

SIMPLE, ACCURATE AND INEXPENSIVE MEASUREMENT. MILLIMESS DIAL COMPARATORS.



Millimess is the "classic" amongst all measuring instrument. For over 60 years, the Millimess series of dial comparators has been synonymous with both high precision and extreme robustness. Both maximum accuracy and a minimal reversal span error are obtained through the levers, gears and pinions being supported with jeweled bearings and the measuring spindle running in a ball bush guide. Millimess is therefore particularly suitable for measuring tasks where the accuracy and the reversal span of a conventional dial indicator are not sufficient. Further advantages of Millimess are the simple handling, the easy reading as well as the movement being absolute shockproof. Our digital comparator with an inductive measuring system is equipped with highest precise technology - readings as small as $0.2 \mu\text{m}$ / $10 \mu\text{inch}$ are realized. The practical control functions (for example: tolerance monitoring or the storage of measuring values for dynamic measurements), the combined analog and digital display and the easy to use data transmission rounds off the complete Millimess spectrum.

Millimes. Digital and Dial Comparator

Digital and Dial Comparators Overview

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Inductive digital comparator

Millimes 2001

For static and dynamic measurements

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Millimes 2000

For static measurements

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Millimes μ Max μ m II

With digital display

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Millimes Max μ m III

With digital and analog display, probe

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Mechanical Dial Comparator

Millimes 1002 / 1003 / 1004

Standard Versions

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Millimes 1000 A / 1000 B

With large dial

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Millimes 1010 / 1010 T / 1050 / 1050 T

Mechanical Dial Comparators

262

Millimes 1002 Z / 1003 Z / 1004 Z / 1010 Z

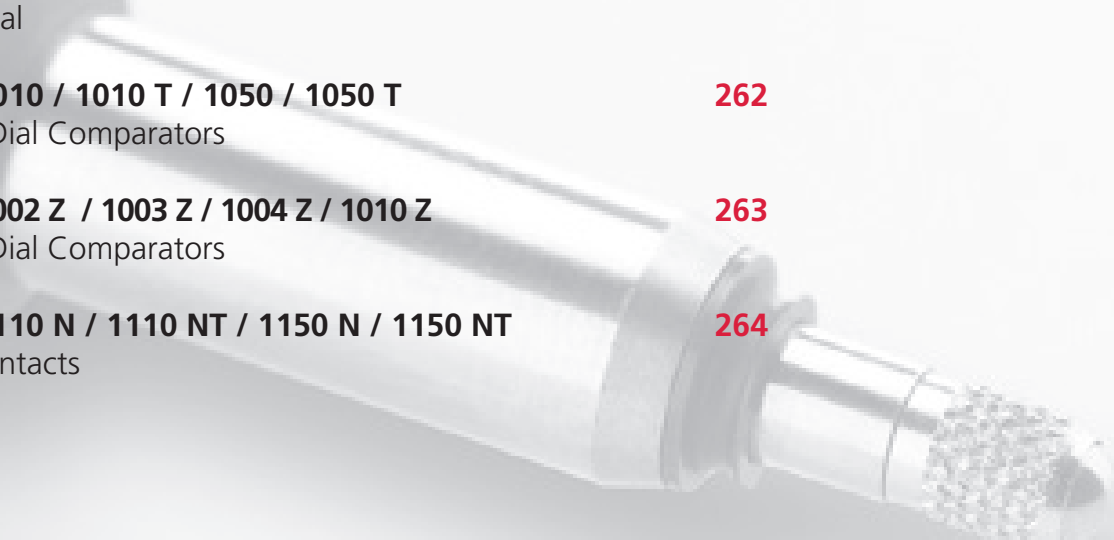
Mechanical Dial Comparators

263

Millimes 1110 N / 1110 NT / 1150 N / 1150 NT

With limit contacts

264



Millimess. Digital and Dial Comparators

OVERVIEW

The Inductive Digital Comparator Millimess 2001: tolerance monitoring is simplified with the color change in the background lit display.

Dynamic measuring functions:



- MAX / MIN finding the reversal point
- MAX - MIN storing values when testing concentricity and flatness



Control output can be connected to a SPS

Universal SPS Interface



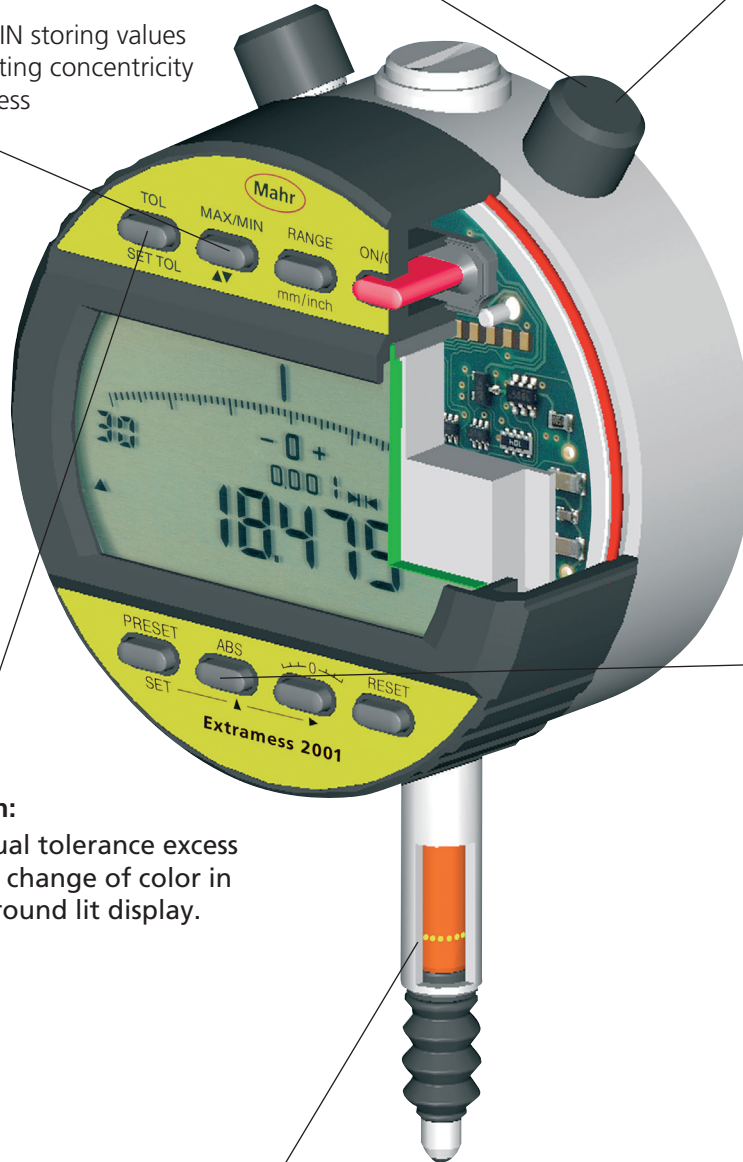
The choice is yours:
MarConnect Data output, choose between USB, Digimatic or RS232C



