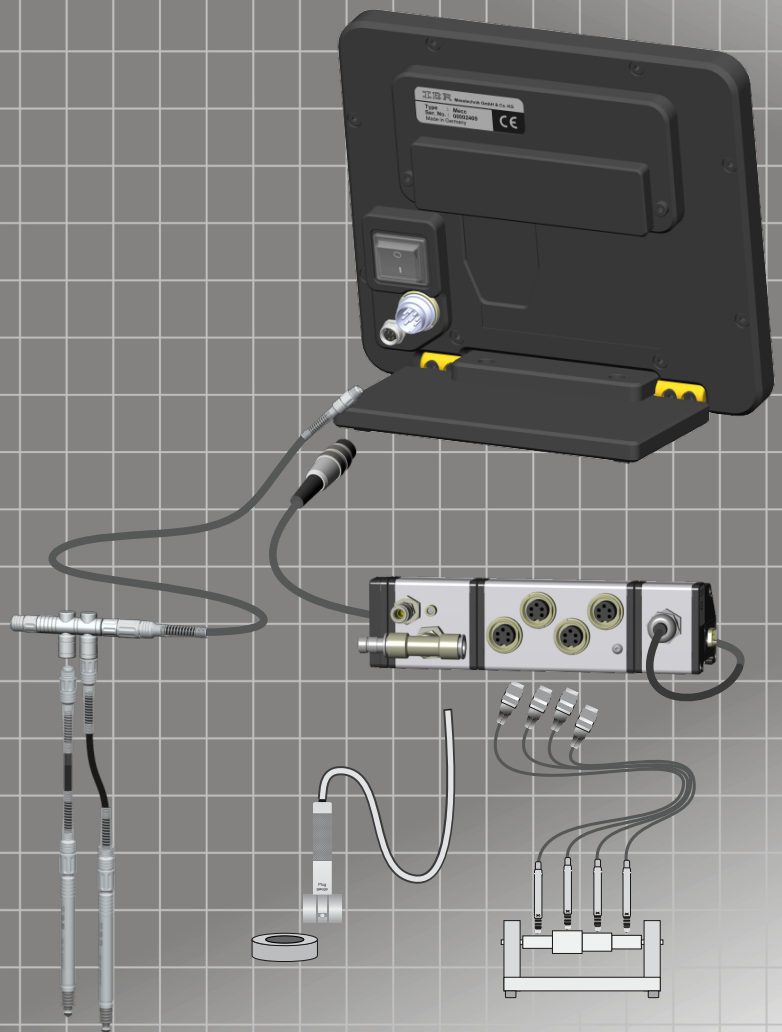
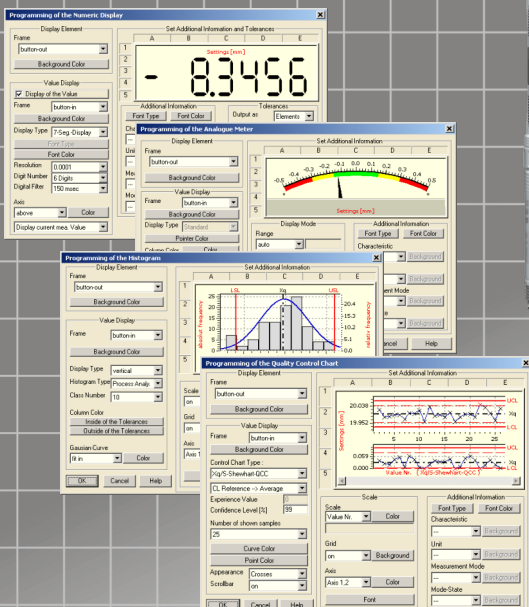
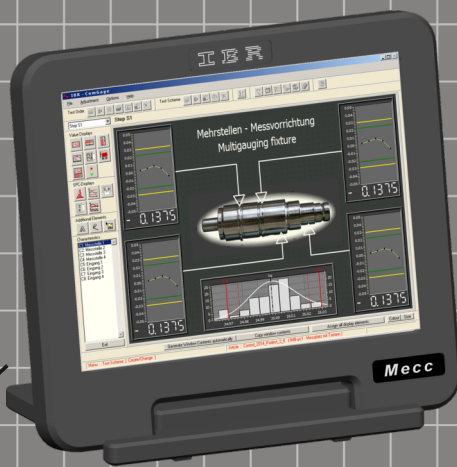




Messtechnik GmbH & Co. KG



**Mecc**   
Computer industriale compatto



# Mecc : computer di misura, industriale, compatto



Il **Mecc** è un computer industriale compatto, robusto e universale per l'acquisizione manuale e automatica delle misure e per la loro analisi statistica. Sequenze di misura programmabili e funzioni di controllo consentono il funzionamento automatico di dispositivi di misura con più strumenti, incluso il trasferimento dei valori di correzione alle macchine CNC. Grazie all'utilizzo di moduli IMBus, il Mecc può essere configurato individualmente per qualsiasi applicazione, con un numero di ingressi di misura compreso tra 1 e 64.

