

Hand Dryer Operating Instructions and Parts Manual

Recessed High-Speed ADA-compliant hand dryer

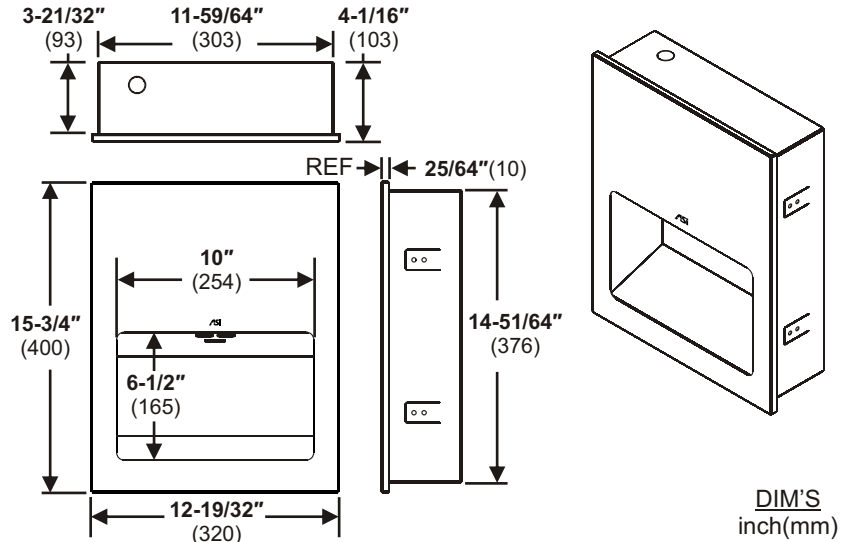


PLEASE CAREFULLY READ THROUGH THIS MANUAL BEFORE USING THE PRODUCT. OBSERVING ALL SAFETY INFORMATION, WARNINGS AND CAUTIONS WILL PROTECT YOURSELF AND OTHERS. PLEASE KEEP INSTRUCTIONS FOR FUTURE REFERENCE.



- MODEL # 0135-1**
- MODEL # 0135-2**
- MODEL # 0135-3**

Patented



TECHNICAL SPECIFICATIONS

ITEM CATEGORY	PERFORMANCE DATA
Operating Voltage, 0135-1	120 VAC, 50/60 Hz, 1.0 kW
Operating Voltage, 0135-2	240 VAC, 50/60 Hz, 1.0 kW
Operating Voltage, 0135-3	277 VAC, 60 Hz, 1.0kW
Output Warm Air Volume	42 - 60 CFM {71 - 102 m ³ /h}, Adjustable by Owner
Output Warm Air Temp	131°F {55°C} at ambient T = 77°F {25°C}, MAX, Adjustable by Owner
Output Air Speed	102 mph (150 ft/s) [45.5 m/s {164 km/h}] - 157 mph (230 ft/s) [70 m/s {252 km/h}], Adjustable by Owner
Sound Pressure	68.9 dB-A Min @ 2m , 74.3 dB-A Max @ 2M, Adjustable by Owner
Motor Type	0.67 HP, 16 - 29 krpm, Adjustable, Brush Type, Dual Ball Bearings
Motor Thermal Protection	120 VAC, Auto Resetting Thermostat turns unit off at 275°F {135°C}
Heater Element	ON/ OFF Heating options (for 120V only); Range Adjustable by Owner, 325 - 500 W
Heater Thermal Protection	Auto Resetting Thermostat turns heater element off at 185°F {85°C}, Resets at 167°F {75°C}, Thermal cut-off at 288°F {142°C}
Drying Time	Less than 15 seconds
Standby Power	Less than 0.5W
Circuit Operation	Infrared Automatic, self adjusting
Sensor Range	Standard 5-19/32" (140 ± 10) , Adjustable, range 2" to 6" (51 to 152)
Timing Protection	60 seconds auto shut off
Timing Duration	2 seconds delayed turn off after last sensor read
Cover Type	18 gauge {.047" (1.2)} thick drawn steel or 304 series stainless steel
Cover Finish	Satin on stainless steel
Net Weight	14.6 lbs {6.6 kg}
Shipping Weight	18.0 lbs {8.2 kg}
Unit Size	12-19/32" W x 15-3/4" H x 4-1/16" D (320 x 400 x 103)



