

# Island Series User Guide

Version 4.2  
November 17, 2017  
Part No. 22300010M

*for use with:*

PN 22300007 - Island Dispense Robot 4S4

PN 22300010 - Island Dispense Robot 3S4



Model 4S4



Model 3S4

prepared by GPD Global® Documentation Dept.

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## Safety Notices

**CAUTION:** Read this manual carefully before using this device.

**CAUTION:** Turn off power and air pressure before inspecting this device.

**CAUTION:** This device should be handled only by an experienced supervisor or worker in accordance with industrial safety regulation.

**CAUTION:** There is no built-in safety system to prevent damage to the gantry Z-axis in the event you enter incorrect coordinate values.

### Electrical safety

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- This device uses high voltage AC power – maintain a safe distance between this device and other equipment and use a separate power supply.
- Using a power supply other than the one stipulated will lead to malfunction of the device.
- Ground this device to prevent electric shock and malfunction.
- Do not disassemble and reassemble the robot controller as this will void your warranty and may lead to damage and accidents when it is connected to high voltage power.

### Installation safety

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- Level the device when installing.
- Supply only with clean, dry air.

### Operation safety

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- Only personnel trained on the operation of the device should handle it.
- Clean or inspect the device only after completely shutting off the power supply and air pressure.

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## Warranty

**General Warranty.** Subject to the remedy limitation and procedures set forth in the Section “Warranty Procedures and Remedy Limitations,” GPD Global warrants that the system will conform to the written description and specifications furnished to Buyer in GPD Global’s proposal and specified in the Buyer’s purchase order, and that it will be free from defects in materials and workmanship for a period of one (1) year. GPD Global will repair, or, at its option, replace any part which proves defective in the sole judgment of GPD Global within one (1) year of date of shipment/invoice. Separate manufacturers’ warranties may apply to components or subassemblies purchased from others and incorporated into the system. THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

**Limitations.** GPD Global reserves the right to refuse warranty replacement, where, in the sole opinion of GPD Global the defect is due to the use of incompatible materials or other damages from the result of improper use or neglect.

This warranty does not apply if the GPD Global product has been damaged by accident, abuse, or has been modified without the written permission of GPD Global.

Items considered replaceable or rendered unusable under normal wear and tear are not covered under the terms of this warranty. Such items include fuses, lights, filters, belts, etc.

**Warranty Procedures and Remedy Limitations.** The sole and exclusive remedy of the buyer in the event that the system or any components of the system do not conform to the express warranties stated in the Section “Warranties” shall be the replacement of the component or part. If on-site labor of GPD Global personnel is required to replace the non-warranted defective component, GPD Global reserves the right to invoice the Buyer for component cost, personnel compensation, travel expenses and all subsistence costs. GPD Global’s liability for a software error will be limited to the cost of correcting the software error and the replacement of any system components damaged as a result of the software error. In no event and under no circumstances shall GPD Global be liable for any incidental or consequential damages; its liability is limited to the cost of the defective part or parts, regardless of the legal theory of any such claim. As to any part claimed to be defective within one (1) year of date of shipment/invoice, Buyer will order a replacement part which will be invoiced in ordinary fashion. If the replaced part is returned to GPD Global by Buyer and found by GPD Global in its sole judgment to be defective, GPD Global will issue to Buyer a credit in the amount of the price of the replacement part. GPD Global’s acceptance of any parts so shipped to it shall not be deemed an admission that such parts are defective.

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Specifications, descriptions, and all information contained in this manual are subject to change and/or correction without notice.

Although reasonable care has been exercised in the preparation of this manual to make it complete and accurate, this manual does not purport to cover all conceivable problems or applications pertaining to this machine.

## Overview

The Island Series table top robots gives you the versatility to do simple, repetitive automation jobs. Ideal for applications such as thermal gels, gasketing, masking, etc. A wide range of reservoir sizes may be used – from small syringes to 30 oz containers to external reservoirs. This wide range of fluid volume ensures you will spend time producing instead of continually replacing fluid.

The work area has a versatile plate that may be customized to accommodate a wide range of product geometry. Custom fixturing with or without vacuum may also be used. All pumps are connected to the system via our Taper-Lock™ mounting hardware for easy exchange and set up.

Operation of the robot is done via computer interface or a hand-held, full color touch screen – all programming functions are available in both teach formats so either can be used. When not in use, the touch screen mounts on an ergonomic swing arm. A system may be programmed on the computer, then stored and started with the touch screen or by pressing the start button on the front of the robot.

Up to 100 programs may be stored in the controller. Programs are easily exchanged between robots via an SD card.

All Island Series robots are compatible with our line of precision dispensing pumps, including the Micro-Dot, HyFlo, and PCD series.



Model 4S4

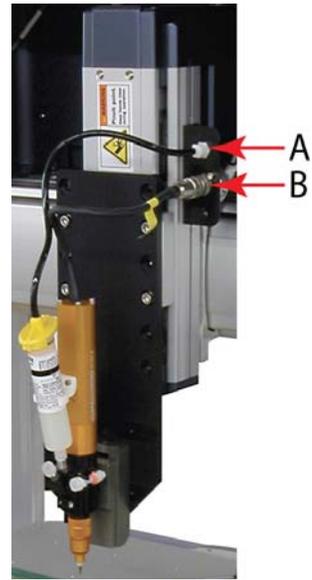


Model 3S4

## Install Pump

To install a pump on the Island Series:

1. Mount material on the pump.
2. Mount the pump in the Taper-Lock™ mount:
  - a. Press down and hold the latching lever at the top of the mount.
  - b. Align and engage the pump with the top dowel pin of the mount.
  - c. Apply downward pressure to the pump while releasing the latching lever.
3. Connect the pump to the Island interconnect panel:
  - a. Plug the pump air hose into the air receptacle (Item A).
  - b. Plug in the power cable - if the power cable is paired with an encoder cable, connect both cables to the appropriate controller box (typically located on the shelf unit); otherwise, plug the pump power cable into the power receptacle (Item B).
  - c. If an FPC Pump Interface is installed on the pump, plug the FPC sensor into the FPC controller (typically located on the shelf unit).



## User Interface

### Touch Screen

- A program can only be selected and executed from the main window. You cannot select or execute a program while editing a program.
- The last loaded program will be reloaded when the robot is connected to power.
- If the touch screen is detached from the robot, the robot will run only the currently selected program.

### Main Window

For details about controls and buttons on the main window, refer to [Main](#) (pg 48).



### Front Panel



Control	Function
ORIGIN / RUN	Returns robot to original point. Button light will flicker until implementation of return to original point is finished. Button light will turn off after return to original point is completed; then the START button light will turn on.
START	Executes currently selected program. If the button is pressed while program is running, the program will be suspended temporarily. The START lamp (green) will flicker when the program is suspended. The program will run again from the point of pause if you press the button again.
STOP / RESET	If pressed while program is running, the program will completely stop. If pressed when alarm lamp is on, alarm reset will be executed. The lamp (red) will be on while the program is running.
EMG	Emergency stop - stops all robot motion. Release the switch to reactivate robot. The robot will return to original point.

## Set Up

Modifying parameter values requires a password to open the parameter sub-menu from the main screen.

### Global Limits & Offsets

You may adjust the value of the offset and global travel parameters to position a tool or work area for your specific process needs.

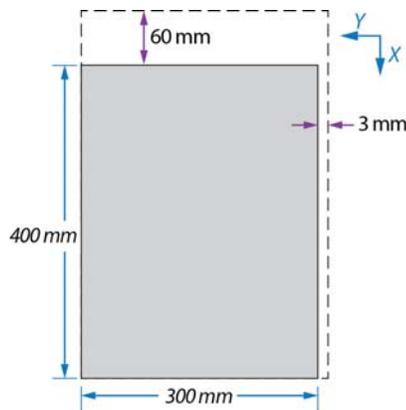
**NOTE:** To maintain the units specification travel (300 x 400 for example), do not exceed these offset parameter values:

X = 60 mm

Y = 3 mm

Z = 1 mm

**Figure 1:** Range area increased using maximum offset parameter values. (Z-axis offset not shown.)



To adjust offset and/or global travel parameters:

1. From the main screen, select 5. Parameter. A password (0502) is required to continue.



2. A numbered list of parameters displays. Press the NEXT button to scroll through the list.
3. Adjust the following parameter values.

#### Limits for Global Travel

- 1: X Axis Limit
- 2: Y Axis Limit
- 3: Z Axis Limit

#### Offsets from Origin

- 44: X Origin Offset
- 45: Y Origin Offset
- 46: Z Origin Offset

4. Press SAVE.
5. To exit, press ESC on the Parameter screen.
6. Press the yellow ORIGIN / RUN button to apply the offsets.

**NOTE:** If offset and/or global travel parameters are changed **after** program creation, the program must be shifted by the amount of offset. For details, refer to [Shift All Points](#) (pg 20).

## Basic Programming

- [Run Program](#) (pg 6)
- [Add Program](#) (pg 7)
- [Save Program](#) (pg 8)
- [Delete Program](#) (pg 8)
- [Copy Program](#) (pg 9)
- [Rename Program](#) (pg 10)
- [Programming with PC](#) (pg 11)

## Run Program

The STEP and CYCLE run command buttons are located on the main window.



If an error displays during the run operation, stop the program and fix the error condition. For details, refer to [Error Messages](#) (pg 56).



### Cycle Run

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To continuously execute the selected program:

1. From the main window, press CYCLE.
2. Answer "Y" to the prompt that displays.

### Step Run

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Step runs a program point-by-point and can be used to check and test the motion of the selected program.

To run the selected program point-by-point:

1. From the main window, press STEP.

- Press RUN to execute current step. The robot moves to the next point by PTP movement and the set value of the point displays when execution of the point is completed.



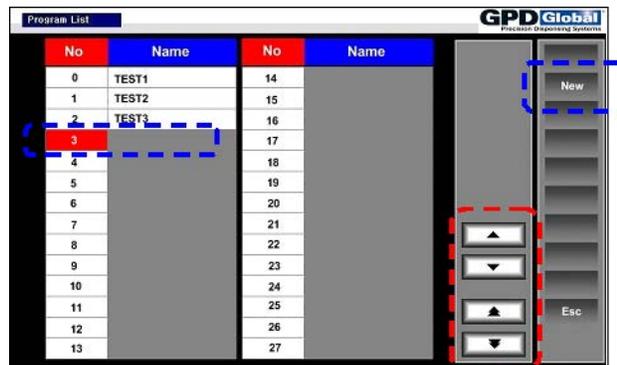
- Choose to:
  - continue point-by-point execution of each point until LINE END is reached by pressing RUN (Moving Step), or
  - stop execution and return to the previous window by pressing ESC, or
  - execute the program again from the first point by pressing RUN (Complete Move) when the last point has been executed.



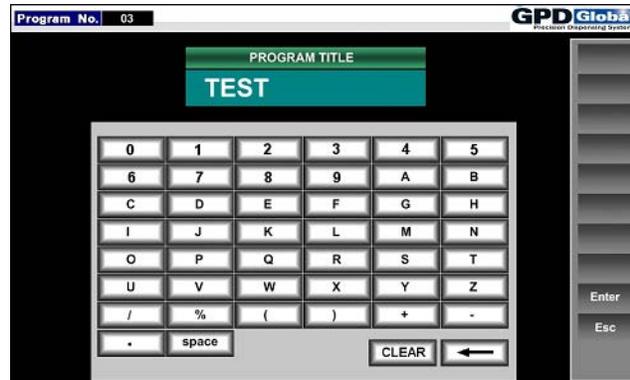
## Add Program

To add a new program:

- From the main window, select 1. PROGRAM. The Programs List window displays.
- Select a blank program number and press NEW.



3. Input the program name and press ENTER.
  - Program name can use up to 9 characters.
  - If you press ENTER without inputting a program name, the program number will be designated as the program name.



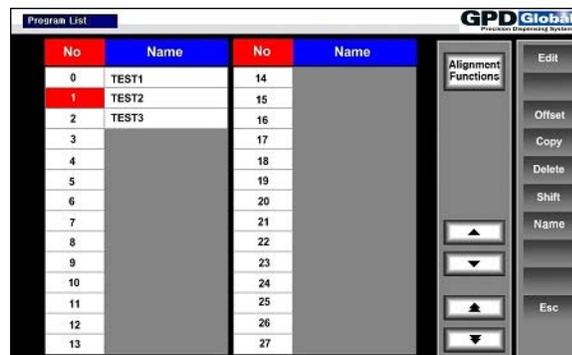
## Save Program

To save all edited point data, press SAVE in the Point Edit window.

## Delete Program

To delete a program:

1. From the main window, select 1. PROGRAM. The Programs List window displays.
2. Select the program number you want to delete and press DELETE

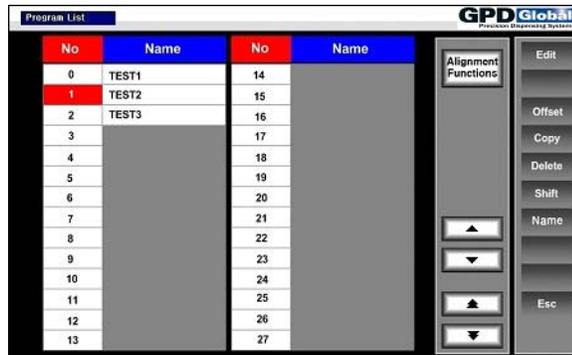


3. A prompt will display. Press YES to delete the program or press NO to cancel.

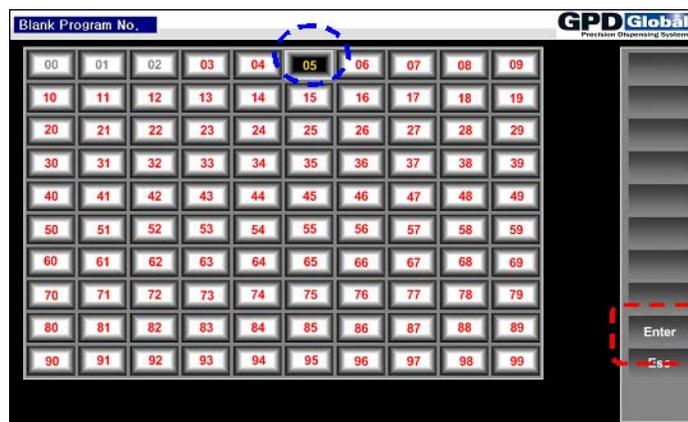
## Copy Program

To copy a program:

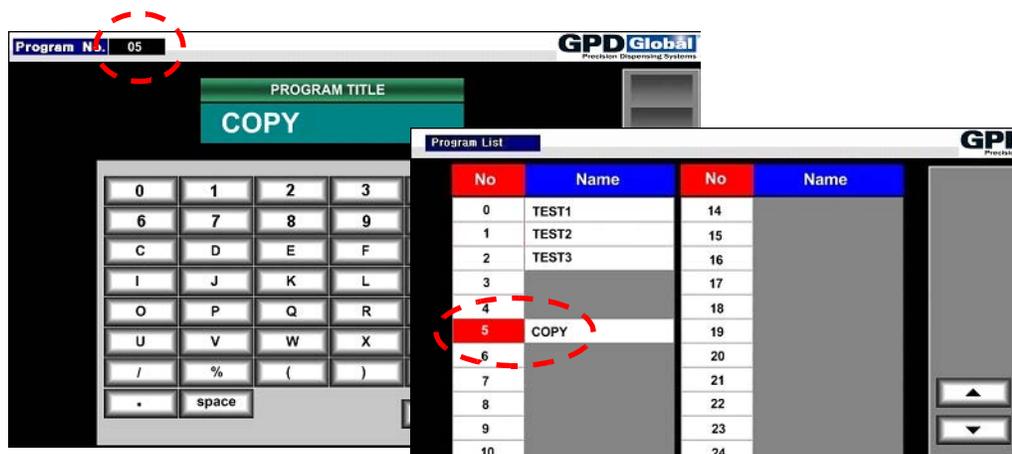
1. From the main window, select 1. PROGRAM. The Programs List window displays.
2. Select the program number you want to copy and press COPY.



3. Select a blank (red) program number and press ENTER.



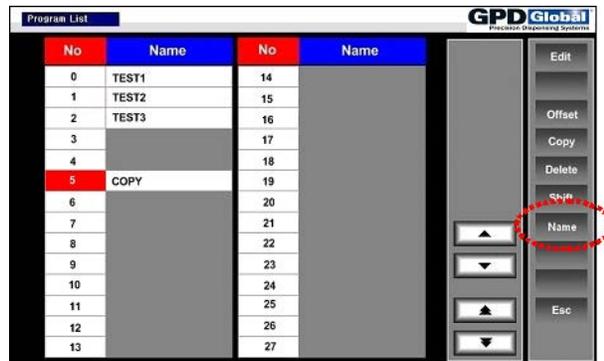
4. Input a program name and press ENTER. The program is generated.



## Rename Program

To change the name of a program:

1. From the main window, select 1. PROGRAM. The Programs List window displays.
2. Select the program number you want to rename and press NAME.



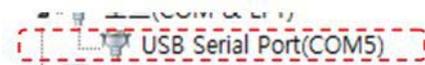
3. Input the program name and press ENTER.



## Programming with PC

To create or edit programs using a PC (with MMI) rather than the touch screen:

1. Disconnect the touch screen and then use the same cable to connect to a PC.
2. Double-click on the “G” icon to display the following window.



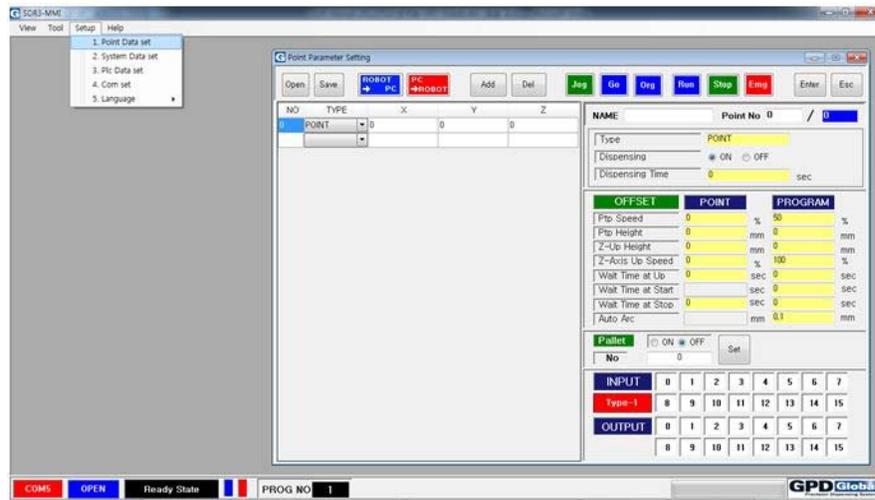
Quad rate com. port numbers when connecting communication cable (RS232 communication cable-USB gender).

