



Installation and Operation Manual

HouseLink HL-10C



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Description

The HouseLink HL-10C provides a CAN bus interface to the CAN bus controller.

The HouseLink HL-10C is designed to be used with the BinTrac Bin Weighing system. One HouseLink HL-10C can be connected to one BinTrac indicator and can connect with a maximum of four bins.

Installation

1. The HouseLink HL-10C should be mounted no more than 10 feet from the CAN bus controller.
2. Using a two-conductor cable (ordered separately), connect the GREEN wire from the Smart Summing Box to the +COM terminal in the HouseLink HL-10C and the White wire from the Smart Summing Box to the -COM terminal in the HouseLink HL-10C.
3. Connect the HouseLink HL-10C to the CAN bus controller by connecting the **CAN (HI)** to the **CAN (HI)** terminal and the **CAN (LO)** to **CAN (LO)** terminal of the CAN bus controller.
4. Finally, connect the **24V (+)** from the HouseLink HL-10C to the **24V (+)** of the CAN bus controller and the **24V (-)** from the HouseLink HL-10C to the **24V (-)** of the CAN bus controller.

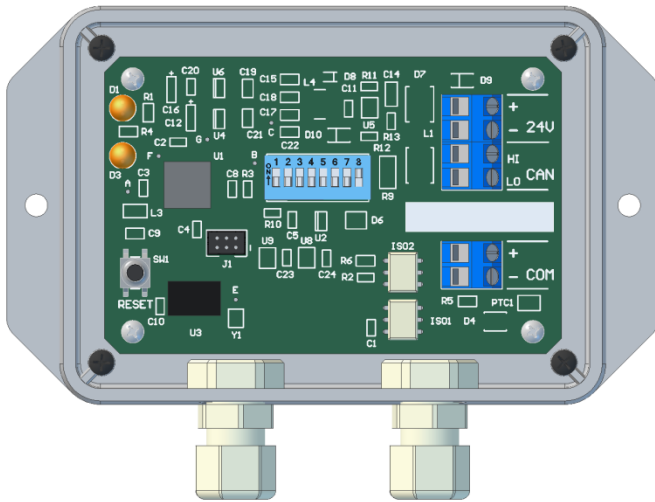


Figure 1

HL-10C Interface	BinTrac Indicator (BINS Port)
+COM (OUT)	+ SIG (GREEN wire)
-COM (OUT)	- SIG (WHITE wire)
HL-10C Interface	CAN Bus Controller
CAN (HI)	CAN (HI)
CAN (LO)	CAN (LO)
24V (+)	24V (+)
24V (-)	24V (-)

Table 1

5. The unit has an 8-position dip switch that needs to be set up for configuration. Switches 1, 7, and 8 are set to ON from the factory. See **Table 2** for dip switch identification.

DIP 1	Lower bit of 0x40 offset CANopen device address. This DIP is set if the CANopen address should be 0x40 + 0x01
DIP 2	Upper bit of 0x40 offset CANopen device address. This DIP is set if the CANopen address should be 0x40 + 0x02
DIP 3	Unused
DIP 4	Unused
DIP 5	Unused
DIP 6	LB/KG Units setting. This DIP is set if the BinTrac is configured using kg units.
DIP 7	Use CANopen setting. This DIP is set if the Can bus controller should use the CANopen protocol. Otherwise it uses the old (CAN Classic) communications routine.
DIP 8	120 Ohm Resistor. This DIP is set if the 120 Ohm termination resistor should be applied to the CAN bus line.

Table 2

BinTrac Indicator Setup

The BinTrac Indicator must be set up for peripheral devices. Access the SETUP menu on the BinTrac Indicator by pressing and holding the BIN key for until SETUP is displayed on the screen, then release BIN key. With SETUP displayed, press the BIN key until BIN D is selected. Use the UP/DOWN arrows to enable peripheral devices (BIN D LED is solid ON).

The Bin LEDs indicate configuration options as being enabled (solid on) or disabled (flashing).

Bin A – Configures BinTrac Monitor as a Remote Display.

Bin B – Enable ASCII Serial Communications Command Set

Bin C – Enable Weight Broadcast.

Bin D – Enable communications to peripheral devices.

