Digimar 817 CLM Quick Height

►| The new Height Measuring Instrument **Digimar** 817 CLM with the innovative Quick Mode. Highly accurate rapid measurements, a wide range of measuring and evaluation options and excellent operator comfort. |◄

The best solution for all measuring tasks

QUICK MODE

Fast measurement per hand
Easy to operate due to the „Quick Mode"; an innovative solution from Mahr (patented).

Ill. 1.   Move the measuring carriage by hand in the direction of the object to be measured.

Ill. 2.   The motor starts, the measurement procedure will automatically be performed.

Measurement using the keypad (speed keys) on the base

Ideal in conjunction with the air bearings for large work pieces.

By using the keys that are integrated into the base; the operator can comfortably move the measuring carriage into the desired position and start a measurement. This eases measurement particularly when measuring large workpieces as these do not have to be moved into position. The operator can keep both hands on the measuring instrument (one hand on the key for the air bearing and other on the high-speed keys) and measure the workpiece in one run.

Highest accuracy and reliability

- Extremely accurate incremental measuring system with double reader head system, insensitive to the contamination of dirt
- Robust guide column, made from stainless steel
- Measuring head in precision ball bearings guide
- Temperature compensation with an integrated temperature sensor

20°C

Ergonomic operating and display unit

• Large, back-lit display

• Self-explanatory guided operation with icons

• The display unit can be positioned freely with the swivel arm

Easy to operate all measurement functions with the function keys due to the clearly defined symbols.

Universal measurement possibilities

• Wide range of measurement functions in 1D or 2D

• Dynamic measurement functions with the analog display

• Automatic perpendicularity and straightness measurements (in conjunction with accessories)

• Automated measuring procedures (measurement programs)

• Auto function for chain measurements and distance measurements

Extensive evaluation possibilities

• Transmit data to a PC via RS232 or USB (with an adapter) for example into MS Excel via the MarCom-Software

• Print measured values, statistics, etc. via a USB printer

• Save measued values in the integrated USB memory (will be recognized by a PC as an interchangeable disc drive) or on a USB dongle

• Broad range of statistical evaluations are available
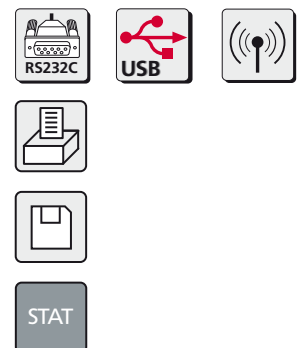
Digimar 817 CLM

Height Measuring Instrument Digimar 817 CLM

See our brochure at
WebCode 12369

Features

Measuring system
- Excellent accuracy and reliabilty due to the optical incremental measurement system with the double reader head
- Dynamic probing system enabling high repeatability
- Air bearings system for light and smooth movement
- Precise measuring head on stainless steel guideways
- Motorised measuring carriage simplifies measurement runs
- Probe constant remains after the instrument is switched off
- Integrated rechargeable battery with a long operating time span for mains independent measurement
- Temperature compensation with an integrated temperature sensor

Operating and display unit
- Large and clearly defined function keys
- Easy to read background lit graphic LCD display
- Operator guidance with self-explanatory icons / pictograms
- Operator prompts and menus are available in several languages
- Possible to set additional zero points on a work piece
- RS232 and / or USB data output for further data processing
- Save measured data on the integrated USB memory or on a USB dongle
- USB interface to connect a compatible USB printer
- Additional measuring instruments with Opto RS232-interface can be connected
- Secure the future due to software update potential
- Automatic Stand-by switch mode
- Selectable Auto-off function, without loss of measured values

- Supplied with:
  Height Measuring Instrument incl. operating and display unit,
  Carrier 817h1,
  Probe K6/51
  Setting block 817 eb,
  Operating instructions,
 Mains power adapter,
  USB cable

