enthermics®
medical systems

Operation and Care Manual

ivNow-1 counter-top module

ivNow-6 with Vertical Wall Mount Bracket Kit

ivNow-3 with 3L Bag Tilt kit, counter-top module

ivNow-1
ivNow-2
ivNow-3
ivNow-4
ivNow-5
ivNow-6

ivNow

120V & 230V

An ISO 13485:2003 certified company
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PRINTED IN U.S.A.

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MADE IN THE U.S.A.

PRINTED IN U.S.A.

MN-28929 (Rev 3) • 12/14

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EC REP

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30175 Hannover
Germany
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ENVIRONMENTAL CONDITIONS

Transport and Storage Environmental Conditions (not to exceed 15 days)

- Ambient temperature range of -40° to +70°C (-40° to +159°F).
- Relative humidity range of 10% to 95%, non-condensation.
- Atmospheric pressure range of 50KPa to 106KPa.

Operational Environmental Conditions

- Unit must acclimate to room temperature in the environment it will be placed. 24 hours is recommended.
- Recommended environmental temperature range is 15°C to 32°C (60°F to 90°F).
- Recommended relative humidity is above 20%, non-condensation.

DELIVERY

The fluid warming module has been thoroughly tested and inspected to insure only the highest quality unit is provided. Upon receipt, check for any possible shipping damage and report it at once to the delivering carrier. See Transportation Damage and Claims section located below.

This appliance, complete with unattached items and accessories, may have been delivered in one or more packages. Check to ensure that all standard items and options have been received with each model as ordered.

Save all the information and instructions packed with the appliance. Complete and return the warranty card to the factory as soon as possible to assure prompt service in the event of a warranty parts and labor claim.

This manual must be read and understood by all people using or installing the equipment model. Contact the service department if you have any questions concerning installation, operation, or maintenance.

Note: Warranty registration and details are available on the website: **http://www.enthermics.com**

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

Always include both model and serial numbers in your correspondence regarding the unit.

Model: _____

Serial Number: _____

Purchased From: _____

Date Installed: _____ **Voltage:** _____

TRANSPORTATION DAMAGE & CLAIMS

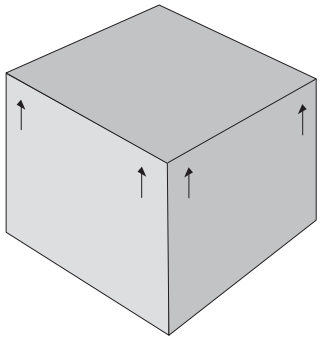
All Enthermics Medical Systems equipment is sold F.O.B. shipping point, and when accepted by the carrier, such shipments become the property of the consignee.

Should damage occur in shipment, it is a matter between the carrier and the consignee. In such cases, the carrier is assumed to be responsible for the safe delivery of the merchandise, unless negligence can be established on the part of the shipper.

1. Make an immediate inspection while the equipment is still in the truck or immediately after it is moved to the receiving area. Do not wait until after the material is moved to a storage area.
2. Do not sign a delivery receipt or a freight bill until you have made a proper count and inspection of all merchandise received.
3. Note all damage to packages directly on the carrier's delivery receipt.
4. Make certain the driver signs this receipt. If he refuses to sign, make a notation of this refusal on the receipt.
5. If the driver refuses to allow inspection, write the following on the delivery receipt: **Driver refuses to allow inspection of containers for visible damage.**
6. Telephone the carrier's office immediately upon finding damage, and request an inspection. Mail a written confirmation of the time, date, and the person called.
7. Save any packages and packing material for further inspection by the carrier.
8. Promptly file a written claim with the carrier and attach copies of all supporting paperwork.

We will continue our policy of assisting our customers in collecting claims which have been properly filed and actively pursued. We cannot, however, file any damage claims for you, assume the responsibility of any claims, or accept deductions in payment for such claims.

UNPACKING AND SET-UP



1. Carefully remove the appliance from the carton.
   NOTE: *Do not discard the carton and other packaging material until you have inspected the unit for hidden damage and tested it for proper operation.*

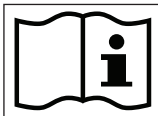
2. Read all instructions in this manual carefully before initiating the installation of this appliance.

   DO NOT DISCARD THIS MANUAL. This manual is considered to be part of the appliance and is to be provided to the owner or manager of the business or to the person responsible for training operators. Additional manuals are available from the service department.

3. Remove all protective plastic film, packaging materials, and accessories from the appliance before connecting electrical power.

SAFETY PROCEDURES AND PRECAUTIONS

Knowledge of proper procedures is essential to the safe operation of electrically energized equipment. In accordance with generally accepted product safety labeling guidelines for potential hazards, the following signal words and symbols may be used throughout this manual.

DANGER	Used to indicate the presence of a hazard that will cause severe personal injury, death, or substantial property damage if the warning included with this symbol is ignored.
WARNING	Used to indicate the presence of a hazard that **can** cause personal injury, possible death, or major property damage if the warning included with this symbol is ignored.
CAUTION	Used to indicate the presence of a hazard that can or will cause minor or moderate personal injury or property damage if the warning included with this symbol is ignored.
CAUTION	Used to indicate the presence of a hazard that can or will cause minor personal injury, property damage, or a potential unsafe practice if the warning included with this symbol is ignored.
	Used to indicate that referral to operating instructions is a mandatory action. If not followed the operator or patient could suffer personal injury.
	Used to indicate that referral to operating instructions is recommended to understand operation of equipment.
NOTE:	Used to notify personnel of installation, operation, or maintenance information that is important but not hazard related.

1. Fluid warmers are ONLY intended for warming medical solutions for irrigation and injection prior to their use. Please refer to the labeling of the manufacturer of the products to be warmed regarding the recommended temperature and the duration of warming. No other use for this device is authorized or recommended.
2. This warmer is intended for use in commercial establishments where all operators are familiar with the purpose, limitations, and associated hazards of this device. The warmer can be used wherever there is appropriate space and electrical source including patient support areas, ER, ICU, PAU, surgical suites, patient rooms, and nursing stations. Operating instructions and warnings must be read and understood by all operators and users.
3. Any troubleshooting guides, component views, and parts lists included in this manual are for general reference only and are intended for use by qualified technical personnel.
4. This manual should be considered a permanent part of this device. This manual and all supplied instructions, diagrams, schematics, parts lists, notices, and labels must remain with the device if the item is sold or moved to another location.

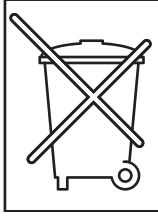
NOTE

A temporary odor may be noticeable upon initial start-up of unit. Contact manufacturer if the odor persists after a day or longer of continuous use.

NOTE

This unit should not be left unattended for periods of more than 24 hours. In case of absences longer than 24 hours, disconnect the warmer from its power source.

NOTE



For equipment delivered for use in any location regulated by the following directive:

DO NOT DISPOSE OF ELECTRICAL OR ELECTRONIC EQUIPMENT WITH OTHER MUNICIPAL WASTE.

PREPARATION

Before operating the module(s), clean the exterior of the unit with a damp cloth and general hospital cleaner (isopropyl alcohol)

ELECTRICAL INFORMATION

The power specifications are located on the unit identification nameplate. This nameplate is permanently attached to the unit and must be located to verify power requirements.

ivNow-1 POWER REQUIREMENTS

120 V.A.C. — 60 Hz, 1 ph
0.15 kW, 1.3 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-15P
15A - 125V Plug
Hospital Grade

ivNow-2 POWER REQUIREMENTS

120 V.A.C. — 60 Hz, 1 ph
0.3 kW, 2.5 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-15P
15A - 125V Plug
Hospital Grade

ivNow-3 POWER REQUIREMENTS

120 V.A.C. — 60 Hz, 1 ph
0.45 kW, 3.8 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-15P
15A - 125V Plug
Hospital Grade

ivNow-4 POWER REQUIREMENTS

120 V.A.C. — 60 Hz, 1 ph
0.6 kW, 5.0 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-15P
15A - 125V Plug
Hospital Grade

ivNow-5 POWER REQUIREMENTS

120 V.A.C. — 60 Hz, 1 ph
0.75 kW, 6.3 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-15P
15A - 125V Plug
Hospital Grade

ivNow-6 POWER REQUIREMENTS

120 V.A.C. — 60 Hz, 1 ph
0.9 kW, 7.5 Amps
Safety Class I Equipment
No Applied Parts
Mode of Operation: Continuous

NEMA 5-15P
15A - 125V Plug
Hospital Grade

Grounding reliability can only be achieved when equipment is connected to an equivalent receptacle marked "Hospital Grade."

Protective Earth Ground Symbol

Medical Equipment classified by Underwriters Laboratories with Respect to Electrical Shock, Fire and Mechanical Hazards only, in Accordance with UL 60601-1 and CAN/CSA C22.2 No. 601.1.

UL File No. E201645

ATTENTION
Consult accompanying documents

Hazardous Voltage Present

CAUTION

THIS UNIT HAS NOT BEEN APPROVED FOR WARMING OF BLOOD OR BLOOD PRODUCTS.

DANGER

ENSURE POWER SOURCE MATCHES VOLTAGE IDENTIFIED ON APPLIANCE RATING TAG.

WARNING

INJECTION FLUID MANUFACTURER SUGGESTS NOT TO WARM INJECTION FLUIDS ABOVE 40°C (104°F).

IF FLUIDS ARE WARMED ABOVE SUGGESTED TEMPERATURE, THEY SHOULD BE DISCARDED.

DANGER

DO NOT use this warming appliance in the presence of flammable anesthetic mixture (with air or with oxygen or nitrous oxide). THIS COULD CAUSE AN EXPLOSION!

ELECTRICAL INFORMATION

The power specifications are located on the unit identification nameplate. This nameplate is permanently attached to the unit and must be located to verify power requirements.

ivNow-1 POWER REQUIREMENTS

230 V.A.C. — 50/60 Hz, 1 ph
0.15 kW, 0.7 Amps
Type B Equipment

BS 1363 Plug* (UK only)
CEE 7/7* 220-230V Plug

ivNow-2 POWER REQUIREMENTS

230 V.A.C. — 50/60 Hz, 1 ph
0.3 kW, 1.3 Amps
Type B Equipment

BS 1363 Plug* (UK only)
CEE 7/7* 220-230V Plug

ivNow-3 POWER REQUIREMENTS

230 V.A.C. — 50/60 Hz, 1 ph
0.45 kW, 2.0 Amps
Type B Equipment

BS 1363 Plug* (UK only)
CEE 7/7* 220-230V Plug

ivNow-4 POWER REQUIREMENTS

230 V.A.C. — 50/60 Hz, 1 ph
0.6 kW, 2.6 Amps
Type B Equipment

BS 1363 Plug* (UK only)
CEE 7/7* 220-230V Plug

ivNow-5 POWER REQUIREMENTS

230 V.A.C. — 50/60 Hz, 1 ph
0.75 kW, 3.2 Amps
Type B Equipment

BS 1363 Plug* (UK only)
CEE 7/7* 220-230V Plug

ivNow-6 POWER REQUIREMENTS

230 V.A.C. — 50/60 Hz, 1 ph
0.9 kW, 3.9 Amps
Type B Equipment

BS 1363 Plug* (UK only)
CEE 7/7* 220-230V Plug

*Other international plugs are available, contact factory for more information.

To prevent an electrical shock hazard between the appliance and other appliances or metal parts in close vicinity, an equalization-bonding stud is provided. An equalization bonding lead must be connected to this stud and the other appliances / metal parts to provide sufficient protection against potential difference. The terminal is marked with the following symbol.

Grounding reliability can only be achieved when equipment is connected to an equivalent receptacle marked "Hospital Grade."

Protective Earth Ground Symbol

Medical Equipment classified by Underwriters Laboratories with Respect to Electrical Shock, Fire and Mechanical Hazards only, in Accordance with UL 60601-1 and CAN/CSA C22.2 No. 601.1.

CE

ATTENTION
Consult accompanying documents

Hazardous Voltage Present

CAUTION

THIS UNIT HAS NOT BEEN APPROVED FOR WARMING OF BLOOD OR BLOOD PRODUCTS.

⚠ WARNING

INJECTION FLUID MANUFACTURER SUGGESTS NOT TO WARM INJECTION FLUIDS ABOVE 40°C (104°F).

IF FLUIDS ARE WARMED ABOVE SUGGESTED TEMPERATURE, THEY SHOULD BE DISCARDED.

⚠ DANGER

ENSURE POWER SOURCE MATCHES VOLTAGE IDENTIFIED ON APPLIANCE RATING TAG.

⚠ DANGER

DO NOT use this warming appliance in the presence of flammable anesthetic mixture (with air or with oxygen or nitrous oxide). THIS COULD CAUSE AN EXPLOSION!

