FlexWeigh System 104

Loss-in-Weight Dispensing Controls

Operation Manual

920i FlexWeigh Systems

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Revision History

This section tracks and describes manual revisions for awareness of major updates.

Revision	Date	Description
E	November 8, 2024	Established revision history; updated electrical drawings

Table i. Revision Letter History

Technical training seminars are available through Rice Lake Weighing Systems.
Course descriptions and dates can be viewed at www.ricelake.com/training
or obtained by calling 715-234-9171 and asking for the training department.

Contents

Rice Lake continually offers web-based video training on a growing selection of product-related topics at no cost. Visit **www.ricelake.com/webinars**

1.0   Introduction

This manual is intended for use by service technicians and operators responsible for installing and operating the FlexWeigh System 104 Loss-in-Weight Dispensing Controller. Additional information on the actual hardware features of the 920i are explained in the *920i Installation and Operation manual* (PN 67887) and is included with this product.

Manuals are available from Rice Lake Weighing Systems at **www.ricelake.com/manuals**

Warranty information is available at **www.ricelake.com/warranties**

Safety Definitions:

⚠️ *DANGER: Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.*

⚠️ *WARNING: Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.*

⚠️ *CAUTION: Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.*

ⓘ *IMPORTANT: Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.*

General Safety

Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.

⚠️ *WARNING*

Failure to heed could result in serious injury or death.

Failure to heed may result in serious injury of death.

Some procedures described in this manual require work inside the indicator enclosure. These procedures are to be performed by qualified service personnel only.

Do not allow minors (children) or inexperienced persons to operate this unit.

Do not operate without all shields and guards in place.

Do not step on the unit.

Do not jump up and down on the scale.

Do not use for purposes other then weight taking.

Do not place fingers into slots or possible pinch points.

Do not use any load bearing component that is worn beyond 5% of the original dimension.

Do not use this product if any of the components are cracked.

Do not exceed the rated load limit of the unit.

Do not make alterations or modifications to the unit.

Do not remove or obscure warning labels.

Do not use near water.

Before opening the unit, ensure the power cord is disconnected from the outlet.

Keep hands, feet and loose clothing away from moving parts.

1.1 Overview

The FlexWeigh 104 Loss-in-Weight Dispensing Controller is designed for applications where a preset target weight is repeatedly dispensed from a removable vessel or a container that may become empty during the sequence of dispense. The system maintains weight within high and low limits to guarantee enough content for a complete dispense cycle. Press Start and the system automatically tares the scale, begins the loss-in-weight dispense, and stops as programmed-all while transmitting and storing the accumulated weight totals.

1.2 Disposal

Product Disposal

The product must be brought to appropriate separate waste collection centers at the end of its life cycle.

Proper separate collection to recycle the product helps prevent possible negative effects on the environment and to health, and promotes the recycling of the materials. Users who dispose of the product illegally shall face administrative sanctions as provided by law.

1.3 Standard Features

The System 104 comes with the following standard features:

- Wall mount NEMA 4Xstainless steel enclosure
- Preprogrammed and configured *920i* HMI Indicator/Controller
- Front panel switches including E-Stop, Reset/Resume, Start
- Softkeys for presets, CN#, Alpha-numeric ID#1, Alpha-numeric ID#2, and Totals
- Built in safety interlocks prevent cycle start if not enough weight
- Accumulating subtotal and total registers
- Transmitted audit trail
- Digital I/O board
- Relay rack and SSR relay outputs: Fast feed, Slow feed and Dispense complete (optional)
- Automatic Discharge

> *NOTE: The iRite program and source code that make up the 920i FlexWeigh 104 are property of the manufacturer. Modifications to this program and equipment must be performed by Rice Lake Weighing Systems.*
> *For more information on the iRite compiler utility program, refer to the 920i Installation and Operation Manual (PN 67887) and is included with this product.*

1.4 FCC Compliance

United States

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Canada

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Class A prescites dans le Règlement sur le brouillage radioélectrique edicté par le ministère des Communications du Canada.

1.4.1 Radio Certificate Numbers

- US: R68WIPORTG
- Canada: 3867A-WIPORTG

1.5   Operation Menu Softkeys

Operation Menu softkeys are defined to provide flexibility of operator functions for specific applications. Softkey assignments are listed on the tabs shown at the bottom of the LCD display and softkey functions are activated by pressing the arrow keys below the softkey tabs. They are password protected and offer access to the following:

- Setup
- Totals
- Presets
- ID #1
- ID #2
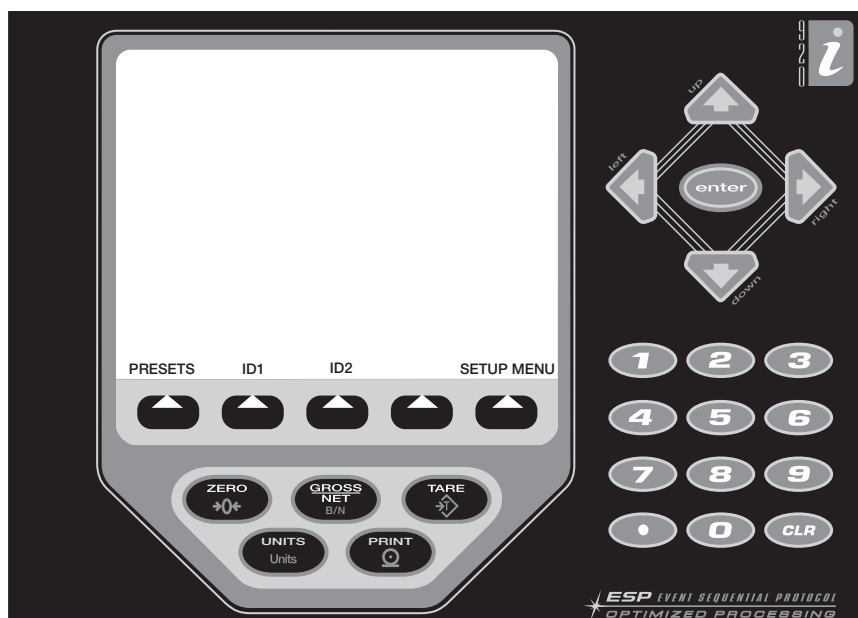
Figure 1-1. 920i Front Panel

The softkeys shown on the display are determined by the indicator configuration and program.

Softkey	Default	Softkey	Description
Time/Date	Current	Time/Date	Time and date of 920i
System Password	""""""""	Setup Password	Changing the password that is required for entry into the setup menu. Setting the password to nothing will cause the system to not prompt for a password when the Setup Menu softkey is pressed.
Enabling/Disabling ID#1	-	ID #1	This allows the operator to log an extra data field. A softkey will appear on the main screen to allow the operator to enter more data (ie: formula, ID Truck, container, operator)
Enabling/Disabling ID#2	-	ID #2	This allows the operator to log an extra data field. A softkey will appear on the main screen to allow the operator to enter more data (ie: formula, ID Truck, container, operator)
Dispensing Speeds	Single Speed	Single, Dual or Parallel	Allows the operator to change the dispense speed operations
Auto Tare Feature	Enabled	Auto Tare Enabled/Disabled	Allows the operator to enable/disable the auto tare feature
Auto Print Feature	Enabled	Auto Print Enabled/Disabled	Allows the operator to enable/disable the auto print feature
Delay After Discharge	-	Delay After Discharge	Allows the operator to enter a time in seconds to delay after completion of Discharge before a new Start input is enabled.

