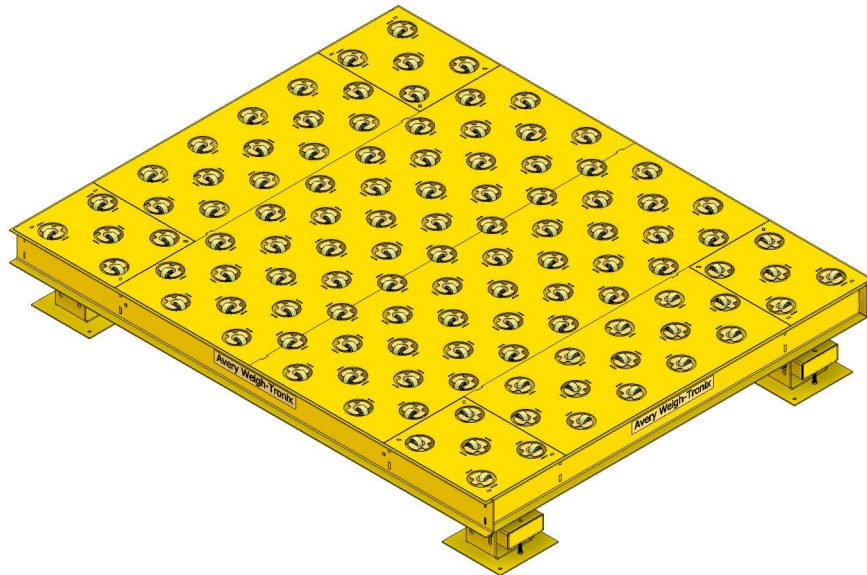


Federal Express Swivel Caster Scale System

Model SCS 131107-20



Operation and Maintenance Manual

© Avery Weigh-Tronix group of companies 2008. All rights reserved.

No part of this publication may be reproduced, stored in an electronic retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written consent of the copyright owner, or as permitted by law or under license. Full acknowledgment of the source must be given.

Avery Weigh-Tronix is a registered trade mark of the Avery Weigh-Tronix group of companies. This publication was correct at the time of going to print however, Avery Weigh-Tronix reserves the right to alter without notice the specification, design, price or conditions of supply of any product or service at any time.

All third party brands and product names used within this document are trademarks or registered trademarks of their respective holders.

1 Introduction and Description of Your Systems

1.1 Introduction

Avery Weigh-Tronix is proud to present you with your Swivel Caster Scale System. This system was specially designed to fit your air-cargo weighing needs, both now and in the future.

This manual provides verified procedures that will enable a person who is unfamiliar with the SCS system to operate, maintain and repair it properly.

1.2 System Specifications



Avery Weigh-Tronix reserves the right to change specifications and features without notice and without incurring obligation.

1.2.1 Mechanical Specifications

Total Capacity	20,000 lbs
System Accuracy	0.1% or less of applied load

1.2.2 Weigh Bar Specifications

The Weigh Bar is Avery Weigh-Tronix® patented alternate to a traditional loadcell. For more information check out the *Weigh Bar Drawing* [on page 7](#).

The Avery Weigh-Tronix® Federal Express Swivel Caster Deck Scale System provides the means to weigh airfreight containers while they are being loaded.

Maximum Load	5,000 lbs
Maximum Excitation	20 V AC or DC
Input Resistance	350 ohms $\pm 1\%$
Output Resistance	350 ohms $\pm 1\%$ page 7
Zero Balance	$\pm 1\%$ of rated capacity
Output at rated capacity	2.03 mv/v
Non-linearity (maximum)	0.02% of rated output
Repeatability	0.02% of rated output
Creep (maximum)	0.01% of rated output
Safe Overload	150% of rated output
Maximum Overload	200% of rated output
Insulation resistance	10^{10} ohms

1.3 Description of Swivel Caster Deck Scale System

1.3.1 Major Components

The system has two major parts:

1. Swivel caster deck scale assembly
2. Remotely mounted indicator (see indicator for operation instructions)

Figure 1.1 shows the scale deck.