• **Digimatic**
To connect a Digimatic compatible evaluation instrument



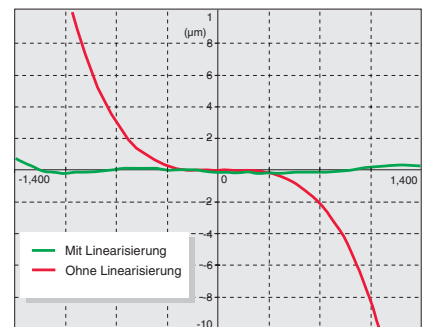
• **Mahr Opto RS232C**
for direct connection to a COM port on a pc



Absolute measuring system:



Linearized, inductive **absolute measuring system**. Reference point is not lost when the instrument is switched off



Tolerance function:



Clearly visual tolerance excess due to the change of color in the background lit display.



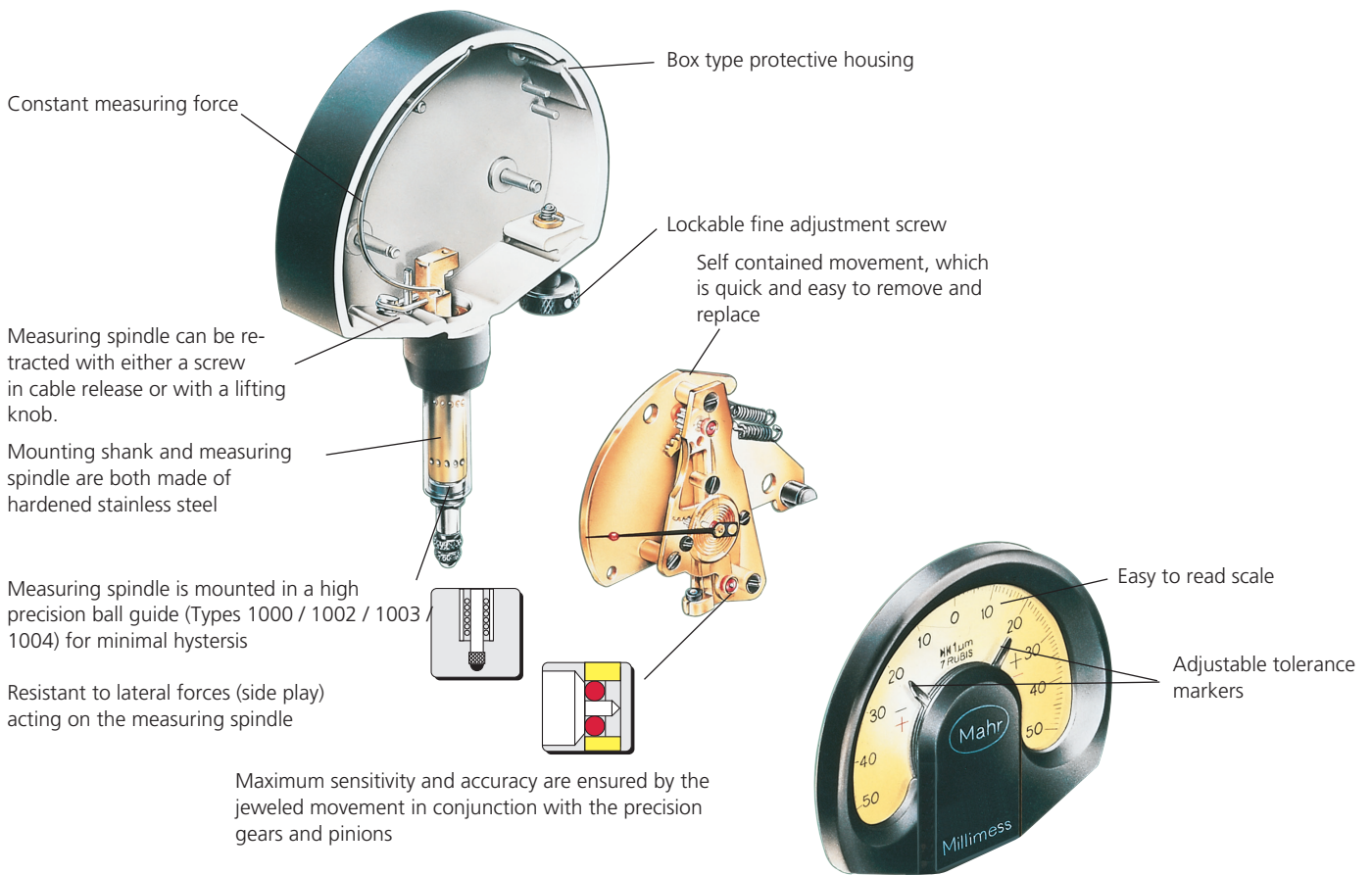
High precision rotary stroke bearings for a longer service life and higher capacity



