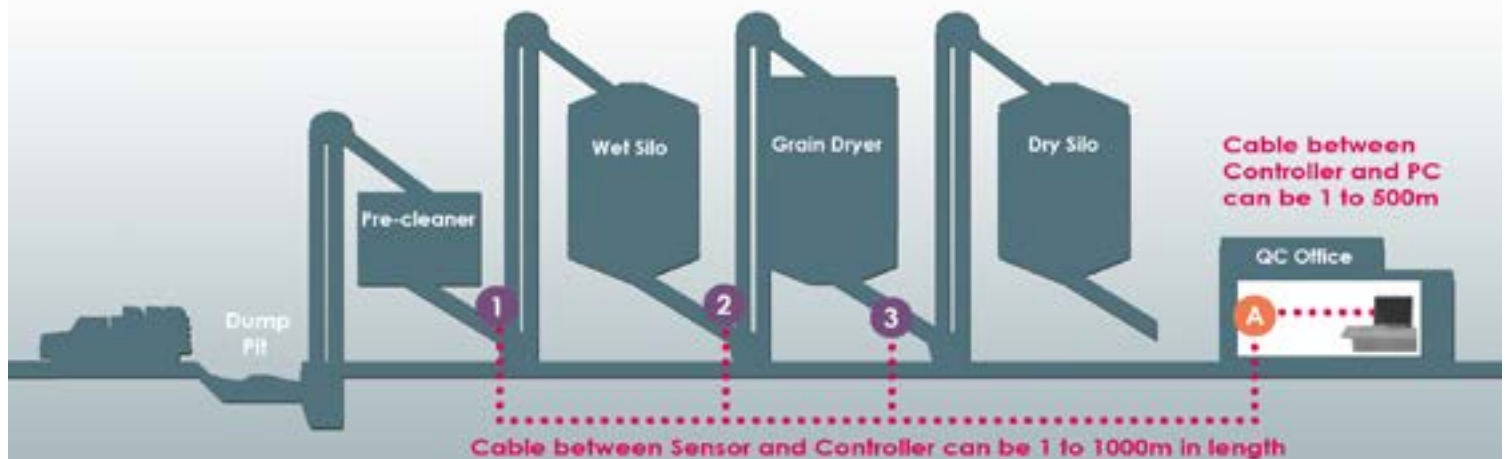# RX-Series

In-line, Interval-type Single Kernel Moisture Measurement System
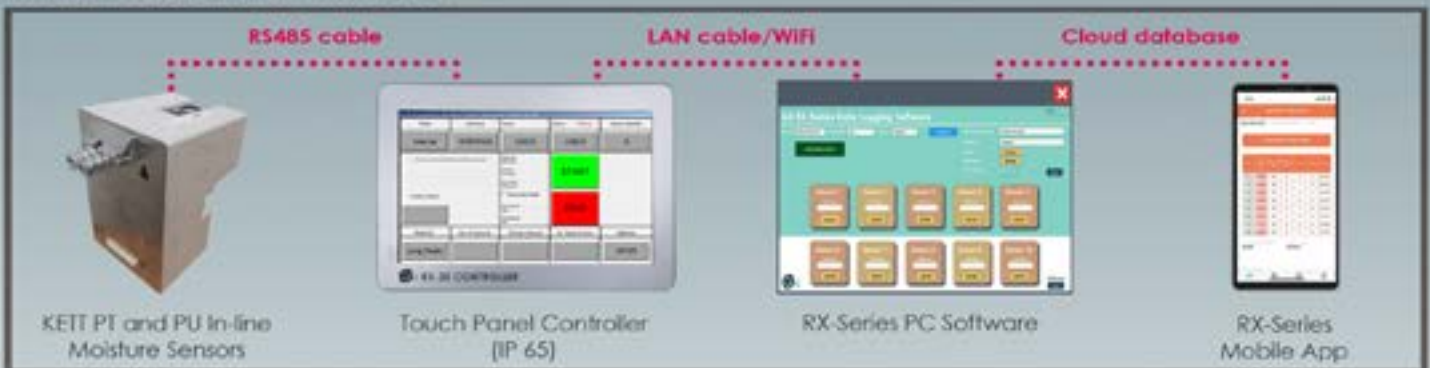
For Corn, Paddy, Miled Rice, Brown Rice and more

** flexible positioning of *SENSOR* for different purposes **

Wet Silo

Grain Dryer

Dry Silo

Cable between Controller and PC can be 1 to 500m

QC Office

Pre-cleaner

Dump Pit

1

2

3

A

Cable between Sensor and Controller can be 1 to 1000m in length

1. To measure the moisture content of incoming grains, install the sensor at the elevator bucket, after the pre-cleaner.

2. To monitor the moisture content of grains inside the grain dryer, install the sensor at the bucket elevator of the dryer.