Table 1-1. Configurable Softkeys

2.0   Installation

This section describes procedures for setting up the FlexWeigh System 104 to weigh.

⚠ *CAUTION: Use a wrist strap to ground yourself and protect components from electrostatic discharge (ESD) when working inside the indicator enclosure.*

The supply cord serves as the power disconnect for the unit. The power outlet supplying the indicator must be installed near the unit and be easily accessible.

⚠ *WARNING: The FlexWeigh System 104 has no on/off switch. Before opening the unit, ensure the power cord is disconnected from the power outlet.*

2.1   Unpacking and Assembly

Immediately after unpacking, visually inspect the unit to ensure all components are included and undamaged.

The shipping carton should contain the FlexWeigh System 104 unit and this manual. If any parts were damaged in shipment, notify Rice Lake Weighing Systems and the shipper immediately.

2.2   Enclosure Disassembly

The FlexWeigh System 104 must be opened to install option cards and to connect cables for installed option cards.

Ensure power to the indicator is disconnected, then open the enclosure.

2.3   Cable Connections

The FlexWeigh System 104 provides eleven cord grips for cabling into the indicator. The parts kit includes cord grip plugs to prevent moisture from entering the enclosure. Install these plugs into all cord grips that will not be used in your application. Use the cable grounding instructions for wiring into the indicator.
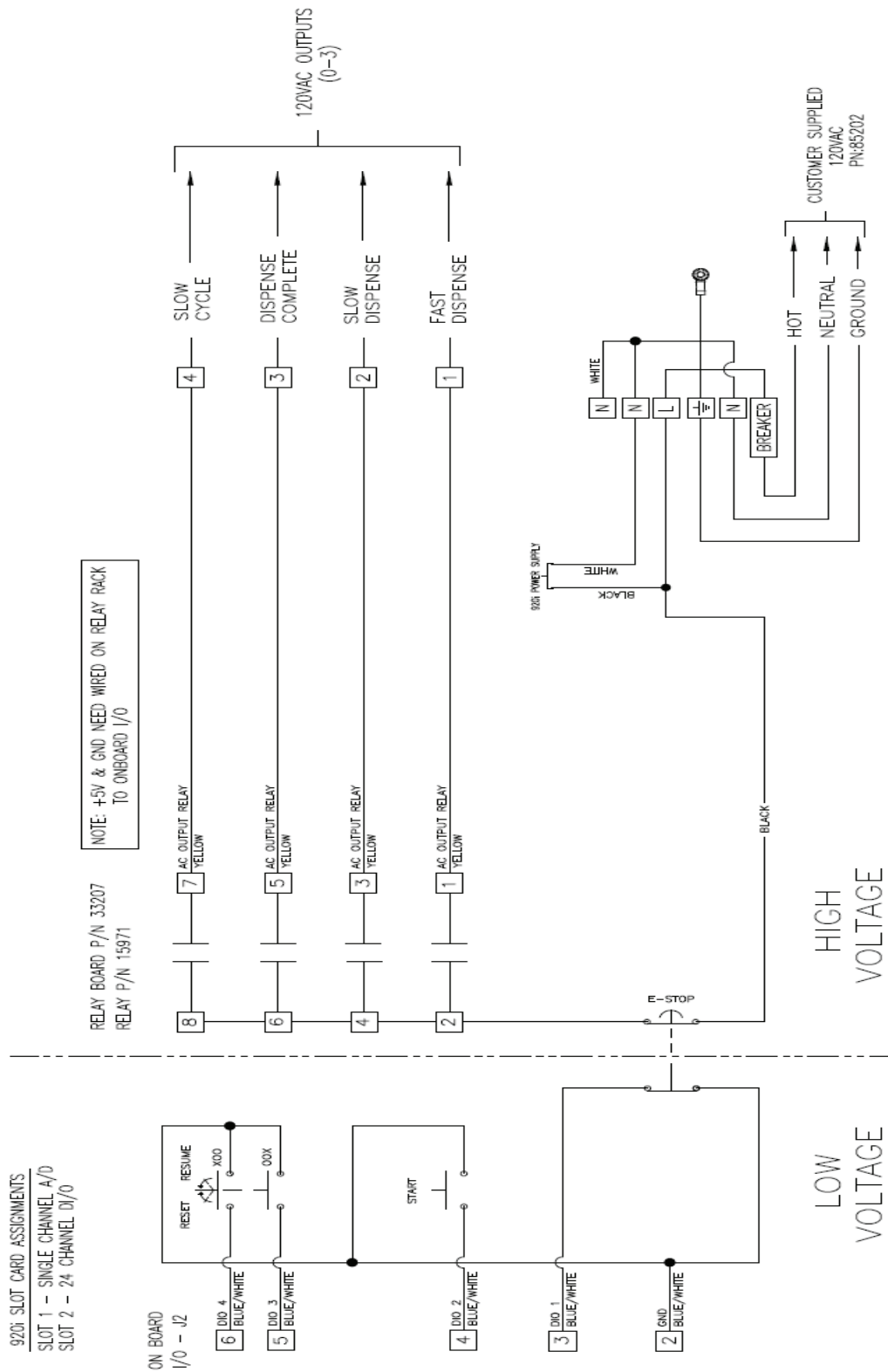
Figure 2-1. Block Wiring Diagram

📝 **NOTE: An additional adhesive label (PN 121108) is included in the parts kit and can be installed at the installer's discretion indicating correct terminal block numbering.**

Circuit breaker = 4 A. All wires are 18 AWG unless otherwise specified. Dashed line represents field wiring.

2.3.1 Cable Specifications

Cord Grip	Part Number	Diameter Range
PG9	15626	0.138 - 0.315 in (3.5 - 8 mm)
PG11	68600	0.197 - 0.394 in (5 - 10 mm)

Table 2-1. Cord Grip Specifications

Connector	Torque
Around cables	22 in-lb
Cord grip to enclosure	33 in-lb

Table 2-2.   Cord Grip Torque Specifications

2.4   Cable Grounding

Cables routed through the cord grips should be grounded against the indicator enclosure. Follow cable grounding instructions in the 920i Installation and Operation Manual (PN 67887) which is also included with this product.

2.5   Parts Kit Contents

Table 2-3 lists the parts kit contents for the FlexWeigh System 104.