## Caratteristiche

- Design compatto e robusto con struttura in metallo solida e protetta (coperchio posteriore opzionale per IP64), raffreddamento passivo e display TFT da 8" (800 x 600) con touch screen e inclinazione regolabile.
- Moduli IMBus per sonde induttive, encoder incrementali, calibri pneumatici (misurazione con aria), sensori con interfaccia IBR ISi, sensori con uscita analogica, strumenti di misura con uscita dati, ...
- Profibus-, Profinet-, Ethernet/IP-, EtherCAT e moduli di input/output compatibili con PLC per applicazioni automatiche
- Porte standard disponibili: 2x USB, 1x Ethernet e 1x RS232 (porta COM)

## Sistema operativo

- Windows CE
- Nessun arresto del sistema operativo
  - Elevata sicurezza contro virus e attacchi
  - Memorizzazione delle misure nella memoria flash interna, su chiavette USB e in rete

## Operating system

- Windows CE
- No shut down of the operating system
  - High security against viruses and misuse
  - Storing of measured values in internal flash memory, on USB sticks and in network



### Creazione delle caratteristiche / Create characteristics

| CHARACTERISTICS : |              |         |       |        |         |       |      |                      |            | Drawing data |          | Statistics |  | Reference Information |  |  |  |
|-------------------|--------------|---------|-------|--------|---------|-------|------|----------------------|------------|--------------|----------|------------|--|-----------------------|--|--|--|
| No                | Name         | Nominal | USL   | UCL    | LCL     | LSL   | Unit | Mea                  | Inputs     | Mode         | 1 Master | 2 Master   |  |                       |  |  |  |
| C1                | Diameter 1   | 20      | 0.03  | 0.025  | -0.025  | -0.03 | mm   | M1+M2                | Static...  | 28.0002      | ---      | ---        |  |                       |  |  |  |
| C2                | Diameter 2   | 28      | 0.02  | 0.015  | -0.015  | -0.02 | mm   | M3+M4                | Static...  | 28.0002      | ---      | ---        |  |                       |  |  |  |
| C3                | Diameter 3   | 32      | 0.027 | 0.0236 | 0.0034  | 0     | mm   | M5+M6                | Static...  | 32.016       | ---      | ---        |  |                       |  |  |  |
| C4                | Taper        | 12      | 0.04  | 0.03   | -0.03   | -0.04 | mm   | (M5+M6)/(M1+M2)      | Static...  | 12.0168      | ---      | ---        |  |                       |  |  |  |
| C5                | Straightness | 0       | 0.01  | 0.0075 | -0.0075 | -0.01 | mm   | (M1+M2)/(M5+M6)/2... | Static...  | 0            | ---      | ---        |  |                       |  |  |  |
| C6                | Roundness D1 | 0       | 0.008 | 0.006  | ---     | ---   | mm   | (M1+M2)/2            | TIR (Ma... | ---          | ---      | ---        |  |                       |  |  |  |
| C7                | Roundness D2 | 0       | 0.008 | 0.006  | ---     | ---   | mm   | (M3+M4)/2            | TIR (Ma... | ---          | ---      | ---        |  |                       |  |  |  |
| C8                | Roundness D3 | 0       | 0.008 | 0.006  | ---     | ---   | mm   | (M5+M6)/2            | TIR (Ma... | ---          | ---      | ---        |  |                       |  |  |  |

Inserimento delle caratteristiche con unità, dimensione nominale, tolleranze; formule per la correlazione tra input, modalità di misurazione e valori master per la calibrazione.

Input of characteristics with unit, nominal size, tolerances, formula for probe-mixing, measuring mode and master values for calibration.