Com. Port Number can be checked at “Control Panel-Device Manager-Port”

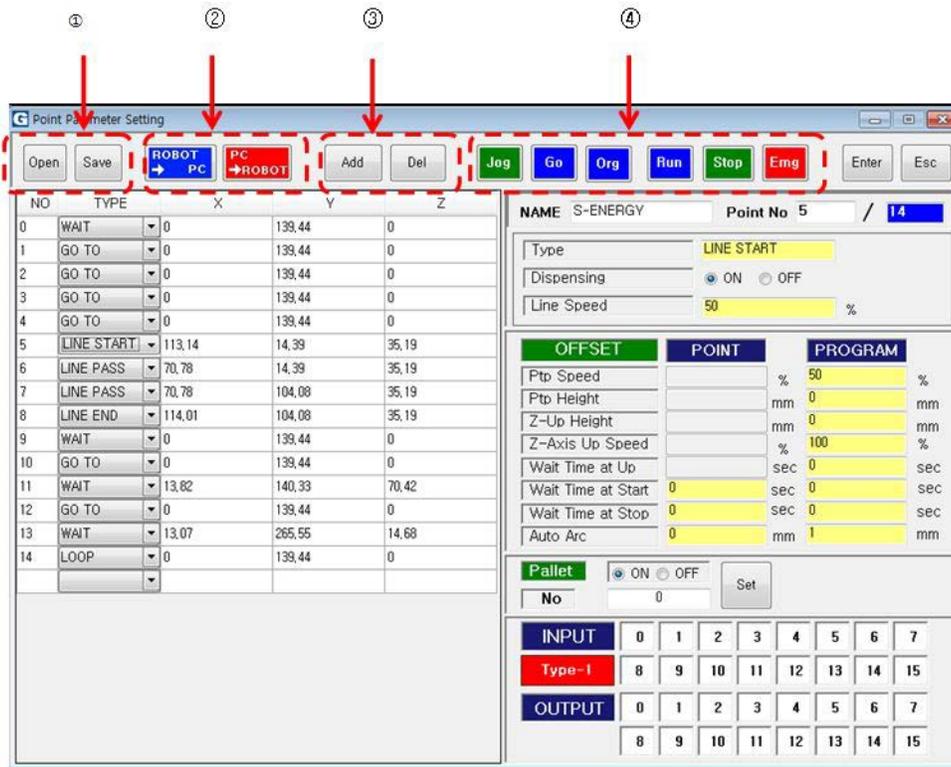
An OPEN message will pop up when communication linked.



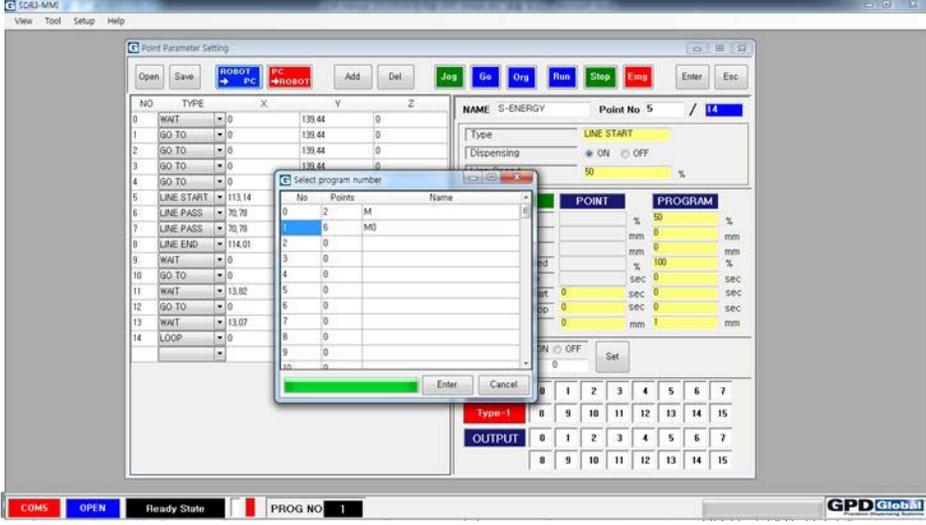
- When you access the program data saved in robot controller or point data of the PC, the following window can be displayed by selecting “setting-1. Point parameter setting”.



### MMI Menu



Item	Description
1	<p>Opens / Saves the file.</p> <p>NOTE: The system will not save programs containing a repeat array. The following error message displays if you attempt to save such a program.</p>

Item	Description
2	<p>Upload / Download program saved in controller.</p>  <p>The screenshot shows the 'Point Parameter Setting' window. A 'Select program number' dialog is open, displaying a list of programs. The selected program is 5, named 'M3'. The background window shows a table of points with columns for NO, TYPE, X, Y, and Z. The status bar at the bottom indicates 'Ready State' and 'PROG NO 1'.</p>
3	<p>Editing and preparing program, including addition and deletion of point can be performed with PC.</p>  <p>The screenshot shows the 'Point Parameter Setting' window with the 'Type' set to 'LOOP'. The 'Start Point' is 0 and 'Repetition' is 1. The 'Offset' section is visible with various parameters like Pto Speed, Pto Height, Z-Up Height, Z-Axis Up Speed, Wait Time at Up, Wait Time at Start, Wait Time at Stop, and Auto Arc. The status bar at the bottom indicates 'Ready State' and 'PROG NO 1'.</p>
4	<p>Jog, location shift, return to original point, program execution, temporary pause, and other manipulation controls.</p>

## Advanced Programming

- [Editing a Program](#) (pg 15)
- [Pallet](#) (pg 21)
- [Internal Interface \(UO / IO\)](#) (pg 23)
- [Nozzle Alignment](#) (pg 24)
- [Adjust Rotation Coordinates](#) (pg 26)
- [Adjust Product Origin](#) (pg 28)

## Editing a Program

**CAUTION:** There is no built-in safety system to prevent damage to the gantry Z-axis in the event you enter incorrect coordinate values.

A simplified sample of how to edit a program:

1. From the main window, press 1.PROGRAM. The Program window displays.
2. Select the program number you want to edit and press EDIT. The Point Edit window displays.
3. Select the point you want to edit and then, as needed, edit:
  - speed
  - type of the point by pressing TYPE. The Point Type window displays. Then select a dispensing type and press ENT to save or ESC to cancel.
  - any of the following program editing functions.

### Edit Functions

- [Add a Point](#) (pg 15)
- [Insert a Point](#) (pg 15)
- [Delete a Point](#) (pg 15)
- [Move a Point](#) (pg 16)
- [Copy Points](#) (pg 16)
- [Change Point Coordinate](#) (pg 17)
- [Offset Point or Program](#) (pg 18)
- [Shift Point Coordinate](#) (pg 20)
- [Shift All Points](#) (pg 20)
- [Pallet](#) (pg 21)

### Add a Point

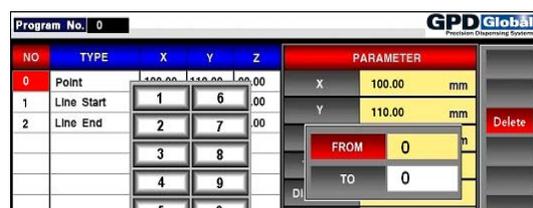
In the Point Edit window, select the last point number. The NEW button displays. Press NEW.

### Insert a Point

In the Point Edit window, select the point number to which you want to add a new point and press ADD.

### Delete a Point

1. In Point Edit window, select the point or range of points to be deleted and press DELETE.



2. Press ENTER to delete or ESC to cancel.

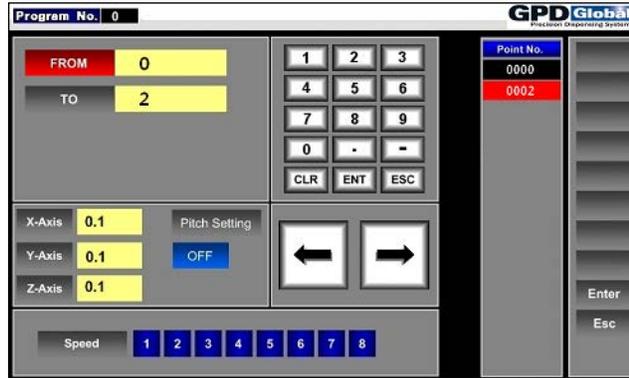
## Move a Point

To move a saved point number (coordinate), press GO in Point Edit window. Movement speed will be the same as PTP speed of Program OFFSET.

## Copy Points

To copy a single point or a range of points:

1. Press COPY in the Point Edit window. The Point Range window displays.

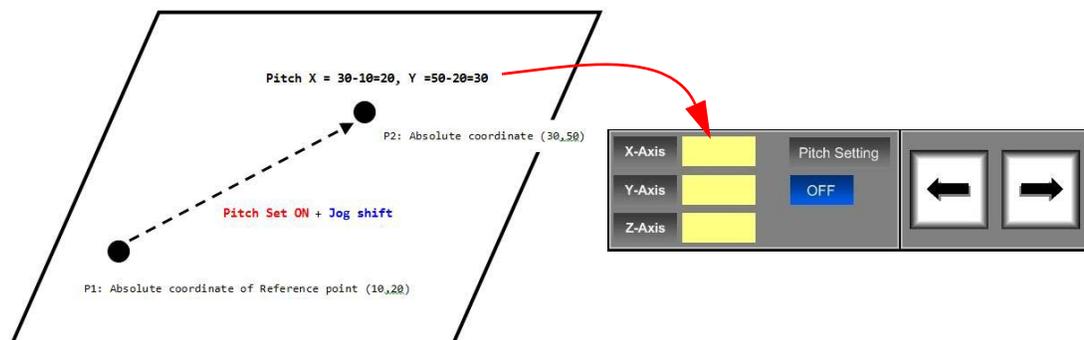


2. Enter the range of points to be copied in FROM and TO.
3. Enter the number of times the range is to be copied in COPY NUM.
4. Enter the pitch settings in X-AXIS, Y-AXIS, and Z-AXIS. Point coordinates will be increased/reduced by the set value when copied. Refer to [How to Set Pitch](#) (pg 16).
5. Press ENTER to save settings and return to previous window, or ESC to cancel and return to previous window.

The point number following the number of the last point will be assigned to copied points. For example, if the last point is number 10, the copied points will begin with number 11.

## How to Set Pitch

The distance from origin coordinate relative to reference coordinate will automatically calculate and display as a result of setting the pitch for each axis:



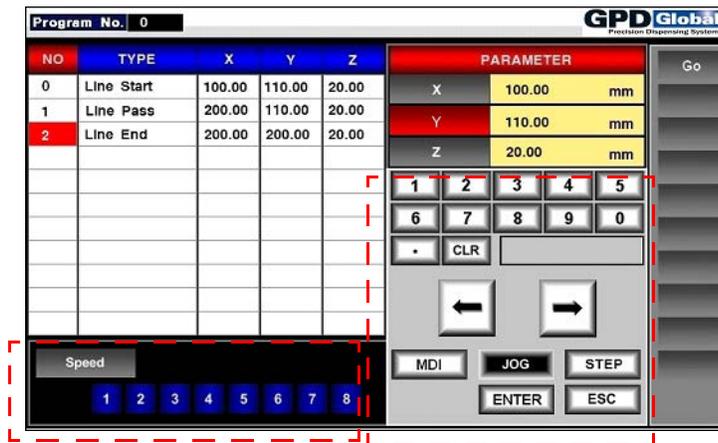
1. Set pitch for a single axis:
  - a. Select an axis.

- b. Set PITCH SETTING to OFF. This enables you to move the robot to origin coordinate without it monitoring travel data.
  - c. Move to P1 using JOG buttons.
  - d. Turn PITCH SETTING to ON. This enables the robot to monitor travel and offset data.
  - e. Move to P2 using JOG buttons.
2. Repeat the above steps for remaining axes.
  3. Press ENTER.

### Change Point Coordinate

To change coordinate of a single point:

1. Press X, Y, or Z in the Point Edit window. Jog controls and an edit keypad display.



2. Select an axis button. Currently selected axis displays with red background.
3. Choose a method of moving the selected axis to desired coordinate:

Method	Instructions
Jog	<ol style="list-style-type: none"> <li>1. Press JOG to select jog mode.</li> <li>2. Press the arrow buttons to move the selected axis to desired coordinate.</li> </ol>
Step Jog	<ol style="list-style-type: none"> <li>1. Press STEP to select step jog mode.</li> <li>2. Enter STEP movement distance in keypad value field.</li> <li>3. Press an arrow button to move the selected axis step distance.</li> </ol>
MDI (Manual Data Input)	<ol style="list-style-type: none"> <li>1. Press MDI to select manual data input mode.</li> <li>2. Enter coordinate data using keypad.</li> </ol>

4. When desired coordinate is achieved, press ENTER to set coordinate.
5. As needed, repeat process for remaining axes.

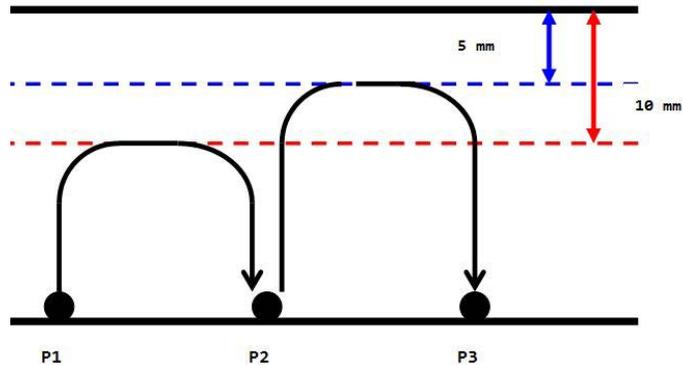
## Offset Point or Program

Program Offset applies globally to all points in a program. Point Offset applies to a single program line. When set to ON, a **point** offset overrides the **program** offset.

### Example:

Assume Program Offset of PTP Height:10 mm (Absolute coordinate)

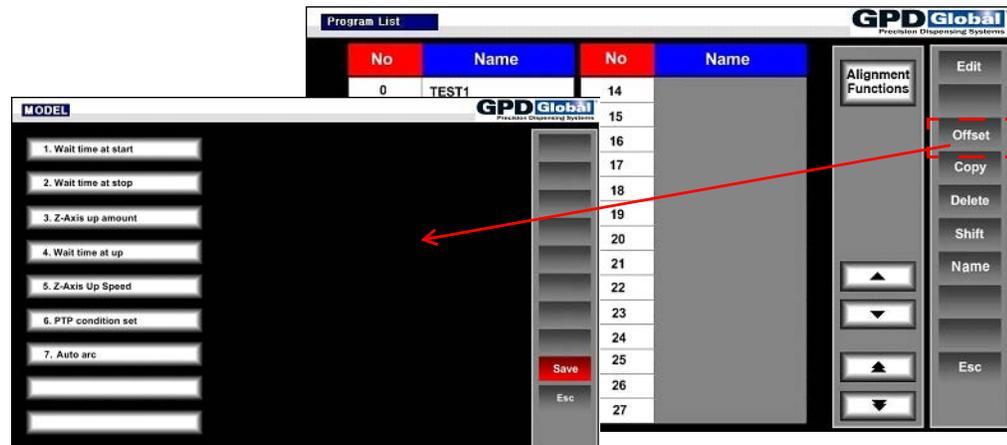
- From P1 to P2: Point 1 using Point Offset set to OFF.
- From P2 to P3: Point 2 using Point Offset set to ON. PTP Height: 5 mm (Absolute coordinate)



## Program Offset

To set program offset:

1. Select OFFSET from the Program window. A list of parameter choices will display; the parameters displayed will vary based on dispensing type. Unavailable parameters will be blank.

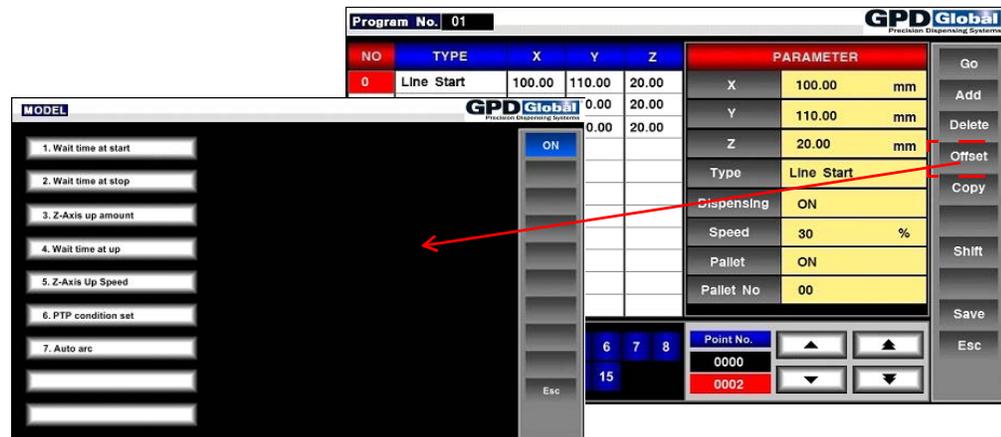


2. Select a parameter and enter a value in the dialog that displays.
3. Press SAVE to save or ESC to cancel.

## Point Offset

To set point offset:

1. Select OFFSET from the Point Edit window. A list of parameter choices will display; the parameters displayed will vary based on dispensing type. Unavailable parameters will be blank.



2. As needed, change the state of the ON/OFF button. To apply point offset, set to ON.
  - ON: applies the set value of **point** offset when program is executed.
  - OFF: applies the **program** offset value when program is executed.
3. Select a parameter and enter a value in the dialog that displays.
4. Press ENT to save or ESC to cancel.

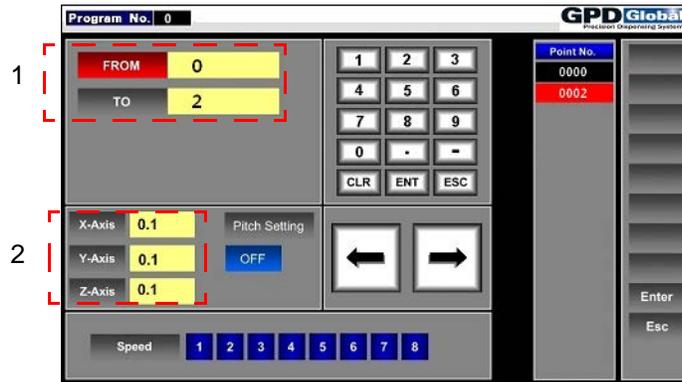
## Shift Point Coordinate

To shift the coordinates of a single point, press GO in the Point Edit window.

