



Innovator In Spectroscopy Equipment

# KM2918



## KARAT METER MODEL KM2918

[www.cfp.co.ir](http://www.cfp.co.ir)



CATALOG



SPECTROMETER



FREE DOWNLOAD

# KARAT METER MODEL KM2918

## Features

- No need to cut samples
- Ready for field operation
- Fast and accurate detection
- Easy and standalone operation
- Safe and closed-beam XRF system
- Advanced Si-PIN detector with low FWHM
- Small area analysis using small spot collimator
- USB interface port for printing and communications
- Splash resistant design
- Bright, colored touch-screen display
- Integrated camera to target sample
- Wide operational temperature range
- Capable of measuring low level concentrations
- Record sample image together with analysis results
- Being robust and suitable for use in challenging Conditions

**FAST, COST-EFFECTIVE AND  
NON-DESTRUCTIVE ANALYSIS OF  
JEWELRY, COINS AND PRECIOUS METALS**



TIN

INDIUM

PALLADIUM

PLATINUM

SILVER

GOLD

COPPER



## Description

The KM2918 from Control Farayand Pasargad (CFP) is a fast, cost-effective and non-destructive device tuned for accurate analysis of jewelry, coins and precious metals especially for gold and gold alloys. Based on x-ray assay technique, KM2918 determines the accurate percentage of gold (in Karat) available in the sample. The device is capable of determining the elemental

composition of all gold alloys, platinum group metals and silver alloys. Furthermore, the instrument is well suited for determining gold coating on the other materials. The measuring process is fully non-destructive and leave the chemical and physical properties of sample intact. KM2918 is specially designed to meet all requirements of the analysis systems used in jewelry retail store and jewelry manufactory.



## Specifications

Unit: KM2918	
Type	KARAT METER
Version	Version1 (standard)
Input(s)	
Power connector	DC adaptor, max.41W
Output(s)	
USB port	USB port for communication and services
LAN port	LAN port for communication
Control(s)	
Power key	Press the power key to turn ON or OFF device
Touch screen display	Setting configure via touch screen display (set and read all data)
Indicator(s)	
Power	Power on indicator
Alarm indicator	Easily visible super bright LED indicator (red: X-ray ON, green: X-ray OFF)
Logo	CFP logo indicator
Display	
Type	Full color IPS LCD
Size	10.1", 1280 × 800 pixels
Performance	
Measuring time	Typically 10 - 120sec
Energy resolution	FWHM < 200eV @ Fe, 5.89 keV
Repeatability	< 1% for gold, measurement time 60 sec
Accuracy	0.5 percent for gold
Detector	
X-ray	Si-PIN
Window	25μm thick dura beryllium
Source	
Tube type	Metal - ceramic
Cathode type	Silver filament
Focal spot size	~ 0.5 mm for zero measurement distance
Aperture (Collimator)	Fixed with 1mm diameter
Sample Alignment	
Sample positioning	Manually
Camera	High resolution CCD color camera
Zoom factor	Digital 1x, 2x, 3x
Sample Stage	
Design type	Fixed stage
Maximum sample weight	5 kg
Maximum sample placement area	310 × 320mm <sup>2</sup>
Data Acquisition and Analysis	
OS	Windows 7 or higher versions
Software	KM2918 (SOFTWARE)
Measurement/Spectrum	
High voltage	0 - 50kV
Beam current	0 – 100μA
Measurement spot diameter	2mm

## Application

- Silver analysis
- On-line inspection
- Academic research
- Platinum group analysis
- Laboratory and quality control
- Coating thickness applications
- Elemental gold and gold alloy analysis



## Electrical, Mechanical and Environmental

Unit: KM2918	
Type	KARAT METER
Version	Version1 (standard)
Electrical	
Power required	AC - 220V - 50Hz
Physical	
Dimensions	350mm x 400mm x 285mm (L x W x H)
Weight	30kg
Mechanical	
	Unit: mm
KM2918	
Environmental	

Storage temperature	0°C to 50°C
Operating temperature	10°C to 45°C

## Software and user interface

### Device GUI

The KM2918 can be used standalone using the companion 10.1" touch screen display.

This sensor can be used with PC interfaces and the data collection KM2918 software.

The main tab represents the online analysis results. It includes five windows. Assay result window shows the elements available in the sample along with gold percentage in karat. Camera view window shows the real-time camera output. Setting window represent the parameters of source and detection units. Device window indicates the general feature of test. The spectrum of sample inspection is also available in Spectrum window.

