

# Comparator Gauge **Precision Digital Dial Gauges**

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## Digital Dial Gauge MD 12 TOP

## Accessories for MD 12 TOP



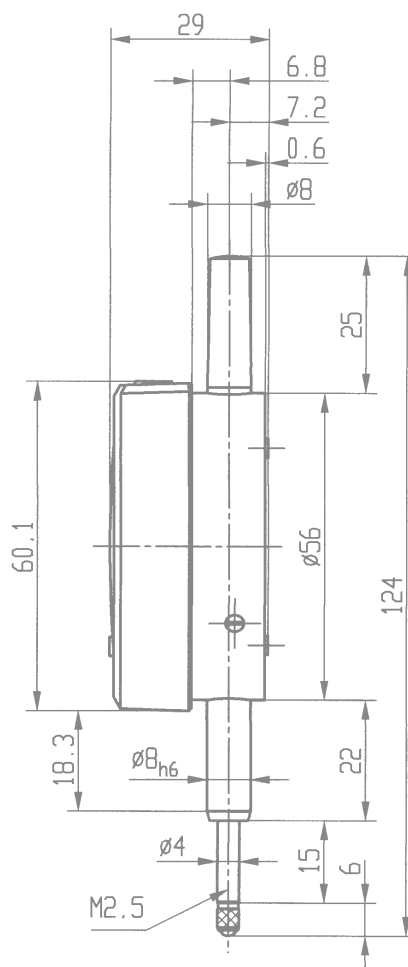
The compact construction and the well placed operating keys permit versatile application and simple operation.

Following functions of the Digital Dial Gauge MD 12 TOP can be used:

- Zero setting
- Data transmission
- Reversal of measuring direction
- mm/inch selection
- Preset of any value
- Data output Opto RS 232C, USB or Digimatic

| Digital Dial Gauge MD 12 TOP          |                                 |
|---------------------------------------|---------------------------------|
| Resolution                            | 0.01 mm / .0005"                |
| Range                                 | 12.5 mm / .5"                   |
| Digital display LCD, height of digits | 8.5 mm                          |
| Measuring system                      | capacitive                      |
| Power supply                          | on battery 3 V, CR 2032         |
| Battery life                          | 3 years                         |
| Output                                | Opto RS 232 or Digimatic or USB |
| Initial Measuring force               | 0.6 N $\pm$ 20%                 |
| Working temperature                   | +10°C – +40°C                   |
| Maximum error                         | 20 $\mu$ m                      |
| Dimensioned drawing                   | page 79                         |

| Accessories for MD 12 TOP                        |                   |
|--------------------------------------------------|-------------------|
| Data connection cable with SUB-D jack 9-pin      | Opto RS232C       |
| Order number:                                    | DCMV 232          |
| Data connection cable with flat connector 10-pin | Digimatic         |
| Order number:                                    | DCMV DIGIMATIC    |
| Data connection cable length                     | USB 2 m           |
| Order number:                                    | DCMV USB          |
| Battery 3V, type CR 2032                         |                   |
| Order number:                                    | BCR 2032          |
| Contact points                                   | see pages 89 – 90 |



The above design and dimensioned drawing also apply to model FMD 12 TOP

## Digital Dial Gauge MD 12 TB

## Digital Dial Gauge FMD 12 TB

The digital display with its large numerals makes it very simple to use this Dial Gauge. Function and display section can be rotated through 270°. The sturdy construction guarantees precision and reliability.

Following functions of the Digital Dial Gauges MD 12 TB and FMD 12 TB can be used:

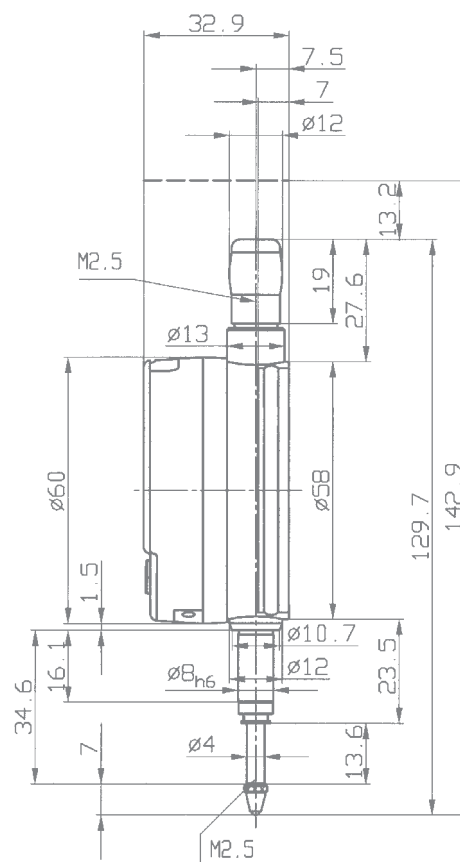
- Zero setting
- Data transmission
- Selection of measuring direction
- mm/inch selection
- Preset value recall
- Personalising the functions
- Memory set Hold

| Digital Dial Gauge MD 12 TB |                        |
|-----------------------------|------------------------|
| Resolution                  | 0.01 mm / .0005"       |
| Range                       | 12.5 mm / .5"          |
| Power supply                | on Lithium battery 3 V |
| Battery life                | 8000 h                 |
| Output                      | RS 232 / USB           |
| Working temperature         | +5 °C – +40 °C         |
| Maximum error               | 20 µm                  |
| Initial measuring force     | 0.7 N ± 20%            |
| Dimensioned drawing         | page 80                |

| Digital Dial Gauge FMD 12 TB |                        |
|------------------------------|------------------------|
| Resolution                   | 0.001 mm / .00005"     |
| Range                        | 12.5 mm / .5"          |
| Power supply                 | on Lithium battery 3 V |
| Battery life                 | 8000 h                 |
| Output                       | RS 232 / USB           |
| Working temperature          | +5 °C – +40 °C         |
| Maximum error                | 4 µm                   |
| Initial measuring force      | 0.7 N ± 20%            |
| Dimensioned drawing          | page 80                |



Model shown: MD 12 TB



## Digital Dial Gauge MD 25 TB

## Digital Dial Gauge FMD 25 TB

The digital display with its large numerals makes it very simple to use this Dial Gauge. Function and display section can be rotated through 270°. The sturdy construction guarantees precision and reliability.

Following functions of the Digital Dial Gauges MD 25 TB and FMD 25 TB can be used:

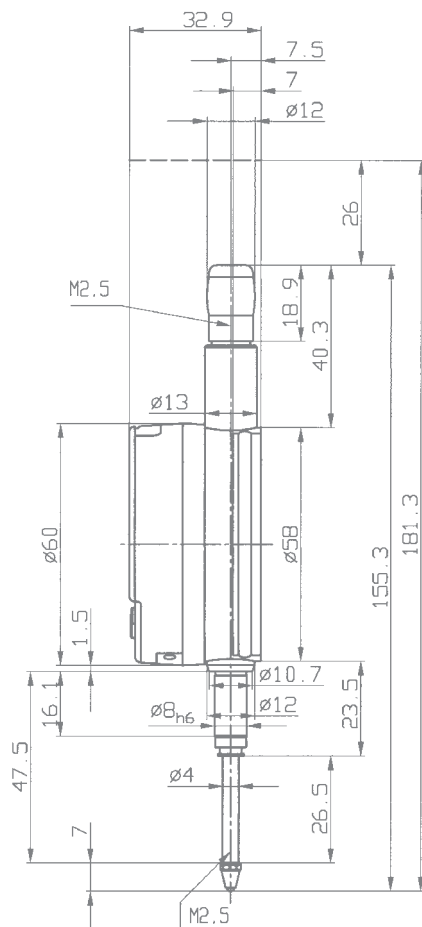
- Zero setting
- Data transmission
- Selection of measuring direction
- mm/inch selection
- Preset value recall
- Personalising the functions
- Memory set Hold