## Shift All Points

To shift all points in a program:

1. Press SHIFT in the Point Edit window. The Point Range window displays.



2. Set the point number(s) to be changed using FROM and TO (Item 1).
3. Set the axis to be changed and the distance of the shift using axis buttons (Item 2).
4. Press ENTER. The coordinate(s) of the point will be changed in accordance with the set value.

## Pallet

Pallet is an array method and refers to repeating **point dispensing** or **line dispensing** by a regular offset interval, in the number of set times.

- Up to 50 pallet patterns can be saved and a desired pattern (“pallet No.”) can be selected for execution.
- Pallet is applied only to POINT DISPENSING and LINE START types.
- If Pallet is applied in a LINE START type, movement from LINE START to LINE END will be repeated.

To create a pallet:

1. From the Point Edit window, select the point to be arrayed (Item 1).



2. Press PALLET (Item 2) to set it to ON.
3. Press PALLET NO (Item 3). The [Pallet Edit](#) (pg 52) window displays.
4. In the Pallet Settings area:
  - a. Press one of the TYPE icons to select a repetition pattern.
  - b. Select a repetition sequence in the Order column: press a sequence number (1st, 2nd, or 3rd) and then select an axis (X, Y, or Z).
  - c. Enter the number of repetitions in the Repeat column.
5. Enter pitch using the Pitch Setting controls. Also refer to pallet samples Figure 2 on page 10-22 and Figure 3 on page 10-22.
  - a. Select an axis.
  - b. Set PITCH SETTING to OFF. This enables you to move the robot to P1 without it monitoring travel data.
  - c. Move to P1 using JOG buttons.
  - d. Turn PITCH SETTING to ON. This enables the robot to monitor travel data.
  - e. Move to P2 using JOG buttons.
  - f. Repeat the above steps for remaining axes.
6. Press SAVE to save pallet entries or ESC to cancel.

Figure 2: Pitch example for dots - settings shown here result in these XY and Z moves

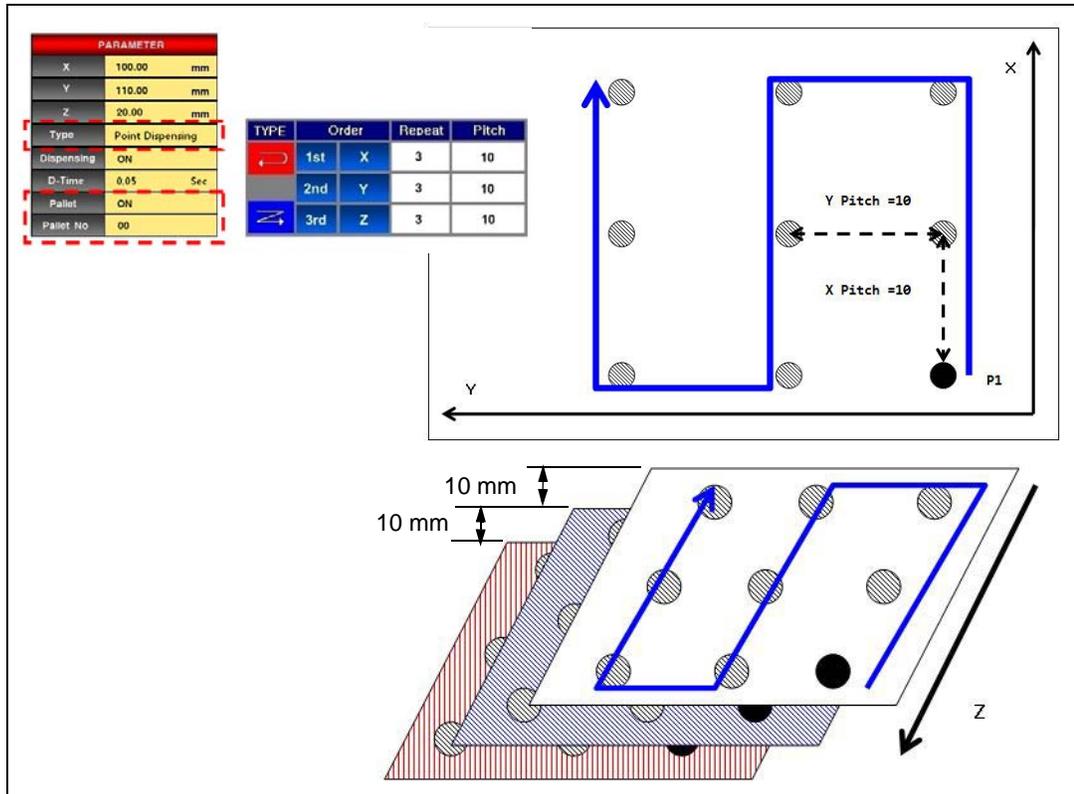
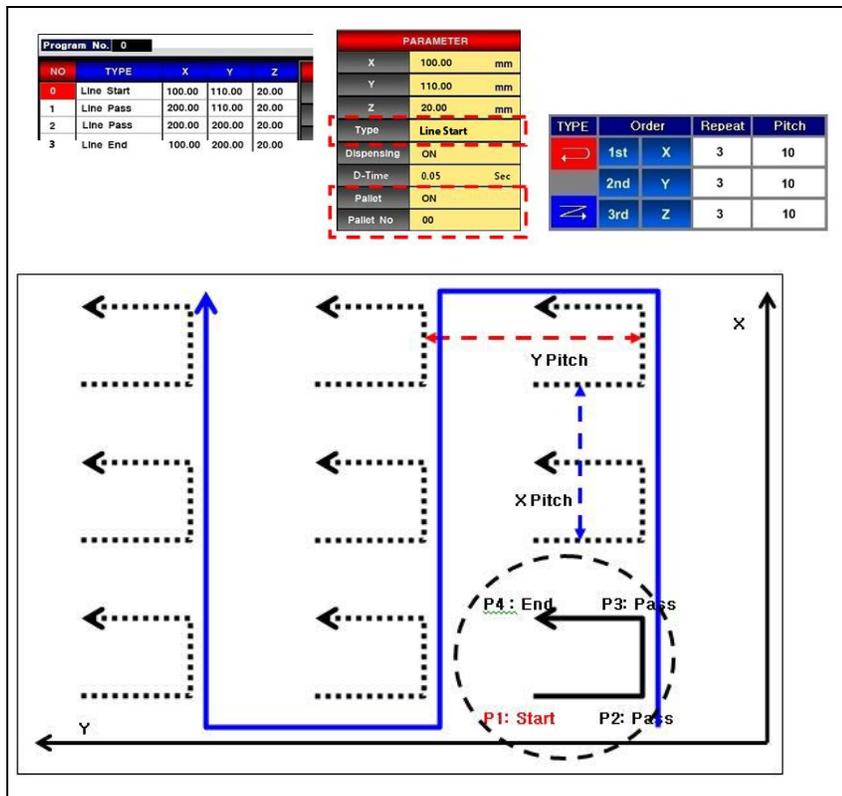


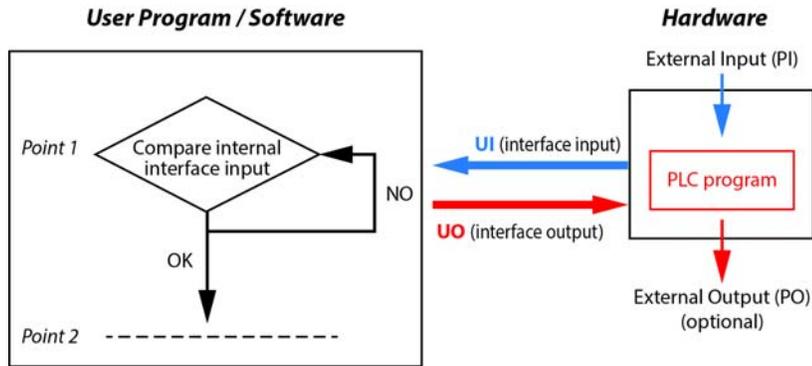
Figure 3: Pitch example for lines - these settings result in this pallet



## Internal Interface (UO / IO)

In line with the condition of “internal interface” set for each point.

- If interface input coincides, the next sequence will proceed after the output of set interface.
- If interface input does not coincide, it will wait until it coincides.



## Working with UI / UO

NO	TYPE	X	Y	Z
0	Line Start	100.00	110.00	20.00
1	Line Pass	200.00	110.00	20.00
2	Line End	200.00	200.00	20.00

PARAMETER	
X	100.00 mm
Y	110.00 mm
Z	20.00 mm
Type	Line Start
Dispensing	ON
Speed	30 %
Pallet	ON
Pallet No	00

Input: 0 1 2 3 4 5 6 7 8  
 Type-1: 9 10 11 12 13 14 15

Output: 0 1 2 3 4 5 6 7 8  
 9 10 11 12 13 14 15

Input: 0 1 2 3 4 5 6 7 8  
 Type-1: 9 10 11 12 13 14 15

Type-1 (Red)  
 Type-2 (Blue)  
 Pass (Yellow)

Input / Output:

- Toggles between input / output status.
- Red background for numbers indicates ON condition.

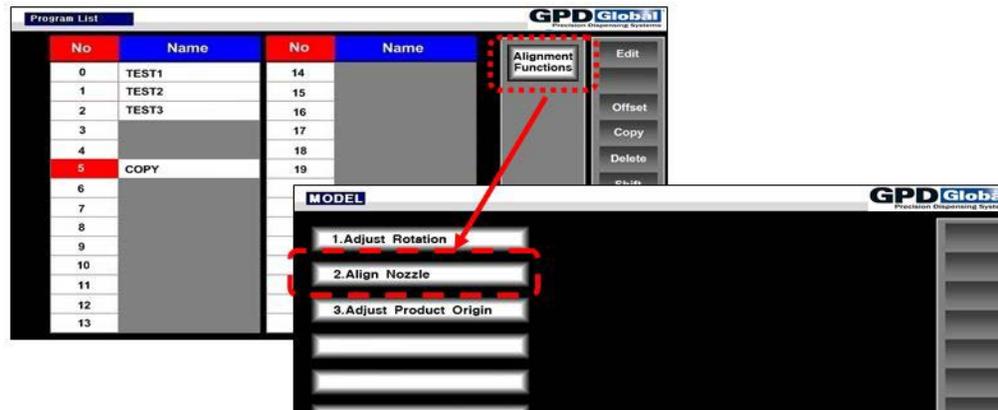
Input types - button toggles between:

- Type-1: check all ON/OFF conditions
- Type-2: check set ON condition only
- Pass: ignore input condition

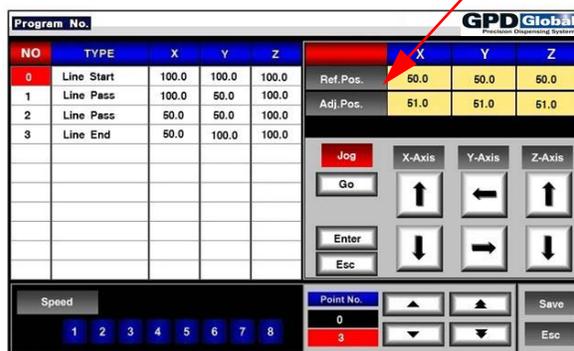
## Nozzle Alignment

To modify nozzle alignment, use the following procedure. You may also adjust nozzle position with [Global Limits & Offsets](#) (pg 4).

1. Access the Alignment Nozzle function:
  - a. In the main screen, press 1.Program.
  - b. From the programs listing, select the program number to be changed.
  - c. Press ALIGNMENT FUNCTIONS, and then press 2.ALIGN NOZZLE.



2. Remove the nozzle from the robot.
3. Set the reference point:
  - a. Select the line number (located at left edge of screen) of the program to be used as a reference point for nozzle alignment.
  - b. Press the GO button. The robot gantry will move to the coordinates of the selected reference line.
  - c. Press REF. POS.



- d. Press ENTER to save the coordinates.

- Select ADJ. POS.



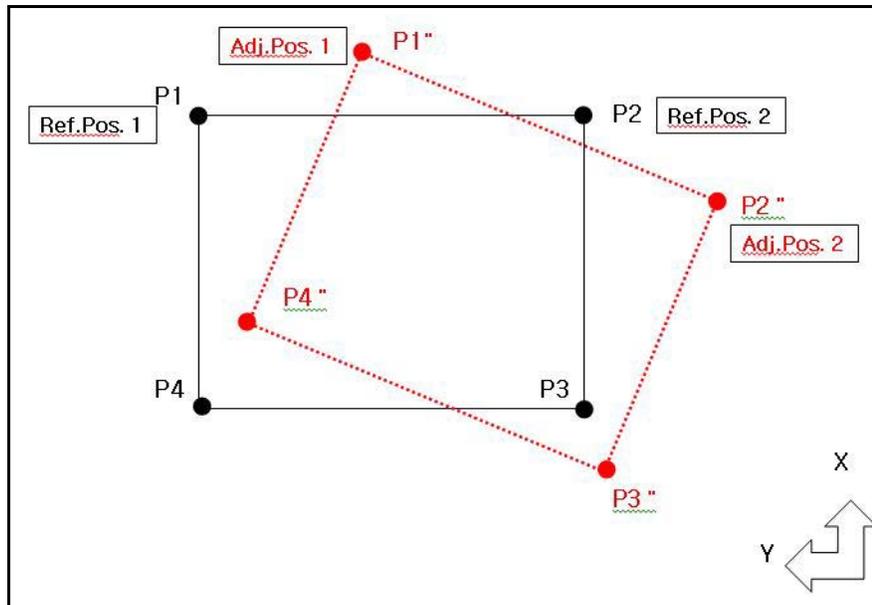
- Press the Up arrow for the Z axis until the robot has attained enough clearance to safely install the new nozzle.



- Using the axes controls, move the new nozzle into alignment with the reference point of the program.
- Press ENTER to save the coordinates.
- Press SAVE to recalculate the program coordinate points.
- Press ESC to exit the calibration routine.
- Press the yellow ORIGIN / RUN button to apply the nozzle adjustment.

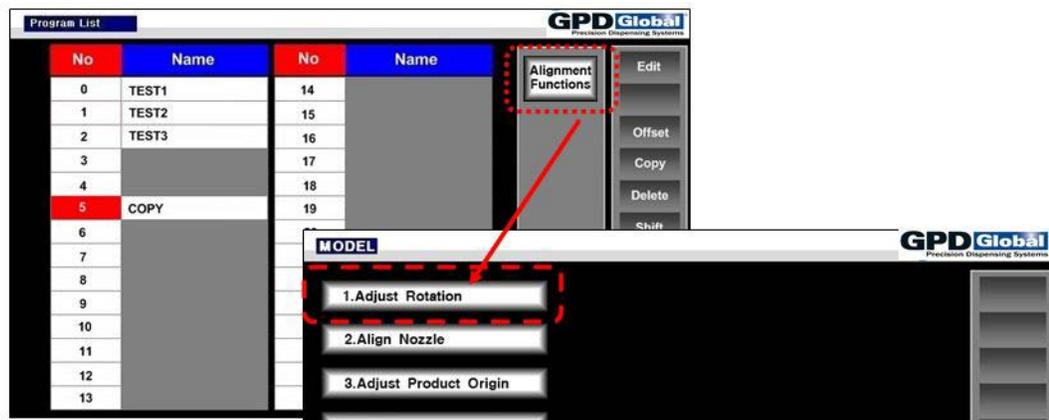
## Adjust Rotation Coordinates

Reset all coordinates for the currently selected program based on calculation of X/Y axis distance and changed angle

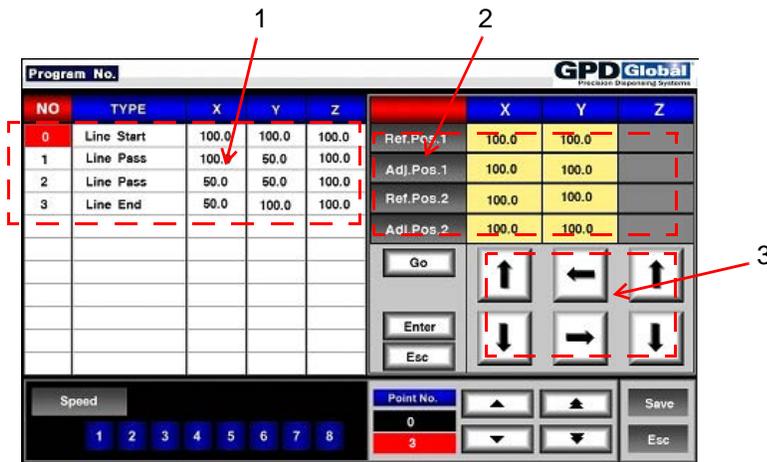


To adjust rotation coordinates for a program:

1. Select a program.
2. From the Program window, press 1.PROGRAM.
3. Press ALIGNMENT FUNCTIONS. The Model window displays.



4. Press 1.ADJUST ROTATION. Coordinates for the currently selected program points are displayed (Item 1).



Item	Description
1	Currently selected program points.
2	Reference and adjustment positions: <ul style="list-style-type: none"> <li>• REF.POS.1: Reference Position 1. Original point from program. Select any point from program.</li> <li>• ADJ.POS.1: Adjust Position 1. New position of point selected for REF.POS.1.</li> <li>• REF.POS.2: Reference Position 2. Second original point from program. Select any point except the point used for REF.POS.1 from program.</li> <li>• ADJ.POS.2: Adjust Position 2. New position of point selected for REF.POS.2.</li> </ul>
3	Navigation buttons for Adjust Position - for use only when parameter is selected.

5. Choose coordinate of reference position:
- Select a point in the program.
  - Press GO to shift reference point.
  - Choose a REF.POS parameter and then press ENTER.

Example: No. 0 point coordinate will be copied as Ref.Pos.1 coordinate when you press ENTER.

6. Adjust position:
- Select a point in the program.
  - Press GO to shift reference point. Current coordinate will be copied when you choose an ADJ.POS. parameter.
  - Shift to changed coordinate with JOG and then press ENTER.
7. Repeat [Step 5](#) and [Step 6](#) for the remaining points in the program.
8. Press SAVE to change and save coordinates.

All coordinates in the current program will be reset using reference coordinate and adjusted coordinate when you press SAVE. Changed coordinate values will display when coordinates are adjusted and saved.

## Adjust Product Origin

**CAUTION:** This function will globally change the origin coordinates of all programs.

This function is used primarily to limit the robot work area. Entering any value other than 0 in for X, Y, and Z will reduce the work area available to the robot.

