



# **Intrinsically Safe Barrier**

## **Installation Guide**

**RollSeal**

**1733 County Road 68**

**Bremen, Alabama 35033**

**256-287-7000**

Table of Contents

1. Warnings .....2

2. Introduction.....3

3. Installation.....3

4. Connecting the Barrier.....4


5. Layout and Wiring Diagrams .....5

6. Notes.....8

1. Warnings

 **Warning!**

Disconnect All Power Sources Before Installing This Equipment. Failure To Disconnect Power Source Can Result In Property Damage, Serious Injury Or Death!

 **Warning!**

All Wiring Should Be In Accordance with National Electrical Codes Or Other Local Codes.

 **Warning!**

The Installer Is Responsible For Complying With All Relevant Regulations, Such As National Wiring Regulations And Accident Prevention Regulations. Particular Attention Must Be Given To The Cross-sectional Areas Of Conductors, The Selection Of Fuses Or Other Protection, And Protective Earth/Ground Connections!

 **Warning!**

Drives Are Intended As Components For Incorporation Into Electrical Control Systems Or Machines. It Is The Responsibility Of The Installer To Ensure That The Drive Is Installed Safely And In Accordance With Any Regulations Which Apply To The End Product At The Place Of Use, For Example, Regarding Safety Or Electromagnetic Compatibility. To Ensure Mechanical Safety, Additional Safety Devices Such As Electro-Mechanical Interlocks May Be Required!

 **Warning!**

The Voltages In The Power Cables And Certain Parts Of The Drive Can Result In Death. Whenever The Drive Has Been Used, It Must Be Isolated And Disconnected For 5 Minutes Before Any Work Commences.



## Danger!

Only Qualified Electrical Personnel Familiar With The Construction And Operation Of This Equipment And The Hazards Involved Should Install, Adjust, And/Or Service This Equipment.

Read And Understand This Manual In Its Entirety Before Proceeding.

Failure To Observe This Precaution Could Result In Severe Bodily Injury Or Death!



## Warning!

### To Reduce The Risk Of Severe Injury Or Death:

1. READ AND FOLLOW ALL INSTRUCTIONS!
2. Never let children operate or play with door controls. Keep the remote control (where provided) away from children.
3. Personnel should keep away from a door in motion and keep the moving door in sight until it is completely closed or opened. NO ONE SHOULD CROSS THE PATH OF A MOVING DOOR.
4. Test the door's safety features at least once a month. After adjusting either the speed or the limit of travel, retest the door operator's safety features. Failure to adjust the operator properly may cause severe injury or death. NEVER GO UNDER A STOPPED, PARTIALLY OPEN DOOR.
5. For products having a manual release, if possible, use the manual release only when the door is closed. Use caution when using this release when the door is open.
6. KEEP DOORS PROPERLY OPERATING AND BALANCED. See Door Manufacturer's Owner's Manual. An improperly operating or balanced door can cause severe injury or death. Have trained door systems technician make repairs to cables, spring assemblies, and other hardware.
7. Install the Entrapment Warning label next to the control button in a prominent location. Install the Emergency Release Marking. Attach the marking on or next to the emergency release.
8. SAVE THESE INSTRUCTIONS.

## 2. Introduction

**2.1.** Before beginning the installation of the barrier, read and understand all instructions.

**2.2.** Choose the appropriate mounting hardware for the mounting surface.

**2.3.** Have the required tools and hardware ready.

## 3. Installation

Note: It is recommended to mount the door to the booth first, then install the barrier.

**3.1.** Determine the ideal mounting location for the barrier. This location has to be a minimum of 36 inches or 3 feet away from any opening in the booth, but within reach of the door's 5 feet AC and DC harnesses. Reference image 5.1

**3.2.** Once a location is determined, test fit the door's 5 feet leads to verify they will reach.

**3.3.** Mount the Intrinsically Safe Barrier using an appropriate fastener through each of the barrier's mounting locations at each corner of the box.

#### 4. Connecting the Barrier

**4.1.** Connect the door's AC Harness (black) and DC Harness (gray) to the barrier. Both harnesses are 5 feet long coming from the right side of the door's head unit and will have a circular twist lock plug on the end. Reference image 4.3 for connection location on the barrier.

**4.1.1.** When connecting these harness, twist the body of the plug until the grooves align and the plug pushes into the connector slightly. Then twist the lock ring clockwise to secure.

**DO NOT FORCE PLUG INTO CONNECTOR!**

**4.2.** Connect the Controller's AC Harness (black) and DC Harness (gray) to the barrier. Both harnesses are coming from the bottom of the Rollseal Controller and will have a circular twist lock plug on the end. Reference image 4.3 for connection location on the barrier.

**4.2.1.** When connecting these harness, twist the body of the plug until the grooves align and the plug pushes into the connector slightly. Then twist the lock ring clockwise to secure.

