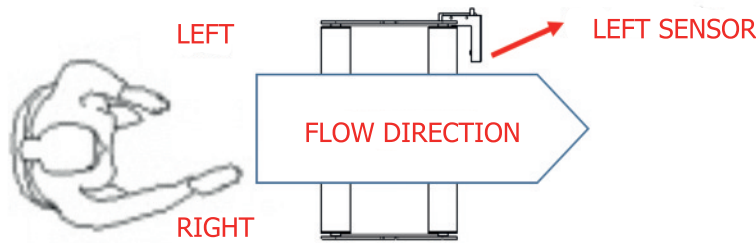


DESCRIPTION

Materials produced or subjected to intermediate processing in the industry are prone to undesired lateral movements in the production line due to both the disruptive effects of the line and the properties of the product. The Rollway edge control device tolerates these irregularities and ensures the smooth progression of the material in the line.

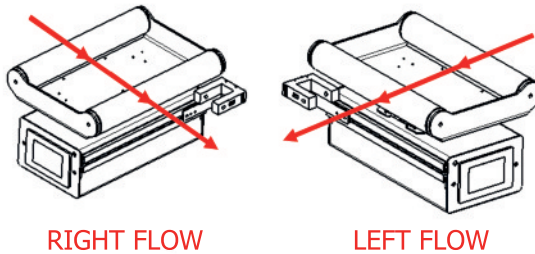
The alignment process can be based on three different references: the left edge, the right edge, or the product center (alignment from the product center requires two sensors for left and right alignment).

☞ This selection should be specified when ordering the Rollway device.



☞ Along with this selection, the direction of material flow should also be specified when ordering the Rollway device.

REFERENCING TO DISPLAY POSITION



The device has an integrated fork (U) edge sensor. The edge of the material is detected as it enters between the prongs of the fork. This sensor comes in two types: photoelectric and ultrasonic models.

The photoelectric sensor works by detecting the receiver-transmitter light waves. It is suitable for materials that do not transmit light, such as paper, plastic film, nonwoven, textile fabric, and so on.

Similarly, the ultrasonic sensor works by detecting receiver-transmitter sound waves. This sensor is suitable for materials that do not transmit sound waves, such as paper, plastic film, and so on.

☞ The material to be worked on should be specified when ordering the Rollway device.

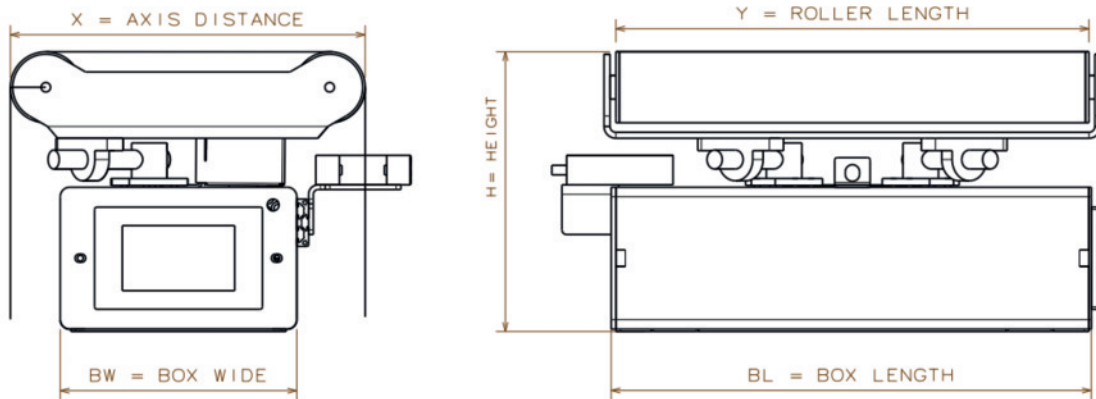
INSTALLATION

When you receive the Rollway edge control device, check whether the product is suitable for you by following the instructions in the description section. If it is suitable, you can proceed with the installation process.

