M303-12(C)

E4000 LOCK

Register Head Hardware Installation and Wiring

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES.
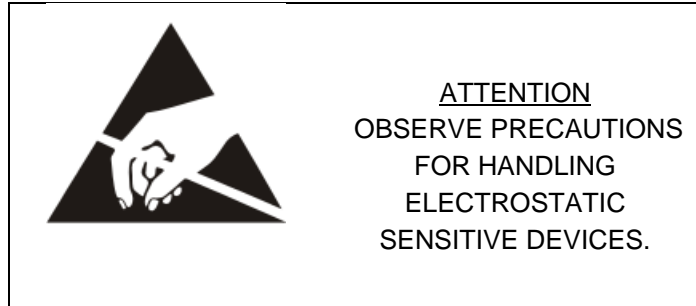
Caution - This electronic device is sensitive to damage from ESD (electrostatic discharge). Observe the following precautions when servicing this device.

Electronic devices with exposed connectors are highly susceptible to damage by electrostatic discharge (ESD). Anyone performing field service on Red Seal Measurement electronic devices must observe the following precautions.

1. **Always use a static-dissipative wrist strap. Connect the strap to a grounded, conductive surface or to the metal chassis of the equipment under repair. Use only wrist straps that incorporate a resistor for user safety. The resistance between the user and ground should be between 800K ohms to 10M ohms. Do not wear a wrist strap around exposed electrical hazards of more than 250 volts.**
2. **If a wrist strap is not available, ground yourself before touching electronics by touching the metal chassis of the equipment or another grounded surface. Repeat frequently while working.**
3. **If available, use a static-dissipative work mat. Connect the mat to ground and the wrist strap to the mat.**
4. **Avoid contacting the connectors or any exposed electronic component.**
5. **Work away from materials that may contribute to the generation of static electricity, such as synthetic carpeting.**
6. **Minimize your movements to avoid building up static charge.**
7. **Avoid working on electronics in areas with very low humidity.**
8. **Do not work on electronics during periods of lightning activity.**
9. **Do not ship or store this device near strong electrostatic, electromagnetic, magnetic, or radioactive fields.**

LOCK Firmware

The LOCK security features are available in the following E4000 firmware versions

US	EA.01.22.E or higher
International	EA.02.09.X or higher

If the firmware in your E4000 is an earlier version, it must be upgraded before the LOCK features can be used.

Upgrading the firmware requires a flash programming kit (RSM part number 600957-000) and the firmware files for the version you wish to install.

A link to the firmware files is available on the product page for the E4000 at www.*redsealmeasurement.com*. The direct URL is:

http://www.redsealmeasurement.com/e4000-firmware/.

For retrofit kits, start here.

If the LOCK hardware was installed into the E4000 at the factory, proceed to section 2.

1. **E4000 Register Head Switch Assembly**
   Verify E4K Register Head Kit includes the following parts:

| Item	Description	Units	Qty.
4	Bracket, E4000	Ea.	1
6B	Limit Switch, E4000	Ea.	1
9B	Screws, LS Mounting, E4000	Ea.	2
10B	Nuts, LS Mounting, E4000	Ea.	2
11B	Lock Washer, LS Mounting, E4000	Ea.	2
12	Terminal, crimp (White)	Ea.	2
14	Tubing, Spiral Wrap, 7"	Ea.	1
16	Wire Ties (not shown)	Ea.	4
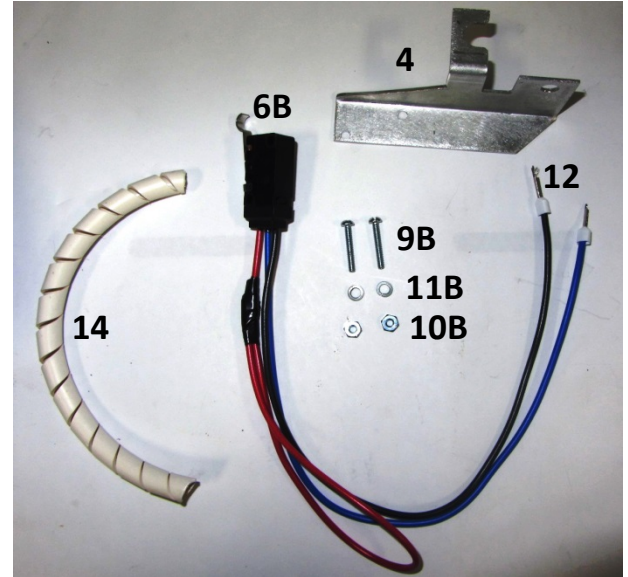
   a. Attach the hardware
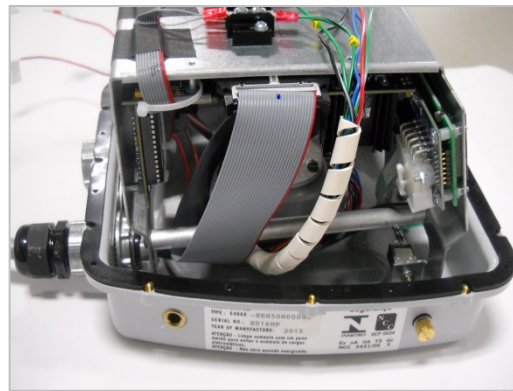
i. Assemble E4000 switch (6B) to E4000 bracket (4), using the screws, washers and nuts provided (items 9B, 10B, and 11B).
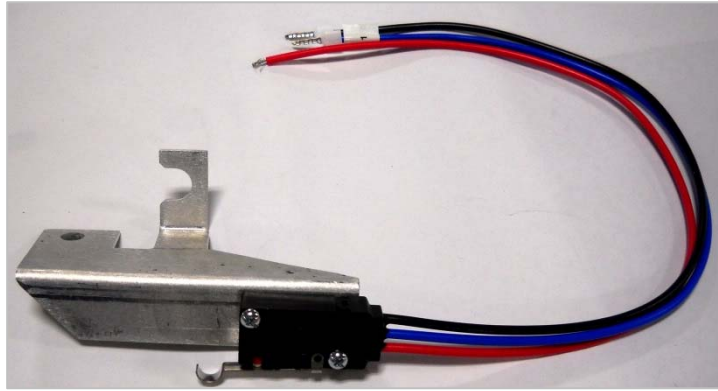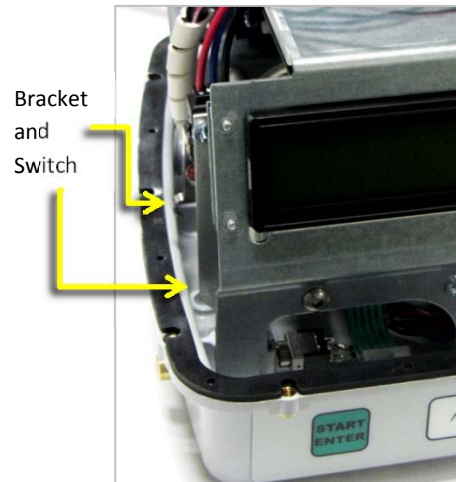

ii. Remove the chassis from E4K base, to gain access to W & M button. Remove button.
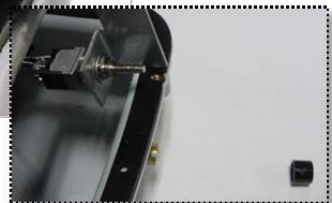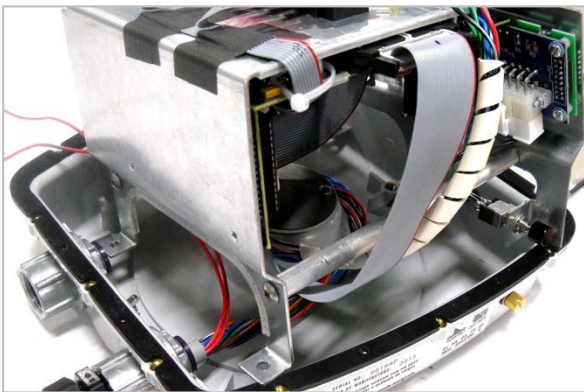
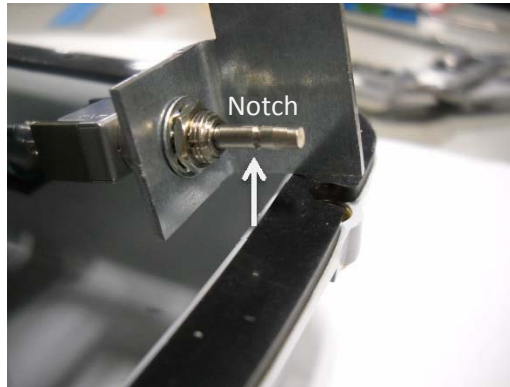iii. Attach assembled Bracket as shown:


Bracket and Switch
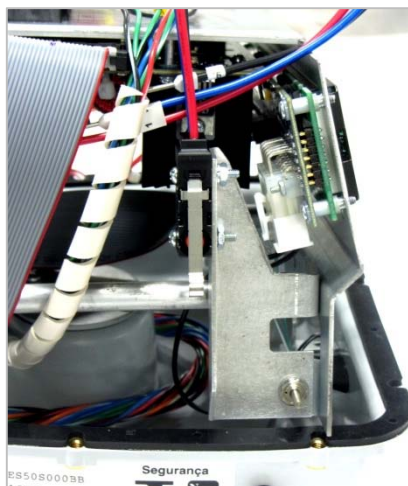
Side view

Front View

iv. Replace the W&M button. Make sure to secure it past the notch on the shaft.
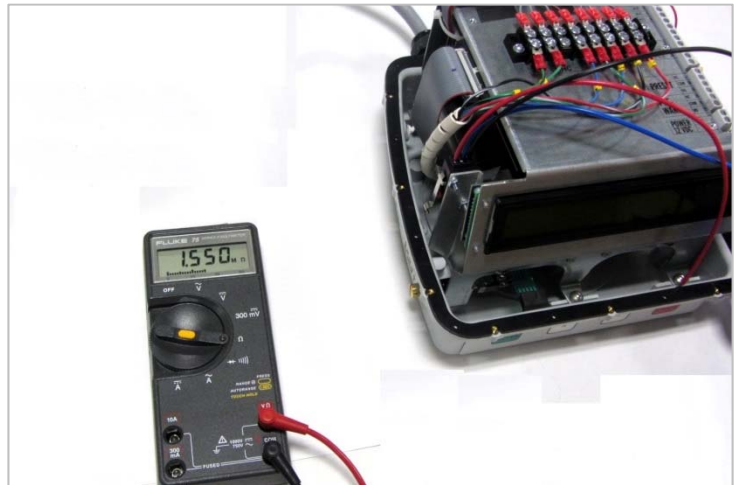

v. Replace and secure chassis.

b. Test the limit switch

   i. Use a multimeter set for resistance (ohms) and check the resistance between the two switch wires.
   ii. With the cover on, the multi-meter should read zero Ohms (Ω).
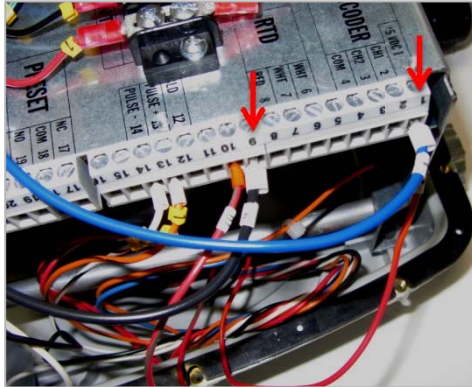   iii. With the cover off, the multi-meter should read a high resistance.
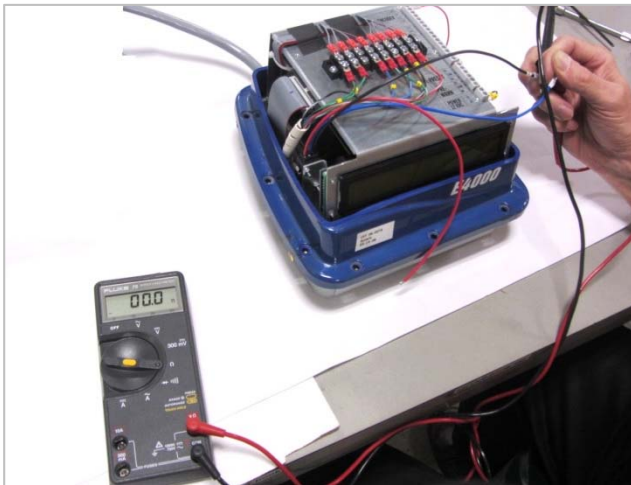
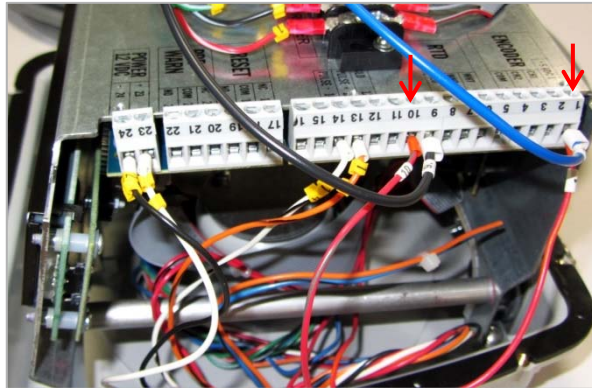Cover On – No Resistance Measured

