

MarCal. The new Generation with the Reference-System

WATERPROOF CALIPERS

► | The water-proof digital caliper **MarCal** 16 EWR, with protection class IP67 and the Reference Lock-Function, ensures both accurate and reliable results even in the most toughest workshop conditions. | ◀

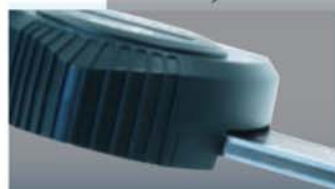
The high-contrast display with 8.5 mm high digits enables accurate, fatigue free reading of the measurement results.



Universal SPC-interface (optional). You have a choice of **MarConnect** data outputs, select either **USB**, **Digimatic** or **Mahr Opto RS232**



The **Reference-Lock-Function** prevents operating error caused by accidental usage of the operating buttons.



MarCal calipers have **lapped guide way surfaces**, these guarantee an even and sensitive run of the slide.

Surface of the guide way



Mahr

Lapped guide way

Lapped measuring faces for accurate measurement.

The new Reference system is extremely energy efficient as when the caliper is in standby mode; almost no power is required, thus **extending the life of the battery to up to 50%.**



Code Initials	IP	International Protection
First digit	6	Dust-tight
Second digit	7	Protected against temporary immersion in water



Protection class **IP67** in accordance to IEC 60529, the water proof measuring system **FPS** (Fluid Protected measuring System) with a sealed housing.

Digital Caliper MarCal 16 EWR

DIN
862

REFERENCE

Features




Functions:

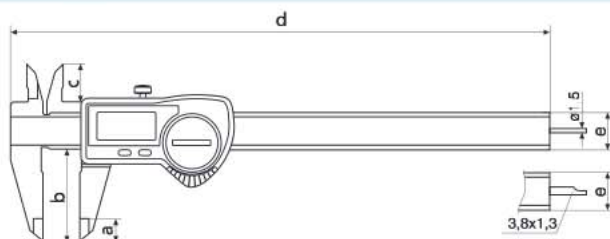
ON/OFF
RESET (Set display to zero)
mm/inch
Reference-Lock/Unlock
DATA (Data transmission via
connection cable)
Auto-ON/OFF

- Immediate measurement due to the Reference system
- Excellent resistance against dust, coolants and lubricants, protection class IP67
- Dirt wipers are integrated in the slide
- Life of the battery up to 3 years
- Max measuring speed 2.5 m/s (1 00"/s)
- High contrast Liquid Crystal Display with 8.5 mm high digits
- Lapped guide way
- Slide and beam made of hardened stainless steel

- Measuring blades for inside measurement
- Step measuring function
- Locking screw
- Supplied with:
Case, battery, operating instructions

Technical Data

Measuring range		Resolution	Error limit G	Depth rod		Friction wheel	Order no.
mm	(inch)	mm / inch	mm				
150	(6")	0.01 / .0005"	0.03	•			4103060
150	(6")	0.01 / .0005"	0.03		•		4103062
150	(6")	0.01 / .0005"	0.03	•		•	4103061
150	(6")	0.01 / .0005"	0.03		•	•	4103063



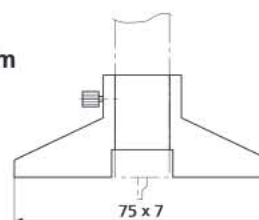
Dimensions

mm	a	b	c	d	e
150	10	40	16	235	16 x 3
200	10	50	19	285	16 x 3.5
300	14	64	19	388	16 x 4

Accessories

	Order no.
Depth Measuring Bridge	4102020
Battery 3V, Type CR 2032	4102520

16 Em



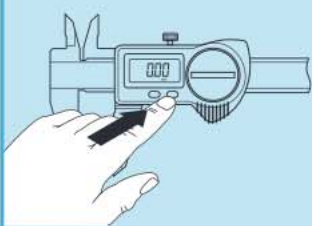
MarCal - The innovative Reference-System

Just set once to zero

All Mahr digital calipers with this logo **REFERENCE** are equipped with the innovative Reference-System. The zero position just has to be set once: after setting the zero position, the zero remains stored for all further measurements. Therefore, once the caliper is switched ON or the slide is moved the caliper is immediately ready for measurement. The need to reset to zero with a conventional caliper once the caliper is switched on has now become obsolete.

Conventional

① Switch ON



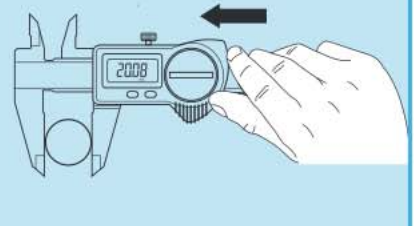
② Close the measuring jaws



③ Set to zero

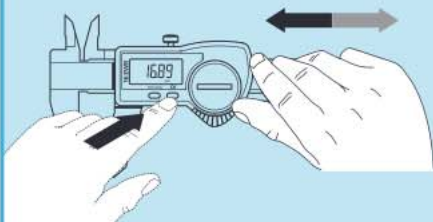


④ Results of measurement



REFERENCE - System

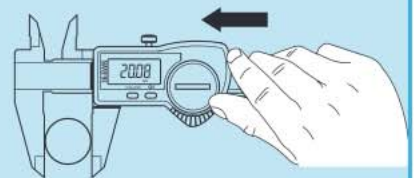
① Switch ON



Press the ON key or move the slide

REFERENCE

② Results of measurement



IP-Protection classes

First digit is the degree of protection according to IEC 60529

Protection against particles, contaminants and dust

0	Not protected
1	Particles > 50.0 mm
2	Particles > 2.5 mm
3	Particles > 2.5 mm
4	Particles > 1.0 mm
5	Dust protected
6	Dust tight

Second digit is the degree of protection according to IEC 60529 (approximate)

Protection against wet conditions (fluids)

0	Not protected
1	Falling water drops - vertical
2	Falling water drops - tilted < 15°
3	Spray water < 60°
4	Water splashing from all directions
5	Water jets from all directions
6	Powerful water jets
7	Temporary immersion in water
8	Continuous immersion in water



Example:
IP67 means that the product is "Dust tight" and is protected against "Temporary immersion in water".