| Digital Dial Gauge MD 25 TB |                        |
|-----------------------------|------------------------|
| Resolution                  | 0.01 mm / .0005"       |
| Range                       | 25 mm / 1"             |
| Power supply                | on Lithium battery 3 V |
| Battery life                | 8000 h                 |
| Output                      | RS 232 / USB           |
| Working temperature         | +5 °C – +40 °C         |
| Maximum error               | 20 µm                  |
| Initial measuring force     | 0.7 N ± 20%            |
| Dimensioned drawing         | page 81                |

| Digital Dial Gauge FMD 25 TB |                        |
|------------------------------|------------------------|
| Resolution                   | 0.001 mm / .00005"     |
| Range                        | 25 mm / 1"             |
| Power supply                 | on Lithium battery 3 V |
| Battery life                 | 8000 h                 |
| Output                       | RS 232 / USB           |
| Working temperature          | +5 °C – +40 °C         |
| Maximum error                | 5 µm                   |
| Initial measuring force      | 0.7 N ± 20%            |
| Dimensioned drawing          | page 81                |



Model shown: FMD 25 T



## Digital Dial Gauge MD 50 TB

## Digital Dial Gauge FMD 50 TB

The digital display with its large numerals makes it very simple to use these Dial Gauges. Function and display section can be rotated through 270°. The sturdy construction guarantees precision and reliability.

Following functions of the Dial Gauges MD 50 TB and FMD 50 TB can be used:

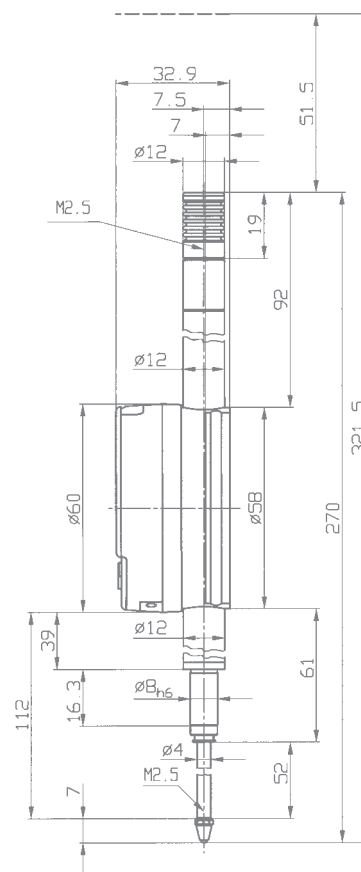
- Zero setting
- Data transmission
- Selection of measuring direction
- mm/inch selection
- Preset value recall
- Personalising the functions
- Memory set Hold

| Digital Dial Gauge MD 50 TB |                        |
|-----------------------------|------------------------|
| Resolution                  | 0.01 mm / .0005"       |
| Range                       | 50 mm / 2"             |
| Power supply                | on Lithium battery 3 V |
| Battery life                | 8000 h                 |
| Output                      | RS 232 / USB           |
| Working temperature         | +5 °C – +40 °C         |
| Maximum error               | 30 µm                  |
| Initial measuring force     | 1.3 N ± 20%            |
| Dimensioned drawing         | page 82                |

| Digital Dial Gauge FMD 50 TB |                        |
|------------------------------|------------------------|
| Resolution                   | 0.001 mm / .00005"     |
| Range                        | 50 mm / 2"             |
| Power supply                 | on Lithium battery 3 V |
| Battery life                 | 8000 h                 |
| Output                       | RS 232 / USB           |
| Working temperature          | +5 °C – +40 °C         |
| Maximum error                | 7 µm                   |
| Initial measuring force      | 1.3 N ± 20%            |
| Dimensioned drawing          | page 82                |



Model shown: FMD 50 TB



## Digital Dial Gauge FMD 12 TA

## Digital Dial Gauge FMD 25 TA



The digital display with its large numerals makes it very simple to use these Dial Gauges. Function and display section can be rotated through 270°. The sturdy construction guarantees precision and reliability.