Cover Off – High Resistance Measured

c. Wire the switch to the register **h**ead

Connect the blue #1 wire into terminal 1, and the black #9 wire into terminal 9 as shown above.
NOTE: The red wire isn't used. Secure with electrical tape.

d. To complete the connection to the E4000 register head, connect the orange crimped ends to terminals 1 and 10.

2. **E4000 Register Head Switch Wiring**

Verify E4K Register Head Kit includes the following parts:

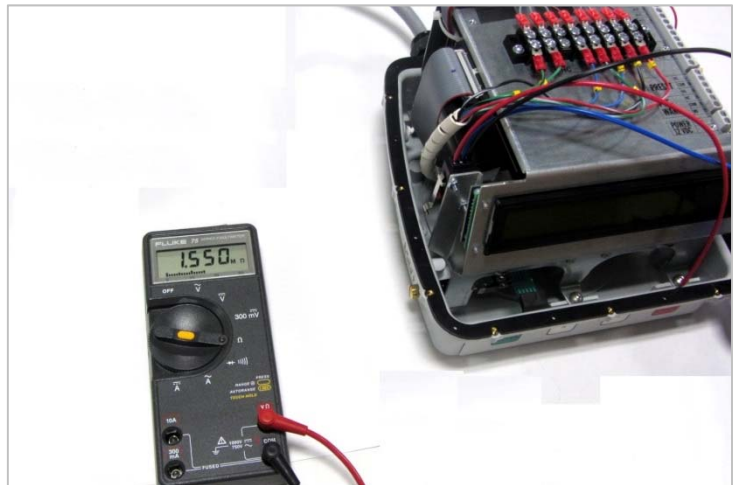| Description	Units	Qty.
Tubing, Spiral Wrap, 7"	Ea.	1
Wire Ties (not shown)	Ea.	4