Part No.	Description	Qty.
14626	Kep nuts, 8-32NC (6)	6
15133	Lock washers, No. 8, type A (6)	6
15631	Cable ties (4 single A/D, 6 dual A/D)	4
15665	Reducing glands for 1/2 NPT cord grips (11)	11
15887	6-position screw terminal for load cell connection (1-single A/D, 2-dual A/D)	1
19538	Cord grip plugs (10-single A/D, 9-dual A/D)	10
94422	Capacity Label (1-single A/D, 2-dual A/D)	1
53075	Cable shield ground clamps (6)	6
70599	6-position screw terminals for J2 and J10 (2)	2
71125	3-position screw terminal for J11 (1)	1
71126	4-position screw terminal for J9 and optional keyboard connection (2)	2
121108	Label, Terminal Block Identification (1)	1

Table 2-3. Parts Kits Contents (PN 121143)

NOTE: See for a complete list of replacement parts.

2.6   Option Cards

Table 2-4 list the available option card that are used in the FlexWeigh System 104. The single channel A/D card can be installed in slot 1 and the 24 channel I/O card in slot 2.

Slot	Type
1	Single Channel A/D Card
2	24 Channel I/O Card

Table 2-4. Option Card Locations

Digital I/O

Slot	Bit	Type	Function
0	1	Programmability	E-Stop
0	2		Start
0	3		Resume
0	4		Reset
0	5-6	Off	Currently not used
2	1	Output	Fast Dispense
2	2		Slow Dispense
2	3		Dispense Complete
2	4		Slow Cycle
2	5-24	Off	Currently not used

Table 2-5. Digital I/O Assignments

Serial Ports

Port	Type	Description	Setup
1	CMD	Currently not used	9600 baud 8 bit None 2
2	CMD/KEYBOARD	iRev downloads/operator input	115200 8 bit None 2
3	CMD	Audit trail printer	9600 baud 8 bit None 2
4	CMD	Currently not used	9600 baud 8 bit None 2

Table 2-6. Serial Port Setup

3.0   Setup Menu

This section describes the various setup parameters for the FlexWeigh System 104.

3.1   Entering the Setup Menu

NOTE: The front panel E-stop button must be in the stopped position (pushed in) to enable the following keypad entries.

1. Press the **Setup Menu** softkey on the main menu screen and the system performs one of the following actions.
    - If a system password is entered, proceed to Step 2
    - If no system password is entered, the **Setup Menu Main Screen** displays (Figure 3-2)
2. Press the **Setup Password** softkey. The system prompts with **Enter Password**.

06/02/2011	02:15PM	SCALE #1
	Gross	SCALE #1
— — — — —	Lb	

Setup Menu

Program: Express 104 PN120599 V 1.00

ID #1 (disabled)	Start	O	Disp Cmpt
ID #2 (disabled)	Resume	O	Slow Cycle
Single-Speed (enabled)	Reset	O	Disp Slow
Auto Print (disabled)	Stop	O	Disp Fast
Delay After Discharge (sec) 3.0			

Enter New Password
=>▉

Home		Cancel		End

Figure 3-1. Setup Menu Enter Password

3. Enter the password and press the **Enter** key on the 920i. The system checks the entered value against the system password and performs one of the following actions:
    - If the password is valid, the **Setup Menu Main Screen** displays (Figure 3-2)
    - If the password is invalid, **Invalid password** displays momentarily and display exits the operation

06/02/2011	02:15PM	SCALE #1
	Gross	SCALE #1
— — — — —	Lb	

Setup Menu

Program: Express 104 PN120599 V 1.00

ID #1 (disabled)	Start	O	Disp Cmpt
ID #2 (disabled)	Resume	O	Slow Cycle
Single-Speed (enabled)	Reset	O	Disp Slow
Auto Print (disabled)	Stop	O	Disp Fast
Delay After Discharge (sec) 3.0			

Setup Menu

Time/Date	Setup Password	ID #1	ID #2	More=>

Figure 3-2. Setup Menu Main Screen

3.2   Setting the System Time and Date

Use the following steps to set up the system time and date.

1.   From the ***Main Setup Menu Screen***, press the **Time/Date** softkey.

```
06/02/2011              02:15PM              SCALE #1
                                Gross        SCALE #1
              — — — — — Lb
                   Setup Menu
         Program: Express 104 PN120599  V 1.00
    ID #1 (disabled)           Start    O   Disp Cmpt
    ID #2 (disabled)           Resume   O   Slow Cycle
    Single-Speed (enabled)     Reset    O   Disp Slow
    Auto Print (disabled)      Stop     O   Disp Fast
    Delay After Discharge (sec) 3.0

  Setup Menu

  Time/Date   Setup      ID #1      ID #2     More=>
              Password
```

Figure 3-3. Select Time/Date Softkey
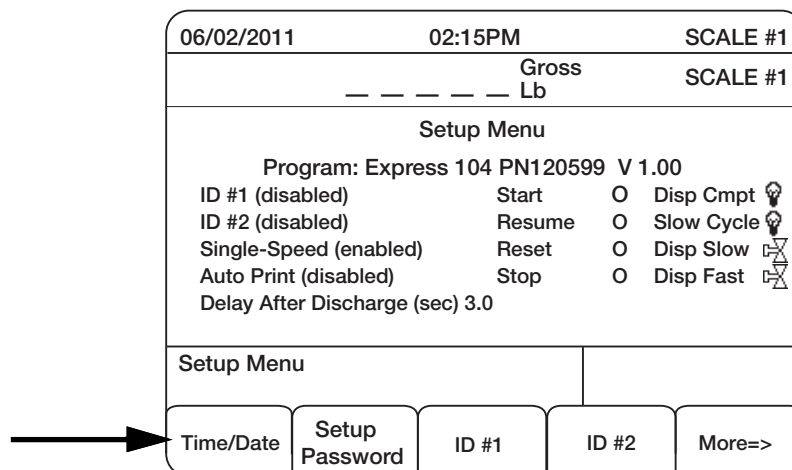
2.   Use the arrow keys on the 920i and the numeric keypad to modify the time and or date.

3.   Press the **Enter** key to save the settings.
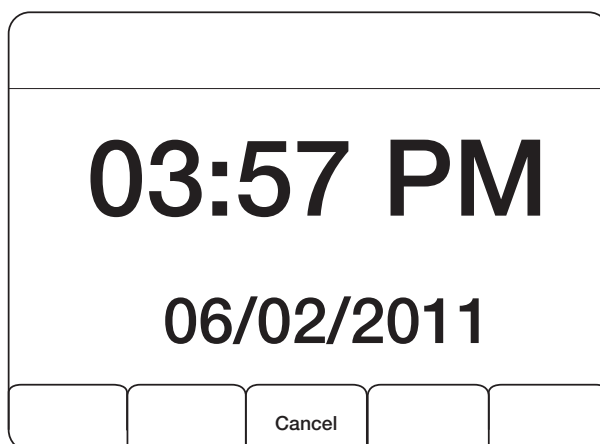
```
              03:57 PM

              06/02/2011

                   Cancel
```

Figure 3-4. Time and Date Main Screen

📝   ***NOTE: The Cancel softkey can be pressed at any time to exit this sequence without saving any changes.***

3.3   Modifying the Setup Password

Use the following steps to modify the setup password.

