

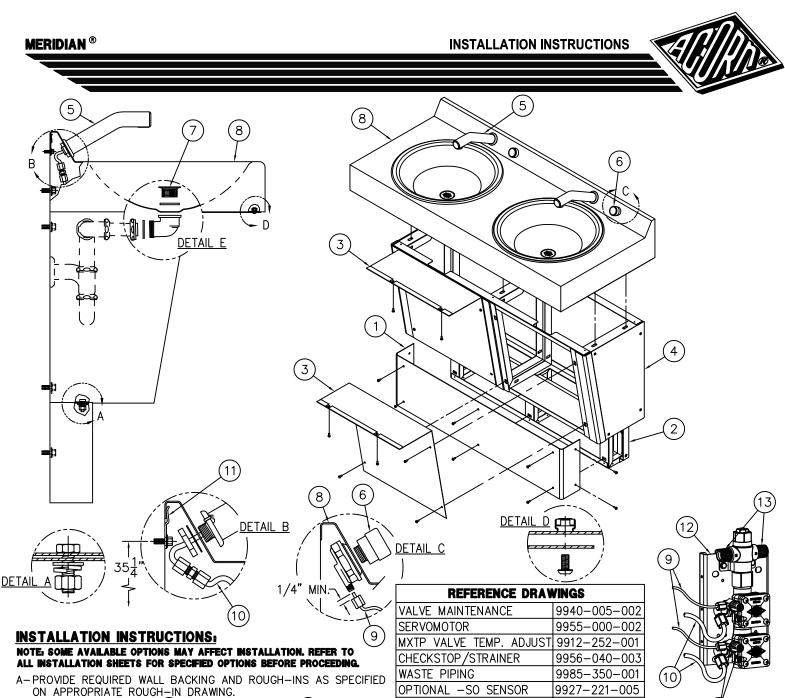
## **ROUGH-IN FOR THE FOLLOWING:**

- 1- LAVY WASTE OUTLET 1-1/2" O.D. TUBE FOR COMPRESSION JOINT.
- 2- MIXING VALVE INLET 1/2" NPS HOT AND COLD VALVE SUPPLIES.
- 3- MOUNTING LOCATIONS 9/16" DIAMETER MOUNTING HOLES (2) PLACES.
- 4- MOUNTING LOCATIONS 9/16" x 1-1/8" MOUNTING SLOTS (10) PLACES.
- 5- BACKSPLASH MOUNTING (2) "S" TYPE MOUNTING CLIPS. CLIPS HAVE (2) 9/32" x 3/4" SLOTS FOR FASTENERS.
- 6- SCUFF PLATE MOUNTING 3/8" X 1" SLOTS (3) PLACES.
- 7-FOR -SO SENSOR OPERATED CONTROLS. PROVIDE 120V/60Hz/3 AMPS (MAX.) ELECTRIC RECEPTACLE TO CONNECT FACTORY SUPPLIED 120 VAC TO 9VDC 100 mA PLUG-IN TRANSFORMER. <u>NOTE:</u> RECEPTACLE MUST BE WIRED TO A GFI PROTECTED CIRCUIT. FIXTURE MUST BE EARTH GROUNDED PER N.E.C. (NATIONAL ELECTRICAL CODE).

#### **INSTALLATION INSTRUCTIONS:**

SOME AVAILABLE OPTIONS FOR THIS UNIT MAY ALTER THESE ROUGH-IN INSTRUCTIONS. CONTACT FACTORY FOR DETAILS. UNIT IS INTENDED FOR INSTALLATION ON A FINISHED WALL WITH APPROPRIATE WALL BACKING. WALL ANCHORS AND MOUNTING HARDWARE ARE NOT INCLUDED. UNIT INCLUDES WASTE PIPING AND 1-1/2" TUBULAR P-TRAP. VALVE ASSEMBLY IS SHIPPED LOOSE FOR MOUNTING TO WALL. INCLUDES VALVE AND TRAP ENCLOSURE, SHIPPED LOOSE.

