

## Millimes | Comparators

# Millimes 2001 Wi: Everything under control! A digital dial comparator – highest level of precision thanks to inductive measuring system



### Integrated Wireless

- Integrated wireless interface
- Sending and receiving measuring data and various parameters



### Lock individual keys and functions

Remote-controlled settings can be configured easily using MarCom Professional software



Can be configured and controlled remotely using MarCom Professional software



### First digital comparator indicator with touch operation



Unique touch operation – even works with gloves

Enormous advantages:

- Keys react even with the slightest touch
  - This prevents a measuring device from being adjusted or deformed
- **Maximum measuring certainty**

### Hardened glass front

- Scratch and impact-resistant surface
- Excellent protection against scratches and penetrating liquids
- Wear-free keys react to the slightest touch



### Protection rating IP 64

Excellent protection against dust and splash water from all directions ensures optimum workshop compatibility at all times



### High-precision ball-bearing guide

Maximum sensitivity of the measuring system. long service life, and high loading capacity

### Bi-directional data interface via USB

- Sending and receiving measuring data and various parameters
- Permanent power supply via data cable
- Possible to retrieve the device ID

#ID

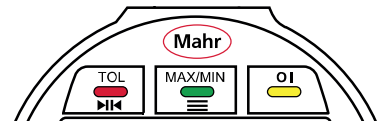
### Data interface via Digimatic

- To send measuring data



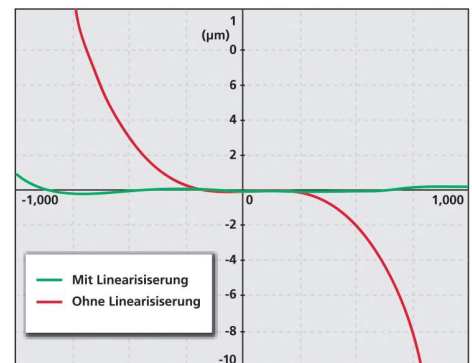
### Convenient tolerance functions

- Clear tolerance symbols
- Colorful LED signals (red, green, yellow) to classify the measuring values
  - No go/Go/warning limit
  - No go/Go/rework



### High precision inductive measuring system

Lowest measuring deviations thanks to linearization



ABS system

### Absolute measuring system

The reference to the electric zero point is not lost when the device is switched off

# Millimess 2000 W / 2000 Wi

## Inductive comparator



### FUNCTIONS

- ON/OFF
- mm/inch
- RESET (set display to zero)
- PRESET (for entering a numerical value)
- ABS (reference to the electrical zero point)
- Selectable resolution
- TOL (Tolerance and Warning Limits Input)
- Factor (adjustable)
- Reversal of counting direction
- HOLD (storage of measured values)
- LOCK function (key lock)
- DATA (data transmission)
- Bi-directional data interface (external output and input option of characteristic values as well as setting of individual lock functions by software MarCom)



**Application:**  
For static measuring tasks

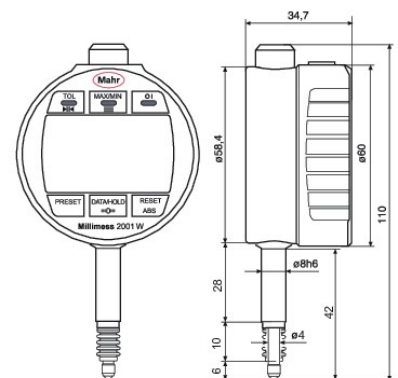
### FEATURES

- **Tempered glass front with touch control panels with enormous advantages:**
  - scratch and impact resistant surface
  - excellent protection against dust, coolants and lubricants
  - wear-free touch operating keys
  - improved safety of measurement values in measuring stands, as only a light touch of the key – no keystroke is required, thus no adjustment or deformation of the measuring device
- High-contrast LCD display, thus very clear and safe to read
- Clear tolerance symbols and **colored LED signals (red, green, yellow) for measured value classification**
  - **with** warning limit input: No Go / Go / Warning Limit
  - **without** warning limit input: No Go / Go / Rework
- Operating and display unit (bezel) can be rotated through 280°
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Measuring spindle is mounted in a high-precision ball guide for minimal hysteresis
- Linearized inductive absolute measuring system
- Measuring force spring is interchangeable
- Lower stop is adjustable
- Software: MarCom Professional free download: [www.mahr.com/marcom](http://www.mahr.com/marcom) (only for Mahr data cables and wireless systems with USB and RS– 232 interface)