1. From the ***Main Setup Menu Screen***, press the **Setup Password** softkey.

2. The system prompts, ***Enter New Password***.

```
06/02/2011              02:15PM              SCALE #1
                                 Gross
                    — — — — — Lb              SCALE #1

                        Setup Menu
              Program: Express 104 PN120599 V 1.00
        ID #1 (disabled)          Start     O    Disp Cmpt  ♀
        ID #2 (disabled)          Resume    O    Slow Cycle ♀
        Single-Speed (enabled)    Reset     O    Disp Slow
        Auto Print (disabled)     Stop      O    Disp Fast
        Delay After Discharge (sec) 3.0

        Enter New Password
        =>▊

          Home                  Cancel              End
```

Figure 3-5. Enter New Password

3. Enter the new password and press the **Enter** key.

4. The system prompts ***Re-enter password*** to verify.

5. Re-enter the password and press the **Enter** key again. The system performs one of the following actions.

    • If the passwords match, the system displays ***Password Changed.***

    • If the passwords do not match, the system displays ***Passwords Did Not Match*** and exits the operation.

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3.4 Enabling/Disabling Additional Data Fields

Use the following steps to enable or disable additional data fields.

1. From the ***Main Setup Menu Screen***, press the **Setup Password** softkey (Figure 3-2 on page 12).

NOTE: *A setup password is not required if it has never been set or if you are already in Setup mode.*

2. Press the **ID #1** or **ID #2** softkey. The system displays ***Enable ID #1 or ID #2*** while displaying **Yes** or **No** softkeys or ***Disable ID #1 or #2***.

```
06/02/2011              02:17PM              SCALE #1
                                Gross
                        _ _ _ _ _ Lb        SCALE #1

                        Setup Menu
              Program: Express 104 PN120599 V 1.00
        ID #1 (disabled)            Start     O    Disp Cmpt
        ID #2 (disabled)            Resume    O    Slow Cycle
        Single-Speed (enabled)      Reset     O    Disp Slow
        Auto Print (disabled)       Stop      O    Disp Fast
        Delay After Discharge (sec) 3.0

        Enable ID #1


          Yes                                      No
```

Figure 3-6. Enabling IDs

3. The operator does one of the following:

   Press the **Yes** softkey, the system prompts ***Enter Extra Data #1 Name***. Enter the name and press the **Enter** key on the 920i. A new data field appears on the main display and as a softkey so that the operator can change it.
   To enter alpha characters, press the **Up** navigation key to access a pop up alphabet.

   Press the **Yes** softkey and this returns the operator back to Step 1.

3.5 Modifying the Filling Speeds

Use the following steps to modify the filling speeds.

1. From the ***Main Setup Menu Screen*** (Figure 3-7), press the **Setup Password** softkey (a password is not required).

2. Press the **More =>** softkey to access the second and third menu screens.

```
06/02/2011              02:15PM              SCALE #1
                                Gross
                        _ _ _ _ _ Lb        SCALE #1

                        Setup Menu
              Program: Express 104 PN120599 V 1.00
        ID #1 (disabled)            Start     O    Disp Cmpt
        ID #2 (disabled)            Resume    O    Slow Cycle
        Single-Speed (enabled)      Reset     O    Disp Slow
        Auto Print (disabled)       Stop      O    Disp Fast
        Delay After Discharge (sec) 3.0



      <=More   Single-Spd  Auto Print   Delay      More=>
               Enabled     Disabled   After Disch
```

Figure 3-7. Setup Main Menu Screen #2

3. Press the **Single Speed Enabled**, **Dual Speed Enabled** or **Parallel Speed Enabled** softkey. The system will toggle

between the three modes of operation (Section 4.3 on page 22) and will display the selected filling speed.

3.6 Modifying Auto Print

Use the following steps to modify the auto print.

1. From the ***Main Setup Menu Screen*** (Figure 3-7 on page 15), press the **More =>** softkey to access the second setup menu screen.

2. Press the **Auto Print Enabled** or **Auto Print Disabled** softkey. The system toggles between the two modes of operation.

```
Auto Print
 Disabled
```

Figure 3-8. Auto Print Disabled Softkey

3.7 Delay After Discharge

Use the following steps to modify the delay after discharge.

1. From the ***Main Setup Menu Screen*** (Figure 3-7 on page 15), cycle through pressing the **More =>** softkey to access the third setup menu screen which includes the **Delay After Discharge** softkey.
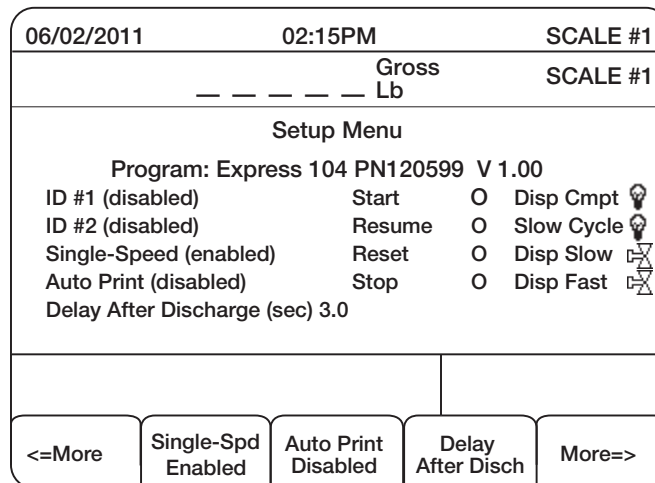
```
06/02/2011              02:15PM              SCALE #1
                              Gross        SCALE #1
            — — — — — Lb
                       Setup Menu
            Program: Express 104 PN120599  V 1.00
ID #1 (disabled)            Start     O    Disp Cmpt  💡
ID #2 (disabled)            Resume    O    Slow Cycle 💡
Single-Speed (enabled)      Reset     O    Disp Slow
Auto Print (disabled)       Stop      O    Disp Fast
Delay After Discharge (sec) 3.0


  <=More   Single-Spd  Auto Print   Delay      More=>
            Enabled    Disabled   After Disch
```