Technical Data

Measuring range	mm / inch	350 / 14"	600 / 24"	1000 / 40"
Range of application	mm / inch	520 / 20.47"	770 / 30.31"	1170 / 46.06"
Resolution	mm		0.01 / 0.005 / 0.001 / 0.0005 / 0.0001	
	inch		.001" / .0005" / .0001" / .00005" / .00001"	
Measuring error*	μm		(1.8 + L/600), L in mm	
Repeatability	μm		0.5 (plane) 1 (bore)	
Perpendicularity error (elect. adjusted)	μm	frontal ≤5	frontal ≤6	frontal ≤10
Operating time of rechargeable battery	h		up to 12	
Measuring force	N		1.0 ± 0.2	
Permissible relative air humidity	%		65 (non condensed)	
Working temperature	°C / °F		20 ± 1 / 68 ± 1.8	
Operating temperature	°C / °F		10 . . . 40 / 50 . . . 104	
3-point air cushion, height	μm		ca. 9	
Measuring system			incremental scale with optical reading	
Total height	mm / inch	741 / 29.17"	985 / 38.78"	1392 / 54.80"
Base area (L x W)	mm / inch		240 x 250 / 9.45" x 9.84"	
Weight	kg / lbs	25 / 55.15	30 / 66.14	35 / 77.16
Order no.		**4429010**	**4429011**	**4429012**

*   At 20°C in conjunction with a base plate in accordance to DIN 876/0 and a standard probe K6/51

Height Measuring Instrument Digimar 817 CLM

Operating and display unit
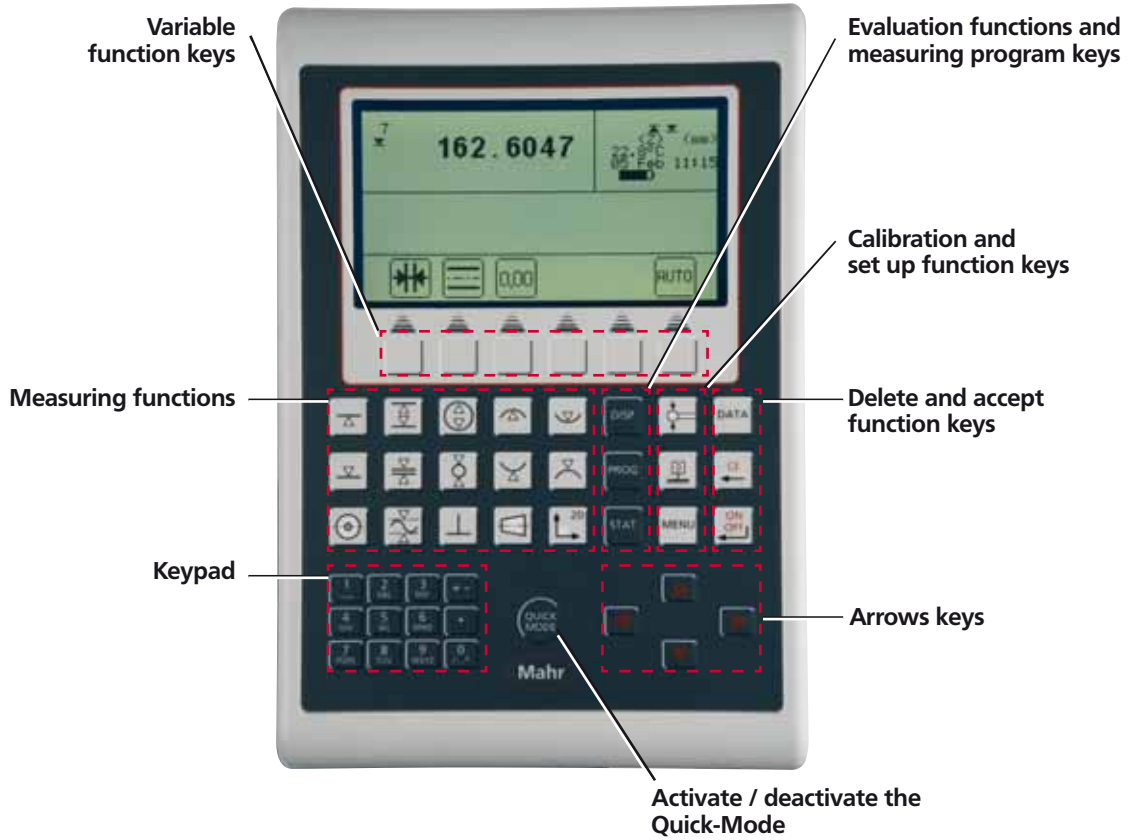
2D Operating and display unit