0135

Input	Model	Motor			Heater			Total	
		Vac	Inrush A(W)	Operating A (W)	Vac	Inrush / Operating A(W)	Inrush A(W)	Operating A(W)	
110	0135-1	110	5.73 (630)	3.82 (420)	110	3.82 (420)	9.55 (1050)	7.64 (840)	
115	0135-1	115	5.99 (689)	3.99 (459)	115	3.99 (459)	9.98 (1148)	7.99 (918)	
120	0135-1	120	6.25 (750)	4.17 (500)	120	4.17 (500)	10.42 (1250)	8.33 (1000)	
208	0135-2	208	2.71 (563)	1.81 (376)	208	1.81 (376)	4.51 (939)	3.61 (751)	
220	0135-2	220	2.86 (630)	1.91 (420)	220	1.91 (420)	4.77 (1050)	3.82 (840)	
230	0135-2	230	2.99 (689)	2.00 (459)	230	2.00 (459)	4.99 (1148)	3.99 (918)	
240	0135-2	240	3.13 (750)	2.08 (500)	240	2.08 (500)	5.21 (1250)	4.17 (1000)	
277	0135-3	240	3.13 (750)	2.08 (500)	240	2.08 (500)	5.21 (1250)	4.17 (1000)	

Installation

See Installation Guide 1703160001

1. Remove front panel using security wrench included in kit and retain security screws. Place cover aside with care to protect face finish until required in Step 8.
2. Remove hand drying chamber using #2 Philips screw driver and retain screws. Place chamber aside with care to protect inside finish until required in Step 7.
3. Remove two (2) mounting screws from bottom edge of chassis plate using #2 Philips screw driver and retain screws. Grasp motor securely and lift entire chassis slightly up & over retainer hooks welded to housing top. Place chassis aside with care to protect unit until required in Step 5.
4. Install supplied plastic KO bushing (or other, not supplied) into KO to be used for cable prior to installation of cable into KO or box into RWO (Rough Wall Opening, previously prepared by others). Install wall box housing into RWO locating stub cable into any one (1) of five (5) available KO locations on sides or top of box. Using screws supplied with unit (or other types suitable to wall conditions, by others) tighten screws through adjustable mounting tabs into framing in side walls of RWO to center wall box in opening.
5. Grasp chassis & motor assembly retained in step 3 and slightly lift to place over retainer hooks on housing top to hold unit in place while driving screws. Using #2 Philips screw driver tighten two (2) screws also retained in step 3 through holes in bottom edge of chassis plate into threaded posts on wall box back.
6. Refer to Circuit Diagram on page 3 of this Owner's Manual to match correct wire to terminal block on motor chassis. Pull stub cable through bushing (previously installed, step 4) to allow clearance around hand drying chamber (to be installed next) and enough length to prep ends for terminal block insertion after routing through strain relief clamp on chassis. Clamp cable, prep ends of wires and insert correct wires into terminal block at locations L, N & G. Using a small flat blade screwdriver ensure each wire is properly secured with terminal block top lock screws.

Connections: (see fig. 6 & refer to Circuit Diagram and see Note B)

- A. Connect the live wire (colored Brown, Red or Black) to the terminal block marked "L".
- B. Connect the neutral wire (colored Black, Blue, White or Grey) or connect the second live wire (colored Red or Orange) to the terminal block marked "N".
- C. Connect the ground wire to the terminal block marked "⊕" or to the green screw marked "⊕". Bare grounding (earth) wires should be sleeved with green and yellow or green tubing.

Colors of live and neutral wires depend on voltage of supply service and requirements of Building and Electrical Code having jurisdiction.

7. Reinstall hand drying chamber retained in step 2 into wall box housing using #2 Philips screw driver and screws also retained in step 2 while being careful to not pinch cable arranged to route clear around hand chamber in step 6.
8. Fasten the front panel onto the chassis box using the two (2) security screws retained in step 1 above using the security wrench. Retain wrench for any possible service access during dryer lifetime. Turn ON breaker at service panel (by others) and test dryer operation.
9. Record the unit S/N on this Owner Manual and give this Owner's Manual, the Installation Guide and the security wrench to Owner or Facility Manager.