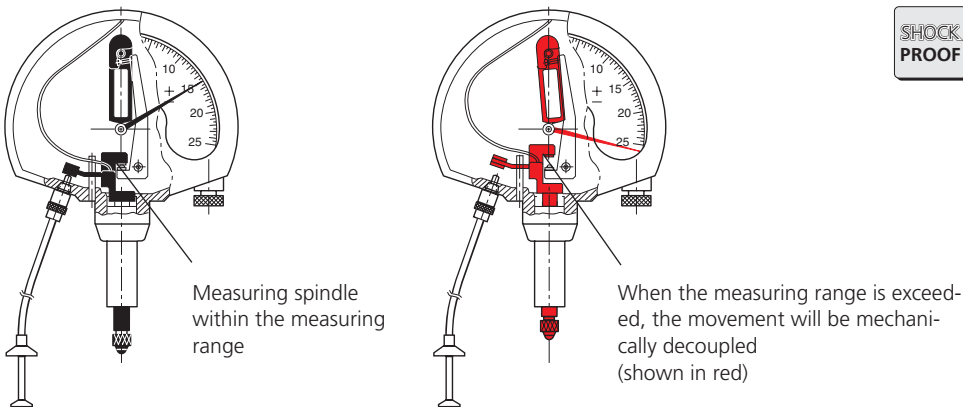
Especially suited for use in a manufacturing environment. **Waterproof: protection class IP54** in accordance to IEC 60529

Code Initial	IP	International Protection
First Numeral	5	Dust protected
Second Numeral	4	Protection against splash water in all directions

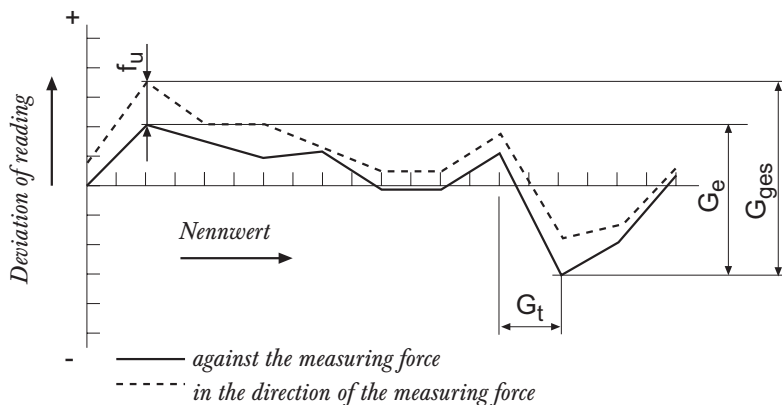
Millimess. Design



Millimess - Shockproof Mechanism



Millimess - Metrological characteristics



Millimess - Versions



Inductive Digital Comparator



Mechanical Dial Comparator



Mechanical Dial Comparator with limit contacts

Inductive digital comparator Millimes 2001



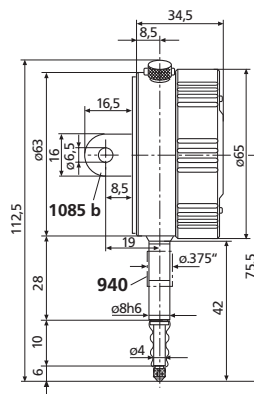
Application:

For static and dynamic measurements

Technical Data

Order no.	4346100	4346910	4346911
Product type		2001	
Measuring range	mm	± 0.9	
Measuring range	inch	± .035"	
Partial measuring range	mm	± 0.4	
Partial measuring range	inch	± .031"	
Resolution	mm	0.001, 0.0005, 0.0002	
Resolution	inch	.00001", .00002", .00005"	
Error limit	µm	0.6 ± 1 Digit	
Error limit in partial measuring range	µm	0.3 ± 1 Digit	
Standard		Factory standard	
Measuring force	N	0.7 - 0.9	
Range of analog display	mm	± 0,030, ± 0,015, ± 0,006	
IP protection category		IP 54	
Supply voltage		230 V	115 V 100 V

Order no.	Mounting shaft
	mm
4346100	8
4346910	8
4346911	8



Functions:

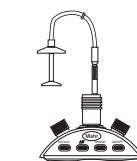
- ON/OFF
- RESET (set display to zero)
- 0 (set the analog display to zero)
- PRESET (for entering a numerical value)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- TOL (enter tolerance limit values)
- Factor (adjustable)
- Remote-controlled via interface (optoRS232/USB)

- High contrast LCD
- Analog display with 4 mm pointer ensures better visual recognition, ideal when checking concentricity or flatness as well as searching for the reversal point when measuring bores
- 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 (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 6.5 mm
- **Data interface:** Digimatic, Opto RS232C, USB, Control output
- **Energy supply:** Integrated rechargeable batteries (max. 40 hrs.) or via the power source
- **Scope of delivery:** Instruction manual, Rubber bellows, Spanner for preliminary stroke setting, Power source, Case

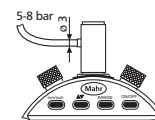
Inductive digital comparator Millimes 2001

Accessories

Order no.	Product name	Product type
4346010	Manual lifer with cable release	2000 h
4346011	pneumatic lifter	2000 p
4346012	Measuring force adjuster	2000 m
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4102232	Transmitter for e-Stick	2000 e
4102230	Receiver	e-Stick
4346031	Cables for control output for connection to PLC	2000 sps
4346035	Control unit for remote control of the RESET, PRESET, RANGE, DATA functions	2000 sg
4310103	Adapter bush (.375" / 8 mm)	940
4336310	lug back	1085 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	