	ACORN ENGINEERING COMPANY P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	MULTILINEAR STN. STL. ROU	GH-IN MODEL <b>*</b> 3712-2	& 3712-2-TZ (ON-FLOOR)
		MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
		DECEMBER 1996	6/30/97	
/16		TO PRESENT	DATE REVISED 01/11/19 C	9927-050-001



- B-REMOVE SCUFF PANEL (1). WITH SCUFF FRAME (2) SUPPORTED ON FINISHED FLOOR, ANCHOR TO THE FINISHED WALL (MOUNTING HARDWARE BY OTHERS).
- C-REMOVE FRONT COVERS (3). ASSEMBLE PEDESTAL FRAME (4) TO SCUFF FRAME (2) USING 5/16"-18 NUTS AND BOLTS PROVIDED. SEE DETAIL A. ANCHOR PEDESTAL FRAME (4) TO WALL (MOUNTING HARDWARE BY OTHERS).
- D-ASSEMBLE WATER SPOUTS (5) (SEE DETAIL B), PUSHBUTTONS (6) (SEE DETAIL C), AND GRID STRAINERS (7) (SEE DETAIL E) TO WASHBASIN
  (8). CONNECT POLYETHYLENE 1/8" O.D. AIR LINES (9) TO THE PUSHBUTTONS BY HAND TIGHTENING FERRULE NUTS PROVIDED. SEE DETAIL C. CONNECT POLYETHYLENE 1/4" O.D. WATER LINES (10) TO SPOUTS WATERTIGHT WITH FERRULE NUTS PROVIDED.
- E- MOUNT S-CLIPS (1) TO THE WALL AT 35-1/4" ABOVE FINISHED FLOOR (MOUNTING HARDWARE BY OTHERS). SEE DETAIL B. INSTALL WASHBASIN (8) ENGAGING BACKSPLASH OVER S-CLIPS. USE BUTTON HEAD SCREWS PROVIDED TO ASSEMBLE SIDES OF WASHBASIN (8) TO PEDESTAL FRAME (4) (SEE DETAIL D); USE 5/16"-18 NUTS & BOLTS PROVIDED IN WASHBASIN CENTER ASSY. (SEE DETAIL A). ANCHOR WASHBASIN (8) TO WALL (MOUNTING HARDWARE BY OTHERS).
- F- INSTALL MIXING VALVE ASSEMBLY (2) ON THE WALL (MOUNTING HARDWARE BY OTHERS). CONNECT 1/8" O.D. AIR LINES (9) FROM PUSHBUTTONS (6) TO VALVE HAND TIGHT USING FERRULE NUTS PROVIDED. SEE DETAIL C. CONNECT 1/4" O.D. WATERLINES (10) FROM SPOUTS (5) TO VALVE WATERTIGHT WITH FERRULE NUTS PROVIDED.

9957-700-001

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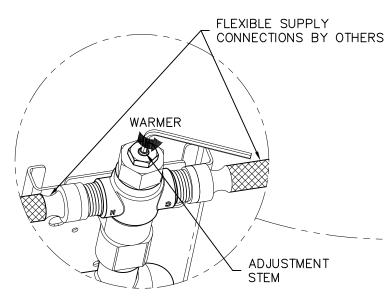
- G-AFTER THOROUGHLY FLUSHING SUPPLY LINES, MAKE UP CONNECTIONS FROM 1/2" NPTE VALVE INLETS (3) TO SUPPLY STUB OUTS. CONNECTOR HOSES AND SUPPLY STUB OUTS ARE PROVIDED BY THE INSTALLER.
- H-NOTE: ALL WASTE PIPING AND CONNECTIONS TO WALL ARE FACTORY PROVIDED. ASSEMBLE WASTE PIPING. SEE APPROPRIATE REFERENCE DRAWING FOR PARTS. MAKE-UP LAVY WASTE CONNECTION (1-1/2" O.D. COMPRESSION).
- I- TURN ON WATER SUPPLY. TEST WASHFOUNTAIN FOR DESIRED TIMING CYCLE BY ADJUSTING TIMERS (4).
- J- INSTALL SCUFF PANEL (1) AND FRONT COVERS (3) WITH BUTTON HEAD SCREWS. SEE DETAIL D.