3. To measure moisture distribution of grains after drying, install the sensor at a grain flow pipe before the dry silo.

A. The controller can be positioned anywhere (inside the factory or inside the QC office) as long as it is within 500m from sensor and 500m from the computer.

In-line version of the RX-20/30

RS485 cable   LAN cable/WiFi   Cloud database

KETT PT and PU In-line Moisture Sensors

Touch Panel Controller (IP 65)

RX-Series PC Software

RX-Series Mobile App

Desktop version of the RX-20/30

LAN cable/WiFi   Cloud database

KETT Moisture Sensor and Controller Attached to Acrylic box

RX-Series PC Software

RX-Series Mobile App

Continuous Interval Feature

You can control the rate and frequency of each measurement session with our unique interval feature adjusting:

1. The number of measuring intervals
2. The number of pieces measured per interval
3. The waiting time between each interval

Additionally, the average moisture value of each interval will be shown in the report, along with the date and timestamp.

1 Measurement Session

Overview Table Feature

Name	Status	Sensor no.	Target Moist.	Last Meas. Min. Thres.	Last Meas. Max. Thres.	Last Moisture	2nd Last Moisture	3rd Last Moisture	4th Last Moisture	5th La Moistu
Intake 1	IN USE BY	Sensor 1		0% 0/20	100% 20/20	17.9% 14:27:24	17.7% 14:26:10	15.2% 14:24:37		
Intake 2	NOT IN USE	Sensor 2								
Dryer 1	NOT IN USE	Sensor 3								
Silo 1	NOT IN USE	Sensor 4								

On one overview page, the user can view the last 10 measurements for each sensor.

At a glance, the user can check for any abnormal data, and fix these issues faster than before.

Moisture Threshold Feature with Siren Alarm

For each measurement, a minimum and maximum threshold moisture value can be set. The system will count the number of grains that are outside these ranges and post them on a measurement report.

An alarm can also be added in Relay Mode that is triggered every time an interval measurement exceeds the user's set minimum or maximum threshold value.

Histogram and Standard Deviation Feature
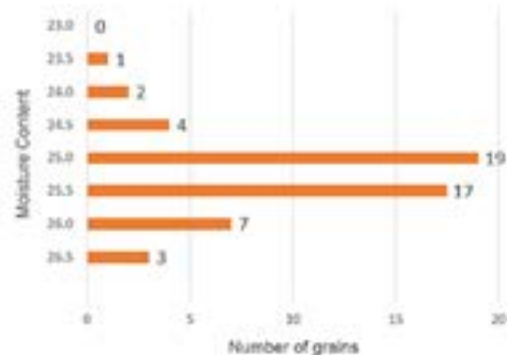
In the report, each grain's individual moisture content is shown in a histogram, along with the standard deviation and average, allowing the user to see the distribution of moisture content.

Detailing sample homogeneity versus only the average moisture content, the histogram allows for more in-depth understanding of your process variables, product quality changes, and supplier comparisons.

Continuous Data Logging and Inputting Supplier Information on PC Software

Data will be continuously logged on the PC software with date and timestamp.

The user is able to input unique data into each measurement report, which will also be shown on the mobile application. Examples of this unique data are supplier's name, vehicle number, the name of the QC staff overseeing the measurements, and more.

After each measurement is completed, a PDF report will be automatically generated. This report will show all of the unique data entered, along with each interval's moisture content reading and the overall average moisture reading for the measurement session.

6 Different Measurement Modes

There are 6 different modes to choose during configuration. The mode selected depends on where the instrument is installed (eg. in the intake area, in the dryer or post dryer).

