Operators Manual

FB2900 Series Instrumentation

FB2900 Intrinsically Safe Weighing Instrument (38165)
ACC-2930 Intrinsically Safe Battery (37972)
ACC-2945 Safe Area Battery Charger (37987)

51564
Rev. 1 05/26

Disclaimer

Every effort has been made to provide complete and accurate information in this manual. However, although this manual may include a specifically identified warranty notice for the product, Fairbanks Scales makes no representations or warranties with respect to the contents of this manual and reserves the right to make changes to this manual without notice when and as improvements are made.

Fairbanks Scales shall not be liable for any loss, damage, cost of repairs, incidental or consequential damages of any kind, whether or not based on express or implied warranty, contract, negligence, or strict liability arising in connection with the design, development, installation, or use of the scale.

Amendment Record

Document TBD

Rev #	Date	Update
Revision 1	5/26	New product documentation release

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1.0 SAFETY

1.1 SAFETY DEFINITIONS

	*DANGER:*	**Indicates a hazardous situation which, if not avoided, will result in death or serious injury.**
	*WARNING:*	**Indicates a hazardous situation which, if not avoided, could result in death or serious injury.**
	*CAUTION:*	**Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.**
	*NOTICE:*	**Indicates safety practices not related to physical injury.**

Figure 1-1. Safety Signals

1.2 SAFETY

WARNING: **Do not operate this equipment until you have fully read this manual and fully understand all instructions.**

WARNING: **Do not install or service this equipment until you have fully read this manual and fully understand all instructions. The FB2900 Weighing Instrument and associated accessories may only be installed and serviced by Fairbanks Scales and Authorized Distributors service technicians that have been trained by Fairbanks Scales for intrinsically safe weighing.**

WARNING: **This equipment is a component of an intrinsically safe scale system. The system design must be reviewed by qualified personnel who are trained in the construction, operation, and all hazards of the application and components of the scale system.**

Installation must be in accordance with control drawing P/N 38209.

WARNING: **Do not exceed the rated specifications of this equipment.**

WARNING **Do not operate damaged equipment.**

WARNING: **Do not modify this equipment.**

WARNING: **The FB2900 may be operated remotely from the optional FB7291 and FB7292 Safe Area Remote Communication Terminal.**

1.3 EQUIPMENT CERTIFICATION & CLASSIFICATION

The FB2900 weighing instrument and ACC-2930 battery are certified for use in hazardous locations per United States, Canadian, and IEC standards.

1. FB2900 Instrument Hazardous (Classified) Location Electrical Equipment Per United States and Canadian standards.
   a. Certificate Numbers: FM24US0087X, FM24CA0032X
   b. Equipment Rating: FM/cFM
      I.S., S.I. Class I, II, III, Division 1, Groups ABCDEFG T4 -10°C ≤ Ta ≤ 40°C
      Class I, Zone 0, AEx / Ex ia op is IIC T4 Ga -10°C ≤ Ta ≤ 40°C
      Zone 20, AEx / Ex ia IIIC T_{200}64°C Da -10°C ≤ Ta ≤ 40°C
      IP65 Rated Enclosure
      Install per control drawing 38209

2. ACC-2930 Battery Hazardous (Classified) Location Electrical Equipment Per United States and Canadian Standards.
   a. Certificate Numbers: FM24US0086X, FM24CA0031X
   b. Equipment Ratings: FM/cFM
      I.S., S.I. Class I, II, III, Division 1, Groups ABCDEFG T4 -10°C ≤ Ta ≤ 40°C
      Class I, Zone 0, AEx / Ex ia IIC T4 Ga -10°C ≤ Ta ≤ 40°C
      Zone 20, AEx / Ex ia IIIC T_{200}45°C Da -10°C ≤ Ta ≤ 40°C
      IP65 Rated Enclosure
      Install per control drawing 38339

1.4 SPECIFIC CONDITIONS OF USE

1. Service

WARNING: Failure to heed these warnings could result in serious injury or death.

- This equipment contains no user-serviceable parts.

AVERTISSEMENT: Le non-respect de directives pourrait entraîner des blessures graves ou la mort.

- Cet équipement ne contient aucune pièce réparable par l'utilisateur.

Field Serviceability & Repairs:

The FB2900 Weighing Instrument and associated accessories may only be serviced by Fairbanks Scales and Authorized Distributors service technicians that have been trained by Fairbanks Scales for intrinsically safe weighing.

Contact Fairbanks Scales to schedule an onsite service call:

Fairbanks Scales
6800 W 64th Street
Overland Park, KS 66202
(800)451-4107

2. Equipment

WARNING: Failure to heed these warnings could result in serious injury or death.

- **Risk of electrostatic sparking in dust atmospheres. Equipment shall not be applied in an explosive dust atmosphere where high electrostatic charging processes are present that could result in propagating brush discharges. See IEC TS60079-32-1 for additional guidance.**
- **The window of the LCD display of the FB2900 Weighing Instrument is considered to constitute an electrostatic discharge hazard. Clean using only a wet or damp cloth.**
- **The cable glands for external cable connections are considered to constitute an electrostatic discharge hazard. Clean using only a wet or damp cloth.**
- **The ACC-2930 Battery is the only battery approved for use with the FB2900 Weighing Instrument.**
- **The ACC-2945 Safe-Area Battery Charger is the only approved charger for use with the ACC-2930 battery.**
- **The ACC-2930 Battery must only be charged using the ACC-2945 Safe-Area Battery Charger.**
- **The ACC-2945 Safe-Area Battery Charger is rated for 100 – 120V @ 50-60 Hz AC input power.**
- **The ACC-2945 Safe-Area Battery Charger, FB7290 Safe-Area Weighing Terminal, and FB7291 Safe-Area Weighing Terminal must only be installed or used in a non-hazardous (unclassified) safe area.**
- **Do not use equipment in direct sunlight.**
- **The FB2900 Weighing Instrument, ACC-2930 Battery and ACC-2945 Safe-Area Battery Charger must only be used in locations where the ambient temperature falls within the range of -10°C to +40°C (14°F to 104°F).**

AVERTISSEMENT: Le non-respect de directives pourrait entraîner des blessures graves ou la mort.

- **Risque d'étincelles électrostatiques dans les atmosphères poussiéreuses. L'équipement ne doit pas être utilisé dans une atmosphère poussiéreuse explosive où sont présents des processus de charge électrostatique élevés qui pourraient entraîner la propagation de décharges en brosse. Voir CEI TS60079-32-1 pour des conseils supplémentaires.**
- **La fenêtre de l'écran LCD de l'instrument de pesée FB2900 est considérée comme présentant un risque de décharge électrostatique. Nettoyer uniquement à l'aide d'un chiffon mouillé ou humide.**
- **Les presse-étoupes pour les connexions de câbles externes sont considérés comme présentant un risque de décharge électrostatique. Nettoyer en utilisant uniquement un chiffon mouillé ou humide.**

- **La batterie ACC-2930 est la seule batterie approuvée pour une utilisation avec l'instrument de pesée FB2900.**
- **Le chargeur de batterie pour zone sûre ACC-2945 est le seul chargeur approuvé pour une utilisation avec la batterie ACC-2930.**
- **La batterie ACC-2930 doit être chargée uniquement à l'aide du chargeur de batterie pour zone sûre ACC-2945.**
- **Le chargeur de batterie pour zone sûre ACC-2945 est conçu pour une puissance d'entrée CA de 100 à 120 V à 50-60 Hz.**
- **Le chargeur de batterie pour zone sûre ACC-2945, le terminal de pesée pour zone sûre FB7290 et le terminal de pesée pour zone sûre FB7291 doivent être installés ou utilisés uniquement dans une zone sûre non dangereuse (non classée).**
- **N'utilisez pas l'équipement en plein soleil.**
- **L'instrument de pesée FB2900, la batterie ACC-2930 et le chargeur de batterie pour zone sûre ACC-2945 doivent être utilisés uniquement dans des endroits où la température ambiante est comprise entre -10 °C et +40 °C (14 °F et 104 °F).**

1.5 APPROVAL STANDARDS

1. Factory Mutual / USA

Title	Number	Issue
Electrical Equipment for Use in Hazardous (Classified) Locations - General Requirements	FM 3600	2022
Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III, Division 1, Hazardous (Classified) Locations	FM 3610	2021
Electrical Equipment for Measurement, Control and Laboratory Use	FM 3810	2021
Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 1: General Requirements	ANSI 61010-1	2010
Degrees of Protection Provided by Enclosures (IP Code)	ANSI 60529	2001

Figure 1-2. Factory Mutual Approval Standards

2. IEC

Title	Number	Issue
Electrical Apparatus for Explosive Gas Atmospheres. Part 0: General Requirements	IEC 60079-0	2017
Explosive Atmospheres Part 11: Equipment Protection by Intrinsic Safety “i”	IEC 60079-11	2011
Explosive Atmospheres Part 18: Equipment Protection by encapsulation “m”	IEC 60079-18	2017
Explosive atmospheres Part 28: Protection of equipment and transmission systems using optical radiation	IEC 60079-28	2015

Figure 1-3. IEC Approval Standards

1.6 CABLE GLANDS

WARNING: The cable glands are considered to constitute an electrostatic discharge hazard. Clean using only a wet or damp cloth.

AVERTISSEMENT: Les presse-étoupes sont considérés comme présentant un risque de décharge électrostatique. Nettoyer en utilisant uniquement un chiffon mouillé ou humide.

The FB2900 instrument uses cable glands for all cable entries. Cable glands must be torqued to seal the cables and blanking plugs inserted at any unused glands.

Cable Gland Size	Cable Diameter Range	Sealing Nut Torque Around Cable
PG7	0.114 - 0.250" (2.9 - 6.4mm)	25 in. lbs. (2.8 Nm)
PG9	0.094 - 0.118" (2.4 - 3mm)	26.5 in. lbs (3 Nm)
PG11	0.230 - 0.395" (5.8 - 10.0mm)	65 in. lbs. (7.3 Nm)
PG16	0.394 - 0.551" (10 - 14mm)	40 in. lbs (4.5 Nm)

Figure 1-4. Cable Gland Specification

1.7 SYSTEM LIMITATIONS & RESTRICTIONS

1. **Weighing Instrument**
   a. The FB2900 Weighing Instrument will include the following nameplate and affixed to the enclosure.
   b. Nameplate:

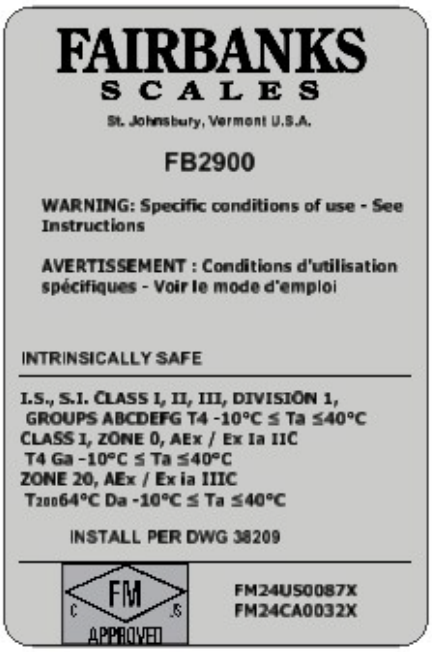

Figure 1-5. FB2900 Nameplate

   c. Weighing Instrument must have a factory installed nameplate.
   d. Installation and use of instrument must be in accordance with control drawing P/N 38209.
   e. Instruments may only be serviced by Fairbanks Scales' and Authorized Distributor's service technicians that have been trained by Fairbanks Scales for intrinsically safe weighing. Instrument may also be returned to Fairbanks Scales for maintenance or repair.
   f. Replacement coin cell battery is Fairbanks Scales P/N 38715 and replaceable from the safe area only.
   g. Field modifications are not permitted.

2. Battery

a. The ACC-2930 Battery will include the following nameplate and affixed to the housing.
b. Nameplate:

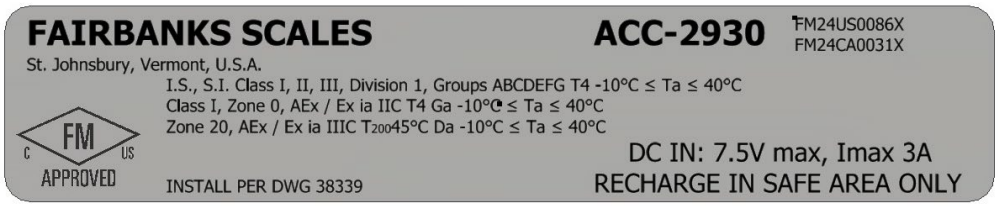

Figure 1-6. ACC-2930 Nameplate

c. Battery must have a factory installed nameplate.
d. Battery must be returned to Fairbanks Scales for maintenance or repair.
e. Field modifications are not permitted.

3. Safe-Area Battery Charger

a. The ACC-2945 Safe-Area Battery Charger will include a serial tag affixed to the bottom of the housing.
b. The ACC-2945 Safe-Area Battery Charger must only be located and installed in a non-hazardous (unclassified) safe area.
c. The ACC-2945 Safe-Area Battery Charger may only be serviced by Fairbanks Scales and Authorized Distributors service technicians that have been trained by Fairbanks Scales for intrinsically safe weighing or returned to Fairbanks Scales for maintenance or repair.
d. Replacement fuse is Fairbanks P/N 38992C only. Fuse is cartridge-type 5x20mm 1.25A 250VAC fast-blow fuse. Breaking current must be 1500A or higher. Disconnect all equipment from electrical supply before replacing fuses or opening enclosures.
e. Field modifications are not permitted.

2.0 INTRODUCTION

This manual provides information to install, configure, calibrate, operate, and service the FB2900 weighing instrument. Do not use, install, or service the FB2900 equipment until you have fully read this manual and fully understand all instructions. Refer to the FB2900 Conditions of Use document P/N 51715 for intrinsic safety rating classifications, conditions of use, and system limitations and restrictions. Do not exceed the rated specifications of this equipment.

2.1 TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION
Display	4.5" diagonal, 240 x 128 resolution FSTN LCD with white LED backlight
Displayed Characters	7/8"
Load Cell Interface	Analog
Load Cells	Up to (8) 350 ohm or (16) 1,000 ohm
Load Cell Excitation	5 VDC
No. of Scales	One (1)
Resolution	10,000d Commercial 50,000d Non-Commercial
Scale Capacity	0-999,999
Division Size	0.00001-5,000, selectable
Units	lb, oz, tons, kg, g, tonne
Auto Zero Tracking	Selectable – Off, 0.5d, 1.0d, 3.0d
Motion Band	Selectable – Off, 0.5d, 1.0d, 3.0d
Digital Filter	3 Stage Median of Means
Digital Filter Presets	Adjustable, Light, Med-Light, Medium, Heavy-Med, Heavy
Zero Range	Selectable – 2%, 100%
Overcapacity Limit	Selectable – 0%, 1%, 2.5%, or 5%
ENVIRONMENTAL	
Enclosure	304 Stainless Steel Washdown (IP65)
Operating Temperature	14°F to 104°F, (–10°C to 40°C).
Operating Humidity	0 to 95%
POWER	
Battery Chemistry	Lithium Iron Phosphate (LiFePO4)
Battery Capacity	3300 mAh
Battery Life	Up to 60 continuous hours with (1) 350 Ohm Load Cell (backlight off Up to 40 continuous hours with (4) 350 Ohm Load Cells (backlight off)
Power Consumption	< 30 W
Power Saving	Sleep Timer (configurable Display, ADC, and Bridge) Backlight Intensity & Timeout, Automatic Rewake Threshold
Approvals	NTEP CC: 21-106 MC: AM-6187C
Accuracy	Class III/III L

Figure 2-1. Technical Specifications

2.2 ACCESSORIES

Accessories for Hazardous (Classified) Area:		
Part Number	**Model Number**	**Description**
37972	ACC 2930	Replacement Battery for FB2900

Figure 2-2. Accessories for Hazardous (Classified) Area

Accessories for Safe Area Only:		
Part Number	**Model Number**	**Description**
37987	ACC 2945	Safe-Area Battery Charger for FB2900
40603	FB7291	FB7291 Safe-Area Remote Communication Terminal – Desktop
40605	FB7292	FB7292 Safe-Area Remote Communication Terminal – Washdown

Figure 2-3. Accessories for Safe Area

Accessories for FB7291 and FB7292 Safe-Area Remote Communications Terminal Only:		
Part Number	**Model Number**	**Description**
35278	ACC 165	FB7200 Relay Control Box with 4 SPDT Relays
30921	N/A	FB7200 Serial Accessory Card
37045	N/A	FB7200 Ethernet/IP Accessory Card
37044	N/A	FB7200 DeviceNet Accessory Card
37720	N/A	FB7200 Modbus TCP Accessory Card
37068	N/A	FB7200 Enhanced Analog Output Accessory Card Current Outputs: 4-20 mA, 0-20 mA, 0-24 mA, Voltage Outputs: 0-5V, 0-5.5V, 0- 10V, 0-11V, -5/5V, -5.5/5.5V, -10/10V, -11/11V,16-bit
30919	N/A	FB7200 4-20mA Analog Output Accessory Card (Passive)
37068	N/A	Relay Accessory Card * (For On-Scale Alarm Only)

Figure 2-4. Accessories for FB7291 and FB7292 Safe-Area Remote Communications Terminal

* Requires ACC 713 Relay Box.

