

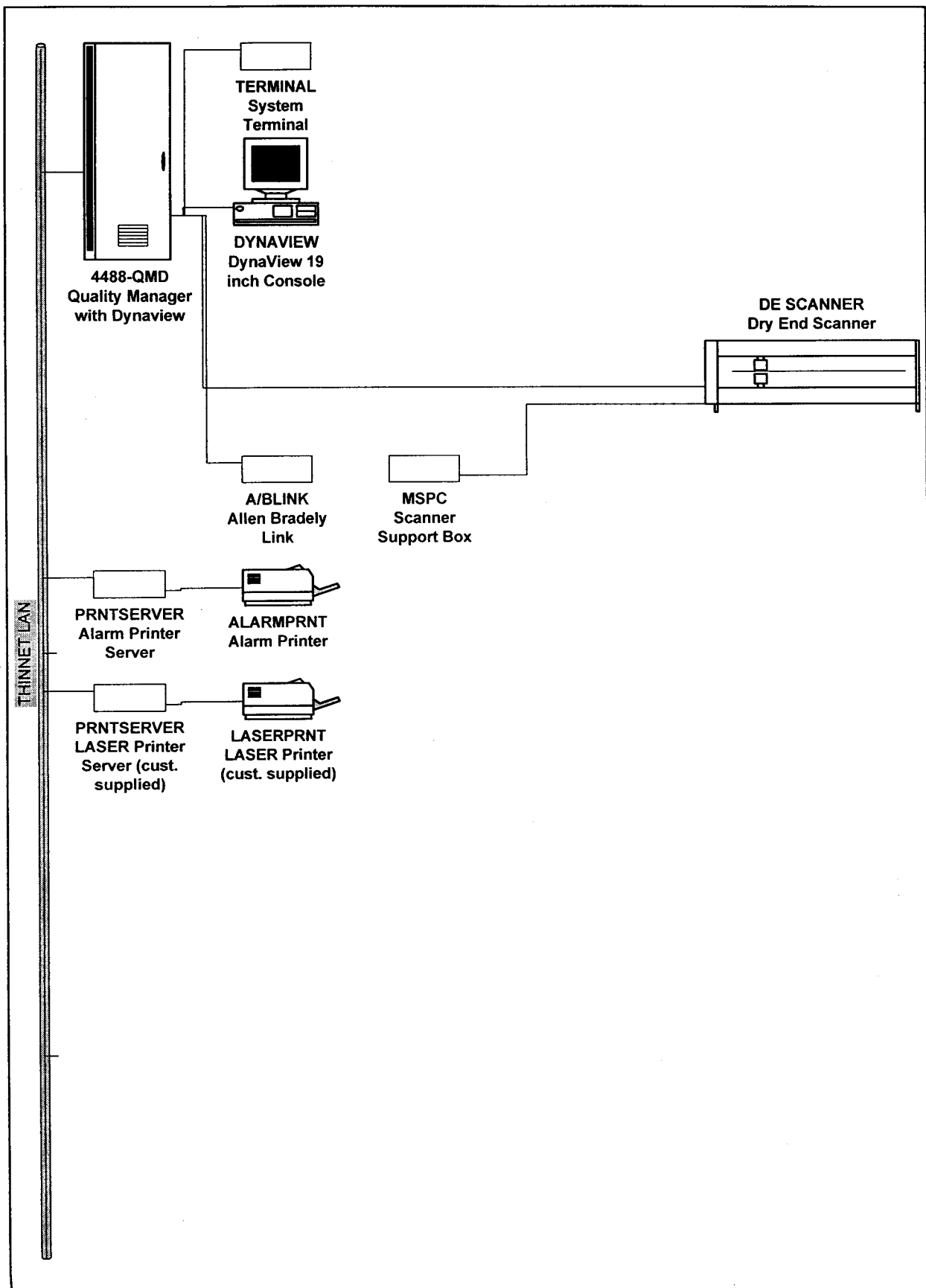
Installation Manual