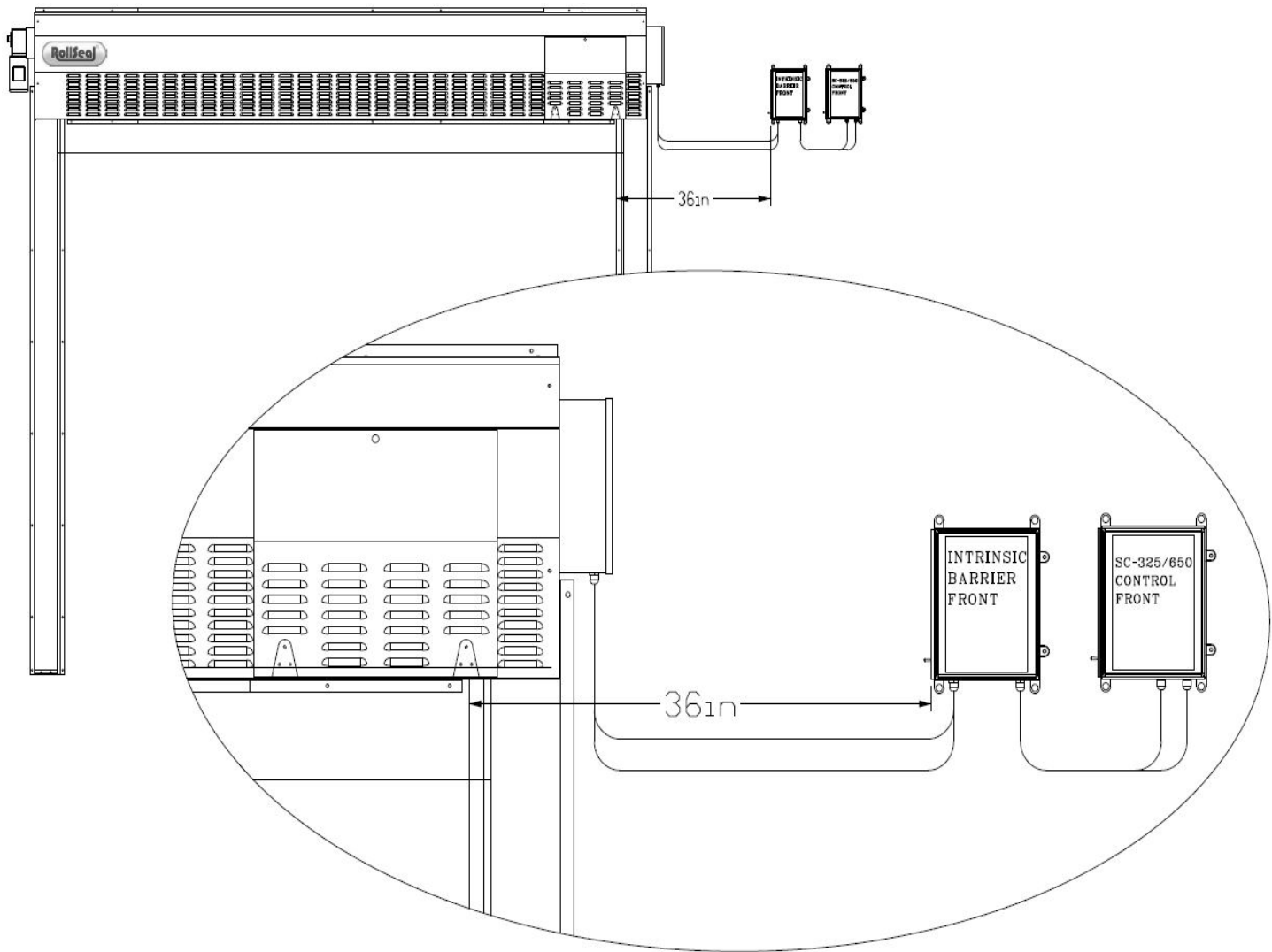
**DO NOT FORCE PLUG INTO CONNECTOR!**

#### 4.3. Harness Connection Location

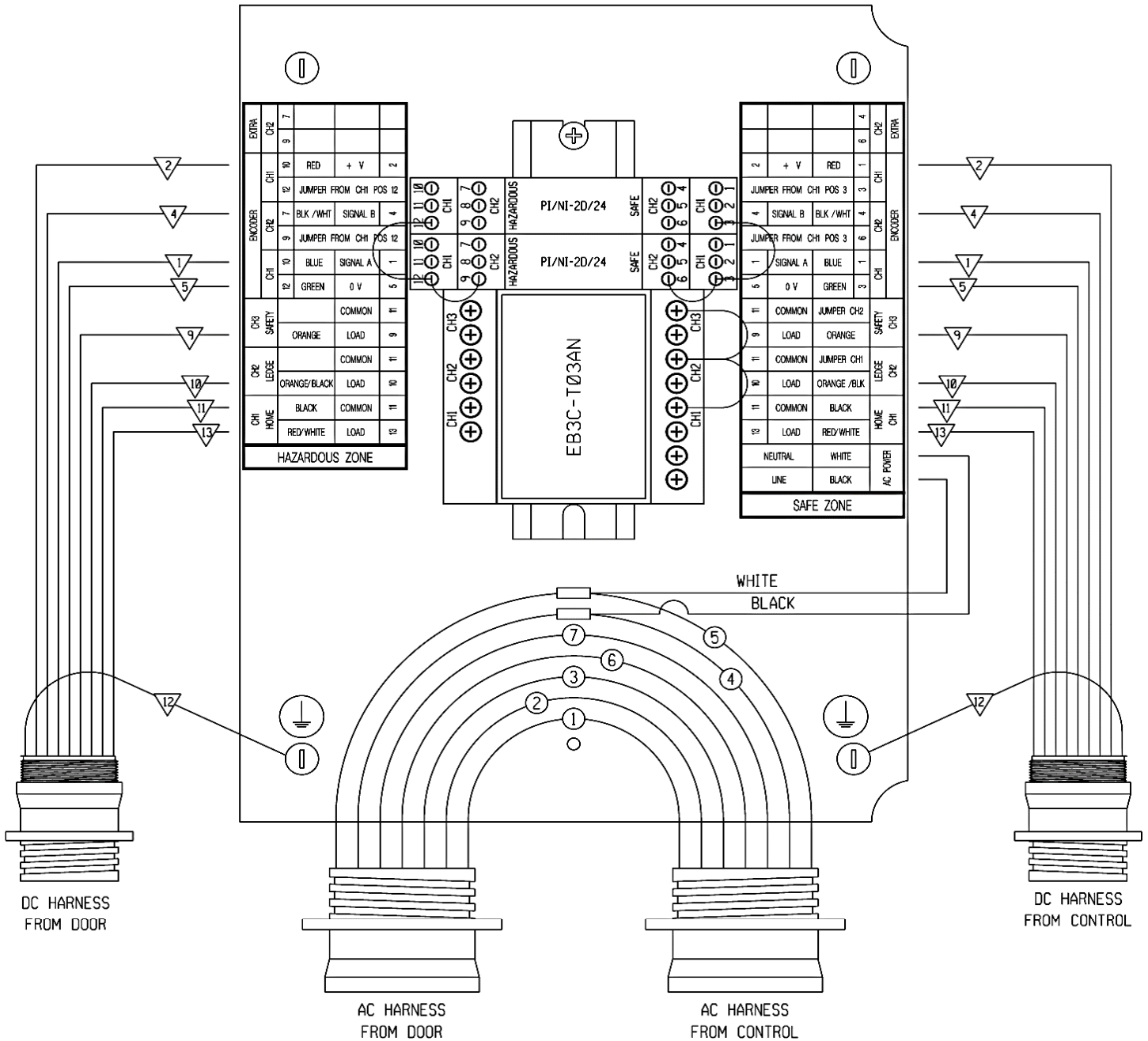


5. Layout and Wiring Diagrams

5.1. Layout



## 5.2. Barrier Internal Wiring



### DC HARNESS FROM DOOR NOTE:

DC HARNESS FROM DOOR IS PART OF A INTRINSIC SAFE CIRCUIT. ALL COMPONENTS WITHIN THIS CIRCUIT ARE CONSIDERED SIMPLE APPARATUS AS DEFINED BY NEC. INSTALLATION SHALL COMPLY WITH THIS DRAWING, DOOR COMPONENT LAYOUT DRAWING AND INSTRUCTIONS PROVIDED BY THE INTRINSIC BARRIER MANUFACTURER. REFER TO NEC ARTICLE 504 FOR FURTHER REFERENCE AND PROCEDURE FOR INSTALLATION AND MAINTENANCE INTRINSICALLY SAFE SYSTEMS.

### INTRINSIC BARRIER NOTES:

REFERENCE PHEONIX PI/NI-20/24 DATASHEET FOR SPECIFICS OF BARRIER.  
REFERENCE IDEC EB3C-T03AN DATASHEET FOR SPECIFICS OF BARRIER.  
INTRINSIC ENCLOSURE IS PRE-WIRED AT HH TECHNOLOGIES.

### CONTROL NOTE:

BARRIER ENCLOSURE IS MADE TO INTERFACE WITH ROLLSEAL SC650 SMART CONTROL  
REFERENCE 4801-5156 SC650 CONTROL MANUAL FOR WIRING AND PROGRAMMING SPECIFICS.

### 5.3. Door Internal Wiring

#### BROTHER MOTOR NOTE:

IF THE SERIAL NUMBER COMES BEFORE 0010156, THE WIRING DIAGRAM CHANGES FROM:  
 BLUE CHANGES FROM T8 & T2 TO T9 & T3.  
 BROWN CHANGES FROM T9 & T3 TO T8 & T2.  
 1/2HP 240V 3 PHASE BROTHER MOTOR WITH A200-D90 BRACKE RECTIFIER