Max number of accessory cards is three (3)

2.3 FCC COMPLIANCE

This instrument has been tested and complies 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 device generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it 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 their own expense.

For further information, contact the manufacturer or refer to the FCC's guidelines on unintentional radiators (47 CFR Part 15, Subpart B).

2.4 DISPOSAL

Proper disposal of this device is essential to ensure safety and compliance with environmental regulations. Follow these steps:

1. Power Down and Disconnect: Turn off the device and disconnect it from any power source to prevent electrical hazards.
2. Remove Accessories: Detach all cables, peripherals, and non-integrated components. Dispose of them separately according to their material type.
3. Follow Local Regulations: Electronic devices must not be disposed of in household waste. Contact your local waste management authority for e-waste recycling programs or designated drop-off locations.
4. Recycle Responsibly: Take the device to a certified e-waste recycling facility. Components such as circuit boards, batteries, and displays may contain hazardous materials (e.g., lead, mercury) that require special handling.

For additional guidance, consult the Waste Electrical and Electronic Equipment (WEEE) Directive or equivalent regulations in your region. Improper disposal may result in environmental harm or legal penalties.

2.5 NAVIGATING THIS MANUAL

This manual contains CAPATIZED words separated by a colon (:) to communicate the structure within the menus. Example: CONFIGURATION : PRODUCTS - The word PRODUCTS is a menu item located in the CONFIGURATION menu.

2.6 USER RESPONSIBILITY

Do not install, configure, or operate the FB2900 weighing instrument and accessories until you have fully read this manual and fully understand all instructions.

Only Fairbanks Scales and Authorized Distributors service technicians that have been trained by Fairbanks Scales for intrinsically safe weighing may install or service equipment.

Refer to Bulletin **FB2900 & ACC-2930 Conditions of Use In Hazardous Locations** (P/N 51715) for rating classifications, conditions of use, and system limitations and restrictions.

Do not exceed the rated specifications of this equipment. Field modifications are not permitted. All electronic and mechanical calibrations and adjustments required for making this equipment perform to accuracy and operational specifications must be performed by trained service personnel only.

3.0 INSTALLATION

3.1 INTRODUCTION

Installation and Operational Guidelines for a Fairbanks Scales FB2900 weighing instrument:

Pre-Installation Verification:

- Prior to installation, confirm that the instrument meets the customer's requirements as specified in the order and this manual.
- If the equipment cannot fulfill the application's needs, **do not** proceed with installation. Consult with your Service Manager and customer to resolve any discrepancies.

Handling and Replacement of Printed Circuit Assemblies:

- The instrument contains printed circuit assemblies (PCAs) that are sensitive to electrostatic discharge (ESD). Always follow ESD handling procedures during service or replacement.

Figure 3-1. Electrostatic Sensitive Device Warning

- PCAs must be replaced as complete units; individual component repairs are prohibited.
- Package replaced PCAs in ESD-protective material and return them intact for replacement or disposal following standard procedures.

Installation Scope and Documentation:

- This manual provides installation, configuration, and operating instructions for the instrument and its specific accessories. For peripheral devices (e.g., FB7291 or FB7292), refer to their respective manuals.
- Installation includes all electronic and mechanical calibrations or adjustments necessary to meet accuracy and operational specifications, covered under the installation charge.

Restrictions on Modifications:

- Refer to the FB2900 Conditions of Use document P/N 51715 for rating classifications, conditions of use, and system limitations and restrictions.
- No physical, electrical, or software modifications are permitted.
- Only use accessories listed within this manual in accordance with the control drawing.
- Do not make electrical connections other than those specified in this manual.
- Physical alterations are prohibited and will immediately void all certifications and warranty.

Customer and Operator Responsibilities:

- Refer to the FB2900 Conditions of Use document P/N 51715 for rating classifications, conditions of use, and system limitations and restrictions.
- The customer and operator must ensure the instrument operates within its specified parameters and is protected from accidental damage or intentional misuse.
- Report any issues promptly to maintain warranty coverage and ensure safe operation.