ACORN ENGINEERING COMPANY P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	STRAIGHT FRONT WASHBASIN - #3711/3712/3713/3714 -2 ON THE FLOOR		
	MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
	JULY 1997	7/18/97	
a	TO PRESENT	DATE REVISED 01/11/19 E	9927-135-001

-H PUSHBUTTON PARTS



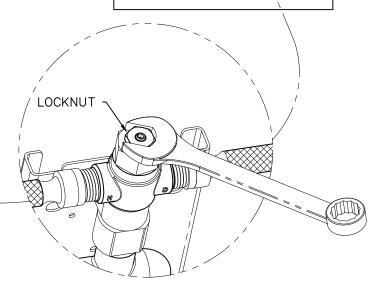
<b>REFERENCE DRAWINGS</b>			
REPAIR PARTS	DRAWING		
NON-METERING SERVOMOTOR (-F)	9955-001-003		
METERING SERVOMOTOR (-H)	9955-000-003		
AIR-CONTROL VALVE BODY	9975-090-001		
CHECKSTOP (-ST Single Temp. Only)	9956-040-003		
SENSOR/SOLENOID (-SO) (24VAC)	9955-015-002		
SENSOR/SOLENOID/PPZ (-SO) (9VDC)	9955-019-002		
HAND BUTTON	9957-300-001		
FOOT BUTTON	9957-200-001		



# VALVE INSTALLLATION:

- A- MX-T/P VALVES: AFTER THOROUGHLY FLUSHING SUPPLY LINES, MAKE UP CONNECTIONS TO SUPPLY STUB OUTS AND VALVE INLETS WITH INSTALLER PROVIDED FLEXIBLE HOSE. NOTE: MX-T/P VALVE SUPPLY INLETS ARE 1/2" NPTE.
- B- OPTIONAL -ST (Single Temp): AFTER THOROUGHLY FLUSHING SUPPLY LINE, MAKE UP CONNECTION TO SUPPLY STUB OUT AND VALVE INLET WITH FLEXIBLE HOSE PROVIDED. NOTE: -ST VALVES INCLUDE FLEXIBLE HOSE WITH 1/2" NPSI CONNECTIONS. FLEXIBLE HOSE ENDS WILL ACCOMMODATE 1/2" NPT MALE ADAPTER.
- C- SEE APPROPRIATE SERVOMOTOR REFERENCE DRAWINGS FOR VALVE DETAILS AND TIMING INSTRUCTIONS.

