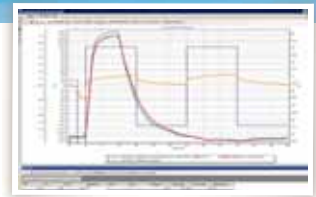




# Auxiliary Input & Output System

## Additional I/O for PEC Test Equipment



Testing advanced batteries and modules requires more than the usual Battery Voltage, Current and Temperature measurements standard available on PEC Test Equipment.

Auxiliary Input and Output Systems (AIOS) obtain additional data such as individual cell temperatures or individual cell voltages, read digital inputs and control analog & digital outputs. Data received from these sensors are sent to PEC Test Equipment via CAN communication. This data can be used in the test program as triggers or end conditions.

### Configuration

Each AIOS backplane has 8 slots which can be equipped with different I/O modules. These I/O modules are pluggable and fit in one of the eight slots of the AIOS. Different AIOS backplanes can be connected through daisy-chain with the internal CANbus of PEC Test Equipment. Up to 1000 aux I/O's can be controlled by one PEC Test Equipment.

When connected to the internal CANbus of PEC Test Equipment, the Lifetest Software allows a flexible mapping of the I/O modules to each channel of PEC Test Equipment. The AIOS can also be connected to the CANbus interface of an individual channel. The sampling time of the modules is then increased from 1 second to 100 msec. The possible configurations can be found on the backside of this document.

### Different IO's

The AIOS backplane supports 9 types of I/O-modules: analog voltage input, analog voltage output, digital input, digital output, temperature sensor input (RTD modules for thermistors and THC modules for thermocouples and BMS interfaces (I<sup>2</sup>, CAN, RS485). Technical specifications of these modules can be found on the backside of this document.

## HIGHLIGHTS

Monitor individual cell voltages and cell temperatures

Control relais with digital in- and outputs

Simulate the BMS system from your test equipment

Communicate with BMS system over CAN, I<sup>2</sup>C or RS485

Use data from Auxiliary Input and Output Systems as end conditions or triggers in your test profile



# Auxiliary Input & Output System

## Additional I/O for PEC Test Equipment

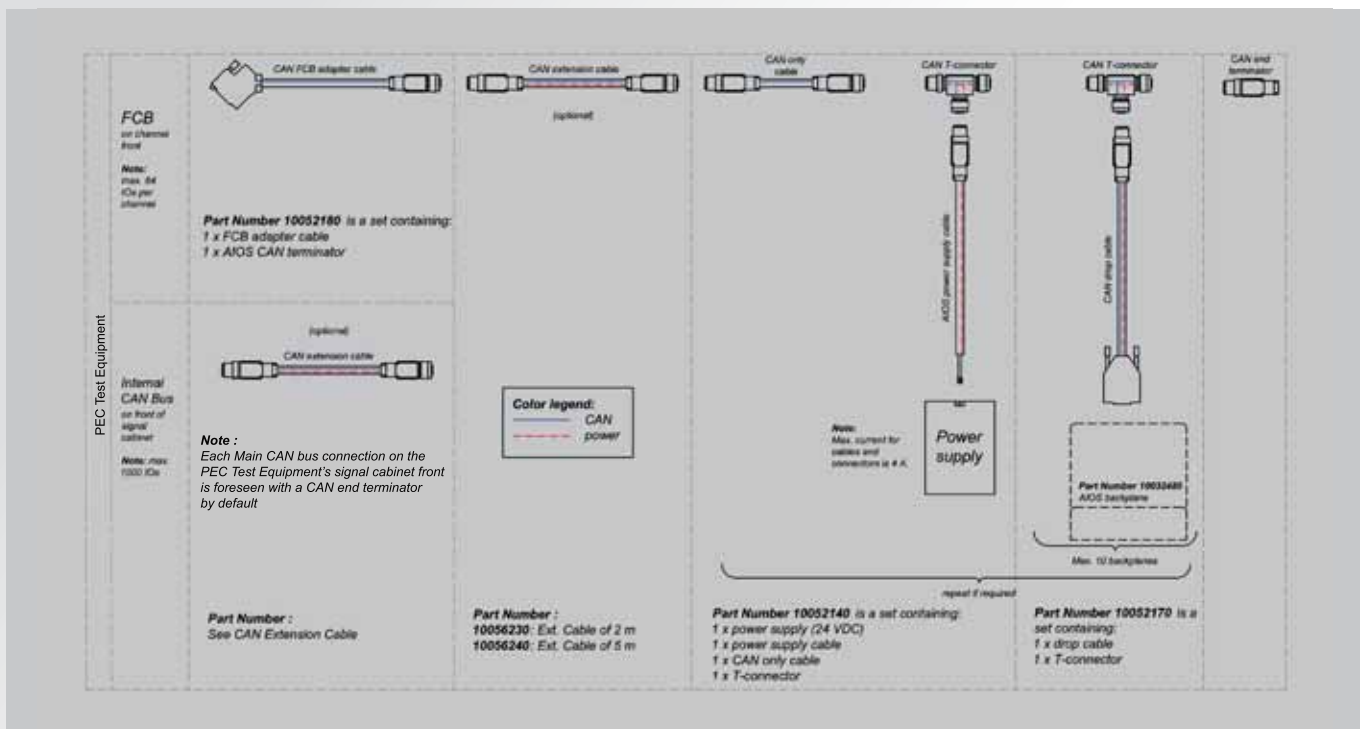


### Technical specifications of I/O Modules

	Analog Voltage Input (AI)	Analog Voltage Output (AO)	Digital Input (DI)	Digital Output (DO)	Temperature Input (RTD)	Thermocouple Input (THC)	BMS Interface (BMS)
Picture							
Channels	1 input	1 output	4 inputs	4 outputs	1 input	1 input	1
Range	$\pm 10V, \pm 1V, \pm 0.1V$	$\pm 10$ Volt	+24Vdc	+10 to +24 Vdc	0 to 300 k $\Omega$	-	-
Resolution	16 bits	16 bits	-	-	16 bits	0.01°C	-
Specifics	$\pm 15V$ output for powering ext. device	-	-	Max current 4A for 4 outputs	NTC, PTC(NT10k, PT100,...)	type K, T, J	CAN RS485 I <sup>2</sup> C



### Configuration of I/O Module



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more info