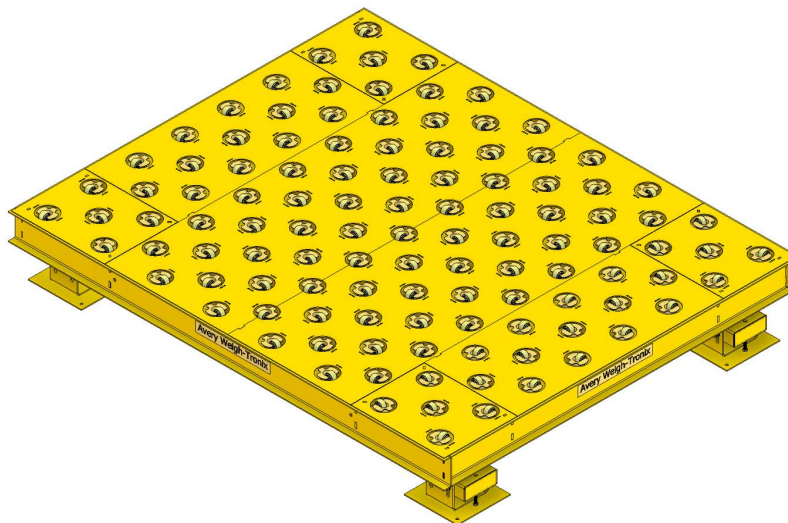


Figure 1.1 Swivel caster deck scale

See the simplified block diagram in Figure 1.2.

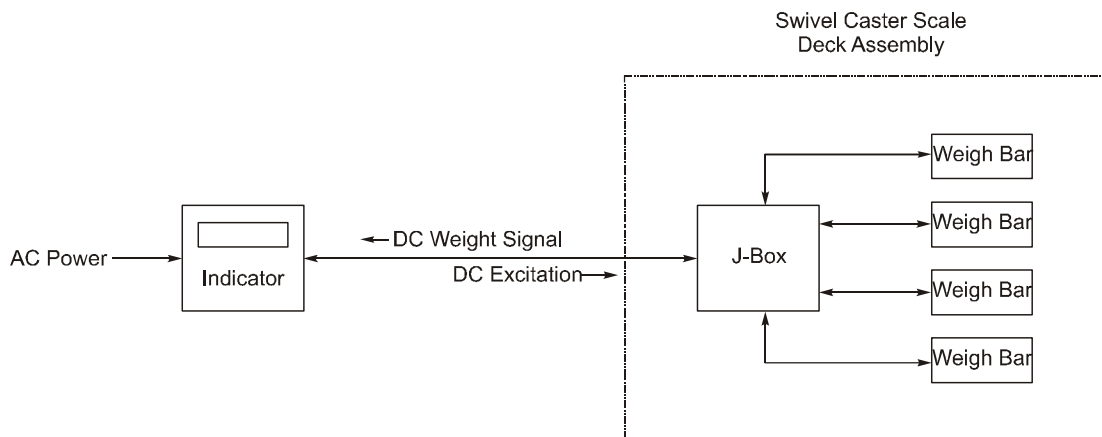


Figure 1.2 Swivel caster deck scale system simplified block diagram

The swivel caster deck assembly consists four Avery Weigh-Tronix 5000 lb capacity Weigh Bars, a junction box, a subframe and mounting components. See the illustrations in the back of this manual for details of the scales construction.

2 Installation and Wiring Information

2.1 Scale Deck Installation

The surface of the scale deck should be parallel to the floor slab in the direction of daily travel. The deck must be level front to back, in the direction of container travel and the scale must be anchored in place with expansion bolts.

Following are the steps for installing the scale platform. See Figure 2.1.



Do all welding prior to installation of the interface cable.

Do not weld on or near a Weigh Bar. Excessive heat or high currents may cause internal damage. Place welding ground on the support channel and not on the sub-frame.

1. Determine the scale location and position mounting base plates per outline drawing for your system.
2. Drill holes in concrete floor and fasten base plates with 5/8" x 3" long expansion bolts and flat washers.
3. Set a support channel on center of each base plate.
4. Place the scale platform in position with the sub-frame inside the support channels.
5. Insert two .75" diameter bolts with washer through support channel and sub-frame. Thread nut on bolt but DO NOT TIGHTEN.
6. Adjust scale platform to desired height using the .62" diameter bolts in each corner and tighten the support channels to the sub-frame.
7. Center support channel on base plates and weld the base plates and support channels together. (Repair paint finish upon completion of welding.)
8. Install interface cable between the scale platform and indicator enclosure.

