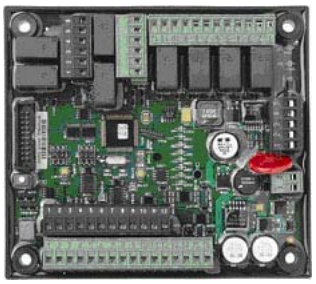
PowerCommand® Input/output Expansion Module AUX 101 and AUX 102



> Specification sheet

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Power Generation

Description

The PowerCommand AUX 101 Input/output Module and the AUX 102 Input/output Expansion Module provide up to sixteen (16) relay output and up to twelve (12) discrete/analog inputs for auxiliary control and monitoring of the power system.

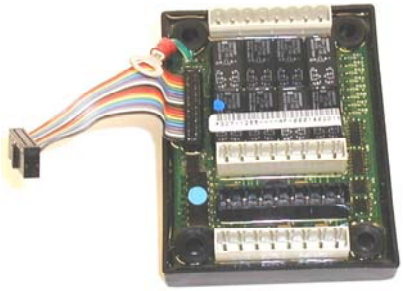
Analog/discrete inputs can be used for system fault expansion and/or generator set metering.

Relay outputs can be used for controlling equipment such as motors, louvers, lamps, fans and pumps. The relays may be configured individually from the genset control operator interface or using InPower™ software.

The AUX 101 and AUX 102 modules are compatible with genset controls supporting a PCCNet network and require a twisted pair connection. This includes the PCC 1301 control.

AUX 101 - Contains eight (8) Form-C relay output sets and eight (8) discrete/analog inputs.

AUX 102 - Easily connects to the AUX 101 to provide an additional eight (8) Form-C relay outputs and (4) additional discrete inputs.



AUX 102 - Expansion

Features

- Up to sixteen (16) configurable Form-C relays provide easy control of system equipment such as lamps, louvers, motors and pumps. LED status of each relay.
- Up to twelve (12) configurable discrete inputs for monitoring equipment status and faults. Equipment status and faults will be annunciated.
- Up to eight (8) analog inputs. Analog inputs can be assigned one of seven preprogrammed functions:
  - Oil temperature
  - Exhaust temperature
  - Fuel level
  - Ambient temperature
  - Alternator RTD
  - Speed bias (for manual paralleling only)
  - Voltage bias (for manual paralleling only)
- Two 5 VDC voltage sources for use with active senders.
- Four programmable current sources for use with resistive senders.
- Two status LEDs:
  - DS1 (green) indicates the AUX 101 is connected to the network and operating normally
  - DS2 (red) indicates the AUX 101 has lost its connection or is not connected to the network
- Device number indicator. Seven segment LED used to uniquely define more than one AUX 101 on the same network.
- May be connected at any point in the PCCNet network.
- Plug-and-play networking - No binding required.
- Pluggable terminal blocks allow easy one-time wiring.
- Less wiring makes installation and system upgrades quick and easy.
- PowerCommand controls are supported by a worldwide network of independent distributors who provide parts, service and warranty support.
- UL Listed and labeled; CSA certified; CE compliant.

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Specifications

Signal requirements

Network connections - RS485, twisted-pair 78 kbps

Control power - 5-40 VDC

Current

- 200 mA typical at 12 V, no active relay
- 100 mA typical at 24 V, no active relay
- 800 mA at 12 V, all relays active

Terminations for control power accept wire up to 16 ga.

Environment

The AUX 101 and AUX 102 are designed for proper operation in ambient temperatures from -40 °C to +60 °C (-40 °F to +140 °F) and for storage from -40 °C to +80 °C (-40 °F to +176 °F). Modules will operate with humidity up to 95%, non-condensing

Relay ratings (AUX 101)

- Normally closed: 3 A at 250 VAC or 30 VDC
- Normally open: 5 A at 250 VAC or 30 VDC

Relay ratings (AUX 102)

- 2 A at 125 VAC, 2 A at 30 VDC

Input ratings (AUX 101)

- Active low inputs
- Maximum voltage 24 VDC (inputs 1 - 6)
- Maximum voltage 40 VDC (inputs 7 - 8)

Network length - Maximum 1219 m (4000 ft)

Approved wiring - Cat 4 or Cat 5 (stranded)

Configurations

All configurations are stored in the main genset control and are modified from the generator set control HMI or using InPower PC software.

