Installation and Operation Manual

HouseLINK HL-10P & HL-10P(LV)

HouseLink™ HL-10P/HL-10P(LV)
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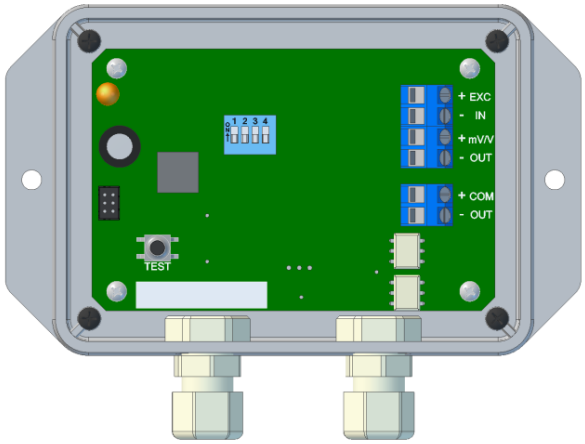
DESCRIPTION

The House Link HL-10P/HL-10P(LV) provides a 2mV/V or 3mV/V output proportional to the weight of the selected bin. The device will connect to the BinTrac® Indicator “BINS” port in parallel with the summing box. The BinTrac Indicator transmits digital weight data which is converted to a proportionate millivolt output.

INSTALLATION

The HouseLink HL-10P/HL-10P(LV) is designed to be used with the BinTrac Bin Weighing system. One HouseLink HL-10P/HL-10P(LV) can be connected per displayed bin. (Two HL-10P/HL-10P(LV) max per Bintrac Indicator)

1. The HouseLink HL-10P/HL-10P(LV) should be mounted no more than 10 feet from the house control.
2. Using a two-conductor cable (ordered separately), connect the Orange wire from the Smart Summing Box to the +COM (OUT) terminal in the HouseLink HL-10P/HL-10P(LV) and the White wire from the summing box to the -COM (OUT) terminal in the HouseLink HL-10P/HL-10P(LV).
3. Connect the HouseLink HL-10P/HL-10P(LV) to the house control by connecting the +EXC (IN) to the + EXC terminal and the
   –EXC (IN) to the –EXC terminal of the house control.
4. Finally, connect the +mV/V (OUT) from the HouseLink HL-10P/HL-10P(LV) to the + SIG of the house control and the –mV/V from the HouseLink HL-10P/HL-10P(LV) to the –SIG of the house control.



HL-10P/HL-10P(LV) Interface	*Smart Summing Box (BINS Port)*
+COM (OUT)	+ SIG (orange wire)
-COM (OUT)	- SIG (white wire)
HL-10P/HL-10P(LV) Interface	***House Control/PLC***
+ EXC (IN)	+ EXC
- EXC (IN)	- EXC
+ mV/V (OUT)	+ SIG
- mV/V (OUT)	- SIG

Table 1

INSTALLATION (continued)

The unit has four dip switches that need to be set up for configuration.

The settings on the switches S1 and S2 coincide with the bin:

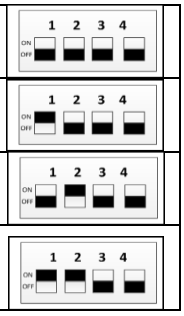
BIN	S1	S2	S3	S4	
A	OFF	OFF	OFF	OFF	
B	ON	OFF	OFF	OFF	
C	OFF	ON	OFF	OFF	
D	ON	ON	OFF	OFF	

Table 2

ZERO Calibration Feature

By default, dip switch S3 is in the OFF position. This setting allows the ZERO to be tracked with the BinTrac Indicator. Setting S3 to the ON position will allow the ZERO to be tracked by the house controls.

Output Scale Selection

By default, dip switch S4 is in the OFF position. This setting provides a 3mV/V output at full scale. Setting S4 to the ON position will provide a 2mV/V at full scale instead.

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 approximately 10 seconds.

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 Monitor is connected to: BinTrac Remote Display or HouseLink HL-10P/HL-10P(LV).

1. Press the BIN key to select the desired configuration option.
2. Use the UPPER or LOWER keys to enable or disable options.

STATUS LED OPERATION

The LED will flash three different ways dependent upon how the unit is operating.

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

FAST FLASH – This means 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

Once the unit is wired and the dip switches are set up correctly, the unit can be put into one of five test modes. These modes are useful when setting up and testing with the house controls.

Test 1 – Press the Test button on the board once and the unit will output -0.5 mV/V.

Test 2 – Press the Test button on the board twice and the unit will output 0 mV/V.

Test 3 – Press the Test button on the board three times and the unit will output 2 mV/V.