This must be enabled when BinTrac Indicator is connected to the HouseLink HL-10C.

LED Operation

CAN Bus Status LED:

SLOW FLASH – This indicates the unit is communicating and operating normally.

STEADY ON – This indicates the unit is not communicating but has power.

NO LIGHT – The unit doesn't have an adequate power source

BinTrac Status LED:

SLOW FLASH – This indicates the unit is communicating and operating normally.

FAST FLASH – This indicates the unit is in TEST mode.

STEADY ON – This indicates the unit is not communicating but has power.

NO LIGHT – The unit doesn't have an adequate power source

Testing and Calibration

Reset/Test button:

Once the unit is wired up properly, the unit can be put into one of five test modes. These modes are useful when setting up and testing with the CAN bus controller.

Test 1 – Press the Reset/Test button on the board once and the unit will output 0% full scale weight.

Test 2 – Press the Reset/Test button on the board twice and the unit will output 25% full scale weight.

Test 3 – Press the Reset/Test button on the board three times and the unit will output 50% full scale weight.

Test 4 – Press the Reset/Test button on the board four times and the unit will output 75% full scale weight.

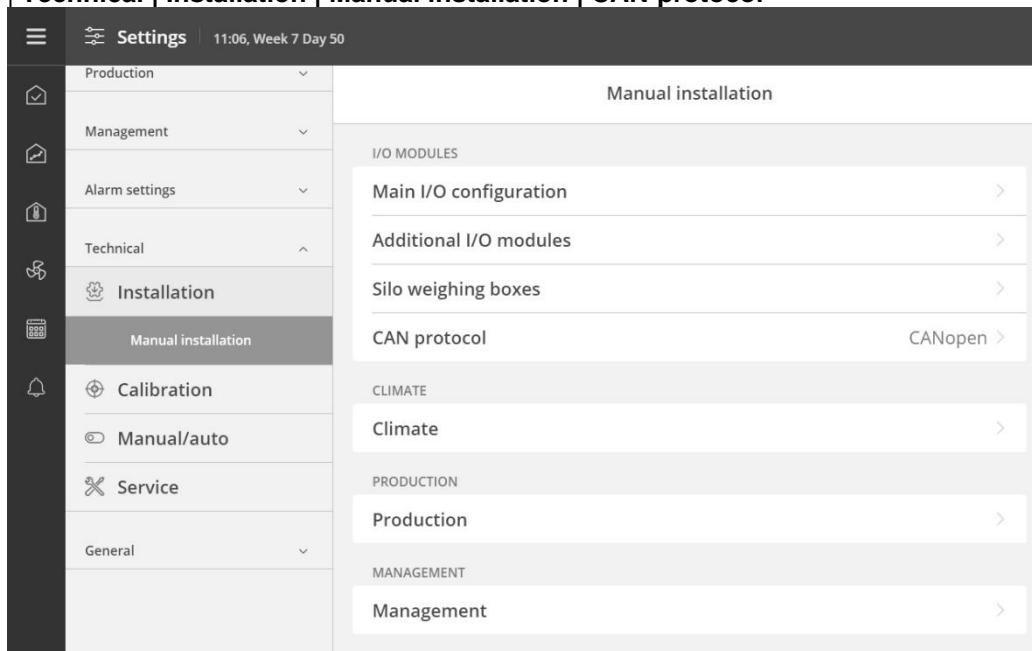
Test 5 – Press the Reset/Test button on the board five times and the unit will output 100% full scale weight.

Pressing the test button a sixth time will return the unit to normal operation. If the unit is left in test mode, it will automatically return to normal operation after five minutes.