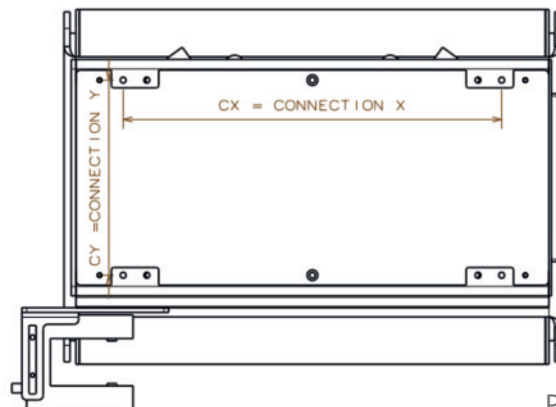


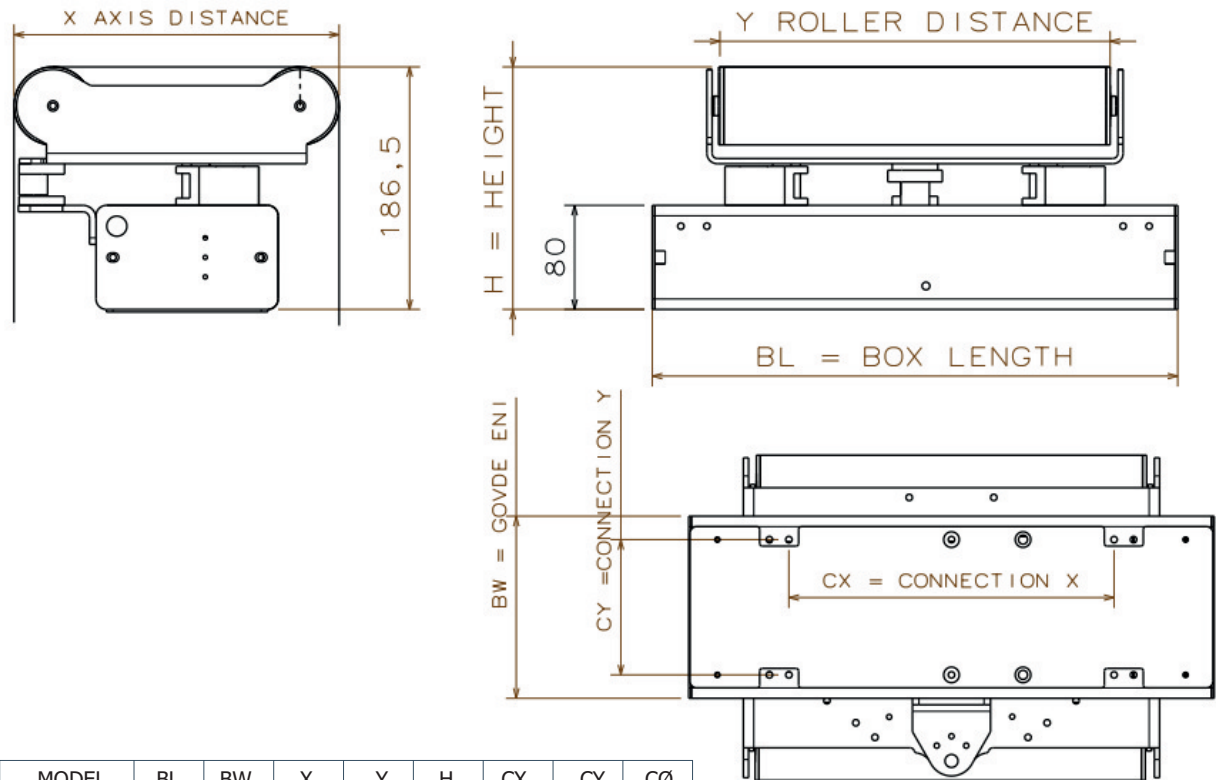
Mechanic Installation

Connect the edge control device to the machine section where the device will operate, with 4 * M6 mounting bolts on its base (refer to the CØ column), in the correct material flow direction and operator panel orientation