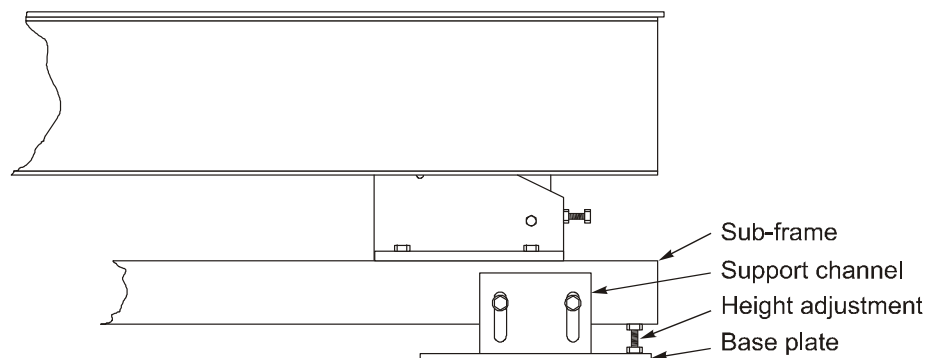


Figure 2.1 Mounting illustration

2.2 Indicator

Make the necessary connections between the indicator and the scale junction box as shown in [Wiring Diagram on page 8](#). Plug the AC power cable into the appropriate power source, 110 V ac, 60 Hz.

3 Operating Instructions

See the user and service manuals for the indicator used with this scale for instructions on daily operation and calibration procedures.

4 Maintenance and Calibration

4.1 Caster Maintenance

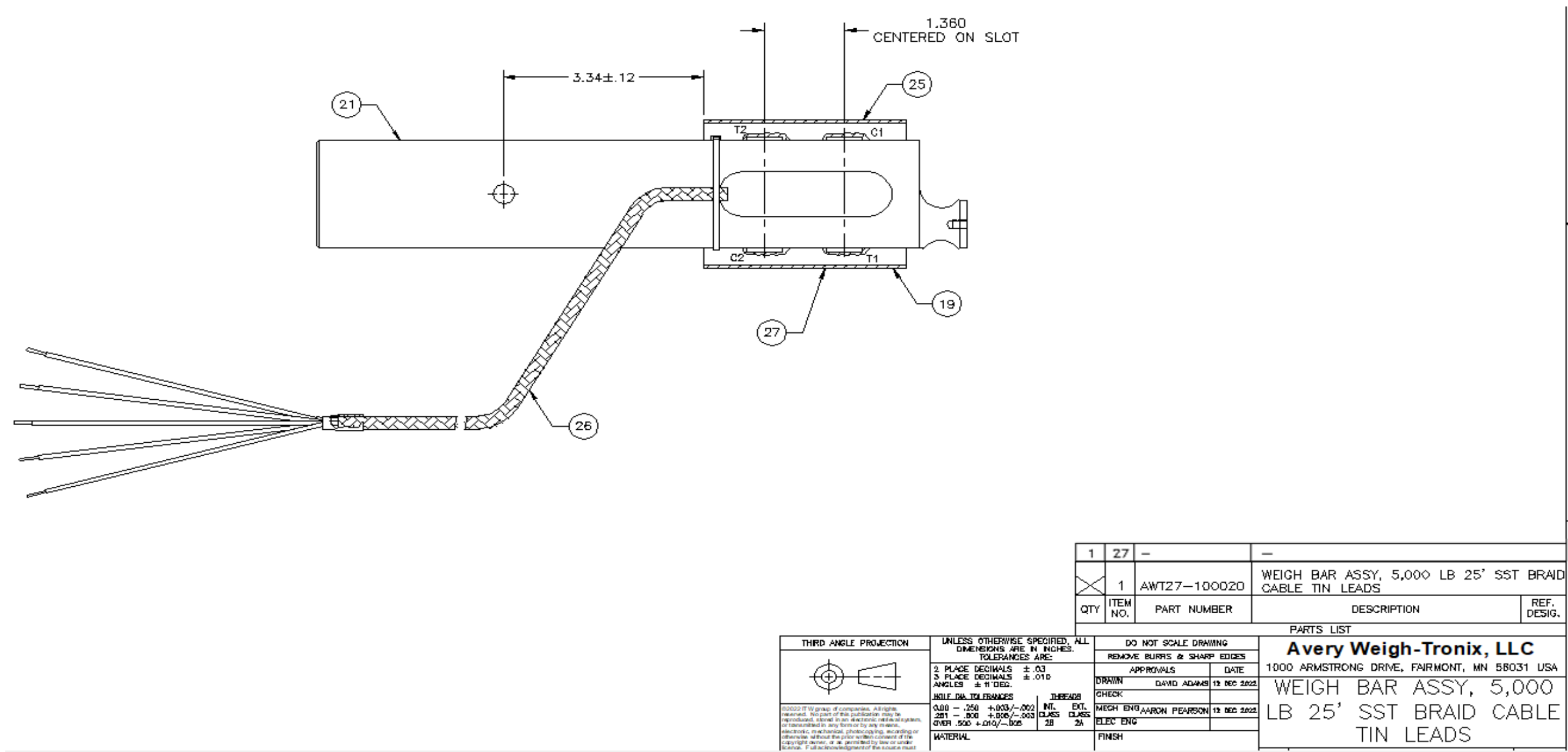
1. Check casters for free movement.
2. Casters do not require lubrication.
3. Replace any faulty casters.