Test 4 – Press the Test button on the board four times and the unit will output 3 mV/V.

Test 5 – Press the Test button on the board five times and the unit will output 4.5 mV/V.

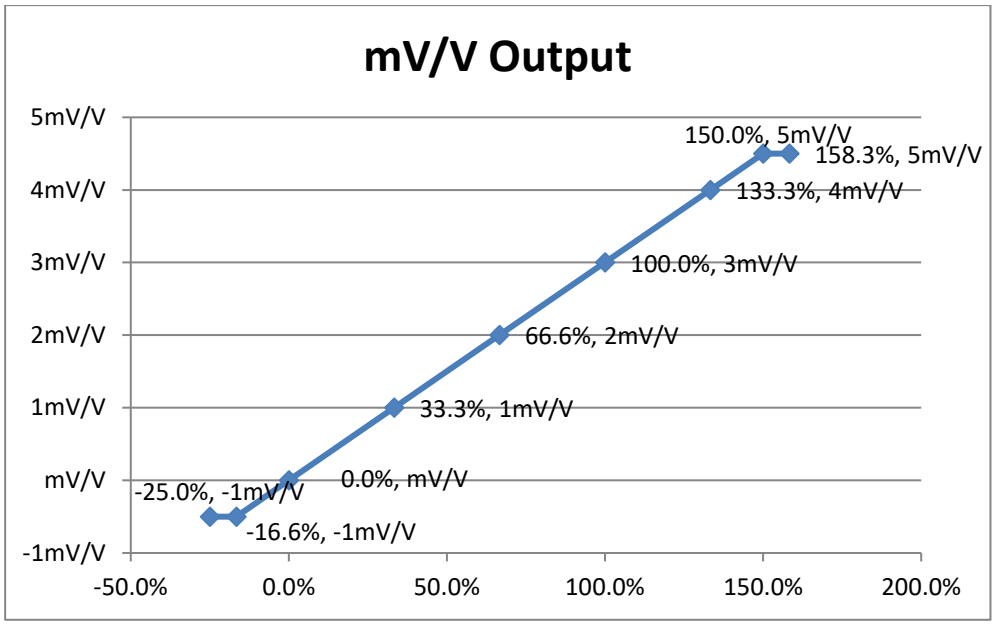
Pressing the test button a sixth time will return the unit to normal operations. If the unit is left in test mode, it will automatically return to normal operation mode after five minutes.

*For calibrating the HouseLink HL-10P/HL-10P(LV) with ***ROTEM Platinum*** control, please refer to instructions in Addendum A.

*For calibrating the HouseLink HL-10P/HL-10P(LV) with ***Maximus-Systems*** control, please refer to instructions in Addendum B.

OUTPUT SPECIFICATION

The displayed weight is relative to the output voltage from the HouseLink HL-10P/HL-10P(LV). The chart below outlines the percentage of the total weight based on the output voltage.



mV/V Output	Percent
-1mV/V	-25.0%
-1mV/V	-16.6%
mV/V	0.0%
1mV/V	33.3%
2mV/V	66.6%
3mV/V	100.0%
4mV/V	133.3%
5mV/V	150.0%
5mV/V	158.3%

Table 3

OPERATIONAL SPECIFICATIONS

Operating Temperature Range:	-40°C to +60°C (-40°F to +140°F)
Humidity:	5% to 95% (non-condensing)
Environmental Air:	No corrosive gasses permitted
Shock and Vibration:	N/A
Enclosure Type:	Unsealed
Agency Approvals:	N/A
Wiring Type:	Screw terminal block
Power Requirements:	5.0 VDC - 12.0 VDC, 70 mA (max)
Output Signal Type:	Simulates 3mV/V 360 ohm load cell.
Maximum Output Signal Range:	-1.0 mV/V to +4.5 mV/V
Default Output Value:	-1.0 mV/V
Maximum Load Capacitance:	No limit
Zero Accuracy:	+/- 35 mV/V
Span Accuracy:	+/- 0.2% of reading
Linearity Error:	+/- 0.02% of full-scale
Span Temperature Stability:	+/- 35 ppm/°C
Output Signal Resolution:	.092 mV/V
Output Signal Ripple:	.046 mV/V
Serial Communication Interface Type:	HerdStar optically isolated (proprietary)

ADDENDUM A

Initial Setup of the Rotem Control using the HouseLink Proportional Interface HL-10P

10P

The HouseLink Proportional Interface HL-10P emulates a Rotem bin scale allowing the user to connect a BinTrac bin scale system to a Rotem control. An individual HouseLink HL-10P control is required for each bin that is being connected to the Rotem. The HouseLink HL-10P is a highly accurate unit that simplifies the calibration with the Rotem without the need of filling the bin with known weight amount or the bin being empty.

