



Digital Refractometer



Operational Manual

Catalogue

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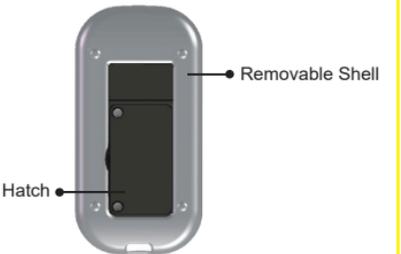
Appendix

Appendix 10

Before operating your instrument, please read this manual properly.

1. Introduction

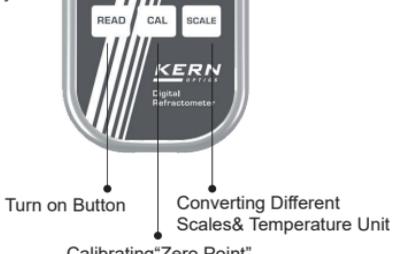
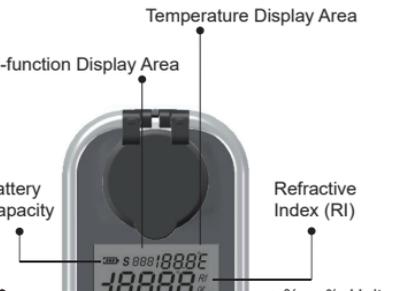
Panel Descriptions



The Packing Accessories:
 Packaging x1 The Instructions x1 AAA Batteries x1 Dropper x1 Screwdriver x1 Digital Refractometer x1

2. Display and Buttons

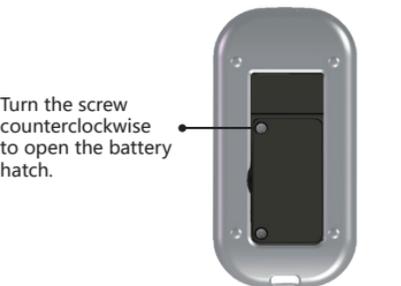
Display Areas and Buttons



Note: Please replace the battery when the is displayed.

3. Preparations before Operation

3.1 Install the Battery



Put 1 piece of 1.5V battery into the cabin in the right way and recover the cabin again.

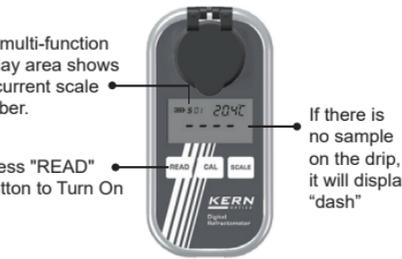
3.2 Install the Wrist Strap



Properly Install the wrist strap into the hole at the bottom of the instrument.

4. Booting and Measurement

4.1 Booting



The multi-function display area shows the current scale number.

If there is no sample on the drip, it will display "dash".

4.2 Measurement

After turn on, clear the distilled water and dry the sample plate, drip 0.2~0.3ml sample then close the cover to measure.

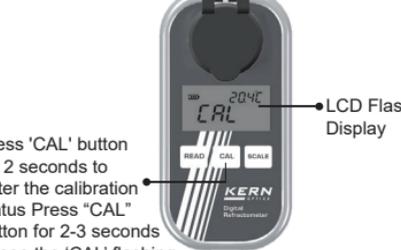


Showing Beyond Measuring Range

Measuring Result

5. Zero Calibration

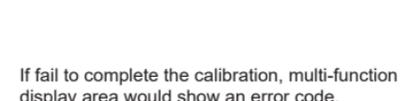
The meter only supports pure water calibration. The calibration method is as following drop 0.2-0.3ml pure water then close the cover to measure.



Press 'CAL' button for 2 seconds to enter the calibration status Press "CAL" button for 2-3 seconds till see the 'CAL' flashing Display

6. Switch the Scales and Temperature Units

Press "CAL" button once again during the 'CAL' flashing to start to calibrate. When the calibration is completed showing as following. If no any operations for 10seconds the instrument would return back to booting status.