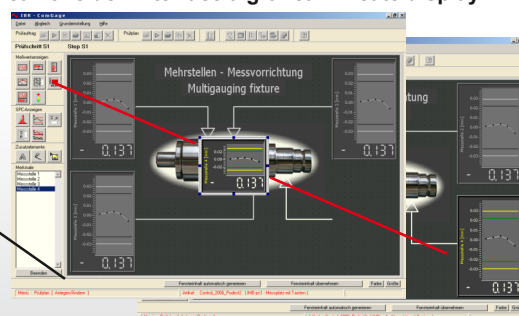
### Creazione dei passi di controllo / Create test steps

| TEST STEPS : |                                            | Sequence                 | Digital Outputs            | Additional settings |
|--------------|--------------------------------------------|--------------------------|----------------------------|---------------------|
| No.          | Test Step Function                         | Save the characteristics | Adjust the characteristics |                     |
| S1           | Wait for next component                    | ---                      | ---                        |                     |
| S2           | Move probes out pneumatically              | ---                      | ---                        |                     |
| S3           | Measure Diameter 1, 3, Taper, Straightness | C1, C2, C3, C4, C5       | ---                        |                     |
| S4           | Start motor for Roundness-Measurement      | ---                      | ---                        |                     |
| S5           | Roundness-Measurement                      | C6, C7, C8               | ---                        |                     |
| S6           | Stop motor and move probes in              | ---                      | ---                        |                     |
| S7           | Send correction values to PLC via Profibus | ---                      | ---                        |                     |
| S8           | Export measured values to Q-DAS            | ---                      | ---                        |                     |

Creazione di passi di controllo con funzioni quali salvataggio dei valori misurati, calibrazione, esportazione Q-DAS, trasferimento dei valori di correzione al PLC, ...

Create test steps with functions such as saving of measured values, calibration, Q-DAS export, correction value transfer to PLC, ...

### Creazione dell'interfaccia grafica / Create display windows



Per guidare l'operatore attraverso la sequenza di misura è possibile creare finestre di visualizzazione personalizzabili.

For guiding the operator through the measuring sequence freely designable display windows can be created.

## ComGage

Software per la metrologia e il controllo statistico di processo in produzione. (Il software ComGage Level 1 è già installato nel Mecc ed è incluso nel prezzo)

Software for metrology and statistical process control in manufacturing facilities. ( ComGage Level 1 included in delivery )