1. Locate the HouseLink HL-10P in a dry location near the Rotem control.

2. The Rotem control needs to have a scale card, a silo plug, and a scale card power supply installed.

3. Wire the BinTrac indicator, Smart Summing Box, HouseLink HL-10P, and Rotem Scale card per the wiring diagram.

4. Calibrate the Bintrac Indicator so it is accurately weighing the bin. See BinTrac manuals.

5. Set HouseLink HL-10P dipswitch S1 & S2 for the desired bin that it will emulate to the Rotem.

6. Set HouseLink HL-10P dipswitch S3 to OFF for weight readings on the Rotem to match the BinTrac.

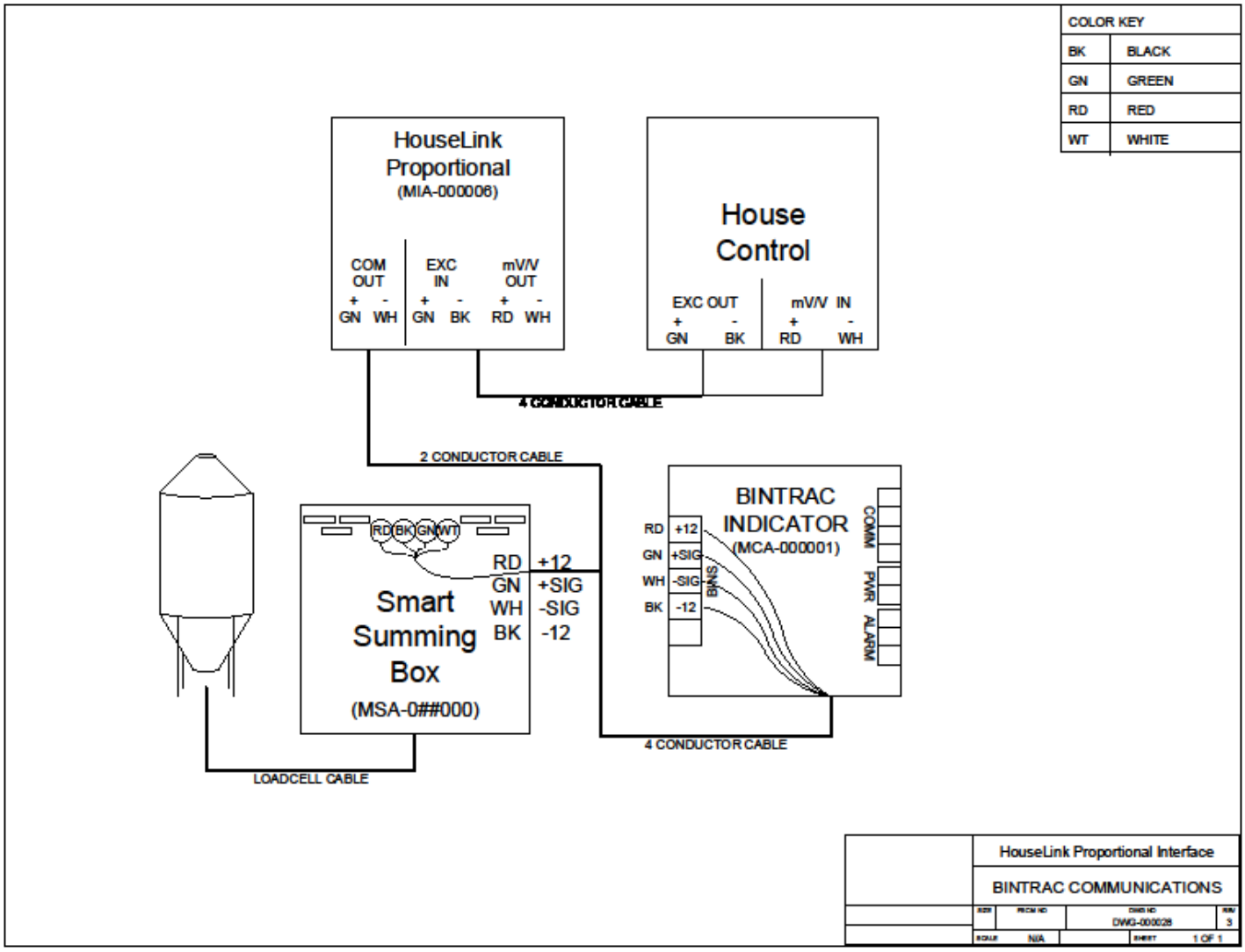
7. Platinum Scale card is made to work with 2mv/v. Set the S4 dip switch in the HouseLink HL-10P to the “UP/ON” position. This sets the output at 2mV/V which matches the Rotem scale card.