MODEL	BL	BW	X	Y	H	CX	CY	CØ
RW400	400	200	300	400	237	320	165	M6
RW500	400	200	350	500	237	320	165	M6
RW600	600	250	420	600	237	520	215	M6
RW700	600	250	420	700	237	520	215	M6



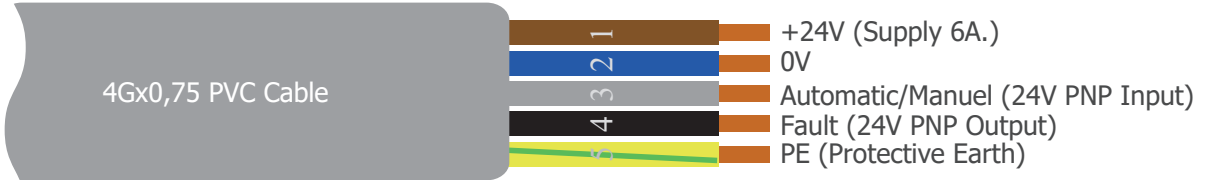


MODEL	BL	BW	X	Y	H	CX	CY	CØ
RW200	400	140	250	200	186,5	250	104	M6
RW250	400	140	250	250	186,5	250	104	M6
RW300	400	140	300	300	186,5	250	104	M6

☞ The control panel box is separate in the RW200, RW300, and RW400 models, with a BL distance of 60.5mm. The width of the control panel box is not included.

Electrical Installation

The Rollway edge control device is connected to your system with a 2-meters 4G*0.75 cable. The device requires a DC24V 6A power supply and a 6A C-type fuse protection is appropriate.



Automatic/Manual Input: If you want to make the automatic/manual operation selection of the device via a digital output from your system instead of the selection button on the device control panel, use this input. Input: If 24V is (HIGH), the selection will be AUTOMATIC, otherwise it will be MANUAL.



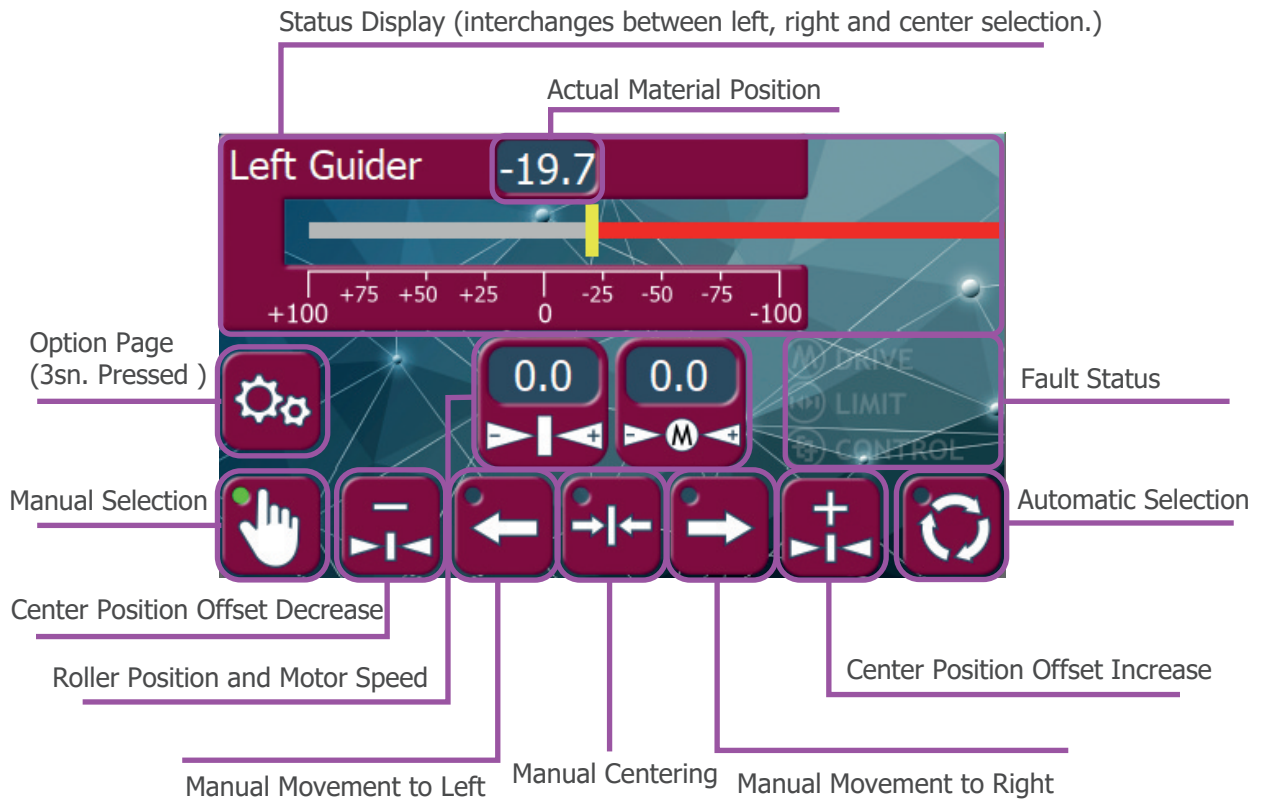
This selection applies when the LOC/REM selection switch is set to REM on the control panel.