General safety information

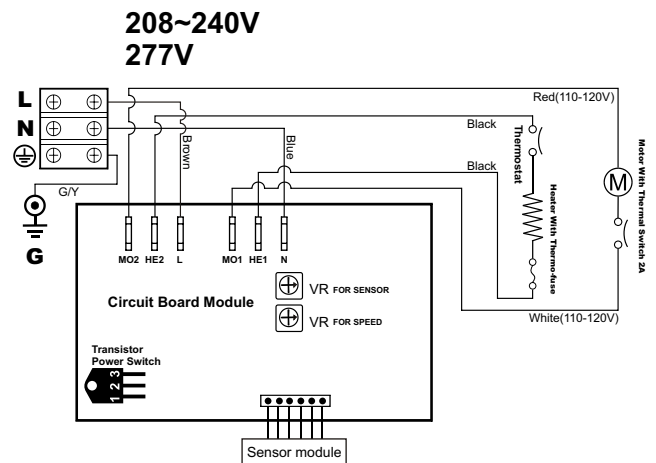
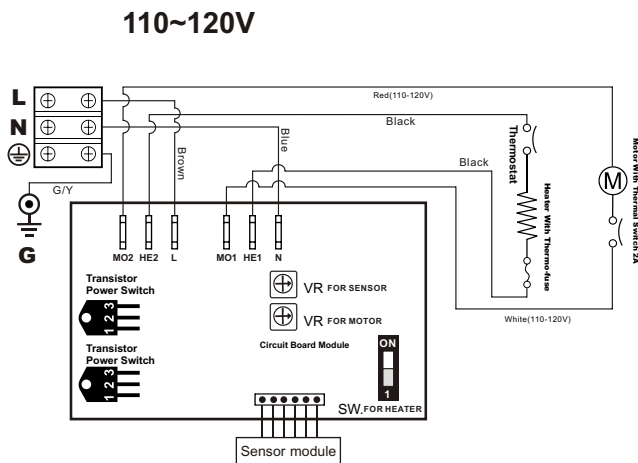
⚠ WARNING This product is intended for installation by a qualified service person. Use AWG NO. 12 solid conductor for wiring.

⚠ DANGER Failure to properly ground unit could result in severe electrical shock and/or death.

⚠ WARNING Disconnect power at the service breaker before installing or servicing.

⚠ WARNING All units must be supplied with a 3-wire service. The ground wire must be connected to the dryer's backplate.

Circuit Diagram



Installation Kit Included (find in carton)

1. Wall box Installation Screws (M5x25 Philips pan head self threading) x 4 pcs
2. Nylon bushing x 1 pc
3. Crimp-on terminal wire tip x 3 pcs

Service Tool Included (with installation kit)

Security hex driver 4 mm x 1 pc (5/32" pin-hex will work if tool is lost)

➤ Please unpack the unit and check the quantity of the above tool and kit.

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Recommended mounting heights

- from top edge of hand chamber above finished floor (AFF)

Men / Women	46"	(1168)
Children 4-7 years	33"	(838)
Children 8-10 years	37"	(940)
Children 11-13 years	41"	(1041)
Children 14-16 years	45"	(1143)
Handicaped	40"	(1016)

**See Mounting Template & Installation Guide (MT & IG)
1703160001** (Supplied with unit)

Reference 2010 ADA Accessibility Standards
AFF (maximum)

Reach LIMIT (unrestricted)

All Approaches 48" (1219)

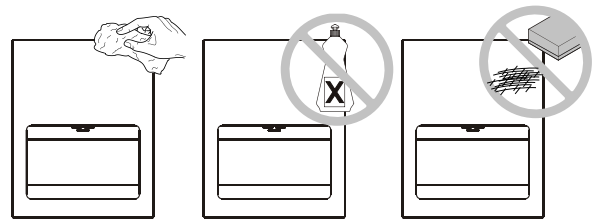
Operation

- Shake excess water from hands.
 - Place hands under the nozzle and dryer automatically starts operation.
 - Rub hands lightly and rapidly under the nozzle.
 - Dryer stops when hands are removed from sensor zone or if maximum time is reached.
 - Sensor Adjustment Control.
See sensor range adjustment section on page 4
- DO NOT OVERTURN!**

Cleaning and Maintenance

Periodic cleaning of the unit is recommended to ensure optimum performance.

- Disconnect the electrical supply.
- Remove the two cover-mounting screws.
- Remove the cover.
- Clean all dust lint from the interior of the dryer.
- Wipe the cover with a damp cloth and mild cleaning solution. Do not Soak. Never use abrasives to clean the cover.
- Replace the cover. Do not over tighten the screws.