2000 h



2000 p



2000 m



e-Stick



2000 sg

Inductive digital comparator Millimes 2000



Application:

For static measurements

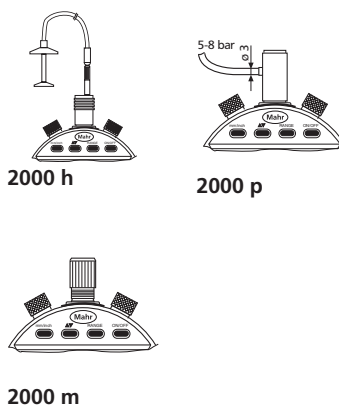
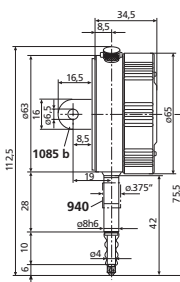
Technical Data

Order no.	4346000	4346900
Product type		2000
Measuring range	mm	± 0.9
Measuring range	inch	± .035"
Partial measuring range	mm	± 0.4
Partial measuring range	inch	± .031"
Resolution	mm	0.001, 0.0005, 0.0002
Resolution	inch	.00001", .00002", .00005"
Error limit	µm	0.6 ± 1 Digit
Error limit in partial measuring range	µm	0.3 ± 1 Digit
Standard		Factory standard
Measuring force	N	0.7 - 0.9
Range of analog display	mm	± 0,030, ± 0,015, ± 0,006
IP protection category		IP 54
Supply voltage		230 V / 115 V

Order no.	Mounting shaft
	mm
4346000	8
4346900	8

Accessories

Order no.	Product name	Product type
4346010	Manual lifter with cable release	2000 h
4346011	pneumatic lifter	2000 p
4346012	Measuring force adjuster	2000 m
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4310103	Adapter bush (.375" / 8 mm)	940
4336310	lug back	1085 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	



Functions:

- ON/OFF
- RESET (set display to zero)
- 0 (set the analog display to zero)
- PRESET (for entering a numerical value)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (display can be set to zero without losing reference to preset)

- High contrast LCD
- Analog display with 4 mm pointer ensures better visual recognition, ideal when checking concentricity or flatness as well as searching for the reversal point when measuring bores
- 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 (only for Mahr data cables and wireless systems with USB and RS232 interface)
- **Digit height:** 6.5 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Integrated rechargeable batteries (max. 40 hrs.) or via the power source
- **Scope of delivery:** Instruction manual, Rubber bellows, Spanner for preliminary stroke setting, Power source, Case

Inductive digital comparator Millimes μMaxμm II

Functions:

- ON/OFF
- PRESET (for entering a numerical value)
- RESET (set display to zero)
- Switch resolution
- Reversal of counting direction
- <0> (tolerance GO / NO GO display mode)
- mm/inch

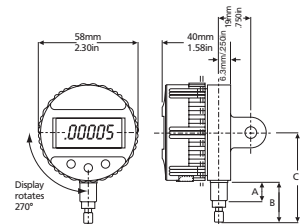
- Inductive absolute measuring system
- Large, high-contrast display with numerical and scale display
- Control and display unit rotatable through 270°
- Zero point setting is retained even after switching off the dial indicator
- **Software:** MarCom Professional free download: www.mahr.com/marcom (only for Mahr data cables and wireless systems with USB and RS232C interface)
- **Digit height:** 8 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery operation
- **Scope of delivery:** Instruction manual, Battery



Technical Data

Order no.	2034101	2034103	2034105	2034107
Product type	μMaxμm II			
Measuring range	mm	±1		
Measuring range	inch	±.040"		
Partial measuring range	mm	± 0.5		
Partial measuring range	inch	± .020"		
Resolution	mm	0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01, 0.02		
Resolution	inch	.00001", .00002", .00005", .0001", .0002", .0005", .001"		
Error limit	μm	± 5		
Error limit	inch	± .0002"		
Error limit in partial measuring range	μm	± 1.25		
Error limit in partial measuring range	inch	± .00005"		
Standard	Factory standard			
Measuring force	N	0.8 – 1.1		
IP protection category	IP 54			

Order no.	a			b			Mounting shaft	Mounting shaft
	inch	inch	inch	mm	mm	mm		
2034101	.46"	.95"	2.11"	11.7	24.1	53.6		.375"
2034103	1.5"	2.25"	3.41"	38	57.2	86.6		.375"
2034105	.46"	.95"	2.11"	11.7	24.1	53.6	8	
2034107	1.5"	2.25"	3.41"	38	57.2	86.6	8	



Accessories

Order no.	Product name	Product type
2210555	Lug back	EBK-1010
2210556	Back panel with cylindrical holder, Ø = .5", l = 1"	EBK-1012
2210557	Back panel with threaded bore 1/4-28, Ø = 11/16", l = .5"	EBK-1013
2210558	Back panel with rack	EBK-1014
2210559	Back panel with adjustable holder	EBK-1016
2210561	Flat back panel	EBK-1018
2212878	Splash guard cover	ECV-1307-W2
2232570	Measuring force springs 0.35N	SP-351
2201833	Thread adapter, M2.5 to #4-48	AD-185
4310103	Adapter bush (.375" / 8 mm)	940
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r
4102230	Receiver	e-Stick
4102232	Transmitter for e-Stick	2000 e



e-Stick

Inductive digital comparator Millimess μ Max μ m II



Functions:

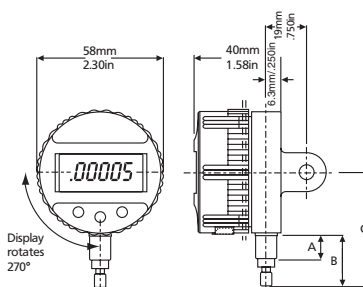
- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- ABS (display can be set to zero without losing reference to preset)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- Factor (adjustable)
- HOLD (storage of measured values)