Fault Output: It is a +24V output for the system to be informed in case of a fault in the device. If edge control process is critically important in your production, you will receive the necessary warning with this signal.

OPERATING THE DEVICE

After completing the mechanical and electrical installation, the device is ready to use. As you will be asked login credentials, Username: Bakim and Password: 87460. When power is supplied, the control panel will become active. The device has three main pages.

1- Main Page



Manual/Automatic Selection:

The device only has two modes, manual or automatic. If the system is in local control, the transition between these modes is done using the automatic and manual selection buttons on the device. If the system is in remote control, the transition is done via the automatic/manual digital input.

If the system is manual;



Left/Right Movement: The corresponding movement is provided as long as the left/right buttons are pressed.



Centering: When the centering button is pressed once, the roller position moves to 0.



Inc/Dec Center Offset: Instead of mechanical position adjust of the Edge sensor, this Offset can give possibility of $\pm 20\%$ shifting of the center position.

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If the system is automatic,



The device will move the roll to the left or right to keep the sensor position centered (at 0).



Motor Speed and Center Position Offset Displays:

The Motor Speed indicator displays the actual speed of the motor in percentage.

The green LED in the Roll Position indicator indicates that the roll is centered.

The Center Offset Indicator indicates the controller target centering offset. So to speak control loop keep the sensor value at this offset instead of -0-(factorydefault).



Fault Status Display (red:active / gray:passive):

When the Drive is active, then the motor driver is faulty. In this case, the device cannot operate.

When the Limit is active, then the roller position has reached the right or left angular movement limit.

When the Control is active, then the device was unable to maintain control for a certain period of time while operating in automatic mode (the material may have run out, there may be a mechanical or electronic problem).



When any of these three conditions are active, the fault output is triggered, alerting the system to a problem with the edge control device.



Status Display (interchanges Left/Right/Center):

Only one of these indicators is active at a time, and it can be easily selected from the options page, as explained in the Description section, depending on the flow direction and position of your sensor.

The top numeric display shows the actual position of the edge sensor, and the yellow cursor and red strip helps visually display the position of the material.