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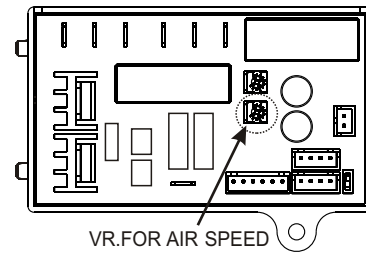
Warranty

All of our dryers are designed and manufactured to provide years of dependable performance. Component parts are guaranteed to be free of defects in material and workmanship for a period of **Five (5)** years from date of original invoice. This guarantee will be honored provided that the dryer is installed and maintained in accordance with the instructions. Parts damaged during the installation are the purchaser's responsibility. **ASI's** warranty covers defects exclusively, and only liability for the replacement of defective parts will be accepted. This warranty does not cover wear and tear, or misuse and abuse. Transportation, freight costs and labor are also excluded. Defective parts must be returned prepaid, accompanied by the unit serial number, to the point of purchase. This warranty is granted solely to the original purchaser of the unit and is subject to registration.

Warm air speed adjustment For 110~120V Circuit Board Module

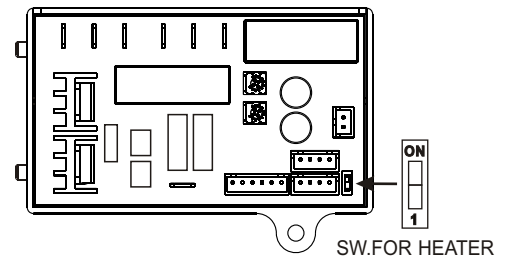
1. Switch off the power, loosen the cover screws and remove the cover.
2. Use small Philips head screwdriver or plastic flat blade probe to gently turn VR shaft. Turn clock-wise [CW] to increase power to maximum (+) ↻, turn counterclockwise [CCW] to reduce power as required (-) ↻.

3. DO NOT OVERTURN!



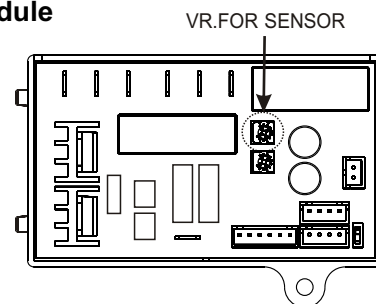
Heater Element Switch ON/ OFF For 110~120V Circuit Board Module

1. Switch off the power, loosen the cover screws and remove the cover.
2. Adjust the heater switch on the PCB with a small plastic or wood flat blade probe.
 - 2-1. Slide the switch to "ON" : Enables heater on.
 - 2-2. Slide the switch to "1" : Disables heater.



Sensor range adjustment For ALL Circuit Board Module

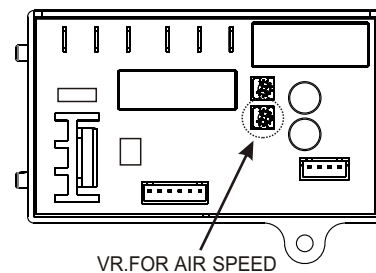
1. The range is 2" to 6" [51 to 152], standard setting is 5-19/32" [140 ± 10].
 2. Turn CW: Increases the sensing range (+) ↻.
 3. Turn CCW: Decreases the sensing range (-) ↻.
- 4. DO NOT OVERTURN!**



Warm air speed adjustment For 208~240V, 277V Circuit Board Module

1. Switch off the power, loosen the cover screws and remove the cover.
2. Use small Philips head screwdriver or plastic flat blade probe to gently turn VR shaft. Turn CW to increase power to maximum (+) ↻, turn CCW to reduce power as required (-) ↻.

