NETSCANNER SYSTEM MODEL 98RK-1 UPGRADE KIT INSTALLATION PROCEDURES

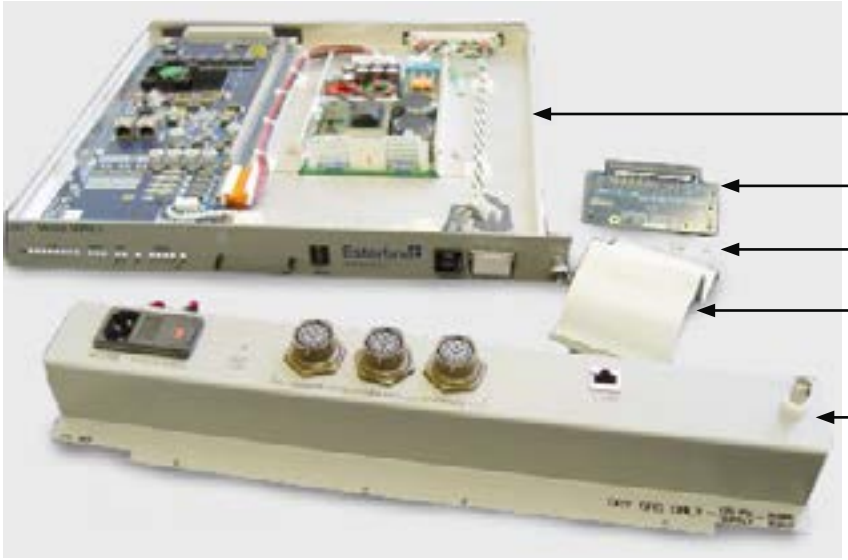
APPLICATION NOTE

Thank you for purchasing the pressure system update kit for converting your **Netscanner 98RK Scanner Interface Rack** to the new **98RK-1** configuration.

This application note will:

- Explain in detail the procedures for upgrading your 98RK Scanner Interface Rack to the 98RK-1 configuration
- Detail the initial system power-up procedures
- Explain system checkout procedures

Contents of the 98RK-1 Upgrade Kit



- 98RK-1 backplane adapter board (PC364)
- 98RK-1 rear panel ribbon cable
- 98RK-1 rear panel assembly
- 98RK-1 controller and switch tray assembly
- 98RK-1 user's manual on CD
- Bag of installation hardware, consisting of:
  - (4) 3/16" 2-56 screws
  - (2) 3/16" by 7/16" stand-offs

PREPARING YOUR EXISTING SYSTEM FOR THE UPGRADE

If, at any time, you do not feel comfortable replacing the electrical connections necessary to accomplish this upgrade, refer the upgrade to a qualified electrical technician or contact Sales at tesensors-ccmeas@te.com.

1. Power down your existing system
2. Disconnect the line cord from the rear of the unit
3. You may want to remove the 9816 Intelligent Pressure Scanners to reduce the weight of the rack since you will need access to the rear and sides of the rack
4. Identify your rack. If your existing rack has a serial number below 125, your rack cannot be upgraded.

REMOVE THE REAR PANEL FROM YOUR EXISTING RACK

1. Remove the four (4) screws located on the bottom of the rear panel sheet metal that secure the rear panel to the pneumatic manifolds (Figure 2).

2. Remove the four (4) 2-56 screws on each side of the rack (2 on each side) that secure the rear panel to the rack (Figure 3). The rear panel should now be free of the rack but still connected by three wires and a ribbon cable (Figure 4 & 5).

3. Note the three (3) spade connection locations for the wires coming from the power module in the 15-position rack-mounted connector (Figure 4). These three connector positions are marked with molded-in numbers. They should be reconnected (later) to the following positions:

   - black wire (line) in position marked 6;
   - white wire (neutral) in position marked 10;
   - green wire (ground) in position marked 30

   You will be reconnecting to these spade connectors (new ones from your new controller and switch assembly).

4. Disconnect the three spade connectors from the rack-mounted connector.

5. Disconnect the ribbon cable from the rack, leaving the cable connector to the rear panel. Open the connector ears and gently work the ribbon cable free from the connector (Figure 5).