GENERAL INFORMATION

The ivNow fluid warmer quickly warms and maintains the temperature of injection/intravenous and irrigation solutions prior to their use. The specially contoured warming module cradles solution bags in 0.5-, 1-, 2- & 3-liter sizes. Three-liter bag capacity available on ivNow-1, ivNow-2, & ivNow-3 with an additional adapter. Individual ivNow units cannot be stacked in the field. Multiple cavity units are available from the factory in the configurations on next page. The unit is controlled by one (1) power switch and individual electronic controls with L.E.D. display for each cavity. The control can easily be set to display temperatures in Celsius or Fahrenheit. A sensor in the heating plate detects the presence of a bag and engages the heating mechanism to quickly begin warming the fluid. Two (2) temperature sensors work in unison to precisely and continuously read the temperature of the bag and another sensor monitors the plate temperature. A green ready light will illuminate when fluid is within +0/-2°C (+0/-3°F) of the set point temperature. The heater will reengage as necessary to maintain the temperature within +0/-2°C (+0/-3°F) of the set point. The electronic control monitors the length of time the bag has been held at temperature, beginning when the bag reaches set point temperature. A status button will display the time the fluid has been held at temperature.

DANGER

AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

NOTE: In the event that fluid should spill inside the module, unplug the unit to prevent an electrical shock hazard. Wipe excess fluid from module immediately. Refer to qualified service personnel. Qualified service personnel should remove the module control and remove any remaining liquid. Perform necessary hospital electrical safety checks before returning the unit to operation.

SAFETY FEATURES

- The control of the ivNow is designed to display an error message (E-31) and stop heating if the temperature at the dual sensor switch is ever above 40°C (104°F).
- The control monitors the temperature of the aluminum plate that the heating element is attached to and it limits the temperature to a maximum of 54°C (130°F).
- The heating pad element is in series with an automatic cutout thermostat with a manual reset cutout thermostat located in different locations on the heating plate. Both cut off heat at 60°C (140°F).

CAUTION

THIS UNIT HAS NOT BEEN APPROVED FOR WARMING OF BLOOD OR BLOOD PRODUCTS.

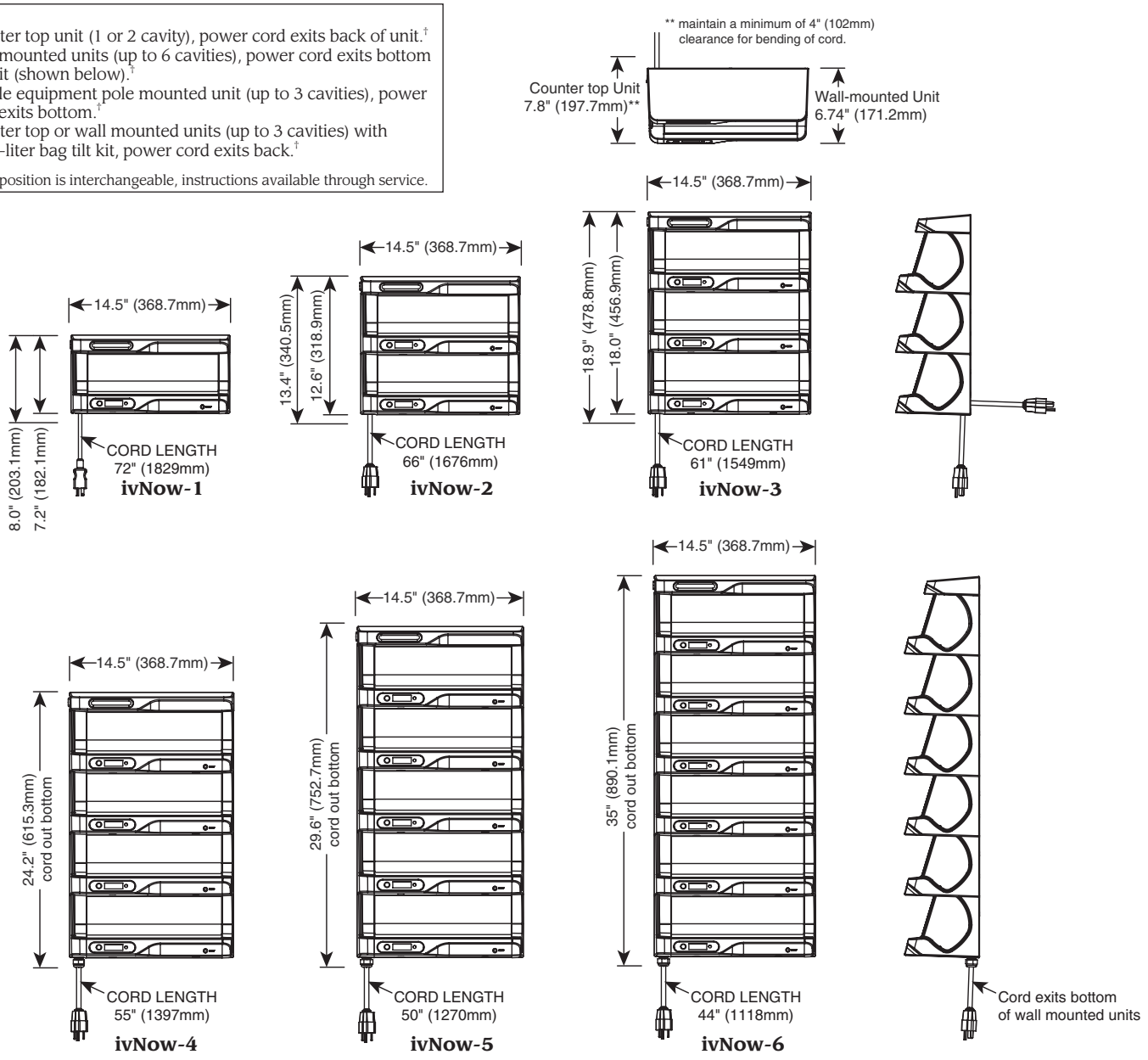
WARNING

REFER TO FLUID MANUFACTURER'S LABELING FOR RECOMMENDED WARMING PROCEDURES.

ivNow DIMENSIONS

Note:
- Counter top unit (1 or 2 cavity), power cord exits back of unit.†
- Wall mounted units (up to 6 cavities), power cord exits bottom of unit (shown below).†
- Mobile equipment pole mounted unit (up to 3 cavities), power cord exits bottom.†
- Counter top or wall mounted units (up to 3 cavities) with three-liter bag tilt kit, power cord exits back.†

†Cord position is interchangeable, instructions available through service.



ivNow CONFIGURATIONS

Note: Individual ivNow units cannot be stacked in the field. Multiple cavity units are available from the factory in the configurations below. Three-liter bag capacity available on ivNow-1, ivNow-2, & ivNow-3 with an additional adapter.

ivNow-1 (one (1) bag capacity) can be placed directly on a counter top, mounted on a mobile equipment pole stand, mounted on a wall using brackets, or mounted to a three-liter bag tilt kit*.

ivNow-2 (two (2) bag capacity) can be placed directly on a counter top, mounted on a wall using mounting brackets, or mounted to a three-liter bag tilt kit*.

ivNow-3 (three (3) bag capacity) must be mounted on a heavy duty mobile equipment pole stand, on a wall using mounting brackets, or mounted to a three-liter bag tilt kit*.

ivNow-4 (four (4) bag capacity) must be mounted on a wall using mounting brackets*.

ivNow-5 (five (5) bag capacity) must be mounted on a wall using mounting brackets*.

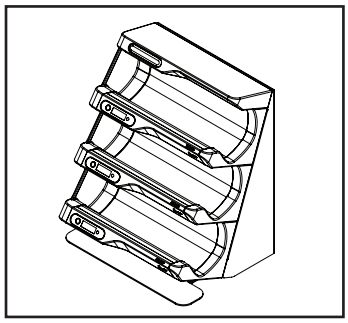
ivNow-6 (six (6) bag capacity) must be mounted on a wall using mounting brackets*.

*Mounting hardware sold separately.

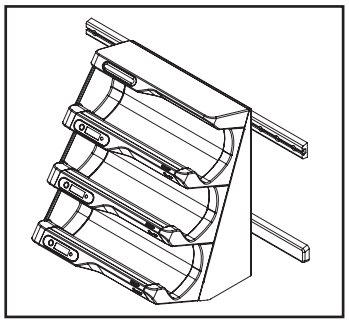
ivNow OPTIONS AND ACCESSORIES

ACCESSORIES		ivNow-1	ivNow-2	ivNow-3	ivNow-4, -5, -6
3L Bag Tilt Kit	COUNTER TOP	(cord exits back of unit) 5014126	(cord exits back of unit) 5014127	(cord exits back of unit) 5014128*	—
	WALL MOUNTED	(cord exits back of unit) 5014129	(cord exits back of unit) 5014130	(cord exits back of unit) 5014131*	—
	WALL MOUNTED OPA-0060-13	(cord exits back of unit) 5017700	(cord exits back of unit) 5017701	(cord exits back of unit) 5017702*	—
GCX Light Duty Roll Stand for Devices & Bracket Kit		mount to GCX equipment stand - stand included (cord exits bottom of unit) 5012246	—	—	—
GCX Heavy Duty Roll Stand for Devices & Bracket Kit		—	mount to GCX equipment stand - stand included 5013312	mount to GCX equipment stand - stand included 5013312	—
Bracket Kit for Equipment Stand		mount to equipment stand or mast - stand not included (cord exits bottom of unit) 5012735	—	—	—
Bracket Kit for Horizontal Wall Mount		one (1) GCX horizontal rail included 5012734	one (1) GCX horizontal rail included 5012734	two (2) GCX horizontal rails included 5012242	(cord exits bottom of unit) two (2) GCX horizontal rails included 5012242
Bracket Kit for Seismic Horizontal Wall Mount OPA-0698-10		one (1) GCX horizontal rail included 5016601	one (1) GCX horizontal rail included 5016601	two (2) GCX horizontal rails included 5016602*	two (2) GCX horizontal rails included 5016602*
Vertical Wall Channel Mount & Bracket Kit		one (1) GCX vertical rail included 5012241*	one (1) GCX vertical rail included 5012241*	one (1) GCX vertical rail included 5012241*	one (1) GCX vertical rail included 5012241*
Bracket Kit for Vertical Wall Channel Mount		GCX vertical rail not included 5012288*	GCX vertical rail not included 5012288*	GCX vertical rail not included 5012288*	GCX vertical rail not included 5012288*
Bracket for Mounting to Harloff Anesthesia Cart		1015253	1015254	1015255	—

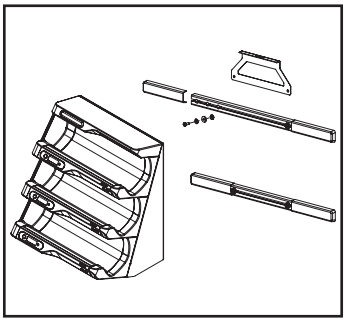
* See equipment diagram below



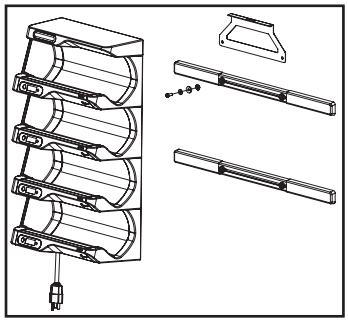
3L Bag Tilt Kit for counter top units (5014128 shown)



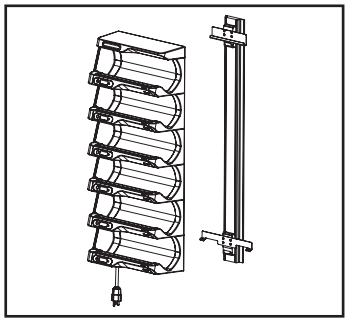
3L Bag Tilt Kit for wall mounted units (5014131 shown)



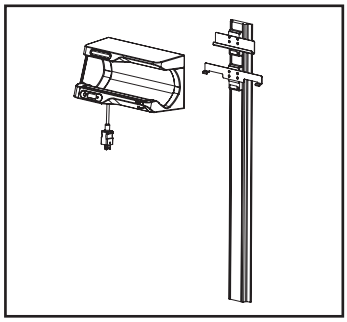
3L Bag Tilt Kit for wall mounted units (5017702 shown)
OPA-0060-13



Bracket Kit for Seismic Horizontal Wall Mount 5016602 (ivNow-3 to -6)
OPA-0698-10



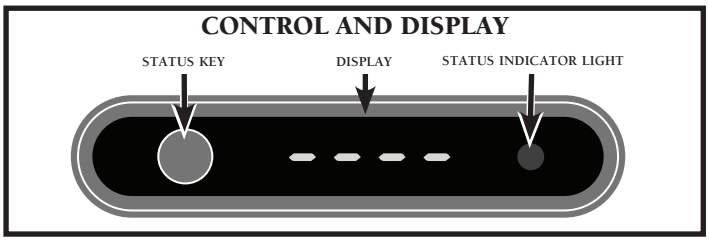
(ivNow-6 shown above)



(ivNow-1 shown above)

Vertical Wall Channel Mount Bracket Kit 5012241
Brackets only 5012288

CONTROL FEATURES



CONTROL PANEL KEY

STATUS KEY
Press to show the set temperature.

