Graphic Recorder
KR series
With AMS2750F /CQI-9 Data Solution

KR2S (144x144mm)
KR3S (288x288mm)
KR2D (144x144mm, PDF Chart)
KR3D (288x288mm, PDF Chart)

PS
PERFORMANCE SPECIFICATION
CHINO

KR2S/3D/2D/3D series are graphic recorders offer digital/electronic record, high input accuracy to meet the requirement of AMS2750F and CQI-9 for heat treatment process.

It also realizes sensor management for usage cycles and days so that sensors are not used beyond their maximum life defined in AMS2750F and CQI-9.

AMS2750F: An aerospace international specification which covers the pyrometric requirements for plants used for the heat treatment of metallic materials.

CQI-9: A special process of heat treat system assessment for to comply IATF 16949 automobiles industry regulation.

■FEATURES

■Digital recording

Comply with "digital" which is a new requirement for the AMS2750 F version and CQI-9 4th version.
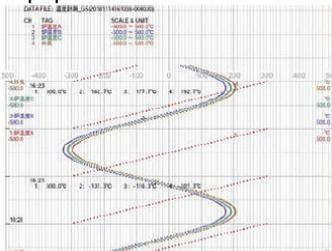
☑ Easy operation without software

The PDF function enables to output both chart paper and digital record to meet the requirement of AMS2750F and CQI-9.

●PDF chart (only KR2D/KR3D)

Create chart paper in PDF format as same form as conventional chart paper.

With digital printing function, operator can see and read the digital data on PDF chart paper form.

●PDF digital record (only KR2D/KR3D)

Electronic signature of PDF file is available to provide evidence that the record was reviewed.

●Binary file

Data files are stored in binary format and such as cannot be falsified.

It is available to provide digital signature as evidence.
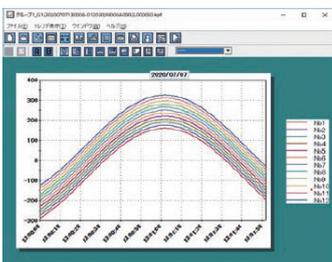
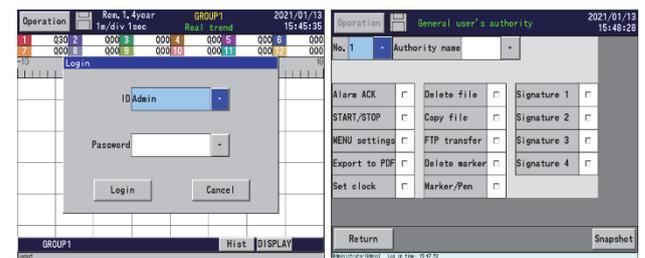

■Electronic recording

☑ System access restriction

User ID and password provide a limitation to authorized operator to access system.

●Up to 5 administrators and 100 general operators can be registered.

●Up to 10 permission levels of operator-authority can be set.

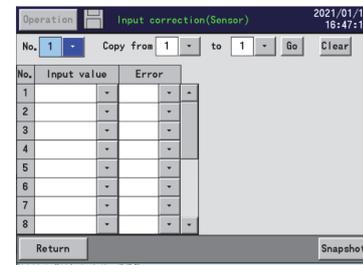
■Calibration accuracy

☑ 16 point input correction meet the requirement of calibration accuracy.

Input correction of sensor and instrument (KR) can be set respectively.

Operator can see the error between displayed values. Set correction values automatically in case error occurred.

●Input correction

Up to 16 input correction for each sensors and instrument can be set.

Input type		Measurement range	Sensor accuracy (includes RJ error)
TC	R	400~1760℃	The greater of ±0.6°C or 0.1% of reading
	S	400~1760℃	
	K	0~1370℃	Note 1 : In the standard operation state described in the instruction manual
	N	400~1300℃	
	J	0~1100℃	Note 2 : Not includes measuring instrument error
	T	0~400℃	