Table tab shows the table of elemental component in the sample.

Spectrum tab shows sample spectrum with in more details.

### PC software

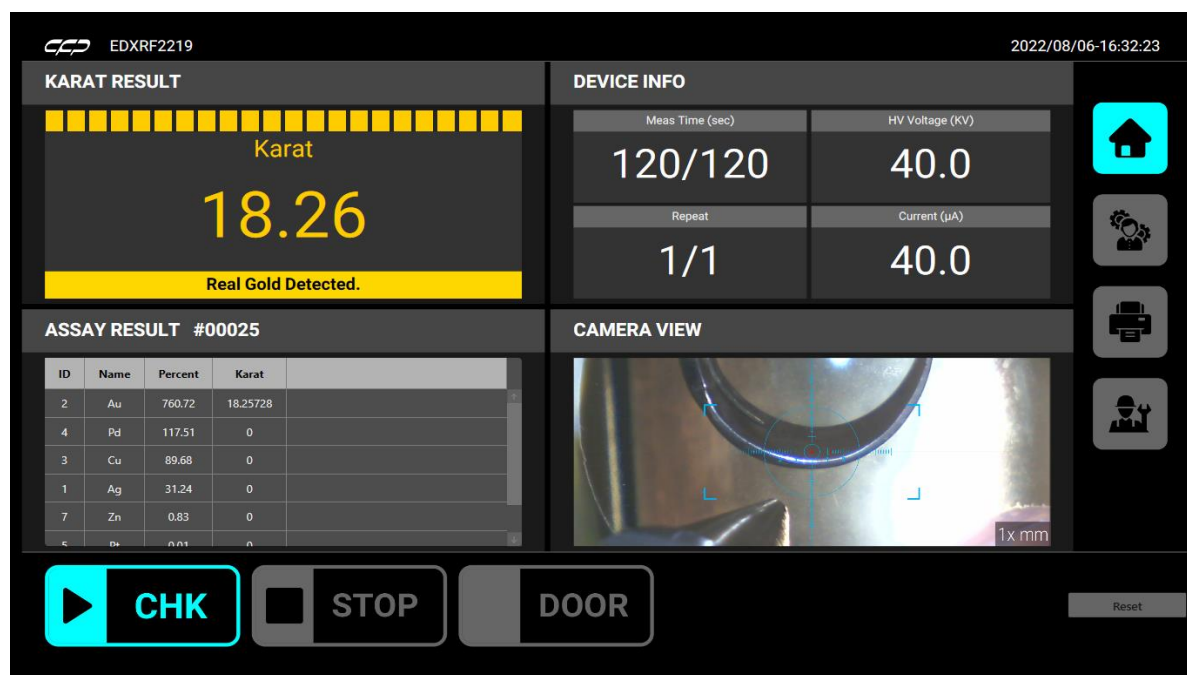
KM2918 (SOFTWARE)

Input /Output (using supplied KM2918 software)

USB

Data Output formats








CSV



Main window

## Ordering info




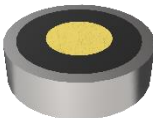
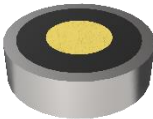

### KM2918 Standard package includes

Part #	Image	Description
KM2918 main		Karat meter main part that includes source (Silver cathode with metal-ceramic tube), Si-PIN detector, high voltage unit and multi-channel analyzer.
ACCE2918001		User guide CD (1 Pack)
ACCE2918002		Wooden case with inserted foam
ACCE2918003*		Guaranty (one year)
ACCE2918010		USB cable for connecting KM2918 to the PC
ACCE2918011		Printer cable
ACCE2918012		Power cable

\* We fully support our products. We guarantee your satisfaction in the quality of our product by providing a complete one-year warranty covering any defect of workmanship, material and design. If our product do not work correctly, we will provide complete repair and/or replacement services. For guaranty conditions, please refer to device manual document (KM2918- Manual)



## Optional accessories and services

Part #	Image	Description
ACCE2918004		Installation
ACCE2918005		Training
ACCE2918006**		Re-Calibration (Interval) services. 1year factory maintenance suggested, not required.
ACCE2918013		Calibration check reference coin
ACCE2918014		Collimator test coin
ACCE2918015		Protective layer thin film Kapton 7.6cm x 7.6cm

\*\* The proper maintenance & calibration of your instruments is critical to ensure correct performance & accuracy. For Re-calibration (Intervals) services, please call CFP company (021- 46045383)





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