3.2 CONTROL DRAWINGS

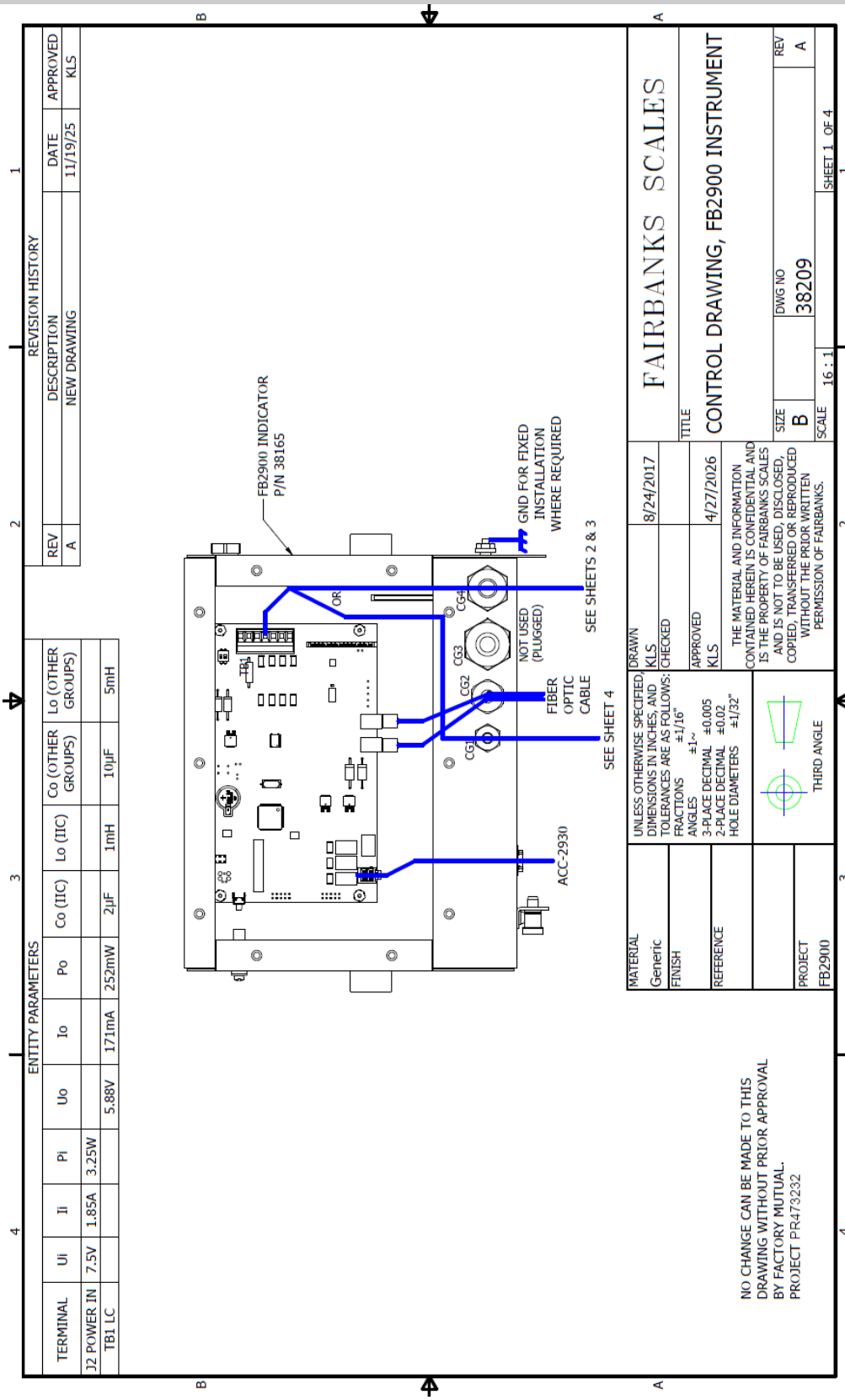

Figure 3-1. FB2900 Control Drawing Page 1 of 4

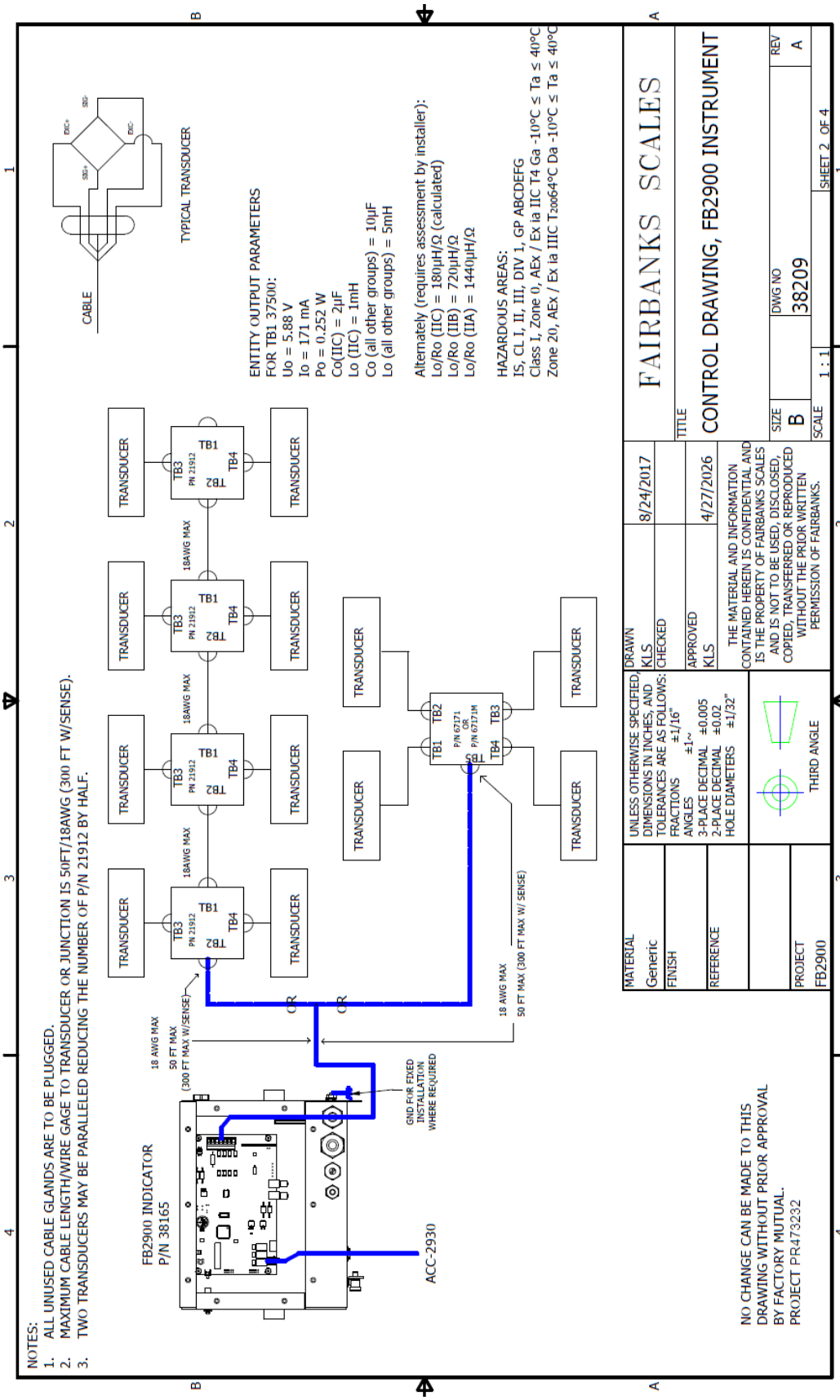

Figure 3-2. FB2900 Control Drawing Page 2 of 4

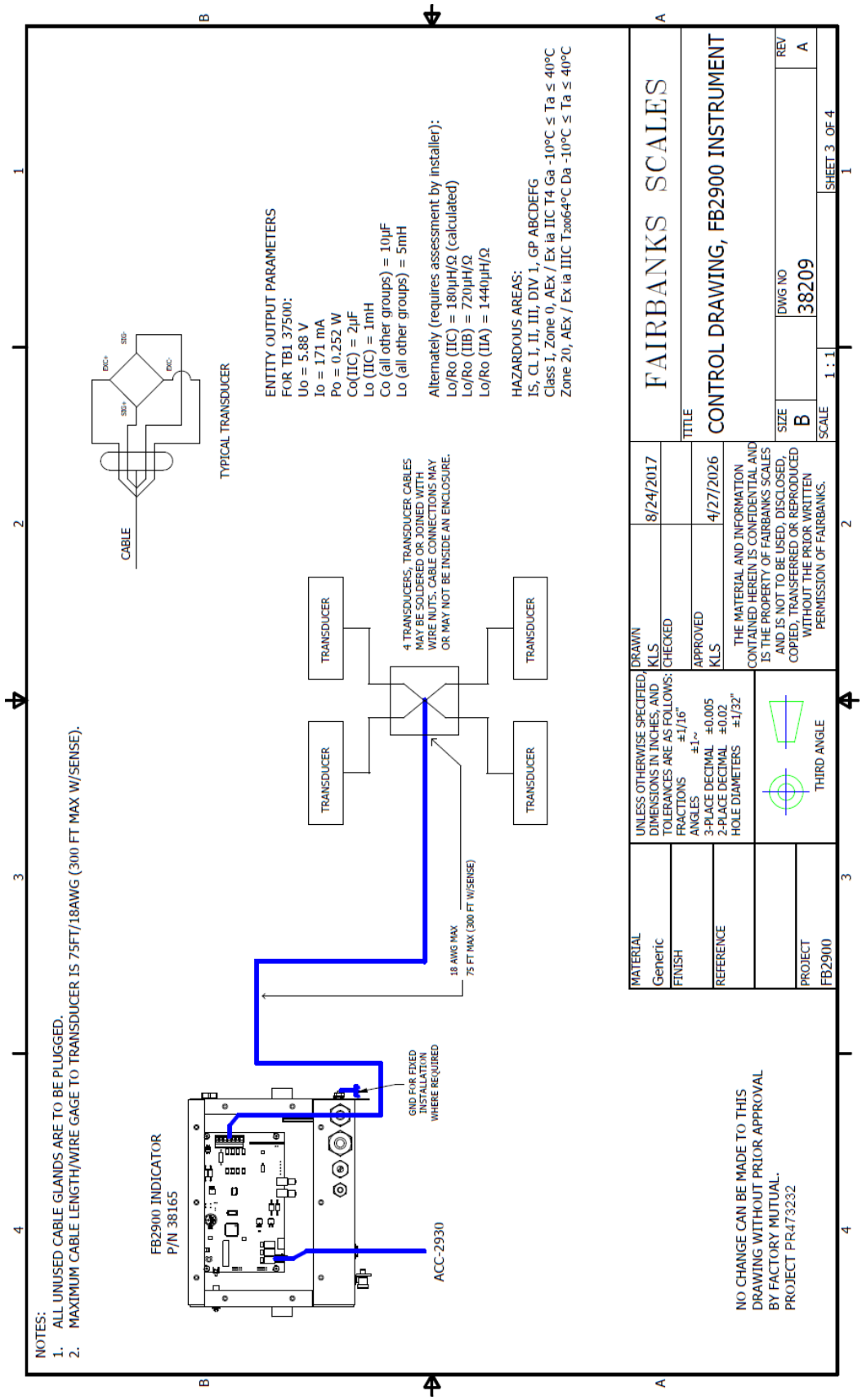

Figure 3-3. FB2900 Control Drawing Page 3 of 4

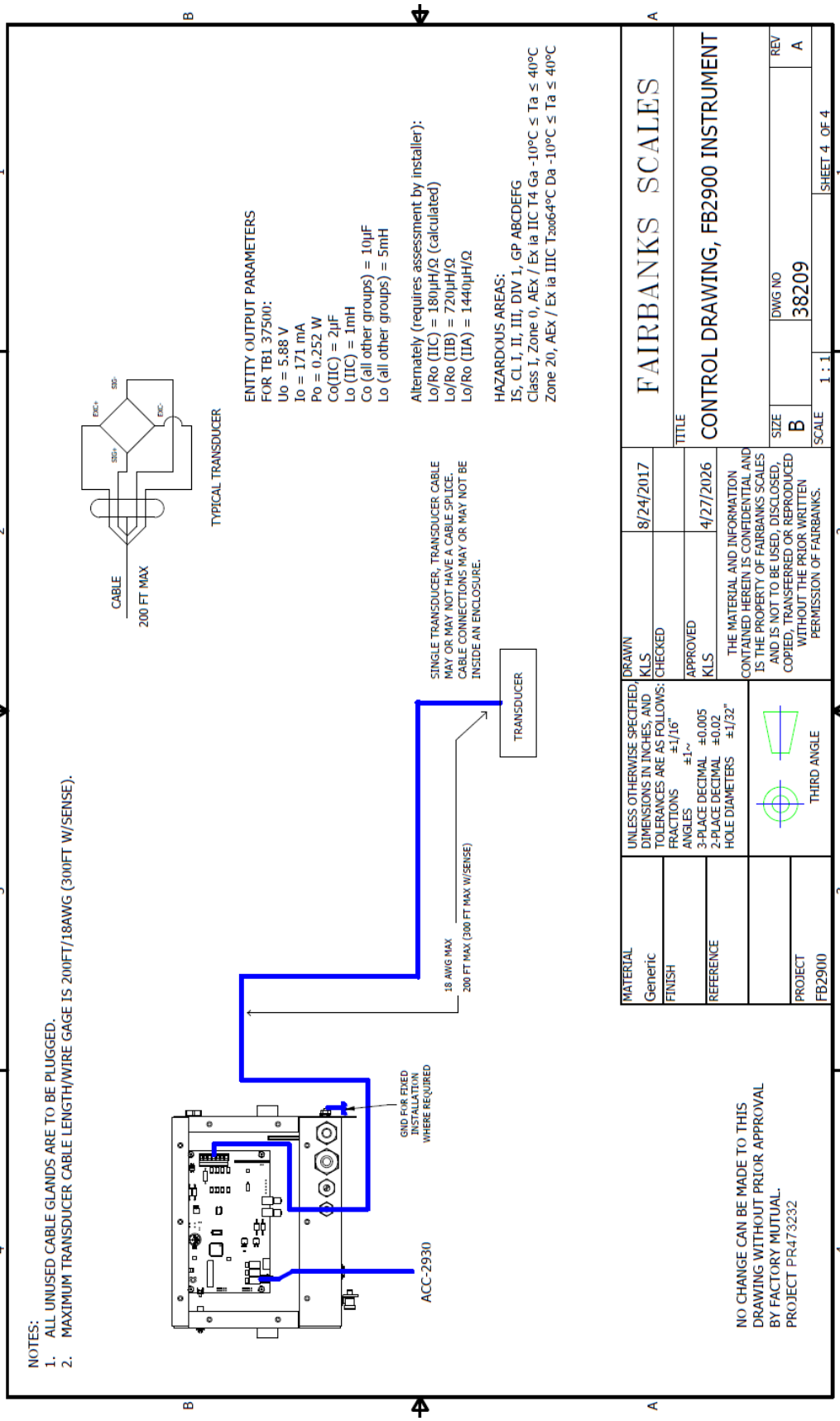

Figure 3-4. FB2900 Control Drawing Page 4 of 4

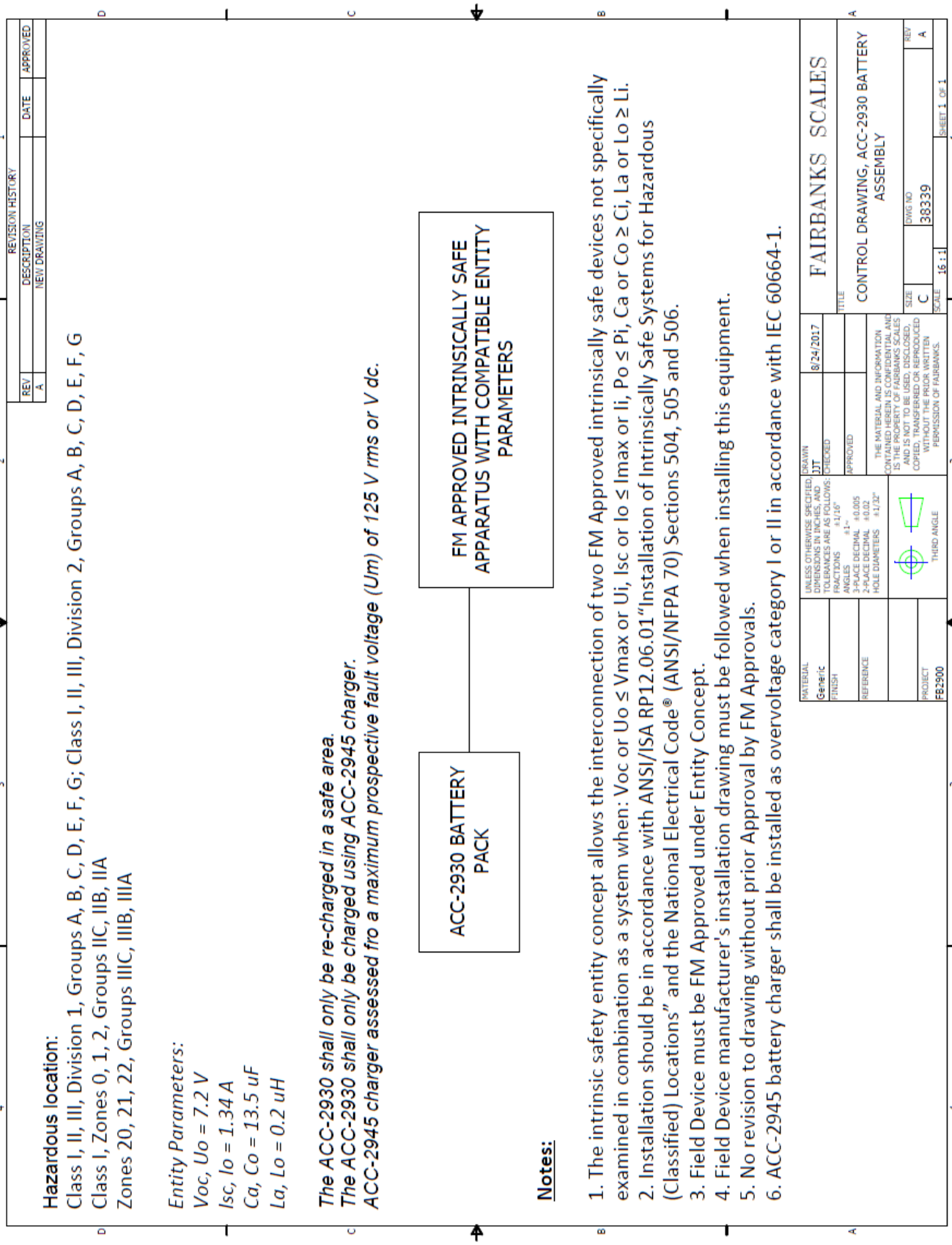

Figure 3-5. ACC-2930 Battery Assembly Control Drawing Page 1 of 1

3.3 PRE-INSTALLATION

PRE-REQUISITES FOR INSTALLATION OF SCALE COMPONENTS

- Minimum Clearance from High-Energy Circuits:
    - All scale components, including load cells, load cell cables, interconnecting cables, digital weight indicators, junction boxes, and home-run cables, must be installed at least 36 inches (91 cm) away from single- or multi-phase high-energy circuits and electrical conductors.
    - Peripheral devices, such as printers, remote displays, and auxiliary data entry devices, must also maintain this 36-inch (91 cm) separation from high-energy sources.
- Separation from High-Energy Equipment:
    - Scale components must be positioned at least 36 inches (91 cm) from high-energy devices and systems, including but not limited to:
        - Machinery operating at 100–480 VAC.
        - High-voltage wiring, AC power transformers, overhead or buried cables, electrical distribution panels, electric motors, fluorescent or high-intensity lighting with ballast assemblies, and electric heating equipment.
- Incompatible Power Sources:
    - Scale components, including digital weight indicators and peripheral devices, are not designed to operate on power supplied by internal combustion engine-driven electric generators or similar equipment. Use only manufacturer-approved and grid power sources to ensure safe and reliable operation.
- Protection from Electric Arc Welding:
    - Electric arc welding near scale components can cause severe damage to digital weight indicators, junction boxes, sectional controllers, power supplies, and load cells. Ensure welding activities are conducted at a safe distance or that scale components are properly shielded or powered off during welding.
- Operator Training and Responsibility:
    - The service technician must ensure that customer personnel are thoroughly trained and familiar with the equipment's capabilities, limitations, and safety requirements before completing the installation. Proper training is critical to safe and effective operation.

PRE-INSTALLATION CHECKLIST

Before the service technician proceeds to the installation site, the following points must be reviewed and, if necessary, confirmed with the Area Sales Manager and Customer:

- ☐ Business Operations:
  - Inform and coordinate onsite labor with the customer to avoid disrupting normal operations.
- ☐ Power Supply:
  - Verify that a properly grounded AC power source is available at the ACC-2945 battery charger installation location, compliant with the equipment's specifications.
- ☐ Operator Training:
  - Ensure that designated equipment operators are available for training during the installation process.
- ☐ Setup Review:
  - Collaborate with the Local Sales or Service Manager to review the recommended configuration and identify any customer's specific requirements.
- ☐ Equipment Positioning:

  Consider the following when selecting the installation location:

  - Equipment must be installed in accordance with the control drawings and **FB2900 & ACC-2930 Conditions of Use in Hazardous Locations** (Bulletin P/N 51715).
  - Do not install the FB2900 in direct sunlight.
  - Do not place near magnetic materials or equipment/instruments that use magnets, as these may interfere with operation.
  - Select a location with stable temperatures within the equipment's specified range, as extreme variations can affect weighing accuracy.

3.4 UNPACKING & INSPECTION

Each box includes one instrument, (2) lead seals, and instructions for locating the operator's manual on www.fairbanks.com.

FOLLOW THESE STEPS WHEN UNPACKING THE EQUIPMENT:

1. Verify all components and accessories against the customer's order and packing list.
2. Verify all components and installation locations are suitable for the equipment ratings and in accordance with the control drawings.
3. Remove components from packaging, inspecting for damage and ensuring all items match the invoice.
4. Report any damage to the shipper immediately and order replacement parts as needed.
5. Retain the shipping container and packing materials for future use.
6. Gather all included literature for the customer.
7. Open the equipment and inspect internal components, ensuring hardware, electrical connections, and printed circuit assemblies are secure.
8. Reinstall the equipment cover if final installation does not immediately follow.

3.5 PRODUCT DIMENSIONS

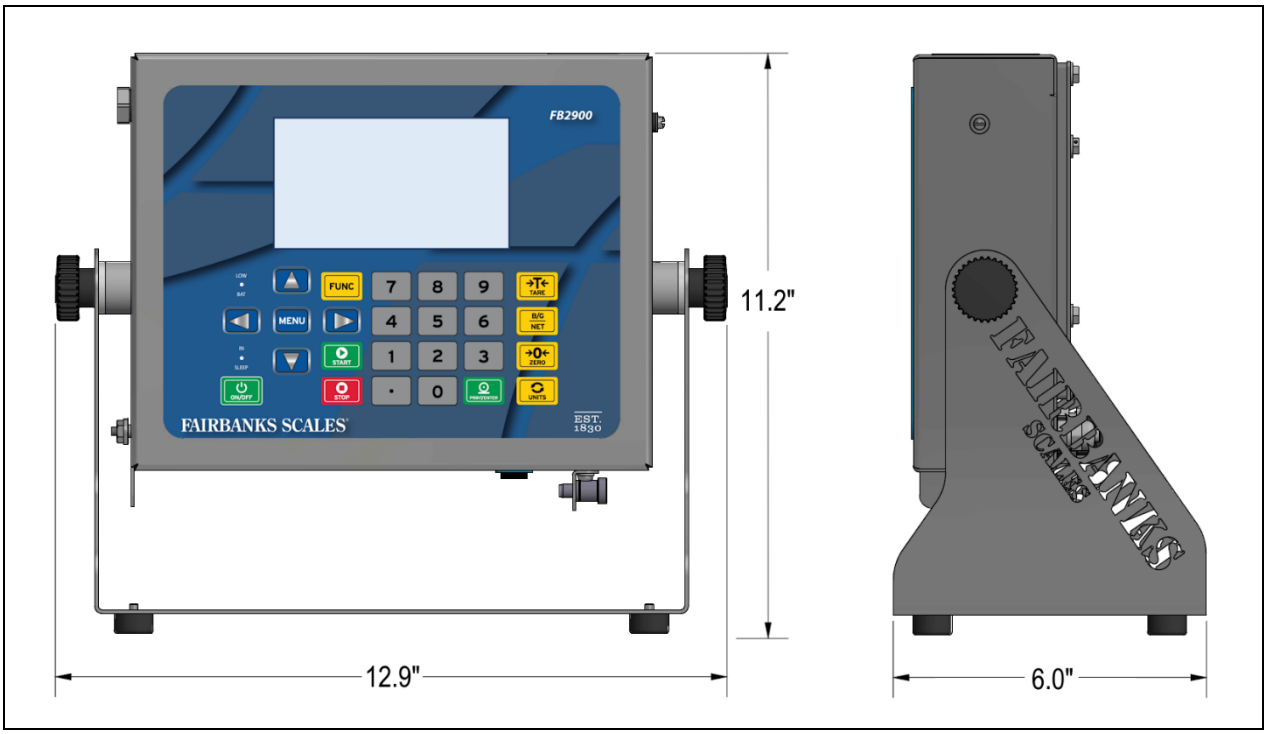

Figure 3-6. FB2900 Weighing Instrument Dimensions

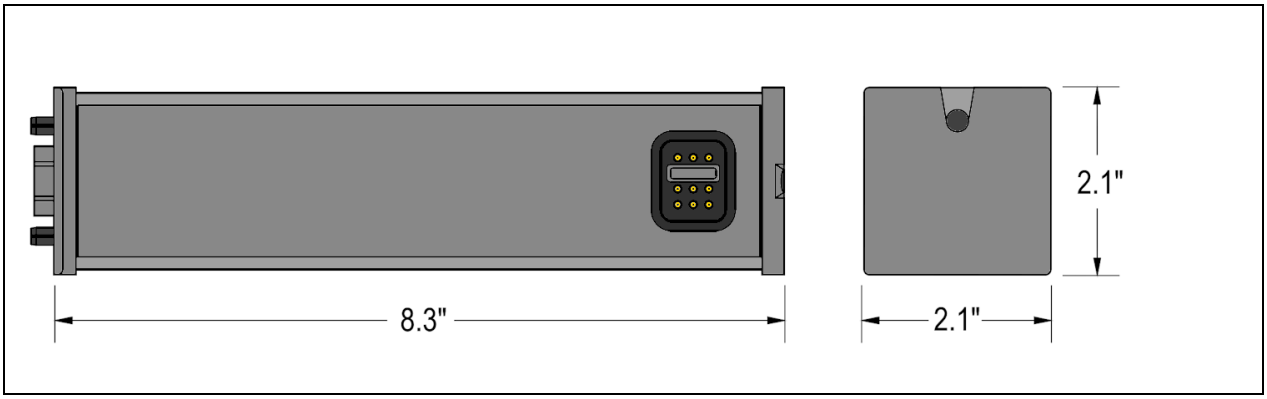

Figure 3-7. ACC-2930 Battery Dimensions

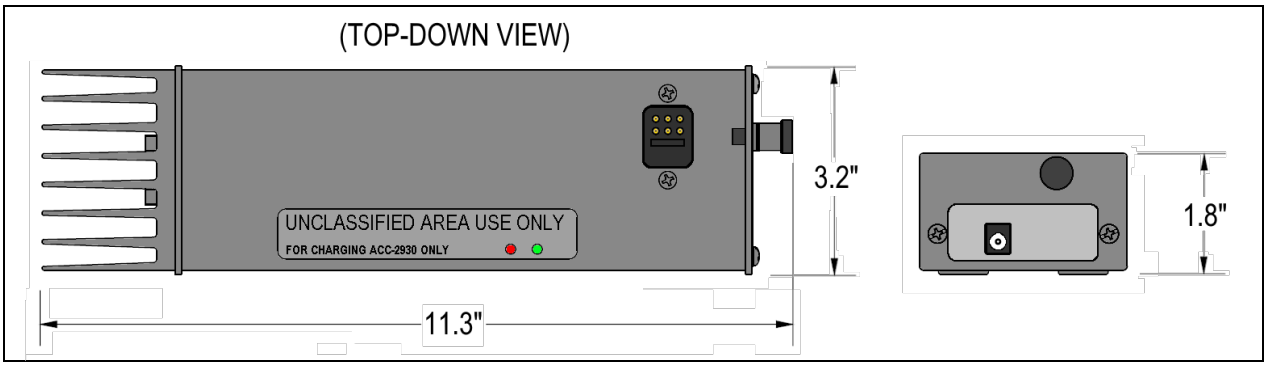

Figure 3-8. ACC-2945 Safe-Area Battery Charger Dimensions

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3.6 MOUNTING INSTRUCTIONS

The washdown instrument arrives assembled to a universal desk/wall mounted stand that can be set on a flat surface unmounted or affixed to a desk or wall using two 1/4-inch screws or bolts. The stand may also be affixed to a Fairbanks Scales bench scale pillar.