Hold for 2 seconds to see how long the fluid has been at set temperature. The first hour is indicated in minutes and seconds (MM:SS) and subsequent time is indicated in hours and minutes (HH:MM) for the first 24 hours. After 24 hours, time is displayed in days and fraction of day (DD.DD). The timer stops after 30.0 days. The time a fluid is held at temperature will remain in memory until a new bag is placed in the module. The word "dAtE" will flash intermittently when a bag has been warming in a unit for 14 days or longer. Remove fluid from cavity and check expiration date. Discard fluid if expired.

NOTE: The factory default set temperature is 40°C (104°F).

DISPLAY STATUS INDICATORS

DISPLAY
If no product is detected, the display will show 4 dashes (----).

When a product is first detected, a single dash will scroll around the display for 5 seconds while the unit is sensing the product temperature.

NOTE: Placing a warmed fluid bag with a temperature higher than the set-point in the module will cause the display to flash the actual temperature. The display will continue flashing until the temperature falls below the set point. Do not use fluid bag until display stops flashing.

During normal operation, the actual temperature is shown on the display.

In the event of an error, the display will show the error code and the error must be cleared by the user. See the "Troubleshooting" section of this manual for instructions.

STATUS INDICATOR LIGHT
The green STATUS INDICATOR will illuminate when the bag reaches set-temperature (+0/-2°C [+0/-3°F]).

TEMPERATURE FORMAT SELECTION
With the power turned on and no product loaded into the warming cavity, hold the STATUS button for 5 seconds to see the current temperature scale (°F/°C). While the scale is displayed, press the STATUS key to toggle the temperature scale. Do not place a bag in the module until the four dashes (----) display or the temperature format changes will not be saved.

⚠ DANGER

DO NOT use this warming appliance in the presence of flammable anesthetic mixture (with air or with oxygen or nitrous oxide). THIS COULD CAUSE AN EXPLOSION!

CAUTION

THIS UNIT HAS NOT BEEN APPROVED FOR WARMING OF BLOOD OR BLOOD PRODUCTS.

NOTE

Do not operate ivNow unit over a warm surface, appliance or heat source.

Ambient temperature should be no warmer than 6°C (10°F) below the set point temperature.

⚠ WARNING

REFER TO FLUID MANUFACTURER'S LABELING FOR RECOMMENDED WARMING PROCEDURES.

INSTALLATION/MOUNTING OF UNIT

ivNow modular units can be installed in a variety of ways.

- A single or double unit (ivNow-1 or ivNow-2) can be used on a counter top without any special mounting hardware.
- One, two or three module units (ivNow-1, ivNow-2 or ivNow-3) can be placed on a three-liter bag tilt stand (Figure 1).
- One, two or three module units (ivNow-1, ivNow-2 or ivNow-3) can be wall-mounted with the three-liter bag tilt stand (Figure 2).
- All units can be wall-mounted using wall mount hardware (Figure 3).
- A single unit (ivNow-1) can also be mounted on a mobile equipment pole.

NOTE: Individual ivNow units cannot be stacked. Units with multiple stacked module configurations are available from the factory only.

See the separate instructions provided with your mobile equipment pole or wall mounting kit for installation guidance.

Figure 1 - Three-liter Bag Tilt Kit (counter top)

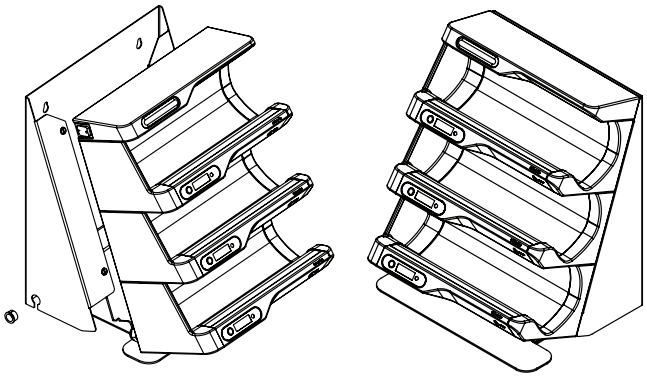


Figure 2 - Three-liter Bag Tilt Kit (wall mounted)

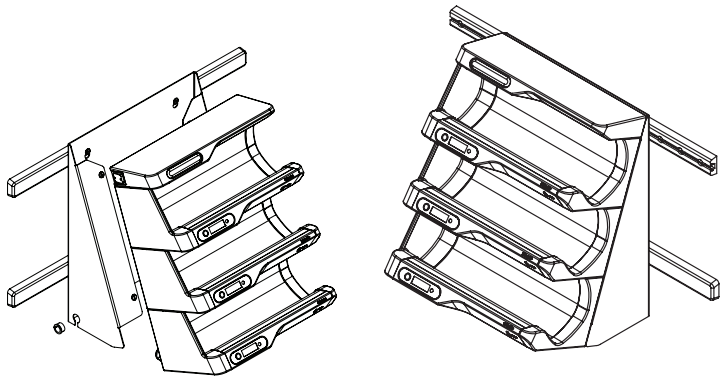
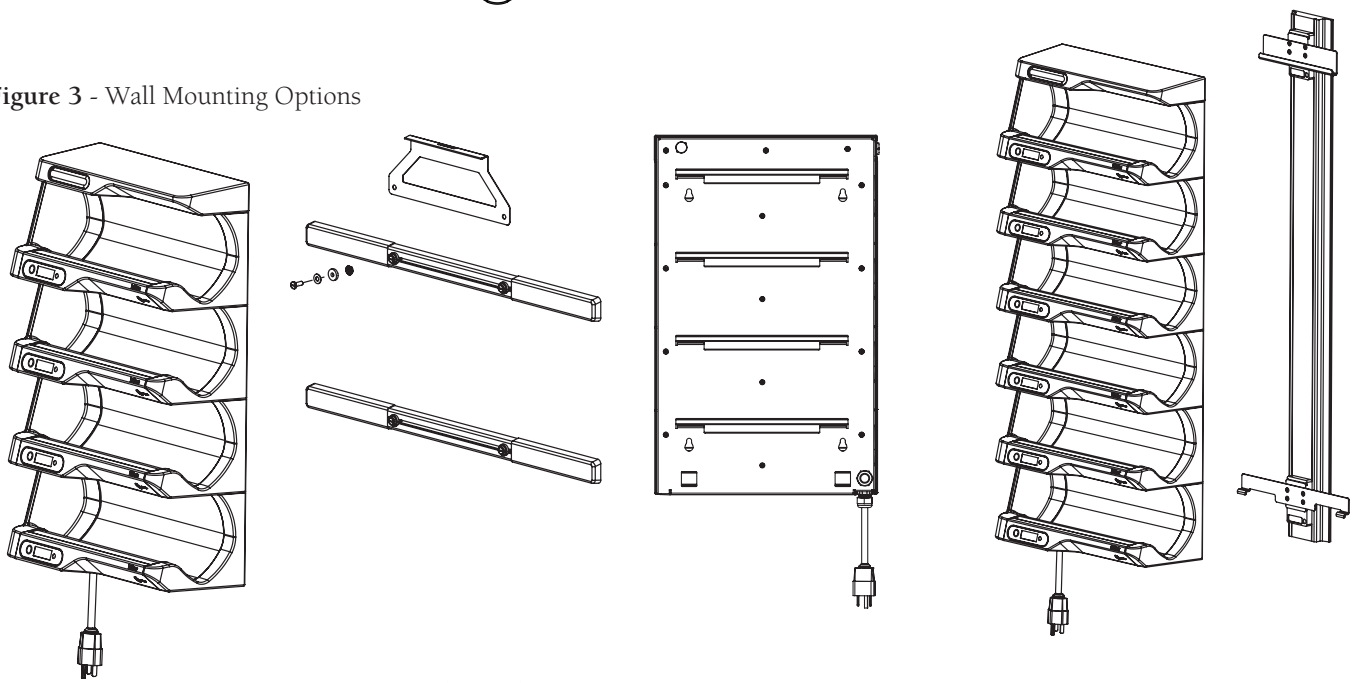


Figure 3 - Wall Mounting Options

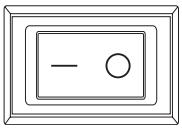


ivNOW CAPACITY INFORMATION

The ivNow warming module accommodates fluids packaged in bags. Each warming module cradles solution bags in 0.5-, 1-, 2- & 3-liter sizes.

OPERATION OF UNIT

1. The appliance should be plugged into an appropriate hospital grade receptacle for a 120V (NEMA 5-15P) or 230V appliance.
2. Turn ON the power switch located on the left side of the appliance. It is a rocker switch with ON (I) and OFF (O) markings. When on, the control display will be powered. **The plate will not heat until a bag is placed in module.**



3. ACTIVATE CONTROL BY PLACING BAG OF FLUID IN MODULE. SEE FIGURE 1. Make sure the bag touches the sensor in the middle of metal plate. (See Figure 2 for illustration of incorrect bag placement.) When product is first detected, a single dash will scroll around the display for 5 seconds while the unit is sensing the product temperature. The Smart Sensor will calculate the appropriate heating curve to heat the fluid to the cavity set-point.

NOTE: The warm-up stabilization time will vary slightly depending on the starting bag temperature and ambient room temperature. The chart in Figure 3 shows the heating of a 1-liter bag starting at 21°C (70°F) warmed to a set-point of 40°C (104°F) in a room with 21°C (70°F) ambient temperature.

4. The display will continue to show the current bag temperature as it heats the fluid.
5. The green status indicator will illuminate when the bag is within +0/-2°C (+0/-3°F) of the set-point temperature.
6. Press and hold STATUS key for 2 seconds to see how long the fluid has been at set temperature. See "Control Panel Key: Status Key" on previous page for more instructions.

CAUTION: If the warmer has failed to heat, is on but display and lights do not illuminate, or if error messages are displayed, see the Troubleshooting Guide in this manual and inspect fluid and discard if necessary. If the error continues, contact your service representative.

NOTE: In the event that fluid should spill inside the module, unplug the unit to prevent and electrical shock hazard. Wipe excess fluid from module immediately. Refer to qualified service personnel. Qualified service personnel should remove the module control and remove any remaining liquid. Perform necessary hospital electrical safety checks before returning the unit to operation.

Figure 1 - Load bag

Figure 2 - Incorrect placement of bag: Product does not touch sensor in middle of heating plate.

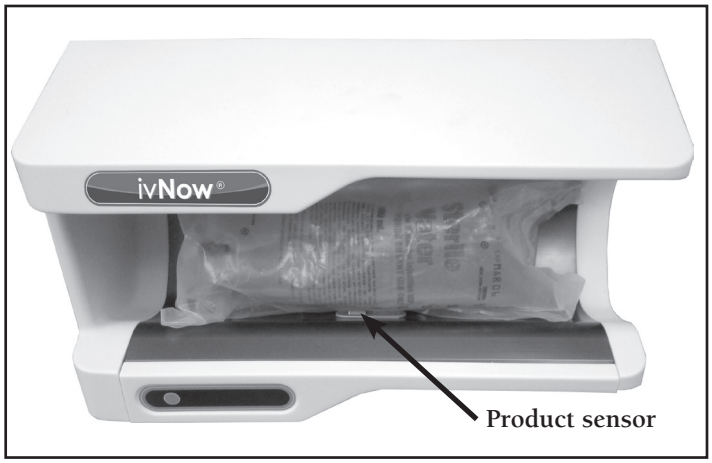
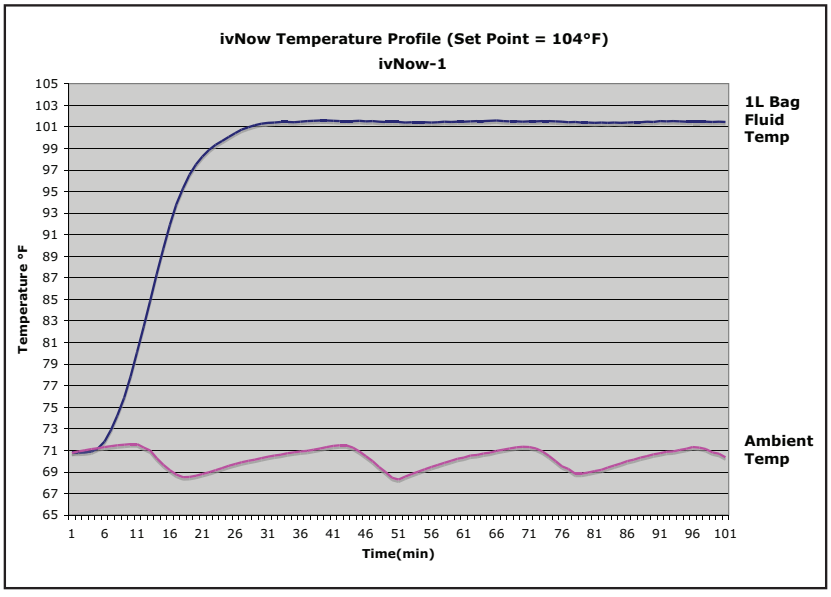


Figure 3



CARE AND CLEANING

The cleanliness and appearance of this equipment will contribute considerably to its operating efficiency. Make certain the module is kept free of any debris that may accumulate. Good equipment that is kept clean works better and lasts longer.