4.2 Weigh Bar Maintenance

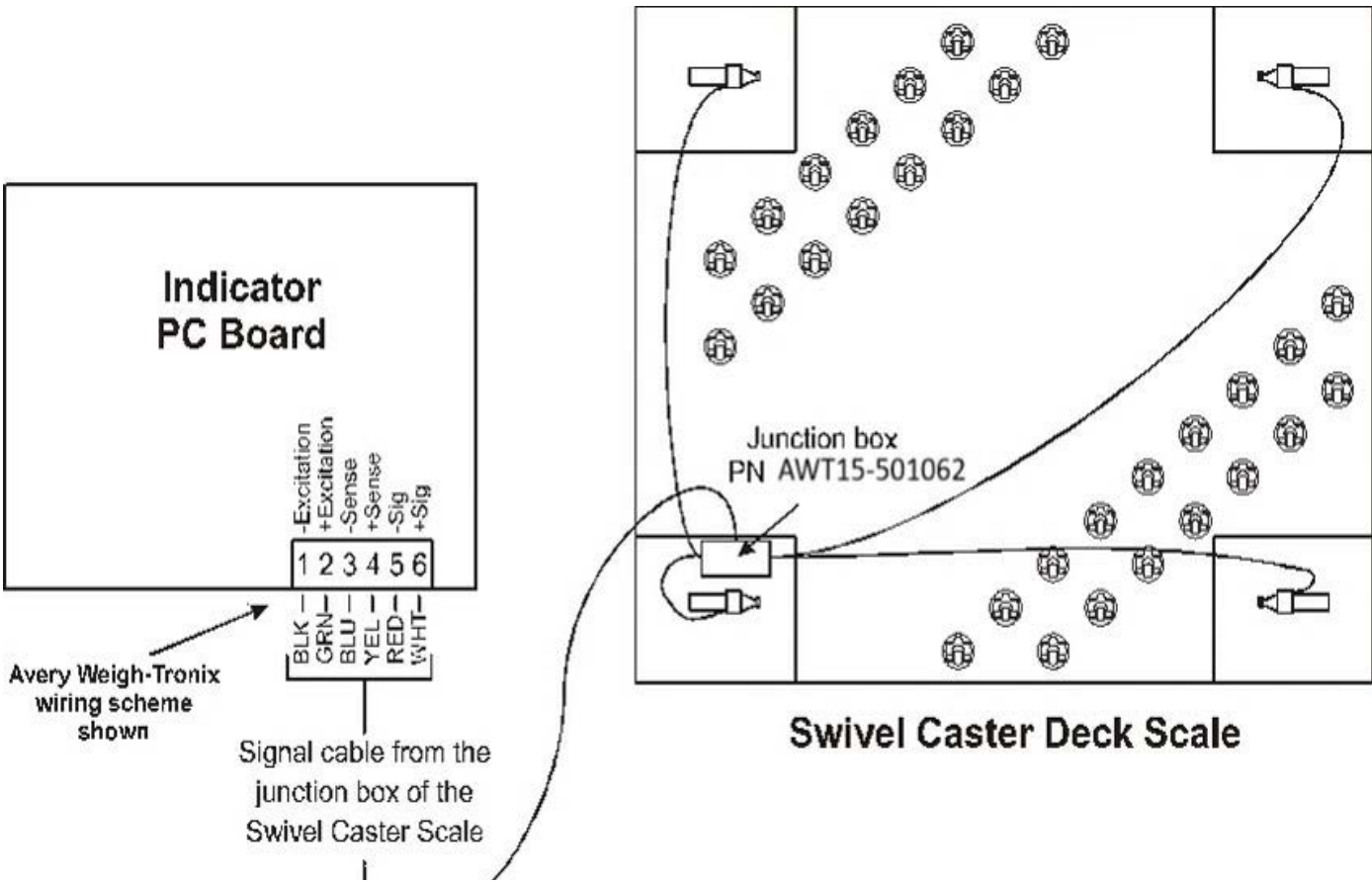
1. Check for cracks or abrasions on cables.
2. Check to see that cables are not pinched or restricting scale movement.
3. Check adjustment of overload stops.
4. Remove any debris from around weigh bar suspension points. Be sure that suspension points have no restrictions to free movement.