- Inductive absolute measuring system
- Large, high-contrast display with numerical and scale display
- Control and display unit rotatable through 270°
- Zero point setting is retained even after switching off the dial indicator
- **Digit height:** 8 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery operation
- **Scope of delivery:** Instruction manual, Battery

Technical Data

Order no.	2034201	2034203	2034205	2034207
Product type	μ Max μ m II			
Measuring range	mm	± 1		
Measuring range	inch	$\pm .040$ "		
Partial measuring range	mm	± 0.5		
Partial measuring range	inch	$\pm .020$ "		
Resolution	mm	0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01, 0.02		
Resolution	inch	.00001", .00002", .00005", .0001", .0002", .0005", .001"		
Error limit	μ m	± 5		
Error limit	inch	$\pm .0002$ "		
Error limit in partial measuring range	μ m	± 1.25		
Error limit in partial measuring range	inch	$\pm .00005$ "		
Standard	Factory standard			
Measuring force	N	0.8 – 1.1		
IP protection category	IP 54			

Order no.	a	b	c	a	b
	inch	inch	inch	mm	mm
2034201	.46"	.95"	2.11"	11.7	24.1
2034203	1.5"	2.25"	3.41"	38	57.2
2034205	.46"	.95"	2.11"	11.7	24.1
2034207	1.5"	2.25"	3.41"	38	57.2



Accessories

Order no.	Product name	Product type
2210555	Lug back	EBK-1010
2212878	Splash guard cover	ECV-1307-W2
4310103	Adapter bush (.375" / 8 mm)	940
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r
4102232	Transmitter for e-Stick	2000 e
4102230	Receiver	e-Stick
2210556	Back panel with cylindrical holder, $\varnothing = .5$ ", $l = 1$ "	EBK-1012
2210557	Back panel with threaded bore 1/4-28, $\varnothing = 11/16$ ", $l = .5$ "	EBK-1013
2210561	Flat back panel	EBK-1018
2210559	Back panel with adjustable holder	EBK-1016
2210558	Back panel with rack	EBK-1014
2232570	Measuring force springs 0.35N	SP-351



e-Stick

Inductive digital comparator Millimes μMaxμm II



Functions:

- ON/OFF
- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- ABS (display can be set to zero without losing reference to preset)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- Factor (adjustable)
- HOLD (storage of measured values)

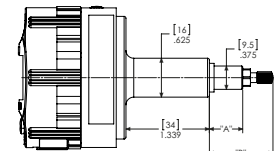
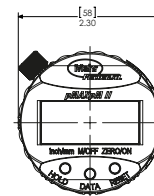


- Inductive absolute measuring system
- Large, high-contrast display with numerical and scale display
- Control and display unit rotatable through 270°
- Zero point setting is retained even after switching off the dial indicator
- **Digit height:** 8 mm
- **Data interface:** Digimatic, Opto RS232C, USB
- **Energy supply:** Battery operation
- **Scope of delivery:** Instruction manual, Battery

Technical Data

Order no.	2034401	
Product type	μMaxμm II	
Measuring range	mm	±1
Measuring range	inch	± .040"
Partial measuring range	mm	± 0.5
Partial measuring range	inch	± .020"
Resolution	mm	0.0002, 0.0005, 0.001, 0.002, 0.005, 0.01, 0.02
Resolution	inch	.00001", .00002", .00005", .0001", .0002", .0005", .001"
Error limit	μm	± 5
Error limit	inch	± .0002"
Error limit in partial measuring range	μm	± 1.25
Error limit in partial measuring range	inch	± .00005"
Standard	Factory standard	
Measuring force	N	0.8 – 1.1
IP protection category	IP 54	

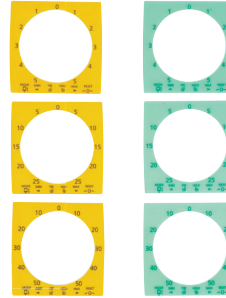
Order no.	a	b	c
2034401	inch .46"	inch .95"	inch 2.11"



Accessories

Order no.	Product name	Product type
2212878	Splash guard cover	ECV-1307-W2
2232570	Measuring force springs 0.35N	SP-351
2201833	Thread adapter, M2.5 to #4-48	AD-185
4310103	Adapter bush (.375" / 8 mm)	940
4346023	2000 usb Data connection cable USB (2 m)	2000 usb
4346021	Digimatic data cable (2 m)	2000 d
4346020	Data Connection Cable RS232C (2 m)	2000 r

Inductive digital comparator Millimess Maxµm III



Functions:

- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- HOLD (storage of measured values)

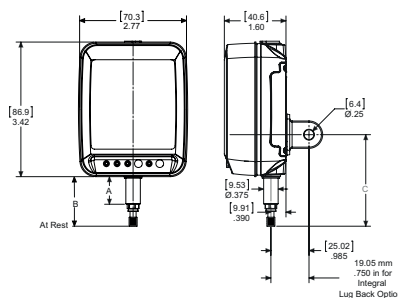
- Large, high contrast digital, analog and fan display for better readability while testing flatness and concentricity as well as for searching the reversal point in bores

Technical Data

Order no.	2033101	2033103	2033105	2033107	2033102	2033104	2033106	2033108
Product type	Maxµm III							
Measuring range	mm	±1			±1.99			
Measuring range	inch	± .040"			± .100"			
Partial measuring range	mm	± 0.199						
Partial measuring range	inch	± .0199"						
Resolution	mm	0.0005, 0.001, 0.005			0.001, 0.005			
Resolution	inch	.00002", .00005", .0001", .0005"			.0001", .0005"			
Error limit	µm	± 10			± 14			
Error limit	inch	± .0004"			± .0007"			
Error limit in partial measuring range	µm	± 1						
Error limit in partial measuring range	inch	± .0001"						
Standard	Factory standard							
Overtravel	mm	0.8			1.3			
Measuring force	N				0.8 - 1.1			
Range of analog display	mm	± 5, ± 25, ± 50			± 25, ± 50			
Data output Maxµm	No output							
IP protection category:	IP 54							