CLEAN THE UNIT REGULARLY:

1. Turn the unit off.
2. Disconnect the module from the power source.
3. Wipe the metal, plastic, control surfaces, and sensor switch of the module with a cloth dampened with isopropyl alcohol or 10% bleach solution to clean and disinfect the unit. Avoid the use of abrasive or corrosive cleaning compounds. Avoid contact with the electrical connections and electrical components.
4. Wipe surfaces with a cloth dampened with clean, warm water.
5. Wipe dry with a clean cloth.

Always follow appropriate state or local health (hygiene) regulations regarding all applicable cleaning and sanitation requirements.

NOTE: In the event that fluid should spill inside the module, unplug the unit to prevent an electrical shock hazard. Wipe excess fluid from module immediately. Refer to qualified service personnel. Qualified service personnel should remove the module control and remove any remaining liquid. Perform necessary hospital electrical safety checks before returning the unit to operation.

ANNUAL PREVENTATIVE MAINTENANCE

1. Ensure that the correct Operation and Care Manual is available to all users.
2. Ensure that all users have been properly trained in unit's operation.
3. Do not exceed the unit's capacity.
4. Inspect condition of plug and cord. Replace if damaged.
5. Clean dust from the unit.
6. Check condition of wall mounting hardware. Ensure mounting screws and assembly are secure.
7. Check control panel overlay condition. Are there any tears or excessive wear on the graphic? Does the control work properly when buttons are pushed?
8. Check that all control LEDs light up. Test by turning the unit off and then on. All LEDs illuminate for one second at start-up.
9. Contact Service for immediate repair if any problems exist.

⚠ DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

DANGER

AT NO TIME SHOULD THE INTERIOR OR EXTERIOR BE STEAM CLEANED, HOSED DOWN, OR FLOODED WITH WATER OR LIQUID SOLUTION OF ANY KIND. DO NOT USE WATER JET TO CLEAN.

SEVERE DAMAGE OR ELECTRICAL HAZARD COULD RESULT.

WARRANTY BECOMES VOID IF APPLIANCE IS FLOODED

(Listed as Ordinary Equipment.)

CAUTION

If your unit is not operating properly, check the following before calling your authorized service agent. Check the power applied to the unit. Is the plug in outlet? Check to make sure the power switch, located on the side of the unit, is in the ON (I) position. Has the high limit manual reset tripped? If so, reset. (See "Manual Reset Instructions" below.)

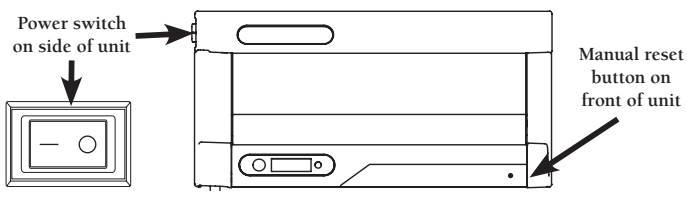
Do not attempt to repair or service beyond this point. Contact manufacturer for nearest authorized service agent. Repairs made by any other service agent without prior authorization by manufacturer will void the warranty on the unit.

This chart is provided for the assistance of qualified technicians only and is not intended for use by untrained or unauthorized service personnel.

TROUBLE SHOOTING GUIDE

ERROR	DESCRIPTION	ACTION REQUIRED
E-10	Temperature Sensor 1 Short	• Press Status Key to clear error code. • If error persists, the sensor switch assembly should be replaced by a qualified service technician. Contact Service.
E-11	Temperature Sensor 1 Open	
E-20	Temperature Sensor 2 Short	
E-21	Temperature Sensor 2 Open	
E-P0	Plate Temperature Sensor Short	
E-P1	Plate Temperature Sensor Open	
E-98	Temperature Delta Error	• Temperature of fluid bag sensors 1 and 2 differ by more than 1.7ºC (3ºF). • Remove fluid bag and allow unit to cool down. • Verify that fluid bag sensor is clean and operating correctly. • Press Status Key to clear error code. • If error persists, the sensor switch assembly should be replaced by a qualified service technician. Contact Service.
E-31	Product Over Temperature and the unit has been actively heating	• Press Status Key to clear error code. • Remove fluid bag and allow unit to cool down. Inspect fluid and discard if necessary. • If error persists after cool down and reset, the sensor switch assembly or lower control assembly should be replaced by a qualified service technician. Contact Service.
E-50	Analog to Digital Convertor Error	• Press Status Key to clear error code. • Remove fluid bag and allow unit to cool down. Inspect fluid and discard if necessary. • If error persists after cool down and reset, the lower control assembly should be replaced by a qualified service technician. Contact Service.
E-FO	Flash Write Error	
E-F1	Flash Erase Error	
E-F2	Flash Value Error	• Press status key to clear error code. • This error is acceptable upon initial start up. Unit will self-correct.
E-70	Low voltage flag triggered	• Check voltage at outlet with volt meter. Correct voltage if incorrect voltage being supplied. • If error persists, the lower control assembly should be replaced by a qualified service technician. Contact Service.
Unit doesn't power on		• Is unit plugged into outlet? • Check outlet voltage. Check voltage rating on equipment rating tag. Ensure both match. • Check manual reset button. Reset if needed. (See instructions below.) • Allow unit to cool down to reset auto hi-limit. • Check fuses. Replace if blown. • If unit still does not power on, contact Service.
Unit powers on and off when loaded and power switch is turned on		• Remove from service. • Contact Service.
Unit is reading a temperature but there is no bag in the unit		• Check sensor switch. • If sticking, clean sensor switch as needed with a dampened isopropyl alcohol wipe and then blow out with compressed air. • If unit still showing a temperature, contact Service.

Manual Reset Instructions: Allow unit to cool down. Locate the manual reset button on front of unit. Using a pen, screwdriver or other long, thin implement, firmly push reset button. You will hear an audible click when the button is reset. If reset button trips again while unit is running, contact a qualified service technician.



DANGER

DISCONNECT UNIT FROM POWER SOURCE BEFORE CLEANING OR SERVICING.

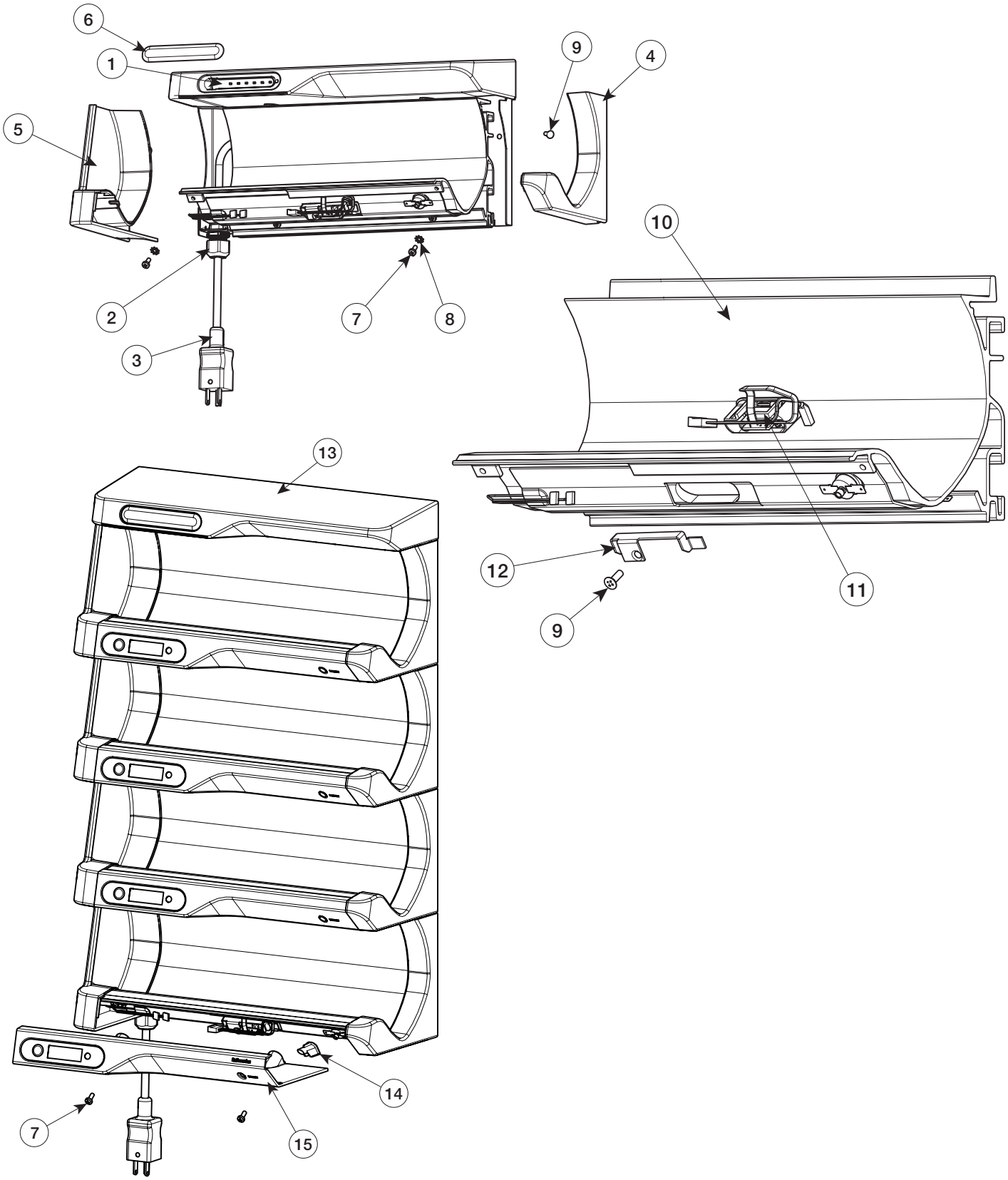
LOC	DESCRIPTION		QTY	ivNow
1	CIRCUIT BOARD, LED	120V	1	BA-34834
		230V	1	BA-34833
2	BUSHING, STRAIN RELIEF		1	BU-37016
3	5-15P HOSPITAL GRADE CORD		1	CD-34856
4	COVER, RT END		1	CV-28579
5	COVER, LF END		1	CV-28580
6	COMPANY LABEL		1	LA-28583
7	SCREW M4 x 6mm PH PAN HD M/S 18-8		2	SC-22273
8	WASHER, #8 EXT LOCK		2	WS-2333
9	SCREW, KA 40 x 12, PHIL, FLAT HD		2	SC-28587
10	EXTRUSION ASSEMBLY		1	008986
11	BAG SENSOR		1	CV-28584
12	BRACKET, SENSOR		1	1009729
13	TOP COVER		1	CV-28758
14	RESET BUTTON		1	CV-29140
15	CONTROL PANEL ASSY	120V	1	5008987
	CONTROL PANEL ASSY - NO LOGO	120V	1	5012152
	CONTROL PANEL ASSY	230V	1	5012347
	CONTROL PANEL ASSY - NO LOGO	230V	1	5012348
16	CORDSET - 16AWG, 3/C, INTERNATIONAL HARM		1	CD-34856
17	BRACKET, ASSY, STRAIN RELIEF		1	5018366
18	REAR COVER - 4 CAVITY		1	1017132
	REAR COVER - UNIVERSAL CORD		1	1017129
	REAR COVER - UNIVERSAL CORD		1	1017130
	REAR COVER - UNIVERSAL CORD		1	1017131
	REAR COVER - 5 CAVITY		1	1017133
	REAR COVER - 6 CAVITY		1	1017134
19	SCREW M4-0.7 HEX NUT 18-8		3	NU-22286
20	SWITCH, ROCKER, 16AMP		1	SW-34171
21	TERMINAL JUMPER - 3		2	BK-34879
22	7 TERMINAL BLOCK	ivNow-1 & -2	1	*BK-34712
		ivNow-3 & -4	1	BK-34713
		ivNow-5 & -6	1	*BK-34877
23	SCREW, M4 x 12mm, PHIL, FLAT HEAD		1	SC-23141
24	FUSE BLOCK, 10A, 250V		1	FU-34873
25	SCREW 4M x 12, FLAT HDMS		2	SC-28970
26	SCREW 10-32 U/C FHMS, 18-8, PH		2	SC-25004

