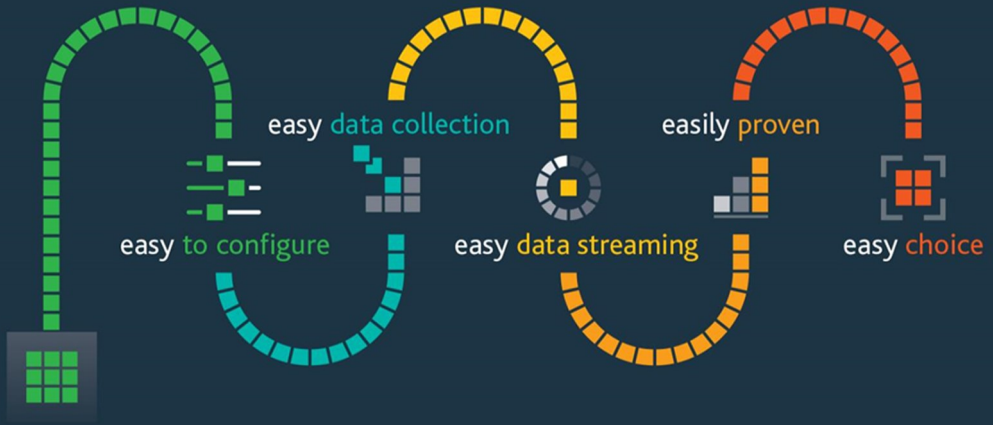
Influx TECHNOLOGY

K-Series Instrumentation Solutions

2023 - V1.2

Out the box dataloggers



connect, simply configure and go

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K-BOX

Multi DAQ Modules

Influx K-BOX

P/N: INF2201

Measuring Thermocouples, Voltages, Currents and P.W.M.

Stackable with all of our K-series instrumentation modules.

Includes our unique power down and WakeOnCAN feature.

Accurate sensor measurement data is transmitted periodically on the CAN Bus .

Advantages

- Combined Voltage, Thermocouple and P.W.M./Digital measurements
- Cold junction compensation for accurate thermocouple measurement
- High input impedance on Analogue inputs
- WakeOnCAN and power down deep sleep mode

K-Box Multi-DAQ Modules

Key Features

- Software switchable voltage input ranges from ±80V to ±10V
- Up to 8 thermocouple connections at up to 10 Hz sampling rate
- 8 Analogue inputs with variable input sampling rates (8 channels at 1kHz, 4 channels at 2kHz and 2 Channels at 10kHz)
- Very high accuracy-Analogue ±0.0015%, Thermocouples ±1°C
- PWM: 3 inputs frequency measurements, counters or pulse measurements
- Outputs: 4 Relay outputs (optional)
- Regulated +5V and +24V output power supply for external sensors
- Supplied with configuration software, Influx K-Cal for Windows® and configurable via a DBC file
- Instrumentation data time synchronised with recorded vehicle network data via CAN
- Galvanic isolation between modules (enclosure, power, CAN BUS and Analogue input module and thermocouple input module)
- Measurement accuracy: ±1° C
- Measurement resolution: .001°C
- Analogue channel over-voltage protection ±150 Volt

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Stackable instrumentation– acquires sensor data for CAN applications

P/N: INF2201

Technical Data

Technical Data	Description
Power supply	6 to 36V DC.
Interfaces	CAN Bus
PC interfaces	None
Enclosure	Dimension (L115xH46xW105) Weight 450g IP65 ABS
Environmental	-40°C to +85°C Humidity max 90%
Output voltages	5 V sensor supply max current 75mA (total power < 1.8W)
	24 V sensor supply max current 75mA (total power < 1.8W)
	Analogue Inputs
Number of channels	8 Bipolar differential inputs
Accuracy	±0.0015%
Software switchable range	±80V, ±40V, ±20V, ±10V
Resolution (ADC)	16 Bit
Max Sampling Rate	1KHz (all 8 channels), 5KHz (4Channels), 10KHz (2 Channels)
Input impedance	> 4 MOhm
Max input voltage	±75V Analogue Ground, ±50V Analogue inputs

Influx K-BOX

Stackable instrumentation– acquires sensor data for CAN applications

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Technical Data

	Thermocouple Inputs
Number of channels	8 J/K/T-type inputs
Accuracy	±1°C accuracy
Measurement Range	Measurement: -200°C to 1250°C
Max Sampling Rate	10Hz (all 8 channels)
Maximum input voltage	±3.3V
	Digital Input / Output
Number of channels	×4 unipolar single-ended hardware configured as inputs or outputs
Input switching thresholds	Low < 1.5V
	High > 2.0V (up to 12V)
Input leakage current	< 10nA
Output states	(Optional) Open collector - 510Ohm
Output drive capability (OK): Collector-emitter voltage	45V max
Collector current (DC)	10mA max
Saturation voltage (OK on)	< 0.15V
Equivalent on-resistance	< 510Ohm
Leakage current at OK off	< 5uA
Min-max applied voltage	Digital input -8V to +12V; Digital output 0V to +40V power supply, which limits the current to 10mA
PWM	3 digital input frequency measurements up to 100kHz or pulse measurements. (min 100 Nano sec) (between pulses 10 microseconds)

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K-Box Kit

P/N: INF2201

1x Influx Technology K-Box

1x Influx Technology K-Bob

1x Kvaser™ Leaf Light

1x Kvaser™ T-Cannector

1x 9 Way-9 Way Cable

1x 25-Way D-Sub terminal

1x 120 Ohm CAN Bus termination D-Sub

1x Influx carry case

This K-Box Kit contains everything needed to get the K-Box set up and tested on a workbench. To help with connecting sensors to the analogue and digital ports, the K-BoB enables easy connection with BNC connectors. Influx K-Cal is easily connected via the Kvaser Leaflight interface and Kvaser T-connector. (Using the Kvaser T-connector to power up the K-Box (at the desk) and terminate the CAN bus).

This kit is supplied in the Influx carry case, is highly recommended for new K-Box users. Very easy to set up and test on a workbench. For example, when calibrating.

Our versatile multi-DAQ K-Box Kit is a cost-effective solution to measure multiple sensor types within one module. Extremely easy to use and ideal for applications that measure inputs such as temperatures, pressures, voltages, currents (using a current clamp), PWM, currents, RPM, digital counters or IEPE sensors. Multiple K-Series modules can be stacked, connected and configured to work together. All K-Series instrumentation modules allow the measurement of signals and the periodic transmission of sensor measurement data on a CAN 2.0 network

Typical Applications

- Vehicle testing with additional instrumentation requiring a wide range of sensors, for example, voltage, pressure, fuel flow, RPM, event counters, acceleration, temperature etc
- Competitor bench testing (reverse engineering). Instrumentation combined with vehicle CAN data (collected via our Rebel/ReXgen data loggers)
- Vehicle engineering component testing, (using K-series add on modules for IEPE and PT100/PT1000 sensors)

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K-Series Instrumentation Solutions

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