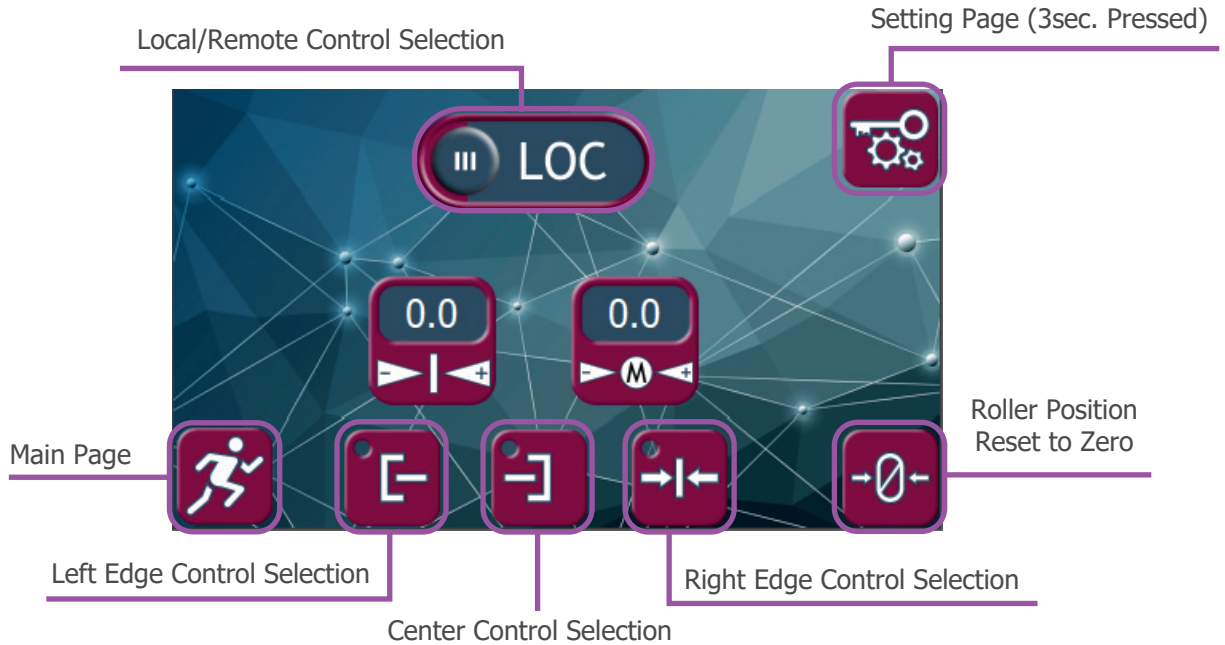
When center control is in use, two sensors are used, and the middle numeric display is used as a differential indicator. On the left and right, the actual values of the left and right sensors are shown.



Options Page: To access the options page, press and hold for 3 seconds.

2- Options Page

On this Options page, preferences that can be set without requiring any special configuration of the device are adjusted.



Left/Center/Right Control Selection:

Which of these preferences is suitable for your working model, you would choose one of them. The device visuals will adapt to your choice. Only one choice can be made at the same time.

Local/Remote Control Selection:

This preference selects whether the device's manual/automatic operating mode will be determined via the device itself or through an external input.

When Local is selected, the operating mode is selected using the Manual and Automatic buttons on the device's home screen.

When Remote is selected, the Manual or Automatic mode is selected by a digital input applied.

Roller Position Reset to Zero:

If there is a sensor that measures the roll position, this button resets the roll's position. Resetting the position when the roll is centered is reasonable. However, the device is already equipped with a sensor that detects whether the roll is centered or not. With this sensor, the reset is performed automatically.

Main Page:

This button returns you to the main working screen (Home Screen).