* not shown

SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

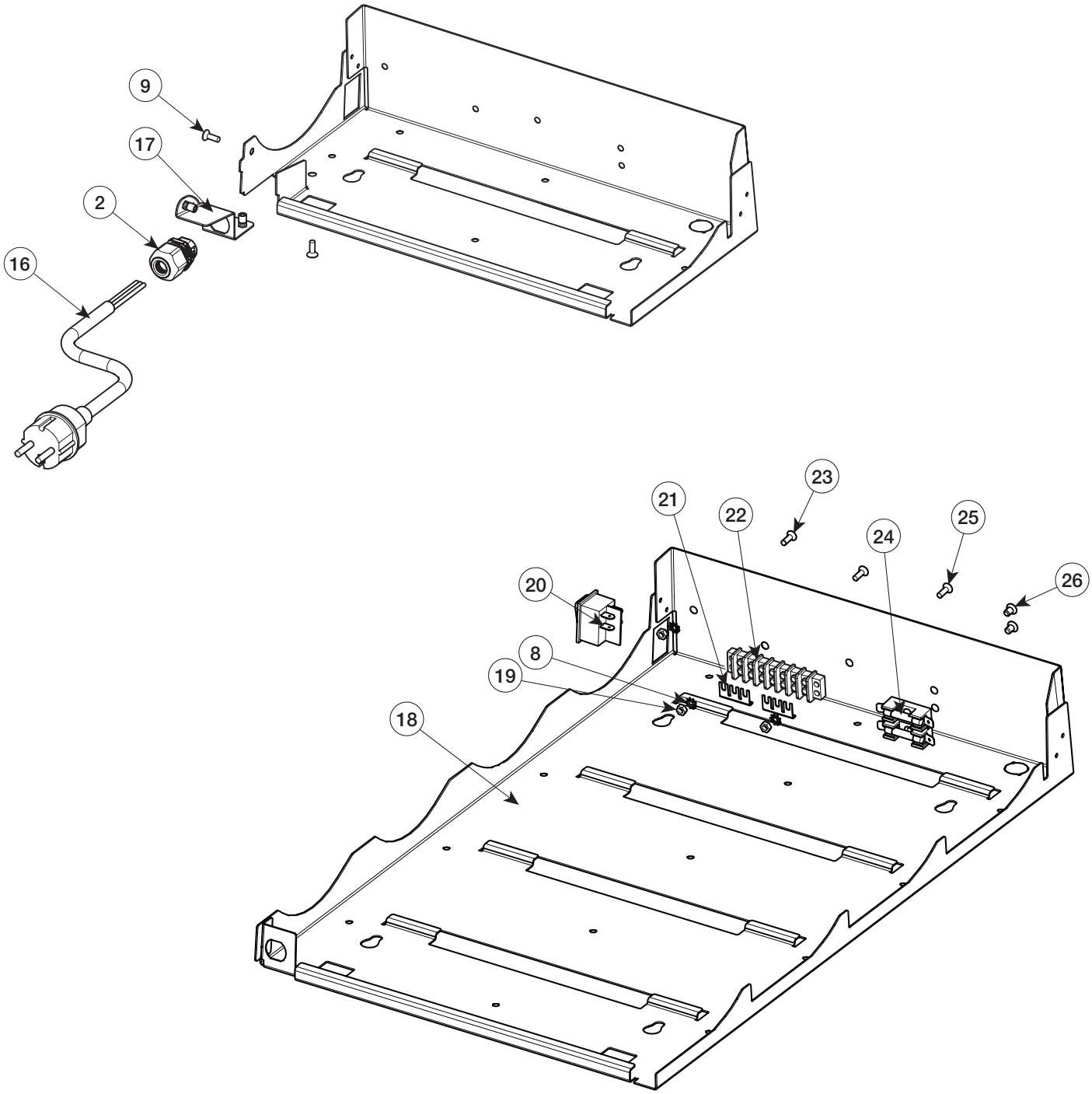
ivNow FLUID WARMING MODULE



SERIAL NUMBER IS REQUIRED FOR ALL INQUIRIES

PART NUMBERS AND DRAWINGS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

ivNow FLUID WARMING MODULE continued



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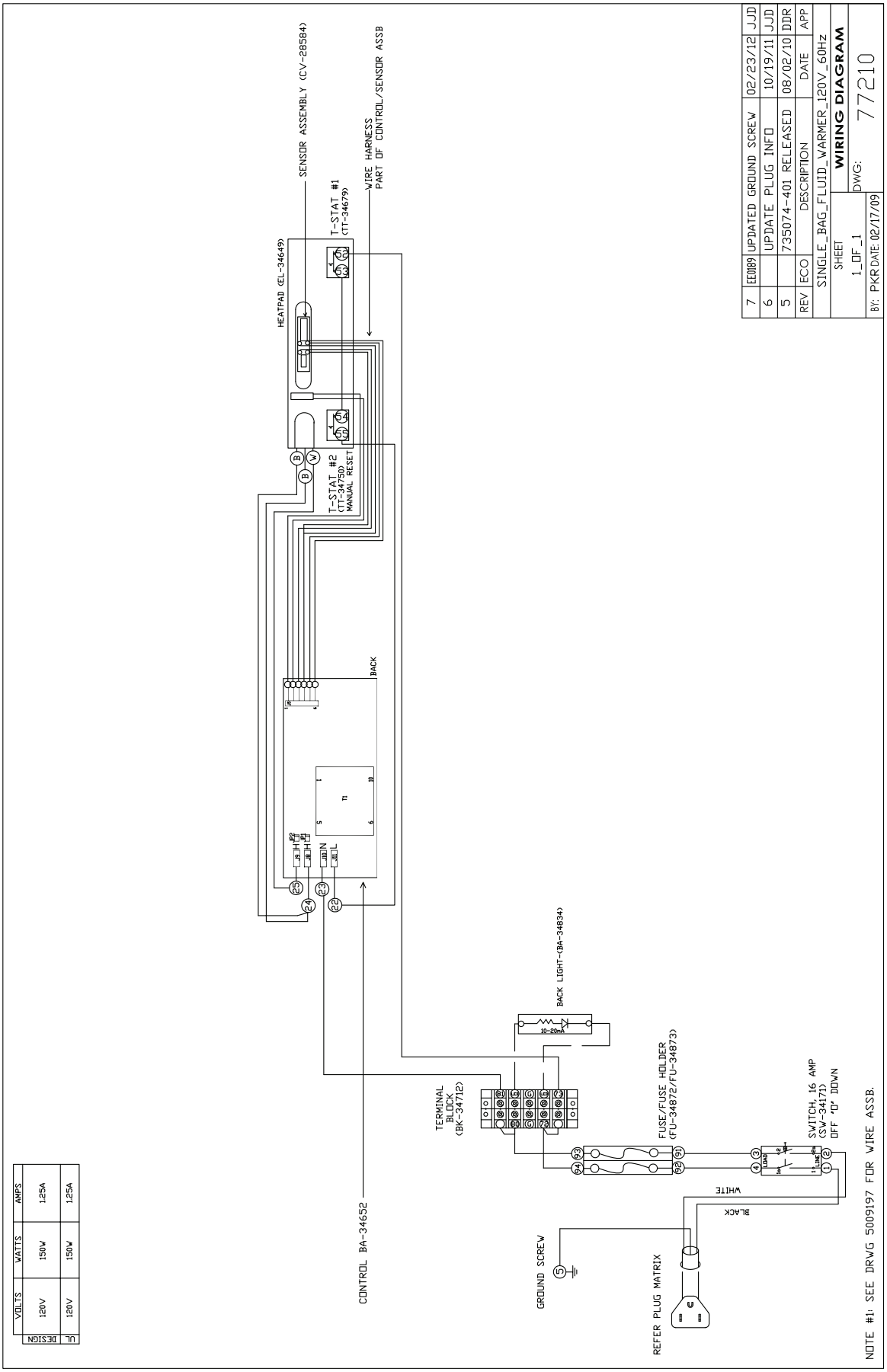
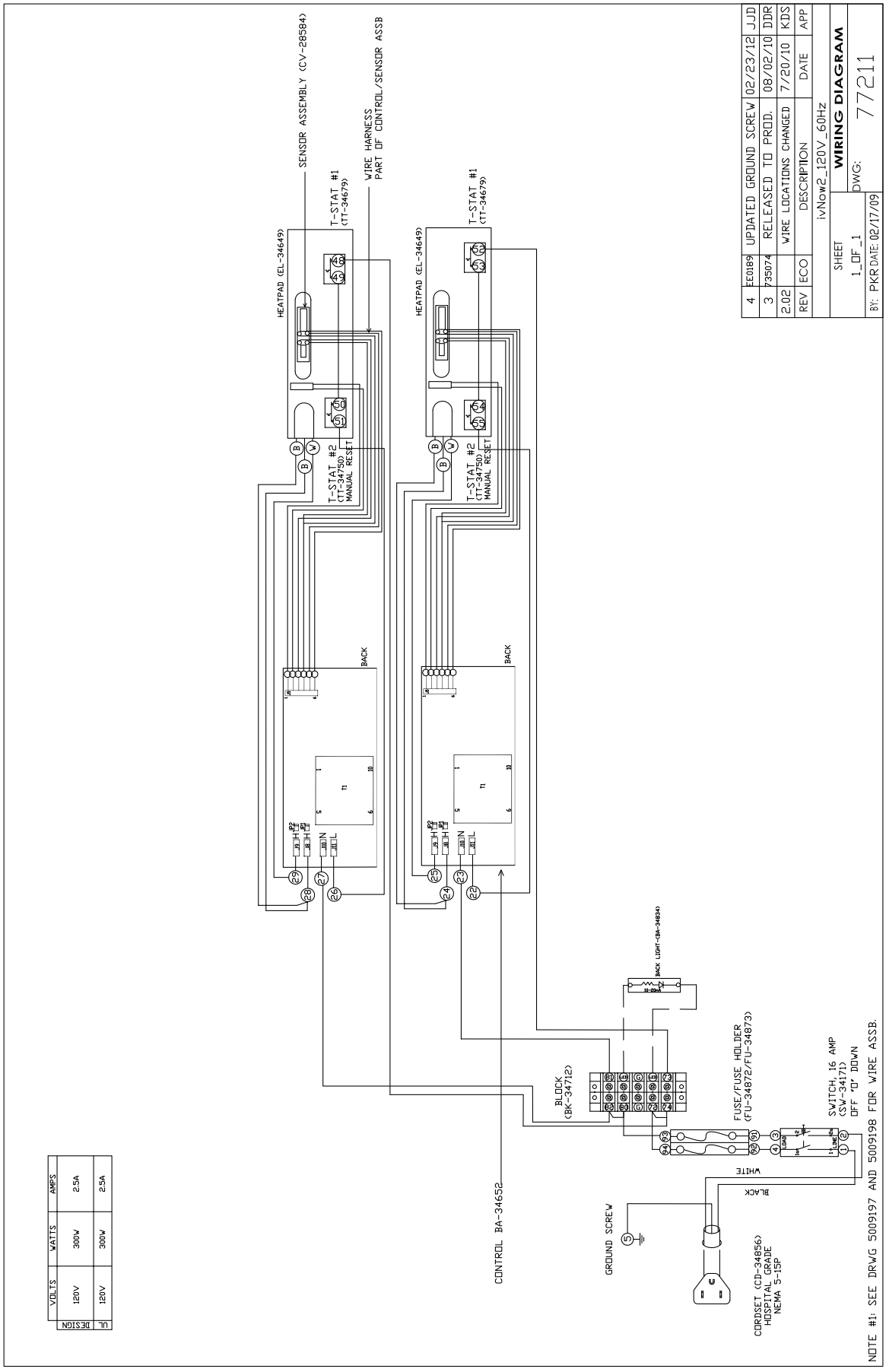
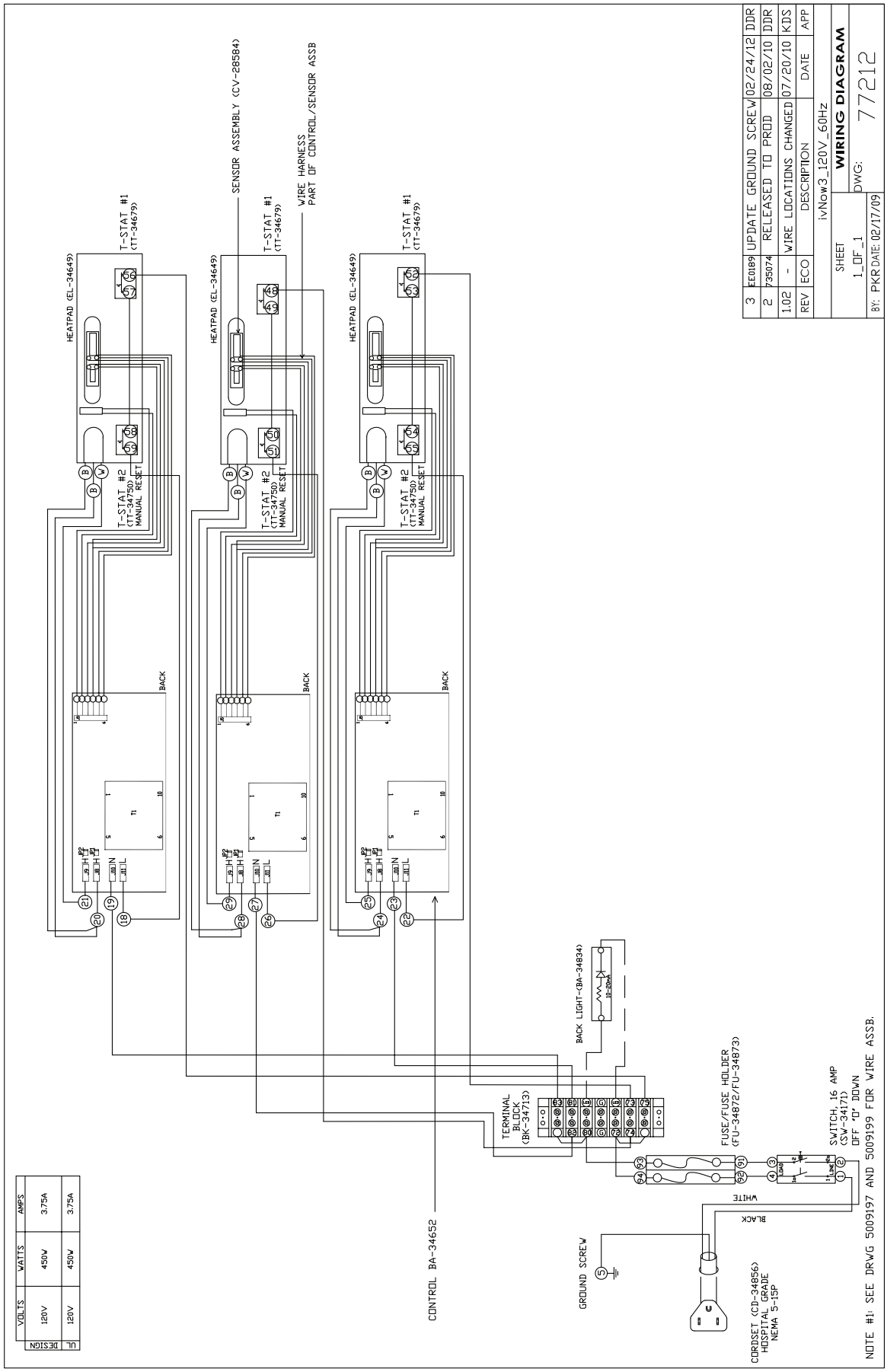
ivNow-1 120V Wiring Diagram



