

Click 112/114 Contact Closure

INSTALLATION QUICK START GUIDE



The Click 112/114 are 2-/4-channel contact output rack cards for use with Wavetronix SmartSensors. For more information about this product, visit wavetronix.com.

1 Mount and connect the device

Use the following steps to install the Click 112/114 rack cards:

- 1 If you're using hardware configuration, set all DIP switches before installing Click 112/114 devices (this will be covered in step 4 of this document).
- 2 Insert the cards into the rack.
- 3 Daisy-chain together all the cards in your installation, using short RJ-11 jumper cables.
- 4 Connect the first Click 112/114 card to the SmartSensor via a Click 200 or Click 222 surge protector and a 60" RJ-11 patch cord.

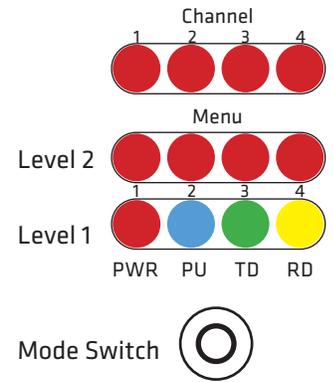
Note. Bus 1 should be used to connect to the sensor, and bus 2 for configuration.



2 Understand the device's configuration features

The following physical features allow you to configure the Click 112/114:

- **Mode Switch** - Allows you to cycle through and select menu and configuration options.
- **Level 1 LEDs** - These light up to indicate menu options while cycling through the menu. They also have the following functions:
 - **Red** - Lights up when the device has power.
 - **Blue** - Currently has no function.
 - **Green** - Lights up when the device is transmitting data.
 - **Yellow** - Lights up when the device is receiving data.
- **Level 2 LEDs** - Light up to indicate configuration options. When the device is not in menu mode, these LEDs are off.
- **Channel LEDs** - The topmost bank of LEDs; these light up to indicate vehicle detection.
- **DIP switches** - Located on the lower part of the circuit board (left face of the board, if you're looking at the faceplate). These switches allow you to configure the device. This will be covered in greater detail in Part 4 of this guide.



3 Select configuration method

The Click 112/114 can be configured in three ways: DIP switches, the front panel menu, and Click Supervisor. These three different configuration methods can configure different sets of options; some of these parameters can be set using multiple configuration methods, and some of them can only be set using one particular method.

The table on the next page lists how each parameter may be accessed and configured.

The final row on the table refers to configuration modes. The DIP switches are used to choose between Hardware and Software modes.

If any of the switches are on, that particular parameter is set to Hardware mode and only the DIP switches can be used to change its configuration options. If no switches are on for a particular parameter, it is in Software mode and the front panel menu and Click Supervisor must be used to configure it.

	DIP Switch	Front Panel Menu	Click Supervisor
Baud Rate	Yes	Yes	Yes
Channel Input Map	Yes	Yes	Yes
Autobaud	No	Yes	No
Reset to Default	No	Yes	Yes
Description	No	No	Yes
Location	No	No	Yes
Device ID	No	No	Yes
To use this configuration method:	Hardware Mode	Software Mode	Software Mode

4 Configuration option 1: DIP switches

The DIP switches on the circuit board can be used to change input mapping and the baud rates used for bus 1 and bus 2. These parameters can also be changed using the two other configuration options.

Note. For each parameter, if any of the switches are turned on, that parameter is in Hardware mode. If Hardware mode is selected, the parameter can only be configured using the switches.