Operating and display unit		
Measurement		
One dimensional (1D)	↑1D	●
Two dimensional (2D)	↳2D	●
Measuring programs (automatic run)	PROG	40
Perpendicularity / straightness measurement	⊥ ▭	●
Flatness / parallel deviation (Max, Min)		●
Roundness / run-out deviation (Max-Min)		●
Measuring a taper		●
Evaluation		
- Statistics	STAT	●
- Transmit measured values to a PC via RS232	RS232C	●
- Print measured values and diagrams on a USB printer		●
- Print out statistical evaluations		●
- Save measured values on the integrated USB memory or on a USB dongle		●

Digimar 816 CL

▶I The new Height Measuring Instrument **Digimar** 816 CL.
You want to obtain highly accurate measurement results without any complicated procedures?
With the Digimar 816 CL you have the perfect partner for simple and accurate measurements both
in the workshop or on the production line, just as you expect from Mahr! I◀

User-friendly operation. . .

. . .due to the
• Clearly displayed measured values
• Self-explanatory operator guidance

The operating and display unit has a
background illuminated display.

Versatile

The Height Measuring Instrument Digimar
816 CL offers numerous practical
measuring and evaluation functions:

• Convenient standard measuring functions

• Dynamic measuring functions
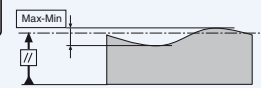
Parallel deviation
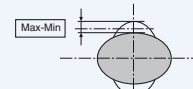
Roundness deviation

• Wide range of options for data evaluation

RS232C   USB

Precise measuring results. . .

. . . on the production line
• Robust design
• Measuring results independent of the user
• Reliable results even outside of the
  inspection room

Probe contact with the motorized
measuring carriage.

• Temperature compensation
  with an integrated temperature
  sensor

The measuring program. . .

**. . . is essential for repetitive part
measurement**

PROG

• Repetitive measuring procedures can
  easily be automated
• Simply create a measuring program with
  the Teach-In-mode
• Complex procedures can be started by
  just pressing one key

Height Measuring Instrument Digimar 816 CL

Features

Measuring system
- Excellent accuracy and reliabilty due to the optical incremental measurement system with the double reader head
- Dynamic probing system enabling high repeatability
- Air bearings system for light and smooth movement
- Precise measuring head on stainless steel guideways
- Motorized measuring carriage simplifies measurement runs
- Temperature compensation with an integrated temperature sensor
- Probe constant remains after the instrument is switched off
- Integrated rechargeable battery with a long operating time for mains independent measurement

Operating and display unit
- Easy to read background lit graphic LCD display
- Large and clearly defined function keys
- Operator guidance with self-explanatory icons / pictograms
- Possible to set additional zero points on a work piece
- Memory can store up to 99 measured values
- MarConnect data output, select either:
  - USB
  - OPTO RS232C

- Supplied with:
  Height Measuring Instrument incl. operating and display unit,
  Carrier 817h1,
  Probe K6/51,
  Setting block 817 eb,
  Operating instructions,
  Mains power adapter

Technical Data

Measuring range	mm / inch	350 / 14"	600 / 24"
Range of application	mm / inch	540 / 21.26"	770 / 30.31"
Resolution	mm (inch)	0.01 / 0.001 (.0001" / .00005")	
Measuring error*	μm	(2.8+L/300), L in mm	
Repeatability	μm	2 (plane) 3 (bore)	
Perpendicularity error (mech.)	μm	frontal ≤15	frontal ≤20
Operating time of rechargeable battery	h	up to 14	
Measuring force	N	1.0 ± 0.2	
Permissible relative air humidity	%	65 (non condensed)	
Working temperature	°C / °F	20 ±1 / 68 ±1.8	
Operating temperature	°C / °F	10 . . . 40 / 50 . . . 104	
3-point air cushion, height	μm	ca. 9	
Measuring system		incremental scale with optical reading	
Total height	mm / inch	741 / 29.17"	985 / 38.78"
Base area (L x W)	mm / inch	240 x 250 / 9.45" x 9.84"	
Weight	kg / lbs	25 / 55.15	30 / 66.14
Order no.		**4429030**	**4429031**