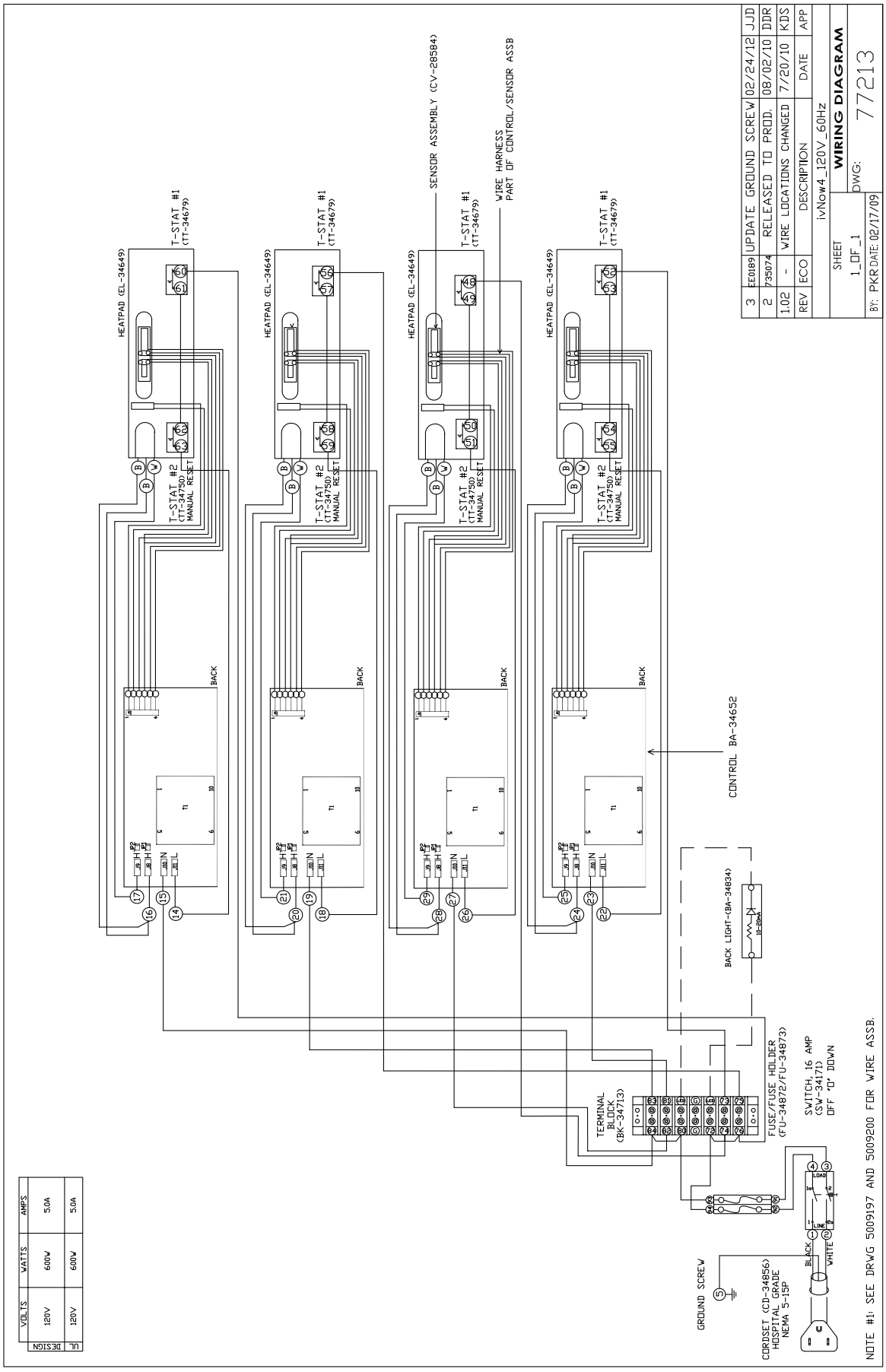
ivNow-2 120V Wiring Diagram



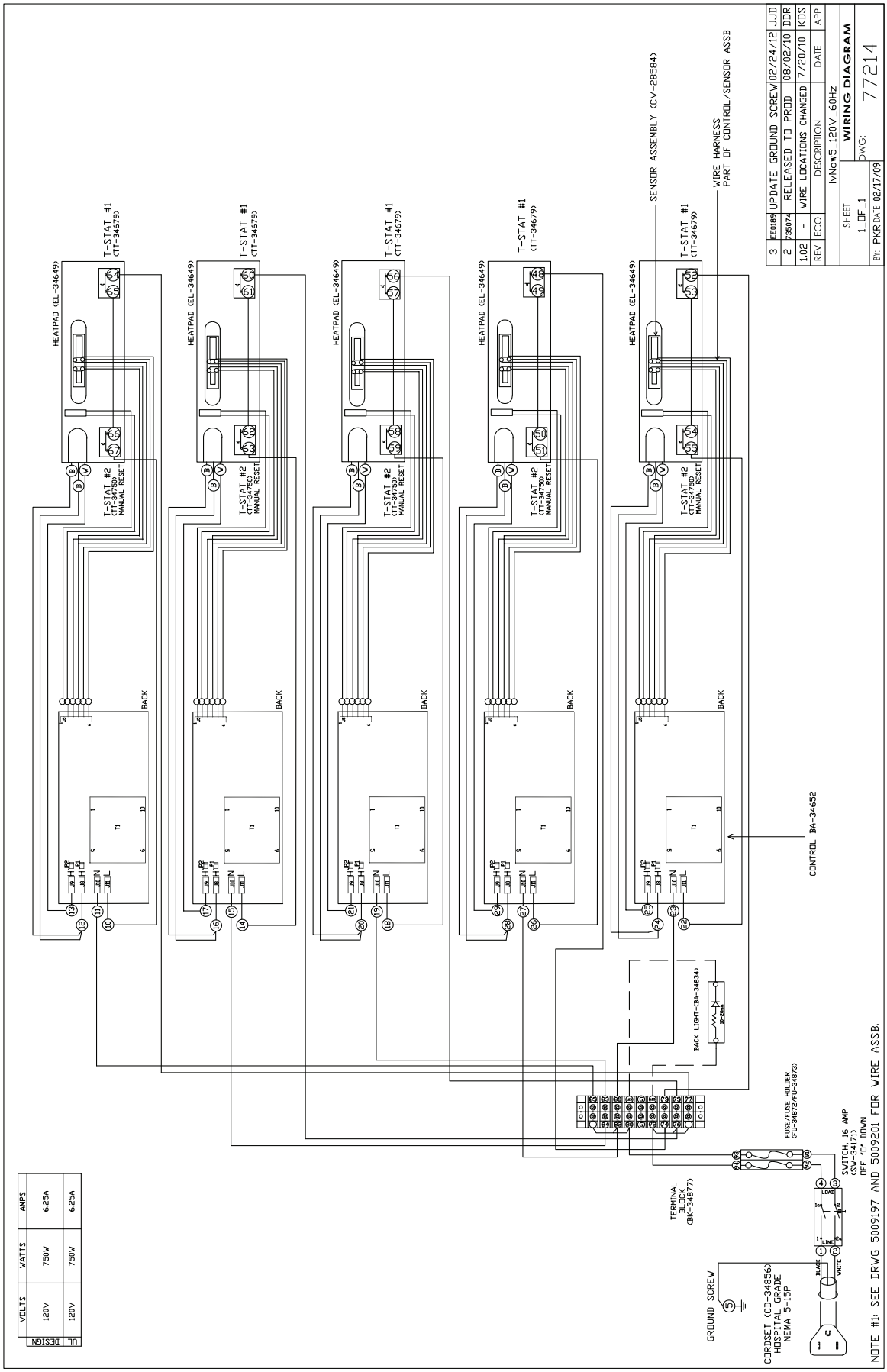
ivNow-3 120V Wiring Diagram



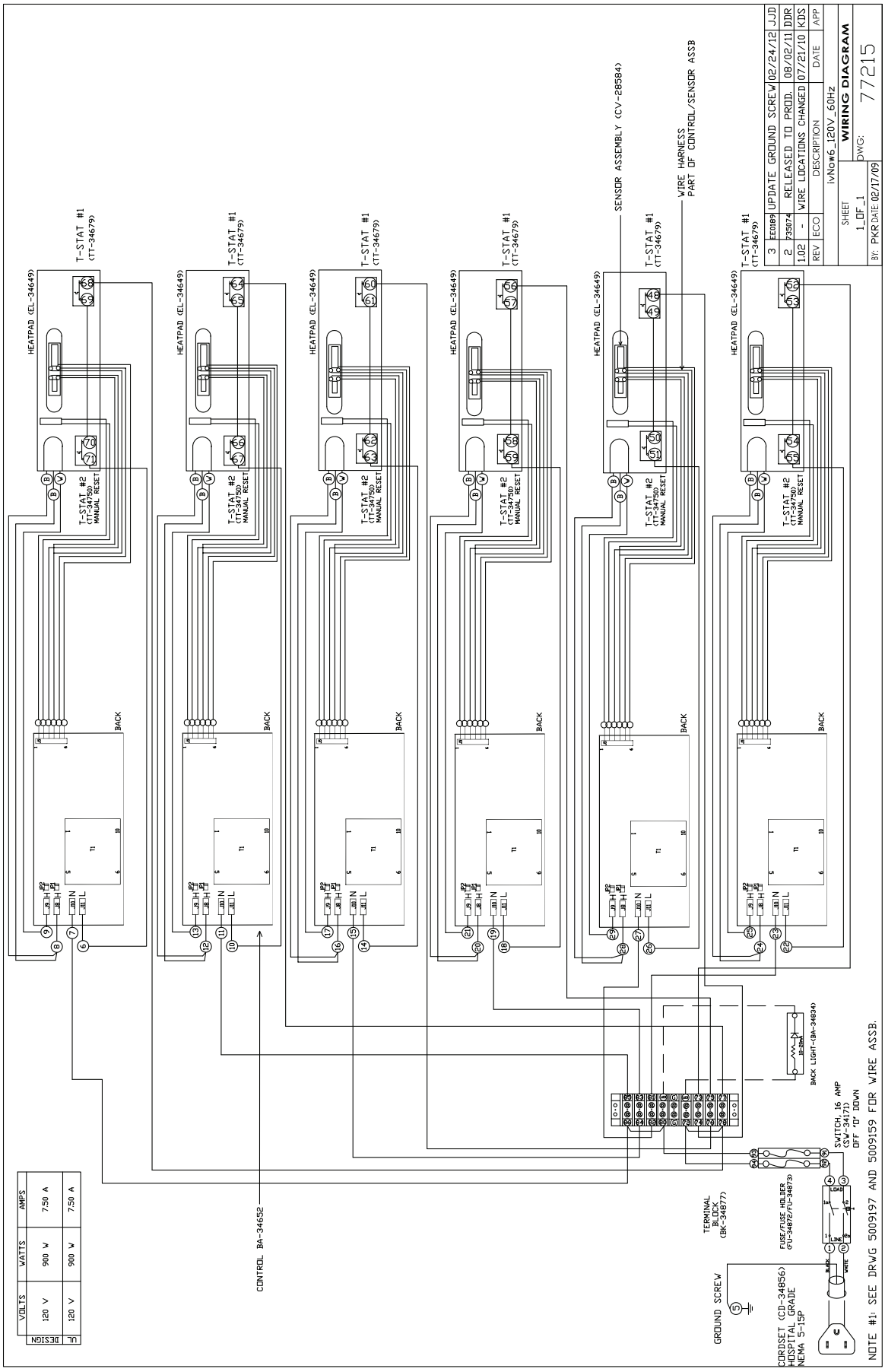
ivNow-4 120V Wiring Diagram



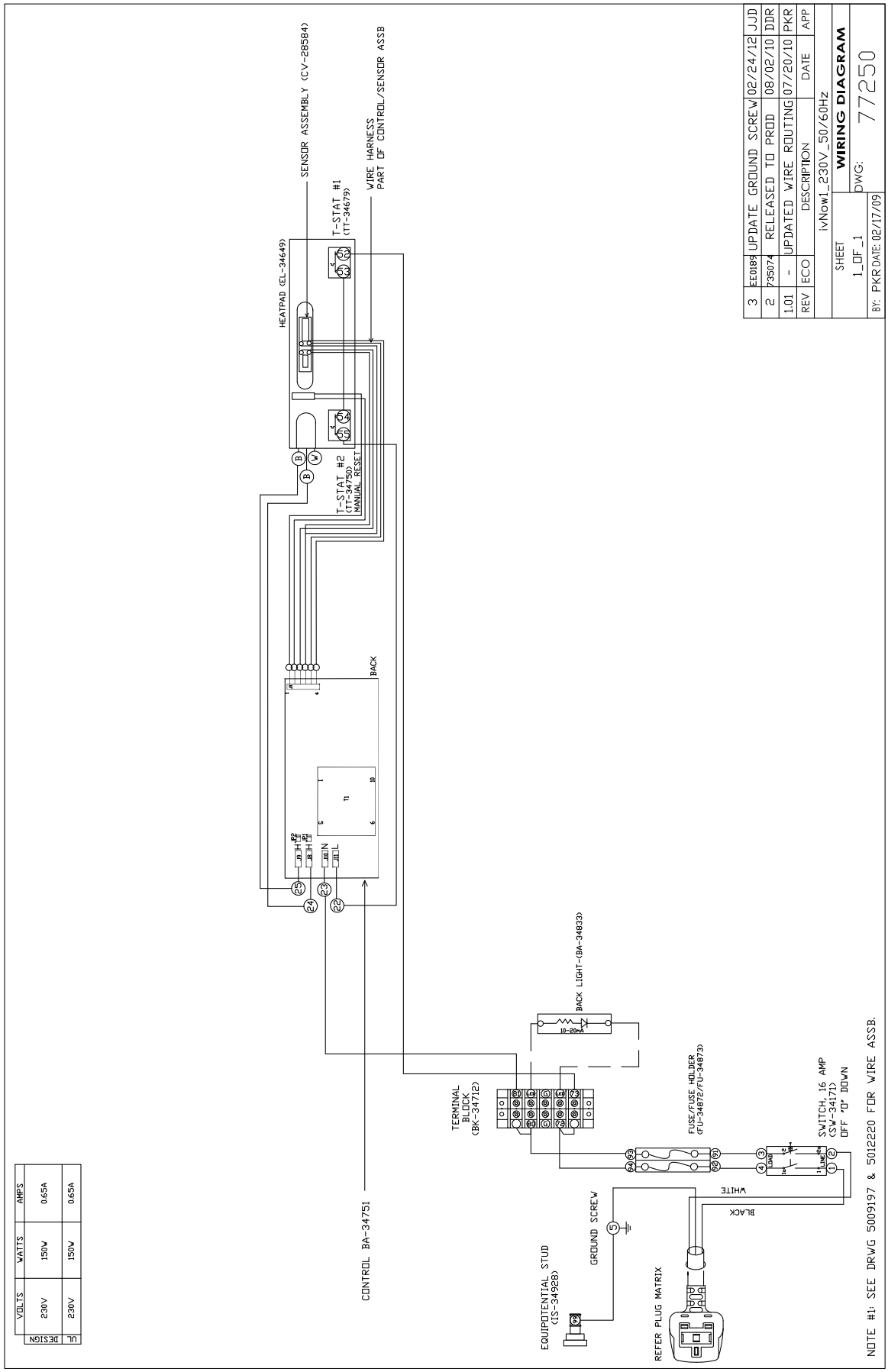