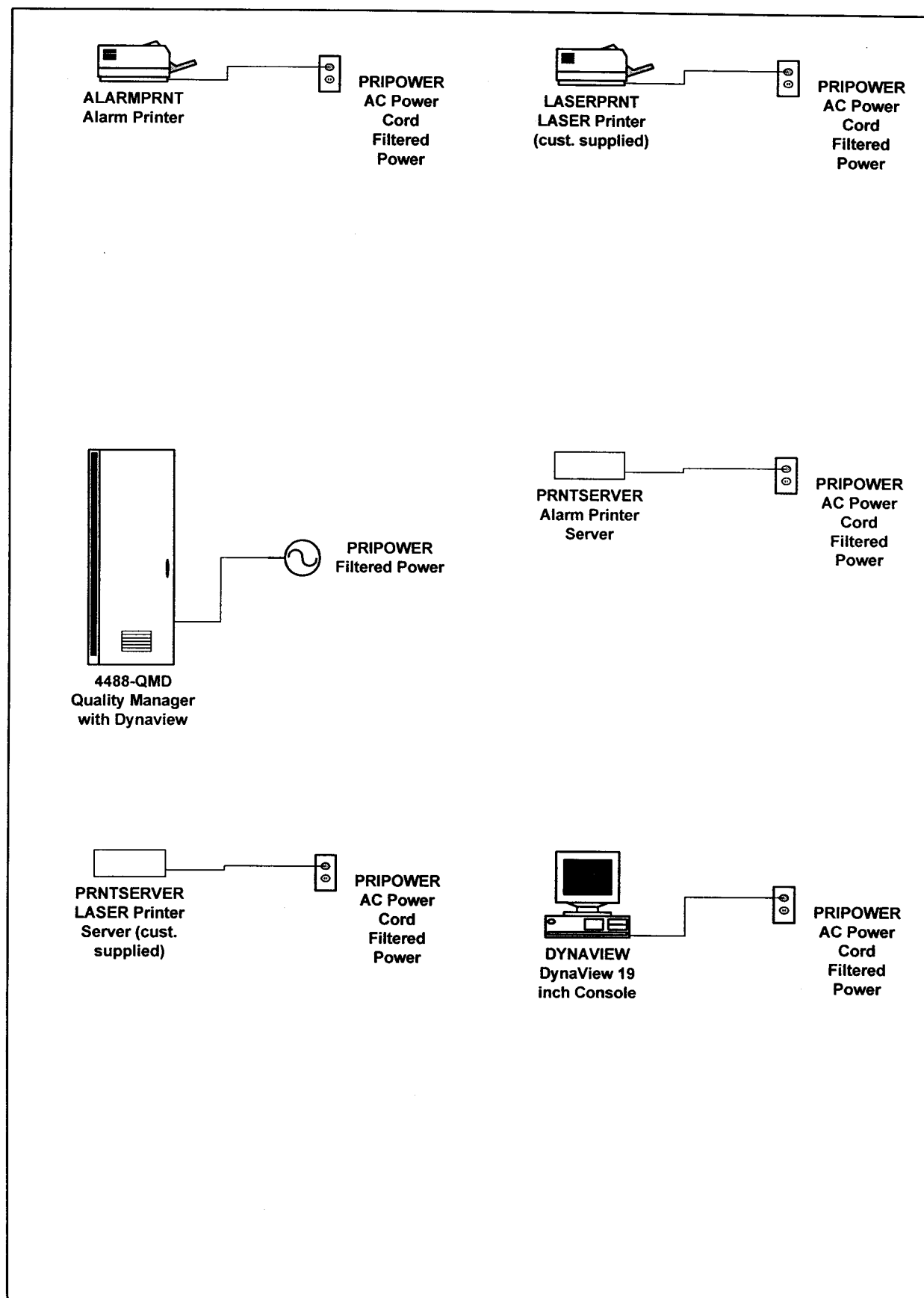
**Natick Paperboard Corp.
Board Machine #1**