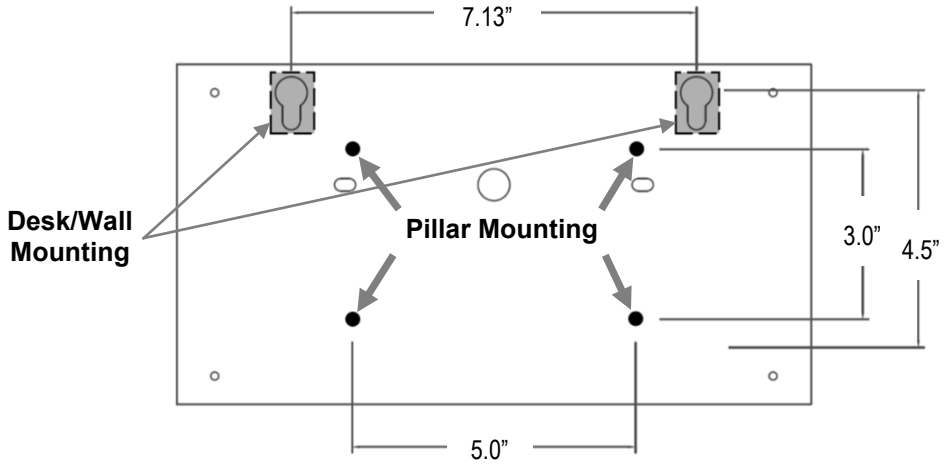


Figure 3-9. Desk/Wall Stand (Top-Down View)

DESK OR WALL MOUNTING INSTRUCTIONS:

1. Unscrew the friction nuts on the side of the Desk/Wall Stand to remove the FB2900 instrument.
2. Mark locations to pre-drill mounting holes using the Desk/Wall Stand as a template.
3. Drill holes with an appropriately sized drill bit.
4. Secure the Desk/Wall Stand using screws or bolts. *(not included)*
5. Reassemble instrument to the stand ensuring the friction disks are placed between the instrument housing and the mount.

PILLAR MOUNTING:

1. Unscrew the friction nuts on the side of the Desk/Wall Stand to remove the FB2900 instrument.
2. Using the four screws, washers and nuts included with the pillar kit, affix the Desk/Wall Stand to the Pillar.
3. Reassemble FB2900 instrument to the stand ensuring the friction disks are placed between the instrument housing and the stand. Route cables through the center hole.

3.7 OPENING THE ENCLOSURE

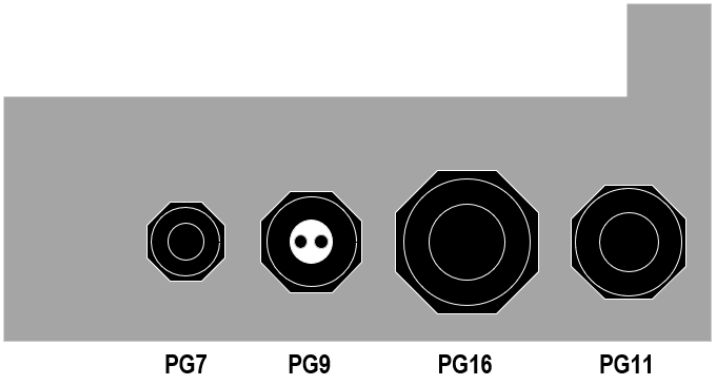
1. Disconnect battery from the instrument.
2. Place instrument on a flat and level surface with anti-static work mat.
3. Rotate instrument on the stand so the front side is facing down.
4. Hand-tighten desk/wall stand thumbscrews to prevent instrument rotation.
5. Unscrew the (10) screws holding the rear access cover. (5/16-inch screw head)

3.8 CABLE GLANDS

WARNING: The cable glands are considered to constitute an electrostatic discharge hazard. Clean using only a wet or damp cloth.

AVERTISSEMENT: Les presse-étoupes sont considérés comme présentant un risque de décharge électrostatique. Nettoyer en utilisant uniquement un chiffon mouillé ou humide.

The FB2900 instrument uses cable glands for all cable entries. All cable glands must be torqued to seal the cables or blanking plugs.



(FB2900 Rear View - Cable Gland Orientation)

Gland Size	For Cable P/N	Cable Description
PG7	17216	Load Cell Home Run Cable - 4 Conductor, Shielded Pairs, 22 Gauge
PG16	17204	Load Cell Home Run Cable - 6 Conductor, Shielded Pairs, 18 Gauge
PG9	17229	Fiber Optic Communications Cable[1]
PG11	17211	*Future direct power supply*[2]

Table 3-10. Cable Gland Cable Assignments

Cable Gland Size	Cable Diameter Range	Sealing Nut Torque Around Cable	Locknut Torque[3]
PG7	0.114 - 0.250" (2.9 - 6.4mm)	25 in. lbs. (2.8 Nm)	35 in. lbs. (4.0 Nm)
PG9	0.094 - 0.118" (2.4 - 3mm)	26.5 in. lbs (3 Nm)	40 in. lbs. (4.5 Nm)
PG11	0.230 - 0.395" (5.8 - 10.0mm)	65 in. lbs. (7.3 Nm)	45 in. lbs. (5.1 Nm)
PG16	0.394 - 0.551" (10 - 14mm)	40 in. lbs (4.5 Nm)	124 in. lbs. (14.0 Nm)

Table 3-11. Cable Gland Specifications

[1] Cable gland insert and blanking plug for 2-fiber conductors is included.

[2] PG11 cable gland may be used for cable P/N 17211 (6 Conductor Shielded Pairs, 22 Gauge Cable) when a direct power supply (future) is not used.

[3] Locknuts must be torqued while the exterior gland is stationary.

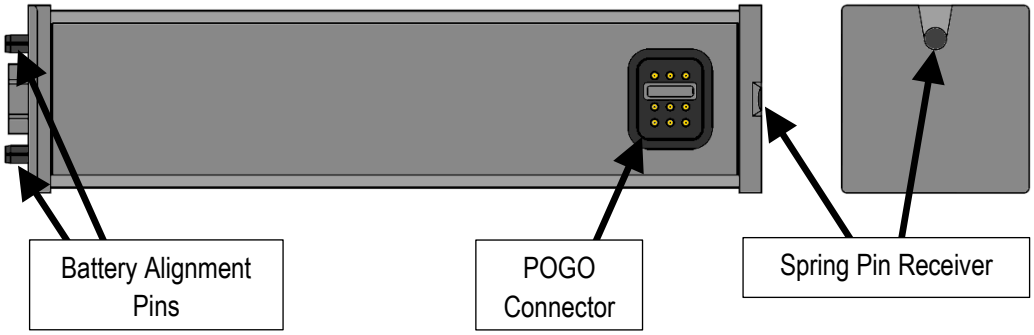
3.9 POWER CONNECTIONS

Power is supplied only using an ACC-2930 Battery P/N 37987. Substitutions are not allowed.

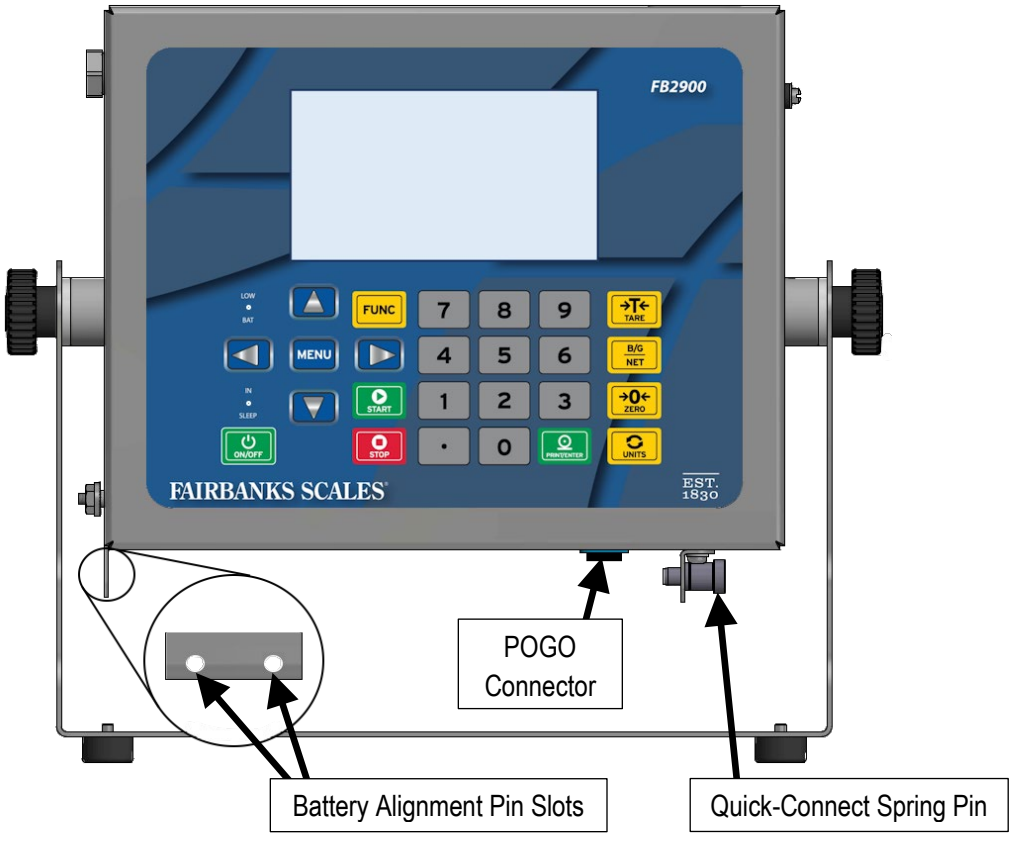
BATTERY INSTALLATION INSTRUCTIONS

Follow these steps to connect the ACC-2930 Battery to FB2900 Weighing Instrument.

ACC-2930 Battery Quick-Connect Components:



FB2900 Instrument – Battery Quick-Connect Components:



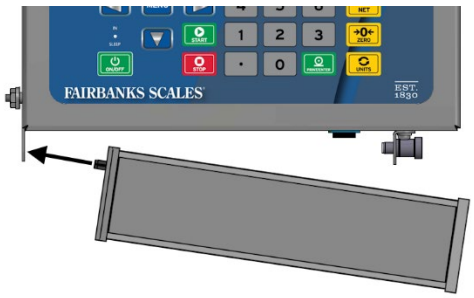
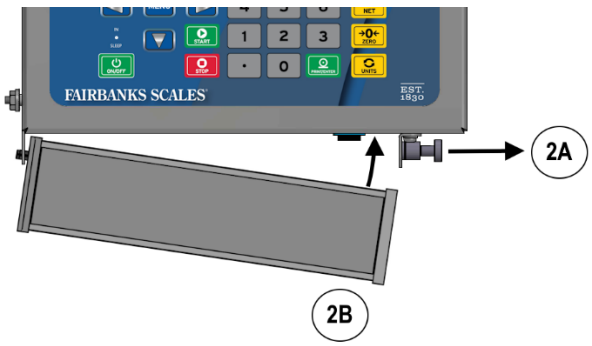
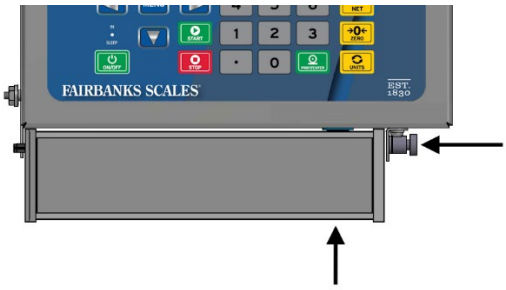
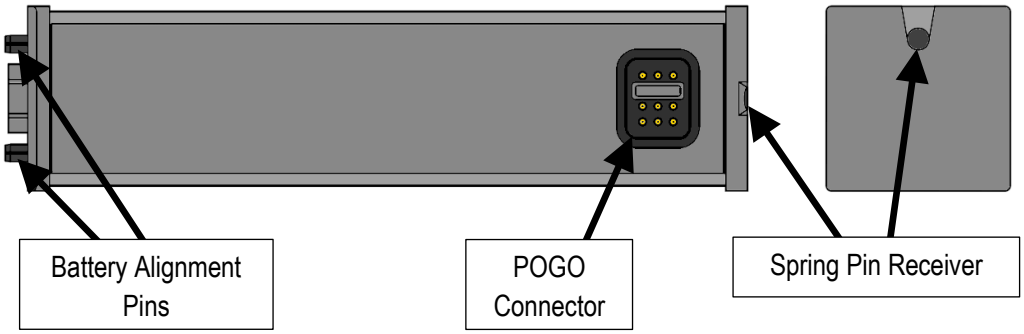
1. Insert battery's (2) alignment pins into the alignment pin slots on the bottom of the FB2900 Instrument.	
2A. Retract and hold the quick-connect spring pin. 2B. Rotate the battery upwards to align the quick-connect spring pin with the spring-pin receiver.	
3. Release the quick-connect spring pin.	
4. Apply light hand-pressure from the bottom of the battery until the quick-connect pin latches into the battery's spring pin receiver.	
5. Press ON/OFF button on FB2900 Instrument to verify power connection.	