ivNow-5 120V Wiring Diagram



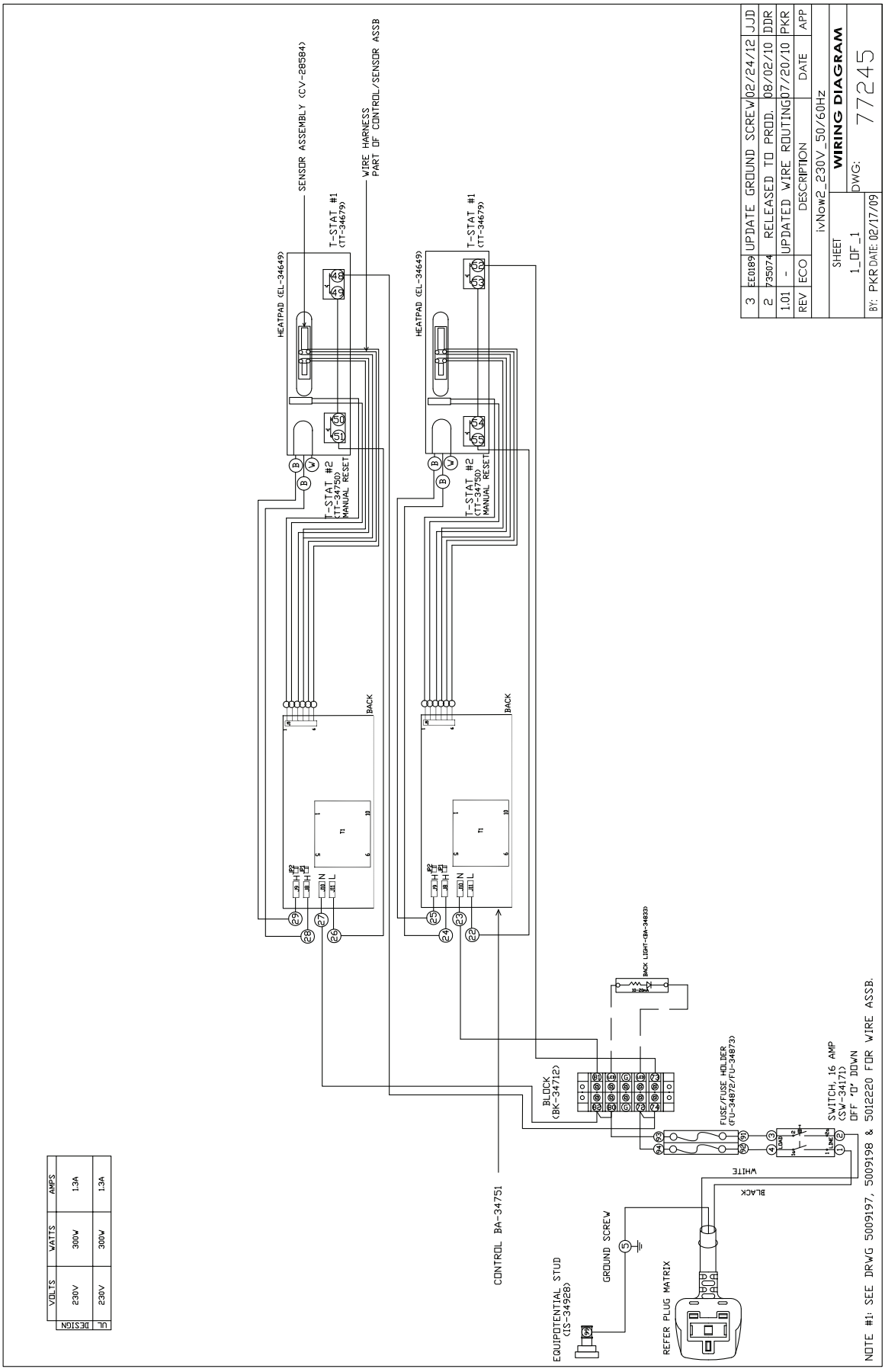
ivNow-6 120V Wiring Diagram



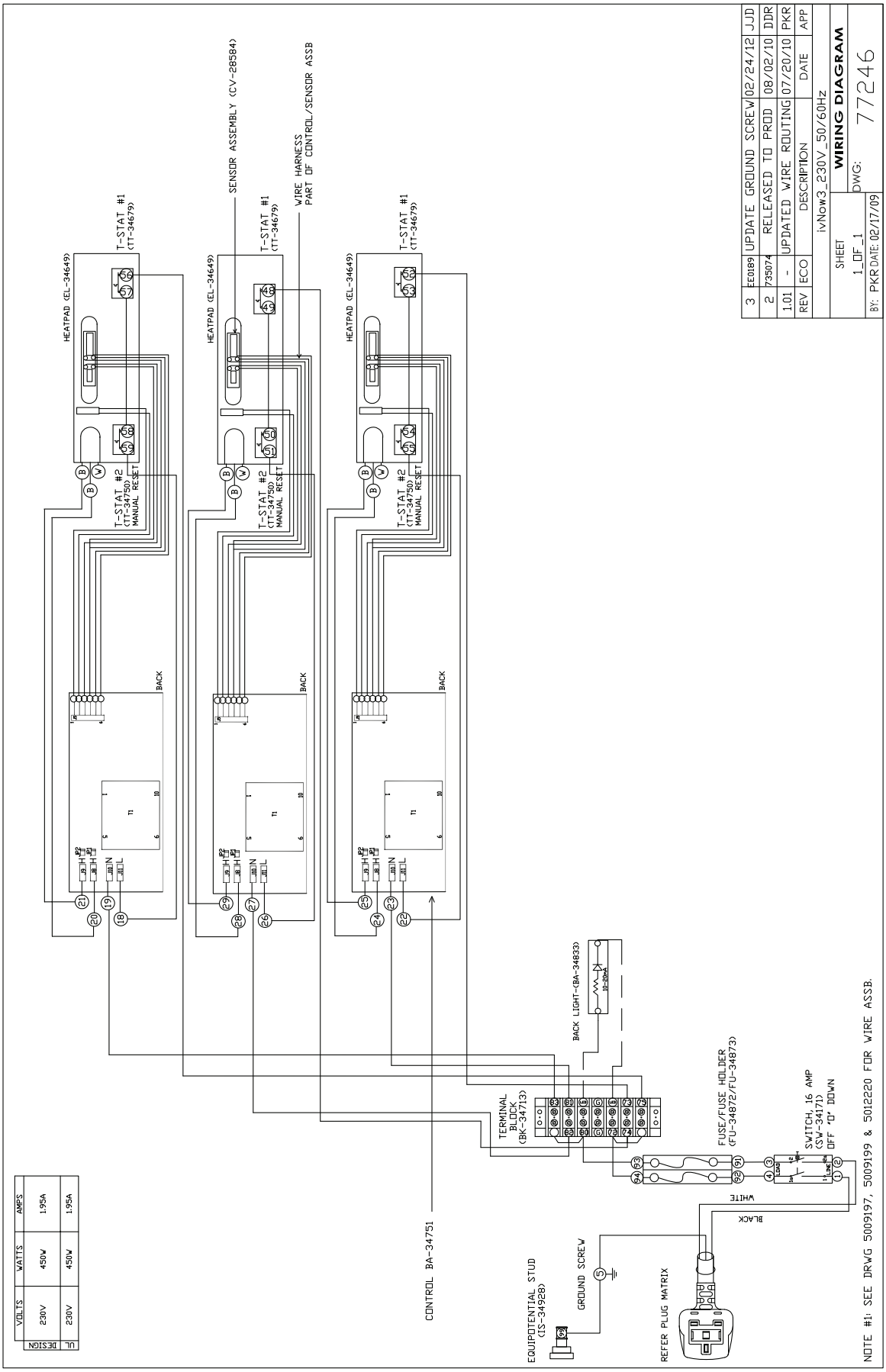
ivNow-1 230V Wiring Diagram



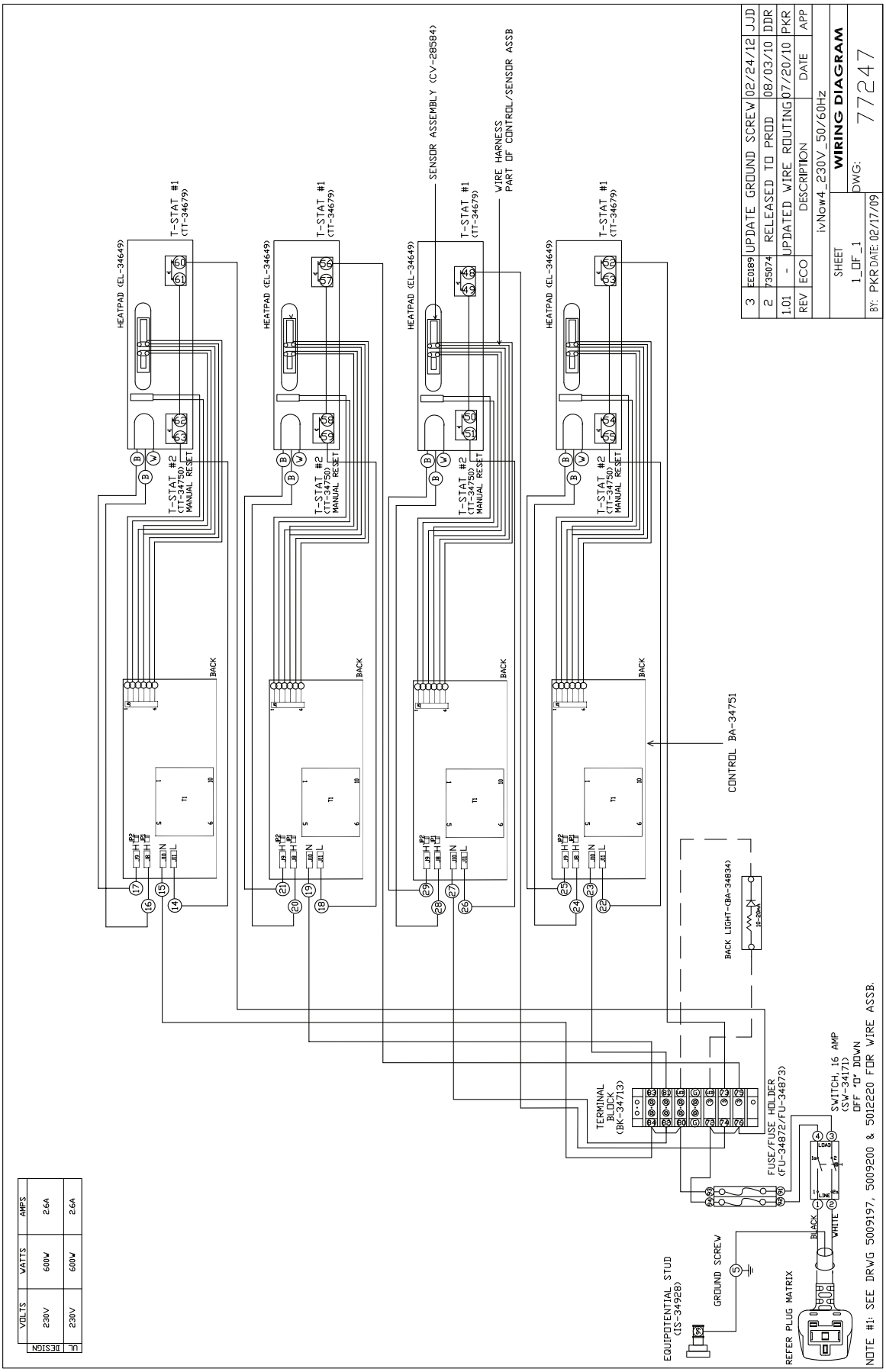
ivNow-2 230V Wiring Diagram



ivNow-3 230V Wiring Diagram