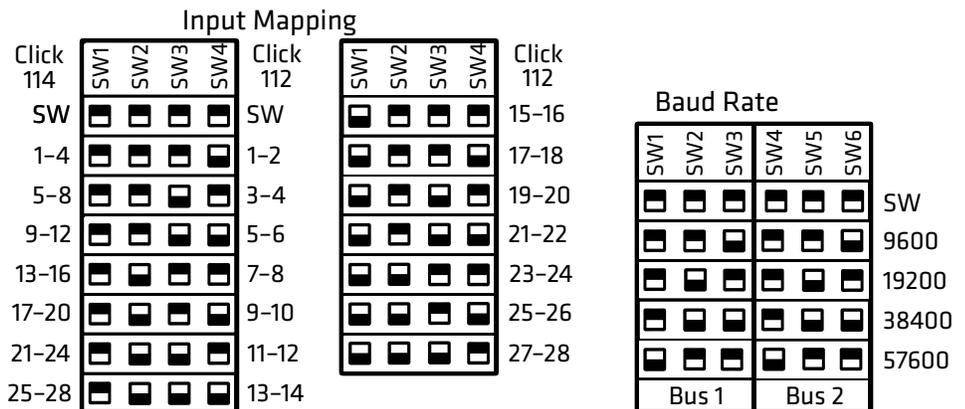
Look at the figure below to see how to set the switches in order to configure the parameter. To turn a switch on, flip it up.

Channel input mapping

This function lets you map two (Click 112) or four (Click 114) of the input data channels coming from the sensor to the output channels on the device. The outputs are assigned sequentially, so if you select 13–14, the input 13 will be mapped to channel 1, and 14 to channel 2.

Baud rate for bus 1 and bus 2

This function lets you set the baud rate for bus 1 and bus 2. The two buses can be configured separately. Flip the switches up and down according to the diagram to set the baud rate for each bus.



5 Configuration option 2: front panel menu

The front panel menu allows you to configure input mapping and baud rates. It can also reset the device to factory defaults, and is the only place on the device to access the autobaud function.

Menu and configuration options are displayed on the Level 1 and Level 2 LEDs on the faceplate. Navigate through the menu using the mode switch:

- 1 Press and hold the mode switch to enter Menu mode. The Level 1 LEDs will start to light up to indicate that the device is cycling through all menu options.
- 2 When the LEDs light up in the way that indicates the menu option you want (see the figure below), release the mode switch.
- 3 Quickly press and release the mode switch to select the current menu option. The Level 2 LEDs will light up to let you configure the options for the selected menu option.
- 4 Press and hold the mode switch to cycle through available values for the selected menu option. The Level 2 LEDs display the currently selected value.
- 5 Press and release the mode switch to accept the displayed value. The device will exit the menu.

Note. If any of the DIP switches are turned on, that parameter will be in Hardware mode and the front panel menu will only be able to display, not change, that setting.

See the figure to the right for how to use the LEDs to configure the parameter.

Channel input mapping

This function lets you map two (Click 112) or four (Click 114) of the input data channels coming from the sensor to the output channels on the device. The outputs are assigned sequentially, so if you select 13–14, then input 13 will be mapped to channel 1, and 14 to channel 2.

Baud rate for bus 1 and bus 2

This function lets you set the baud rate for bus 1 and bus 2. The two buses can be configured separately.