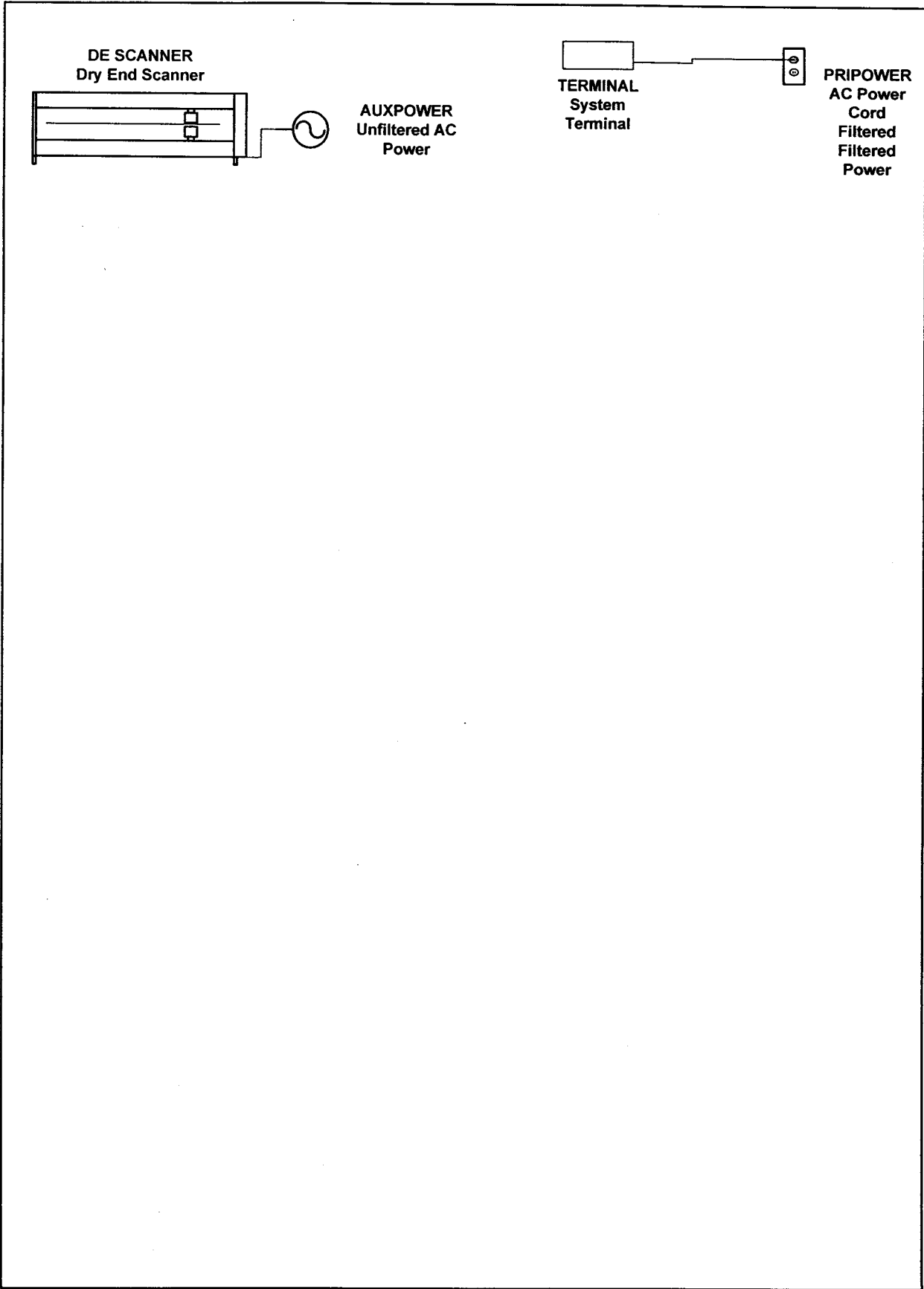
Measurex System #: 5664

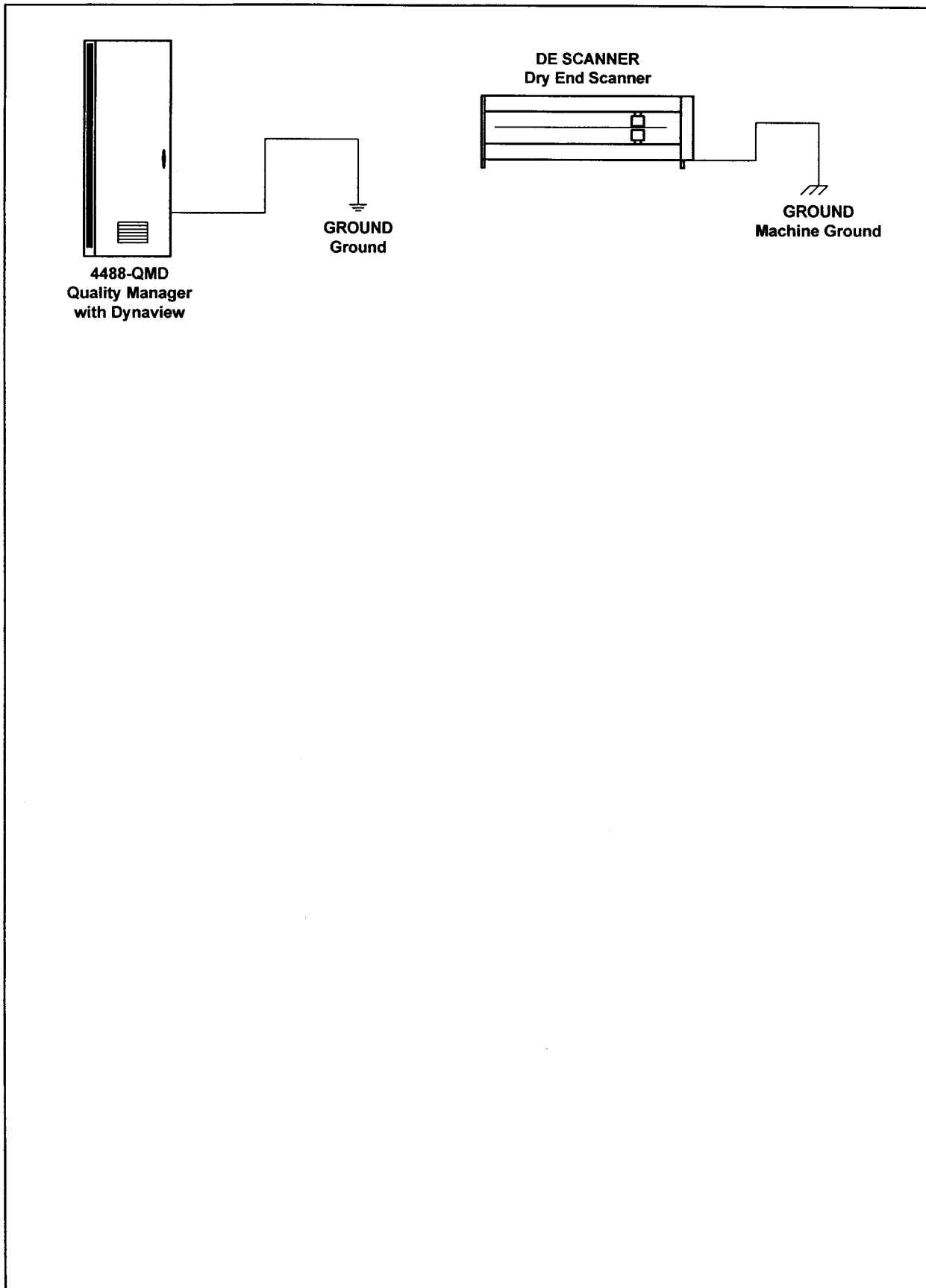
Created By: Honeywell - Measurex

**Manual Revision: 1.0
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Model Number: 4488-QMD**Equipment Name: 4488-QMD****QUALITY MANAGER WITH DYNAVUEW****Height:** 71in / 1803mm**Height Notes**

1. Add 3.94in / 100mm for cable base

Width: 31.75in / 806.8mm**Depth:** 25.7in / 652.8mm**Weight:** 669LBS / 301.1KG**Weight Notes**

1. Weight is for fan/heat exchanger cooled cabinet.
2. Air conditioned cabinet weight: 834LBS / 375.3Kg.

Environmental Requirements	
Temperature Range	41°F to 125°F / 5°C to 52°C, See notes
Relative Humidity	10% to 75% (Non-Condensing)
BTU	8525/Hr, 511/Hr
Air Cooling	Yes
Water Cooling	Yes

Environmental Notes

1. Environmental conditions for fan cooling:
 - a. (For control room non-corrosive conditions)
 - b. Use fan cooling (re-circulating ambient air)
 - c. Temperature range = 41°F to 104°F / 5°C to 40°C.
 - d. Control tolerance = +/-5.4°F (+/-3C)
 - e. Max. rate of change = +/-18F/hr (10C/hr)
 - f. Humidity range = 10-75%RH (Non-Condensing)
 - g. Max moisture content = .02LB (.009KG/KG)
2. Environmental conditions for air cooled air conditioning:
 - a. For mill floor-corrosive or non-corrosive conditions but relatively dust + fiber free: Use air cooled air conditioner.
 - b. Temperature range = 50°F to 125°F / 10°C to 52°C.
3. Environmental conditions for water cooled air conditioning:
 - a. For mill floor-corrosive or non-corrosive conditions, relatively dust + fibers present or free: Use water cooled air conditioner.
 - b. Temperature range: 50°F to 150°F / 10 to 66°C.
 - c. Max water temperature: 90°F / 32°C.
 - d. Water flow rate: 2.0 gpm / 7.6 lpm..
 - e. Water pressure: 30 to 80 PSI

