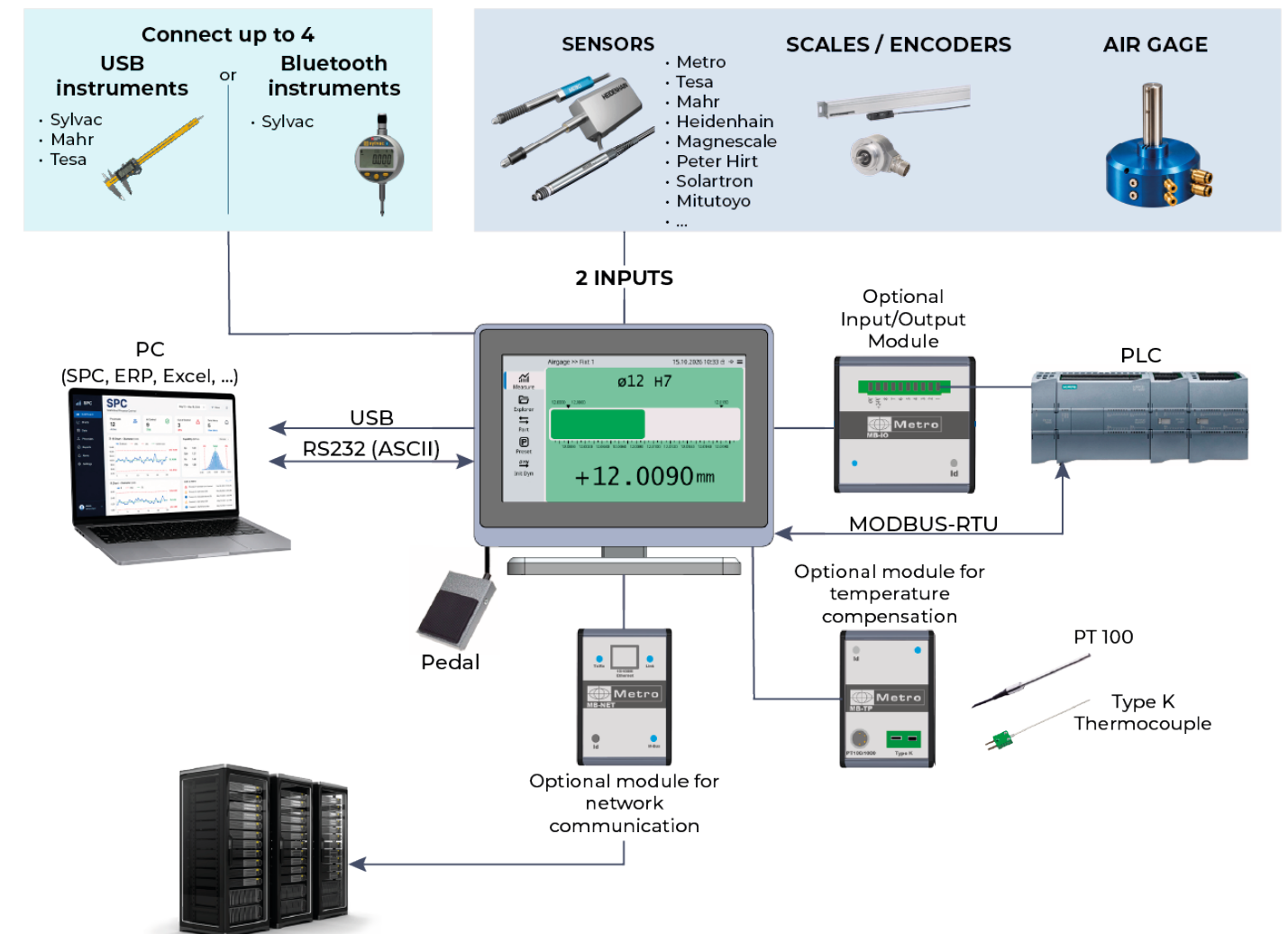
Bluetooth and USB

Sylvac, Mahr and Tesa instruments

The **M5** is a state-of-the-art tool for performing **any dimensional inspection using one or two measuring devices**. Several versions are available, allowing connection to up to 4 inductive probes from Metro, Tesa, Mahr, Marposs, ...; a universal air-jet measurement system compatible with all brands; Heidenhain sensors, rulers, and incremental encoders (sine 11 µApp, 1 Vpp, or TTL output); and Magnescale or Mitutoyo LG series sensors.

The M5 now also communicates directly with **Sylvac Bluetooth instruments** and Sylvac, Mahr and Tesa USB instruments, without the need for an additional interface module.

Other measurement methods remain accessible via optional external modules: calipers, scales, temperature sensors, and devices with 0-10 V / 4-20 mA outputs.



Smart, powerful, and easy to use

The **M5** is equipped with a **5-inch color capacitive touchscreen with an 800×480px resolution**. Its highly intuitive user interface allows for quick configuration and simple, error-free operation.

Administrator password protection, along with the ability to customize the interface, ensures a high level of operational security. Measurements are displayed very clearly, with color-coded indicators showing the position of each characteristic within the part's tolerance range.