Figure 3-9. Delay After Discharge Softkey Location

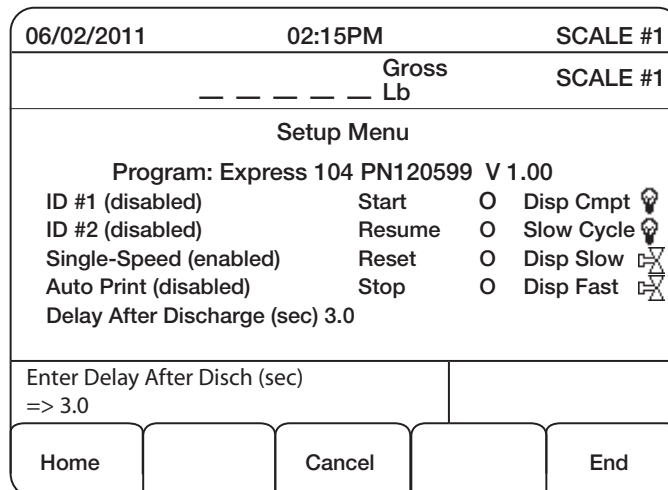2. Press the **Delay After Discharge** softkey to access that softkey.

```
06/02/2011              02:15PM              SCALE #1
                              Gross        SCALE #1
            — — — — — Lb
                       Setup Menu
            Program: Express 104 PN120599  V 1.00
ID #1 (disabled)            Start     O    Disp Cmpt  💡
ID #2 (disabled)            Resume    O    Slow Cycle 💡
Single-Speed (enabled)      Reset     O    Disp Slow
Auto Print (disabled)       Stop      O    Disp Fast
Delay After Discharge (sec) 3.0

Enter Delay After Disch (sec)
=> 3.0

  Home                  Cancel                End
```

Figure 3-10. Enter Time

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3. Enter in the time in seconds to delay after completion of a discharge before a new start input will be allowed.

3.8   Test Digital I/O

Press the **Test Digital I/O** softkey to test the Dispense Complete, Slow Dispense and Fast Dispense relay outputs.

Figure 3-11. Test Digital I/O

Dispense Complete

Press the **Dispense Complete** softkey to test the digital I/O.

Slow Dispense

By pressing the **Slow Dispense** softkey, the digital I/O is tested and the Slow Dispense icon on the setup menu screen is darkened ▮▰ while it's being tested. Press the **Slow Dispense** softkey again and the icon clears again.

Fast Dispense

By pressing the **Fast Dispense** softkey, the digital I/O is tested and the Fast Dispense icon on the setup menu screen is darkened ▮▰ while it's being tested. Press the **Fast Dispense** softkey again and the icon clears again.

Slow Cycle

By pressing the **Slow Cycle** softkey, the digital I/O is tested and the Slow Cycle icon on the setup menu screen is darkened ▮▰ while it's being tested.

4.0   Operation

The section describes the basic sequence of operation for the FlexWeigh System 104.

4.1   Entering Presets Softkey Menu

The FlexWeigh System 104 has the capability to allow the operator to modify the presets/weights. See the following procedure:

> **NOTE: The front panel E-stop button must be in the stopped position (pushed in) to enable the following keypad entries.**

Figure 4-1. Presets Menu Screen

1.   Press the **Presets** softkey. Softkeys in Figure 4-2 are displayed.

Figure 4-2. Presets Softkey Parameters

2.   Press the corresponding softkey to edit the data. Parameters that can be edited include:
   • Target weight
   • Dribble weight
   • Preact weight
   • Slow Cycle Time

Target Weight

This is the desired weight value for a final fill weight. The existing number needs to first be cleared by using the **Clear** key.

1. Enter the target weight using the arrow keys and the numeric keypad.
2. Press **Enter** on the 920i to save that value.

```
04/27/2011     10:34AM                    SCALE #1
                                          SCALE
                     89  Gross             #1
                         Net
      Target    |  Dribble  |  Preact  |  Near Zero
      200.0 Lb  |    75     |   0.0    |    10.0


            Enter Target Weight

      Consec. #  |    Subtotal    |    Total
         23      |    1687 Lb     |   3468 Lb
   Enter Target Weight
   =>  25
   [ Home ] [      ] [ Cancel ] [      ] [ Exit ]
```

Figure 4-3. Enter Target Weight

Dribble Weight

When a 2-speed fill is enabled (either Parallel or Sequential), this is the desired weight value below the Target Weight that the cycle switches from Fast Feed to Dribble Feed.

1. Enter the dribble weight using the arrow keys and the numeric keypad.
2. Press **Enter** on the 920i to save that value.

📝 *NOTE: The existing number needs to first be cleared by using the Clear key.*

```
04/27/2011     10:16AM                    SCALE #1
                                          SCALE
                     89  Gross             #1
                         Net
      Target    |  Dribble  |  Preact  |  Near Zero
      200.0 Lb  |    75     |   0.0    |    10.0


            Enter Dribble Weight

      Consec. #  |    Subtotal    |    Total
         23      |    1687 Lb     |   3468 Lb
   Enter Dribble Weight
   => 12.0
   [ Home ] [      ] [ Cancel ] [      ] [ End ]
```

Figure 4-4. Enter Dribble Weight

Preact Weight

Preact weight allows material to cut off prior to the original target value to allow for free fall material to settle onto the scale.

1. Enter the preact weight using the arrow keys and the numeric keypad.
2. Press **Enter** on the 920i to save that value.

NOTE: The existing number needs to first be cleared by using the Clear key.

04/27/2011	10:22AM		SCALE #1
	89 Gross Net		SCALE #1
Target	**Dribble**	**Preact**	**Near Zero**
200.0 Lb	75	0.0	10.0
Enter Preact Weight			
Consec. #	**Subtotal**		**Total**
23	1687 Lb		3468 Lb
Enter Preact Weight => 110			
Home		Cancel	Exit

Figure 4-5. Enter Preact Weight

Slow Cycle Time

If a refill or dispense is not complete within the slow cycle time, the system will turn off all outputs and remain in a paused state.

1. Enter the slow cycle time using the arrow keys and the numeric keypad.
2. Press **Enter** on the 920i to save that value.

06/02/2011	10:24AM			SCALE #1
		Gross Lb		SCALE #1
Target	**Dribble**	**Preact**	**Dispensed**	**Actual Gross**
100.0 Lb	75	0.0	500 Lb	150 Lb
Enter Cycle Time (sec)				
Consec. #		**Subtotal**		**Total**
2		0.0 Lb		0.0 Lb
Enter Cycle Time (sec) => 20.0				
Home		Cancel		End

Figure 4-6. Enter Zero Tolerance Weight

Exit

Press the **Exit** softkey to leave the presets menu parameters.

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4.2 Entering Totals Softkey Menu

📝 *NOTE: The front panel E-stop button must be in the stopped position (pushed in) to enable the following keypad entries.*

1. Press the **Totals** softkey.

Figure 4-7. Printing and Clearing Accumulators Menu

2. The operator can print and reset the consecutive number, subtotal and totals by pressing the appropriate softkey. Parameters that can be edited include:

   • Consecutive Number
   • Print Sub Total
   • Print Total

Consecutive Number

Press the **Consecutive Number** softkey to enter the next number to be weighed. The system keeps incrementing every time a batch is running (counter).

Figure 4-8. Enter Consecutive Number

Print Sub Total

1. Press the **Totals** softkey (Figure 4-7 on page 21) to access the **Print Sub Total** softkey.
2. Press the **Print Sub Total** softkey to access the following screen.