●Automatic input correction
KR input is calibrated easily by just pressing one button.
Calibrates multiple channels simultaneously.
KR automatically recognize input value, error and register.
Instruments correction table is automatically output as a CSV file.
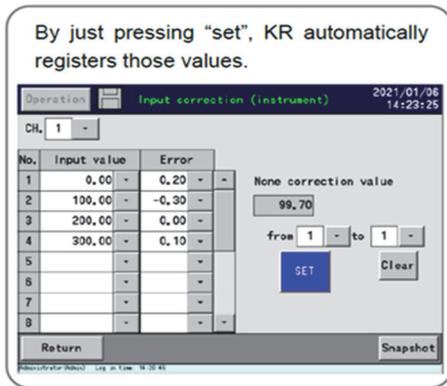
■Sensor management

☑ **Sensor Management function to prevent from overusing sensor**

Count cumulative sensor usage time, cycle time and duration of service.
Since data is managed based on serial no. of sensor, you can change CH connection for calibration freely.
Deterioration diagnosis can also be performed by continuous recording.
Recorder provides replacement notification.

■**MODELS AND SPECIFICATION NO.**
Graphic recorder KR series with AMS2750F and CQI-9 data solution is a special specification of KR2S/KR2D, KR3S/KR3D series.

MODEL	SPECIFICATION NO.
KR2□□PS□*□-□□□Z	FKR-201505
KR3□□□-□□□-□□□Z	FKR-202507

*: Only applicable when "0" or "7" are selected.

■**INPUT SPECIFICATIONS**

Measuring points: KR2S/KR2D: 6points, 12points
KR3S/KR3D: 12points, 24points, 36points, 48points

Input type: Universal
DC voltage…±13.8mV to ±50V
Thermocouple…
B, R, S, K, E, J, T, N,PtRh40-PtRh20,
NiMo-Ni, WRe5-WRe26, W-WRe26,
CR-AuFe, Platinel ll, U, L
Resistance thermometer…
Pt100, JPt100, Pt50, Pt-Co

Sampling rate: KR2S: Approximately 100ms/ 4points
Approximately 1sec/ All points
KR2D/KR3S/KR3D:
Approximately 1sec/ All points

Internal memory: Flash memory (8MB)
External memory: CF card (128MB to 8GB)
Recording cycle: KR2S/KR2D:
100,200,500ms
(Only when KR2S is 4 points input),
1,2,3,5,10,15,20,30s,
1,2,3,5,10,15,20,30,60min
KR3S/KR3D:
1,2,3,5,10,15,20,30s,
1,2,3,5,10,15,20,30,60min

Logging data: Measured data …
File name (group name), time of day,
month and year of recording start,
tag, measured data, alarm status/types,
others

Rated power supply voltage:
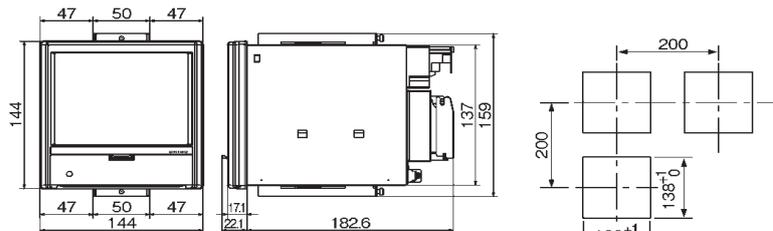100 to 240 V AC (universal power supply), 50/60Hz

Maximum power consumption:
KR2S/KR2D: 35VA
KR3S/KR3D: 60VA

Installation method: Panel mount
Weight: KR2S/KR2D: Approximately 2.1kg
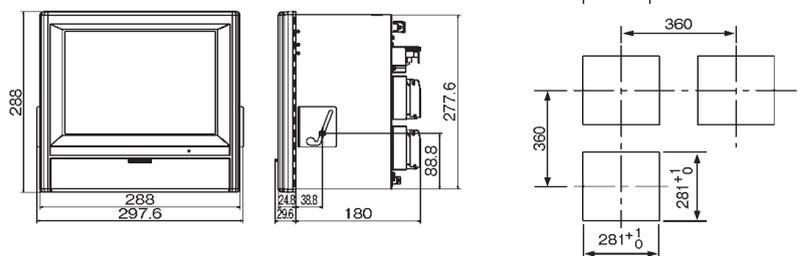KR3S/KR3D: Approximately 5.6kg

*For other specification, please be sure to read each standard specification sheet.

■**DIMENSIONS**
■**KR2S/KR2D**

■**KR3S/KR3D**

Specifications subject to change without notice. 2021. 2

PSE-820