Figure 3-12. ACC-2930 Battery Installation Guide

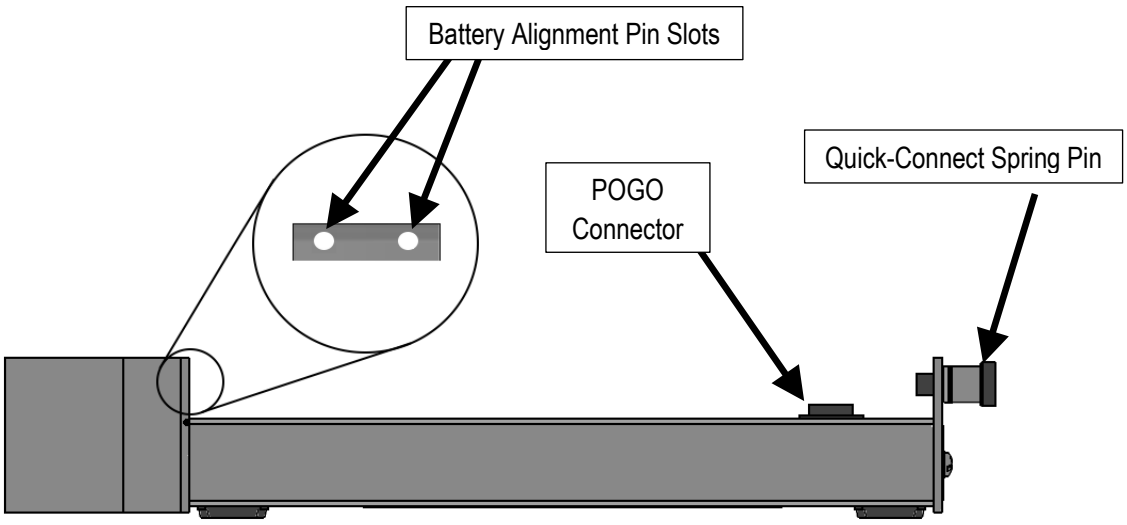
BATTERY CHARGING INSTRUCTIONS

Follow these steps to charge the ACC-2930 Battery using the ACC-2945 Safe Area Battery Charger. The ACC-2930 Battery must only be charged in a safe (unclassified) area. Do not use any other device to charge the ACC-2930 Battery.

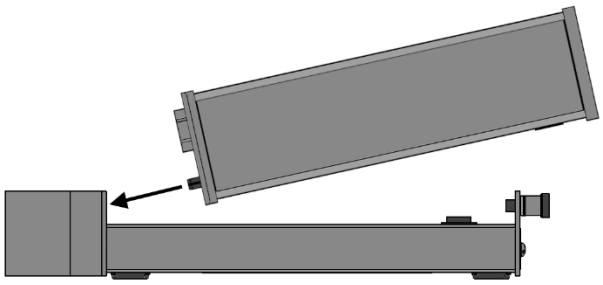
ACC-2930 Battery Quick-Connect Components:



ACC-2945 Safe Area Battery Charger Quick-Connect Components:



1. Insert battery's (2) alignment pins into the alignment pin slots on the top of the ACC-2945 Safe Area Battery Charger.



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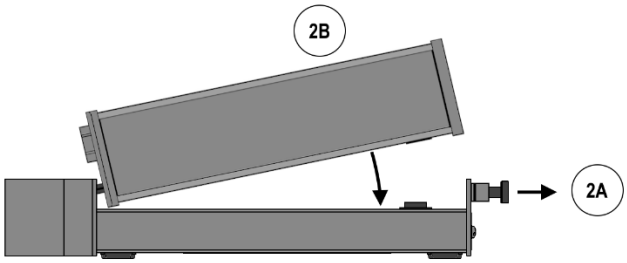
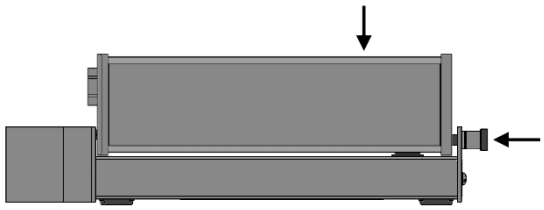
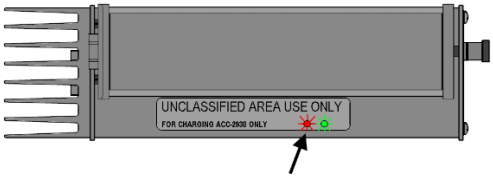
2A. Retract and hold the quick-connect spring pin. 2B. Rotate the battery downwards to align the quick-connect spring pin with the spring-pin receiver.	
3. Release the quick-connect spring pin.	
4. Apply light hand-pressure from the top of the battery until the quick-connect spring pin latches into the battery's spring pin receiver.	
5. Verify STATUS LED indicator is SOLID RED to indicate battery is charging. If STATUS LED indicator is flashing RED, refer to battery troubleshooting guide. *(next page)*	

Figure 3-13. ACC-2930 Battery Charging Instructions

ACC-2945 BATTERY CHARGER STATUS INDICATORS

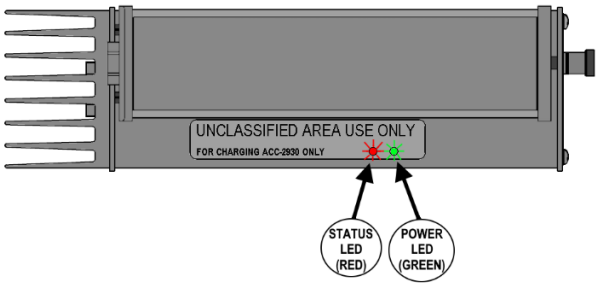


Figure 3-20. ACC-2945 Battery Charger

Power LED (Green)	OFF		Charger is not powered
	SOLID GREEN		Charger is powered
Status LED (Red)	FLASHING RED	No Battery Connected	Ready to charge
		Battery Connected	Battery charging fault indication See *Battery Troubleshooting Guide (below)*
	SOLID RED	Battery Connected	Battery is charging
	OFF	Battery Connected	Battery charging is complete

Figure 3-14. Battery Charger Status Indications

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FB2900 POGO CONNECTOR CLEANING PROCEDURE

WARNING: **Only use a suitable electrical contact cleaner that has been approved for use in the hazardous (classified) location. If a cleaner cannot be approved for the hazardous (classified) location the FB2900 must be moved to a safe area for cleaning.**

WARNING: **Do not use electrical contact cleaner to clean other parts of the FB2900 instrument.**

The window of the LCD display of the FB2900 Weighing Instrument is considered to constitute an electrostatic discharge hazard. Clean using only a wet or damp cloth.

The cable glands for external cable connections are considered to constitute an electrostatic discharge hazard. Clean using only a wet or damp cloth.

The POGO connector connects the electrical pins from the ACC-2930 Battery to the FB2900 Weighing Instrument. All pins must be kept clean and free from debris and contaminants for proper operation. Follow all appropriate PPE procedures when handling a cleaner solution including appropriate eye protection, safety gloves, and protective clothing.

1. Remove battery from the FB2900 Weighing Instrument.
2. Determine a suitable non-flammable, fast-evaporating, residue-free electrical contact cleaner approved for use in the hazardous (classified) location. Electrical contact cleaner must be suitable for POM (polyoxmethylene) otherwise known as acetal. If an electrical contact cleaner cannot be identified and approved for the hazardous (classified) location, remove the FB2900 Weighing Instrument from the hazardous (classified) location for cleaning.
    a. Example Electrical Contact Cleaners:
        i. CRC CO Contact Cleaner (Non-Flammable)
        ii. JAX Electrical Contact Cleaner Non-Flammable
3. Wet a clean cotton cloth or cotton swab with the customer-approved non-flammable, fast-evaporating, residue-free electrical contact cleaner.
4. Gently wipe the wet cloth or cotton swab over the POGO connector to remove debris and contaminants. **DO NOT** clean any other components of the FB2900 Instrument with the electrical contact cleaning solution.

ACC-2930 & ACC-2945 BATTERY POGO CONNECTOR CLEANING PROCEDURE

WARNING: **Do not clean the ACC-2945 battery charger when connected to AC line power.**

The POGO connector connects the electrical pins from the ACC-2930 Battery to the ACC-2945 Safe Area Battery Charger. All pins must be kept clean and free from debris and contaminants for proper operation. Follow all appropriate PPE procedures when handling cleaner solutions including appropriate eye protection, safety gloves, and protective clothing.

1. In the safe (unclassified) area, wet a clean cotton cloth or cotton swab with 90% isopropyl alcohol.
2. Gently wipe the wet cloth or cotton swab over the POGO connector to remove debris and contaminants.
    a. Use a soft-bristled brush if required.

BATTERY TROUBLESHOOTING GUIDE

FB2900 will not power ON with the battery installed.	• Charge battery. • Verify quick-connect spring pin is latched onto battery. *(apply light hand-pressure to the bottom of the battery to latch spring pin)* • Clean POGO connectors on FB2900 Instrument and ACC-2930 Battery.
ACC-2945 Safe Area Battery Charger's POWER LED is OFF.	• Verify AC line power. • Verify power supply output power. *(wall adapter)* • Replace ACC-2945 Charger.
ACC-2945 Safe Area Battery Charger STATUS LED is FLASHING RED with battery connected.	• Verify battery is fully seated into the charger. • Clean POGO connectors on charger and battery. • Verify quick-connect spring pin is latched onto battery. *(apply light hand-pressure to the top of the battery to latch spring pin)* • Battery charging will not be initiated with a fully charged or near-fully charged battery. Discharge battery until FB2900 Instrument indicates a low battery and retry charging. • Replace ACC-2930 Battery.

Figure 3-15. Battery Troubleshooting Guide

FIBER OPTIC CABLE TEMPERATURE RESTRICTIONS

The acceptable temperature range of the fiber optic cable is -40°F to +185°F. Do not subject the fiber optic cable to extreme temperatures.

FIBER OPTIC CABLE DISPOSAL

Optical Fiber contains fluorocarbon resin and vinyl chloride resin. When incinerated, such products may generate corrosive and poisonous hydrogen fluoride gas or hydrogen chloride gas. It is necessary to observe the laws and regulations of the country or providence where the fiber is to be incinerated or buried for disposal.

FIBER OPTIC CABLE HANDLING & ENVIRONMENTAL FACTORS

- **Do not** apply force to the fiber optic cable that exceeds the maximum allowable tension factor.
- **Do not** bend the fiber in a tight arc. Optical characteristics may deteriorate if excessive stress is applied. The minimum radius of a bend to the fiber optic cable must not
- **Do not** apply excessive force, repetitive bending, dropping, or twists to the fiber optic cable.
- **Do not** allow fiber optic cable to contact with plasticizers (phthalates, etc.) including soft PVC material such as electrical wire jackets, vinyl electrical tape, etc due to prevent deterioration.
- **Do not** bring the fiber optic cable into contact with detergents, adhesives, oils, solvents, and other chemicals.
- **Avoid** installing fiber optic cable in conduit due to bend radius, tension damage during cable pulling, and temperature effects. If fiber optic cable must be installed in conduit, minimize the conduit bends and allow for thermal expansion of the conduit. Be aware, fiber optic cable length decreases as temperature increases. A nominal 20-°F temperature increase will decrease a 100 ft cable by 0.12 inches. Aluminum conduit for example will increase in length by 0.3 inches over the same distance. The combined effect can stretch and damage the fiber optic cable. Ensure plenty of cable slack.
- **Avoid** or protect fiber optic cable in areas exposed to ultraviolet and ionizing electromagnetic radiation.
- Route fiber optic cable away from high moisture areas.

4.0 OPERATION

4.1 OPERATING MODES

The instrument can operate in the following modes:

WEIGHING MODE

The weighing mode will display the weight on the scale and accompanying indicators. The instrument may also be configured to operate with a Scale App enabled.

SCALE APP MODES

Scale apps provide specialized functionality. Visual Checkweighing is available by default. When connected to an FB7290 Safe Area Remote Communications Terminal and ACC 165 Relay Control Box, additional scale apps can be accessed including Batch, AutoBatch, AutoRepeat, Freerunning, and Checkweighing. Enable a Scale App by navigating to MENU : SCALE APPS.

CONFIGURATION MODE

The configuration mode allows users and technicians to configure and the instrument and Scale Apps. Enter Configuration Mode by pressing the MENU button. Certain menus or menu items are only accessible with a password. The CUSTOMER PASSWORD allows access to restricted CONFIGURATION menu items and the SERVICE PASSWORD allows access into the SERVICE menu.

When the internal calibration switch is enabled, the FB2900 will prevent access to the SERVICE menu until the Internal Calibration Switch has been pressed.

4.2 WEIGHING INDICATORS

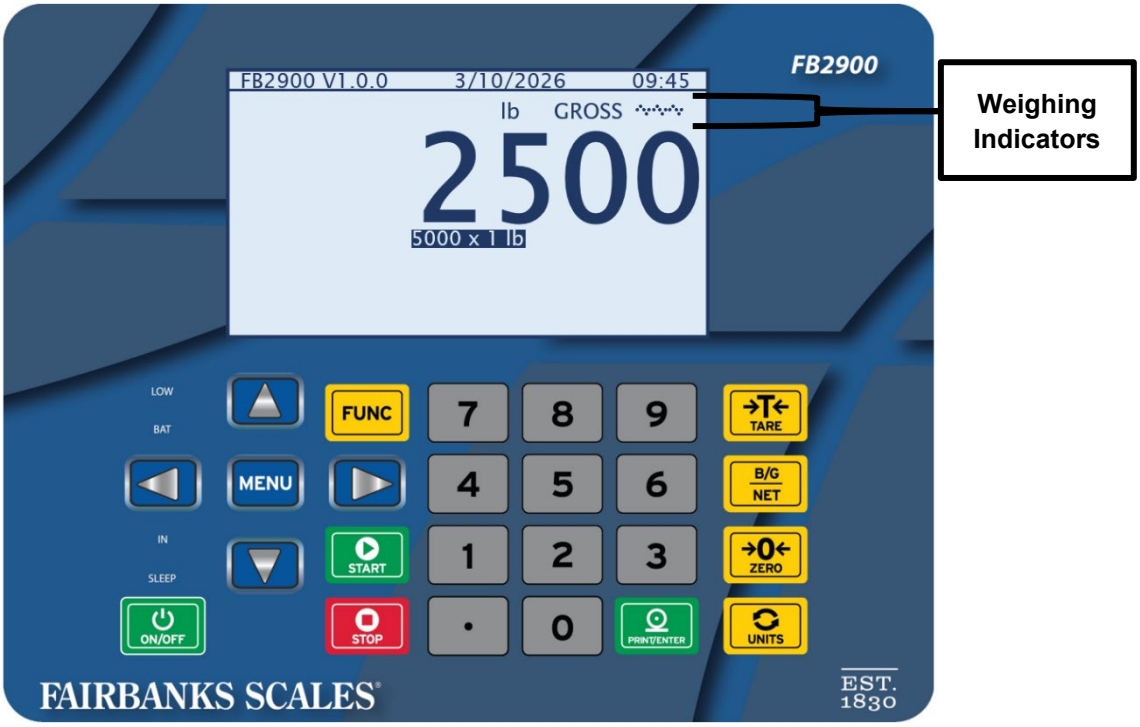

Figure 4-1. Example Weighscreen

Weighing Indicators:

<0>	Indicates the displayed reading is within +/- 0.25 division of true zero.
⋰⋱⋰⋱⋰⋱	Indicates the scale is in motion.
Unit of Measure	Indicates the unit of measure. Available units include oz, lb, ton, g, kg, and tonne.
GROSS	Indicates the instrument is displaying the GROSS weight.
NET	Indicates the instrument is displaying the NET weight.

Figure 4-2. Weighing Indicators

MENU NAVIGATION

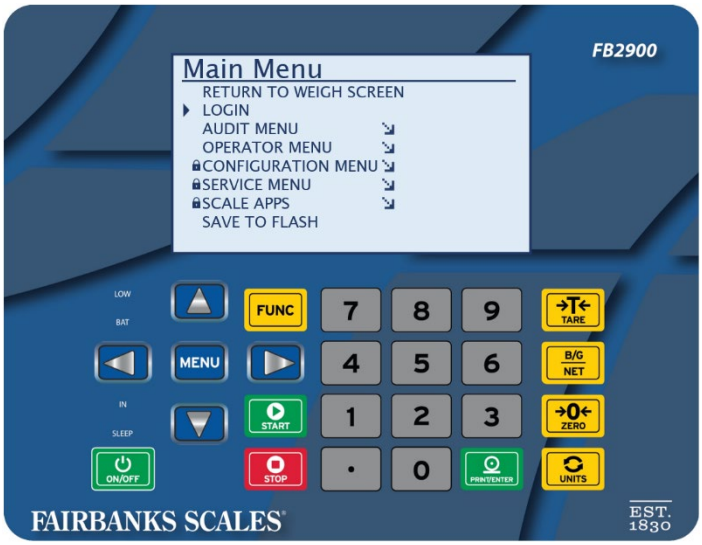

Figure 4-2. Menu Screen

	Press to enter Configuration Mode. Secondary function as a back/return button to the previous menu.
	Press to scroll down once.
	Press to scroll up once.
	Enter selection.