### TECHNICAL DATA

Order no.	4346700	4346701
Type	2000 W	2000 Wi
Measuring range	mm	± 1
Resolution	mm	0.0001, 0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01
Resolution	inch	.000005", .00001", .00002", .00005", .0001", .0002", .0005"
Error limit	µm	± (0.2 + 0.5 x L) L in mm
Measuring value hysteresis $f_u$	µm	0.3
Repeatability $f_w$	µm	0.1
Standard		Factory standard
Free stroke	mm	2.5
Measuring force	N	0.9±0.1 (Reference to absolute zero point of inductive measuring system)
IP protection category		IP 64
Supply voltage		100– 240 V

- Digit height: 11.5 mm
- Data interface: USB, Digimatic
- Energy supply: Integrated rechargeable accumulator (up to 4 weeks) or powered by USB Data Cable
- Battery type: Lithium polymer battery 3.7 V
- Package contains: instruction manual, USB data and charging cable type DK-U1, plug-in power supply (with 4 interchangeable adapters) for USB, rubber bellows, screwdriver for pre-stroke adjustment (hexagon socket 0.9 mm), case

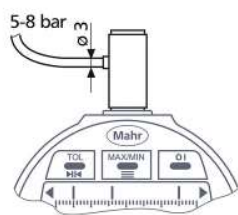


# Millimess 2000 W / 2000 Wi

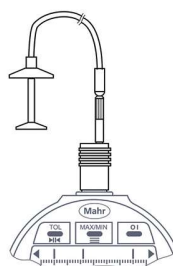
## Inductive comparator

### ACCESSORIES

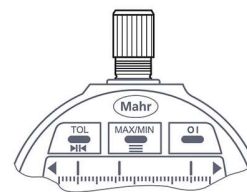
Order no.	Description	Type
4102603	Data cable USB bi-directional (2 m)	DK-U1
4102606	Interface adapter with data cable Digimatic (2 m)	DK-D1
4310103	Adapter bushing (.375" / 8 mm)	940
4346010	Manual lifter with cable release	2000 h
4346011	Pneumatic lifter	2000 p
4346012	Measuring force adjuster	2000 m
4337421	Lug back	1086 b
4346050	Measuring force spring 0.25 N	
4346051	Measuring force spring 0.50 N	
4882284	Measuring force spring 0.75 N	
4346052	Measuring force spring 1.00 N	
4346053	Measuring force spring 1.50 N	
4346054	Measuring force spring 2.00 N	
4346055	Measuring force spring 2.50 N	
4337900	Display protection film, anti reflective frosted, made of extra hard hybrid glass, to protect against scratches and reflections	1086 sf
4346606	Shock protection ring made of hard rubber for Millimess 2000 W(i) / 2001 W(i)	1086 sr
4102220	Receiver for instruments with Integrated Wireless	i-Stick



2000 p



2000 h



2000 m



1086 sf



1086 sr



i-stick

# Millimes 2001 W / 2001 Wi

## Inductive comparator



### FUNCTIONS

- ON/OFF
- mm/inch
- RESET (set display to zero)
- PRESET (for entering a numerical value)
- ABS (reference to the electrical zero point)
- Selectable resolution
- TOL (Tolerance and Warning Limits Input)
- RANGE (switch the measuring range and resolution)
- MAX/MIN memory for searching the reversal point
- (MAX-MIN) for testing flatness and concentricity
- 0 (set the analog scale display to zero)
- Factor (adjustable)
- Reversal of counting direction
- HOLD (storage of measured values)
- LOCK function (key lock)
- DATA (data transmission)
- Bi-directional data interface (external output and input option of characteristic values as well as setting of individual lock functions by software MarCom)

### FEATURES

- **Tempered glass front with touch control panels with enormous advantages:**
  - scratch and impact resistant surface
  - excellent protection against dust, coolants and lubricants
  - wear-free touch operating keys
  - improved safety of measurement values in measuring stands, as only a light touch of the key
  - no keystroke - is required, thus no adjustment or deformation of the measuring device
- Clear tolerance limits in the scale display and **colored LED signals (red, green, yellow) for measured value classification**
  - **with** warning limit input: No Go / Go / Warning Limit
  - **without** warning limit input: No Go / Go / Rework
- LED signals (red, green, yellow) in mode:
  - powered by Accumulator: flashing signal (1 sec.)
  - powered by data cable DK-U1: permanent
- High contrast LCD display, thus very clear and safe to read
- Analog scale display for visual recognition of the measuring movement during dynamic measurement tasks such as checking of concentricity or flatness as