The user may arbitrarily designate the coordinates of the original point for each program.

Because it can be set for each program, when the user changes the program and when the user original point coordinate is different from newly changed coordinate, the robot will change to “waiting mode for original point shift”. In this case, you should return to original point using the button for original point on the robot or touch screen.

### Example

To be changed from Program 0 to Program 5.  
If original point coordinate of Program 0 is different from that of Program 5,  
It will be changed to waiting mode for original point shift

Set value of user's reference coordinate

JOG/MDI mode change

Button for choosing axis - to be used in MDI mode

X	Y	Z
0.0	0.0	0.0

MDI Go Save

X-Axis Y-Axis Z-Axis

1 2 3  
4 5 6  
7 8 9  
0 .  
CLR ENT ESC

## Programming Operations

Overview of preprogrammed dispensing type program “primitive” operations.

### Point Dispensing (Dot)

Point dispensing means moving to the coordinate designated by the user and dispensing at the point for a certain amount of time as designated by the user.

#### Dispensing Parameters

Parameter	Description
D-TIME	Dispensing time. 0.00-99.99 seconds
Dispensing ON/ OFF	Choose ON/OFF for dispensing
Pallet ON/OFF	Choose whether or not to use pallet function or not.
Pallet No	Designate pallet number when using pallet function.

#### Offset Parameters

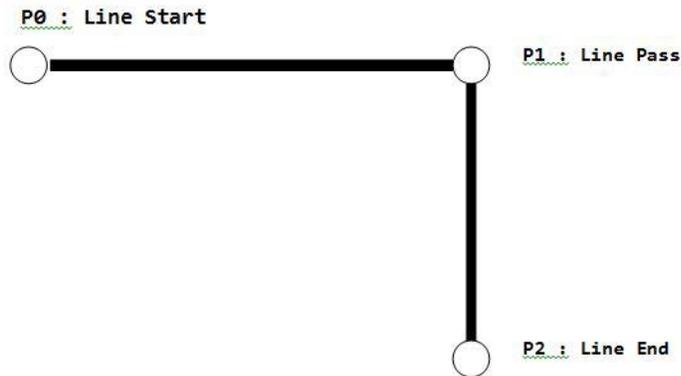
Parameter	Description
Waiting Time At Stop	Waiting time between completion of dispensing and Z axis shift-PTP movement. 0.00-99.99 seconds
Z Axis Up Amount	Relative coordinates Increases by set value after completion of dispensing at the dispensing coordinate. If set value (Z axis risen point) is greater than current Z coordinate, it will be ignored.
Wait Time At Up	Waiting time before Z Axis Up Amount shift 0.00-99.99 seconds
Z Axis Up Speed *	Z Axis Up Amount movement rate 0-100% If set value is 0, movement rate of PTP will be applied.
<b>* Can be defined as mm/sec or inch/sec</b>	

## Line Dispensing

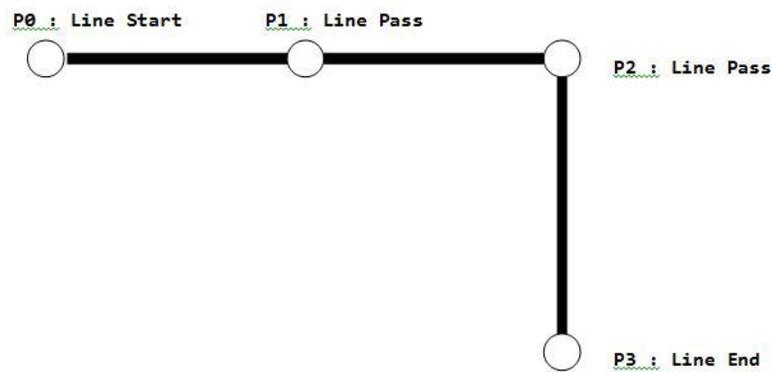
Line dispensing means dispensing in a straight or curved line.

### Examples

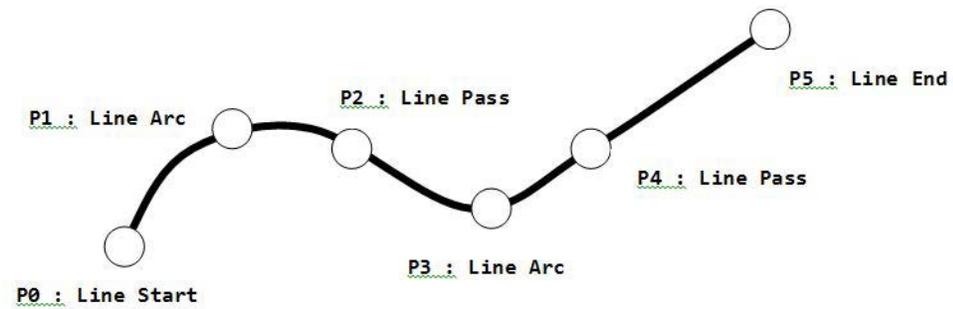
Example 1



Example 2

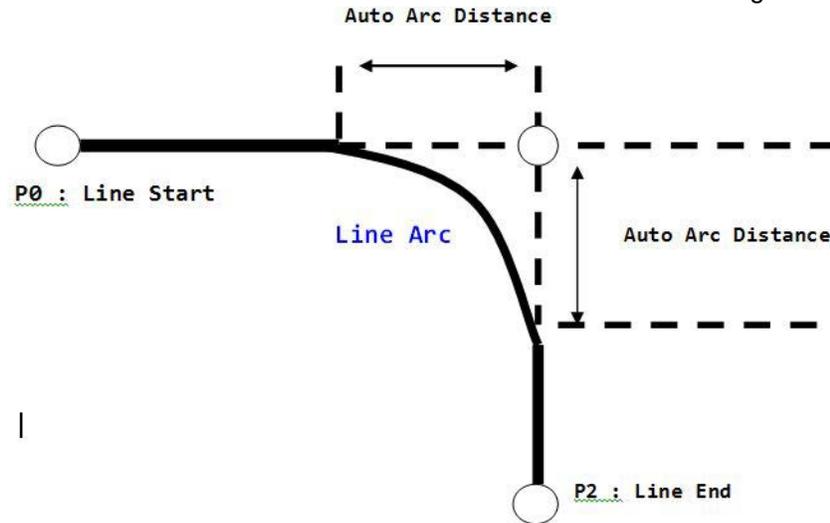


Example 3



## Example 4

Line Arc converts the “Auto Arc Distance” from where Line Pass might otherwise be used.



## Rules

- Only LINE PASS and LINE ARC can be used between LINE START and LINE END.
- LINE START and LINE END can be used only once in a program.
- LINE ARC must be preceded by either LINE START or LINE PASS, and followed by either LINE PASS or LINE END.

## Parameters

### Line Start

---

Line Start is the starting point.

### Dispensing Parameters

Parameter	Description
Dispensing ON/OFF	Choose ON/OFF for dispensing
Speed	Line movement rate (%)
Pallet ON/OFF	Choose whether or not to use pallet function.
Pallet No.	Designate pallet number when using pallet function.

**Offset Parameters**

Parameter	Description
Waiting Time At Start	Waiting time between start of dispensing and shift to next point coordinate. 0.00-99.99 seconds
Auto Arc	Automatic arc shift at the point where two straight lines are lined. Minimum 0.01 mm

**Line Pass**

Point at which straight lines or curved lines meet.

**Dispensing Parameters**

Parameter	Description
Dispensing ON/OFF	Choose ON/OFF for dispensing
Speed	Line movement rate (%)

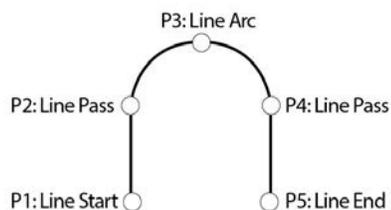
**Offset Parameters**

Parameter	Description
Wait Time At Start	Waiting time between start of dispensing and shift to next point coordinate. 0.00-99.99 seconds
Auto Arc	Automatic arc shift at the point where two straight lines are lined.

**Line Arc**

Point at which straight or curved lines meet.

Example



## Line End

---

Last coordinate in straight or curved line shift.

### Offset Parameters

- Wait Time At Stop
- Z Axis Up Amount
- Wait Time At Up
- Z Axis Up Speed
- PTP Height
- PTP Speed

## Wait Point

Waiting period set by the user.

### Dispensing Parameters

Parameter	Description
W-Time	Waiting for the amount of time set by the user.

### Offset Parameters

- PTP Height
- PTP Speed

## Loop Point

Repetition of motion. Motion from a set point number to loop point number will be repeated the number of times designated set by the user during the execution of the program.

### Dispensing Parameters

Parameter	Description
Start Point	Number of the point where repetition starts. <b>NOTE:</b> Do not repeat the Loop Point type within the range of repetition.

### Offset Parameters

- PTP Height
- PTP Speed

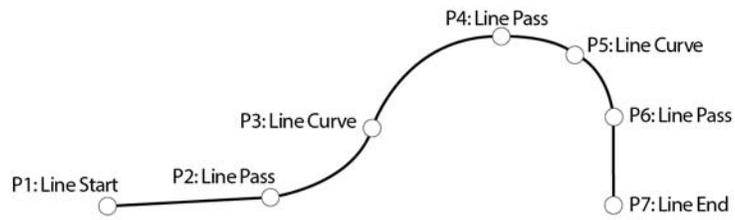
## Line Curve

Line Curve is used to generate curved motion between points.

Usage:

- Line Start or Line Pass
- Line Curve
- Line Pass or Line End
- Line Curve
- Line Pass or Line End

Example



## Go to

Instruction for ramification. Use “Go to” when shift to a certain point coordinate is needed during point sequential shift.

1. Set the window number of the point to shift.

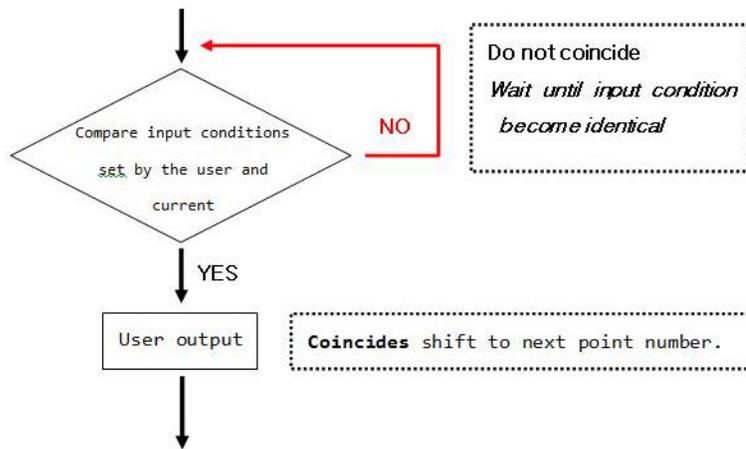
**NOTE:** Point number between LINE START and LINE END cannot be set.

2. If conditions input by the user coincide, it will shift to set point number.

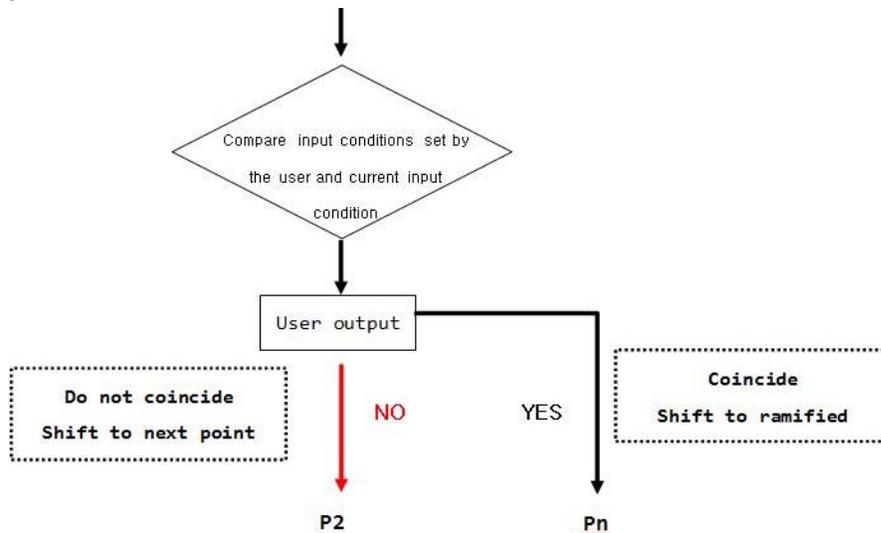
**NOTE:** If conditions do NOT coincide, it will sequentially shift to the next point number. Its I/O function is different from other motion types that wait until input conditions become identical.

## Examples

Example 1



Example 2

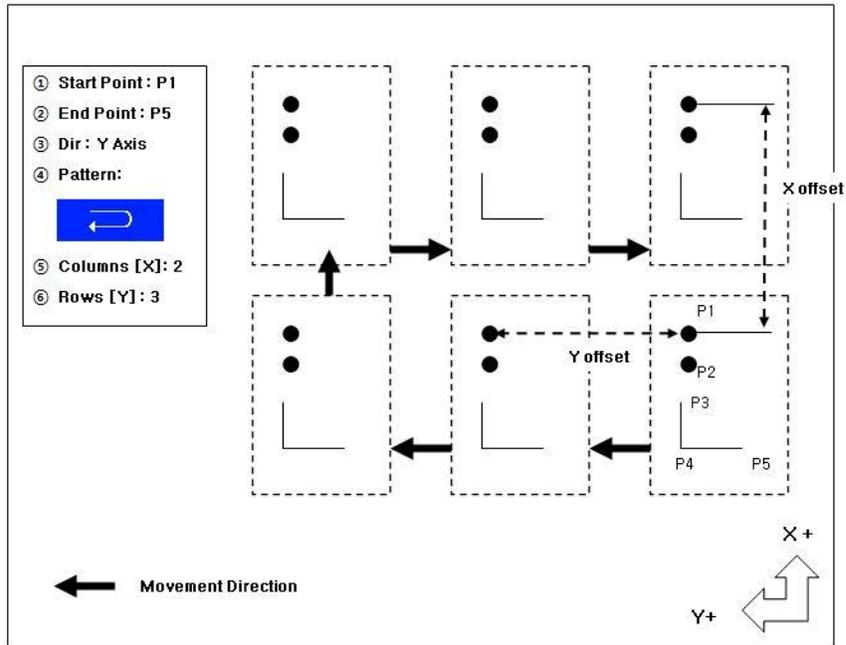


## Repeat Array

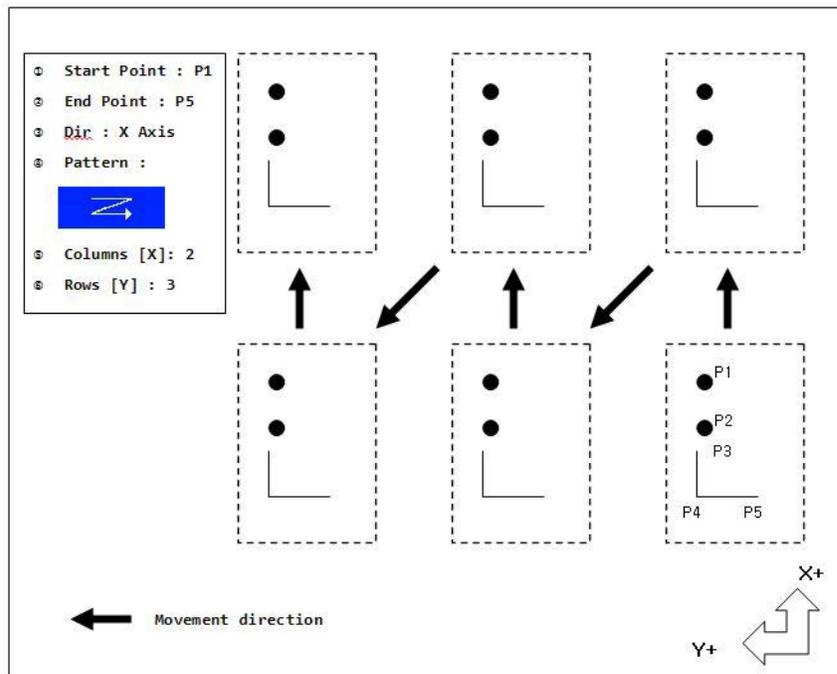
Repeatedly implements the section set by the user for the number of times set by the user.

### Examples

Example 1



Example 2



## Parameters

### Dispensing Parameters

Parameter	Description
X-Offset	X axis interval
Y-Offset	Y axis interval
Start Point	Number of starting point of repeated section.
End Point	Number of ending point of repeated section.
Dir	Movement direction of repeated motion.
Patterns	Movement pattern of repeated motion.
Columns (X)	Number of repetition of X axis shift.
Rows (Y)	Number of repetition of Y axis shift.

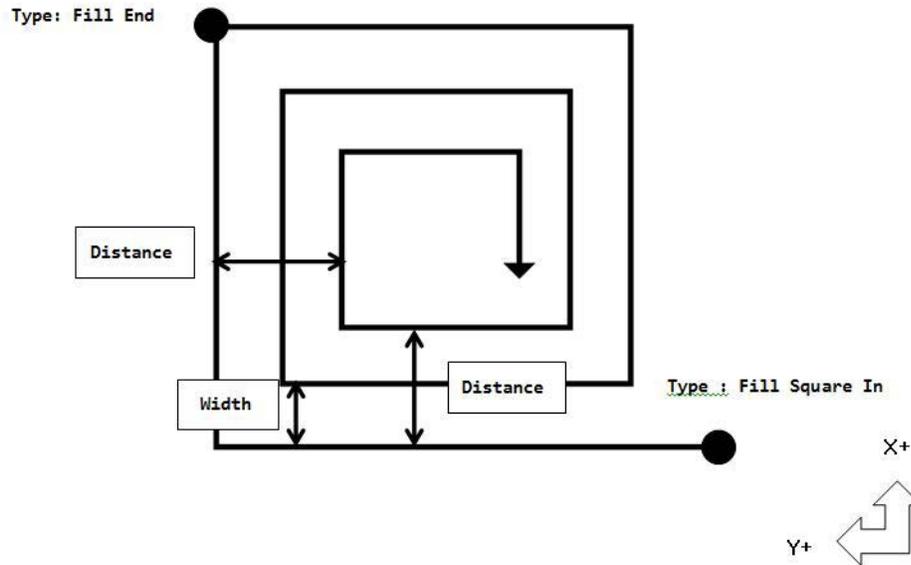
### Offset Parameters

- PTP Height
- PTP Speed

## Fill Square In

Reduces the size of a tetragon designated by the user to a certain size while filling it.