* 20° C with surface base plate according to DIN 876/0 and standard probe K6/51

Overview of carriers and probes for Digimar 817 CLM / 816 CL
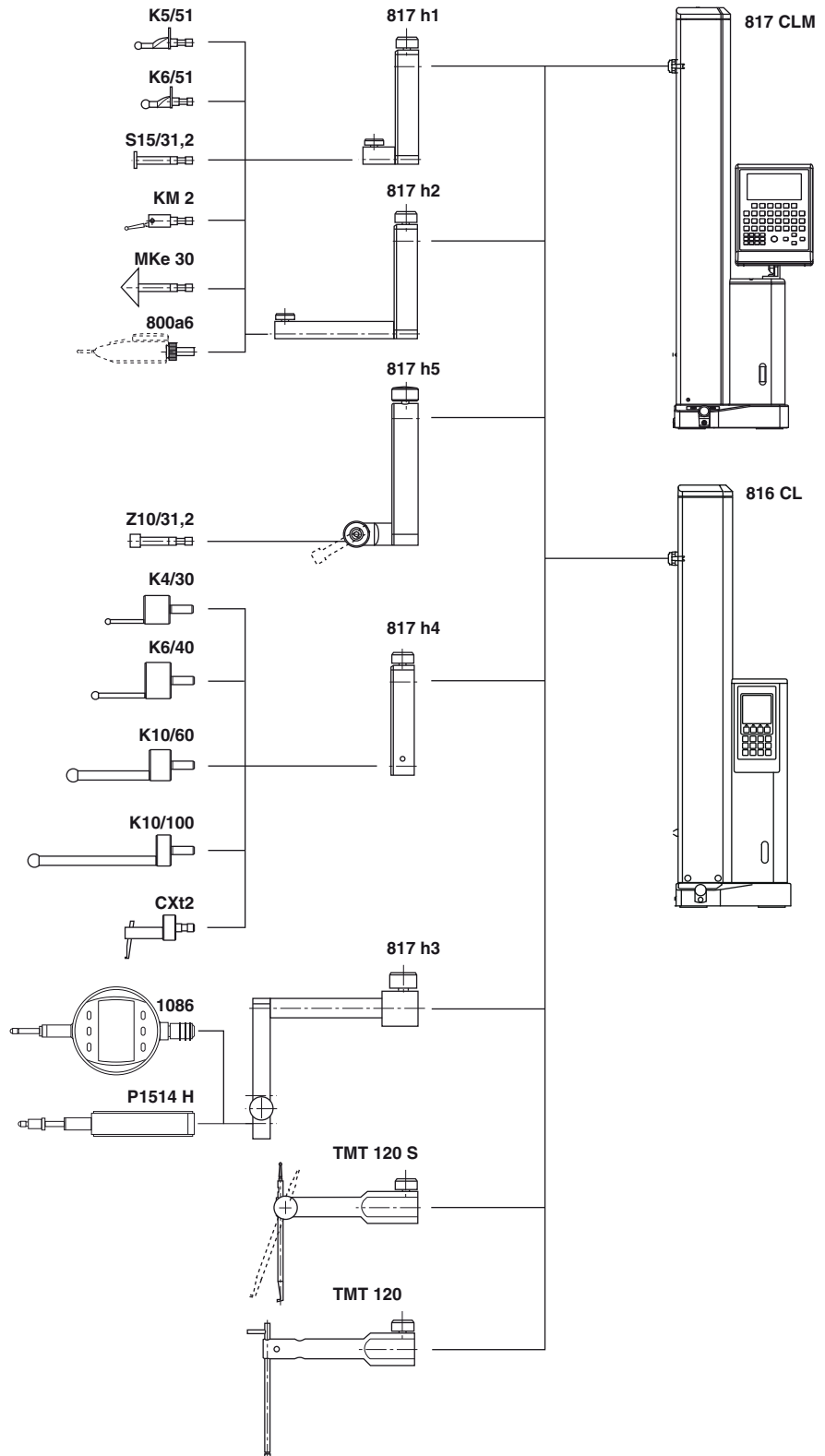
K5/51