Discrete/analog inputs:

Each AUX 101 input can be configured as discrete or analog. AUX 102 inputs are discrete only. Discrete inputs have the following configuration options:

- Active high or active low
- Event, warning or shutdown
- Programmable text (displayed on genset HMI and InPower software)

Analog inputs have a set of predefined functions and can only be configured on certain module inputs. Below is a list of functions and possible module inputs:

- Input 1 - Voltage bias (-3 to +3 VDC)*
- Input 2 - Speed bias (0 to +5 VDC)*
- Inputs 3 - 6
  Oil temperature
  Exhaust temperature
  Ambient air temperature
  Fuel level
  Alternator temperature

Inputs are defaulted to disabled

* Please note that speed and voltage bias interfaces are for manual paralleling only and must not be used with automatic paralleling controls.

Relay outputs

Outputs can be configured to energize on occurrence of any event or fault code supported by the genset control.

The relay outputs default to the following:

AUX 101

1 - Low oil pressure
2 - High engine temperature
3 - Charger AC failure
4 - Battery (low, weak, high)
5 - Engine overspeed
6 - Fail-to-start
7 - Not-in-auto
8 - Generator set running

AUX 102

9 - Pre-low oil pressure
10 - Pre-high engine temperature
11 - Low coolant level*
12 - Low fuel level*
13 - Low coolant temperature
14 - Common alarm
15 - Not defined
16 - Not defined

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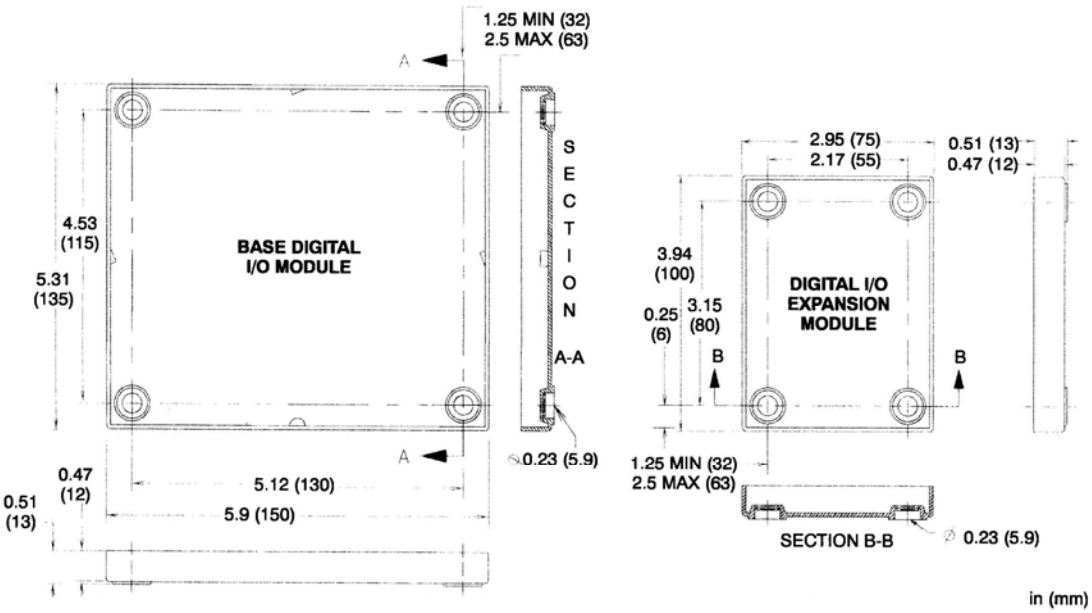
Dimensions



Ordering information

Part number	Description
0541-1291	AUX 101 Digital Input/output Module - Base – PCC 1301
0184-0263	AUX 101 Digital Input/output Module - Base – PCC 1301 on DN and GN model generator sets
0630-3142	AUX 102 Digital Input/output Module wiring diagram - Instruction sheet C693
0541-0772	AUX 102 Digital Input/output Module - Expansion

PCCNet Logo

Look for this logo on spec sheets of PCCNet compatible devices.

PCCNet COMPATIBLE

See your distributor for more information.

Cummins Power Generation

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