CANLG-IN / CANLG-OUT

Installation Overview:

The CANLG-IN and CANLG-OUT products may come in a variety of combinations. It can have 2, 4, or 8 Inputs, or be coupled with 2 or 4 outputs (CANLG-OUT). The CANLG prefix identifies the product as a CAN Bus Analog box. CANLG products may monitor for a 4-20mA signal (CANLG-IN), or may output a 4-20mA signal (CANLG-OUT). CANLG-IN inputs are often used for monitoring pressure, temperature, and positioning sensors. CANLG-OUT outputs are often used to control proportional valves or electronic regulators.

CANLG - CAN Analog Box
IN - References a bank of 4-20mA inputs
OUT- References a bank of 4-20mA outputs
2, 4, 8 - References number of IN or OUT connections.

Recommended location(s):

The CANLG box is often mounted in a centralized location (ie. rear console), or in a conveniently located near the point-of-load in a sealed enclosure to reduce wiring . An example of near the point of load would be placing the CANLG device near pumps or tanks in a sealed NEMA enclosure.

Mounting:

The CANLG boxes come with a DIN clip on the device for top hat DIN rail mounting. Skip-Line does not supply DIN rails, so please contact your preferred distributor or order DIN rails online.

Use Top Hat DIN Rails:
EN 5022 35mm x 7.5mm
EN 5022 35mm x 15mm (deep version)

https://en.wikipedia.org/wiki/DIN_rail
https://www.digikey.com/product-detail/en/phoenix-contact/0807012/277-2064-ND/2179626

Please mount in a location free from exposure to:
- Water
- Pressure Washing
- Excessive mechanical vibration
- Temperature extremes
- Intermittent, poorly regulated, highly inductive, or noisy power sources
- Improper wiring

Communications Cabling

The CANLG device receives communication via CAT5 cables. Connect devices to the most convenient hub on any of the numbered hub jacks (1-8). It does not matter which hub a device is connected to. Please keep CAT5 cables between the hub and devices to a maximum length of 5 meters (16.4 ft).

 If a device is properly connected to an SC-12 Core Hub or BUS-012 Hub, the large green port light should be illuminated to indicate the device is pulling current.

Cabling should use 26AWG (or larger) Cat5 cable and RJ45 connectors. Cat5 cable should not be longer than 5 meters (16.4 feet). The Hubs accept only standard RJ45 plugs. Some of the devices have sealed RJ45 jacks, available from Skip-Line, which will accept either standard or strain-relieved IP-67 rated plugs. See Appendix B of the SC-12 Manual for instructions on RJ45 568-B connector wiring.

Avoid pinch points where the cable may be damaged from moving parts.

Tips:
- Use a continuity tester for all Cat5 cables

Power Connectors:

The CANLG device receives power through the CAT5 cable, so no additional power is required.

Dimensions:

- Single gang box - 1.75"W x 4.5"H x 4.25"D
  - CANLG-IN2
  - CANLG-OUT2
- Dual gang box - 2.3"W x 4.5"H x 4.25"D
  - CANLG-IN4
  - CANLG-OUT4
  - CANLG-IN2-OUT2

- Quad gang box - 4.3W" x 4.5"H x 4.25"D
  - CANLG-IN8
  - CANLG-OUT8
  - CANLG-IN4-OUT4
  - CANLG-IN2-OUT6
  - CANLG-IN6-OUT2

Connections:

The CANLG device accept 8-pin Euro Plug connectors (supplied by Skip-Like). Pin wiring may vary, so please refer to your vehicle's wiring sheet for instructions. The number of 8-pin Euro Plugs per device will vary depending upon the number of headers on the box.

- Single Gang Options has 1 x 8-pin Euro Plug connector
- Dual Gang Options has has 2 x 8-pin Euro Plug connectors
- Quad Gang Options has 4 x 8-pin Euro Plug connectors

IN Connections

The 4-20mA signal is only monitored on L- pins. The other pins are available for convenience.

L- Pin: The 4-20mA signal input
+12V Pin: Outputs clean, filtered +12V to power sensors
L+ Pin: Outputs clean, filtered +30V to power sensors
GND Pin: Outputs ground.

Note: If the sensor is NOT powered using Skip-Line outputs, it is recommended that the GND pin be linked with sensor ground source to reduce noise.

OUT Connections

The 4-20mA signal is only outputted on L+ pins. The other pins are available for convenience.

L+ Pin: The 4-20mA signal output
+12V Pin: Outputs clean, filtered +12V to power sensors
L- Pin: Ground side of current loop.
GND Pin: Additional ground for 4-wire valves (rare)
VO Pin: Outputs clean, filtered +30V to power sensors

Note: If the sensor is NOT powered using Skip-Line outputs, it is recommended that the L- pin be linked with sensor ground source to reduce noise.

Troubleshooting

CAN Diagnostic Lights

There are 2 CAN Diagnostic Lights on the front of all CANLG boxes labeled POWER and TRAFFIC.

The POWER LED indicates it has clean power from the CAT5 cable. The POWER light will be solid.

The TRAFFIC LED indicates that the devices is receiving CAN-bus activity. It can either be solid or blinking.

If the POWER and/or TRAFFIC lights are not illuminated check the CAT5 cable.

Addressing:

Each CANLG device will be assigned an address. This is indicated with labels on both the front and the top of the device. The address is a self-identifier for the CANLG device. If a CANLG-IN2 device, for example, is addressed A1, it will know to only monitor the CAN-bus for instructions that are assigned to A1.

CANLG boxes can be easily re-addressed so they are interchangeable (or even stockable). The address is set using a simple pot switch on the top of the device (under the top address label). The pot can be rotated to a different value to assign a new address. To re-assign a CANLG device from address A1 to A3, simply turn the pot so the arrow points to 3 instead of 1.

Re-addressing may be helpful in troubleshooting a cable issue or in the event of a CANLG device failure. When using the Point-of-Load wiring method, a CANLG box on the right side of the vehicle may be re-assigned and physically moved to take the place of a faulty CANLG box on the left side of the vehicle.

<u>WARNING!!!</u>

Always unplug all LOAD (green connectors) and CAT-5 cables prior to any welding on the vehicle. Failure to do so may result in severe damage to the unit.