To allow you to carry out measurements based on your specific needs at each location, these modes are:

- Interval
- Fixed time
- Fixed pieces
- Relay
- Dryer Mode
- Flatbed mode
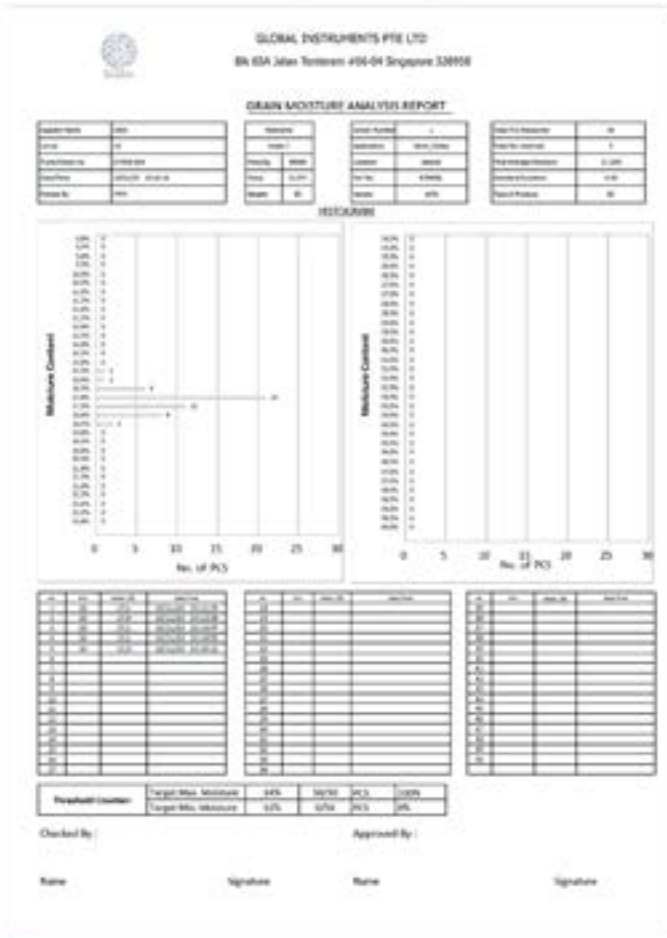
Data Storage and Analytics on Mobile App

Gii RX-Series

Available for iOs and Android

All data will be stored in a cloud database and can be accessed with the Gii RX-Series mobile application anytime, anywhere.

Data will be displayed live, with histogram and standard deviation values. Year on year comparison charts can also be viewed on the app.

PDF Report Sample

Specifications

RX-Series				
Measuring Principle	Electrical Resistance Method			
Applications	**RX-20**		**RX-30**	
	Long Paddy	(11-38%)	Corn	(11-40%)
	Long Milled Rice	(11-20%)	Soy bean	(11-25%)
	Long Brown Rice	(11-20%)	Barley	(10-40%)
	Short Paddy	(11-38%)	Long Paddy	(11-38%)
	Long Sticky Paddy	(11-38%)	Long Milled Rice	(11-20%)
	Jasmine Paddy	(11-38%)	Long Brown Rice	(11-20%)
	Long Parboiled Rice	(11-20%)	Short Paddy	(11-38%)
	Wheat	(10-40%)	Wheat	(10-40%)
			Bare Wheat	(10-35%)
Measurement resolution	0.1%			
Measurement speed	Approximately 60 pcs/min			
Operating Environment	Temp: 0-50°C, RH: 0-80%			
Measurement Settings	No. of Intervals	: 1 to 50 intervals		
	No of PCS/interval	: 10 to 250 PCS		
	Waiting time between intervals	: 0.5 to 60 min		
	Threshold range	: 11.0 to 40.0%		
Power Source	Sensor: AC 100-240V (50/60Hz) @ 75W			
	Controller: 12-24VDC @ 9W			
PC Software Compatibility	Windows 11, 10, 8.1, 8 and 7 (SP1)			
PC Software settings	Choice of PDF Report: A4/A5			
	Connects up to 10 sensors with 1 PC software			
	Input company information for PDF report letterhead			
	External software integration via MySQL database			
PC Requirements	1 USB port for PC software			
	1 Ethernet/USB port per sensor			
Standard Accessories	1x Moisture sensor with sensor cable			
	1x 24V Power Supply			
	1x Touch panel controller			
	1x RS232C-RS485 Converter (requires 5-12V DC power)			
	1x 50m RS485 cable			
	1x 3m LAN cable			
	1 x USB Flash drive with PC Software			
Dimensions	Controller: 187(L) x 52(D) x 124(H)mm, 0.6kg			
	Sensor: 150(L) x 120(D) x 220(H)mm, 2.0kg			
Options	*Cable length between sensor and controller up to 500m			
	*Cable length between controller and PC up to 500m			
	*USB-Ethernet Converter			
	*LAN splitter			

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v2

To improve the product, specifications and appearance might be changed without notice. In addition, due to printing, the product's color may appear different from the actual article.