Figure 4-4. Menu Navigation Controls

SAVING CHANGES

All menu changes including calibration must be saved before exiting the menu. Before exiting, select SAVE TO FLASH to save the changes. If changes are not saved and the operator exits the menu, a notification prompt will display to ask to save the changes.

4.3 WEIGHING MODE OPERATION

GENERAL OPERATION

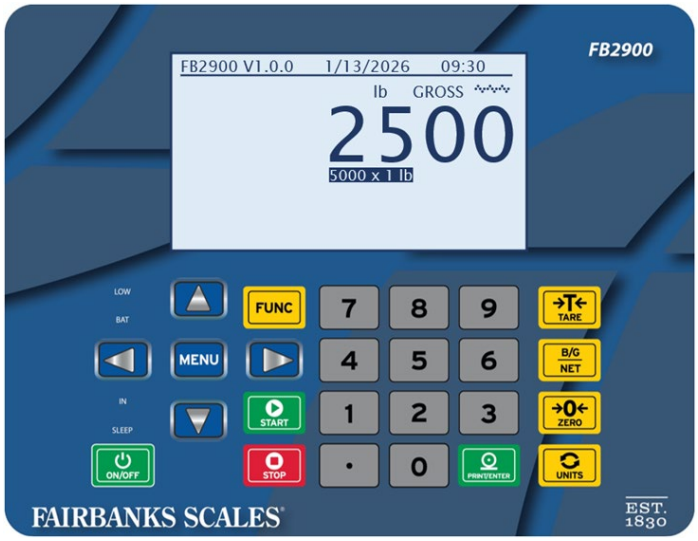

Figure 4-3. Weigh Screen in GTN Operating Mode

B/G NET	Press to change the displayed weight between gross and net weight.
UNITS	Press to switch the display between the primary and secondary units of measure.
TARE	Press to set an automatic tare based on the weight of the scale.
ZERO	Press the ZERO button to zero the scale
PRINT/ENTER	Press the PRINT/ENTER button to process a transaction, print a ticket (if configured), and confirm entries in the menu.
MENU	Press to enter the menu. When navigating inside the menu, also functions as a RETURN/BACK button.
	Press to scroll up or down in the menu.
	Press to select a stored tare. Select from the displayed list.

Figure 4-4. Weighing Mode Controls

TOGGLE UNITS

1. Press the UNITS button.

ZERO SCALE

1. Remove weight from the scale platform and confirm the motion indicator has cleared.
2. Press the ZERO button.
    a. The display will change to GROSS Mode if instrument is operating in NET Mode.
    b. The display will show GROSS indicator above the displayed weight.
    c. The display will show the Center-of-Zero indicator. (<0>)
    d. The display will show 0 weight.

TOGGLE GROSS/NET MODE

Switch between Net and Gross modes when a tare has been set.

1. Press the B/G NET button.

TARE WEIGHTS

A tare weight is defined by the operator. If enabled, there are three methods to set a tare weight:

AUTO TARE

1. Place the container, vessel, or other item which comprise the tare weight onto the scale.
2. Press the TARE button.
    a. The display will show the NET Mode indicator.
    b. The display will change the show the net weight.
    c. The tare weight will remain in memory until the ZERO button is pressed, a new tare weight has been set, or the menu button has been pressed.
3. Place the object to be weighed on the scale.
4. The display will show the net weight of the object.
5. Press B/G NET button to change to GROSS Mode if desired.

KEYPAD TARE

A user may manually set the tare weight using the keypad.

NOTE: If the value of the entered keypad tare does not correspond with the configured divisions size, the tare value is rounded to the nearest division.

1. Enter the tare weight using the keypad.
2. Press the ENTER button.

RECALL STORED TARE

Up to 31 tare weights may be stored to memory and recalled at a later time.

1. Press LEFT ARROW button.
2. Select stored tare from the available list and press ENTER.

STORE A NEW TARE (AUTO TARE METHOD)

1. Navigate to MENU : OPERATOR MENU : NEW TARE
2. Set tare ID from available list of stored tares.
3. Set tare DESCRIPTION using the keypad or onscreen keyboard.
4. Set tare TYPE to PLATTER.
5. Press TARE button to store the tare.
6. Select OK when prompted.

STORE A NEW TARE (KEYPAD ENTRY METHOD)

1. Navigate to MENU : OPERATOR MENU : NEW TARE
2. Set a tare ID.
3. Set tare DESCRIPTION using the keypad or onscreen keyboard.
4. Set tare TYPE to KEYBOARD to store the tare based on a keypad entry.
5. Set weight value.
6. Set units to the appropriate unit of measure.
7. Press TARE button to confirm the setting.
8. Select OK if prompted.

DELETE A STORED TARE

1. Navigate to MENU : OPERATOR MENU : NEW TARE
2. Selected tare ID to be deleted.
3. Press B/G NET button.

VIEW ALL STORED TARES

1. Navigate to MENU : OPERATOR MENU : TARE REPORT

CLEAR TARE

1. Press the ZERO button.

GROSS WEIGHING

1. With the scale platform empty, press the ZERO button.
    a. The display will indicate 0 weight.
    b. The display will indicate Center-of-Zero. (<0>)
2. Place the object to be weighed on the scale platform.
3. The gross weight will be displayed
    a. The display will indicate GROSS Mode.

NET WEIGHING

1. With the scale platform empty, press the ZERO button.
    a. The display will indicate 0 weight.
    b. The display will indicate Center-of-Zero. (<0>)
2. Place the container, vessel, or other item which comprise the tare weight onto the scale.
3. Press the TARE button.
    a. The display will change from GROSS Mode to NET Mode.
    b. The display will indicate NET Mode.
    c. The display will the show the net weight.

d. The tare weight will remain in memory until the ZERO button is pressed, a new tare weight has been set, or the menu button has been pressed.

4. Place the object to be weighed on the scale.
5. The display will show the net weight of the object.
6. Press B/G NET button to change to GROSS Mode if desired.

PRINT TICKET

Optional: Requires FB7290 Safe Area Remote Communication Terminal and printer

1. Complete weighing tasks necessary to prepare instrument to print ticket.
2. Press the PRINT button.

4.4 SCALE APPS OPERATION

LOCAL AND REMOTE SCALE APPS

The FB2900 includes Scale Apps for special functionality. **LOCAL** scale apps can be operated from the FB2900 without additional accessories. **REMOTE** Scale Apps require a fiber optic connection to the optional FB7290 Safe-Area Remote Communication Terminal and ACC 165 Relay Control Box.

LOCAL SCALE APPS

Visual Checkweighing	Visually determine if the weight on the scale is below (UNDER), within (ACCEPT, below, or within a target range.

Figure 4-5. Local Scale Apps

REMOTE SCALE APPS

External device signaling is provided by the optional ACC 165 Relay Control Box. Each setpoint target is tied to the corresponding relay number.

Batch	Fill up to (8) ingredients to individual target weights by manually commanding each ingredient filling step in whatever order is preferred.
AutoBatch	Fill up to (8) ingredients to individual target weights in a single chronological sequence.
AutoRepeat	Fill up to (8) ingredients to individual target weights in a single chronological sequence, and continue repeating the filling sequence until stopped by the operator.
Freerunning	Continuously monitor up to (8) setpoints targets based on the scale weight.
Checkweighing	Compare scale weight to (3) configured target weight ranges. Scale weight above the target range will trigger the OVER relay, scale weight below the target range will engage the UNDER relay, and scale weight within the target range will engage the ACCEPT relay.

Figure 4-6. Remote Scale Apps

BATCH APP

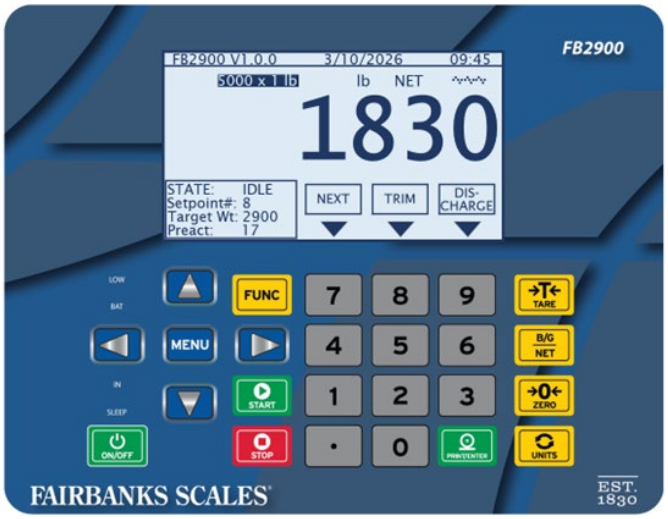

Figure 4-7. Weigh Screen in Batch Setpoint Mode

General		
START	Start filling the selected ingredient.	
STOP	Stop filling ingredient.	
State: **IDLE**		
NEXT INGREDIENT	FUNC + NEXT 7	Select next available ingredient. *(press FUNC, then press 7)*
TRIM	FUNC + TRIM 8	Manually discharge the ingredient. *(press FUNC, then press 8)*
DISCHARGE	FUNC + DIS-CHARGE 9	Discharge the batch. *(press FUNC, then press 9)*
State: **RUNNING**		
PAUSE	FUNC + PAUSE 7	Pause the Batch *(press FUNC, then press 7)*
State: **PAUSED**		
RESUME FILLING	FUNC + RESUME 7	Resume filling the ingredient. *(press FUNC, then press 7)*
STOP FILLING	FUNC + STOP 8	Stop ingredient filling. *(press FUNC, then press 8)*

Figure 4-8. Batch App Controls

BATCH APP OPERATION

NOTE: Recipe CREATE/UPDATE/LOAD/DELETE functions must be commanded from the FB7290 Safe-Area Remote Communication Terminal only.

Fill up to (8) ingredients to a target weight, one by one in whichever order is preferred.

Batch mode requires a connected FB7290 Safe Area Remote Communication Terminal and ACC165 Relay Control Box. Batch mode may also be operated from the FB7290 Safe-Area Remote Communication Terminal. See the FB7290 manual for remote operation.

SELECT INGREDIENT

1. From the IDLE state, press FUNC + 7 (NEXT) buttons. Continue sequence until the intended setpoint number is indicated on the display.

START FILLING INGREDIENT

1. From the IDLE state, press the START button.

STOP FILLING INGREDIENT

1. From the RUNNING or PAUSED state, press the STOP button.

PAUSE FILLING INGREDIENT

1. From the RUNNING state, Press FUNC + 7 (PAUSE) buttons.
2. Select RESUME or STOP as desired.

TRIM (MOMENTARILY ACTIVATE INGREDIENT OUTPUT FOR FILLING)

1. From the IDLE state, press FUNC + 8 (TRIM) buttons. Hold button 8 to keep output engaged as desired.

DISCHARGE CONTENTS

1. From the IDLE state, press FUNC + 9 (DISCHARGE) buttons.

EDIT SETPOINT AND PREACT TARGETS

1. Navigate to MENU : SCALE APPS *(password required)*
2. Select SETPOINT TARGETS.
3. Edit setpoint and preact targets as desired.

BATCH APP CONFIGURATION

Navigate to SCALE APPS : MODE : BATCH.

Name	Sub-Menu/Item	Description
LOCAL		Set to **REMOTE**.
MODE		Set to **BATCH**.
INGREDIENTS		Set number of ingredients. (1-8)
SETPOINT TARGETS		Set the TARGET WEIGHT(S), and PREACT WEIGHT(s) if enabled.
BATCH TYPE		GROSS: Setpoint target is compared against the GROSS WEIGHT on the scale.

		NET: A tare is taken at the start of each ingredient filling setp. The setpoint target is compared to the NET WEIGHT of the scale.
DELAY		Delay timer after each ingredient filling step to allow for ingredient settling. (seconds)
PREACT		Enables use of PREACT weights to de-energize the output by an offset amount to reach the target weight. Example: Assume the weight target is 1,000 lbs. and an additional 100 lbs falls onto the scale after the equipment is signaled to stop. To reach 1,000 lbs. set the TARGET WEIGHT to 1,000 lbs. and PREACT weight to 100 lbs.
DRIBBLE	***Summary***	Dribble binds pairs of relay outputs together for two-speed batching of an ingredient. (Fast Feed/Slow Feed) Dribble binds ingredient pairs 1-2, 3-4, 5-6, 7-8. The first relay of the pair is the fast feed. Set the first TARGET WEIGHT of the pair to the total target weight. Set the second TARGET WEIGHT of the pair to the offset weight for the slow fill. *Example: Assume the weight target is 1,000 lbs. and you want to Slow Fill after 900 lbs. Set the first TARGET WEIGHT to 1,000 lbs. and set the second TARGET WEIGHT to 100 lbs.*
	SOLO	Set to SOLO to only enable the Fast Feed at the beginning of the batch. The Slow Feed will not activate until the Fast Feed TARGET WEIGHT has been achieved. *Example: Assume the weight target is 1,000 lbs. and the Slow Feed is needed to fill the final 100 lbs. The Fast Feed will initiate and fill to 900 lbs. Once the Fast Feed TARGET WEIGHT has been achieved the Slow Feed will start.*
	TANDEM	Set to TANDEM to enable the Fast Feed and Slow Feed to both initiate at the beginning of the batch. The Fast Feed will cease once the Fast Feed TARGET WEIGHT has been achieved. *Example: Assume the weight target is 1,000 lbs. and the slow feed is to fill the final 100 lbs. Both outputs will engage at the start of the batch. The Fast Feed will stop once the Fast Feed TARGET WEIGHT has been achieved.*
DISCHARGE SETTINGS	***Summary***	At the completion of a batch, an output may be needed to initiate a discharge valve. In BATCH mode the discharge function may be commanded by the user at any point in the batching process. The Discharge Output will be tied to the first available of relays #7 or #8. Discharge feature limits the maximum number of ingredients to (7).
	TIMER	Set the Discharge Output to activate for a configured amount of time. (seconds)
	RETURN TO WEIGHT	Set the Discharge Output to activate until the GROSS WEIGHT of the scale has dropped below the configured weight.
INHIBITS	***Summary***	Inhibits prevent the start of a batching step if the weight is not within the specified target.
	INHIBIT LOW	Prevents batch start if the GROSS WEIGHT is below the configured weight.
	INHIBIT HIGH	Prevents batch start if the GROSS WEIGHT is above the configured weight.
	INHIBIT LOW & HIGH	Prevents batch start if the GROSS WEIGHT is below the INHIBIT LOW weight or above INHIBIT HIGH weight.
	RESTART THRESHOLD WEIGHT	Prevents a new batching cycle from restarting until the scale weight falls below the configured value.

INTERLOCKS	An interlock is a safety feature used to STOP a batch when a normally closed switch has opened during a filling state. Commonly used with normally closed limit switches to prevent an operator from accessing a dangerous area during batching. Up to four interlocks may be wired and named. When triggered, the interlock name will be displayed.
ZERO BAND	An output that activates when the weight is below the Zero Band target weight. When enabled the Zero Band will always reference TARGET WEIGHT and Relay #8. Using the Zero Band feature reduces the maximum number of ingredients to (7). When used in conjunction with Discharge the maximum number of ingredients is (6).
AUTO PRINT	Automatically prints the weight of each ingredient fill.
RELAY FILTER	Terminates a relay when hysteresis quickly activates and deactivates during settling after a batching step.
TARGET WEIGHTS PROTECTED	The TARGET WEIGHTS may be quickly edited by a user from the Batch App screen. Enable this function to require the customer password to edit TARGET WEIGHTS.
PREDICTIVE FEATURE	Terminates filling if the next scale update is predicted to overrun the setpoint.