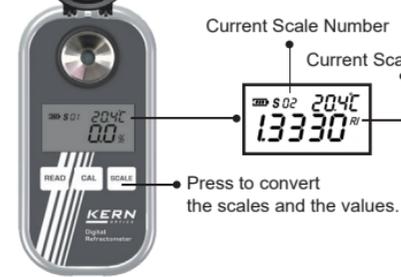


If fail to complete the calibration, multi-function display area would show an error code.

Temperature exceed the limitations, other error codes could be checked in the appendix error code page.

6.1 Scales Converting

6.2 Temperature System Converting



Press "CAL" button once again during the 'CAL' flashing to start to calibrate. When the calibration is completed showing as following. If no any operations for 10seconds the instrument would return back to booting status.

Temperature exceed the limitations, other error codes could be checked in the appendix error code page.

6.1 Scales Converting

7. Turn Off

If without any operations for 1 minute, the instrument would be automatically turned off.

8. Maintenance and Preservation

- Please clean and wash the sample plate with distilled water and dry it with soft cleaning cloth or paper towel after finishing the measuring one kind sample.
- Never left the remains and residuals of samples in the sample plate for long time.
- After finishing measurements of the corrosive liquid, please clean the sample plate as quick as possible to avoid the irreparable damage of the prism and metal surface of the plate.
- Please use soft cleaning cloth or paper towel to clean the sample plate to avoid scribing the prism's glass.
- When the dropper and dust-free cloth are not used, please clean it with clean water and put it in the packing box after drying.
- If no using the instrument for a long time, please remove the battery, and preserved in a cool and dry environment.

Appendix:

Performance:

	Range	Accuracy	Resolution
Brix	0.0%~50.0%	±0.2%	0.1%
	0.0%~90.0%	±0.2%	0.1%
Temperature	0.0~40.0°C	±0.5°C	0.1°C
	32.0~104.0°F	±0.9°F	0.1°F

The Error Codes Table:

code	Instructions
A01	Beyond the scope of calibration temperature. (0.0°C~40.0°C)
A02	During calibration, no solution or solution wrong.
A03	This instrument has a hardware failure.