3. DO NOT OVERTURN!



Diagnostics and Remedies

Symptom	Corrective Actions for Initial Installation Failures
If the dryer will not run	First ensure that the breaker supplying the dryer is operational. If it is, disconnect the power and remove the dryer cover. Taking suitable precautions to avoid shock hazard, reconnect the power and check for Voltage at the terminal block. Verify that connections are made correctly.
The dryer cycles by itself or runs constantly	Ensure that there is no obstruction on or in front of the IR sensor. Clean any dirt or debris off the sensor lens. If problem persists, replace sensor.
The dryer makes a loud noise and does not run for a complete cycle	Ensure that the supply Voltage is correct. Dryer will make a loud humming noise if the input Voltage is too high. Verify Voltage requirement on unit rating label and correct supply as required. If CBM has been damaged, replace CBM, IR sensor module.
The dryer runs but air stream is low pressure and/or low velocity	Ensure that the supply Voltage is correct. Dryer will run weakly if the input Voltage is too low. Verify Voltage requirement on unit rating label and correct supply as required.
Symptom	Corrective Actions for In-Service Failures
If the dryer will not run	First ensure that the breaker supplying the dryer is operational. If it is, disconnect the power and remove the dryer cover. Replace the CBM and IR sensor module. Taking suitable precautions to avoid shock hazard, reconnect the power and check for Voltage at the terminal block.
The IR sensor only "sees" close range objects	For 208~240 V and 277 V: Disconnect power from unit; disconnect heater element from circuit; check resistance (Ω) of element with multimeter. If Ω is off-scale infinitely large then replace element. If Ω is between 25 and 30 then check motor brushes for wear and replace them if remaining graphite is $\leq 25/64$ " [10]. If after reassembly and testing there is still no motor function then replace motor.
The heater gets hot but no air stream is produced	Ensure that there is no obstruction on or in front of the IR sensor. Clean any dirt or debris off the sensor lens. Check VR for sensor range setting, If problem persists, disconnect the power and remove the dryer cover and replace CBM, IR sensor module.
The dryer only blows cold air during a full cycle	Disconnect the power. Remove the dryer cover. Check VR for speed setting Disassemble the blower- motor/ fan housing. Replace the fan motor. Reassemble.
The air stream is low pressure and velocity	Disconnect the power. Remove the dryer cover and check/ ensure heater SW is ON. Disassemble the blower-motor/fan housing. Test the thermostat for open circuit. Check the heater element for signs of burning or breakage. Damaged element must be replaced.
	Check the output nozzle for obstructions. If none are present, disconnect the power. Remove the dryer cover. Remove any dust/lint buildup from intake vent slots. Check VR for speed setting. Disassemble the blower-motor/fan housing. Check the motor brushes for worn condition ($\leq 25/64$ " [10] graphite remains) and replace them, if necessary.

Repair parts list

Key	Part #	Description	Qty	Key	Part #	Description	Qty
1	A0245	Blower housing - Upper	1	21	A0274	Dry hand chamber	1
2	A0168	Motor rubber - Upper	1	22	A0363	Security hex screw	2
3	A0246	Motor brushes	2	23	A0364	Recessed box	1
4	A0247	Motor 0.67HP@120Vac	1	24	-	Screw M4x10, philips pan head	2
5		Heater assembly	1	25	-	Self threading screw M4x10, philips pan head	8
	A0249	500W@120Vac,28.8Ω					
6	A0251	Motor rubber - Lower	1	26	-	Screw M3x16,philips pan head	2
7	A0252	Blower housing - Lower	1	27	-	Screw M4x10,philips pan head	1
8	A0001	Rubber grommet -Base	4			with external tooth lock washer	
9	A0253	Base plate	1	28	-	Screw M5x8,philips pan head	4
10	A0011	Grounding screw with cup washer	1			with external tooth lock washer	
11	A0133	Mylar shield with LNG marked	1	29	-	Screw M5x10,philips pan head	2
12	A0012	Nylon cable clamp	1	30	-	Wires Harness (Not Shown)	1
13	A0010	Terminal block	1	31	A0124	L-Wrench	1
14	A0254	Blower mounting bracket	1	32	A0276	CBM terminal legend label	1
15		Circuit Board Module (CBM)	1	33		Caution Branch Circuit label	1
	A0321	110-120Vac			A0267	15A - 120Vac	
	A0430	208-240Vac			A0268	8A - 240Vac/ 277Vac	
	A0431	277Vac		36	A0242	Crimp-on wire tips for terminal block	3
16	A0258	Sensor bracket	1	37	A0277	Bushing, Nylon blk, KO	1
17	A0259	Sensor module	1	38	-	Screw M3x8,philips pan head	2
18		Label, Circuit Diagram	1	39	-	Screw M4x8,philips pan head	4
	A0260	110-120Vac		40	-	Hex nut,M4	2
	A0432	208-240Vac/ 277Vac					
19	A0365	Cover, Stainless steel - Satin	1				
20		Rating label	1				
	A0366	0135-1					
	A0367	0135-2					
	A0368	0135-3					