CAN Open Setup

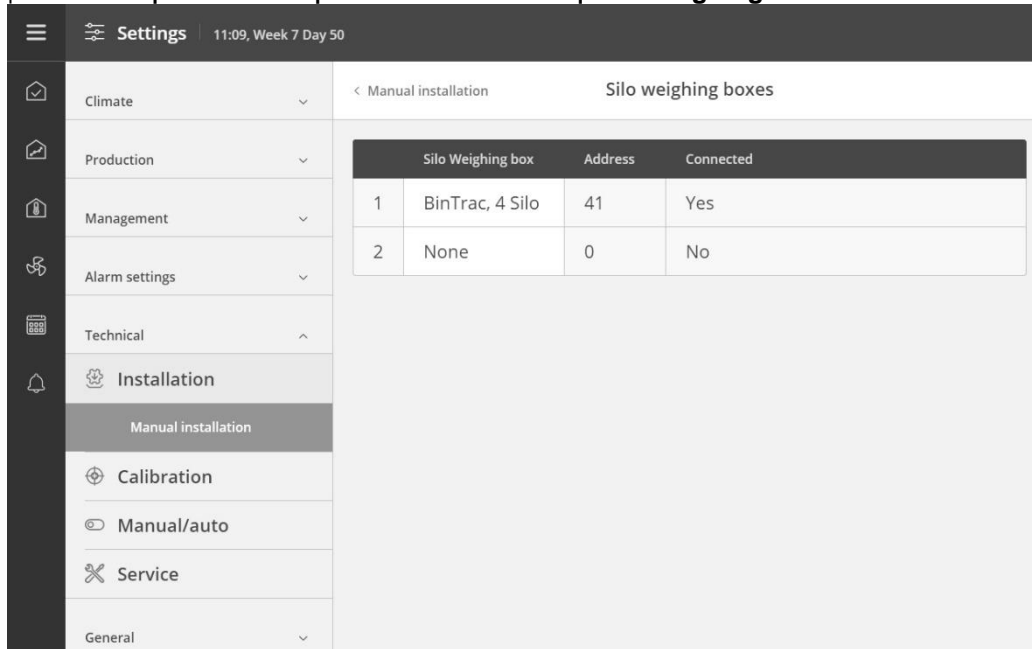
Make sure the CAN protocol is set to CANopen.

Technical | Installation | Manual installation | CAN protocol



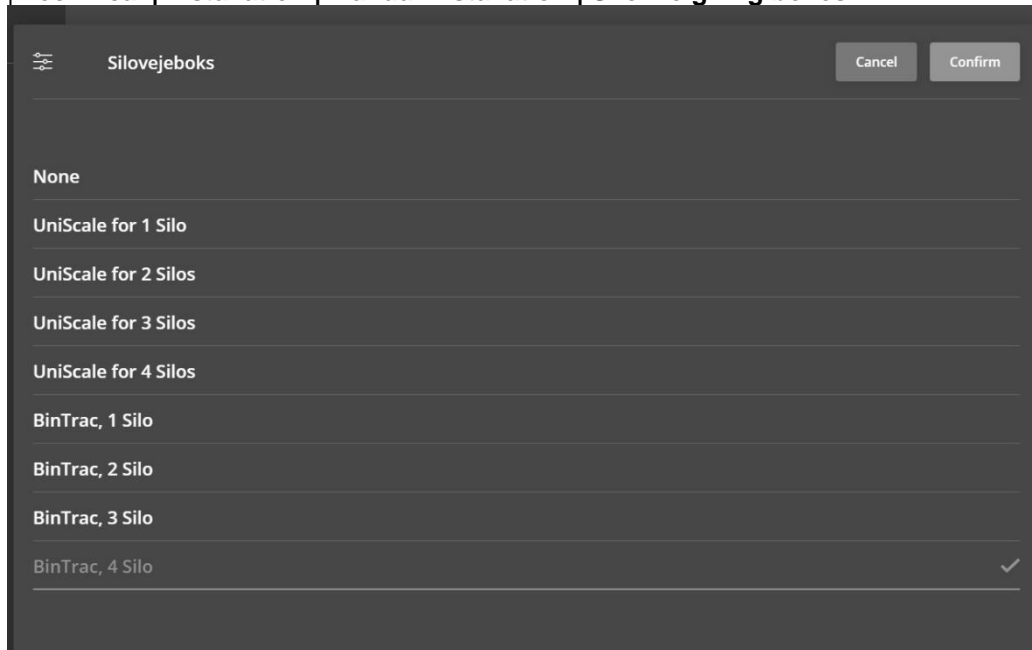
Here you see the CAN bus address (CAN ID) and if it is connected. Utilize address 41 for bins 1-4 and address 42 for bins 5-8.