K6/51

S15/31,2

KM 2

MKe 30

800a6

817 h1

817 h2

817 h5

817 CLM

816 CL

Z10/31,2

K4/30

K6/40

K10/60

K10/100

CXt2

817 h4

1086

P1514 H

817 h3

TMT 120 S

TMT 120

Height Measuring Instruments Digimar 817 CLM / 816 CL

Accessories

Carrier for probes with mount dia. 6 mm

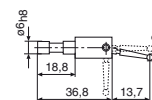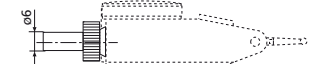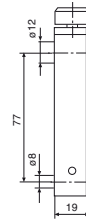| Catalog no.	Description	Shaft length mm	Order no.
817 h1	Carrier for a probe	27.5	**4429154***
817 h2	Carrier for a probe	100	**4429219**
817 h5	Carrier with a joint for a probe	35	**4429454**

* Supplied with standard accessories

817 h1
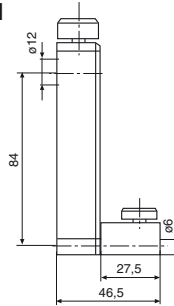
817 h2
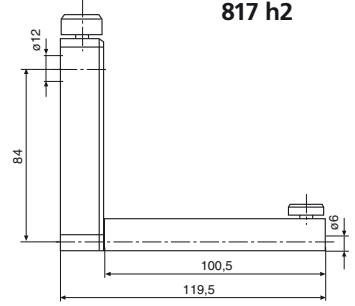
817 h5
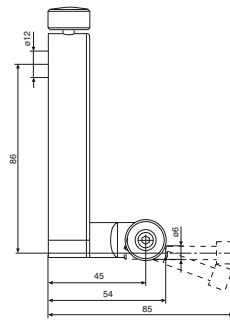
rotatable

Probes with mount dia. 6 mm

Catalog no.	Description	Order no.
K5/51	Spherical probe	**4429158**
K6/51	Spherical probe	**4429254***
S15/31,2	Disc probe	**4429226**
Z10/31,2	Cylindrical probe	**4429227**
MKe 30	Taper probe	**4429228**
KM 2	Probe M2 incl. styli 800 ts, dia. 2 mm	**4429256**
800 a6	Mounting shaft 800 a6 for MarTest	**4301865**

* Supplied with standard accessories

K 5/51
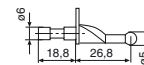
K 6/51
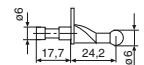
S 15/31,2
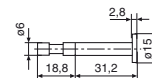
MKe 30
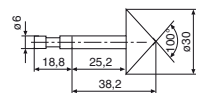
Z 10/31,2
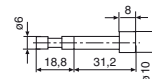
KM 2

800 a6

Height Measuring Instruments Digimar 817 CLM / 816 CL

Accessories

Carrier for probes with mount dia. 8 mm

Catalog no.	Description	Order no.
817 h4	Carrier for probes	**4429220**

817 h4

Probes with mount dia. 8 mm

Catalog no.	Ball dia. D mm	Order no.
K4/30	4	**7023813**
K6/40	6	**7023816**
K10/60	10	**7023810**
K10/100	10	**7023615**
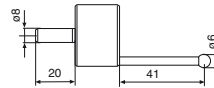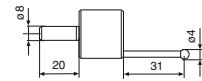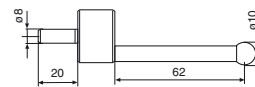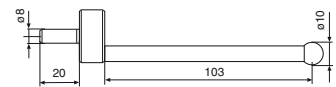
Universal probe CXt2 see page 2-14