ivNow-4 230V Wiring Diagram



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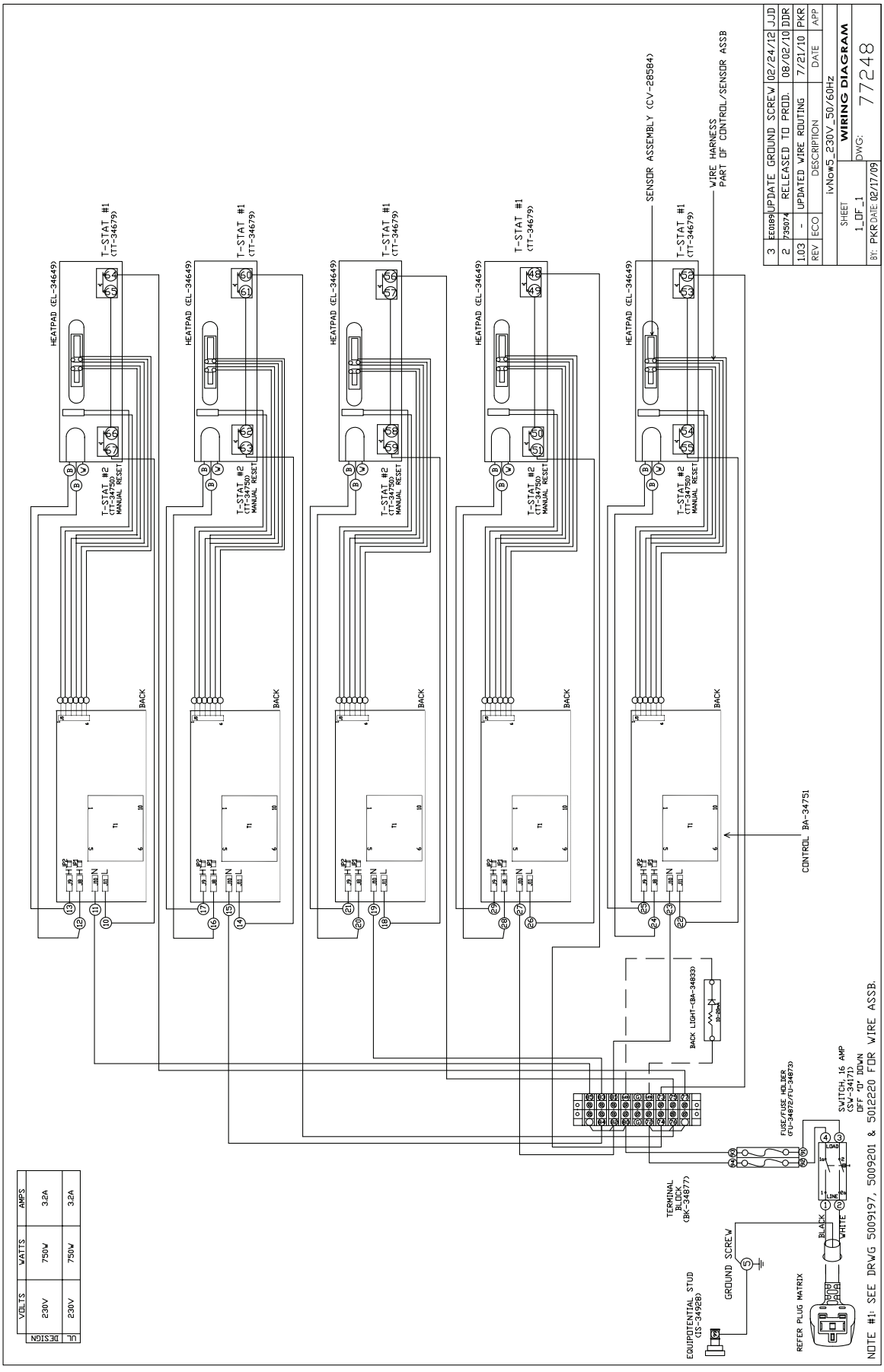

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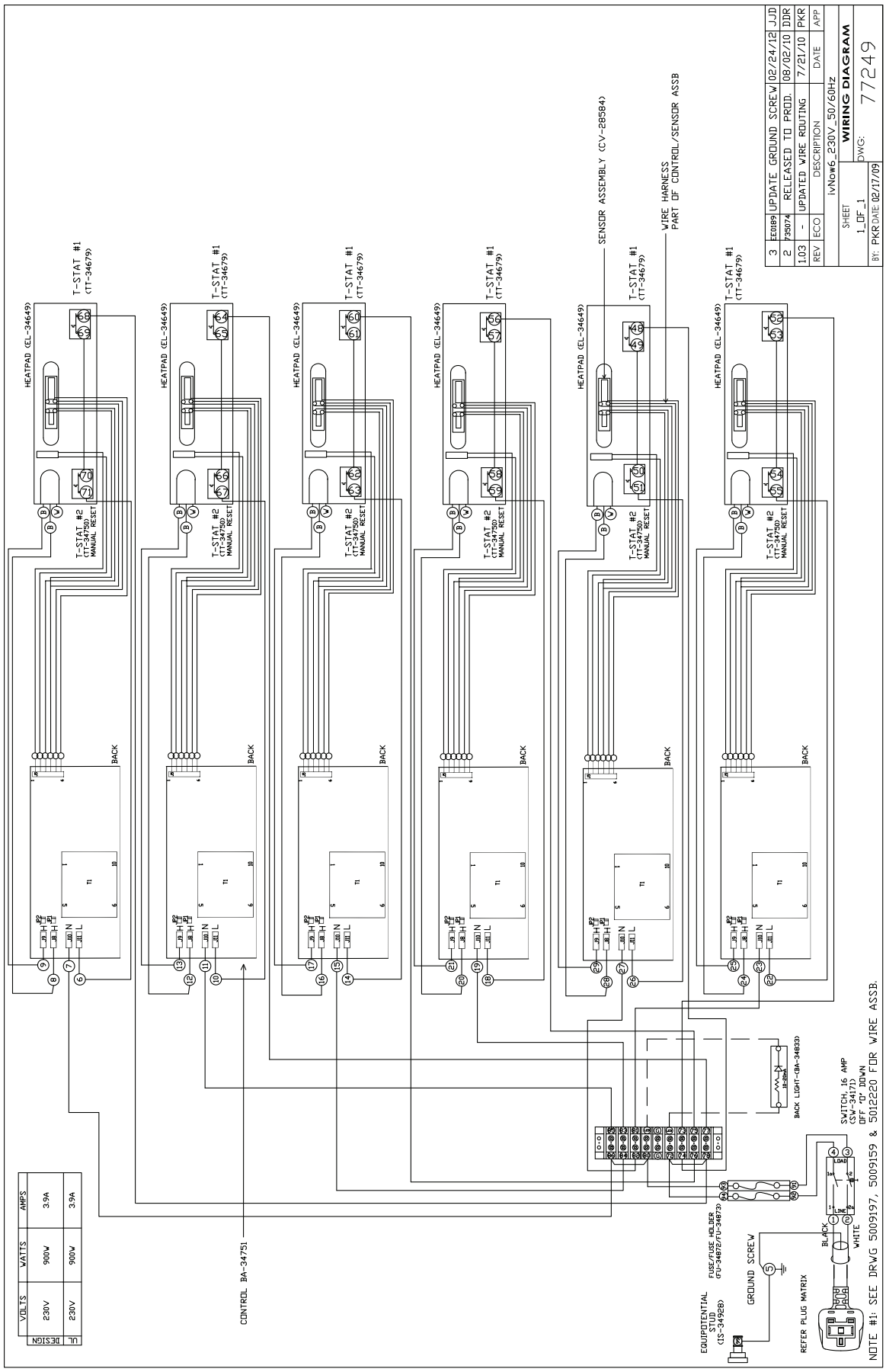

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