# Mecc : Compact measuring computer for industrial use

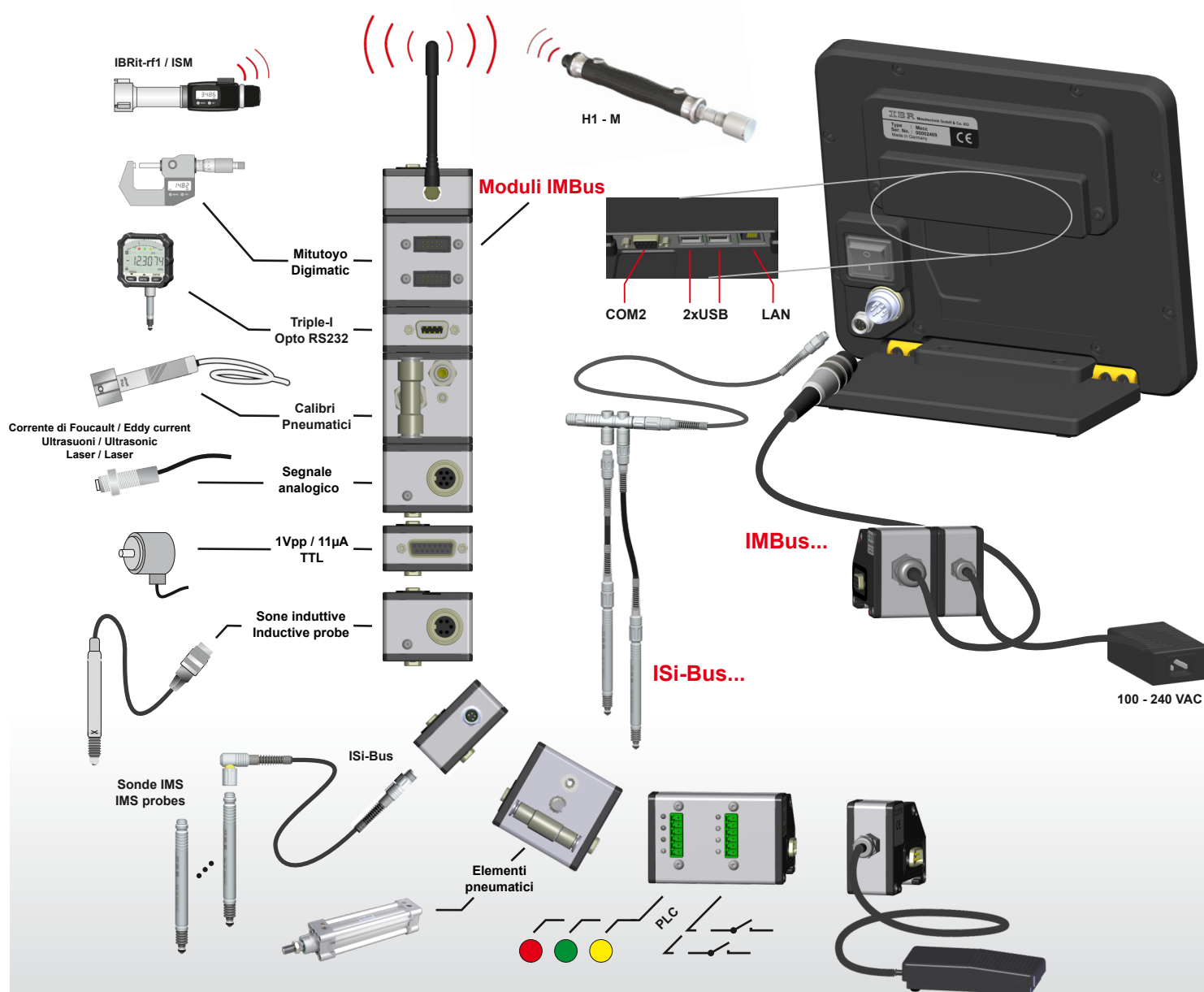


The compact measuring computer **Mecc** is a robust and universal industrial computer for manual and automatic collection of measured values with statistical analysis. Programmable measuring sequences and control functions allow automatic operation of multi-gauging fixtures up to the transfer of correction values to CNC machines.

By the usage of IMBus modules the measuring computer can be individually configured for any application with 1...64 measuring inputs.

## Features

- Compact and robust construction with solid, sealed metal case ( optional cover cap for IP64 ), passive cooling and 8" TFT-Display ( 800 x 600 ) with touch screen, adjustable angle of tilt
- IMBus modules for inductive probes, incremental systems, pneumatic gauge heads ( air gauging ), sensors with IBR ISi interface, sensors with analogue output, gauges with data output, ...
- Profibus-, Profinet-, Ethernet/IP-, EtherCAT- and PLC compatible input / output modules for control applications
- Standard PC-connections : 2x USB, 1x Ethernet and 1x RS232 ( COM port )



Nota: per ulteriori moduli IMBus (per strumenti con interfaccia USB, Solarton Orbit bus, Sylvac Bluetooth, sensori di temperatura, ...), consultare il catalogo IMBus.  
 Note: further IMBus mea. modules available ( for USB gauge connection cables, Solarton Orbit bus, Sylvac Bluetooth, temp. sensors, ... ), see IMBus brochure.

## Dati tecnici: Mecc



## Technical data: Mecc



### Caratteristiche meccaniche

|                      |                                     |
|----------------------|-------------------------------------|
| Struttura            | Alluminio verniciato a polvere      |
| Dimensioni / Peso    | (LxAxP) 203 x 183 x 109 mm / 2,5 kg |
| Classe di protezione | Parte frontale IP65, CEI / IEC 529  |
|                      | Parte posteriore IP64 con coperchio |

### Caratteristiche elettriche

|                 |                                 |
|-----------------|---------------------------------|
| Alimentazione   | 100 ... 240 VAC, 12 Watt        |
| Consumo massimo | 7 Watt (senza moduli di misura) |

### Caratteristiche computer

|                          |                                                                          |
|--------------------------|--------------------------------------------------------------------------|
| Display                  | 8" TFT, risoluzione mass. 800 x 600 (Inclinazione regolabile - 8,5° 20°) |
| Touch Screen             | Resistivo analogico a 4 fili                                             |
| CPU                      | Tegra T20, Cortex A9, 1 GHz Dual Core                                    |
| Memoria                  | 512 MB RAM, 1GB Flash                                                    |
| Sistema operativo Win CE | Windows Embedded Compact 7                                               |
| Software di misura       | ComGage                                                                  |