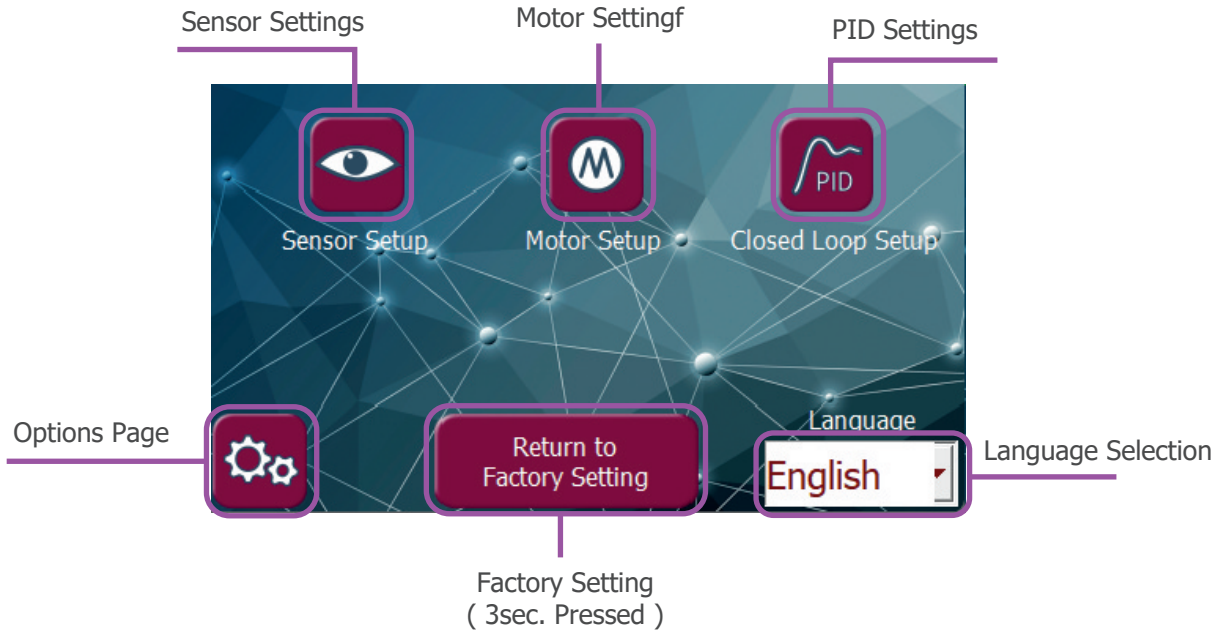
Custom Settings Page:

By pressing and holding this button for 3 seconds, you can enter the Custom Settings page.

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3- Custom Settings Page

In this Custom Settings Page, detailed settings can be made if the device's factory settings are not satisfactory.



Sensor/Motor/PID Settings Page:

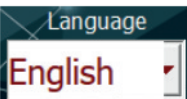
Navigations to the desired custom settings are made are provided with the relevant buttons.



Return to Option Page: Exit and return to Options Page.



Factory Settings: By pressing and holding this button for 3 seconds, you will be asked if you want to return to the factory settings, and the device will return to the factory settings with your confirmation.



Language Selection: When you press the language selection menu, please select the preferred device language from the options of Turkish/English/German.

3.1- Sensor Setting Page

In this Sensor Settings page, detailed settings can be made if the device's factory settings are not satisfactory. These settings require experience and knowledge.

	Left	Right
Raw In	3.60	0.00
Raw Min.	6.00	6.00
Raw Max.	0.00	0.00
Engineered Min.	-100.00	-100.00
Engineered Max.	100.00	100.00
Engineered Out	-19.89	99.99
Sensing Invert	<input type="checkbox"/>	<input type="checkbox"/>

Center Invert: OFF

Return to Custom Settings Page

Raw In: It shows the voltage coming into the device's 1st sensor input in volts.

Raw Min: The expected value for the device's 1st sensor input in volts is when no material present.

Raw Max: The expected value for the device's 1st sensor input in volts is when the material is fully.

Engineered Min: It is the desired value in percentage for the device's 1st sensor when there is no material present.

Engineered Max: It is the desired value in percentage for the device's 1st sensor when there is material present.

Engineered Out: This is the instantaneous value calculated by the device as a percentage based on the expected and desired calibration values from the 1st sensor. This value is used as the sensor value in the device..

Sensing Invert: The device provides a practical adjustment opportunity by interchanging the values of material and material-free desired values (Calibrated Min and Calibrated Max).

The same settings are applied for the second sensor as well.