08/27/2012	02:15PM	SCALE #1
	000.0 Gross Lb	SCALE #1

Ingredient Totals

Name	Sub Total : Total
1 Ingredient	50.00 : 150.00

Clear Sub Total?

| Yes | | | | No |

Figure 4-9. Clear Sub Total Screen

3. Press the **Yes** softkey to clear the subtotal of the batch. Press the **No** softkey to exit out of the screen

Print Total

1. Press the **Totals** softkey (Figure 4-7 on page 21) to access the **Print Total** softkey.
2. Press the **Print Total** softkey to access the following screen.

08/27/2012	02:15PM	SCALE #1
	000.0 Gross Lb	SCALE #1

Ingredient Totals

Name	Sub Total : Total
1 Ingredient	50.00 : 150.00

Clear Total?

| Yes | | | | No |

Figure 4-10. Clear Total Screen

3. Press the **Yes** softkey to clear the total and sub-total of the batch. Press the **No** softkey to exit out of the screen

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4.3   Dispensing Material from a Scale

Use the following steps to dispense material from a scale.

1. Press the **Start** button on the unit. The system verifies if:

   • E-Stop is pulled out
   • A valid target weight is entered

2. The system does the following during this process.

   • Increments the consecutive number by one
   • Tares the scale to zero (net mode)

The system begins dispensing either of three speeds while the 920i screen displays real time sequence progress. The displayed net weight will continue showing more negative as weight is dispensed, until the target weight presets are achieved.

```
06/02/2011        10:35AM              SCALE #1

              250    Gross          SCALE
                     Lb               #1

  Target  | Dribble | Preact | Dispensed | Actual Gross
  100.0 Lb|   75    |  0.0   |  500 Lb   |   150 Lb


              Fast Dispense

  Consec. #    |    Subtotal    |    Total
      2        |    120 Lb      |   3200 Lb
```

Figure 4-11. Fast Dispense

The three dispensing speeds include:

• Single speed dispensing - The system turns on fast dispense until the target weight/preact weight is satisfied.
• Parallel speed dispensing - Turns on the fast dispense and slow dispense until the dribble weight is satisfied. The system then turns off the fast dispense and leaves the slow dispense on until the target weight/preact weight is satisfied.
• Dual speed dispensing - Turns on the fast dispense until the dribble weight is satisfied. The system turns on the slow dispense until the target weight/preact weight is satisfied.

If during the dispensing cycle the system determines that the material supply on the scale has run empty, the system will pause the automatic process and prompt for a resupply of material. The current dispensing process can resume from where it left off by pressing **Start**.

The system does the following when the target/preact is reached.

• Turns off the output based on the dispensing mode
• Updates the subtotal weight and number of dispenses
• Updates the total and number of dispenses
• Turns on the Dispense Complete output

The system delays for the Delay After Dispense time before it exits the sequence and ready for the next dispense.

4.4   Pausing/Resume/Reset a Dispense

1. Press the **E-Stop** button. The system turns off all outputs and displays *System Paused*.

2. Pressing the Resume switch will resume where the current batch left off. Pressing the Reset switch will return back to Step 1 to allow the operator to start over.

4.5   Audit Trail Print

Record keeping is an important part of any system. The FlexWeigh System 104 has the ability to be connected to a printer for retaining detailed records on batches, cycle runs, cycle paused, etc.

The preferred printer to integrate with the FlexWeigh System 104 is the TMU-220 Tape Printer but will easily integrate with any strip printer.

Hook up the printer to the FlexWeigh System 104 per printer manual instructions.

Shown below are tape samples that can be printed using the FlexWeigh System 104 and the TMU-220 Tape Printer.

```
Start Cycle    6 04:31PM 04/27/2011
Id AB123 Location Rice Lake

End Cycle
 111.2 lb   04:31PM 04/27/2011

Start Cycle    7 04:32PM 04/27/2011
Id AB123 Location Rice Lake

Cycle Stopped   04:32PM 04/27/2011

Cycle Resumed 04:32PM 04/27/2011

End Cycle
 116.0 lb   04:32PM 04/27/2011

Start Cycle    8 04:32PM 04/27/2011
Id AB123 Location Rice Lake

Cycle Stopped   04:32PM 04/27/2011

Cycle Reset    04:32PM 04/27/2011
```

Batch Stopped & Resume & Reset Print

```
Sub Total       04:32PM 04/27/2011
Id AB123 Location Rice Lake
   7 cycles        755.8 lb
```

Sub Total Printout

```
Total           04:34PM 04/27/2011
Id AB123 Location Rice Lake
   9 cycles       1022.9 lb
```

Total Printout

```
Start Cycle    1 04:03PM 04/27/2011

End Cycle
 111.1 lb   04:03PM 04/27/2011

Start Cycle    2 04:03PM 04/27/2011

End Cycle
 104.9 lb   04:03PM 04/27/2011
```

No Extra ID Fields Running Batch Print

```
Start Cycle    3 04:07PM 04/27/2011
Id AB123 Location Rice Lake

End Cycle
 100.7 lb   04:07PM 04/27/2011

Start Cycle    4 04:07PM 04/27/2011
Id AB123 Location Rice Lake

End Cycle
 109.1 lb   04:07PM 04/27/2011

Start Cycle    5 04:07PM 04/27/2011
Id AB123 Location Rice Lake

End Cycle
 102.9 lb   04:08PM 04/27/2011
```

2 Extra ID Fields Running Batch Printout

Figure 4-12. Tape Printer Example

5.0   Appendix

The section provides additional information for the FlexWeigh System 104.

5.1   Options

Several options are available with the FlexWeigh System 104. Those options that are available include:

- Three Position Selector Switch
- Manual-Mode Front Panel Controls
- Optional Front Panel Pilot Lights

Three Position Selector Switch

Includes:

- Manual/Off/Auto

Manual Mode Front Panel Push Button

Includes:

- Manual Dispense

Maintained/Off/Spring Return Manual Switches

- Dispense - On/Jog
- Dispense - Fast/Slow

Optional Front Panel Event Pilot Lights

Includes:

- Amber Dispense
- Amber Dispense Fast
- Amber Dispense Slow
- Red Dispense Complete
- Red Low Supply
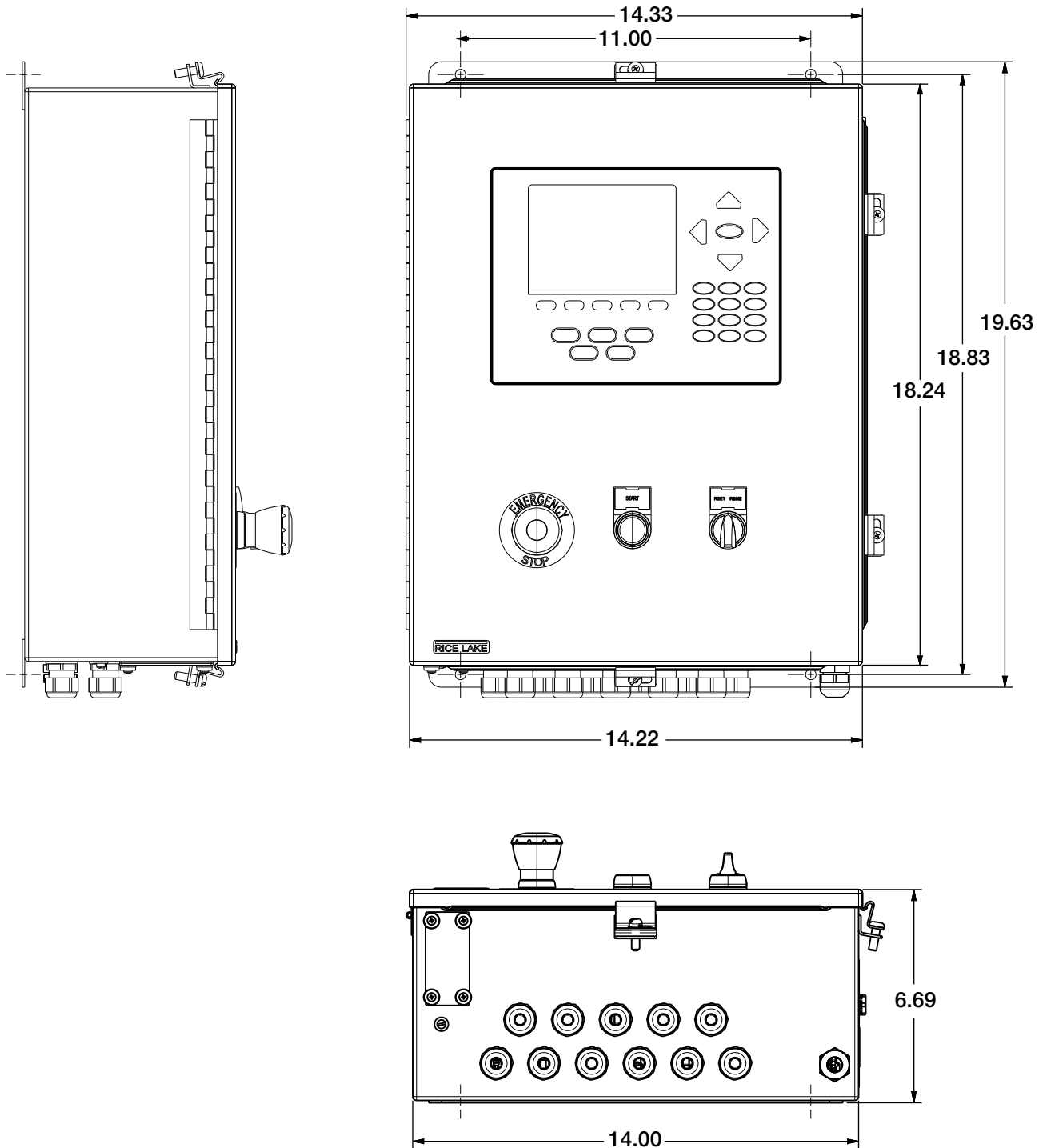- Red Fill Time Alarm

5.2   Product Dimensions

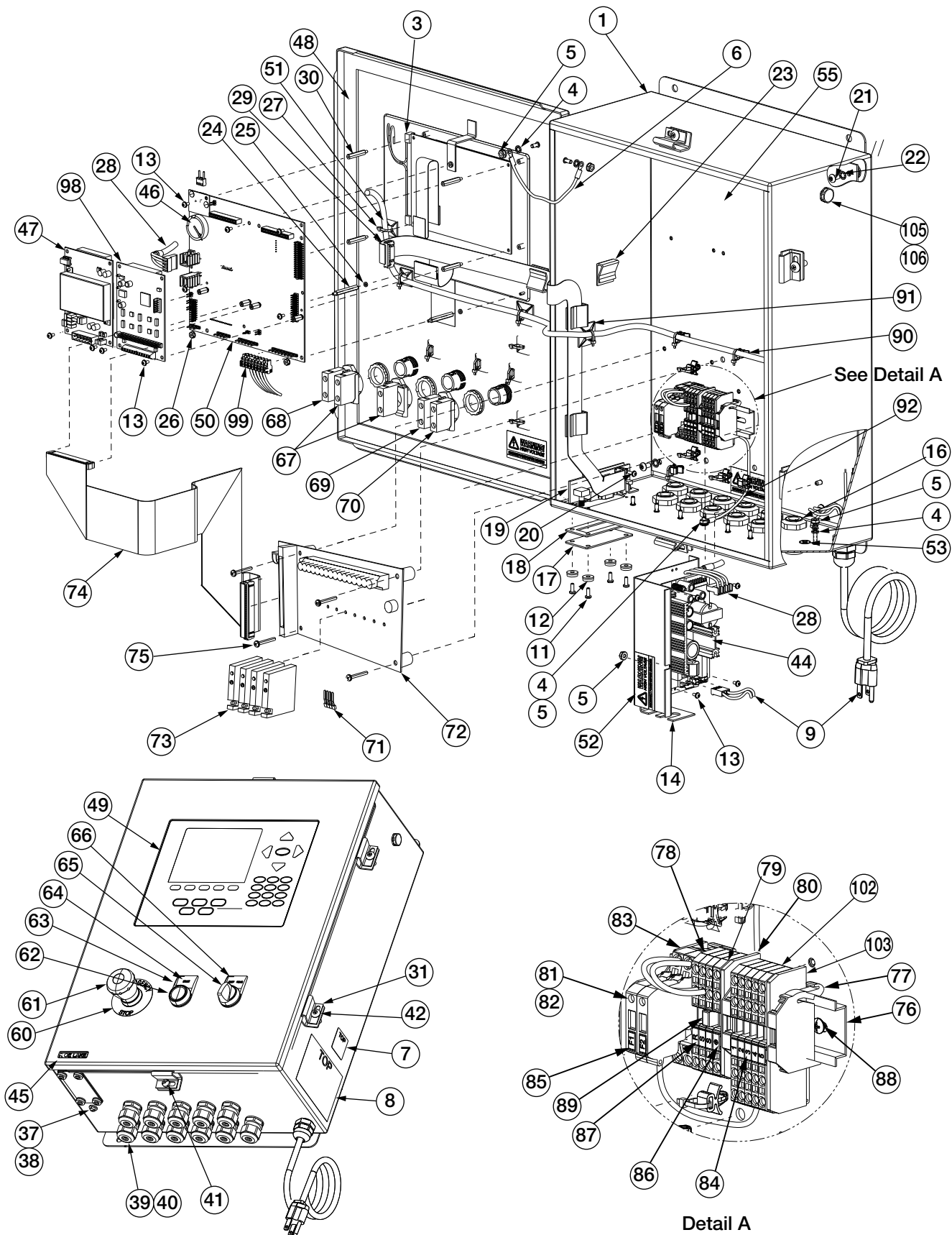*Figure 5-1. FlexWeigh System 104 Basic Filler Enclosure Dimensions*