4. Environmental conditions for heat exchanger:
 - a. For mill floor-corrosive or non-corrosive condition, dust + fibers present or free.
 - b. Temperature range = 50°F to 125°F / 10°C to 52°C.
 - c. Max water temperature: 90°F / 32°C.
 - d. Water flow rate: 1.0 gpm / 3.8 lpm.
 - e. Water pressure: 30 to 80PSI.
5. Water specifications apply only if cabinet has a water cooled air conditioner.

Filtered Electronics Power	
Voltage	115 VAC
Current	14.8
KVA	1.7
Frequency	60
Phase	Single
Circuit Breaker Size (AMPS)	20
Inrush	52.4

Filtered Electronics Power Notes

1. From automatic voltage regulator.
2. If the optional air conditioner is not supplied, then both the electronic and cooling shall be connected to the same power service.

Grounding Requirements	
Earth Ground Required	Yes

Lifting Instructions

1. Use lifting eyes

Access Notes

1. Allow 32in / 812.8mm for front door swing.
2. Allow 32in / 812.8mm for rear door swing.

Installation Notes

1. Conduit/Cables should enter from bottom.
2. Signal cables must extend 12 feet beyond the conduit end for termination purposes and each cable must be identified by its respective cable number.
3. For fan/heat exchanger cooling:
 - a. Customer shall provide dedicated circuit breaker.
 - b. Power shall be provided by three wire customer supplied cable. They shall conform to the national electric code and local codes, or to any applicable codes outside the United States.
4. For air conditioning:
 - a. Both the electronics and the cooling shall be connected to the same power service.
 - b. Disconnect means: Ground per local electrical code. Separate customer furnished circuit breakers are recommended for each power source connected to this cabinet. Power shall be provided by three wire customer supplied cable. They shall conform to the national electric code and local codes, or to any applicable codes outside the United States.
5. Seal between mounting pad and GP enclosure and floor with RTV (MX P/N 16000001).
6. Seal all cable entries with foam (MX P/N 16000085).

Honeywell-Measurex Responsibilities

1. Supervision of mechanical installation.
2. Termination of all cabling entering Measurex equipment.
3. Connection of cooling water if required.
4. Equipment power-up and check-out.

Customer Responsibilities

1. Mount enclosure.
2. Pull and label all cables.
3. Plant side connection of power and ground cables.
4. Cooling Water: Provide specification water source, isolation valving, filtration. A supply and return/drain are required.

Model Number: 4236**Equipment Name: DYNAVVIEW****DYNAVVIEW 19 INCH CONSOLE****Height Notes**

1. Support Box: 4.26in / 108.2mm.
2. Dynatouch Keypad: 3in / 75mm.
3. Monitor: 18.8in / 477mm.

Width Notes

1. Support Box: 13in / 330.2mm.
2. Dynatouch Keypad: 19in / 483mm.
3. Monitor: 18.9in / 480mm.

Depth Notes

1. Support Box: 15.6in / 396.3mm.
2. Dynatouch keypad: 9.2in / 234mm.
3. Monitor: 21.5in 545mm.

Weight: 86LBS / 39KG**Weight Notes**

1. Weight is for support box, keyboard and monitor.

Environmental Requirements	
Temperature Range	40°F to 104°F / 5°C to 40°C
Relative Humidity	10%to 75% (non-condensing)
Control Room Environment	Yes

Environmental Notes

1. Temperature range: 40 to 104°F / 5 to 40°C.
2. Control Tolerance: +/-5.4°F / +/-3°C.
3. Max moisture content: .02lb/lb / .02kg/kg
4. Max rate of change: +/-18°F /hr (+/- 10C/hr)
5. Humidity range: 10 to 75%RH.
6. Typical heat dissipation: .29kVA, 989 BTU/Hr (249 Kcal.Hr).Intended for non-corrosive environment.