Figure 4-9. Batch App Configuration Menu

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AUTOBATCH APP

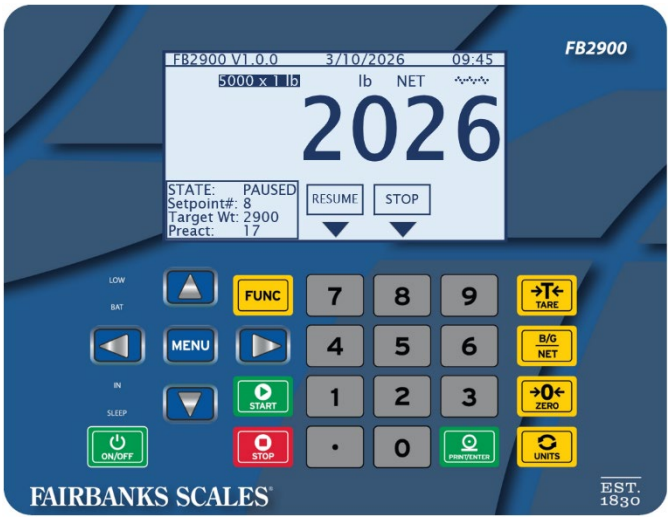

Figure 4-10. Weigh Screen in AutoBatch Setpoint Mode

General		
START	Start the batch filling routine.	
STOP	Stop the batch filling routine.	
State: **IDLE**		
DISCHARGE	FUNC + DIS-CHARGE 9	Discharge the batch. *(press FUNC, then press 9)*
State: **RUNNING**		
PAUSE	FUNC + PAUSE 7	Pause the Batch *(press FUNC, then press 7)*
State: **PAUSED**		
RESUME BATCH ROUTINE	FUNC + RESUME 7	Resume the filling routine. *(press FUNC, then press 7)*
STOP BATCH ROUTINE	FUNC + STOP 8	Stop the filling routine. *(press FUNC, then press 8)*

Figure 4-11. AutoBatch App Controls

AUTOBATCH APP OPERATION

NOTE: Recipe CREATE/UPDATE/LOAD/DELETE functions must be commanded from the FB7290 Safe-Area Remote Communication Terminal only.

Fill up to (8) ingredients, each to a target weight in sequential order. When the sequence has finished the instrument will stop and wait for a user to START the next filling sequence.

AutoBatch mode requires a connected FB7290 Safe Area Remote Communication Terminal and ACC165 Relay Control Box. AutoBatch mode may also be operated from the FB7290 Safe Area Remote Communication Terminal. See the FB7290 Safe Area Remote Communication Terminal manual for remote operation.

START FILLING ROUTINE

1. From the IDLE state, press the START button.

STOP FILLING ROUTINE

1. From the RUNNING or PAUSED state, press the STOP button.

PAUSE FILLING ROUTINE

1. From the RUNNING state, Press FUNC + 7 (PAUSE) buttons.
2. Select RESUME or STOP as desired.

DISCHARGE CONTENTS

1. From the IDLE state, press FUNC + 9 (DISCHARGE) buttons.

EDIT SETPOINT AND PREACT TARGETS

1. Navigate to MENU : SCALE APPS *(password required)*
2. Select SETPOINT TARGETS
3. Edit setpoint and preact targets as desired.

AUTOBATCH APP CONFIGURATION

Navigate to SCALE APPS : MODE : AUTOBATCH.

Menu Item	Sub-Menu Item	Description
LOCAL		**REMOTE**
MODE		**AUTOBATCH**
INGREDIENTS		Set the number of active ingredients.
SETPOINT TARGETS		Set TARGET WEIGHT(S) and PREACT WEIGHT(S) if enabled.
BATCH TYPE		GROSS: Setpoint target is compared to the GROSS WEIGHT of the scale. NET: A tare is taken at the start of each ingredient batching step. The setpoint target is compared to the NET WEIGHT of the scale.
DELAY		Delay timer after each ingredient filling step to allow for ingredient settling. (seconds)
PREACT		Enables use of PREACT weights to de-energize the output by an offset amount to the reach the target weight.

		Example: Assume the weight target is 1,000 lbs. and an additional 100 lbs. falls onto the scale after the equipment is signaled to stop. To reach 1,000 lbs. set the TARGET WEIGHT to 1,000 lbs. and set the PREACT WEIGHT to 100 lbs.
DRIBBLE	***Summary***	Dribble binds pairs of relay outputs together for two-speed batching of an ingredient. (Fast Feed/Slow Feed) Dribble binds ingredient pairs 1-2, 3-4, 5-6, 7-8. The first relay of the pair is the fast feed. Set the first TARGET WEIGHT of the pair to the total target weight. Set the second TARGET WEIGHT of the pair to the offset weight for the slow fill. Example: Assume the weight target is 1,000 lbs. and you want to Slow Fill after 900 lbs. Set the first TARGET WEIGHT to 1,000 lbs. and set the second TARGET WEIGHT to 100 lbs.
	SOLO	Set to SOLO to only enable the Fast Feed at the beginning of the batch. The Slow Feed will not activate until the Fast Feed TARGET WEIGHT has been achieved. Example: Assume the weight target is 1,000 lbs. and the Slow Feed is needed to fill the final 100 lbs. The Fast Feed will initiate and fill to 900 lbs. Once the Fast Feed TARGET WEIGHT has been achieved the Slow Feed will start.
	TANDEM	Set to TANDEM to enable the Fast Feed and Slow Feed to both initiate at the beginning of the batch. The Fast Feed will cease once the Fast Feed TARGET WEIGHT has been achieved. Example: Assume the weight target is 1,000 lbs. and the slow feed is to fill the final 100 lbs. Both outputs will engage at the start of the batch. The Fast Feed will stop once the Fast Feed TARGET WEIGHT has been achieved.
DISCHARGE SETTINGS	***Summary***	At the completion of a batch, an output may be needed to initiate a discharge valve. In BATCH mode the discharge function may be commanded by the user at any point in the batching process. The Discharge Output will be tied to the first available of relays #7 or #8. Using the discharge feature limits the maximum number of ingredients to (7).
	TIMER	Set the Discharge Output to activate for a configured amount of time. (seconds)
	RETURN TO WEIGHT	Set the Discharge Output to activate until the GROSS WEIGHT of the scale has dropped below the configured weight.
INHIBITS	***Summary***	Inhibits prevent the start of a batching step if the weight is not within the specified target.
	INHIBIT LOW	Prevents batch start if the GROSS WEIGHT is below the configured weight.
	INHIBIT HIGH	Prevents batch start if the GROSS WEIGHT is above the configured weight.
	INHIBIT LOW & HIGH	Prevents batch start if the GROSS WEIGHT is below the INHIBIT LOW weight or above INHIBIT HIGH weight.
	RESTART THRESHOLD WEIGHT	Prevents a new batching cycle from restarting until the scale weight falls below the configured value.
INTERLOCKS		An interlock is a safety feature used to STOP a batch when a normally closed switch has opened during a filling state. Commonly used with normally closed limit switches to prevent an operator from accessing a dangerous area during batching. Up to four interlocks may be wired and named. When triggered, the interlock name will be displayed on the Batch App screen.
ZERO BAND		An output that activates when the weight is below the Zero Band target weight. When enabled the Zero Band will always reference TARGET WEIGHT and Relay #8.

	Using the Zero Band feature reduces the maximum number of ingredients to (7). When used in conjunction with Discharge the maximum number of ingredients is (6).
AUTO PRINT	Automatically prints the weight of each ingredient fill.
RELAY FILTER	Terminates a relay when hysteresis quickly activates and deactivates during settling after a batching step.
TARGET WEIGHTS PROTECTED	The TARGET WEIGHTS may be quickly edited by a user from the Batch App screen. Enable this function to require the customer password to edit TARGET WEIGHTS.
PREDICTIVE FEATURE	Terminates ingredient filling if the next scale update is predicted to overrun the setpoint.

Figure 4-12. AutoBatch App Configuration Menu

AUTOREPEAT APP

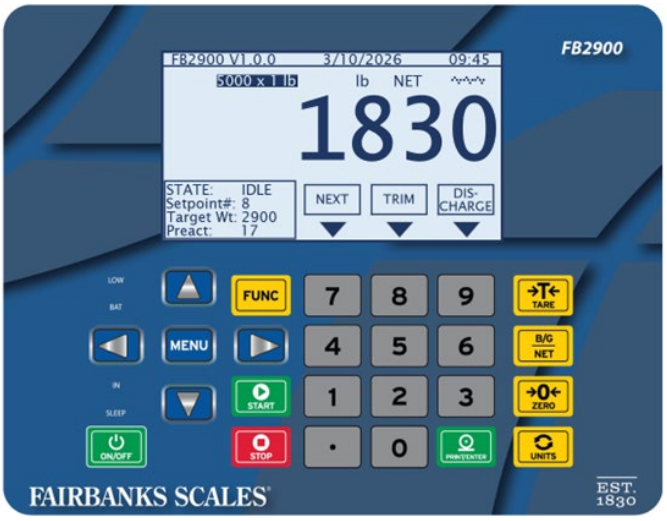

Figure 4-13. Weigh Screen in AutoRepeat Setpoint Mode

General		
START	Start the batch filling routine.	
STOP	Stop the batch filling routine.	
State: **IDLE**		
DISCHARGE	FUNC + DIS-CHARGE 9	Discharge the batch. *(press FUNC, then press 9)*
State: **RUNNING**		
PAUSE	FUNC + PAUSE 7	Pause the Batch *(press FUNC, then press 7)*
State: **PAUSED**		
RESUME BATCH ROUTINE	FUNC + RESUME 7	Resume the filling routine. *(press FUNC, then press 7)*

STOP BATCH ROUTINE	FUNC + STOP 8	Stop the filling routine. *(press FUNC, then press 8)*

Figure 4-14. AutoRepeat App Controls

AUTOREPEAT APP OPERATION

NOTE: Recipe CREATE/UPDATE/LOAD/DELETE functions must be commanded from the FB7290 Safe-Area Remote Communication Terminal only.

Fill up to (8) ingredients, each to a target weight in sequential order and automatically restart the next batch when complete.

AutoBatch mode requires a connected FB7290 Safe Area Remote Communication Terminal and ACC165 Relay Control Box. AutoBatch mode may also be operated from the FB7290 Safe Area Remote Communication Terminal. See the FB7290 Safe Area Remote Communication Terminal manual for remote operation.

START FILLING ROUTINE

1. From the IDLE state, press the START button.

STOP FILLING ROUTINE

1. From the RUNNING or PAUSED state, press the STOP button.

PAUSE FILLING ROUTINE

1. From the RUNNING state, Press FUNC + 7 (PAUSE) buttons.
2. Select RESUME or STOP as desired.

DISCHARGE CONTENTS

1. From the IDLE state, press FUNC + 9 (DISCHARGE) buttons.

EDIT SETPOINT AND PREACT TARGETS

1. Navigate to MENU : SCALE APPS *(password required)*
2. Select SETPOINT TARGETS
3. Edit setpoint and preact targets as desired.

AUTOREPEAT APP CONFIGURATION

Navigate to SCALE APPS : MODE : AUTOREPEAT.

Menu Item	Sub-Menu Item	Description
LOCAL		**REMOTE**
MODE		**BATCH**
INGREDIENTS		Set the number of active ingredients.
SETPOINT TARGETS		Set TARGET WEIGHT(S) and PREACT WEIGHT(S) if enabled.
BATCH TYPE		GROSS: Setpoint target is compared to the GROSS WEIGHT of the scale. NET: A tare is taken at the start of each ingredient batching step. The setpoint target is compared to the NET WEIGHT of the scale.
DELAY		Delay timer after each ingredient filling step to allow for ingredient settling. (seconds)

INTERBATCH DELAY		Delay timer after completion of a batching sequence. (seconds)
PREACT		Enables use of PREACT weights to de-energize the output by an offset amount to the reach the target weight. Example: Assume the weight target is 1,000 lbs. and an additional 100 lbs. falls onto the scale after the equipment is signaled to stop. To reach 1,000 lbs. set the TARGET WEIGHT to 1,000 lbs. and set the PREACT WEIGHT to 100 lbs.
DRIBBLE	***Summary***	Dribble binds pairs of relay outputs together for two-speed batching of an ingredient. (Fast Feed/Slow Feed) Dribble binds ingredient pairs 1-2, 3-4, 5-6, 7-8. The first relay of the pair is the fast feed. Set the first TARGET WEIGHT of the pair to the total target weight. Set the second TARGET WEIGHT of the pair to the offset weight for the slow fill. Example: Assume the weight target is 1,000 lbs. and you want to Slow Fill after 900 lbs. Set the first TARGET WEIGHT to 1,000 lbs. and set the second TARGET WEIGHT to 100 lbs.
	SOLO	Set to SOLO to only enable the Fast Feed at the beginning of the batch. The Slow Feed will not activate until the Fast Feed TARGET WEIGHT has been achieved. Example: Assume the weight target is 1,000 lbs. and the Slow Feed is needed to fill the final 100 lbs. The Fast Feed will initiate and fill to 900 lbs. Once the Fast Feed TARGET WEIGHT has been achieved the Slow Feed will start.
	TANDEM	Set to TANDEM to enable the Fast Feed and Slow Feed to both initiate at the beginning of the batch. The Fast Feed will cease once the Fast Feed TARGET WEIGHT has been achieved. Example: Assume the weight target is 1,000 lbs. and the slow feed is to fill the final 100 lbs. Both outputs will engage at the start of the batch. The Fast Feed will stop once the Fast Feed TARGET WEIGHT has been achieved.
DISCHARGE SETTINGS	***Summary***	At the completion of a batch, an output may be needed to initiate a discharge valve. In BATCH mode the discharge function may be commanded by the user at any point in the batching process. The Discharge Output will be tied to the first available of relays #7 or #8. Using the discharge feature limits the maximum number of ingredients to (7).
	TIMER	Set the Discharge Output to activate for a configured amount of time. (seconds)
	RETURN TO WEIGHT	Set the Discharge Output to activate until the GROSS WEIGHT of the scale has dropped below the configured weight.
INHIBITS	***Summary***	Inhibits prevent the start of a batching step if the weight is not within the specified target.
	INHIBIT LOW	Prevents batch start if the GROSS WEIGHT is below the configured weight.
	INHIBIT HIGH	Prevents batch start if the GROSS WEIGHT is above the configured weight.
	INHIBIT LOW & HIGH	Prevents batch start if the GROSS WEIGHT is below the INHIBIT LOW weight or above INHIBIT HIGH weight.
	RESTART THRESHOLD WEIGHT	Prevents a new batching cycle from restarting until the scale weight falls below the configured value.
INTERLOCKS		An interlock is a safety feature used to STOP a batch when a normally closed switch has opened during a filling state. Commonly used with normally closed limit switches to prevent an operator from accessing a dangerous area during batching. Up to four interlocks may be wired and named. When triggered, the interlock name will be displayed on the Batch App screen.

ZERO BAND	An output that activates when the weight is below the Zero Band target weight. When enabled the Zero Band will always reference TARGET WEIGHT and Relay #8. Using the Zero Band feature reduces the maximum number of ingredients to (7). When used in conjunction with Discharge the maximum number of ingredients is (6).
AUTO PRINT	Automatically prints the weight of each ingredient fill.
RELAY FILTER	Terminates a relay when hysteresis quickly activates and deactivates during settling after a batching step.
TARGET WEIGHTS PROTECTED	The TARGET WEIGHTS may be quickly edited by a user from the Batch App screen. Enable this function to require the customer password to edit TARGET WEIGHTS.
PREDICTIVE FEATURE	Terminates ingredient filling if the next scale update is predicted to overrun the setpoint.