- Interchangeable dials
- Inductive absolute measuring system
- Metal cast housing with robust buttons
- **Energy supply:** Battery life approx. 4000 hrs.
- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual

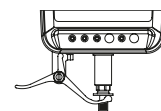
Order no.	a	b	c	a	b	c	Mounting shaft	Mounting shaft
	inch	inch	inch	mm	mm	mm	mm	inch
2033101	.670"	1.42"	2.50"	17	36	63.5		.375"
2033103	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033105	.670"	1.42"	2.50"	17	36	63.5	8	
2033107	1.5"	2.25"	3.33"	38	57	84.6	8	
2033102	.87"	1.84"	2.87"	22	47	73		.375"
2033104	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033106	.87"	1.84"	2.87"	22	47	73	8	
2033108	1.5"	2.25"	3.33"	38	57	84.6	8	



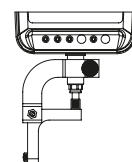
Inductive digital comparator Millimes Maxum III

Accessories

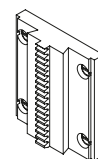
Order no.	Product name	Product type
2239138	Battery for MaxumIII Type CR 123A	
2209094	Lifting lever, left	EAS-1903
2210406	Right Angle Attachment - Spring Type (± .187" range)	EAT-1034-W1
2210407	Right Angle Attachment - Spring Type (± .060" range)	EAT-1035-W1
2210551	Back panel with rack	EBK-1005
2236895	Mounting block for back panel with rack	
2210552	Back panel with eyelets	EBK-1006
2210553	Back panel with adjustable holder	EBK-1007
2212877	Dust cover	ECV-1307-W1
2239040	Set of 3 inch and 3 metric scale overlay	
2217907	Spare screws for back panels	ESW-1252



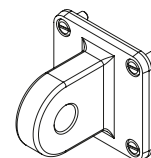
EAS-1903



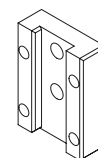
EAT-1034-W1



EBK-1005

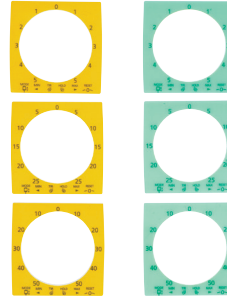


EBK-1006



EBK-1007

Inductive digital comparator Millimes Maxµm III



Functions:

- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- HOLD (storage of measured values)

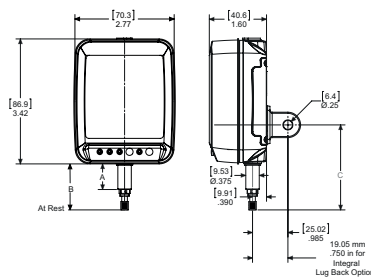
- Large, high contrast digital, analog and fan display for better readability while testing flatness and concentricity as well as for searching the reversal point in bores

Technical Data

Order no.	2033111	2033113	2033115	2033117	2033112	2033114	2033116	2033118
Product type	Maxµm III							
Measuring range	mm	±1			±1.99			
Measuring range	inch	±.040"			±.100"			
Partial measuring range	mm	± 0.199						
Partial measuring range	inch	± .0199"						
Resolution	mm	0.0005, 0.001, 0.005			0.001, 0.005			
Resolution	inch	.00002", .00005", .0001", .0005"			.0001", .0005"			
Error limit	µm	± 10			± 14			
Error limit	inch	± .0004"			± .0007"			
Error limit in partial measuring range	µm	± 1						
Error limit in partial measuring range	inch	± .0001"						
Standard	Factory standard							
Overtravel	mm	0.8			1.3			
Measuring force	N	0.8 - 1.1						
Range of analog display	mm	± 5, ± 25, ± 50			± 25, ± 50			
Data output Maxµm	Data output 6 pin (E2)							
IP protection category	IP 54							

- Interchangeable dials
- Inductive absolute measuring system
- Metal cast housing with robust buttons
- **Data interface:** RS232C, Digimatic, USB
- **Energy supply:** Battery life approx. 4000 hrs.
- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual
- **Data interface:** RS232C, Digimatic, USB
- **Energy supply:** Battery life approx. 4000 hrs.
- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual

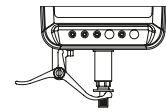
Order no.	a	b	c	a	b	c	Mounting shaft	Mounting shaft
	inch	inch	inch	mm	mm	mm	mm	inch
2033111	.670"	1.42"	2.50"	17	36	63.5		.375"
2033113	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033115	.670"	1.42"	2.50"	17	36	63.5	8	
2033117	1.5"	2.25"	3.33"	38	57	84.6	8	
2033112	.87"	1.84"	2.87"	22	47	73		.375"
2033114	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033116	.87"	1.84"	2.87"	22	47	73	8	
2033118	1.5"	2.25"	3.33"	38	57	84.6	8	



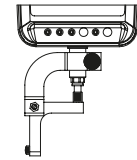
Inductive digital comparator Millimes Maxum III

Accessories

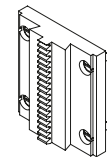
Order no.	Product name	Product type
2239138	Battery for MaxumIII Type CR 123A	
2209094	Lifting lever, left	EAS-1903
2210406	Right Angle Attachment - Spring Type (\pm .187" range)	EAT-1034-W1
2210407	Right Angle Attachment - Spring Type (\pm .060" range)	EAT-1035-W1
2210551	Back panel with rack	EBK-1005
2236895	Mounting block for back panel with rack	
2210552	Back panel with eyelets	EBK-1006
2210553	Back panel with adjustable holder	EBK-1007
2212877	Dust cover	ECV-1307-W1
2217907	Spare screws for back panels	ESW-1252
2239035	Digimatic data cable (2 m) (D, E1)	
2239036	Data cable RS232C (2 m) (D, E1)	
2200362	Foot Switch for send data (Maxum) or dynamic reset/zeroing (832), 1,5m / 5 ft cable	300-50
2240545	Maxum III, Unlock Setup & Unlock Calibration Key, (D, E1)	
2239040	Set of 3 inch and 3 metric scale overlay	