Assembly Diagram

Tool Req'd

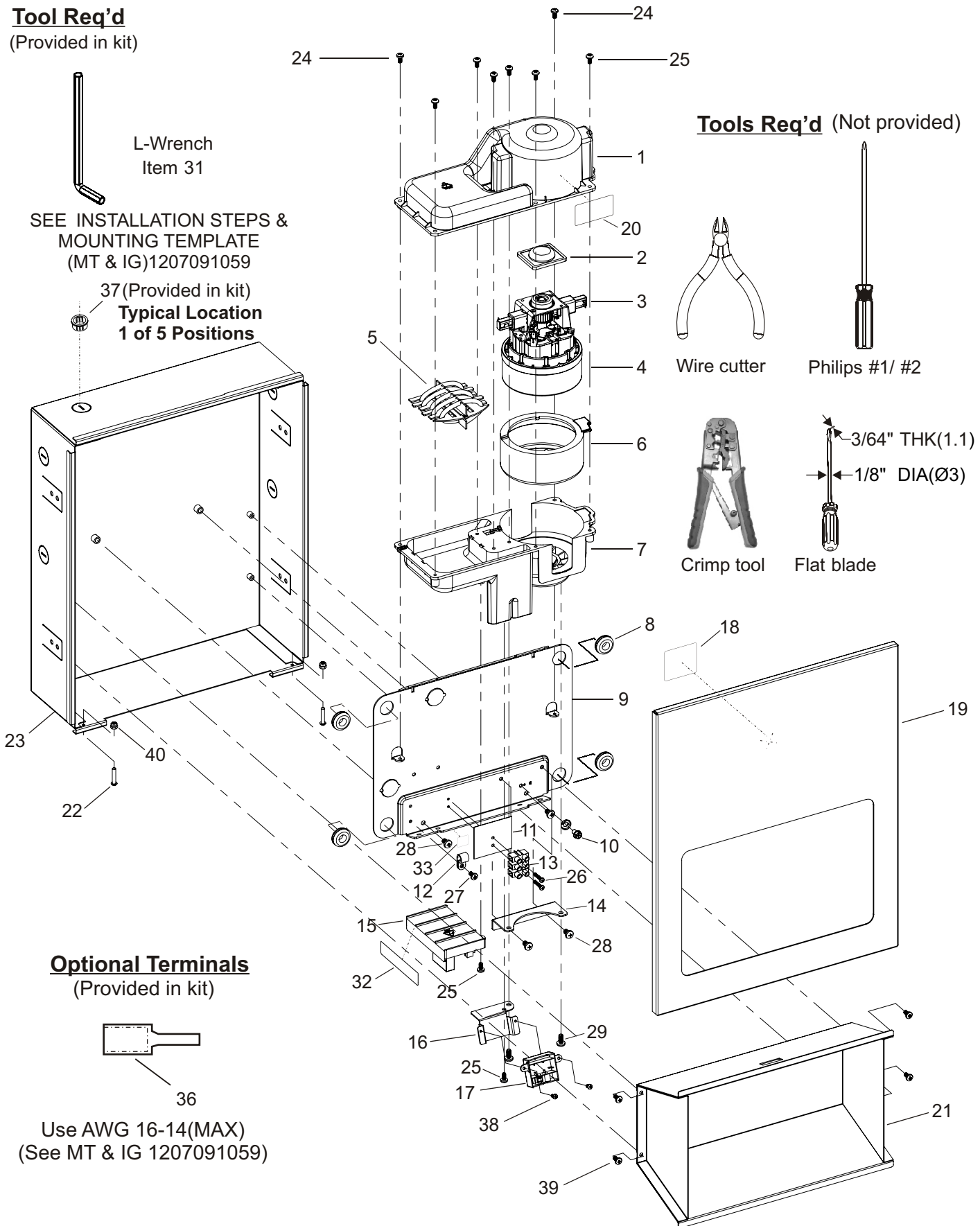
(Provided in kit)



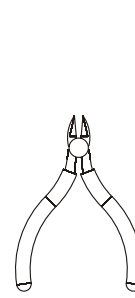
L-Wrench
Item 31

SEE INSTALLATION STEPS &
MOUNTING TEMPLATE
(MT & IG)1207091059

37 (Provided in kit)
Typical Location
1 of 5 Positions



Tools Req'd (Not provided)



Wire cutter



Philips #1/ #2



Crimp tool



Flat blade

3/64" THK(1.1)
1/8" DIA(Ø3)

Optional Terminals

(Provided in kit)



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Use AWG 16-14(MAX)
(See MT & IG 1207091059)