The 1st and 2nd sensors will only work simultaneously with the center control option. Only the settings for sensor 1 are valid for the Left/Right Control option.

The 1st and 2nd sensors also represent the 1st and 2nd analog inputs of the control device.

3.2- Motor Setting Page

In this Motor Settings page, detailed settings can be made if the factory settings of the device are not satisfactory. These settings require experience and knowledge.



The screenshot shows the 'Motor Setup' interface with the following parameters and values:

Right Limit	95.0	Min. Motor Speed	-1250
Left Limit	-95.0	Max. Motor Speed	1250
Homing Gain	5.0	Manual Speed	500
Position Coeff.	0.00000	Dead Band Speed	5
		Pulse per Revolution	200
		Act. Speed Reference%	0
		Invert Motor Direction	ON

A 'Return to Custom Settings Page' button with a gear icon is located at the bottom left of the screenshot.

Min. Motor Speed: The maximum speed in rpm that the motor can rotate in the opposite direction.

Max. Motor Speed: The maximum speed in rpm that the motor can rotate in the forward direction.

Manual Speed: The speed in rpm at which the motor will operate during manual movements.

Dead Band Speed: The lowest speed in rpm of the motor in both directions.

Pulse Per Revolution: The number of control pulses required for the motor to complete 1 revolution.

Actual Speed Reference: Actual Speed command produced by control loop.

Invert Motor Direction: It determines whether the motor will rotate in a clockwise or reverse direction with respect to the positive reference and provides a practical adjustment opportunity.

Left Limit: The maximum angle position in degrees at which the Roller can rotate in clockwise.

Right Limit: The maximum angle position in degrees at which the Roller can rotate in counterwise.

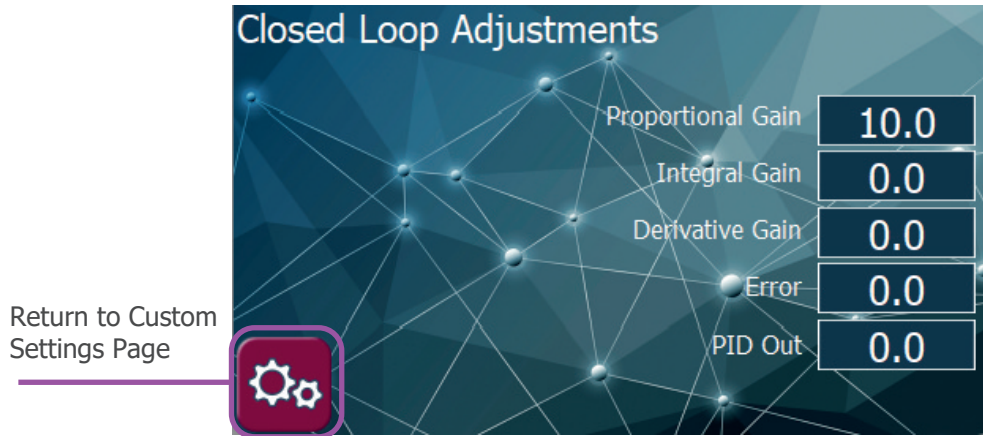
Homing Gain: The gain value used when going to the center position manually.

Position Coeff.: The coefficient used to convert the pulse counter used for the Roller's position to an angle counter in degrees. This coefficient includes all mechanical ratios.

If taking the center position automatically is worthless for you, you can enter 0 for this coefficient. In this case, the roller position will always be 0.

3.3- PID Setting Page

In this PID Settings page, detailed settings can be made if the factory settings of the device are not satisfactory. These settings require experience and knowledge.



Proportional Gain: The proportional gain of the control loop.

Integral Gain: The Integral gain of the control loop..

Derivative Gain: The Derivative gain of the control loop.

Error: The difference between the desired sensor value and the actual value in the control loop. This is also known as the control loop error.

PID Out: The correction reference generated by the control loop as a percentage..

Speed Command: The instantaneous speed set by the control loop for the motor.