

TAD-400SR

Spray Valve Controller

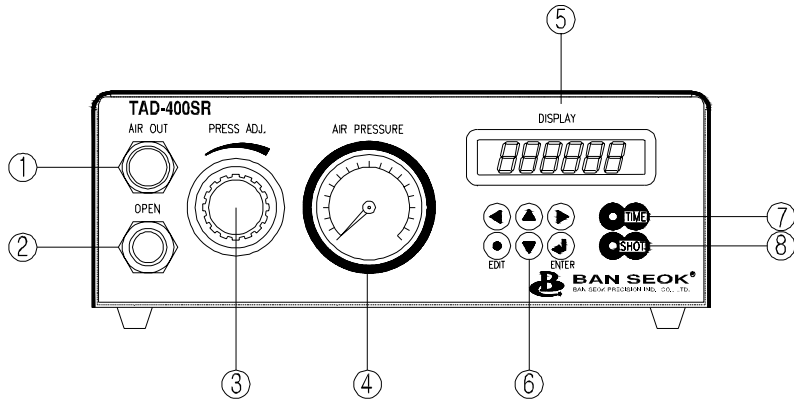
Manual

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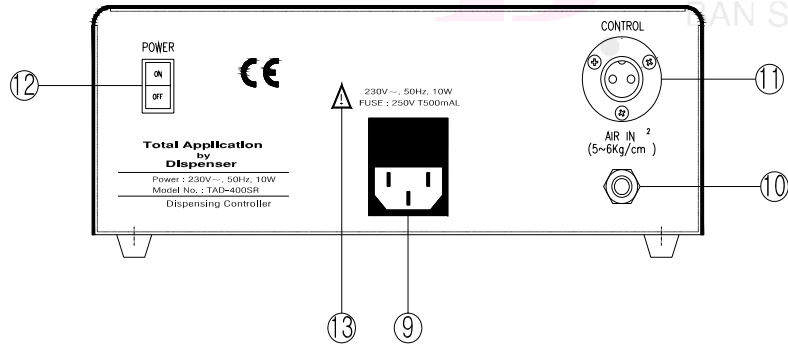
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1. Parts & Description



[FRONT]



[REAR]

- ① Air Blow Port
- ② Spray valve open port
- ③ Air Regulator
- ④ Pressure Gauge
- ⑤ Display Unit
- ⑥ Data Editing S/W
- ⑦ Time / Normal S/W
- ⑧ Shot S/W (Input dispensing signal)
- ⑨ Power Connector And Fuse Box
- ⑩ Air Inlet (Main Air Port)
- ⑪ Foot S/W Connector (Input dispensing signal)
- ⑫ Power S/W
- ⑬ Warning mark

2. Specification

TYPE	Air Syringe & Cartridge
MODEL	TAD-400SR
VOLTAGE	AC 110V/220V, 50/60Hz, 1.0A
PRESSURE AIR	4 ~ 6Kg/cm ²
SOLENOID VALVE	2 way & 2port valve / DC 24V
Response speed of Solenoid Valve	20ms
TIMER RANGE	0.001 ~ 99.99 sec
Measurement	232mm × 186mm × 81mm

※ ~ : indicates Alternating Current  : Protective conductor terminal

When replacing Fuse, replace with the same rated fuse as above.

3. Before getting started

- Check whether the voltage is AC 110V/220V, 50/60Hz before connecting it to plug.
- Connect the power plug to connector
- Connect the main air-hose from compressor to 'air inlet port' on the rear part of the TAD- 400SR unit. (No. ⑩)
- Connect the Foot switch or Finger switch to the S/W connector (No. ⑪) of the rear part.
- Turn on the power Switch
- Turn the handle part of regulator to 'clockwise' direction to increase air pressure.
- Push the male jack of barrel adapter (or syringe, cartridge) to the female coupler of the controller unit until you hear a sound with a click.

4. Spray Valve Operation

• Key function

- EDIT : edit the data or program, and check the input / output
- UP KEY : move the menu in the edit data (digit increases when inputting data)
- DOWN KEY : move the menu in the edit data (digit decreases when inputting data)
- LEFT KEY : move the digit position when you input data.
- RIGHT KEY : move the digit position when you input data
- ENTER KEY : save the data

• Check mode (Self-check function)

- You can check the status of the controller
(EDIT KEY====>CHK select====>push ENTER KEY)
- RY : check the output of relay on SHOT finalization
- TR : check the output of open collector on SHOT finalization
- BR : check the BLOW OUT (SOL2)
- SL : check the SHOT switch from outside
- LT : check the TIME LED of OP
- LS : check the SHOT LED of OP
- KY : check the KEY of OP
- PRG : remove the program saved.
- DAT : remove the program saved.

• DATA mode (Parameter setting)

- (0) SHOT TIME : set the time of SHOT
- (1) TIME UNIT : set the unit of time applied to the controller
(ex: 0=0.1 second, 1=0.01 second, 2=0.001 second)
- (2) INTVTIME :
 - Automatic time-compensation (available from 0.01~99.99 sec)
 - Every time the frequency of count set by INTVCONT increase, the dispensing time set by INTVTIME is increased.
- (3) INTVCONT : Refer to above no. 2
- (4) RUNPROG : select dispensing mode
(ex. 1=auto-operation by program, 0>manual operation)
- (5) RUNFILE
 - control the deposit volume by auto-program if the deposit volume is each different per application surface.
 - you can save the file for auto-program from 0 to 9 and you can compose 64 steps per file.
- (6) END TIME : Finalize signal come out after standby as END TIME after SHOT OFF
- (7) RELAYOFF : Output mode of dispensing finalization
(ex. 0=RELAY output, 1=OPEN COLLECTOR output)
- (8) SHOTINTV : standby time till the next dispensing after a dispensing in case you give 'START' signal continuously at TIME mode.
- (9) SHOTDLY : standby time till the actual dispensing after SHOT signal come out.
- (10) SHOTTYPE : recognize mode of START signal
(0=EDGE mode, 1=level mode)
- (11) BLOWTIM1 : time of pre-spray
- (12) BLOWTIM2 : time of post spray

5. Operating Guide

The methods to control deposit volume :

you can control the deposit volume by three ways like below.