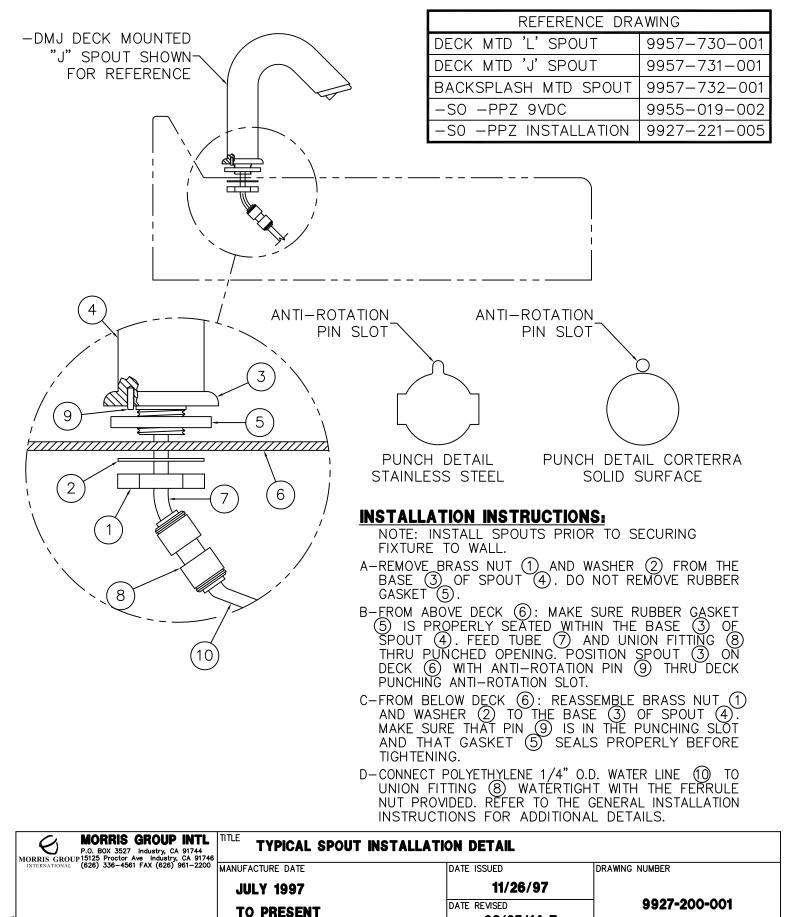
# 



# MX T/P TEMPERATURE VALVE ADJUSTMENT

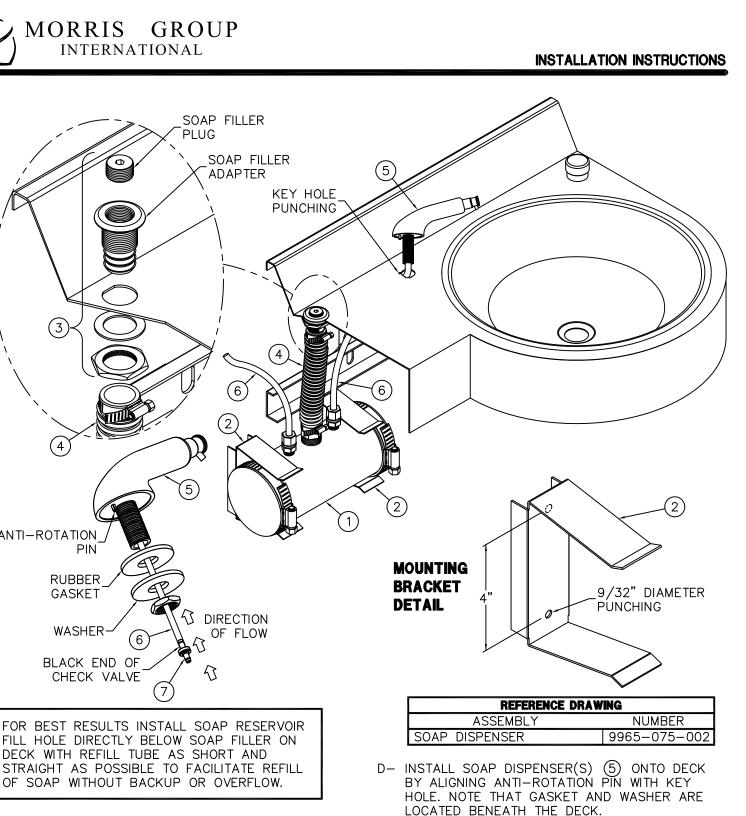
- D- LOOSEN LOCKNUT SHOWN.
- E- TURN ON FIXTURE AND RUN WATER FOR AT LEAST 2 MINUTES. ALLOW WATER TO STABILIZE.
- F- USE AN 1/8" ALLEN WRENCH TO TURN ADJUSTMENT STEM COUNTER-CLOCKWISE FOR WARMER OR CLOCKWISE FOR COOLER OUTLET WATER TEMPERATURE.
- G- TIGHTEN LOCKNUT TO PREVENT ACCIDENTAL OR UNAUTHORIZED TEMPERATURE ADJUSTMENT.
- H- RE-CHECK OUTLET TEMPERATURE.

ACORN ENGINEERING COMPANY P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	VALVE INSTALL & MIXING VALVE ADJUSTMENT		
	MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
	MARCH 2014	03/25/14	
	TO PRESENT	DATE REVISED	9912-252-002



03/25/14 F

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A- INSTALL SOAP RESERVOIR (1) TO WALL INSIDE THE TRAP ENCLOSURE USING THE MOUNTING BRACKETS (2) PROVIDED. WALL ANCHORS AND FASTENERS ARE BY OTHERS.

