

# Hand Dryer **Operating Instructions and Parts Manual**

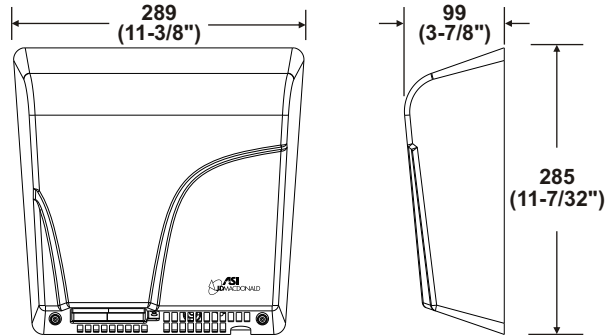
Surface-mounted **ADA-compliant** hand dryer



**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 # 10-0165-2**

**Patented No. D 542,976 S**



DIM'S  
mm(inch)

## TECHNICAL SPECIFICATIONS

ITEM CATEGORY	PERFORMANCE DATA
Operating Voltage	220-240VAC, 50/60Hz, 7.5A, 1.8KW
Output Warm Air Volume	306m <sup>3</sup> /h [180CFM]
Output Warm Air Temp	60°C [140°F] at ambient T = 25°C [77°F]
Output Air Speed	53.6mph (78.7ft/s) [24m/s {86.4km/h}]
Motor Type	200W, 5500rpm, brush type, dual ball bearings
Motor Thermal Protection	Auto resetting thermostat turns unit off at 105°C [221°F]
Heater Element	1600W @ 240VAC, nichrome 8.9Ω
Heater Thermal Protection	Auto resetting thermostat turns unit off at 65°C [149°F], resets at 50°C [122°F]
Drying Time	Less than 28 seconds
Standby Power	Less than 0.5W
Circuit Operation	Infrared automatic, self adjusting
Sensor Range	100mm to 230mm [4" to 9"], adjustable; standard 170mm ± 20mm [7"]
Timing Protection	60 seconds auto shut off
Timing Duration	1 second delayed turn off after last sensor read
Sound Level	66dB @ 2m
Drip Proof	IPX3
Cover Type	Die cast aluminum, 7/64"(.109", 2.6mm) thick
Cover Finish	Powder coating white
Net Weight	4.54kg [10lbs]
Shipping Weight	4.76kg [10.5lbs]
Unit Size	289mm W x 285mm H x 99mm D [11-3/8" x 11-7/32" x 3-7/8"]
ADAAG Compliance	Less than 4" [102mm] projection

Input	Model	Motor			Heater		Total	
VAC	Nº	Vac	Inrush A(W)	Operating A(W)	Vac	Operating A(W)	Inrush A(W)	Operating A(W)
220	0165-2	220	1.14 (252)	0.76 (168)	220	6.11 (1344)	7.25 (1596)	6.87 (1512)
230	0165-2	230	1.18 (276)	0.79 (184)	230	6.39 (1469)	7.57 (1745)	7.18 (1653)
240	0165-2	240	1.24 (300)	0.83 (200)	240	6.67 (1600)	7.91 (1900)	7.50 (1800)

## General safety information

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

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

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

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

-- **NOTE:** Do not install dryer over washbasin --

## Installation - IMPORTANT - READ COMPLETELY BEFORE STARTING INSTALLATION PROCEDURE

1. Make sure power supply breaker is switched off. Installation must be carried out in accordance with the current edition of the local wiring regulations code having jurisdiction. Installation should be performed only by a qualified electrician.
2. Place template against wall at desired height (see mounting height recommendations) and mark locations of 4 mounting holes and wire service entry at knockout (KO) location.  
**Note:** For two or more dryers, dryers should be no closer than 24 inches (610 mm) on center.
3. Remove and retain 2 cover screws and cover.
4. **For in-wall (concealed) power supply** - Provide supply wire to KO location according to local code and attach securely to chassis at KO with appropriate strain relief connector (not supplied).
5. Attach dryer to wall. For wood wall/studs use 1/4 inch (6 mm) screws at length that will ensure 1 inch (25 mm) min. stud penetration. For masonry walls use expansion bolts or anchors for 1/4 inch (6 mm) screws to ensure penetration 1/4 inch (6 mm) deeper than anchor. Shim if necessary to ensure base plate is flat against wall.
6. Connect supply and ground wires to terminal block where indicated or connect supply wires to terminal block where indicated and connect ground wire to base plate with ground screw (Connections: A. Connect the live wire (colored Brown or Black) to the terminal block marked "L1". B. Connect the neutral wire (colored White or Grey) or connect the second live wire (colored Red or Orange) to the terminal block marked "N/L2". C. Connect the ground wire (colored green or green and yellow or bare conductor) to the terminal block marked "⊕" or to the green screw marked "⊕"). Colors of live and neutral wires depend on voltage of supply service and requirements of Building and Electrical Code having jurisdiction.
7. Replace cover. Do not over-tighten screws.
8. Switch on circuit breaker and test unit operation.
9. Complete and mail registration reply postcard.

## Installation Kit Included (find in carton)

1. Self-Threading screws (1/4" x 1-1/2") x 4 pcs
2. Metal Washer (3/8" x 7/8"x 1/16") x 4 pcs
3. Nylon bushing x 4 pcs
4. Security hex wrench (5/32") x 1 pc

### Service Tool Included (with installation kit)

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

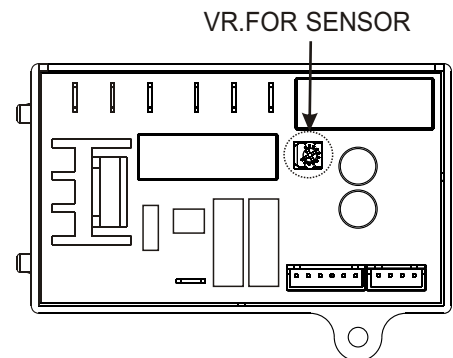
➤ Please unpack the unit and check the quantity of the above tool and kit.