Kett Product Lines · *Seventy years of field experience allows Kett to offer unsurpassed quality, reliability and versatility!*

Primary Methods – Moisture Measurement

Moisture Balances - Continuous, accurate, and repeatable measurements using built-in microprocessors. Simple to use and rugged, yet faster than traditional oven-drying. Models are available for all budgets, sample weights, and moisture contents.

Secondary Methods – Moisture and Composition Measurements

Near-Infrared Moisture Meters - Handheld, desktop, and production models are available. These devices provide instant, non-contact measurements of moisture for both solids and liquids by using optical absorbance. Ranges from .001% to 100% can be accurately, repeatedly measured within +/- 0.001%. Models include automatic zero adjustment, on-line calibration, large digital displays, memory, output options, computer interface, and industrial design. Optional data analysis software and specialized sensors provide the user with unmatched versatility and complete process control.

Near-Infrared Composition Meter - Desktop, and on-line/inline process models are available. These devices provide instant, non-contact, non-destructive measurement. Multiple organics components can be simultaneously measured. Major applications are moisture, water activity (Aw), API, fat/oil, protein, alcohol/solvent, BTU, homogeneity and more.

Wood Moisture Tester - Compact, handheld, one-piece units provide portable measurement of over 80 types of wood. We also offer the only non-invasive meter available for applications requiring measurements on rare and exotic woods, or, where non-invasive testing is desirable. Digital readouts, limit alarms, automatic temperature correction, and auto power-off are standard.

Concrete/Mortar Moisture Meters - Portable units for cured or curing conrete mortar and other dense products. A unique desktop for wet slurry samples. All models provides unmatched performance and versatility. Utilizing the di-electric principle, these can determine the average moisture content to a depth of 40mm. Digital displays, limit alarms, automatic temperature correction, and auto power-off are included.

Grain Moisture Analyzers - Thanks to our strenuous R&D efforts, Kett is internationally recognized for agricultural moisture testers and inspection instruments. Reliable performance and simple operation minimize operator varianc-es, while providing simple calibration verification. Handheld, laboratory, and production models are available. All use electrical resistance principles (resistance, capacitance, rf, etc.). Digital displays, multiple calibrations, and rugged, ergonomic designs are standard. Various models offer on-line calibration, printer options, memory features, and built-in scales.

Paper Moisture Testers – Three portable, digital models are available depending on the moisture requirements. Electrical resistance is used to measure the moisture of copy, kraft, corrugated, rolls/reams and other paper and paper-board applications. Direct moisture readings, special calibrations, and relative moisture measurements are standard features.

Universal Moisture Tester – Main unit connects to a variety of Kett probes.   Can be calibrated for specific customer applications.   Contact, instant, non-destructive measurement. Probes include the three paper probes, 'pin' probes, and insert probes (applications such as sacks of a material or bulk storage items). Direct moisture readings, special calibrations, and relative moisture measurements are standard features.

Surface Property Measurements

Coating Thickness Gauges - The finest complete line of handheld non-destructive gauges for testing ferrous and nonferrous substrates. Digital displays and rugged, industrial designs are standard. Specific models include memory, statistics, integrated printers, and data output.

Handheld Friction Meters (Tribometer) - Our handheld models calculate the coefficient of static friction in under 10 seconds. These simple-to-use compact units operate on batteries, providing tremendous versatility, and includes an automatic averaging function. Our original (H94) measures when horizontal. Our latest version (H37) can measure at any angle, even upside down.

Desktop Surface Property Testing Machines - Precise evaluation of friction, abrasion, adhesion, scratch and peel resistance is available in several benchtop designs. Digital output is provided for quantitative evaluation of process or product variability.

Other Instruments

Specialized Rice/Grain Measurement Instruments - Building upon our 75 years or experience designing instrumenta-tion for the rice and grain processing industry, we offer a complete array of instrumentation to measure rice and other grain crops. Manual, semi-automatic, and fully automatic instrumentation for size, color, quality, freshness and chemi-cal composition.