a. Attach the hardware
   i. Gather the existing HHC and printer wires and wrap them using the spiral wrap for protection.
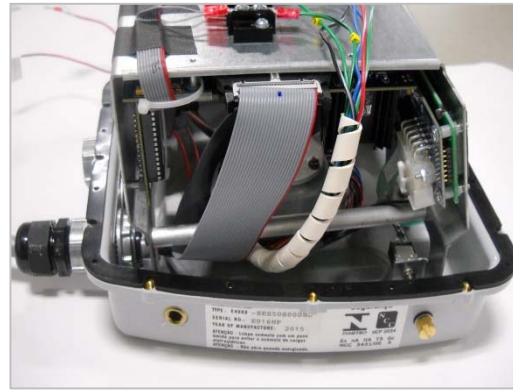
b. Test the limit switch
   i. With cover on, the multi-meter should read zero Ohms (Ω).
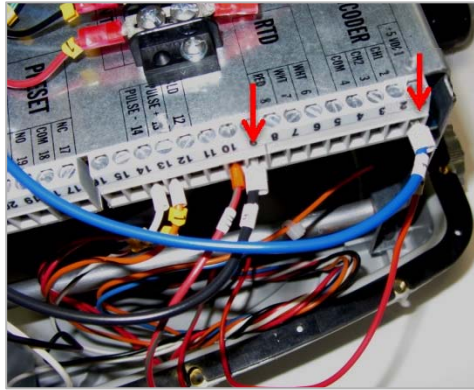   ii. With cover off, the multi-meter should read a high resistance.
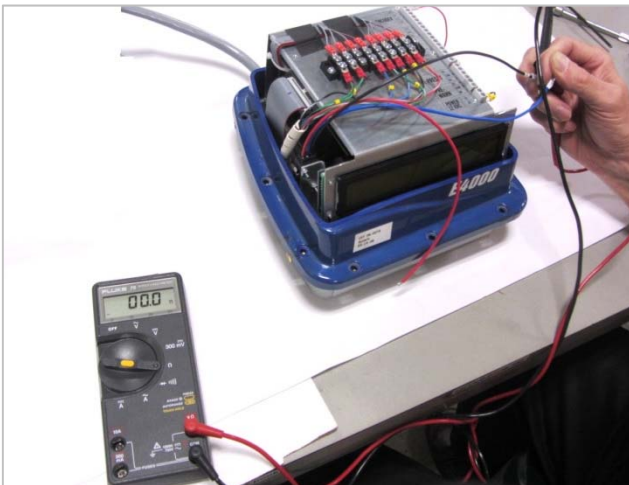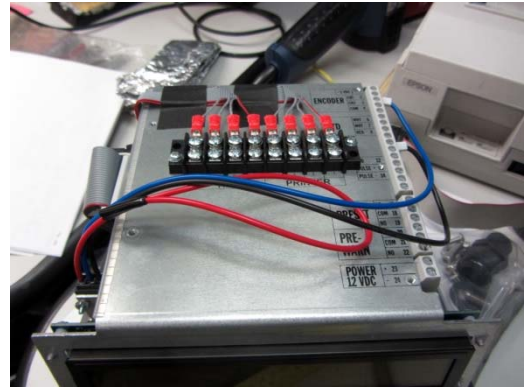

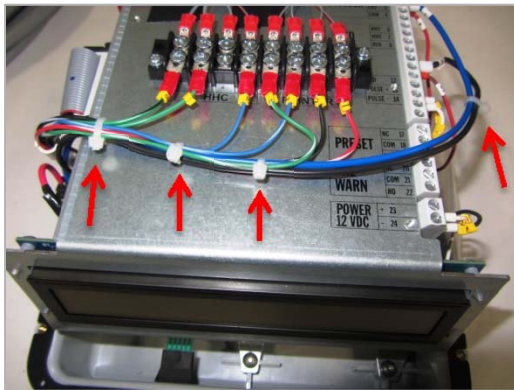Cover On – No Resistance Measured

Cover Off – High Resistance Measured

c. Wire the switch to register head

Connect the blue #1 wire into terminal 1, and the black #9 wire into terminal 9 as shown above**.**
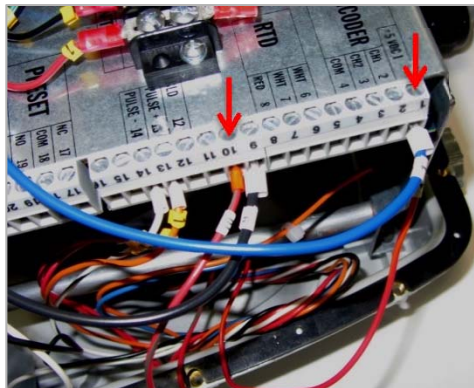

NOTE: The red wire from the switch isn't used. Wrap the exposed conductor with electrical tape, and loop its free end back onto itself and tape securely.

Secure the 4 wire ties as shown. The taped red wire from the switch can also be tied together with these wires.

d. Junction box switch wiring

Connect the orange/black wire from the power/data cable to terminal 1.

Connect the white/black trace to terminal 10.