3

(4)

ANTI-ROTATION

PIN

RUBBER

GASKET

WASHER

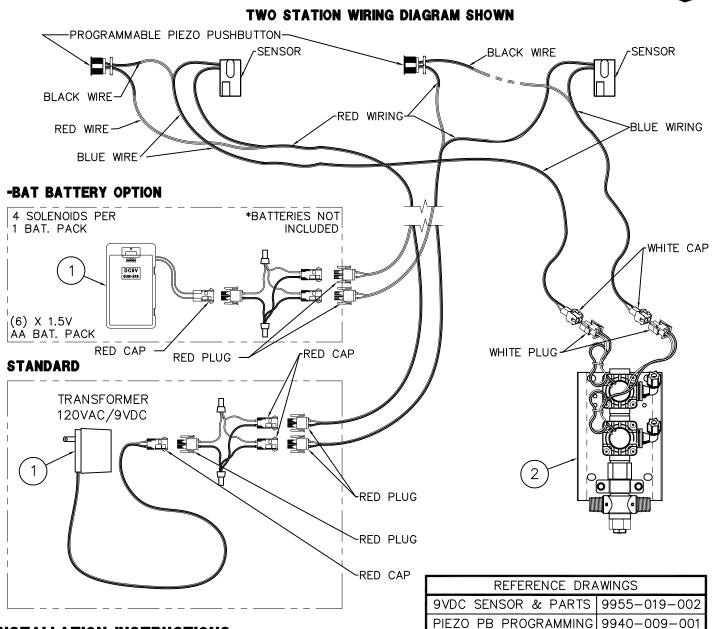
- B- INSTALL SOAP FILLER ASSEMBLY (3) TO DECK.
- C- ATTACH THE 1-1/4" O.D. REFILL TUBE (4) TO SOAP FILLER ASSEMBLY (3) & SOAP RESERVOIR (1) WITH THE HOSE CLAMPS PROVIDED.

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- E- ATTACH THE 3/8" O.D. TUBING (6) TO THE DISPENSER(S) (5) & RESERVOIR (1). NOTE: CHECK VALVE(S) (7) MUST BE FIELD SPLICED INTO TUBING (6) & INSTALLED WITH RESPECT TO DIRECTION OF FLOW.
- F- TO FILL SOAP RESERVOIR, REMOVE THE FILLER PLUG FROM THE SOAP FILLER ADAPTER. SLOWLY POUR SOAP DOWN OPENING AND REPLACE PLUG.

P.O. BOX 3527 Industry, CA 91744 MORRIS GROUP 15125 Proctor Ave Industry, CA 91746	-PUM SVAP DISPENSER INSTALLATION DETAIL		
MORRIS GROUP 15125 Proctor Ave Indústry, CA 91746 INTERNATIONAL (626) 336-4561 FAX (626) 961-2200	MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
	<b>JUNE 2001</b>	08/24/01	
×.32	TO PRESENT	DATE REVISED 06/22/04	9927-210-003





# **INSTALLATION INSTRUCTIONS:**

- A- USING APPROPRIATE INSTALLATION INSTRUCTIONS, MOUNT FIXTURE TO WALL AND MAKE-UP WASTE PIPING CONNECTIONS. SENSOR OR ELECTRONIC PUSHBUTTON ARE FACTORY INSTALLED. POWER SUPPLY (1) AND VALVE (2) SHIPPED LOOSE.
- B- INSTALL SOLENOID VALVE ASSEMBLY ② ON THE WALL (FASTENERS AND WALL ANCHORS BY OTHERS), MAKING SURE THAT THE VALVE WILL BE WITHIN BOTTOM ENCLOSURE.
- C- CONNECT WATER SUPPLY (AFTER FLUSHING LINES) TO VALVE, AND VALVE RISER TO SPOUTS AS PER UNIT INSTALLATION INSTRUCTIONS.

- D-CONNECT SOLENOID VALVE, POWER SUPPLY AND SENSOR WIRING AS SHOWN ON DETAIL.
- E- COMPLETE THE INSTALLATION OF THE UNIT ACCORDING TO THE UNITS INSTALLATION INSTRUCTIONS.