5 Technical Illustrations

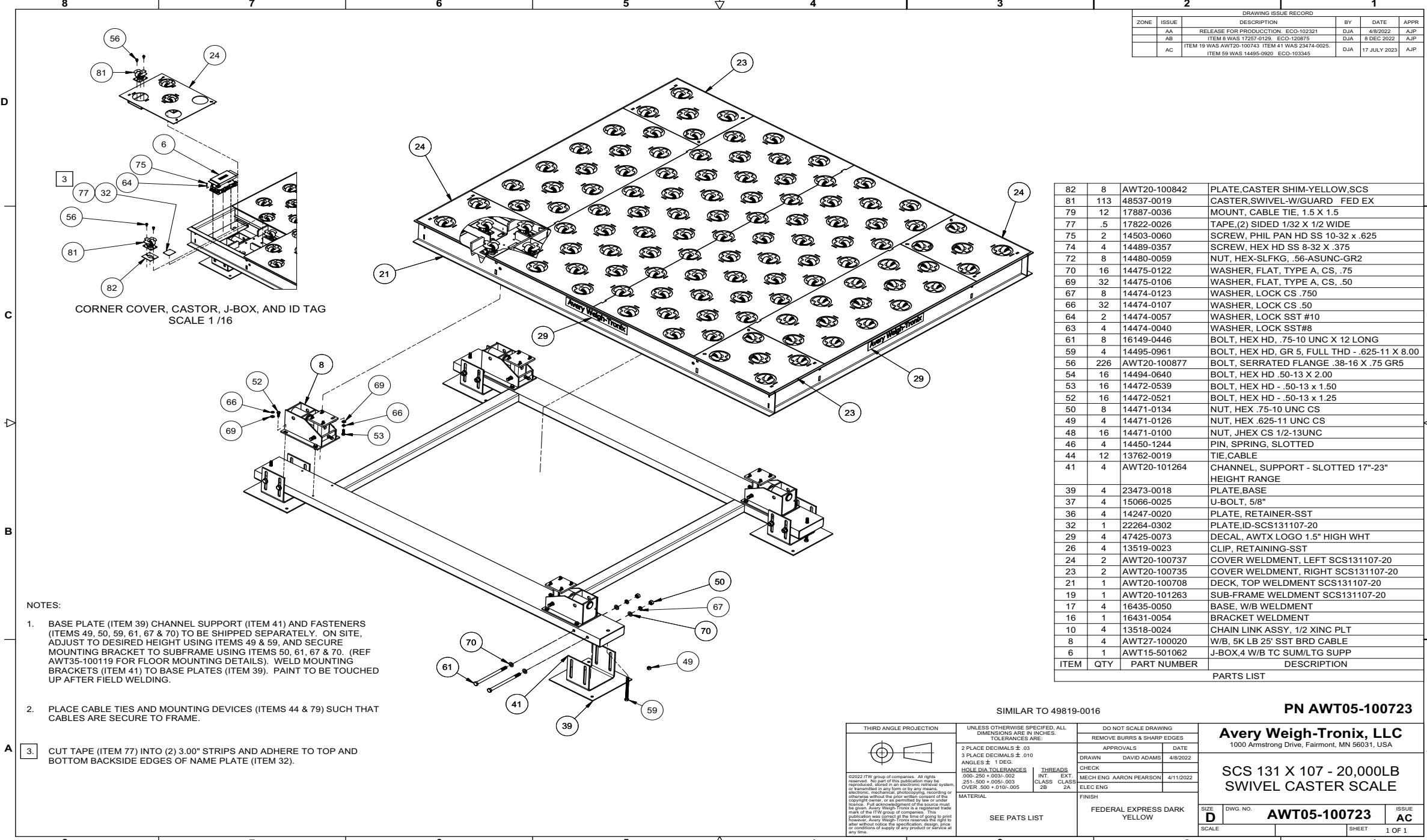
5.1 Weigh Bar Drawing



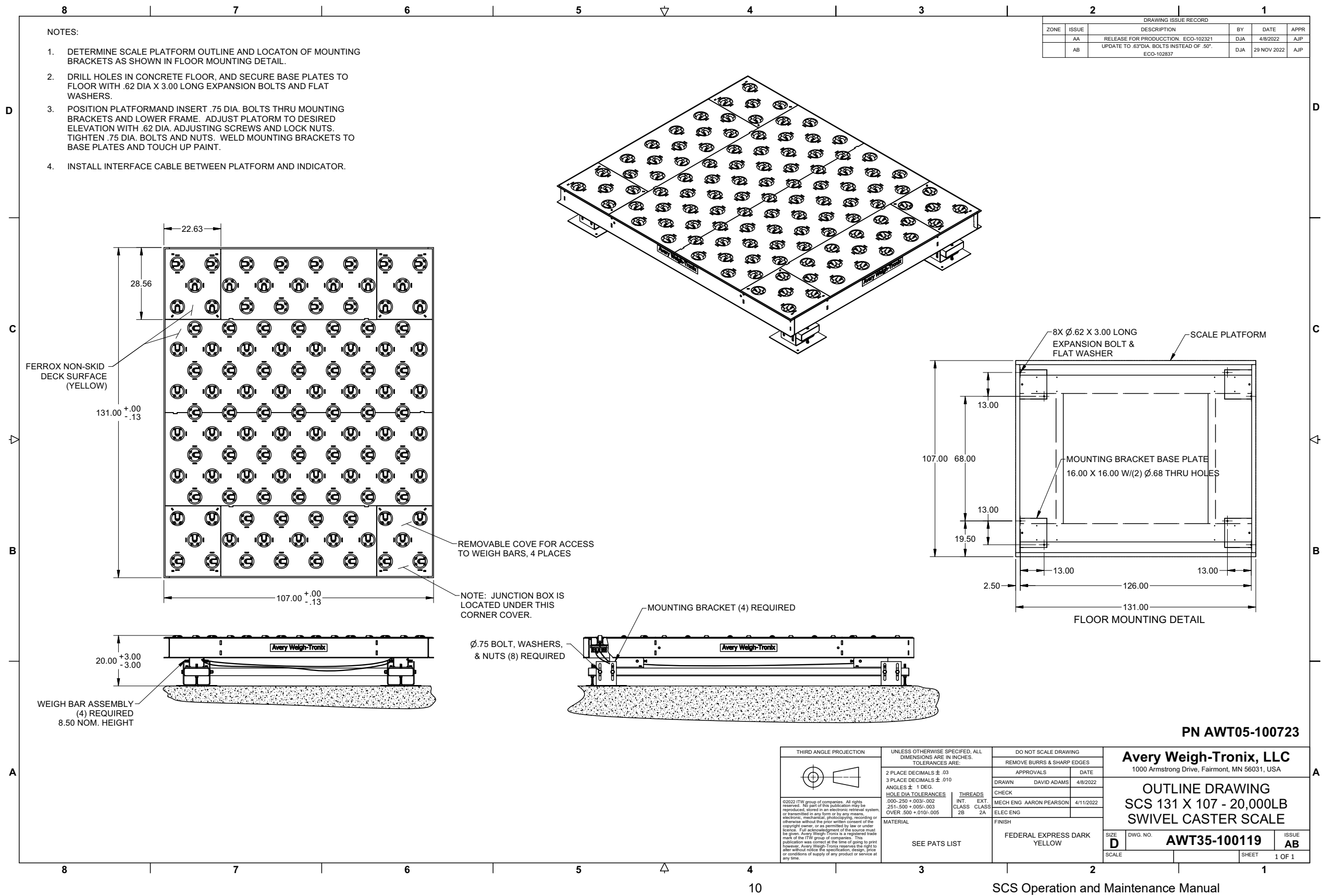
5.2 Wiring Digram



5.3 Swivel Caster Scale Assembly and Parts List SCS-131107-20, and AWT05-1007



5.4 Swivel Caster Scale Outline Drawing SCS-131107-20 and AWT35-100119



Avery Weigh-Tronix



Avery Weigh-Tronix USA

1000 Armstrong Dr.
Fairmont MN 56031 USA
Tel: 507-238-4461
Fax: 507-238-4195
Email: USAinfo@awtx-itw.com
www.averyweigh-tronix.com

Avery Weigh-Tronix UK

Foundry Lane,
Smethwick, West Midlands,
England B66 2LP
Tel: +44 (0)870 903 4343
Fax: +44 (0)121 224 8183
Email: webinfo@awtx-itw.com
www.averyweigh-tronix.com