### Application:

For static and dynamic measuring tasks

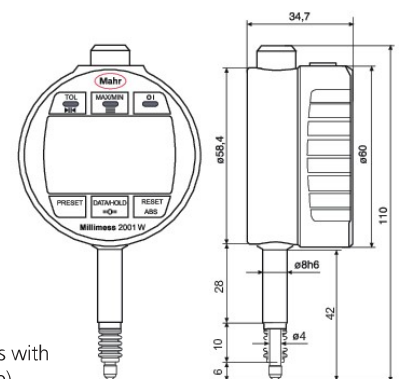


### TECHNICAL DATA

Order no.	4346800	4346801
Product type	2001 W	2001 Wi
Measuring range $\mu\text{m}$	mm	$\pm 1$
Resolution	mm	0.0001, 0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01
Resolution	inch	.00005", .00001", .00002", .00005", .0001", .0002", .0005"
Error limit	$\mu\text{m}$	$\pm (0.2 + 0.5 \times L)$ L in mm
Measuring value hysteresis $f_u$	$\mu\text{m}$	0.3
Repeatability $f_w$	$\mu\text{m}$	0.1
Norm		Factory standard
Free stroke	mm	2.5
Measuring force	N	$0.9 \pm 0.1$ (Reference to absolute zero point of inductive measuring system)
Range of analog display	mm	$\pm 0.002, \pm 0.004, \pm 0.01, \pm 0.02, \pm 0.04, \pm 0.1, \pm 0.2$
IP protection category		IP 64
Supply voltage		100– 240 V

- during bore measurements
- Operating and display unit (bezel) can be rotated through  $280^\circ$
- Mounting shank and measuring spindle are both made of hardened stainless steel
- Measuring spindle is mounted in a high precision ball guide for minimal hysteresis
- Linearized inductive absolute measuring system
- Measuring force spring is interchangeable
- Lower stop is adjustable
- Software: MarCom Professional free download: [www.mahr.com/](http://www.mahr.com/)

- cables and wireless systems with USB and RS- 232 interface)
- Digit height: 9 mm
- Data interface: USB, Digimatic
- Energy supply: Integrated rechargeable accumulator (up to 4 weeks) or powered by USB Data Cable
- Battery type: Lithium polymer battery 3.7 V
- Package contains: instruction manual, USB data and charging cable type DK-U1, Plug-in power supply (with 4 interchangeable adapters) for USB, rubber bellows, Screwdriver for pre-stroke adjustment (hexagon

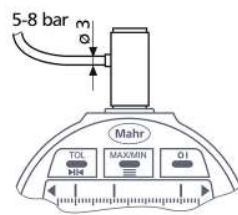


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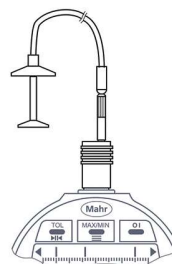
## Inductive comparator

### ACCESSORIES

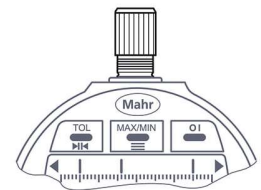
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4102606	Interface adapter with data cable Digimatic (2 m)	DK-D1
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4102220	Receiver for instruments with Integrated Wireless	i-Stick



2000 p



2000 h



2000 m



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i-stick



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## Inductive comparator



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- RESET (set display to zero)
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### FEATURES

- Unit of measurement METRIC only (no INCH)
- **Tempered glass front with touch control panels with enormous advantages:**
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### Application:

For static and dynamic measuring tasks  
Version: Unit of measurement only METRIC (without INCH)

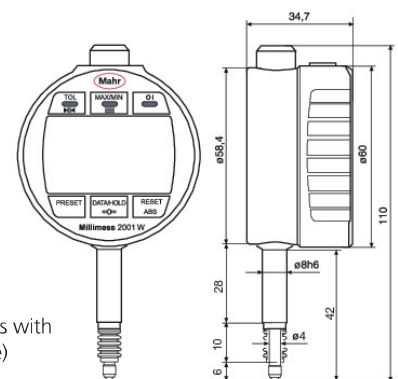


### TECHNICAL DATA

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Product type		2001 Wi
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IP protection category		IP 64
Supply voltage		100– 240 V

- well as for reversal point search during bore measurements
- Operating and display unit (bezel) can be rotated through  $280^\circ$
- Mounting shank and measuring spindle are both made of hardened stainless steel
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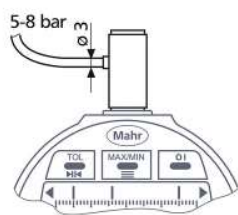


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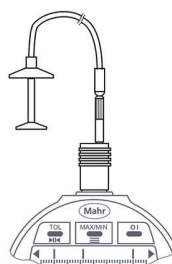
## Inductive comparator

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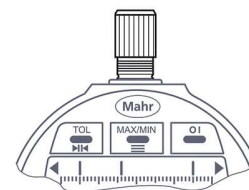
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