### Recommended mounting heights - from bottom edge of dryer above finished floor (AFF)

Men	1270 mm	(50")
Women	1194 mm	(47")
Children 4-7 years	889 mm	(35")
Children 8-10 years	991 mm	(39")
Children 11-13 years	1092 mm	(43")
Children 14-16 years	1194 mm	(47")
Handicaped	1016 mm	(40")

### Sensor range adjustment

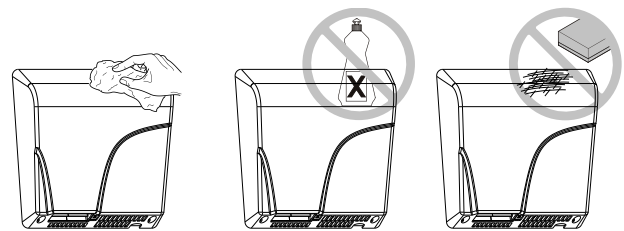
1. The ranger 100 mm to 250 mm [4" to 10"], standard 170 mm ± 20 mm [7"].
2. Clockwise: Lengthen the sensing range(+) ↻
3. Counterclockwise: Shorten the sensing range(-) ↻
4. **DO NOT OVERTURN!**



### 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.



### Operation

- **No-touch** operation.
- **Shake** excess water from hands.
- **Place** hands under the outlet to start operation. LED in sensor array shines blue light during operation to guide user to optimal hand placement for fastest drying time.
- **Rub** hands lightly and rapidly.
- **Stops** automatically after hands are removed.

## Diagnosics and Remedies

Symptom	Corrective Action
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. If there is power and the dryer will not run, replace the circuit board module (CBM) and/or the sensor module and/or the power transistor (part of the wire harness, item 19/21).
If the dryer cycles by itself, runs all the time, or is not sensitive enough	Ensure that there is no obstruction on or in front of the infra-red sensor. Clean any dirt off the sensor lens. Try adjusting the sensitivity potentiometer on CBM (blue knob). If the problem persists, replace the CBM and/or the sensor module.
If the element gets hot but the fan motor does not turn	Disconnect the power. Remove the dryer cover and check for obstructions in the fan housing. Damaged fans must be replaced. If there are no obstructions, replace the motor.
If the unit runs but makes a buzz noise	Disconnect the power. Remove the dryer cover and check the fan for rubbing on the housing as it rotates. Replace fan if the condition exists.
If the fan motor runs but the element does not get hot (Dryer blows cold air)	Disconnect the power and remove the dryer cover. Check for loose or damaged wires. Remove the blower housing. Check the element for signs of burning or breakage. Damaged element must be replaced. If the element does not appear damaged, disconnect it at the CBM and check element wire continuity (see tech spec). An open circuit indicates damage to the element wire and to the integral temperature limit control (TLC). Separate the TLC and test for open circuit. If this is the case, replace the element and/or the thermostat.
If the motor makes ticking/winding noise when it runs	Disconnect the power. Remove the dryer cover and check the brushes for worn condition (less than 25/64" (10mm) graphite remains) and replace them, if necessary. Purchase rebuild kit to perform repair.

## Repair parts list

Key	Part #	Description	Key	Part #	Description
1	A0289	Cover 10-0165-2	25	A0029	Nylon bushing (4 reqd.)
2	A0183	Cable clamp	26	A0034	Access hole plug
3	A0062	Motor 200W @240Vac	27	A0292	220-240 Vac Rating label
4	A0005	Rubber grommet -Motor (4 reqd.)	28	A0372	Circuit diagram label (not shown)
5	A0006	Motor bracket	29	A0335	Power cord (Not Shown)
6	A0007	Nylon washer -Motor (4 reqd.)	30	-	Screw (4 reqd. 1/4" dia. X1-1/2"), philips pan head
7	A0290	Circuit Board Module (ERP)	31	-	Screw (4 reqd. M5x10mm), philips pan head
8	A0022	Barrier plate	32	-	Screw (6 reqd. M4x10mm), philips pan head
9	A0512	Sensor Module, 6" cable	33	-	Screw (2 reqd. M3x6mm), philips pan head
10	A0023	Security hex screw with lock washer (2 reqd.)	34	-	Screw (4 reqd. M5x12mm), philips pan head
11	A0011	Grounding screw with cup washer	35	-	Screw (4 reqd. M4x6mm), philips pan head
12	A0010	Terminal block	36	-	Screw (1 reqd. M4x6mm), headless set (with 2mm hex key)
13	A0358	Base plate	37	-	Screw (2 reqd. M3x16mm), philips pan head
14	A0014	Blower housing - LH	38	-	Screw (1 reqd. M4x10mm), philips pan head with external tooth lock washer
15	A0013	Thermostat (TLC)	39	-	Mylar shield with <b>L1,N/L2,G</b> marked
16	A0015	Blower wheel	40	-	Wire nuts (2 reqd.) not shown
17	A0037	Heater assembly	41	-	Cable ties (2 reqd.) not shown
18	A0003	Blower housing - RH			
19	-	-			
20	A0020	Security hex wrench			
21	A0025	Wire harness (not shown)			
22	A0026	Motor brush (2 reqd.)			
23	A0001	Rubber grommet - Base (4 reqd.)			
24	A0028	Metal washer (4 reqd.)			

**Diagram** Patented No. D 542,976 S