Filtered Electronics Power	
Voltage	90 to 132 VAC
Current	2.5
KVA	0.3
Frequency	60
Phase	Single
Circuit Breaker Size (AMPS)	5
Crest Factor	2
Inrush	30

Filtered Electronics Power Notes

1. From automatic voltage regulator.

Grounding Requirements	
Wall Receptacle Ground Required	Yes

Access Notes

1. Allow 4in / 101.6mm for cable access at rear.

Installation Notes

1. Each cable must be identified by its respective cable number.
2. Power and ground are supplied from a standard three prong outlet.
3. Power cord is approximately 3ft / 1.0 meter long.

Honeywell-Measurex Responsibilities

1. Supervision of equipment placement.
2. Termination of all cabling.
3. Equipment power-up and check-out.

Customer Responsibilities

1. Place equipment.
2. Pull and label all cables.
3. Provide power and ground to three prong outlet.

Cable Notes

1. Maximum cable length is 300ft / 100m.

Model Number: 2200-1**Equipment Name: DE SCANNER****DRY END SCANNER****Height:** 63in / 1600.2mm**Height Notes**

1. Add 7.25in / 184.15mm to scanner height for radiation lights.
2. Height of the motor controller is 20in / 508mm.

Width: Installation dependent**Width Notes**

1. Width of the motor controller is 14.96in / 379.98mm.

Depth: 18.30in / 464.82mm**Depth Notes**

1. Includes heads, set at zero degrees pass-angle and no external sensors.
2. Depth of the motor controller is 9.5in / 241.3mm.

Weight: Installation dependent**Weight Notes**

1. Scanner weight is 1500 LBS / 680Kg + 10 LBS / 4.6Kg per inch of beam length.
2. Motor controller weight is 29Lbs / 11Kg.

Environmental Requirements	
Temperature Range	50°F to 212°F / 10°C to 100°C
Relative Humidity	95% (Non-Condensing)
Air Cooling	Yes
Water Cooling	Yes
Cooling Water Flow	2.0 gpm / 7.6 lpm
Cooling Water Pressure	50 - 80 psig / 345 - 551 kPa / 3.51 - 5.62 kg/cm2
Cooling Water Temperature	50°F to 85°F / 10°C to 29.4°C
Compressed Air Flow	5 - 10 scfm / 141.5 - 283 lpm / 0.14 - 0.28 m3/min
Compressed Air Pressure	60 - 100 psig / 413 - 689 kPa / 4.21 - 7.03 kg/cm2
Compressed Air Temperature	80°F to 95°F / 26.6°C to 35°C
Cooling/Purge Air Flow	1000 scfm / 28316 lpm / 28.31 m3/min
Cooling/Purge Air Pressure	1.0 H2O / 2.5 cm H2O at frame duct connection.
Cooling/Purge Air Temperature	Dry Bulb temperature 0°F to 18°F / -17°C to -8°C below the scanner ambient temperature and no warmer than 120°F / 49°C.

Environmental Notes

1. Keep water circulation pump operating to retain superior scanner alignment under all environmental conditions.
2. Operation temperature is 50°F to 212°F / 10°C to 100°C with air purge enabled.
3. If scanner is installed in a Tissue mill, use a 2 ft X 2 ft air filter for purge air.

4. See installation drawings for air purge specifications.

Unconditioned Electronics Power	
Voltage	220 to 240 VAC
Current	11
KVA	3.0
Frequency	60
Phase	Single
Circuit Breaker Size (AMPS)	20

Unconditioned Electronics Power Notes

1. Customer installed if required.
2. If customer elects to install an AC service outlet in scanner end-pan, customer must supply outlet, wiring and breaker.

Grounding Requirements	
Earth Ground Required	Yes
Machine Ground Required	Yes

Grounding Notes

1. Scanner must be grounded to the machine frame.
2. Motor controller must be connected to earth ground.

Lifting Instructions

1. To install scanner move lift eyes to top of beam.
2. Lift eyes are rated 6000# each. Caution do not go below 80 degrees lift angle from horizontal.
3. Do not lift scanner anywhere else except under lower beam bolts using wood blocks. Lift eyes preferred.

Access Notes

1. Allow at least 24 inches / 609.6mm CD clearance for tending-end access cover opening radius.
2. Allow at least 24 inches / 609.6mm CD clearance for drive-end access cover opening radius.
3. Allow at least 15 inches / 381mm vertical clearance above the scanner for upper beam access cover removal.