Example



## Parameters

### Dispensing Parameters

Parameter	Description
Dispensing ON/OFF	Choose ON/OFF for dispensing
Speed	Movement rate
Width	Distance of reduction
Distance	Total distance of reduction

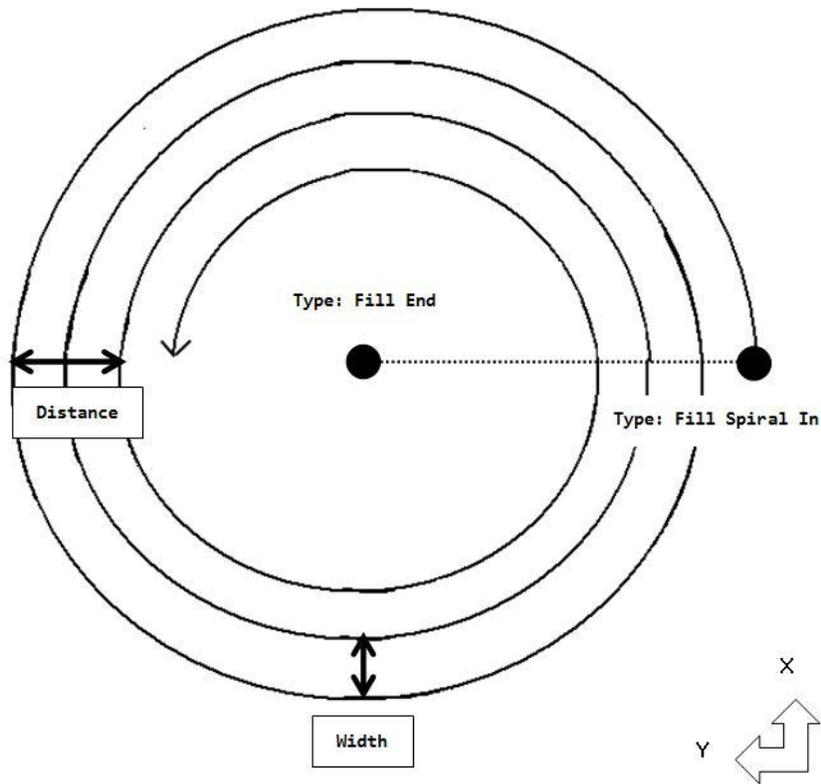
### Offset Parameters

- Wait Time at Start

## Fill Spiral In

Fills a circle of the size designated by the user in a spiral from outside to inside (counter-clockwise).

Example



## Parameters

### Dispensing Parameters

Parameter	Description
Dispensing ON/OFF	Choose ON/OFF for dispensing
Speed	Movement rate
Width	Distance of reduction
Distance	Total distance of reduction

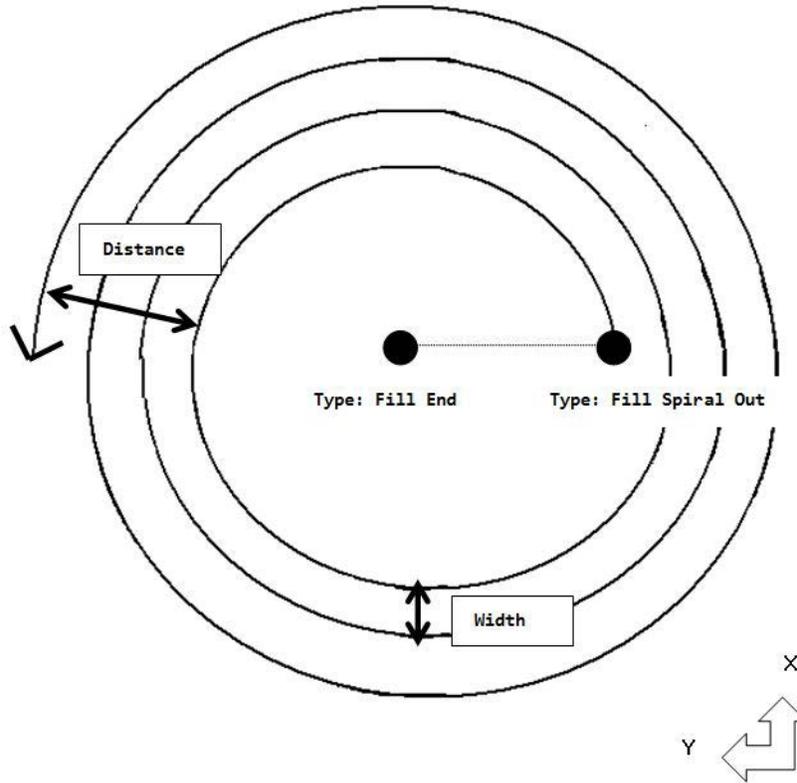
### Offset Parameters

- Wait Time at Start

## Fill Spiral Out

Fills a circle of the size designated by the user in a spiral from inside to outside (counter-clockwise).

Example



## Parameters

### Dispensing Parameters

Parameter	Description
Dispensing ON/OFF	Choose ON/OFF for dispensing
Speed	Movement rate
Width	Distance of reduction
Distance	Total distance of expansion

### Offset Parameters

- Wait Time at Start

## Fill End

Use with FILL SQUARE IN, FILL SPIRAL IN, and FILL SPIRAL OUT.

### Rules

- For a FILL SQUARE IN condition, the FILL END point will be diagonal point of a tetragon.
- In the event of FILL SPIRAL IN or FILL SPIRAL OUT, the FILL END point should be the center of the circle.

### Parameters

#### Offset Parameters

- Wait Time At Stop
- Z Axis Up Amount
- Wait Time At Up
- Z Axis Up Speed
- PTP Height
- PTP Speed

## Point to Point Move

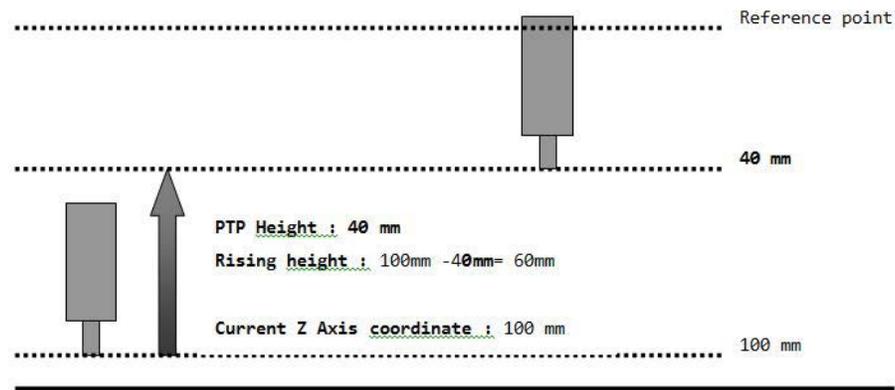
*PTP Move / Point to Point Move*

PTP move means shifting from a point to point at the predetermined speed and height.

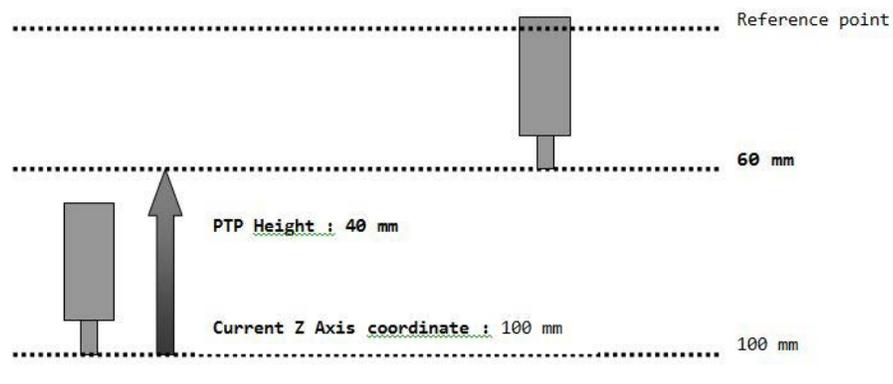
PTP Height	Z axis ascending coordinate in PTP move. (relative / absolute coordinate to be chosen)
PTP Speed	XYZ axis movement rate in PTP move (%).

### Examples

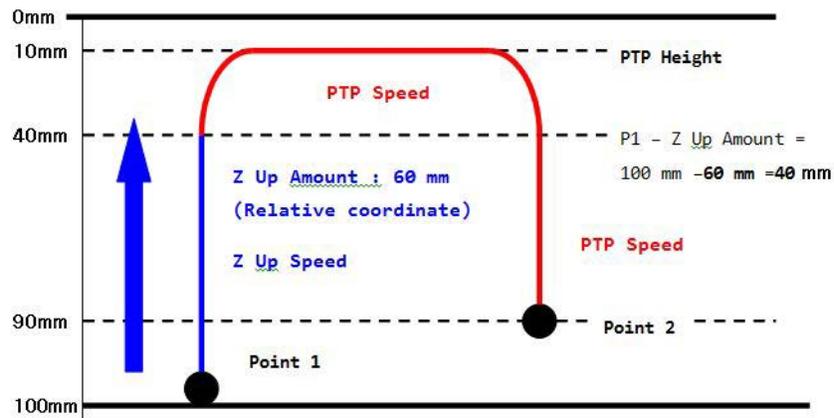
Example 1 - Absolute coordinate applied



Example 2 - Relative coordinate applied



Example 3 - Using offset parameters in unison. Illustrates the relationship between the different Z height offset parameters.



## Rules

- PTP MOVE is not feasible within the range between LINE START and LINE END.
- Point shift from LINE END to LINE START accompanies PTP MOVE.
- Before PTP MOVE, if absolute coordinate of Z axis is lower than PTP Height, set value of PTP Height will be ignored and move to next point.

## Programming Operations Parameters

These parameters apply to some of the primitive [Programming Operations](#) (pg 29).

### Dispensing

Toggles ON / Off.

**Applies to:**

- Point Dispensing
- Line Start
- Line Pass

### D-Time

Sets dispensing time.

Press keypad to change the set value and press ENTER.

**Applies to:**

- Point Dispensing

### Speed

Sets line movement speed.

Press keypad to change the set value and press ENTER.

**Applies to:**

- Line Start
- Line Pass

### W-Time

Motion shift is prohibited during waiting time and setting time.

Press keypad to change the set value and press ENTER.

**Applies to:**

- Wait Point

### Loop Point

Number of point where motion repetition starts.

**NOTE:** Loop point should not be overlapped within the range of repeated point.

Press keypad to change the set value and press ENTER.

**Applies to:**

- Loop Point

### Repetition

Sets the number of motion repetition. Motion will be repeated in the number of set times.

Selecting the infinity symbol key will result in infinite repetition. Press keypad to change the set value and press ENTER.

**Applies to:**

- Loop Point

## Pallet

Determines whether to use pallet.

Toggles ON / Off.

**Applies to:**

- Point Dispensing
- Line Start

## Pallet No

Determines pallet number.

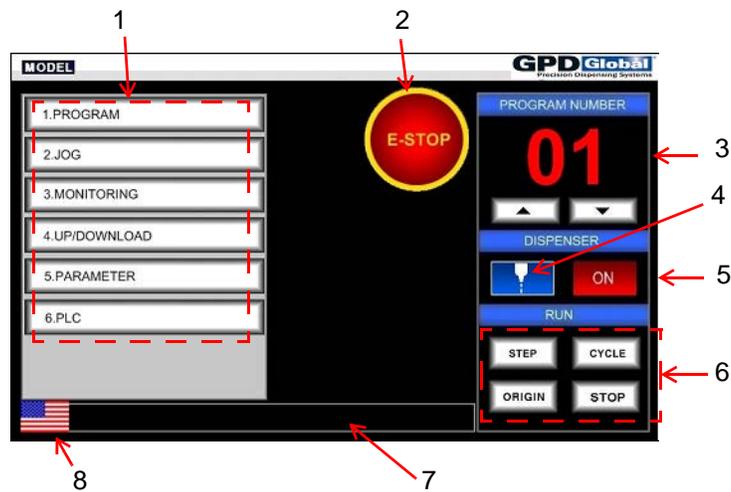
In the Pallet Edit window, choose Pallet No. with Up/Down button and then press SAVE to save and close window, or ESC to cancel and close window.

**Applies to:**

- Point Dispensing
- Line Start

## Windows

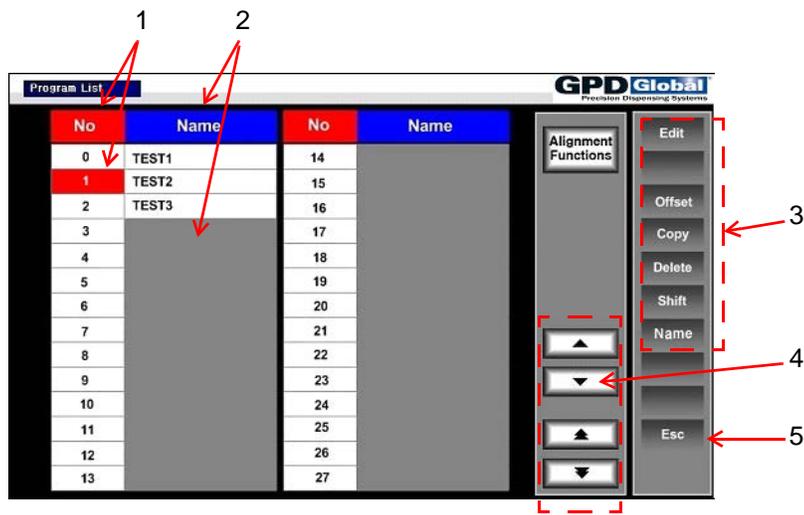
### Main



Item	Description
1	Function settings sub-menu buttons.
2	Emergency stop button.
3	Displays and changes current program number.
4	Purge / Manual shot: press and hold to purge fluid from dispenser.
5	Toggles between dispenser ON and OFF. <ul style="list-style-type: none"> <li>• ON: dispenses during program run.</li> <li>• OFF: dry run; does not dispense during program run.</li> </ul>
6	Program execution and reference point movement buttons: <ul style="list-style-type: none"> <li>• STEP: runs a program point-by-point.</li> <li>• CYCLE: continuously execute the selected program.</li> <li>• ORIGIN: moves robot to user designated origin coordinates point.</li> <li>• STOP: stops program run.</li> </ul>
7	Operation status information.
8	Language currently selected.

## Program

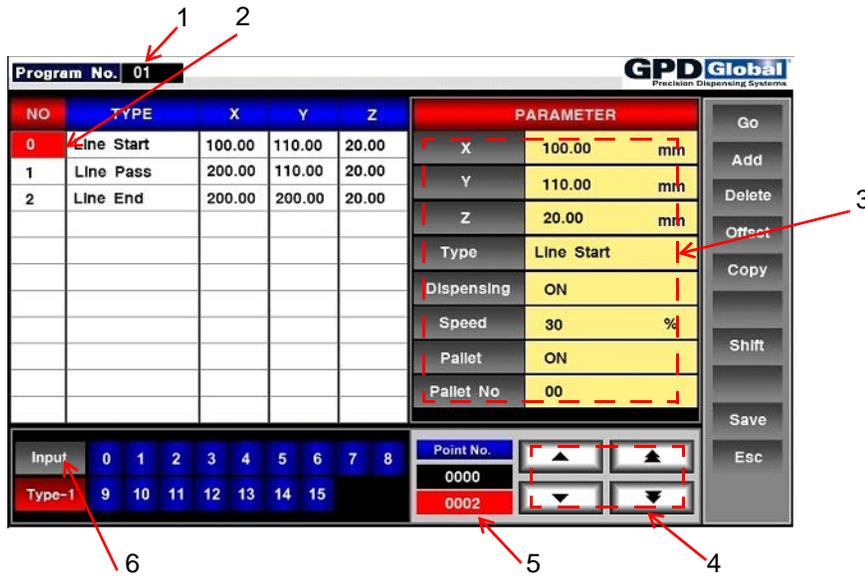
To open the Program window, press 1.PROGRAM on the main window.



Item	Description
1	Program number. The currently selected program number displays with a red background.
2	Program name. Blank programs display as a gray box.
3	Function buttons: <ul style="list-style-type: none"> <li>• EDIT: edit a program.</li> <li>• OFFSET: edit offset parameters.</li> <li>• COPY: copy a program.</li> <li>• DELETE: delete a program.</li> <li>• SHIFT: move points in the program.</li> <li>• NAME: rename a program.</li> </ul>
4	Up / Down buttons for navigating through programs.
5	ESC button returns to main window.

## Point Edit

To open the Point Edit window, press EDIT on the main window.



Item	Description			
1	Program selected for editing.			
2	Points in program and their current coordinate values. The currently selected point number displays with a red background.  To move to a specific point number, press the column title "NO." and then enter the point number in the keypad that displays.			
3	Use these fields to edit the motion type and parameter values of the selected point.			
4	Up / Down buttons for navigating through points. Single arrows move to the next/previous point. Multi arrows move in increments of 10.			
5	Indicates the point currently being edited (black) and the point last edited (red).  <div style="border: 1px solid black; padding: 5px; width: fit-content;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="background-color: #000080; color: white; padding: 2px;">Point No.</td> </tr> <tr> <td style="background-color: #000000; color: white; padding: 2px;">0001</td> </tr> <tr> <td style="background-color: #FF0000; color: white; padding: 2px;">0017</td> </tr> </table> </div>	Point No.	0001	0017
Point No.				
0001				
0017				
6	Input / Output status of currently selected point. <ul style="list-style-type: none"> <li>• OFF numbers display on blue background.</li> <li>• ON: numbers display on red background.</li> </ul>			

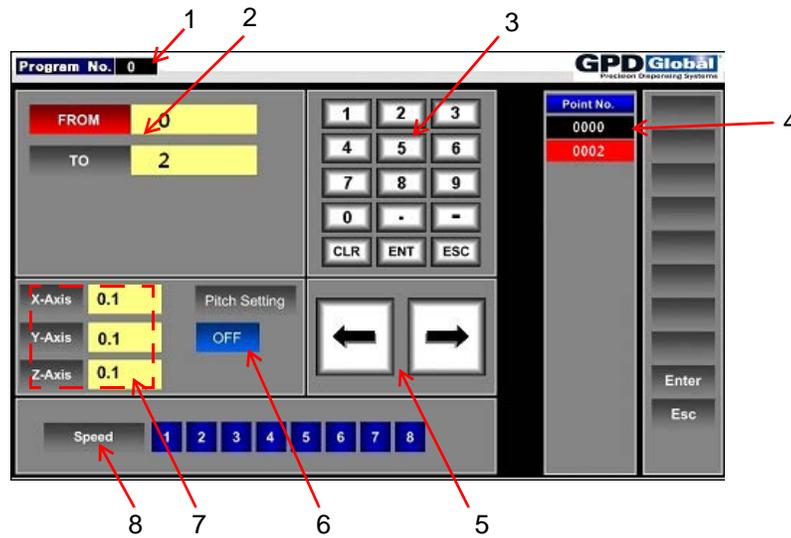
## Point Type



To open the Point Type window, press TYPE on the Point Edit window. For details about a specific type, refer to [Programming Operations](#) (pg 29)

## Point Range

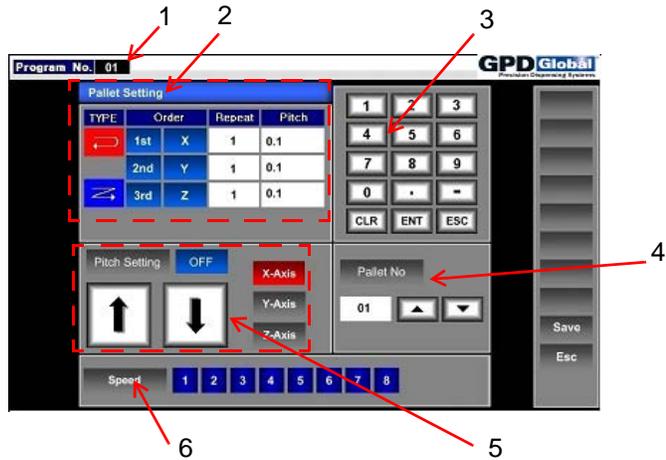
To open the Point Range window, press SHIFT or COPY in the Point Edit window.