Model	Scale	No.	Range	Unit	Resolution	Accuracy
CRM 508M	Bit	S01	0.0-50.0	%	0.1%	±0.2%
	Refractive Index	S02	1.3330-1.4200	nD	0.0001nD	±0.0003nD
CRM 1RS	Bit	S01	0.0-90.0	%	0.1%	±0.2%
	Refractive Index	S02	1.3300-1.5177	nD	0.0001nD	±0.0003nD
CRM 1SU	Fructose	S01	0.0-68.9	%	0.1%	±0.2%
	Glucose	S02	0.0-68.9	%	0.1%	±0.2%
CRM 2SU	Bit	S01	0.0-90.0	%	0.1%	±0.2%
	Refractive Index	S04	1.3330-1.5177	nD	0.0001nD	±0.0003nD
CRM 1HD	Lactose	S01	0.0-16.5	%	0.1%	±0.2%
	Maltose	S02	0.0-16.5	%	0.1%	±0.2%
CRM 1H0	Devian	S03	0.0-15.6	%	0.1%	±0.2%
	Bit	S04	0.0-50.0	%	0.1%	±0.2%
CRM 1H0	Honey Water	S01	5.0-38.0	%	0.1%	±0.2%
	Honey Boume	S02	33.0-88.0	Bx	0.1	±0.2
CRM 1NA	Bit	S03	0.0-90.0	%	0.1%	±0.2%
	Refractive Index	S04	1.3330-1.5177	nD	0.0001nD	±0.0003nD
CRM 1SA	Saltily (NaCl) %	S01	0.0-28.0	%	0.1%	±0.2%
	Saltily (NaCl) ‰	S02	0-280	‰	2%	±2%
CRM 1SB	Specific Weight	S03	1.000-1.250	-	0.001	±0.002
	Bit	S04	0.0-50.0	%	0.1%	±0.2%
CRM 1SB	Refractive Index	S05	1.3330-1.4200	nD	0.0001nD	±0.0003nD
	Stability Sizerader	S01	0-100	%	1%	±2%
CRM 1SB	Chloride Sizerader	S02	0-67	%	1%	±2%
	Specific Weight	S03	1.000-1.070	-	0.001	±0.002
CRM 1SB	Bit	S04	0.0-50.0	%	0.1%	±0.2%
	Refractive Index	S05	1.3330-1.4200	nD	0.0001nD	±0.0003nD
CRM 1AL	Alcohol Mass	S01	0-72	%	1%	±1%
	Alcohol Vol	S02	0-80	%	1%	±1%
CRM 1BR	Bit	S03	0.0-50.0	%	0.1%	±0.2%
	Refractive Index	S04	1.3330-1.4200	nD	0.0001nD	±0.0003nD
CRM 1BR	Plato	S01	0.0-30.5	°P	0.1	±0.3
	SG Wort	S02	1.000-1.130	-	0.001	±0.002
CRM 1WN	Bit	S03	0.0-50.0	%	0.1%	±0.2%
	Refractive Index	S04	1.3330-1.4200	nD	0.0001nD	±0.0003nD
CRM 1WN	Oechsle	S01	0.0-150.0	°Oe	1	±2
	VorH	S02	0.0-22.0	%	0.1%	±0.2%
CRM 2WN	KMW (Babo)	S03	0.0-25.0	-	0.1	±0.2
	Bit	S04	0.0-50.0	%	0.1%	±0.2%
CRM 2WN	Oechsle France	S01	0.0-230.0	°Oe	1	±2
	VorH	S02	0.0-22.0	%	0.1%	±0.2%
CRM 1CO	KMW (Babo)	S03	0.0-25.0	-	0.1	±0.2
	Bit	S04	0.0-50.0	%	0.1%	±0.2%
CRM 1CO	Coffee TDS 1	S01	0.0-25.0	-	0.1	±0.2
	Bit	S02	0.0-50.0	%	0.1%	±0.2%
CRM 2CO	Refractive Index	S03	1.3330-1.4200	nD	0.0001nD	±0.0003nD
	Bit	S04	0.0-25.00	-	0.01	±0.20
CRM 2CO	Coffee TDS 2	S01	0.0-30.00	%	0.01%	±0.20%
	Bit	S02	0.0-30.00	%	0.01%	±0.20%
CRM 1UN	Refractive Index	S03	1.3330-1.4200	nD	0.0001nD	±0.0003nD
	Urine Human	S01	1.000-1.050	-	0.001	±0.002
CRM 1UN	Serum Protein	S02	0.0-12.0	g/100ml	0.1	±0.2
	Bit	S03	0.0-50.0	%	0.1%	±0.2%
CRM 2UN	Refractive Index	S04	1.3330-1.4200	nD	0.0001nD	±0.0003nD
	Urine Cat	S01	1.000-1.060	-	0.001	±0.002
CRM 2UN	Urine Dog	S02	1.000-1.060	-	0.001	±0.002
	Bit	S03	0.0-50.0	%	0.1%	±0.2%
CRM 1CA	Refractive Index	S04	1.3330-1.4200	nD	0.0001nD	±0.0003nD
	Chester	S01	1.4000-0.0	°C	0.1°C	±0.5°C
CRM 1CA	AdBlue®	S02	0.0-51.0	%	0.1%	±0.2%
	Battery Fluid	S03	1.000-1.500	-	0.001	±0.005
CRM 2CA	Bit	S04	0.0-50.0	%	0.1%	±0.2%
	Refractive Index	S05	1.3330-1.4200	nD	0.0001nD	±0.0003nD
CRM 2CA	Ethylenglycol (%)	S01	0.0-100.0	%	0.1%	±0.5%
	Ethylenglycol (°C)	S02	140.0-0.0	°C	0.1°C	±0.5°C
CRM 2CA	Propylenglycol (%)	S03	0.0-100.0	%	0.1%	±0.5%
	Propylenglycol (°C)	S04	140.0-0.0	°C	0.1°C	±0.5°C
CRM 2CA	Bit	S05	0.0-90.0	%	0.1%	±0.2%