Following functions of the Dial Gauges FMD 12 TA and FMD 25 TA can be used:

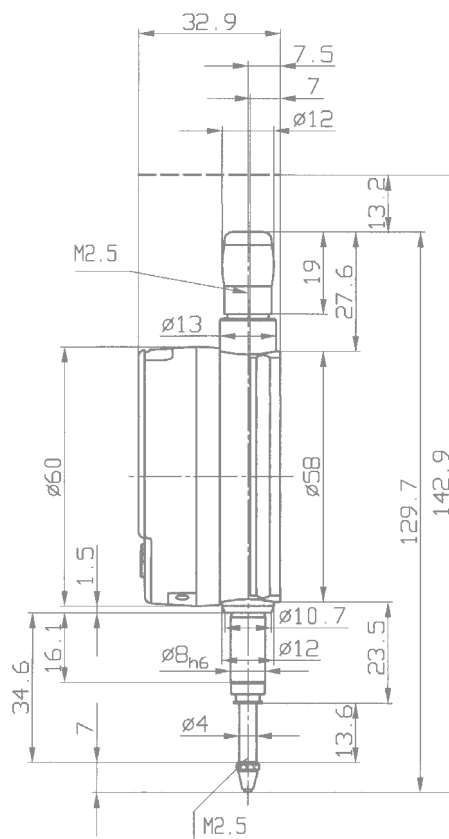
- Zero setting
- mm/inch selection
- Memory set Hold
- MIN / MAX / DELTA
- Data transmission
- Preset value recall
- REF I / REF II
- Setting of tolerances
- Selection of measuring direction
- Personalising the functions
- Selection of resolution
- Multiplication factor

| Digital Dial Gauge FMD 12 TA |                        |
|------------------------------|------------------------|
| Resolution                   | 0.001 mm / .00005"     |
| Range                        | 12.5 mm / 2"           |
| Power supply                 | on Lithium battery 3 V |
| Battery life                 | 8000 h                 |
| Output                       | RS 232 / USB           |
| Working temperature          | +5 °C – +40 °C         |
| Maximum error                | 3 µm                   |
| Initial measuring force      | 0.7 N ± 20%            |
| Dimensioned drawing          | page 83                |

| Digital Dial Gauge FMD 25 TA |                        |
|------------------------------|------------------------|
| Resolution                   | 0.001 mm / .00005"     |
| Range                        | 25 mm / 2"             |
| Power supply                 | on Lithium battery 3 V |
| Battery life                 | 8000 h                 |
| Output                       | RS 232 / USB           |
| Working temperature          | +5 °C – +40 °C         |
| Maximum error                | 4 µm                   |
| Initial measuring force      | 0.7 N ± 20%            |
| Dimensioned drawing          | on request             |



Model shown: FMD 12 TA



## Small Digital Dial Gauge KMD 12 T

Following functions of the Small Digital Dial Gauge KMD 12 T can be used:

- Zero setting
- mm/inch selection
- Absolute / relative mode
- Preset value recall
- Data transmission
- Selection of measuring direction

### Small Digital Dial Gauge KMD 12 T

|                                       |                                          |
|---------------------------------------|------------------------------------------|
| Resolution                            | 0.01 mm/.0005"                           |
| Range                                 | 12.5 mm/.5"                              |
| Digital display LCD, height of digits | 6 mm                                     |
| Power supply                          | on Lithium battery 3 V                   |
| Battery life                          | 5000 h                                   |
| Output                                | RS 232, with external power supply / USB |
| Working temperature                   | +5 °C – +40 °C                           |
| Maximum error                         | 20 µm                                    |
| Initial measuring force               | 0.5 N ± 20%                              |
| Dimensioned drawing                   | page 84                                  |

The dovetail at the rear offers an additional fixing option. The standard contact point can be exchanged for specially styled contact points as listed on pages 89 and 90.