### Collegamenti

|                          |                                 |
|--------------------------|---------------------------------|
| Collegamenti Standard PC | 2xUSB 2.0, 1xLAN, 1xRS232 (COM) |
| IMBus                    | EIA RS485, 64 moduli            |
| ISi-Bus                  | 60 Sensori                      |

### Parametri di misura

|  |                                                                                  |
|--|----------------------------------------------------------------------------------|
|  | Vedere la documentazione tecnica dei moduli IMBus e/o dei Sensori ISi, collegati |
|--|----------------------------------------------------------------------------------|

### Condizioni ambientali

|                               |                            |
|-------------------------------|----------------------------|
| Temper. Utilizzo / Stoccaggio | 0 ... 45°C / -20 ... +70°C |
| Umidità relativa              | 5 - 80% (non condensante)  |

### Mechanical characteristics

|                      |                                     |
|----------------------|-------------------------------------|
| Case with base parts | Aluminium powder-coated             |
| Dimensions / Weight  | (WxHxD) 203 x 183 x 109 mm / 2.5 kg |
| Protection class     | Front side IP65, CEI / IEC 529      |
|                      | Rear side IP64 with cover cap       |

### Electrical characteristics

|                        |                                    |
|------------------------|------------------------------------|
| External power supply  | 100 ... 240 VAC, 12 Watt           |
| Max. power consumption | 7 Watt (without measuring modules) |

### Computer characteristics

|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| Display                 | 8" TFT, max. resolution 800 x 600 (Adjustable angle of tilt -8.5° to 20°) |
| Touch Screen            | 4-wire analogue-resistive                                                 |
| CPU                     | Tegra T20, Cortex A9, 1 GHz Dual Core                                     |
| Memory                  | 512 MB RAM, 1GB Flash                                                     |
| Win CE Operating system | Windows Embedded Compact 7                                                |
| Measuring software      | ComGage                                                                   |

### Connections

|                         |                                 |
|-------------------------|---------------------------------|
| Standard PC connections | 2xUSB 2.0, 1xLAN, 1xRS232 (COM) |
| IMBus                   | EIA RS485, 64 clients           |
| ISi-Bus                 | 60 sensors                      |

### Measurement parameters

|  |                                                                          |
|--|--------------------------------------------------------------------------|
|  | See technical documentation of the connected IMBus modules / ISi-sensors |
|--|--------------------------------------------------------------------------|

### Environmental conditions

|                           |                              |
|---------------------------|------------------------------|
| Operation / Storage temp. | 32 ... 113°F / -4 ... +158°F |
| Relative humidity         | 5 - 80% (non condensing)     |

## Informazioni per l'ordine



Tipo [ Art. Nr. ] Articolo

|                   |                                                                                        |
|-------------------|----------------------------------------------------------------------------------------|
| Mecc [ F234 002 ] | Computer compatto con alimentatore, display touch TFT da 8", WinCE e ComGage Livello 1 |
| [ F234 010 ]      | Coperchio posteriore protettivo (IP64) e attacco VESA MIS-D 100 C                      |
| [ F234 020 ]      | Set di montaggio con binario industriale                                               |

#### Nota:

A seconda dei requisiti dell'applicazione, è necessario ordinare anche i moduli IMBus e, se necessario, i moduli ComGage.

### Accessori

1. Mecc con coperchio protettivo IP64 e attacco VESA MIS-D 100 C per montaggio su staffe a parete
2. Mecc con binario industriale per montaggio moduli IMBus



Type [ Art. No. ] Article

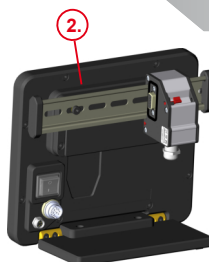
|                   |                                                                                               |
|-------------------|-----------------------------------------------------------------------------------------------|
| Mecc [ F234 002 ] | Compact measuring computer with power supply, 8" TFT touch display, WinCE and ComGage Level 1 |
| [ F234 010 ]      | Mecc cover cap for cable connectors (IP64) and VESA MIS-D 100 C                               |
| [ F234 020 ]      | Mecc mounting rail set                                                                        |

#### Note:

According to the application requirements e.g. the IMBus modules and if necessary ComGage modules must be ordered in addition.

### Accessories

1. Mecc cover cap (protection class IP64), mounting standard VESA MIS-D 100 C for assembly to wall brackets
2. Mecc with mounting rail set for fastening of IMBus modules



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