6. The rear panel should now be separated from the rack and may be set aside.

Figure 2: Remove sheet metal screws

Figure 3: Side panel screws

Figure 4: Removing wires from controller and switch assembly

Figure 5: Ribbon cable connection from rack to controller and switch assembly

REMOVE THE FRONT PULL-OUT TRAY

1. Loosen both of the captive, knurled thumbscrews that retain the front pull-out tray to the chassis (Figure 6).

2. Using the handle provided near the center of the tray, pull the tray straight forward and out of the rack (Figure 7).

3. Set the old tray aside and out of the way. There are no parts on this tray for future use.

Figure 6: Removing front pull-out tray

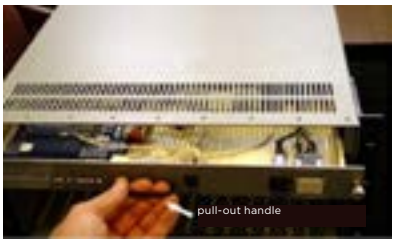


Figure 7: Removing front pull-out tray

INSTALLATION AND WIRING OF THE REAR PANEL

1. Locate the backplane adapter board (PC364) and the two (2) stand-offs (3/8” x 7/16”, PN 12-58-02-07B) that came in your upgrade kit (Figure 8, Figure 9).

2. The backplane adapter board (PC364) will be installed into the connector from where you previously disconnected the rear panel ribbon cable.

3. Identify the two backplane adapter board mounting nuts that will be directly behind the holes in the adapter board. Temporarily hold the backplane adapter board in place to ascertain that you have the correct holes. Use a 3/16” nut driver (not included in your upgrade kit) and screw the two stand-offs over the existing nuts (Figure 10).

4. Align the backplane adapter board with the holes in the ribbon connector and seat the adapter board (PC364). Ensure that the locking levers (ears) are closed.

5. Use a Phillips-head screwdriver and attach 2-56 x 1/4” pan head Phillips screws through the backplane adapter board and into each stand-off. The screws are included in your upgrade kit (PSI PN 12-09-3104) (Figure 11).


Figure 8: Backplane adapter board (PC364)


Figure 9: Stand-offs

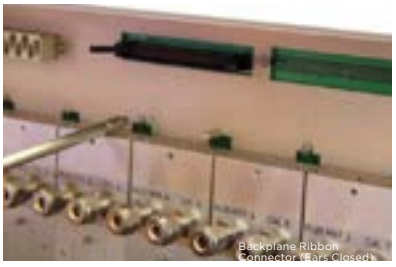


Figure 10: Attaching stand-offs


Figure 11: Attaching the backplane adapter board (PC364)

6. Bring the new rear panel (from your upgrade kit) close to the rear of the upgrade rack, with the power switch assembly near the power module (15-pin rack mounted connector). As previously mentioned, connect the three wires from the power switch assembly to the 15-pin connector as follows:

    - black wire (line) in position marked 6;
    - white wire (neutral) in position marked 10;
    - green wire (ground) in position marked 30

    Ensure that the spade connectors are fully seated (Figure 12).

Figure 12: Attaching spade connectors

7. Locate the 60-pin ribbon cable from your upgrade kit. Attach the ribbon cable to the backplane adapter board (PC364) with the cable exiting up (Figure 13). Ensure that the locking levers (ears) are completely closed, and that the red-colored trace connects to pin #1.

Figure 13: Connecting 60-pin ribbon cable to adapter board

8. Connect the keyed 60-pin ribbon cable to the connector on the new controller and switch assembly. Make sure that the holes are aligned and ascertain that the locking levers (ears) are fully closed. Crease the cable and fold it together so that it will fit into the space provided. Make sure that all wires and cables are away from possible pinch points (Figure 14).

Figure 14: Folding the ribbon cable

9. Attach the rear panel assembly to the rack with four (4) phillips-head screws through the side panels. Leave the screws slightly loose to allow for some adjustment in the next step (Figure 15).

10. Using four (4) screws secure the rear panel to the pneumatic manifolds (Figure 16). Fully tighten the screws.

Figure 15: Side panel screws

11. Tighten the four (4) side panel screws.

Figure 16: Inserting the rear panel sheet metal screws.

INSTALL NEW 98RK-1 FRONT PULL-OUT TRAY

1. Ensure that the front pull-out tray edge guides align with the ears of the guide rails on your 98RK-1 chassis. Slide the tray in and ascertain that it glides in smoothly (Figure 17).

2. Ensure that the knurled thumbscrews are fully engaged, and tightened (Figure 18).

Figure 17: Inserting the fron pull-out tray

Figure 18: Tightening thumbscrews

INITIAL POWER-UP

1. Reconnect the line power cord to the rear of your rack.

2. Engage the power button on the front of your rack.

3. All LEDs should briefly illuminate, with the +12, +5, 24, and -12 volt indicators remaining illuminated.

SYSTEM CHECKOUT

1. Connect the upgraded rack to your Ethernet. The host connection light should illuminate, indicating a valid Ethernet connection. The color of the indicator light signifies the type of connection established. For example: yellow for a 10T, green for 100T, or blue for 1000T-based connection. Any internal and external NetScanner connections will indicate valid links on their front panel LEDs.

2. Further set-up and configuration operations are covered in the 98RK-1/9816 User's Manual, available on the accompanying CD.