Installation Notes

1. Add 1 inch for rubber mount pads + shims provided in the installation kit.
2. Install a 10 inch (minimum diameter) air duct to provide 'Outside' (cleaner, drier air away from the process) air.
3. External closed-loop cooling unit recommended for proper head temperature control.
4. Adequate and safe servicing access is required at the frame ends.
5. All conduits to be plugged with duct seal.
6. All cables must extend beyond conduit a minimum of 7 ft. for terminations. provide a minimum cable service loop of 8.00in / 203.2mm to the scanner end pan from top of conduit.
7. Allow a service loop from the end pan conduit fitting to the endbell enclosure. Make the loop long enough to allow the endbell door to swing open to the far left service position.
8. When pass angle exceeds 45 degrees tilt scanner up to 10 degrees maximum.
9. Caution: Corrosion may occur if lifting eye-bolts are removed. If eye-bolts are removed coat holes with RTV (MX P/N 16000001) to prevent rust.

Honeywell-Measurex Responsibilities

1. Supervision of scanner frame mechanical installation.
2. Termination of all cabling entering Measurex equipment.
3. Connection of cooling water and compressed air services to scanner.
4. Alignment of scanner heads.
5. Equipment power-up and check-out.
6. Sensor calibration and verification.
7. Adjustment of scanner pass angle.
8. Adjustment of head scan limits.

Customer Responsibilities

1. Design, fabricate, supply and anchor the scanner frame mounts.
2. Set, level and anchor the scanner frame.
3. Mount the scanner drive controller box.
4. Pull and label all cables.
5. Plant side connection of power and ground cables.
6. Cooling Water: Provide specification water source, isolation valving, filtration with servicing bypass, piped to scanner drive-end location, terminated with 1/4in ID hose connectors. A supply and return/drain are required.
7. Compressed Air: Provide specification air source, isolation valving, Measurex provided filtration mounting, piped to scanner drive-end location. terminated with 1/4in ID hose connectors.
8. Cooling/Purge Air: Provide specification air source, damper, ducting, connection to scanner drive-end location.
9. Customer is to provide a suitable safety platform at both ends of the scanner approximately 18in below the passline. This applies to all scanners located more than 24in above the floor.

Cable Notes

1. Maximum cable length between the scanner and the computer bay is 500ft / 163m.

Model Number: 7657
Equipment Name: TERMINAL
SYSTEM TERMINAL

Height: 12.3in / 312.42mm

Height Notes

1. Keyboard: 1.25in / 31.75mm.

Width: 12.5in / 317.5mm

Width Notes

1. Keyboard: 18.75in / 476.25mm.

Depth: 13.5in / 342.9mm

Depth Notes

1. Keyboard: 6.9in / 175.26mm.

Weight: 20LBS / 44KG

Environmental Requirements	
Temperature Range	50°F to 95°F / 10°C to 35°C
Relative Humidity	8% to 80%
Control Room Environment	Yes
BTU	154

Environmental Notes

1. Intended for non-corrosive, benign control room environments.
2. Temperature range: 50°F to 95°F / 10°C to 35°C.
3. Temperature control tolerance: +/-5.4°F (+/-3C).
4. Maximum moisture content: .02lb/lb (.02kg/kg).
5. Maximum rate of change: +/-18F/hr (+/- 10C/hr).
6. Maximum altitude: 7000ft.
7. Noise: 3db.
8. Typical heat dissipation: .46kVA, 154 BTU/Hr (38.7 Kcal.Hr).

Filtered Electronics Power	
Voltage	120 VAC
Current	0.6
KVA	0.072
Frequency	60 / 50
Phase	Single
Circuit Breaker Size (AMPS)	5

Filtered Electronics Power Notes

1. Electronics Power

Grounding Requirements	
Wall Receptacle Ground Required	Yes

Access Notes

1. Allow 4in / 101.6mm for cable access at rear.

Installation Notes

1. It is recommended that the terminal be installed near the computer.

Honeywell-Measurex Responsibilities

1. Supervision of equipment placement.
2. Termination of all cabling.
3. Equipment power-up and check-out.

Customer Responsibilities

1. Place equipment.
2. Pull and label all cables.
3. Provide power and ground to three prong outlet.

Cable Notes

1. Maximum cable distance from the computer is 300ft / 100m if RS422 is used.

Model Number: 4422**Equipment Name: ALARMPRNT
ALARM PRINTER****Height:** 5.9in / 149.86mm**Width:** 17.9in / 454.66mm**Depth:** 14.2in / 360.68**Weight:** 20.9LBS / 9.5KG

Environmental Requirements	
Temperature Range	40°F to 95°F / 5°C to 35°C
Relative Humidity	20% to 80% (Non-Condensing)
Control Room Environment	Yes

Environmental Notes

1. Intended for control room non-corrosive conditions.
2. Air flow requirements: Open Operation- 20 scfm / 566 lpm / .56 m3/min per person in occupied area.
Enclosed unit- 20 CFM in enclosure.