Item	Description			
1	Program selected for editing.			
2	Enter beginning and ending point numbers to indicate either a single point or a range of points that will be acted upon.			
3	Keypad for entering range values.			
4	Indicates the point currently being edited (black) and the point last edited (red). <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <table border="1" style="width: 100%; text-align: center;"> <tr><td style="background-color: #000080; color: white;">Point No.</td></tr> <tr><td style="background-color: #000000; color: white;">0001</td></tr> <tr><td style="background-color: #FF0000; color: white;">0017</td></tr> </table> </div>	Point No.	0001	0017
Point No.				
0001				
0017				
5	Jog motion controls. Works in tandem with Pitch Setting.			
6	Pitch Setting used in tandem with Jog controls. <ul style="list-style-type: none"> <li>• OFF - enables you to move the robot to origin coordinate without the robot monitoring travel data.</li> <li>• ON - enables the robot to monitor travel and offset data.</li> </ul>			
7	Distance from origin coordinate relative to reference coordinate will automatically display here as a result of setting the pitch for each axis.			
8	Relative speed settings. 1 = slowest, 8 = fastest.			

# Pallet Edit

To open the Pallet Edit window, press PALLET NO in the Point Edit window.



Item	Description
1	Program selected for editing.
2	<p>Pallet settings:</p> <ul style="list-style-type: none"> <li>TYPE - These repetition pattern choices are available under TYPE:</li> </ul> <div style="display: flex; flex-direction: column; gap: 10px;"> <div data-bbox="451 976 1153 1285"> </div> <div data-bbox="451 1333 1153 1642"> </div> </div> <ul style="list-style-type: none"> <li>ORDER: pattern order. Select sequence number (1st, 2nd, 3rd) and then an axis (X, Y, or Z).</li> <li>REPEAT - number of repetitions the pattern will be repeated. This value calculates as “repetition minus 1”. For example: If value is set to 1, repetition will not execute. If set to 2, it will repeat once. If set to 3, it will repeat two times.</li> <li>PITCH: offset distance of repetition pattern. Use Pitch Setting controls to set value.</li> </ul>

Item	Description
3	Keypad for entering range values.
4	Use arrow buttons to select a different pallet number.
5	<p>Pitch Setting:</p> <ul style="list-style-type: none"><li>• OFF - enables you to move the robot to origin coordinate without the robot monitoring travel data.</li><li>• ON - enables the robot to monitor travel and offset data.</li></ul> <p>Arrows: Jog motion controls</p> <p>X, Y, Z: distance from original coordinate relative to reference coordinate will automatically display here as a result of setting the pitch for each axis.</p>
6	Relative speed settings. 1 = slowest, 8 = fastest.

# System Management

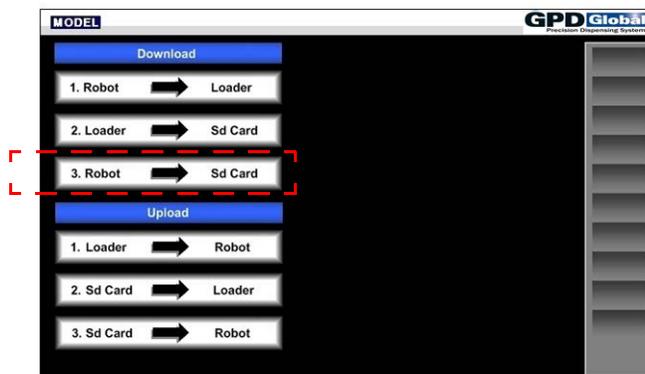
## Units of Measure

To globally set the units of measure, select 5.PARAMETERS from the main window.

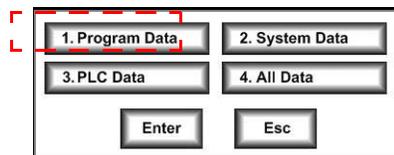
## Download Program to SD Card

To back up a program, you must copy the user program data to an SD card:

1. Insert an SD card into the SD slot located in the top of the touch screen.
2. Selecting the program number to be backed up is an important step – it determines which program files will be copied. To select the program for backup:
  - a. Select 1.Program button.
  - b. Select the program location you want to copy.
  - c. Press ESC.
3. From the main window, select 4.UP/DOWNLOAD button. A password (0196) is required to continue.
4. Select 3.Robot -> Sd Card button.



5. From the pop-up screen, select 1.Program Data button, and then press Enter. This backs up only the selected program.



6. Press the ESC button in the lower right-hand corner to exit the Up/Download menu.

**IMPORTANT:** The program consists of two (2) files: **progpara.poi** and **palpara.pal**. Do NOT change these file names; otherwise, they become unusable for uploading to other machines. If you wish to identify the files with a new name, copy them into a folder and rename the folder.

## Upload Program from SD Card

Uploading a program onto a machine requires copying user program data from an SD card onto the machine. To upload program files onto a machine:

1. If the program back up (represented by files **progpara.poi** and **palpara.pal**) is not already located in the root of an SD card, copy it to the root of an SD card.
2. Insert the SD card into the SD slot located in the top of the touch screen.
3. To select the location into which you want to copy/upload the program:
  - a. Select 1.Program button.
  - b. Select the program location into which you want to copy the program.

**IMPORTANT:** Be careful to select the correct program location; any existing files in the selected location will be overwritten.

4. Press the ESC button to exit the program.
5. Select 4.UP/DOWNLOAD button. A password (0196) is required to continue.
6. Select 3.SD Card > Robot Button.
7. From the pop-up screen, select 1.Program Data button, and then press Enter.
8. Press the ESC button in the pop-up screen.  
Press the ESC button in the lower right-hand corner to exit the Up/Download menu.

# Troubleshooting

## Error Messages

Error messages may display before program execution.

Message Code	Description
1	Input data does not exist.
2	Input data exceeds 1,000 points.
3	Last point is Line Start.
4	Error in setting point type next to Line Start.
5	Movement speed is 0 at Line Start.
6	Error in setting point type next to Line Pass.
7	No. 1 point is Line Pass.
8	Error in setting point type before Line Pass.
9	Line Pass is starting point of Line.
10	First point is Line Arc.
11	Error in setting point type next to Line Arc.
12	Error in setting point type before Line Arc.
13	Line End is the first point.
14	Error in setting point type before Line End.
15	Error in setting point type before Wait point.
16	ARC cannot be calculated.
17	Error in inputting ARC coordinate. Two point coordinates are the same.
18	When the Limit boundary is exceeded during ARC execution.
19	Loop type is overlapped within Loop point range.
20	Error in Line Curve calculation.
21	Error in setting point number to be shifted for "Go to".
22	Error in setting repeat point - it cannot be the first point type.
23	Error in Repeat point - Start point number is larger than end number.
24	Error in setting Repeat point - Error in setting dispensing type within the repetition range.
25	Error in setting repeat point - Repetition range exceeds the number of saved point.
26	Error in setting Repeat point - Error in designating Start point.
27	Error in setting Repeat point - Error in designating End point.
28	Error in setting Fill point - Movement speed is 0.
29	Error in setting Fill point - Fill end point has not been set.
30	Error in setting Fill point.
31	Error in setting Fill point
32	Error in setting Fill point.

## Incompatible Parameter Setting

If a program states that the robot is moving but it appears no movement is taking place, the setting for parameter 54 is probably incorrect. Parameter 54 should be set to “mm/sec”; if set to “%”, the machine will move so slowly that it appears not to move at all.

Changing parameter 54 to mm/sec prior to a program upload negates the need to manually input offsets to speed, line starts, and line moves.

To verify parameter 54 is set to mm/sec:

1. From the main screen, select 5. Parameter. A password (0502) is required to continue. A numbered list of parameters displays.
2. Press the NEXT button until Parameter 54 displays.
3. Press the Parameter 54 button.
4. Verify the parameter at the top of the pop-up screen states mm/sec. If a value other than mm/sec displays:
  - a. Select the mm/sec button in the pop-up screen.
  - b. Press ESC on the pop-up screen.
  - c. Press SAVE.
5. To exit, press ESC on the Parameter screen.

## Specifications

Specification	Island Series 3S4	Island Series 4S4
Range of operation (XY)	300 x 400 mm (11.8" x 15.75")	400 x 400 mm (15.75" x 15.75")
Range of operation (Z)	100 mm (4")	
Speed (XY)	500 mm/sec (20" sec)	
Speed (Z)	200 mm/sec (8" sec)	
Acceleration	0.5G	
Repeatability (XY)	±0.05 mm (± 0.002")	
Repeatability (Z)	0.02 mm (0.0007")	
Program method	Touch screen, PC	
Operating control	Touch screen, PC, Front panel	
Drive system	Micro stepping motor	
Product weight, max.	11 kg (24 lbs)	
Pump capacity	1, Tandem operation available	
Pump weight, max (Z)	5 kg (11 lbs)	
User input/output	System I/O: 4/5 User I/O: 16/15	
Program capacity	100 programs with 1,000 steps/program	
Footprint (XYZ)	600 x 802 x 825 mm (23.6" x 31.6" x 32.5")	700 x 802 x 825 mm (27.6" x 31.6" x 32.5")
Power	110V, 50/60 Hz	
Air pressure range	0.1-7.0 kgf/cm <sup>2</sup>	
Weight (approximate)	77 kg (170 lbs)	86 kg (190 lbs)

## References

### Mechanical Drawings

#### **Model 4S4 (PN 22300007)**

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- [22300007 - Island Dispense Robot, 4S4 \(400 x 400 x 100 mm\)](#) (pg 60)
- [22395509 - Fixture for 4S4, 400x400](#) (pg 65)
- [22110291 - Taper Lock Quick Release](#) (pg 62)
- [22110291 - Taper Lock Quick Release, Dimensions](#) (pg 63)

#### **Model 3S4 (PN 22300010)**

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- [22300010 - Island Dispense Robot, 3S4 \(400 x 300 x 100 mm\)](#) (pg 61)
- [22395508 - Fixture for 3S4, 300x400](#) (pg 64)
- [22110291 - Taper Lock Quick Release](#) (pg 62)
- [22110291 - Taper Lock Quick Release, Dimensions](#) (pg 63)

### Electrical Schematics

#### **Model 4S4 (PN 22300007)**

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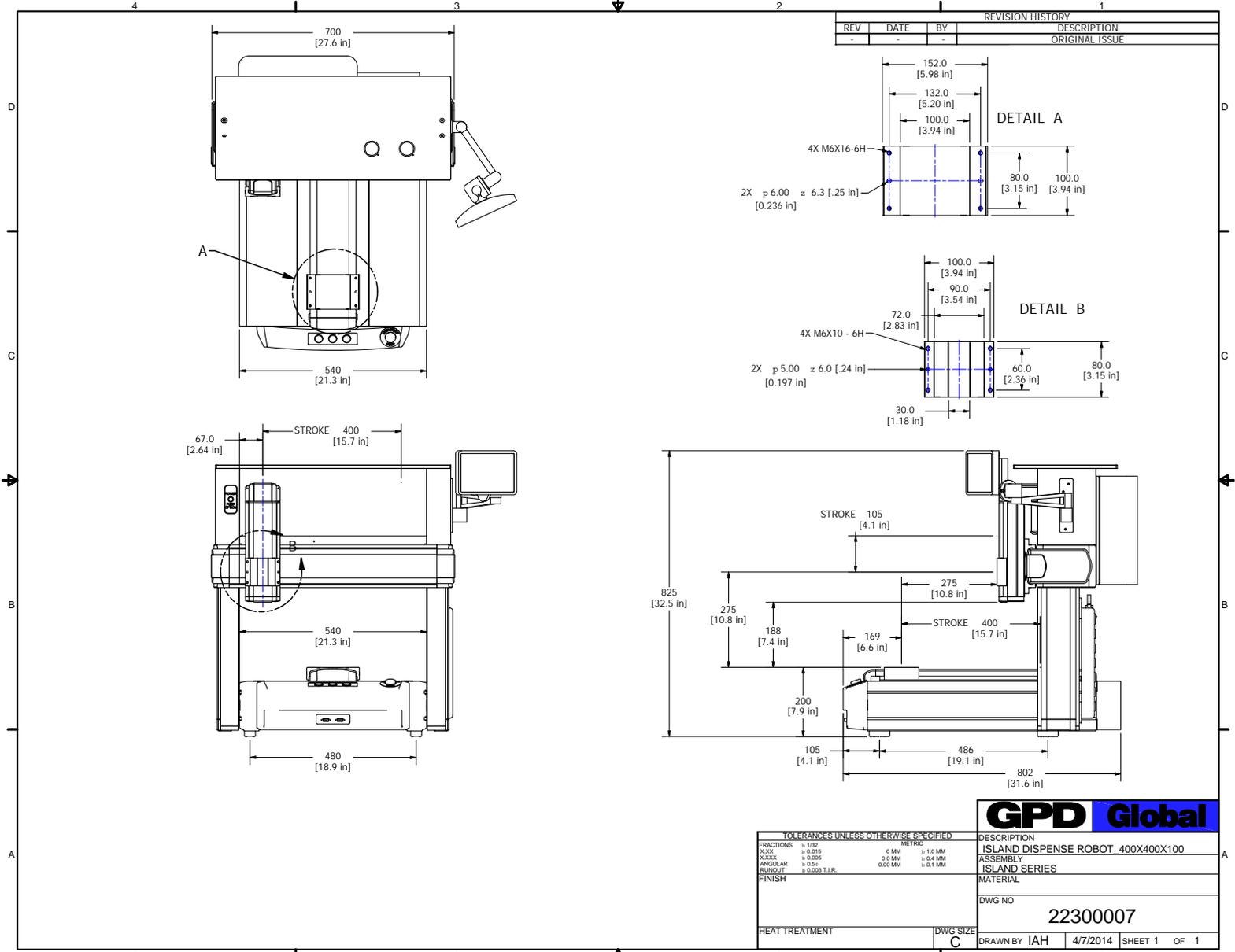
- [22300007-005 - Schematic, Configuration 005](#) (pg 66)
- [22300007-007 - Schematic, Configuration 007](#) (pg 68)

#### **Model 3S4 (PN 22300010)**

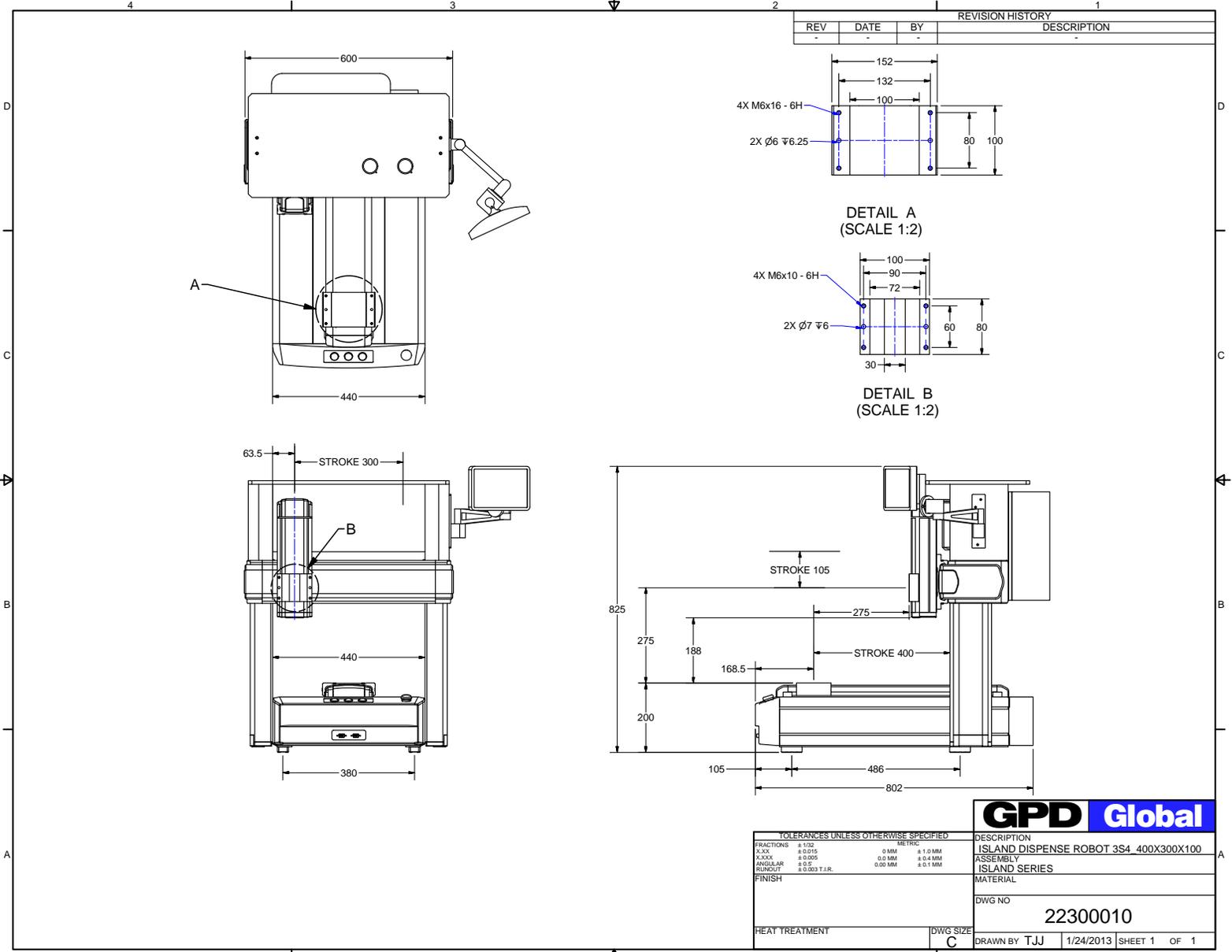
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- [22300010-006 - Schematic, Configuration 006](#) (pg 67)
- [22300010-007 - Schematic, Configuration 007](#) (pg 68)
- [22300010-004 - Schematic, Power Distribution/Safety](#) (pg 69)
- [22300010-001 - Schematic, Power Distribution/Safety: PCDStandard](#) (pg 70)
- [22300010-003 - Schematic, Power Distribution/Safety: HyFlo & FPC](#) (pg 71)
- [22300010-002 - Schematic, Rear Panel Build/Options](#) (pg 72)