<u>NOTE:</u>

1- PLUG-IN TRANSFORMER INCLUDES BUILT-IN SECONDARY FUSE. IN THE EVENT OF POWER SURGE TRANSFORMER MAY REQUIRE REPLACEMENT.

2- ELECTRICAL RECEPTACLE MUST BE WIRED TO A GFI PROTECTED CIRCUIT. FIXTURE MUST BE EARTH GROUNDED PER N.E.C. (NATIONAL ELECTRICAL CODE).

ACORN ENGINEERING COMPANY P.0. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	4 I SO SENSOR/ "DD7 DIE7O ELECTRONIC DUSHRUTTON INSTALLATION		
	MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
	OCTOBER 2009	09/06/13	
	TO PRESENT	DATE REVISED	9927-221-005
9		03/25/14	



# **INSTALLATION, OPERATIONS & MAINTENANCE MANUAL**

Please visit **www.acorneng.com** for most current specifications.

# Programable Piezo Pushbutton Programming Instructions (Flow Time Adjustment)

The Button is factory set an 8 sec. timing cycle, if an 8 sec. cycle is adequate, then **no** programming adjustment is required.

NOTE: Read the entire document before trying to program the piezo pushbutton.

## THE TIME SETTINGS PROGRAM USES 3 DIFFERENT TIMING MODES:

- <u>1 second timing mode</u>: Each push of the button adds 1 second to the total timing cycle.
- **<u>5 second timing mode</u>**: Each push of the button adds 5 seconds to the total timing cycle.
- 20 second timing mode: Each push of the button adds 20 seconds to the total timing cycle.

To program the piezo pushbutton, you will need to be able to see the back of the piezo pushbutton.

Prevision must be made to access the back of the piezo pushbutton. There is an LED on the back of the piezo pushbutton under a layer of transparent epoxy, used as a programming indicator light.

NOTE: This programming procedure moves along rapidly, there is only about 2 or 3 seconds between programming operations.

In order to start the programming the piezo pushbutton, the button must be powered down. Disconnect the red power cable and wait 20 seconds, then reconnect the red power cable.

As soon as the cable is reconnected the LED will start flashing, it will flash 4 times, then stays on for 3 seconds. During the 3 second period, push the piezo button once, the LED will go out, now you are in the **1 sec timing mode** and each time the button is pushed the LED will flash, adding 1 sec to the total timing cycle.

To move on to the **5 sec timing mode**, pause and wait for the LED to flash 2 times, now you are in the 5 sec timing mode. Each time the button is pushed the LED will flash, adding 5 sec to the total timing cycle.

To move on to the **20 sec timing mode**, pause and wait for the LED to flash 3 times, now you are in the 20 sec timing mode and each time the button is pushed the LED will flash, adding 20 sec to the total timing cycle. After programing is complete, pause and wait for the LED to flash 4 times and then 5 times, which completes the programming.

- When a **timing mode is not required** then **do not** push the button and wait for the next timing mode.
- Each timing mode (1 sec, 5 sec or 20 sec timing mode) can be sequenced up to 100 times, that is the number of times, the button can be pushed, to increase the total timing cycle in each timing mode.

Part #: 9940-009-001

ACORN ENGINEERING COMPANY

New: 10/01/13



# **INSTALLATION, OPERATIONS & MAINTENANCE MANUAL**

Please visit www.acorneng.com for most current specifications.

# **Programmable Piezo Pushbutton Programming Instructions** (Flow Time Adjustment)

WORKSHEET

(FILL IN ALL BOXES, WHICH WILL SIMPLIFY THE PROGRAMMING PROCEDURE)

Fill in all the Boxes below

# **PROGRAMING STEPS:**

Power down piezo button for 10 seconds.

While the LED is steady on, push button.

equals 1 sec added to the total timing cycle.

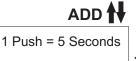
Pause and wait for the LED to flash 2 times.

Reconnect power.

LED turns off.

LED flashes, then stay on.