The M5 can display up to 3 characteristics on screen at once, for even faster multi-sensor inspection.

QR Code compatible



A **barcode or QR code reader** can be connected to the M5, enabling 2 functions:

- Data entry: scanning a production/batch number.
- Screen configuration: all screen settings (tolerance, etc.) can be programmed via a QR code.

APPLICATION EXAMPLES



Heidenhain probes for watchmaking applications

Heidenhain Specto sensor mounted on a Sylvac PS15 bench. Metro displays are compatible with the entire range of Heidenhain sensors (Certo, MT12, MT25, MT101, Specto...).

Inspection of turned/machined parts (bar turning)

Retrofit of a fixture equipped with dial indicators on a 100% sorting station: improved accuracy and measurement traceability.



Air gage inspection

Metro systems can achieve excellent repeatability, down to 0.02µm for certain demanding applications.

Metro can supply you with a complete solution: pneumatic ring or plug gage + associated display and accessories.

OPTIONAL MODULES

MB-IO Module



Up to **4 MB-IO modules** can be connected, providing up to **32 inputs/outputs**. A graphical interface makes it easy to assign a function to each MB-IO module terminal, and also to test the wiring using a virtual button/lamp system:

- Good/bad part output
- Calibration input
- Dynamic measurement start input
- Class output (1 to 16)
- etc.

MB-RO Module



The **MB-RO** features a relay output. When used with the Air Gage version of the M5, it controls the automatic air-saving regulator (part no. ACS-PNE-004), which shuts off or reduces the pressure to maintain the temperature of the measuring tool.

It also controls the precision regulator with an integrated flow limiter (part no. ACS-PNE-001) to operate pneumatically driven probes.

MB-TP Module



The **MB-TP** temperature module allows for the connection of a PT100/PT1000 probe or a Type K thermocouple.

Two functions are then available:

- Temperature compensation of measurements
- Alarm in the event of a temperature change.

MB-RC Module

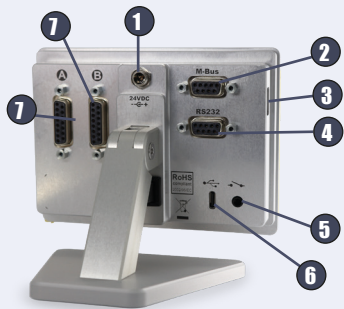


The **MB-RC** remote control has 4 programmable buttons. It allows the operator to activate the M5's common functions without touching the screen, directly from their workstation.

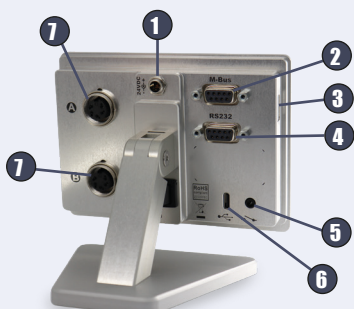
Connectors

- 1 - Power supply 24VDC
- 2 - M-Bus for connecting MB-XX modules
- 3 - USB-A port – USB drive and QR code reader
- 4 - RS232 COM port (ASCII and Modbus RTU protocol)
- 5 - External contact input (foot pedal)
- 6 - USB-C port with USB keyboard emulation + power
- 7 - Sensor / Air Gage connection

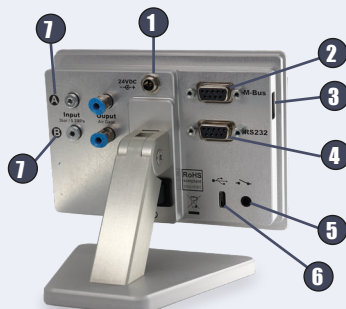
Heidenhain version



Inductive version



Air gage version



Automatic transfer

The **M5** automatically detects each measurement, regardless of the sensor used. As soon as the value stabilizes, it sends it directly to the computer via keyboard emulation, without the need for a foot pedal or button.

The operator simply inserts the air gage into the part, and the measurement is automatically recorded in Excel or the SPC software: it's faster, more reliable, and ensures nothing is missed.



Export to USB drive

On the M5, measurements can be saved to a USB drive. A CSV file is then available for data processing in Excel or any other software.