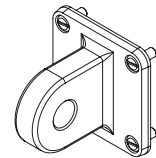
EAS-1903



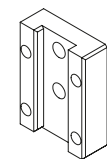
EAT-1034-W1



EBK-1005

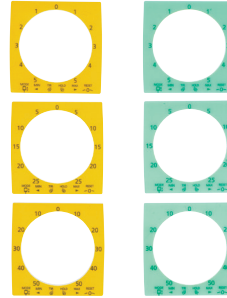


EBK-1006



EBK-1007

Inductive digital comparator Millimess Maxµm III



Functions:

- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- HOLD (storage of measured values)

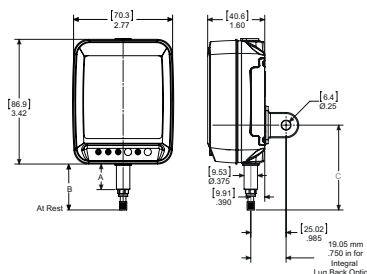
- Large, high contrast digital, analog and fan display for better readability while testing flatness and concentricity as well as for searching the reversal point in bores

- Interchangeable dials
- Inductive absolute measuring system
- Metal cast housing with robust buttons
- **Data interface:** RS232C, USB
- **Energy supply:** Battery life approx. 4000 hrs.
- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual

Technical Data

Order no.	2033121	2033123	2033125	2033127	2033122	2033124	2033126	2033128
Product type	Maxµm III							
Measuring range	mm	±1						±1.99
Measuring range	inch	±.040"						±.100"
Partial measuring range	mm	± 0.199						
Partial measuring range	inch	±.0199"						
Resolution	mm	0.0005, 0.001, 0.005						0.001, 0.005
Resolution	inch	.00002", .00005", .0001", .0005"						.0001", .0005"
Error limit	µm	± 10						± 14
Error limit	inch	±.0004"						±.0007"
Error limit in partial measuring range	µm	± 1						
Error limit in partial measuring range	inch	±.0001"						
Standard	Factory standard							
Overtravel	mm	0.8						1.3
Measuring force	N	0.8 - 1.1						
Range of analog display	mm	± 5, ± 25, ± 50						± 25, ± 50
Data output Maxµm	Data output 10 pin (E2)							
IP protection category	IP 54							

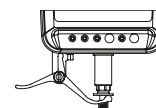
Order no.	a	b	c	a	b	c	Mounting shaft	Mounting shaft
	inch	inch	inch	mm	mm	mm	mm	inch
2033121	.670"	1.42"	2.50"	17	36	63.5		.375"
2033123	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033125	.670"	1.42"	2.50"	17	36	63.5	8	
2033127	1.5"	2.25"	3.33"	38	57	84.6	8	
2033122	.87"	1.84"	2.87"	22	47	73		.375"
2033124	1.5"	2.25"	3.33"	38	57	84.6		.375"
2033126	.87"	1.84"	2.87"	22	47	73	8	
2033128	1.5"	2.25"	3.33"	38	57	84.6	8	



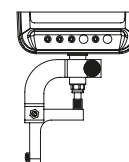
Inductive digital comparator Millimes Maxum III

Accessories

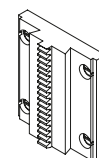
Order no.	Product name	Product type
2239138	Battery for MaxumIII Type CR 123A	
2209094	Lifting lever, left	EAS-1903
2210406	Right Angle Attachment - Spring Type (\pm .187" range)	EAT-1034-W1
2210407	Right Angle Attachment - Spring Type (\pm .060" range)	EAT-1035-W1
2210551	Back panel with rack	EBK-1005
2236895	Mounting block for back panel with rack	
2210552	Back panel with eyelets	EBK-1006
2210553	Back panel with adjustable holder	EBK-1007
2212877	Dust cover	ECV-1307-W1
2217907	Spare screws for back panels	ESW-1252
2239037	Digimatic data cable (2 m) (E2)	
2239038	Data Connection Cable RS232C (2 m) (E2)	
2200362	Foot Switch for send data (Maxum) or dynamic reset/zeroing (832), 1,5m / 5 ft cable	300-50
2239040	Set of 3 inch and 3 metric scale overlay	
2240547	Maxum III, Unlock Setup & Unlock Calibration Key, (E2)	
2209924	Hand Switch for Hold/Reset	EAS-2867
2209925	Foot Switch for Hold/Reset	EAS-2868
2121428	USB data cable (2 m) (E2)	



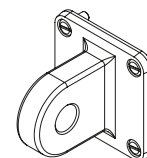
EAS-1903



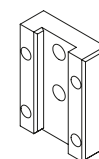
EAT-1034-W1



EBK-1005

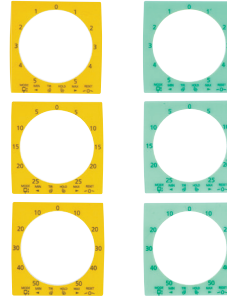
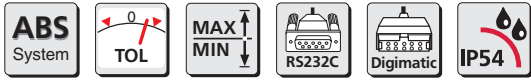


EBK-1006



EBK-1007

Display unit Millimes Maxum III



Functions:

- RESET (set display to zero)
- mm/inch
- Reversal of counting direction
- RANGE (switch the measuring range and resolution)
- ABS (reference to the electrical zero point)
- TOL (enter tolerance limit values)
- MAX/MIN memory for searching the reversal point
- TIR (MAX-MIN) for testing flatness and concentricity
- HOLD (storage of measured values)