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5.3   Replacement Parts

Figure 5-2. Replacement Parts Illustration

Item No.	Part No.	Description	Qty.
1	120417	Enclosure, Wall Mount	1
3	67614	Display, LCD Module, 920i	1
4	15134	Lock Washers, No 8, Type A	4
5	14626	Kep Nuts, 8-32NC Hex	4
6	15601	Ground Wire, 6 in w/No. 8	1
7	53308	Label, 1.25 x 1.25 8000T	1
8	53307	Label, 4.000 x 2.875	1
9	85202	Power Cord Assembly, 120 VAC	1
11	14845	Machine Screws, 6-32NC x 3/8	8
12	45042	Washer, Bonded Sealing SS	8
13	14822	Machine Screws, 4-40NC x 1/4	13
14	69538	Power Supply Bracket	1
16	15630	Locknuts, 1/2 NPT Black	11
17	67530	Interface Board Plate	1
18	67535	Interface Board Gasket	1
19	67869	920i Inteface Board	1
20	55708	Machine Screws, 4-40NC x 3/8	2
21	14875	Machine Screws, 10-32NF x 3/8	4
22	15140	Lock Washer, No. 10, Type A	4
23	46192	Flat Ribbon Cable Clamp	4
24	68661	Standoffs, Male-FEM, 4-40NC	2
25	69898	Nylon Washer ID 0.112	2
26	14618	Kep Nuts, 4-40NC Hex	2
27	15631	Cable Tie, 3 in Nylon	18
28	71431	Cable Assembly, 65W power	1
29	71436	Ribbon Cable Assembly, 28 in	1
30	67886	Standoffs, Long, Male 4-40NC	4
31	71739	Cinching Enclosure Clip	4
37	42640	Machine Screw, 1/4 - 28NF x 1	1
38	59250	Washer, .255 ID x .437 OD	1
39	30376	Sealing Ring, 1/2 NPT, Nylon	11
40	15628	Cord Grip, 1/2 NPT, Black	11
41	71455	Machine Screws, 1/4-28NF x .75	1
42	71447	Machine Screws 1/4-28NF	3
44	71333	920i Power Supply Board	1
45	68216	Metal Nameplate	1
46	69290	3V Coin Lithium Batter	1
47	67610	Single Channel A/D Card	1
48	68724	920i Cover Gasket	1
49	66502	Overlay, Membrane Switch	1
50	109549	920i CPU Board Assembly	1
51	15650	Cable Tie Mount 3/4 in	7

Item No.	Part No.	Description	Qty.
52	16861	Label, High Voltage	3
53	16892	Label, Earth Ground	1
55	120423	Back Panel Component	1
60	94274	Legend Plate, Emergency Stop	1
61	94273	Red Mushroom Switch	1
62	94277	Switch, Push Button Green	1
63	94316	Legend Plate Holder	2
64	114695	Legend Plate, Start	1
65	94298	3-Position Switch	1
66	120728	Legend Plate, Reset/Resume	1
67	94310	Contact Block	2
68	94311	Contact Block, Switch On	1
69	94312	Contact Block, Switch On	1
70	94313	Contact Block, Switch On	1
71	85108	4 Position Jumper Strap	1
72	33207	8-Channel Mounting Relay Board	1
73	15971	Output Relay Module	4
74	70780	50 Pin Flat Ribbon Cable	1
75	120762	Machine Screw, 6-32NC x 1 - 1/4	4
76	43636	DIN Rail	1
77	61141	Screwless WAGO End Stop	3
78	62964	WAGO Terminal Block	7
79	62966	WAGO Terminal Block	1
80	62968	Intermediate End Plate	3
81	62969	WAGO Fuse Terminal Block	2
82	54215	Time Delay Fuse, 3.15 amp	2
83	66190	Intermediate End Plate	1
84	62959	Label, WAGO Terminal Strip	1
85	65007	Label, WAGO Terminal Block	1
86	62967	Label, WAGO Terminal Block	1
87	66034	Label, WAGO Terminal Block	1
88	22087	Machine Screw, 6-32NC x 3/8	2
89	55337	Jumper, Series 280, Insulated	1
90	80590	Arrowhead Cable Tie Mount	8
91	15658	1 Inch Cable Tie Mount	2
92	121069	9 Inch Ground Assembly Wire	1
98	67608	Card, Digital I/O	1
99	77180	Conn, 8 Pos Screw Terminal	1
105	88733	Vent, Breather Sealed	1
106	88734	Nut, Breather Vent	1
–	54215	Fuse Between Din Rail/Relay Rack	1
–	117901	Foam, Mixture High Density	1

Table 5-1. Replacement Parts List

RICE LAKE
WEIGHING SYSTEMS

6.0   Compliance

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EU DECLARATION OF CONFORMITY

EU-KONFORMITÄTSERKLÄRUNG
DÉCLARATION UE DE CONFORMITÉ

Rice Lake Weighing Systems
230 West Coleman Street
Rice Lake, Wisconsin 54868
United States of America

RICE LAKE
WEIGHING SYSTEMS

Type/Typ/Type: 820i and 920i series

English   We declare under our sole responsibility that the products to which this declaration refers to, is in conformity with the following standard(s) or other regulations document(s).

Deutsch   Wir erklären unter unserer alleinigen Verantwortung, dass die Produkte auf die sich diese Erklärung bezieht, den folgenden Normen und Regulierungsbestimmungen entsprechen.

Francais   Nous déclarons sous notre responsabilité que les produits auxquels se rapporte la présente déclartion, sont conformes à la/aux norme/s suivante ou au/aux document/s normatif/s suivant/s.

EU Directive	Certificates	Standards Used / Notified Body Involvement
2014/30/EU EMC	-	EN 61326-1:2013, EN 55011:2009+A1:2010, EN 61000-6-1:1995, EN 61000-6-2:2007
2014/35/EU LVD	-	IEC 60950-1 ed.2
2011/65/EU RoHS	-	EN 50581:2012

Signature: _Richard Shipman_

Type Name: Richard Shipman

Title: Quality Manager

Place: Rice Lake, WI   USA

Date: May 3, 2019

UK DECLARATION OF CONFORMITY

UK CA

Rice Lake Weighing Systems
230 West Coleman Street
Rice Lake, Wisconsin 54868
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RICE LAKE
WEIGHING SYSTEMS

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UK Regulations	Certificates	Standards Used / Approved Body Involvement
2016/1101 Low Voltage	-	IEC 60950-1 ed.2
2016/1091 EMC	-	EN 61326-1:2013, EN 55011:2009+A1:2010, EN 61000-6-1:1995, EN 61000-6-2:2007
2012/3032 RoHS	-	EN 50581:2012

Signature: *Brandi Harder*

Name: Brandi Harder

Title: Quality Manager

Place: Rice Lake, WI   USA

Date: December 30, 2021

Form 0291 New 07/2021   Approved by: Quality Department

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