Technical | Installation | Manual installation | Silo weighing boxes

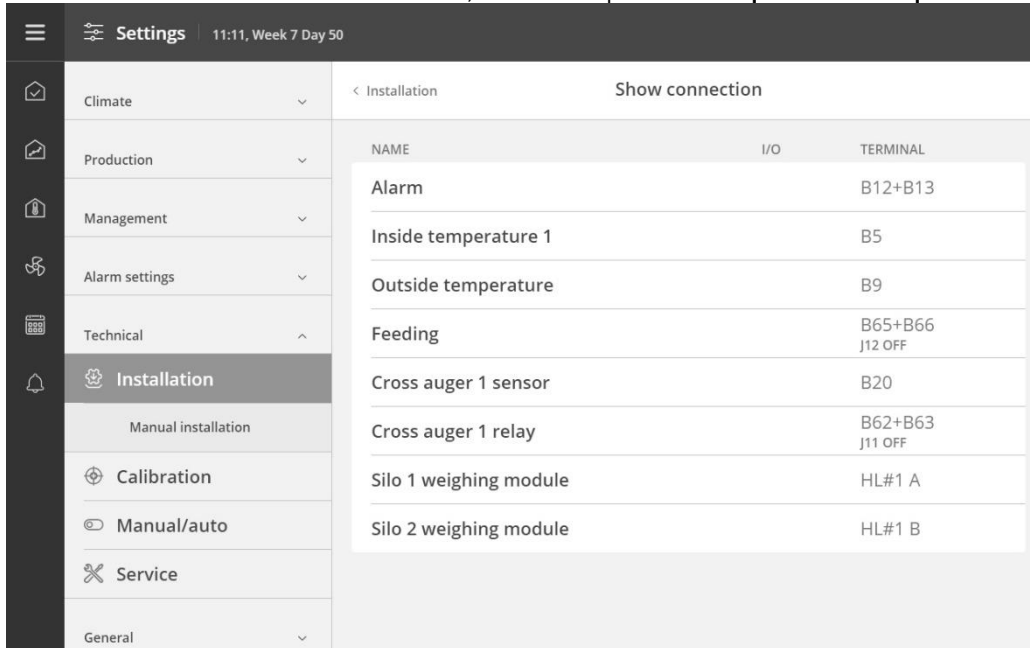


Select the number of BinTrac bins enabled. The CAN controller supports up to 8 electronic silo weighers.

Technical | Installation | Manual installation | Silo weighing boxes



For correct connection of silo load cells, see menu | **Technical | Installation | Show connection**



The screenshot shows the BinTrac Settings application. The 'Installation' menu item is selected in the left sidebar. The main content area displays the 'Show connection' table, which lists various components and their terminal connections.

NAME	I/O	TERMINAL
Alarm		B12+B13
Inside temperature 1		B5
Outside temperature		B9
Feeding		B65+B66 J12 OFF
Cross auger 1 sensor		B20
Cross auger 1 relay		B62+B63 J11 OFF
Silo 1 weighing module		HL#1 A
Silo 2 weighing module		HL#1 B

CAN Classic Setup

The following two settings must be configured when using properly on the CAN bus controller to allow for accurate weight communication with the BinTrac system.



The screenshot shows the 'SERVICE' menu in the BinTrac application. It displays calibration and offset values for two silos.

Setting	Value
Silo 1 calibration value	10.000 t
Silo 1 offset value	0.000 t
Silo 2 calibration value	10.000 t
Silo 2 offset value	0.000 t

1. Set Calibration value to same value as total Load Cell Capacity setting in the BinTrac Indicator.
2. Set Offset value to "0".

For complete installation and setup of your CAN bus controller, please consult your user manual.

Operational Specifications

CAN Bus version:	Compatible with ISO 11898 STANDARDS
Operating Temperature Range:	-40°C to +60°C (-40°F to +140°F)
Operating Voltage Range:	10.5 VDC to 27.0 VDC
Humidity:	5% to 95% (non-condensing)
Environmental Air:	No corrosive gasses permitted
Enclosure Type:	Non-Sealed
Wiring Type:	Screw terminal blocks

Wiring Diagram