### 22300007 - Island Dispense Robot, 4S4 (400 x 400 x 100 mm)



22300010 - Island Dispense Robot, 3S4 (400 x 300 x 100 mm)



### 22110291 - Taper Lock Quick Release

Parts List				REVISION HISTORY			
ITEM	QTY	PART NUMBER	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	1	DOWEL	3/32 X 3/16 LG ALLOY	A	07/19/2002	ARM	ORIGINAL ISSUE
2	1	DOWEL	3/32 X 1/4 LG ALLOY	B	11/19/2002	ARM	ADDED LOCK SCREW
3	1	DOWEL	3/32 X 1/2 LG ALLOY	C	12/21/2005	ARM	6-32 X 1-1/8 SCREW WAS 1-1/2 LG
N/S	2	S2026	SPRING,COMPRESS,MW_148OD 1.00L .023W	D	07/30/09	ARM	ADD O-RING
N/S	2	S2027	SPRING,COMPRESS,MW_088OD 1.00LG .12W				
5	1	10/3770	KNOB,#6 CAP SCREW				
N/S	3	10/3396	O-RING,SILICONE,STD_3/8ID 9/16OD 3/32W				
6	1	22121014	FEMALE BRACKET,TAPER LOCK				
7	1	22121015	EXTENSION GUIDE,TAPER LOCK				
8	1	22121016	LEVER EXTENSION,TAPER LOCK				
9	1	22121018	ACTUATOR LEVER,TAPER LOCK				
10	1	22121019	ACTUATOR COVER,TAPER LOCK				
11	1	22121020	ACTUATING LOCK,TAPER LOCK				
12	1	22121021	STATIONARY LOCK,TAPER LOCK				
13	1	22121318	THUMB BUTTON,NARROW				
14	1	10/3520	O-RING				
15	1	SACSN0632112	6-32 X 1 1/8 CAP SCREW				

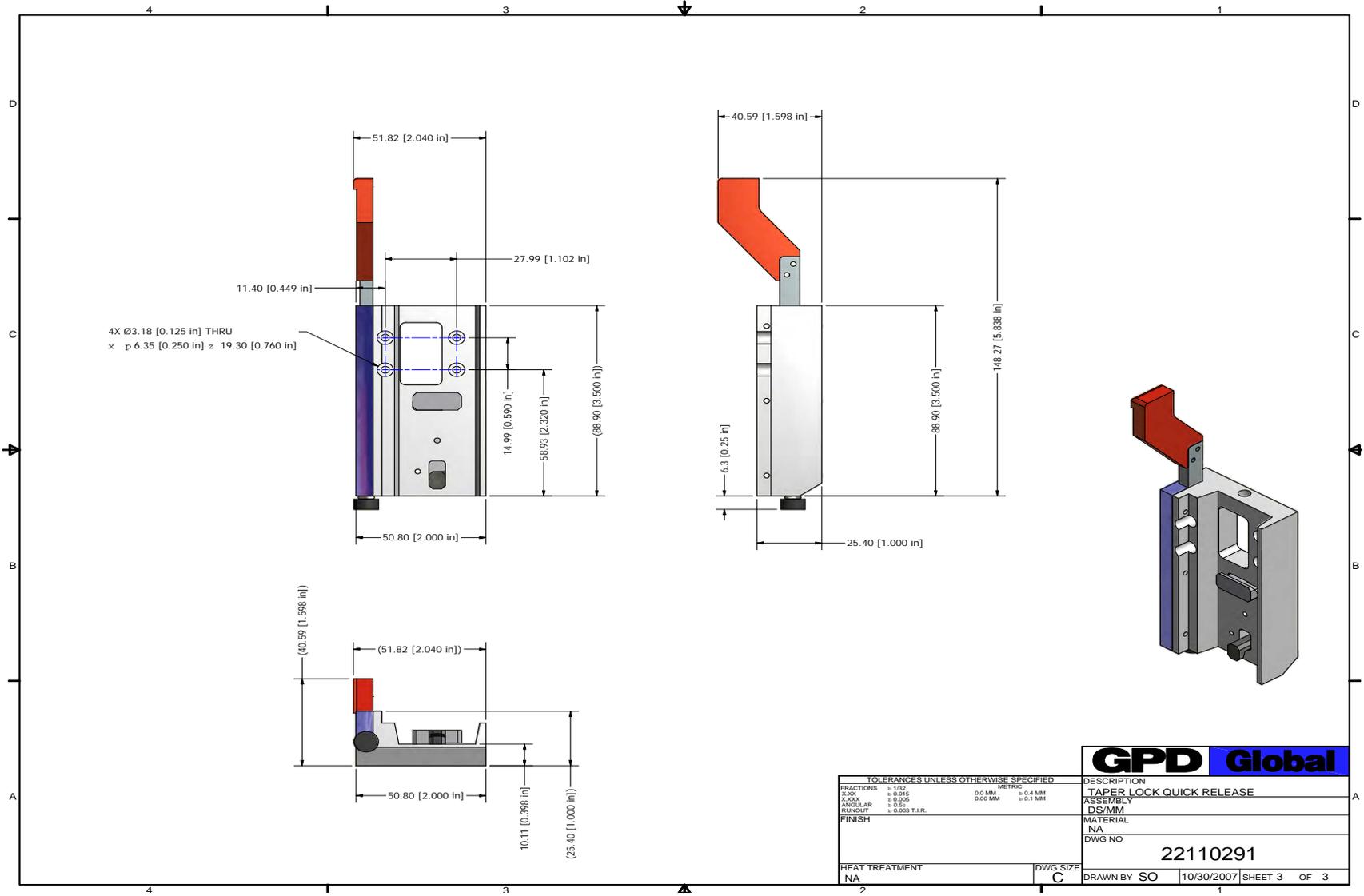
  

**NOTES UNLESS OTHERWISE SPECIFIED:**  
 1. APPLY THIN FILM OF TEFLON GREASE TO ALL MOVING SURFACES.

TOLERANCES UNLESS OTHERWISE SPECIFIED				DESCRIPTION	
FRACTIONS		METRIC		<b>TAPER LOCK QUICK RELEASE</b> ASSEMBLY DS/MM MATERIAL NOTED DWG NO <div style="text-align: center; font-size: 1.2em; font-weight: bold;">22110291</div>	
X.XX	± 0.015	0.0 MM	± 0.4 MM		
X.XXX	± 0.005	0.00 MM	± 0.1 MM		
ANGULAR RUNOUT	± 0.5°				
			± 0.003 T.I.R.		
FINISH				DRAWN BY SO	
NONE				10/30/2007	
HEAT TREATMENT		DWG SIZE		SHEET 1 OF 3	
N/A		B			

### 22110291 - Taper Lock Quick Release, Dimensions



TOLERANCES UNLESS OTHERWISE SPECIFIED		GPD Global	
FRACTIONS	METRIC	DESCRIPTION	
± 1/32	± 0.38 mm	TAPER LOCK QUICK RELEASE	
± 0.015	± 0.4 mm	ASSEMBLY	
± 0.005	± 0.1 mm	DS/MM	
± 0.003 T.I.R.		MATERIAL	
		NA	
		DWG NO	
		22110291	
HEAT TREATMENT	DWG SIZE	DRAWN BY	SO
NA	C	10/30/2007	SHEET 3 OF 3

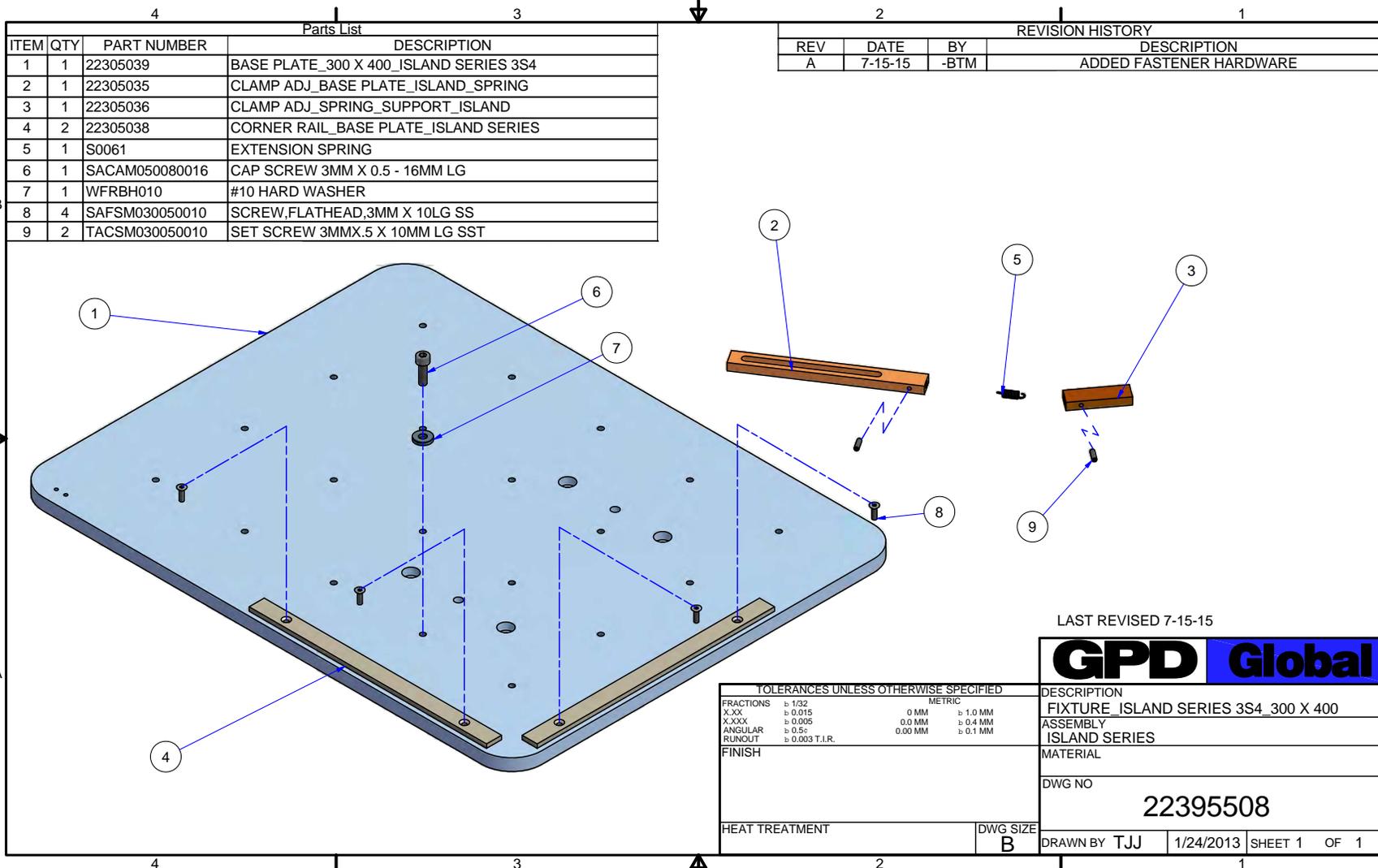
22395508 - Fixture for 3S4, 300x400

11/17/17

GPD Global®

Island Series User Guide

References



22395509 - Fixture for 4S4, 400x400

11/17/17

GPD Global®

Island Series User Guide

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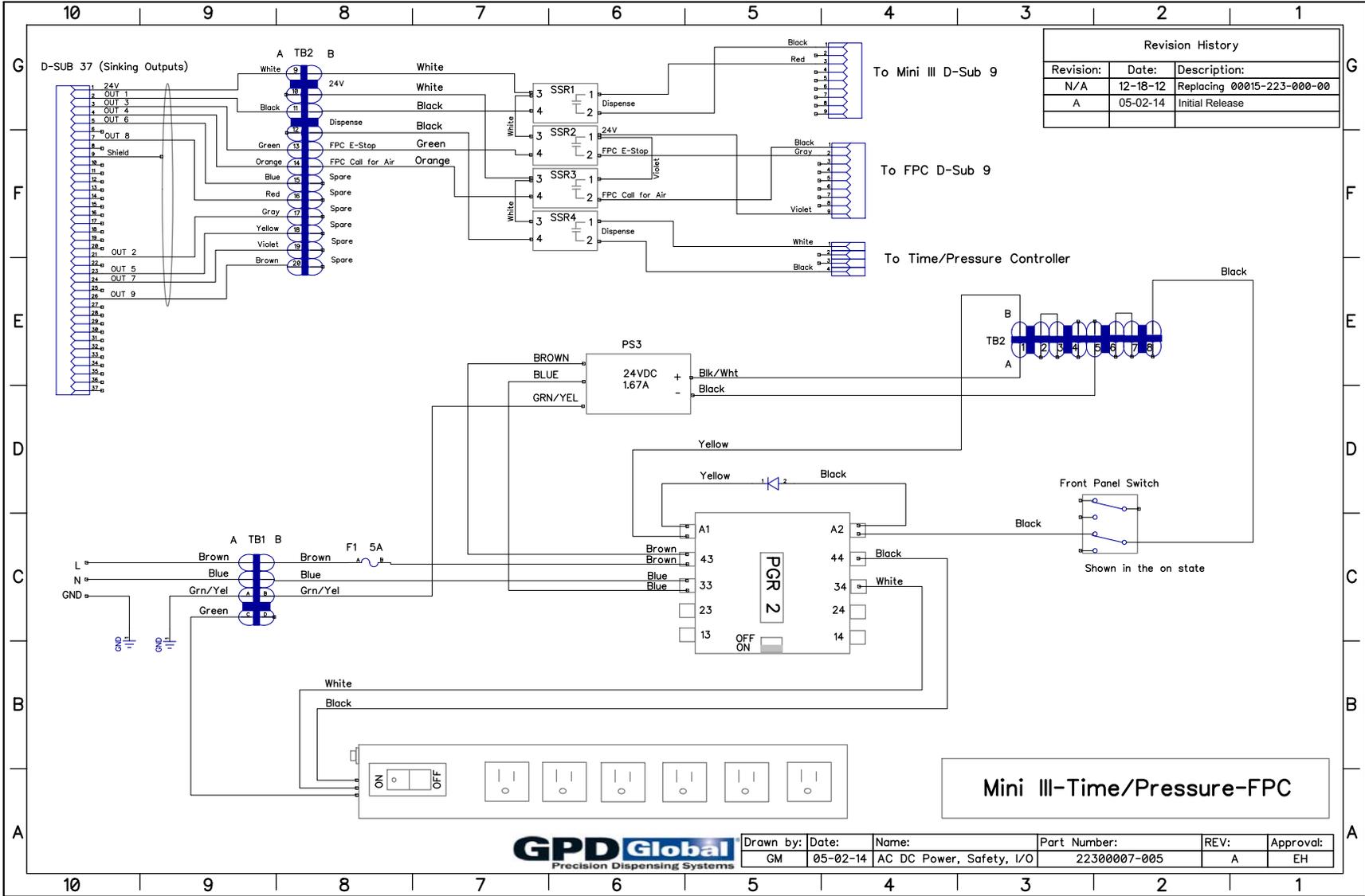
References

Parts List				REVISION HISTORY			
ITEM	QTY	PART NUMBER	DESCRIPTION	REV	DATE	BY	DESCRIPTION
1	1	22305035	CLAMP ADJ_BASE PLATE_ISLAND_SPRING	-	-	-	ORIGINAL ISSUE
2	1	22305036	CLAMP ADJ_SPRING_SUPPORT_ISLAND				
3	2	22305038	CORNER RAIL_BASE PLATE_ISLAND SERIES				
4	1	S0061	EXTENSION SPRING				
5	1	22305048	BASE PLATE_400 X 400_ISLAND SERIES 4S4				