- Determine the number of seconds per timing cycle
- 1 Push = 1 Second x 1 =
  - sec



sec

sec

ADD

EQUALS

Total timing cycle equals

x 5 =

1 Push = 20 Seconds

x 20 =

You are in the 5 sec timing mode, immediately push the button, 1 push equals 5 sec added to the total timing cycle.

You are in the 1 sec timing mode, immediately push the button, 1 push

- Pause and wait for the LED to flash 3 times.
  - You are in the 20 sec timing mode, immediately push the button, 1 push equals 20 sec added to the total timing cycle.

Part #: 9940-009-001

acorn engineering company

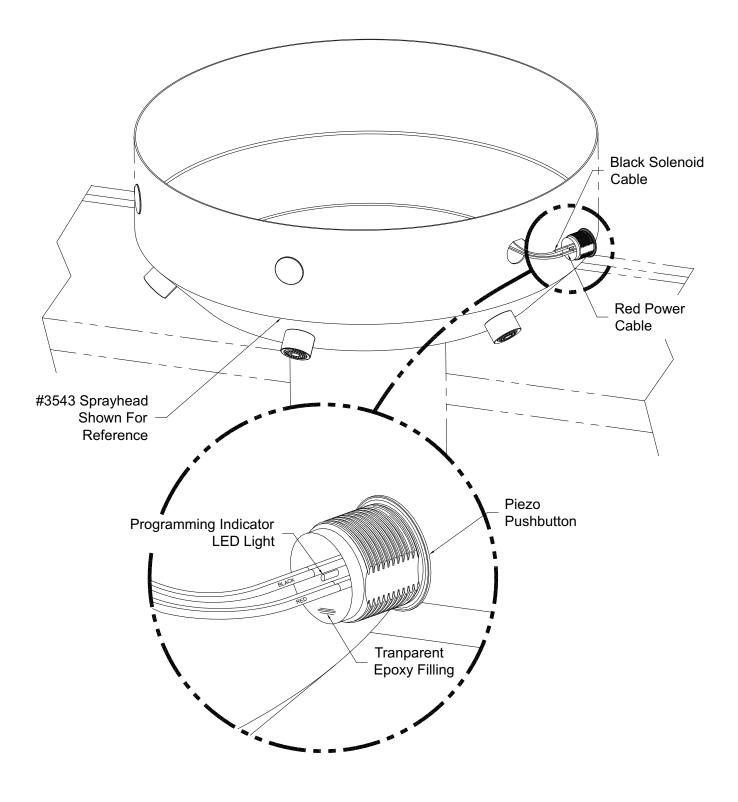
seconds

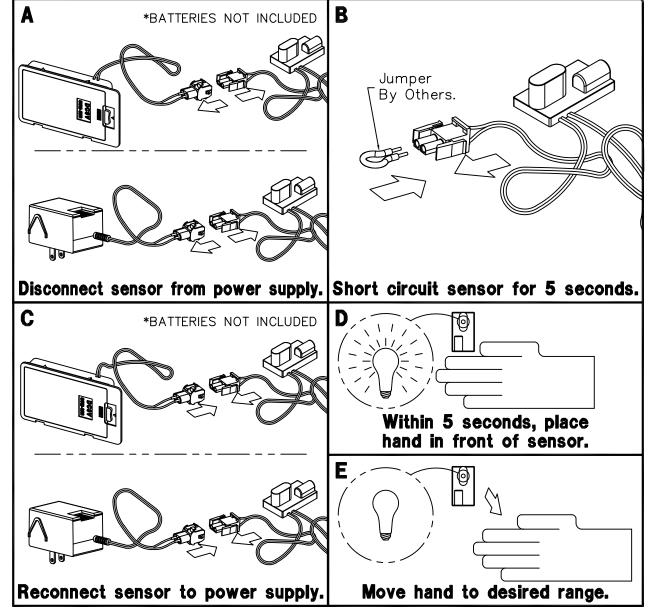
New: 10/01/13



# INSTALLATION, OPERATIONS & MAINTENANCE MANUAL

Please visit **www.acorneng.com** for most current specifications.