Figure 4-15. AutoRepeat App Configuration Menu

CHECKWEIGHING APP

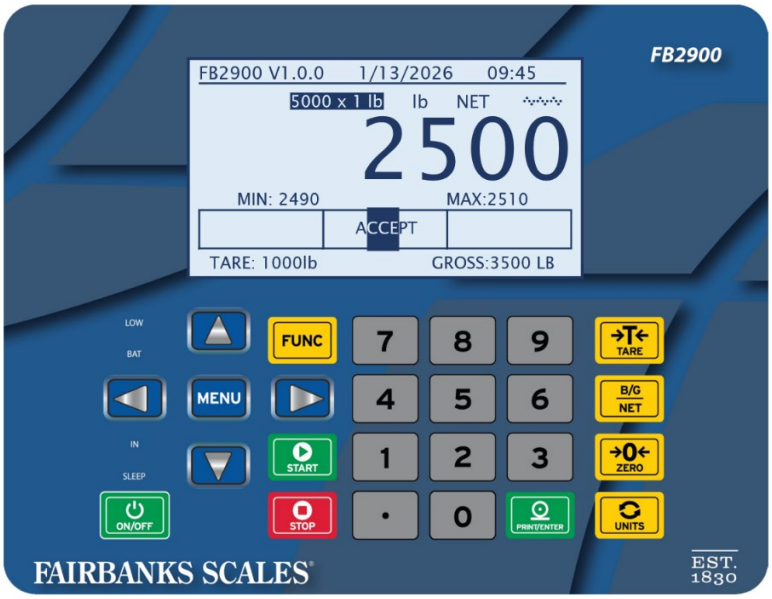

Figure 4-16. Weigh Screen in Checkweighing Mode

CHECKWEIGHING APP OPERATION

ENABLE OUTPUTS

Requires FB7290 Safe Area Remote Communication Terminal and ACC 165 Relay Control Box.

1. Press the START button.

DISABLE OUTPUTS

Requires FB7290 Safe Area Remote Communication Terminal and ACC 165 Relay Control Box.

1. Press the STOP button.

CHECKWEIGHING APP CONFIGURATION

Navigate to SCALE APPS : MODE : CHECKWEIGHING

Menu Item	Description
ENABLE	Set to ON to enable checkweighing app.
TYPE	LOCAL: Visual checkweighing only. No additional accessories required. REMOTE: Visual checkweighing to signal optional relay outputs. Remote only available when connected to FB7290 Safe Area Remote Communication Terminal and ACC 165 Relay Control Box.
RANGE HIGH	Set the OVER range band for graphical mode 2.
OVER WEIGHT	Set the threshold weight to indicate OVER WEIGHT. (max)
ACCEPT WEIGHT	Set the threshold weight to indicate ACCEPT WEIGHT. (min)
RANGE LOW	Set the LOW range band for graphical mode 2.

GRAPHICAL MODE	Mode 1 Boxed Indication of BELOW/ACCEPT/OVER weight. Mode 2 Slider bar indication of net weight in the BELOW/ACCEPT/OVER ranges.

Figure 4-17. Checkweighing App Configuration Menu

FREERUNNING APP

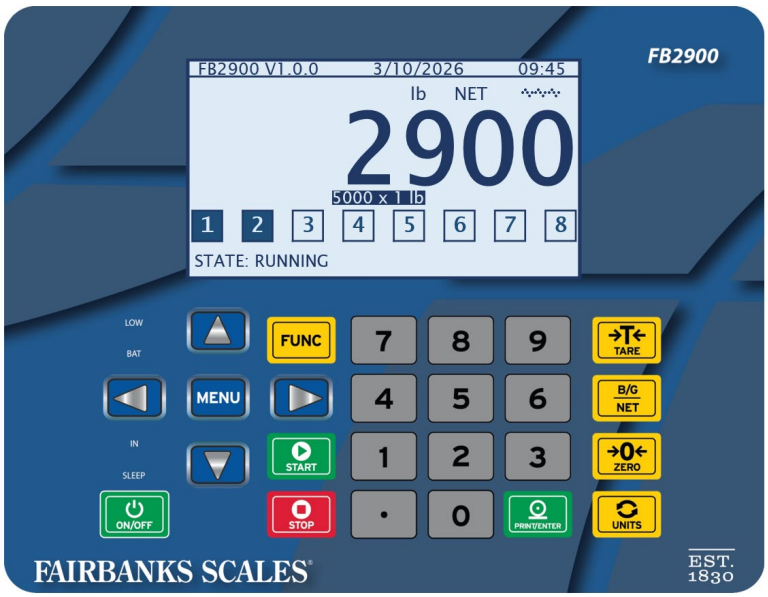

Figure 4-18. Weigh Screen in Freerunning Mode

FREERUNNING APP OPERATION

ENABLE FREERUNNING OUTPUTS

1. Press the START button.

DISABLE FREERUNNING OUTPUTS

1. Press the STOP button.

FREERUNNING APP CONFIGURATION

Navigate to SCALE APPS : MODE : FREERUNNING

Menu Item	Sub-Menu Item	Description
INGREDIENTS		The number of setpoints to be continuously monitored.
SETPOINT TARGETS		Set target weights for each setpoint.
TARGET WEIGHT PROTECTED		Set to require password when editing target weights from the weighscreen.
Relay Filter		
Run Options	**RUN ON STARTUP**	Set to yes to run freerunning app after returning from a menu or reboot.
	RUN MODE	NO CHANGE ON CANCEL: Set to prevent operator from disabling outputs using the STOP button.

Figure 4-19. Freerunning App Configuration Menu

5.0 CONFIGURATION

5.1 PASSWORD PROTECTION

The FB2900 restricts access to certain menus with either a customer password or a service password. The service password will provide access to all menus.

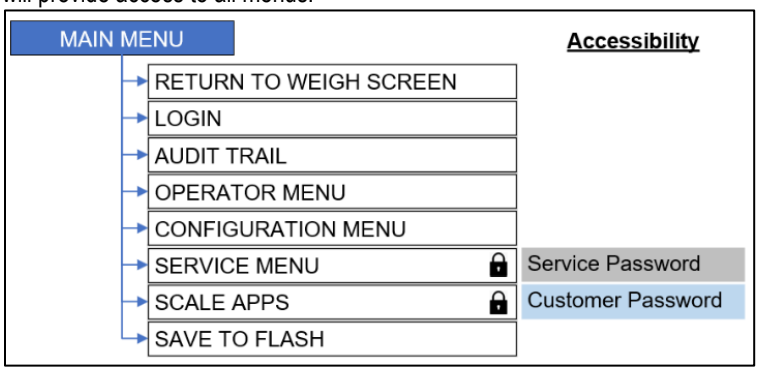

Figure 5-1. Operation Menu Password Accessibility

ACCESSING THE MENU FROM THE FRONT PANEL

Access the menu by pressing the MENU button on the front panel. While in the menu, the MENU button functions as a back/return button to navigate to the previous menu. Exit the setup menu by reaching the top menu level and pressing the MENU button once.

INTERNAL CALIBRATION SWITCH

The FB2900 provides a mechanical means of preventing calibration from inside the instrument. See Section 3 of this manual for instructions to enable and use the internal calibration switch.

5.2 AUDIT TRAIL MENU

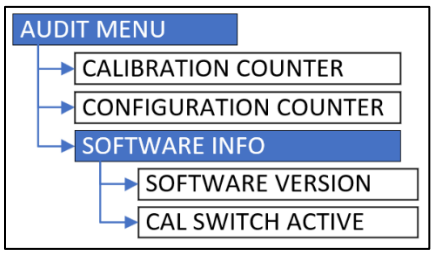

Figure 5-2. Audit Trail Menu Hierarchy

Menu Item	Description
CALIBRATION COUNTER	Displays the number of times the instrument has been calibrated.
CONFIGURATION COUNTER	Displays the number of times non-calibration related service menu fields have been changed.
SOFTWARE VERSION	Displays the version number of the installed software.
CAL SWITCH ACTIVE	Displays if the internal calibration switch has been enabled. Service menu access is restricted when enabled. Press the internal calibration switch to gain access.

Figure 5-3. Audit Trail Menu

5.3 OPERATOR MENU

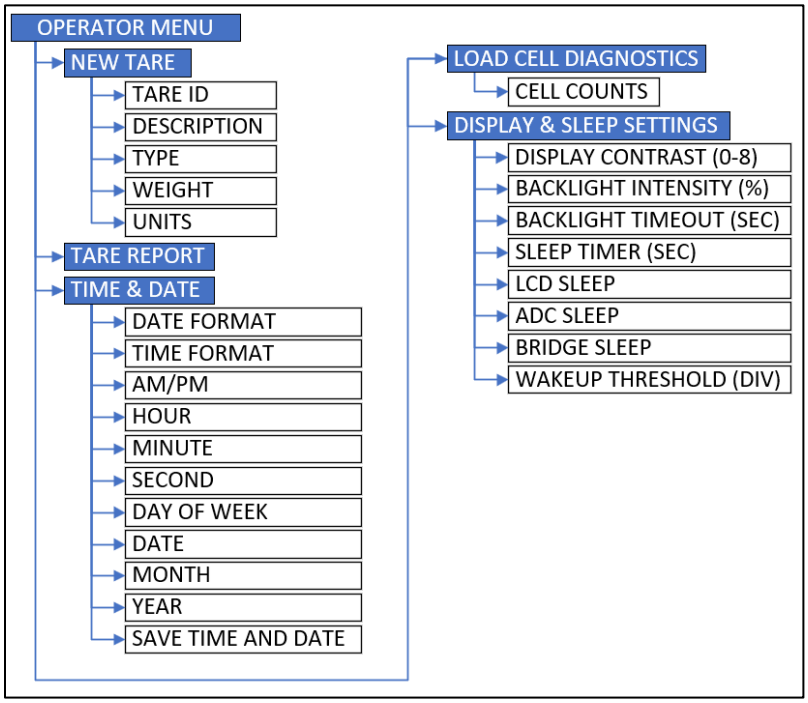

Figure 5-4. Operator Menu Hierarchy

Name	Sub-Menu	Description
NEW STORED TARE	**TARE ID**	Select a tare ID to save or edit.
	DESC	Set the tare description.
	TYPE	Set the type of tare. **SCALE WEIGHT** – Select to use the scale weight as the stored tare value when stored. **KEYPAD** – Select to enter a tare weight using the keypad.
	WEIGHT	Displays scale weight when TYPE set to SCALE WEIGHT. Set stored tare weight when TYPE set to KEYPAD.
	UNITS	Displays unit of measure when TYPE set to SCALE WEIGHT. Set unit of measure when TYPE set to KEYPAD.
TARE REPORT		View a list of all stored tares.
TIME & DATE	**DATE FORMAT**	Select date format. MM/DD/YYYY DD-MM-YYYY MM-DD-YYYY MM/DD/YY
	TIME FORMAT	Select time format (12 hour/24 hour)
	AM/PM	Select AM/PM
	HOUR	Set current hour.
	MINUTE	Set current minute.

TIME & DATE (cont)	**SECOND**	Set current seconds.
	DAY OF WEEK	Set current day of week.
	DATE	Set current day of the month.
	MONTH	Set current month.
	YEAR	Set current year.
	SAVE TIME & DATE	Select to save time and date entries to memory.
LOAD CELL DIAGNOSTICS	**COUNTS**	Displays current digital counts from the analog to digital converter.
DISPLAY & SLEEP SETTINGS	**DISPLAY CONTRAST**	Set the display contrast from 0 - 8.
	BACKLIGHT INTENSITY	Set the backlight intensity from 0 – 100.
	BACKLIGHT TIMEOUT	Set the backlight timeout from 0 – 255 seconds. 0 = off.
	SLEEP TIMER	Set the timer in seconds to enter sleep state after no use. 0 = off.
	LCD SLEEP	Set to YES to turn off LCD display while in sleep state.
	ADC SLEEP	Set to YES to set ADC circuit to low power mode while in sleep state.
	BRIDGE SLEEP	Set to YES to set bridge to low power mode while in sleep state.
	WAKEUP THRESHOLD	Set the minimum change in weight divisions required to wake the instrument from sleep state.

Figure 5-5. Operator Menu

5.4 CONFIGURATION MENU

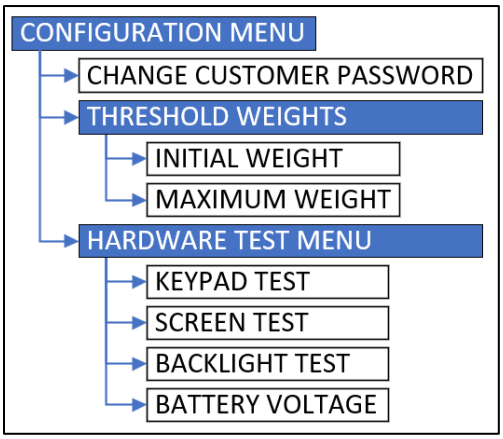

Figure 5-6. Configuration Menu Hierarchy

Menu Item	Sub-Menu Item	Description
Change Customer Password		
THRESHOLD WEIGHTS	**INITIAL WEIGHT**	Set a minimum weight that a transaction can be printed. (if configured)
	MAXIMUM WEIGHT	Set a maximum weight that a transaction can be printed. (if configured)
HARDWARE TEST MENU	**KEYPAD TEST**	Test each keypad button for functionality.
	SCREEN TEST	Test display to identify dead pixels.
	BACKLIGHT TEST	Test display backlight and contrast settings
	BATTERY VOLTAGE	Displays the current battery voltage.

Figure 5-7. Configuration Menu

6.0 MAINTENANCE

6.1 MAINTENANCE & CLEANING

WARNING: Failure to heed these warnings could result in serious injury or death.

- **The window of the LCD display of the FB2900 Weighing Instrument is considered to constitute an electrostatic discharge hazard. Clean using only a wet or damp cloth.**
- **The cable glands for external cable connections are considered to constitute an electrostatic discharge hazard. Clean using only a wet or damp cloth.**

Scale systems must be checked on a routine basis to determine if recalibration is required. Perform a zero calibration during daily operation, verify calibration using test weights, and recalibrate as necessary. Check for changes in the calibration (mv/V) and other anomalous behavior.

Cleaning:

- Power off and disconnect the instrument before cleaning.
- Do not use harsh chemicals or high-pressure water jets for cleaning.
- Wipe enclosure clean using mild soap and water or other approved cleaner rated for use in the hazardous (classified) location. Remove the FB2900 instrument
- Clean using only a wet or damp cloth.

Calibration:

- The scale system must be checked on a frequent and recurring basis.
- Check the zero calibration for drift and scale calibration.
- Record each check to identify changes and report them to the appropriate party.

Electrical Wiring:

- Check for proper interconnections between the instrument, the scale, and accessories.
- Verify terminal blocks are properly torqued.
- Inspect wiring for abrasions, cuts, or tears.
- Remove power from the system and inspect wiring for continuity, shorts, and grounds using an ohmmeter.

6.2 TROUBLESHOOTING

Problem	Troubleshooting
FB2900 will not power ON with the battery installed.	• Charge battery. • Verify quick-connect spring pin is latched onto battery. *(apply light hand-pressure to the bottom of the battery to latch spring pin)* • Clean POGO connectors on FB2900 Instrument and ACC-2930 Battery.
ACC-2945 Safe Area Battery Charger's POWER LED is OFF.	• Verify AC line power. • Verify power supply output power. *(wall adapter)* • Replace ACC-2945 Charger.
ACC-2945 Safe Area Battery Charger STATUS LED is FLASHING RED with battery connected.	• Battery charging will not be initiated with a fully charged or near-fully charged battery. Discharge battery until FB2900 Instrument indicates a low battery and retry charging. • Clean POGO connectors on charger and battery. • Verify quick-connect spring pin is latched onto battery. *(apply light hand-pressure to the top of the battery to latch spring pin)* • Replace ACC-2930 Battery.

Figure 6-1. Troubleshooting Guide

Certificate Number: 21-106
Page 1 of 3

NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Indicating Element
Digital Electronic
Model: FB2900 Series
n_{max}: 10 000
Accuracy Class: III / III L

Submitted By:
Fairbanks Scales, Inc.
2176 Portland Street, Suite 1
St. Johnsbury, VT 05819
Tel: 802-473-5228 Fax: 802-473-3111
Contact: Devin J. Holland
Email: dholland@fairbanks.com
Web site: www.fairbanks.com

Standard Features and Options

- Semi-automatic (push-button) Zero Setting Mechanism (SAZSM)
- Automatic Zero Tracking (AZT)
- LCD Display
- Keyboard Tare
- Semi-automatic (push-button) Tare
- Programmable Tare
- Multiple Tare Memories
- Gross/Net/Tare Display
- Alphanumeric Display
- Internal Analog to Digital Converter
- Pound/Kilogram/Ton/Tonne/Ounce/Gram Units Available.
- Category I Audit Trail Capability (calibration and configuration counters (see page 2)
- Stainless Steel Enclosure
- External Battery Power (7v) Supply with Sleep Mode

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

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Figure 7-1. NTEP Certificate of Conformance