### Summary of important technical data of other Digital Dial Gauges and accessories

| Digital Dial Gauges | Resolution | Range   | Bezel-Ø | Stem-Ø | Maximum error | Data cable                       | Special feature  |
|---------------------|------------|---------|---------|--------|---------------|----------------------------------|------------------|
| KMD 5 R             | 0.01 mm    | 5 mm    | 44 mm   | 8 h 6  | 20 µm         | DCKMD 232/DCKMD USB              | back plunger     |
| KMD 12 T wa         | 0.01 mm    | 12.5 mm | 44 mm   | 8 h 6  | 20 µm         | DCKMD 232/DCKMD USB              | water protected  |
| FKMD 5 R            | 0.001 mm   | 5 mm    | 44 mm   | 8 h 6  | 5 µm          | DCKMD 232/DCKMD USB              | back plunger     |
| FKMD 12 T           | 0.001 mm   | 12.5 mm | 44 mm   | 8 h 6  | 5 µm          | DCKMD 232/DCKMD USB              |                  |
| FMD 12 TOP          | 0.001 mm   | 12.5 mm | 58 mm   | 8 h 6  | 5 µm          | DCMV Digimatic/DCMV 232/DCMV USB |                  |
| MD 100 TB           | 0.01 mm    | 100 mm  | 60 mm   | 8 h 6  | 30 µm         | DCPRMD 232/DCPRMD USB            |                  |
| FMD 100 TB          | 0.001 mm   | 100 mm  | 60 mm   | 8 h 6  | 8 µm          | DCPRMD 232/DCPRMD USB            |                  |
| DK 30               | 0.001 mm   | 0.8 mm  | 44 mm   | –      | 10 µm         | DCKMD 232/DCKMD USB              | model lever type |

| Accessories | Model          | Technical features                                            | Suitable for model                                                                                         |
|-------------|----------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Data cable  | DCMV 232       | 2 m long, SUB-D jack 9-pin                                    | MD 12 TOP/FMD 12 TOP                                                                                       |
| Data cable  | DCMV DIGIMATIC | 2 m long, flat connector 10-pin                               | MD 12 TOP/FMD 12 TOP                                                                                       |
| Data cable  | DCMV USB       | 2 m long, USB connector                                       | MD 12 TOP/FMD 12 TOP                                                                                       |
| Data cable  | DCPRMD 232     | Max. 15 m, standard 3 m long, SUB-D jack 9-pin/F              | MD 12 TB, MD 25 TB, MD 50 TB, MD 100 TB                                                                    |
| Data cable  | DCPRMD USB     | 3 m long, USB connector                                       | FMD12TB, FMD25TB, FMD50TB, FMD100TB                                                                        |
|             |                |                                                               | MD 12 TB, MD 25 TB, MD 50 TB, MD 100 TB, FMD 12 TB, FMD 25 TB, FMD 50 TB, FMD 100 TB, FMD 12 TA, FMD 25 TA |
| Data cable  | DCKMD 232      | Max. 15 m, standard 2m long, SUB-D jack 9-pin/F; power supply | KMD 12 T, KMD 12 Twa, FKMD 12 T, DK 30, KMD 5 R, FKMD 5 R                                                  |
| Data cable  | DCKMD USB      | 2 m long, USB connector                                       | KMD 12 T, KMD 12 Twa, FKMD 12 T, DK 30, KMD 5 R, FKMD 5 R                                                  |
| Battery     | BCR 2032       | Lithium 3V type CR 2032                                       | For all Digital Gauges                                                                                     |

The cable for data transmission is not included in the scope of supply of Digital Dial Gauges but has to be ordered separately.

# Precision Dial Gauges



Käfer Messuhrenfabrik GmbH & Co. KG  
Hahnstraße 11  
D-78054 Villingen-Schwenningen

Factory and administration:  
Hahnstraße 11  
78054 Villingen-Schwenningen  
Phone: +49 (0) 77 20/83 41-0  
Fax: +49 (0) 77 20/2 18 68  
E-Mail: [info@kaefer-messuhren.de](mailto:info@kaefer-messuhren.de)  
Internet: [www.kaefer-messuhren.de](http://www.kaefer-messuhren.de)



**GRG S.a.s. di Gianbruno Grippa**  
Via B. Oriani, 59 - 20156 Milano  
Tel.: +39 02 38003843-44  
E-Mail: [grg@grgsas.net](mailto:grg@grgsas.net)  
Web: <http://www.grgsas.net>

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