**NOTE:** THESE INSTRUCTIONS ONLY APPLY TO 9 VOLT SENSORS THAT DO NOT HAVE A RANGE ADJUSTMENT SCREW ON THE BACK. SEE DRAWING # 9927-222-001.

# **INSTRUCTIONS:**

A-Disconnect sensor from power supply.

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- B- Create a short circuit between the positive and negative connections on the sensor for five seconds. <u>WARNING</u> Do not create a short circuit on the power supply or while the sensor is connected to the power supply.
- C- Reconnect the sensor to the power supply.

- D- Within 5 seconds of making the connection, place hand 2 to 4 inches from the sensor.
- E- Once red light begins flashing quickly, move hand to preferred distance and wait for light to stop flashing.
- F- Check distance. If unsatisfactory, repeat steps A through E.

	MORRIS GROUP INTL P.O. BOX 3527 Industry, CA 91744 INTERNATIONAL 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	I Y VULI UU SENSUR RANGE AUJUSIMENI		
	INTERNATIONAL (626) 336-4561 FAX (626) 961-2200	MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
		SEPTEMBER, 2001	09/06/01	
4		TO PRESENT	DATE REVISED 02/18/14	9927-222-002

STANDARD WIDTHS \*LESS -ECL/-ECR

3711 UNI-BASIN

3713 TRI-BASIN

3712 DUAL-BASIN

3714 QUAD-BASIN



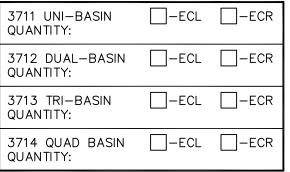
19"

49'

79"

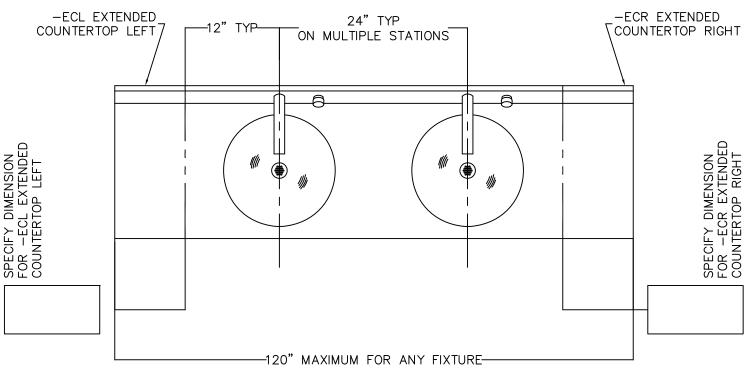
109

#### **MUST SPECIFY:**



SPECIFY EXTENDED COUNTERTOP WIDTH BELOW.

# MERIDIAN<sup>®</sup> STAINLESS STEEL DUAL-BASIN, 3702 SHOWN FOR REFERENCE ONLY.



#### **ORDERING INSTRUCTIONS:**

SPECIFY WHERE INDICATED COUNTERTOP SIDE(S) TO BE EXTENDED AND DIMENSION(S) REQUIRED. MAXIMUM OVERALL WIDTH IS 120".

NOTE: WHEN -ECL OR -ECR OPTIONS ARE SELECTED, ONLY THE COUNTERTOP IS EXTENDED; TRAP ENCLOSURES REMAIN THE SAME AS STANDARD. LENGTHS ARE SUBJECT TO FACTORY APPROVAL. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCE OF PLUS OR MINUS  $\frac{1}{4}$ " WITH OVERALL TOLERANCE OF PLUS OR MINUS  $\frac{1}{4}$ ".

ACORN ENGINEERING COMPANY P.O. BOX 3527 Industry, CA 91744 15125 Proctor Ave Industry, CA 91746 (626) 336-4561 FAX (626) 961-2200	<b>3710 SERIES MULTI-BASIN FIXTURES -ECL / -ECR</b>		
	MANUFACTURE DATE	DATE ISSUED	DRAWING NUMBER
	AUGUST 1997	07/15/10	
*972	TO PRESENT	DATE REVISED 01/10/19 A	9927-127-001