

# Influx

K - IEPE AND K - PT



Handling IEPE and PT sensors



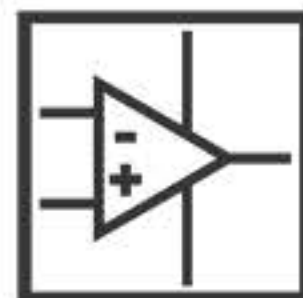
P/N: INF2213



•Add-on



•Voltages



•Amplifier

## Advantages

- Wide frequency range.
- Linear amplitude characteristic in wide dynamic range;
- Ability to operate in severe ambient conditions (temperature, humidity, radiation and magnetic fields);
- High mechanical reliability and durability at the expense of moving parts in the sensor;
- High vibration resistance and shock resistance;
- No need in other power supply for sensor;
- Compact structure and a large ratio of sensitivity to mass.

## K-IEPE -Measuring IEPE Sensor

**ICP/IEPE sensor** is a device for measuring dynamic pressure, power, deformation, or acceleration. It contains a sensitive cell made of piezoelectric material which converts mechanical load into electric signal and microelectronic circuit to amplify the signal and transmit it to external devices.

Since the piezoelectric cells generate electric signal only under the effect of dynamic forces, the accelerometers cannot measure mechanical fluctuations with frequencies reaching 0 Hz. The used preamplifier determines electric signal leakage speed generated by piezoelectric cells of an accelerometer. Power supply of built-in charge preamplifier is performed via a two-wire circuit.

**Influx K-IEPE module** enables easy connection of **IEPE sensors** to voltage input measurement devices.

Our **K-IEPE module** is designed to connect **IEPE sensors** to a voltage measurement device that normally cannot support **IEPE sensors**.

The powered **K-IEPE module** simply enables **IEPE sensors** to be connected via the BNC terminals and output the signal voltages to an analogue measurement device.

Additionally, the **K-IEPE** add-on modules can be connected directly with our **K-Box** and **K-AN8** analogue measurement modules using a 25Way cable (supplied).

The **K-Box** and **K-An8** support sensor measurement of up to 1K Hz per channel.

## Key features

- Connects to the K-Series K-Box/K-AN8 via the analogue inputs.
- Refresh rates achievable (4 channels 1kHz)
- ABS enclosure

Function	Description
Measurement inputs	4
Internal resolution	18 bit
Internal sampling rate per ch.	6.25kHz
Measurement data rate per ch.	4 channels: 1kHz. CAN bus: 1Mbit/s
SW input filter	A digital filter in the ADC module is automatically adjusted to the sampling rate
High pass filter	13.8Hz
Bandwidth	21.8Hz
Operational safety	-0.7V to +24V permanent, additional
Device safety	-0.7V to +24V permanent, additional ESD protection
Input impedance	>10K
Broken sensor detection	Yes
Typical SNR @ 30kHz Band Width	Sampling @6.25Hz: 102dB
Linearity	ADC $\pm 0.75$ LSB
Current source	5.1mA $\pm 2\%$

Function	Description
Voltage	24V
Output power	Maximum total (for 4 channel) current: 60mA
Channel/ power supply	1000 VDC minimum
Sensor excitation/ power supply	1000 VDC minimum
CAN channel	1000 VDC minimum
CAN power supply	CAN and power are galvanically connected
Configuration	Configuration with K-Box Cal application by company protocol
Power Supply	4.5V to 36V DC
Power Consumption	Typ. 2.6W
Housing	ABS
Dimensions	Dimensions: (L115x H26x W105) unit: mm
Weight	Weight: 370g
Protection Class	IP65
CAN/ Power Supply	Two 9-pin D-Type connections with duplicate signals
Signal Inputs	BNC Connector
Operating Temperature Range	-40degC to +85degC



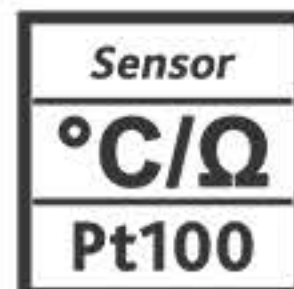
P/N: INF2212



•Add-on



•Temp Reading



•PT100

## K-PT100/1000 -Measuring Pt Sensor

The **Pt100/1000** is one of the most accurate temperature sensors. Not only does it provide good accuracy, it also provides excellent stability and repeatability.

**Pt100/Pt1000** are also relatively immune to electrical noise and therefore well suited for temperature measurement in industrial environments, especially around motors, generators and other high voltage equipment.

Using the K-PT add-on module, it is possible to connect and accurately measure **Pt100** and **Pt1000** sensors.

Our Influx K-PT module is designed to connect up to **Pt100/Pt1000** sensors and to simply provide an output voltage signal. Thus enabling the most standard voltage measurement devices to work **Pt100/Pt1000** sensors.

Additionally, the K-PT add-on modules can be connected directly with our **K-Box** and **K-AN8** analogue measurement modules using a 25 Way cable (supplied).

### Advantages

- Accuracy, excellent stability and repeatability.
- Relatively immune to electrical noise.
- Well suited and widely used for temperature measurement in industrial environments, especially around motors, generators and other high voltage equipment.
- Software easily configurable.

### Key features

- Connects up to 4 RTD sensors to the K-Series K-Box/K-AN8 via the analogue inputs.
- Simple signal configuration using a DBC file.
- Supplied with configuration software Influx K-Cal for Windows®
- Refresh rates achievable (4 channels 100 Hz)
- ABS enclosure

Function	Description
Measurement inputs	4
Type of Measured Sensors	PT100/1000
Measurement Range	-200degC to +850degC
Linearization	Standard tables for different types of ALPHA
Internal Resolution	18 Bit
Internal Sampling Rate per channel.	6.25kHz
Measurement Data Rate per channel.	1, 2, 5, 10, 20 Hz
HW Input Filter	Input filter common mode; Output filter on the amplifier; Differential-Mode Corner Frequency 7.6Hz, Common-Mode Corner Frequency: 159Hz
SW Input Filter	A digital filter in the ADC module is automatically adjusted to the sampling rate. With the current setting (sampling at 6.25kHz), the filter has a frequency of 3kHz
Broken Sensor Detection	Yes
Measurement Current	The current changes, depending on the resistance of the sensor, within the range: 212-224 $\mu$ A

Function	Description
Gain Error at 25degC	± 0.1% of measured value
Offset and Scaling Error	±1K
Gain Drift	± 10ppm/K of measured value
Zero Drift	±5 mK/K
CAN Channel	1000VDC minimum
CAN Power Supply	CAN and Power are galvanically connected
CAN Interface	CAN 2.0B, up to 1Mbit/s
Configuration	Configuration with K-Box Cal application by company protocol
Power Supply	4.5V to 36V DC
Power Consumption	Typ. 1.9W
Designation Housing	ABS
Protection Class	IP65
Weight	370g
Dimensions	Dimensions: (L115x H26x W105) unit:mm
CAN Power Supply	Two 9 pin D-type connectors with duplicate signals
Signal Inputs	Two channels are integrated into a 9 pin D-type connector
Operation Temperature Range	-40degC to +85degC

**Influx Technology Ltd**



[sales@influxtechnology.com](mailto:sales@influxtechnology.com)

[www.influxtechnology.com](http://www.influxtechnology.com)



## K-Series Instrumentation Solution

Price and specification are correct at date of publication but subject to availability or change without notice. Photos for illustrative purposes only - actual items may differ from photo. Influx Technology Ltd cannot be responsible for errors in typography or photography.

All copyrights reserved @2021



**Influx**  
TECHNOLOGY