Filtered Electronics Power	
Voltage	115 VAC
Current	2
KVA	0.25
Frequency	60
Phase	Single
Circuit Breaker Size (AMPS)	5

Filtered Electronics Power Notes

1. From automatic voltage regulator.

Grounding Requirements	
Wall Receptacle Ground Required	Yes

Access Notes

1. Allow 4in / 101.6mm for cable access in rear.

Installation Notes

1. Each cable must be identified by its respective cable number.
2. Power and ground are supplied from a standard three prong outlet.
3. Power cord is approximately 3ft / 1.0 meter long.

Honeywell-Measurex Responsibilities

1. Supervision of equipment placement.
2. Termination of all cabling.
3. Printer setup and configuration.
4. Equipment power-up and check-out

Customer Responsibilities

1. Place equipment.
2. Pull and label all cables.
3. Provide power and ground to three prong outlet.

Cable Notes

1. Printer is LAN based.

Model Number: THIN**Equipment Name: THINNET LAN
THINNET LAN**

Installation Notes

1. The cable must be identified by its respective cable number.

Honeywell-Measurex Responsibilities

1. Supervise mechanical installation.
2. Termination of all cabling entering Measurex equipment.
3. Supervise equipment power-up and checkout.

Customer Responsibilities

1. Pull and label all cables.

Cable Notes

1. Ensure that the maximum thin wire segment backbone of 412.5 feet / 125 meters is not exceeded.
Termination: BNC connectors. The total thin wire for a complete daisy chain segment is 610.5 feet / 185 meters. Both ends of coax cable must be have 50 ohm termination resistors installed.
2. Thinnet part numbers:
 - a. Termination plug - 21001769
 - b. BNC Tee connector - 21000630
 - c. Thinnet Coax cable - RG58A/U assembly - 60000684
 - d. Coax connector 2 pl. - 21002054

Model Number: 4420**Equipment Name: LASERPRNT****LASER PRINTER (CUST. SUPPLIED)****Height:** 13.1in / 333.3mm**Width:** 16.1in / 410mm**Depth:** 21.1in / 537.1mm**Weight:** 40LBS / 18.3KG

Environmental Requirements	
Temperature Range	60°F to 90°F / 16°C to 32°C
DB Noise Level	50db Running / 33db Idle
Relative Humidity	8% to 80% (Non-Condensing)
Control Room Environment	Yes

Environmental Notes

1. Intended for control room non-corrosive conditions.
2. Air flow requirements: Open Operation - 20 scfm / 566 lpm / .56 m3/min per person in occupied area.
Enclosed unit - 20 CFM in enclosure.

Filtered Electronics Power	
Voltage	100 to 127 VAC
Current	9.8
KVA	1.2
Frequency	60 / 50
Phase	Single
Circuit Breaker Size (AMPS)	15

Filtered Electronics Power Notes

1. From automatic voltage regulator.

Grounding Requirements	
Wall Receptacle Ground Required	Yes

Access Notes

1. Allow 4in / 101.6mm for cable access in rear.

Installation Notes

1. Printer name and address must be set up in the Application Manager and each XOP which will send requests to the printer.
2. Printer setup as a postscript parallel printer.
3. Print server cues print requests from network and sends them to printer.
4. Proper network setup of print server required. Current Measurex print server is LANTRONIX EPS1/EPS2.
5. See vendor documentation for setup.
6. Each cable must be identified by its respective cable number.
7. Power and ground are supplied from a standard three prong outlet.
8. Power cord is approximately 3ft / 1.0 meter long.

Honeywell-Measurex Responsibilities

1. Supervision of equipment placement.
2. Termination of all cabling.
3. Printer setup and configuration.
4. Equipment power-up and check-out

Customer Responsibilities

1. Place equipment.
2. Pull and label all cables.
3. Provide power and ground to three prong outlet.