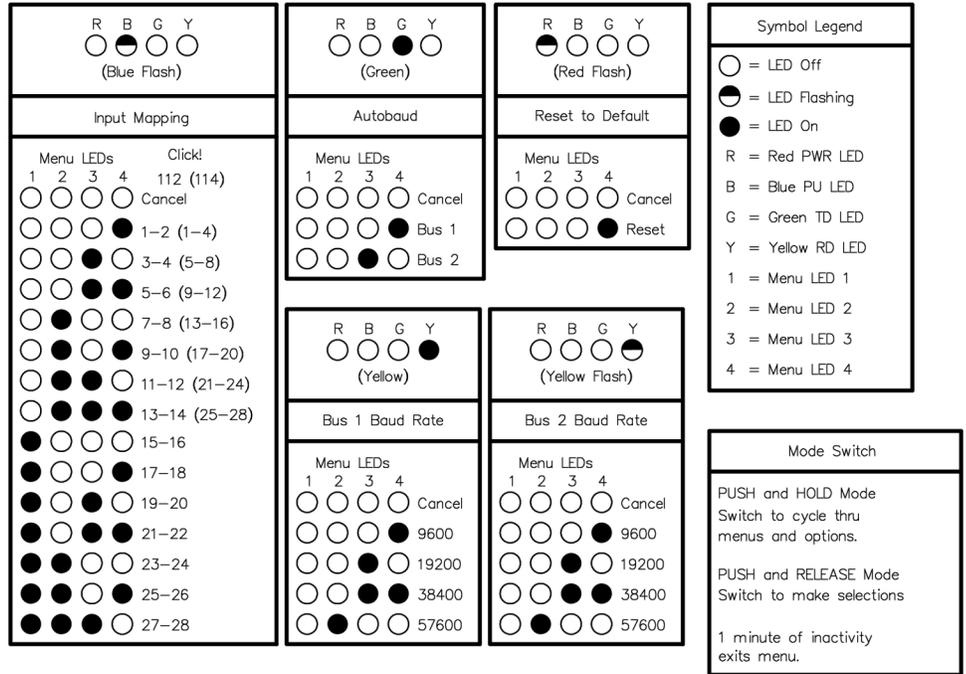
Autobaud

This function initiates an autobaud on the RS-485 bus you select. If the autobaud is successful, the LEDs will display the baud rate found, using the same LED patterns used for the baud rate (see figure above). If it fails, all four LEDs will flash, and then the device will exit the menu.

Reset to Default

This function will restore all configuration settings to factory defaults (even those not configured using the front panel menu): baud rate, channel map, description field, location field, and device ID.

Menu Operation



6 Configuration option 3: Click Supervisor

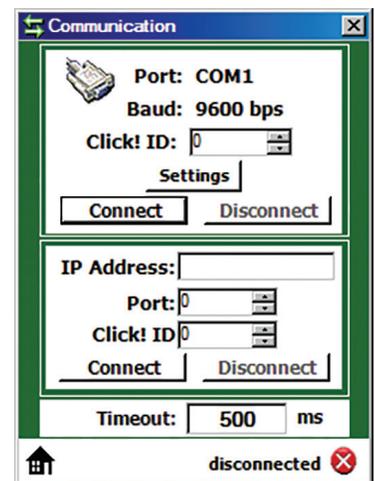
Install Click Supervisor

Click Supervisor is the third available way to configure the Click 112/114. To install it:

- 1 Download the setup file from www.wavetronix.com (under **Support**).
- 2 Double-click on the file to run the setup wizard. Follow the steps to install.

Make a connection

- 1 Make sure there is a connection between the Click 112/114 and the computer that Click Supervisor is on. To do this, there should be a jumper cable connected from the bus 2 port to a Click device with an RJ-11 jack on the T-bus, such as a Click 222.
- 2 Run Click Supervisor and select **Communication**. This screen lets you pick the type of connection you want to make—serial or IP. The Click 112/114 will likely be configured using serial communication.
- 3 Click **Settings** to make any necessary changes to the settings, such as the port or the baud rate. Click **OK** to return to the Communication screen, then click **Connect**. Keep the Click ID set to 0.
- 4 In the next screen, Click Supervisor will display all the devices it discovers. When the desired Click 112/114 appears, select it and click **Select**. Click Supervisor will connect to the device.



Select a driver

Select **Setup Click** on the main screen. In the next screen, select the **Expert** driver and click **OK**.

Configure the module

The **System > General** tab has text parameters that cannot be changed anywhere else. The most important of these include:

- **Description/Location** – For informational/identification purposes only. These settings do not affect the operation of the device.
- **Device ID** – Changes the ID number associated with the device. By default this is the last five digits of the serial number. The **System > Settings** tab lets you set certain parameters that can also be changed using the front panel menu and the DIP switches.
- **Baud rate for bus 1/2** – Changes the baud rates of buses 1 and 2.
- **Input mapping** – Lets you map two or four of the input data channels coming from the sensor to the output channels on the device. The outputs are assigned sequentially, so if you select 13–14, then input 13 will be mapped to channel 1, and 14 to channel 2.

Note. If any of the DIP switches are turned on, that parameter will be in Hardware mode and Click Supervisor will only be able to display, not change, that setting.