K 6/40   **K 4/30**

K 10/60   **K 10/100**

Depth probes

Catalog no.	Description	Order no.
TMT 120	Depth probe incl. carrier	**4429221**
TMT 120 S	2 depth probes incl. carrier (rotatable)	**4429421**

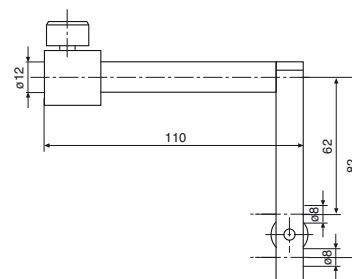**TMT 120**
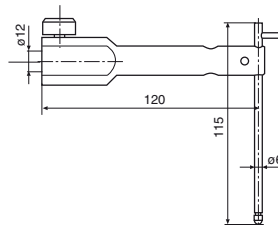
TMT 120 S
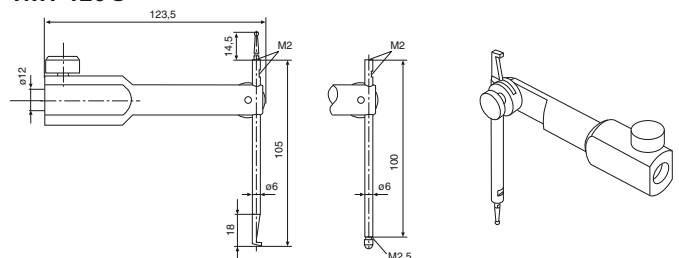
Height Measuring Instruments Digimar 817 CLM / 816 CL

Accessories for checking perpendicularity
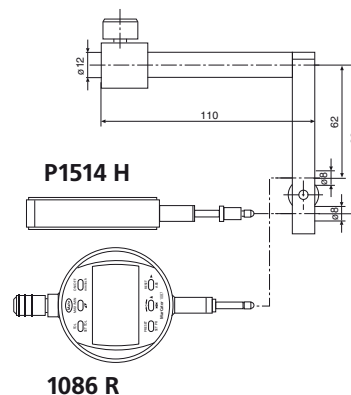
Carrier for probes

Catalog no.	Description	Order no.
817 h3	Carrier for transducers	**4429206**

817 h3

Transducers for checking perpendicularity

Catalog no.	Description	Order no.
P1514 H	Incremental probe, 12 mm incl. cable	**4426810***
1086 R	Digital indicator, 12.5 mm Resolution 0.001 / .00005"	**4337120**
16 EXr	Data cable for digital indicator 1086 R	**4102410***

* Only for Digimar 817 CLM

817 h3

P1514 H

16 EXr   **1086 R**
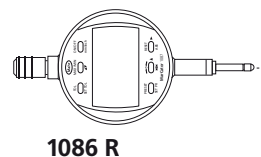
Accessories

Setting blocks

Catalog no.	Description	Order no.
817 eb	Setting block	**4419168***
EB I	Setting block for a taper probe, includes a calibration certificate	**7023827**

* Supplied with standard accessories

817 eb   **EB I**
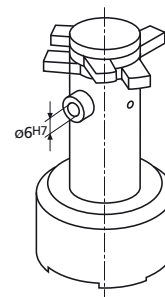
Height Measuring Instruments Digimar 817 CLM / 816 CL

Accessory sets for probes

Probe set 817 ts1 consists of:		4429019
	Carrying case for accessories	4429020
817 h2	Carrier for probes	4429219
S15/31,2	Disc probe	4429226
Z10/31,2	Cylindrical probe	4429227
MKe 30	Taper probe	4429228
TMT 120	Depth probe incl. carrier	4429221
KM 2	Probe for MarTest styli M2	4429256
817 h4	Carrier for probes	4429220
K4/30	Spherical probe	7023813
K6/40	Spherical probe	7023816
K10/60	Spherical probe	7023810
K10/100	Spherical probe	7023615

