Influx TECHNOLOGY

K-Series Instrumentation Solutions

Version 2.0

Out the box dataloggers

easy data collection

easily proven

easy to configure

easy data streaming

easy choice

connect, simply configure and go

Influx

K-Box

Multi DAQ Modules

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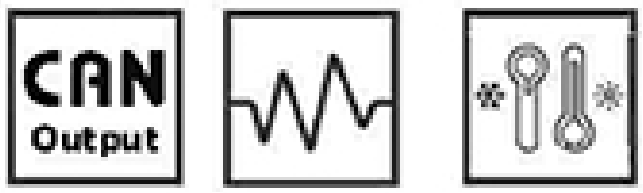
K-BOX

P/N: INF2201



K-Box Multi-DAQ Modules

Measuring Thermocouples, Voltages, Currents and P.W.M
The K-Box is simply the most cost effective and flexible method available to measure multiple sensor types. This avoids higher costs, complexity, cables and space. Stackable with all of our K-series instrumentation mo dules,the K-Box includes our unique power down and WakeOnCAN feature, enabling quick installation on long term unattended fleet test vehicles. Accurate sensor measurement data is transmitted periodically on the CAN Bus enabling multiple K-Series modules to be connected together and data recorded via our CAN data loggers.

Advantages

- Combined Voltage, Thermocouple and P.W.M./Digital measurements.
- Software switchable voltage input ranges from ± 80V to ± 10V.
- Very high accuracy-Analog ± 0.0015%, Thermocouples ± 1 Degree C
- Cold junction compensation for accurate thermocouple measurement.
- High input impedance on Analog inputs.
- WakeOnCAN and power down deep sleep mode.

Key Features

- Up to 8 thermocouple connections at up to 10 Hz sampling rate.
- 8 Analog inputs with variable input sampling rates. (8 channels at 1k Hz, 2 channels at 10k Hz).
- 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 Analog input module and thermocouple input module).
- Measurement accuracy: ± 1 degree C, Measurement resolution: .001-degree C.
- Analog channel over-voltage protection ± 150 Volt.

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Stackable instrumentation – acquires sensor data for CAN applications

P/N INF2201

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	10 Hz (all 8 channels)
Maximum input voltage	±3.3 V
	Digital Input / Output
Number of channels	x4 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 - 510 Ohm
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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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	5V and 24V (Max current drawn 80 mA combined)
	Analog 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	1 KHz (all 8 channels), 2 KHz (4Channels), 10 KHz (2 Channels)
Input impedance	> 4 M Ohm
Max input voltage	±75 Analog Ground, ±50 V Analog inputs

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K-BOX

K-Box Kit

1x Influx Technology K-Box

1x Influx Technology K-Bob

1x Kvaser™ Leaf Light

1x Kvaser™ T-Cannector

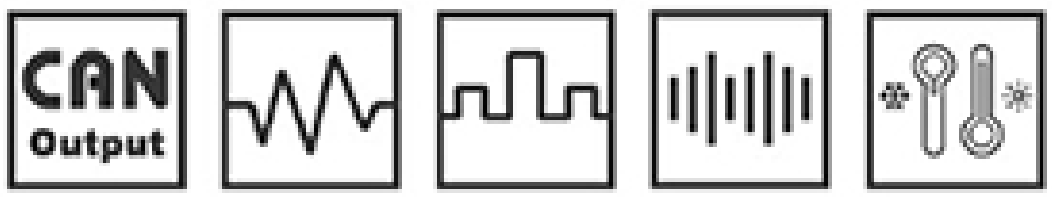
1x 9 Way-9 Way Cable

1x 25-Way D-Sub terminal

1x 120 Ohm CAN Bus termination D-Sub

1x Influx carry case

P/N: INF2202



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.

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 data loggers).
- Vehicle engineering component testing. (Using K-series add on modules for IEPE, PT100/PT1000 sensors)

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K-Series Instrumentation Solution

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