- Large, high contrast digital, analog and fan display for better readability while testing flatness and concentricity as well as for searching the reversal point in bores

- Interchangeable dials
- Inductive absolute measuring system
- Metal cast housing with robust buttons
- **Data interface:** none
- **Energy supply:** Battery operation, Battery life approx. 4000 hrs.
- **Scope of delivery:** Interchangeable dials, Battery, Instruction manual

Technical Data

Order no.	2033001	2033011	2033021
Product type	Maxum III		
Measuring range	mm	Depending on probe type	
Standard	Factory standard		
Measuring force	N	-	
Data output Maxum		without data output	Data output 6-pin (D, E1) / Data output 10 pin (E2)
IP protection category	IP 54		

Accessories

Order no.	Product name	Product type
2239138	Battery for MaxumIII Type CR 123A	
2212877	Dust cover	ECV-1307-W1
2239040	Set of 3 inch and 3 metric scale overlay	
2217907	Spare screws for back panels	ESW-1252
2240545	Maxum III, Unlock Setup & Unlock Calibration Key, (D, E1)	
2239035	Digimatic data cable (2 m) (D, E1)	
2239036	Data cable RS232C (2 m) (D, E1)	
2240547	Maxum III, Unlock Setup & Unlock Calibration Key, (E2)	
2239037	Digimatic data cable (2 m) (E2)	
2239038	Data Connection Cable RS232C (2 m) (E2)	
2121428	USB data cable (2 m) (E2)	

Digital probe Millimes Maxµm III

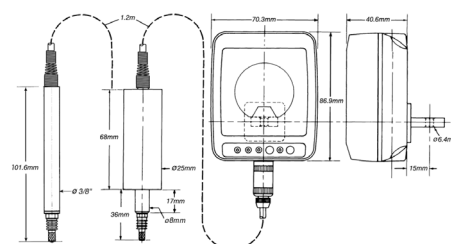
- Maxµm transducers are available as replacement parts - refer to part price list for part numbers and pricing
- Maxµm III remote indicating units are sold without digital transducer
- Any digital transducer may be used with a Maxµm III remote indicating unit
- For alternate cable lengths, extension cables or special indicator options - call Mahr's Technical Assistance Group



Technical Data

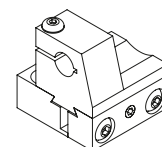
Order no.	2033091	2033093	2033095	2033097	2033092	2033094	2033096	2033098
Product type	Maxµm III							
Measuring range	mm	± 1,00			± 1,99			
Measuring range	inch	± .040"			± .100"			
Partial measuring range	mm	± 0,199						
Partial measuring range	inch	± .199						
Resolution	mm	0.0005, 0.001, 0.005			0.001, 0.005			
Resolution	inch	.00002", .00005", .0001", .0005"			.0001", .0005"			
Error limit	µm	± 10			± 14			
Error limit	inch	± .0004"			± .0007"			
Error limit in partial measuring range	µm	± 1.25						
Error limit in partial measuring range	inch	± .0001"						
Standard	Factory standard							
Measuring force	N	0.8 - 1.1						

Order no.	a		Mounting shaft	
	inch	mm	mm	inch
2033091	.670"	17		.375"
2033093	1.50"	38		.375"
2033095	.670"	17	8	
2033097	1.50"	38	8	
2033092	.670"	17		.375"
2033094	1.50"	38		.375"
2033096	.670"	17	8	
2033098	1.50"	38	8	

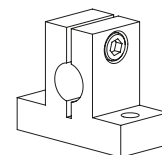


Accessories

Order no.	Product name	Product type
2009148	Adaptor - T-bracket, d = .375"	AAD-91
2208615	Adapter - Rack Bracket, for Maxµm III Transducer Probes, d = .375"	EAD-1007-W1
2208616	Adapter - Rack Bracket, for Maxµm III Transducer Probes, d = 8 mm	EAD-1007-W2
2236895	Mounting block for back panel with rack	



EAD-1007-W1



AAD-91

Digital probe Millmess Maxum III

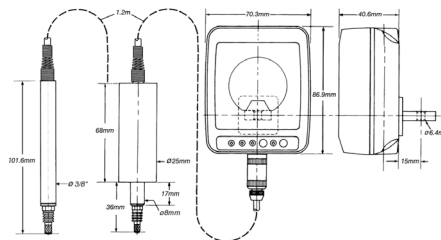


- Maxum transducers are available as replacement parts - refer to part price list for part numbers and pricing
- Maxum III remote indicating units are sold without digital transducer
- Any digital transducer may be used with a Maxum III remote indicating unit
- For alternate cable lengths, extension cables or special indicator options - call Mahr's Technical Assistance Group

Technical Data

Order no.	2033099	
Product type		Maxum III
Measuring range	mm	± 1,00
Measuring range	inch	± .040"
Partial measuring range	mm	± 0,199
Partial measuring range	inch	± .199
Resolution	mm	0.0005, 0.001, 0.005
Resolution	inch	.00002", .00005", .0001", .0005"
Error limit	µm	± 10
Error limit	inch	± .0004"
Error limit in partial measuring range	µm	± 1.25
Error limit in partial measuring range	inch	± .0001"
Standard		Factory standard
Measuring force	N	0.8 - 1.1

Order no.	a	a	Mounting shaft
	inch	mm	inch
2033099	3.25"	82.5	.375"



Accessories

Order no.	Product name	Product type
2009148	Adaptor - T-bracket, d = .375"	AAD-91
2208615	Adapter - Rack Bracket, for Maxum III Transducer Probes, d = .375"	EAD-1007-W1
2208616	Adapter - Rack Bracket, for Maxum III Transducer Probes, d = 8 mm	EAD-1007-W2
2236895	Mounting block for back panel with rack	