817 ts1

Probe set 817 ts2 consists of:		4429018
	Carrying case for accessories	4429020
817 h2	Carrier for probes	4429219
S15/31,2	Disc probe	4429226
Z10/31,2	Cylindrical probe	4429227
MKe 30	Taper probe	4429228
TMT 120	Depth probe incl. carrier	4429221
KM 2	Probe for MarTest styli M2	4429256

817 ts2

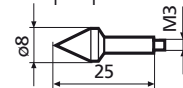| Universal probe set CXt2 consists of:				7034000
Case				3015925
Probe carrier				3015917
		Dimension	Shaft length	
Measuring crook		d = 0.5 mm	l = 78 mm	3015918
Probe pin /tip:		dia. d = 1.2 mm	l = 75 mm	3015919
			ls = 15.5 mm	
Taper probe		dia. d = 0–7.5 mm		3015920
Spherical probe		TC dia. dk = 3 mm	l = 24 mm	3022000
Spherical probe		TC dia. dk = 2 mm	l = 24 mm	3022001
Spherical probe		TC dia. dk = 1 mm	l = 24 mm	3022002
Extension M3 – M3		d = 4 mm	l = 20 mm	3015921
Extension M3 – M2.5		d = 4 mm	l = 20 mm	3015888

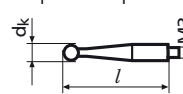Probe carrier
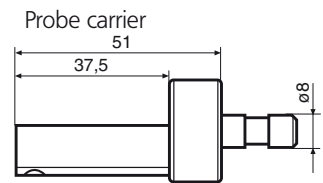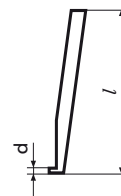
Measuring crook Pin probe Taper probe Spherical probe Extension
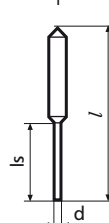
Height Measuring Instruments Digimar 817 CLM / 816 CL

Accessories for data transmission for 816 CL

Data connection cable

|		Order no.
Data connection cable incl. MarCom Standard, USB (2 m)	2000 usb	4346023
Data connection cable Opto RS232C (2 m), with SUB-D jack 9-pin	2000 r	4346020
Accessories for Data Processing see Chapter 11		
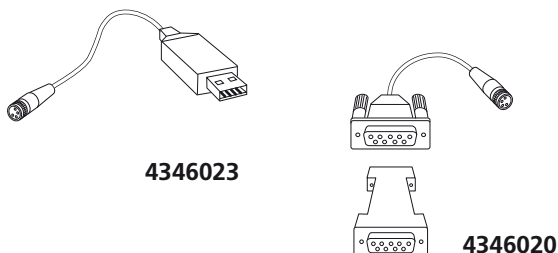
4346023

4346020

Accessories for data transmission for 817 CLM

Data connection cable

	Order no.
Data cable 817 CLM to MSP 2 / PC	7024634
Adapter cable RS232-USB for Digimar 817 CLM incl. MarCom Standard	4102333
Accessories for Data Processing see Chapter 11	
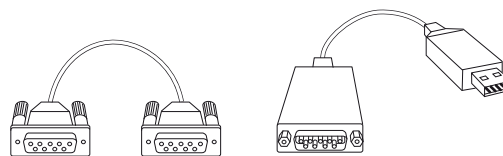
7024634 **4102333**

Statistics printer MSP 2 for 816 CL and 817 CLM

- Can be connected via a RS232C interface
- Two-line display for a simple dialog mode
- 3 types of print protocols: statistics, statistics with a histogram and sample charts
- Retrieve at any time from the memory a list of measured values
- Individual values can be selected and deleted as required.
- Alternative power sources include: mains adapter (100 - 240 V), batteries or NIMH-accumulator, type AA
- Languages can be selected, German, English and French

- Supplied with:
  Mains adapter, paper rolls

	Order no.
MSP2 Statistics printer	4102040

Printer for 817 CLM

HP Ink jet printer

- Standard connectivity: USB - compatible with USB 2.0 specifications
- Compatible operating systems: Microsoft® Windows® 98 SE, Me, 2000, XP, 7
- Standard printer languages HP PCL 3

Similar to illustration

	Order no.
HP Ink jet printer	4429015