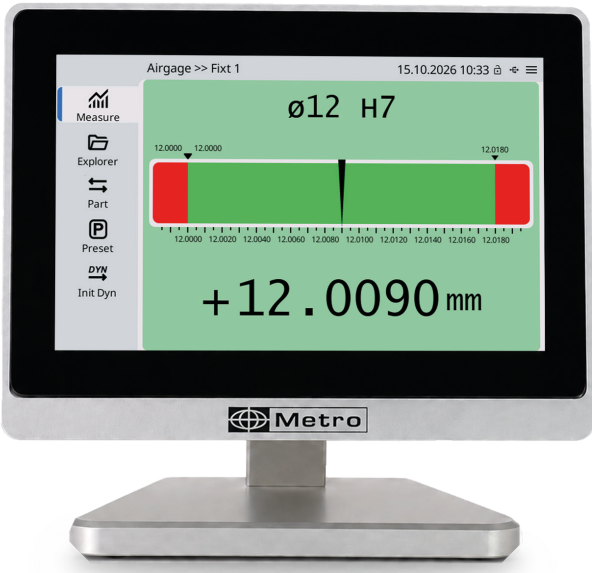
Keyboard emulation

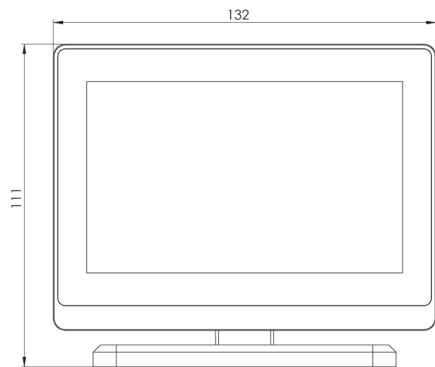
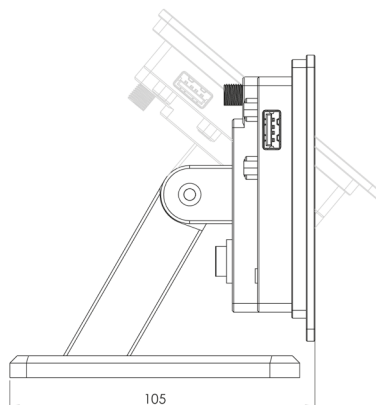
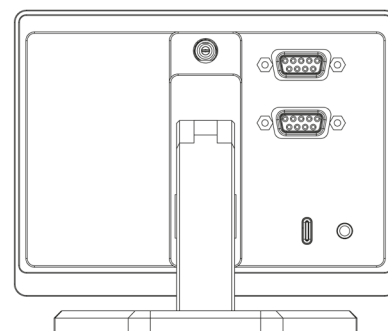
When connected to a PC, the M5 is detected as a USB keyboard. Measurements are written directly wherever the cursor is positioned, with no driver installation required, ideal for R&R studies in Excel.



GENERAL CHARACTERISTICS

Display model	M5 inductive version	M5 Heidenhain version	M5 Air Gage version
Screen size	5" (12.7cm), Capacitive, 800×480px resolution		
Measurement inputs	2 (4 via external M-BUS modules)		1 or 2 (4 via external M-BUS modules)
Simultaneous characteristics displayed	Up to 3		
Compatible sensors	Metro, Tesa, Mahr, Marposs, Peter Hirt inductive probes	Heidenhain incremental sensors, scales & encoders (Sinus 11µA, 1Vpp, TTL), Magnescale, Mitutoyo LG	Air gage (plug, ring, fork gauges), compatible with all brands
Orbit ® compatible	Yes		
Storage capacity / Programs in memory	10		
Display and evaluation of measurements	Digital values, colored bar graph, analog dial, color-coded tolerance indicators		
Password protection	Yes		
Class sorting	16 configurable		
Mathematical functions	Calculation between characteristics, trigonometrics, etc		
Temperature compensation	Via external MB-TP module		
RS232 connector	ASCII (QDAS compatible) or Modbus RTU protocol		
USB-A connector	USB drive (CSV export), QR code reader		
USB-C connector	Keyboard emulation + power		
M-BUS extension	Yes		
Optocoupled inputs/outputs	Max 32 via external MB-IO modules (4 max, 8 I/O each)		
Bluetooth/USB instrument compatibility	Sylvac Bluetooth, Sylvac/Tesa/Mahr USB		
External contact input	Foot pedal, button		
Power supply	24VDC		





Product	REF
M5 display for 1 Air gage	M5AIR1
M5 display for 1 Air Gage, Mahr/Federal 1-master compatible (High)	M5AIR1-MF-H
M5 display for 1 Air Gage, Mahr/Federal 1-master compatible (Low)	M5AIR1-MF-L
M5 display for 2 Air Gages	M5AIR2
M5 display for 2 Air Gages, Mahr/Federal 1-master compatible (High)	M5AIR2-MF-H
M5 display for 2 Air Gages, Mahr/Federal 1-master compatible (Low)	M5AIR2-MF-L
M5 display for 2 Mahr inductive probes	M5MHR2
M5 display for 2 Marposs LVDT inductive probes	M5MPS2
M5 display for 2 Metro inductive probes	M5MTR2
M5 display for 2 Sinus 1V/11μA probes	M5SIN2
M5 display for 2 Tesa inductive probes	M5TES2
M-Bus Module - 8 optocoupled inputs/outputs	MB-IO
M-Bus Module - 1 Relay Output	MB-RO
M-Bus Module - For temperature measurement, PT100 sensor, Type K thermocouple	MB-TP
M-Bus Module - Remote Control with 4 Programmable Buttons	MB-RC
Pedal	18020
Table button	18022
Precision Controller for Pneumatic Thrust Sensors	ACS-PNE-001
Precision Regulator for Air Gauge	ACS-PNE-003
Compact Precision Regulator for Air Gage	ACS-PNE-039
Precision Regulator for Air Gauge with Air-Saving Feature	ACS-PNE-004



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