8. The BinTrac indicator needs to be set up for peripheral devices. Follow the procedure shown in the HouseLink HL-10P “Installation and User Guide”.

9. Calibrate the Rotem control using the silo calibration method for empty and full weight and using the HouseLink HL-10P test mode. (The scale factor cannot be keyed in as each individual Rotem scale card has a different scale factor).
    a. Enter the silo calibration mode on the Rotem control.
    b. Press the TEST button on the HouseLink HL-10P two times for the 0mV/V output setting which represents an empty bin weight reading.
    c. Calibrate Rotem to the empty bin weight reading and advance to known weight reading.
    d. Press the HouseLink HL-10P TEST button 1 more time for the 2mV/V output setting which represents a full capacity bin weight reading.
    e. Enter the BinTrac Capacity setting as the known weight value in the Rotem control.
    Ex: For a BinTrac scale system with six 10k loadcells this would be 60,000lbs capacity.
    f. After a successful known weight value has been calibrated. Set the current weight the same way as step “e” again for final calibration.
    g. Calibration of Rotem control to the BinTrac should be completed.
    h. Press HouseLink HL-10P TEST button three more times to exit test mode. HouseLink HL-10P will now output the correct mV/V to the Rotem that will match the BinTrac displayed weight.

10. Verify the displayed weight of the BinTrac Indicator closely matches the displayed weight on the Rotem control. Note: It may take a minute or more for the Rotem control to begin displaying the correct amount due to the excessive filtering in the Rotem. If weight values are not within 50lbs, repeat step 9.

ADDENDUM A - WIRING DIAGRAM



ADDENDUM B

Initial Setup of the Maximus Control using the HouseLink Proportional Interface HL-10P (LV)

The HouseLink Proportional Interface HL-10P(LV) emulates a bin scale allowing the user to connect a BinTrac bin scale system to a Maximus control. An individual HouseLink HL-10P(LV) control is required for each bin that is being connected to the Maximus. The HouseLink HL-10P(LV) is a highly accurate unit that simplifies the calibration with the Maximus without the need of filling the bin with known weight amount or the bin being empty. Setup can be completed with material in the bin.

1. Locate the HouseLink HL-10P(LV) in a dry location near the Maximus control.

2. The Maximus Bin brains unit is required for interfacing bin weights to the Maximus.

3. Wire the BinTrac indicator, Smart Summing Box, HouseLink HL-10P(LV), and the Maximus per the wiring diagram.

4. Calibrate the Bintrac Indicator so it is accurately weighing the bin. See BinTrac manuals.

5. Set HouseLink HL-10P(LV) dipswitches S1 & S2 for the desired bin that it will emulate to the Maximus.

6. Set HouseLink HL-10P(LV) dipswitch S3 to OFF for weight readings on the Maximus to match the BinTrac following zeroing.

7. The Maximus Brain is made to work with 2mv/v. Set the S4 dip switch in the HouseLink HL-10P(LV) to the “UP/ON” position. This sets the output at 2mV/V which matches the Maximus brain.

8. The BinTrac indicator needs to be set up for peripheral devices. Follow the procedure shown in the HouseLink HL-10P(LV) “Installation and User Guide”.

9. Calibrate the Maximus control using the calibration method for empty and full weight and using the HouseLink HL-10P(LV) test mode to output an empty and full weight simulated weight reading.
    a. Enter the calibration mode on the Maximus control.
    b. Press the TEST button on the HouseLink HL-10P(LV) two times for the 0mV/V output setting which represents an empty bin weight reading.
    c. Calibrate Maximus to the empty bin weight reading and advance to known weight reading.
    d. Press the HouseLink HL-10P(LV) TEST button 1 more time for the 2mV/V output setting which represents a full capacity bin weight reading.
    e. Enter the BinTrac Loadcell Capacity setting as the known weight value in the Maximus control. Ex: For a BinTrac scale system with six 10k loadcells this would be 60,000lbs loadcell capacity.
    f. Calibration of Maximus control to the BinTrac should be completed.
    g. Press HouseLink HL-10P(LV) TEST button three more times to exit test mode. HouseLink HL-10P(LV) will now output the correct mV/V to the Maximus that will match the BinTrac displayed weight.

10. Verify the displayed weight of the BinTrac Indicator closely matches the displayed weight on the Maximus control. Note: It may take a minute or more for the Maximus control to begin displaying the correct amount. If weight values are not within 50lbs, repeat step 9.

ADDENDUM B – WIRING DIAGRAM