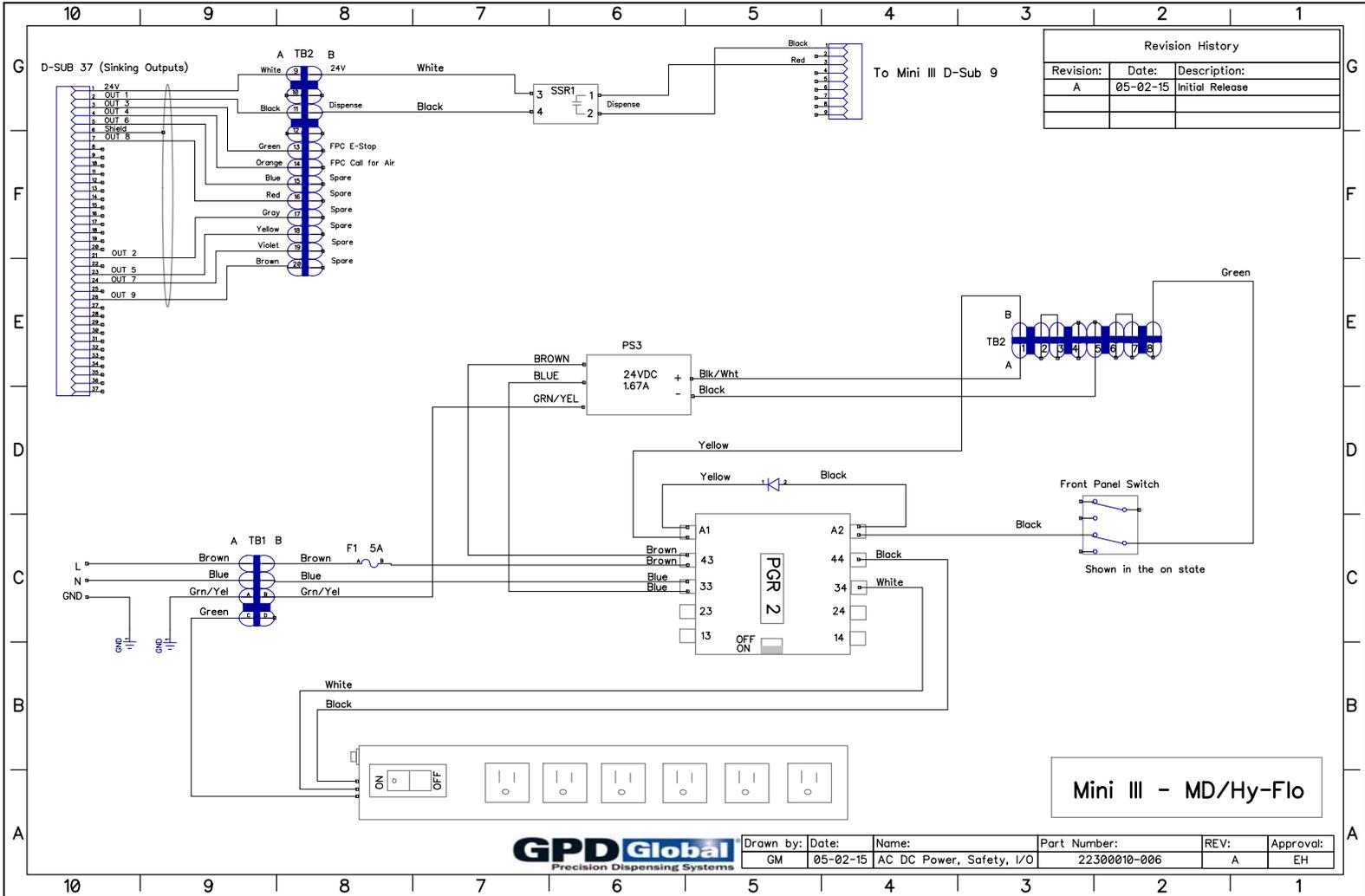
  
  

TOLERANCES UNLESS OTHERWISE SPECIFIED				DESCRIPTION	
FRACTIONS		METRIC		FIXTURE_ISLAND SERIES 4S4_400 X 400	
± .132		0 MM	± 1.0 MM	ASSEMBLY	
± .015		0.0 MM	± 0.4 MM	ISLAND SERIES	
± .005		0.00 MM	± 0.1 MM	MATERIAL	
± .05°				DWG NO	
± 0.003 T.I.R.				22395509	
FINISH				DRAWN BY TJJ   1/24/2013   SHEET 1 OF 1	
NONE				DWG SIZE	
HEAT TREATMENT				B	

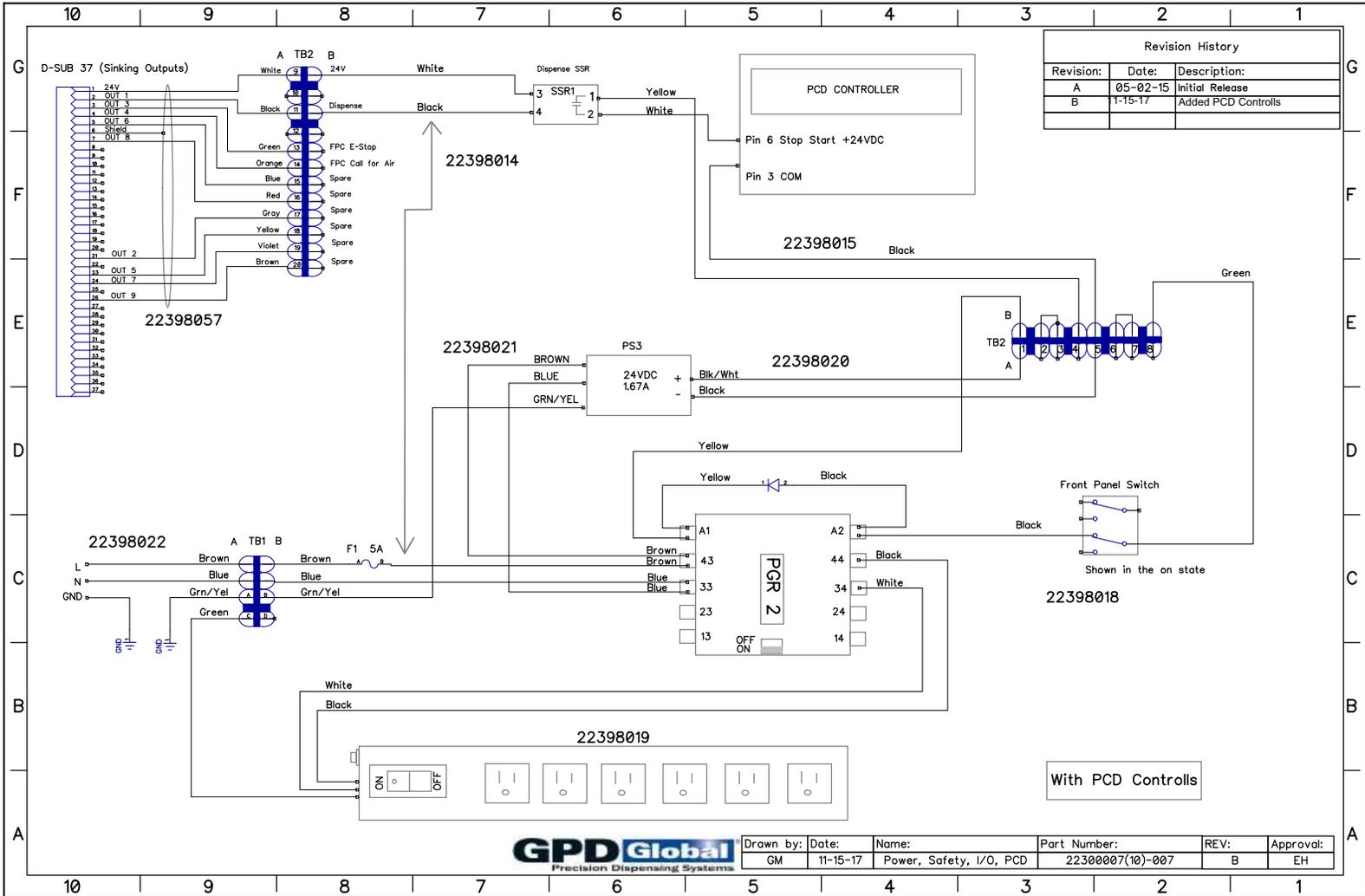
### 2230007-005 - Schematic, Configuration 005



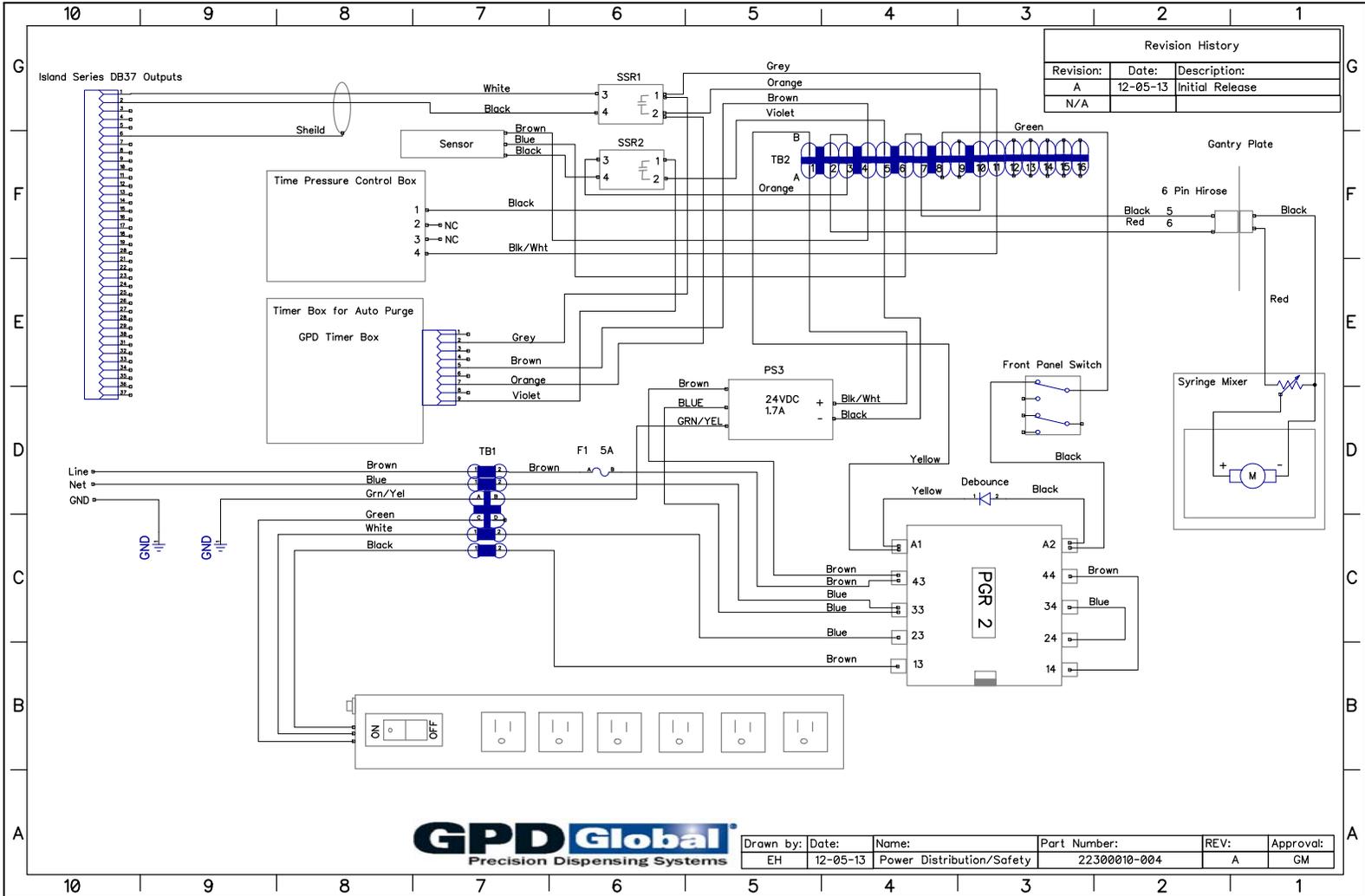
22300010-006 - Schematic, Configuration 006



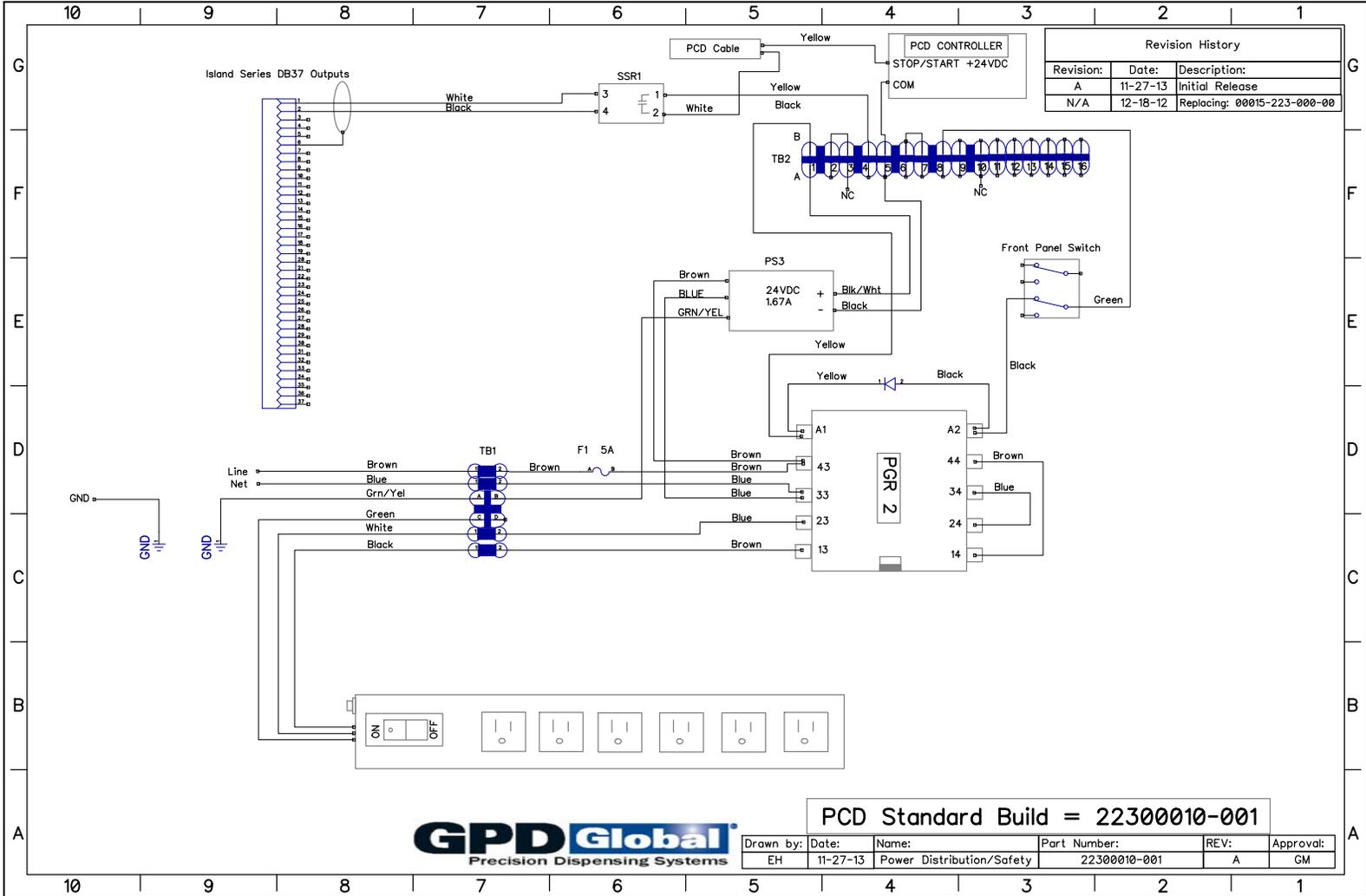
2230007-007 - Schematic, Configuration 007  
22300010-007 - Schematic, Configuration 007



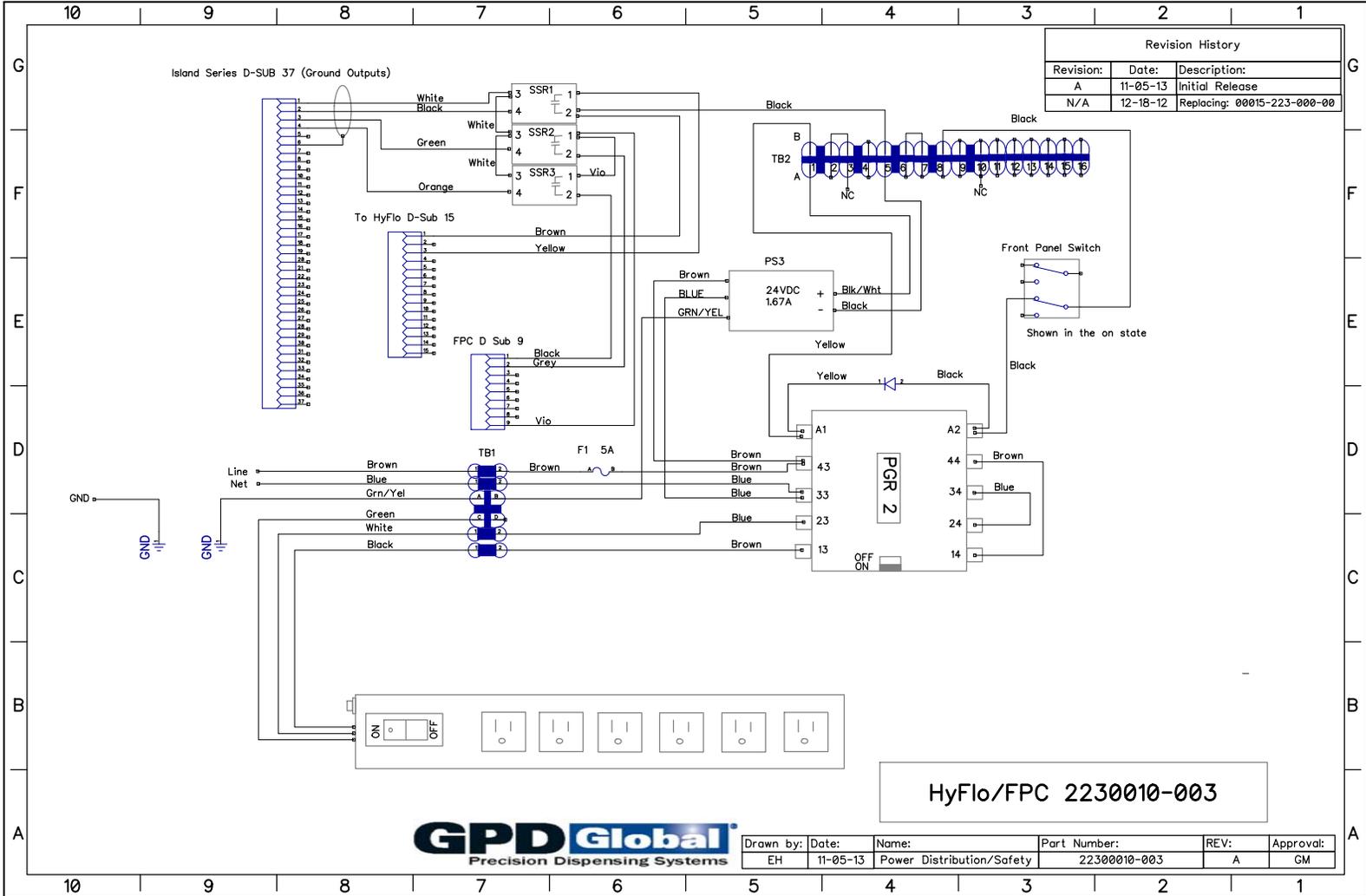
### 2230010-004 - Schematic, Power Distribution/Safety



### 22300010-001 - Schematic, Power Distribution/Safety: PCDStandard



22300010-003 - Schematic, Power Distribution/Safety: HyFlo & FPC



### 22300010-002 - Schematic, Rear Panel Build/Options