- Pressure (Regulator)
(High viscous material – High pressure / Low viscous material – Low pressure)
- Time : use the TIME when you dispense consistent deposit volume to same product
- Dispensing tip's gauge : control the deposit volume in precision by gauge of needle
 - ※ Please note that there may happen residual pressure if you use too thin needle for high viscous material.

☞ The above methods have advantage and disadvantage respectively, so you'd better to use all those methods adjusting them as per the application to use only one way among them.

- **NORMAL** : Use this mode when you only dispense the liquids without BLOW operation.

- Operation
 - a. Off the Time S/W. (Light on the lamp is off)
 - b. Dispense the material using Foot S/W or Shot S/W till the material is deposited as you want.

- **TIME mode**: Use this mode when you want to spray constant volume under consistent pressure.

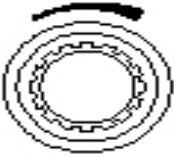
- Operation
 - (1st Blow (pre-spray) – Spray (actual spray) – 2nd Blow (post spray)
 - a. Turn off Time S/W  On. (Light on the lamp is on.)
 - b. Set the dispensing time as you want. (Set it at Data Mode)
 - c. Dispense the material by Foot S/W (or Hand S/W) or Shot S/W .

- **Auto Run Mode** : Use this mode when you want to dispense each different volume per application surface.


- Operation
 - a. Move to 'edit data mode' by pressing Edit Key.
 - b. Move to menu #4, and then set the 'Run PROG' to 1.
 - c. Move to menu #4, and then choose Run File and make the program.
 - d. If you give START Signal, the program is performed.

6. Operation of each part

• Pressure Control

Pressure Control	<p>Low High</p> <p>← →</p> <p>PRESS ADJ.</p> 	<p>Pull its handle and make it unlock, and then turn it to the left or right to adjust the pressure appropriately.</p>
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• Shot Mode & Data Setting

<p>Function:</p> <p>1. Auto / Manual</p> <p>2. Data Edit</p>		<p>1. Select Auto or Manual by using Time Button.</p> <p>* Auto mode : Timer on</p> <p>* Manual mode : Timer off</p> <p>2. Refer to "Data Mode (Parameter Setting).</p>
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7. Troubleshooting

Trouble	Cause	Solution
Power doesn't work	<ul style="list-style-type: none"> • Plug is disconnected. • Fuse blew. 	<ul style="list-style-type: none"> • Connect the Plug. • Replace the fuse with new one. (AC 220V-250V 1A, AC 110V-125V 1A)
Dispensing is not performed.	<ul style="list-style-type: none"> • Poor supply of air • Regulator is locked. • Poor connection of Auto coupler 	<ul style="list-style-type: none"> • Supply with main air. • Turn the regulator to 'clockwise' way to supply air. • Push the auto coupler until you hear a sound with click to connect it for sure.
Dispensing is performed but not spraying.	<ul style="list-style-type: none"> • Poor Blow Solenoid valve • Poor connection Blow Auto coupler • Poor regulator 	<ul style="list-style-type: none"> • Replace Blow Solenoid valve with new one. • Connect Airout Autocoupler surely. (Push it until you hear a sound with click.) • Replace the regulator with new one, or turn it to clockwise way to supply Blow air.
Air is supplied, but dispensing is not performed.	<ul style="list-style-type: none"> • Problem with dispensing line. • Problem with dispensing solenoid valve. • No material to be dispensed. 	<ul style="list-style-type: none"> • Check the Air in/out (Adjust the air regulator) • Replace the dispensing solenoid valve • Supplement the dispensing material.

8. Cautions and Reminders

- Use the nominal Voltage (AC 110V / 220V)
- Do not remove the body cover -> It may cause 'electric shock' or 'break down'
- Avoid using of Shot S/W frequently.
 - We recommend to use Foot S/W or Hand S/W.
- Don't allow water or material to run into the controller.

9. Environmental conditions for the equipment operation

- Indoor use only
- Altitude up to 2000 m
- Temperature 5℃ ~ 60℃
- Maximum relative humidity 80%
- Main supply voltage fluctuations not to exceed +/- 10% of the nominal voltage.
- Transient overvoltage according to Installation Categories (OVERVOLTAGE CATEGORIES) II
- POLLUTION DEGREE 2 in accordance with IEC 664
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.
- Warning mark: 
→ Be careful of this part, or you may be faced with accident like 'electric shock'.

10. Circuit Diagram and In/Out Signal

IN, OUT Signal is settled by 'Open Collector'. (Out Signal Time – 20ms)

9-1 INPUT Signal

- a. Open Collector or Relay contact-point
- b. DC 24V

9-2 OUTPUT SIGNAL

- a. Open Collector
- b. DC 24V
- c. Relay contact-point
- d. Out Signal – 20ms, 10ms

9-3 Circuit Diagram (→ Next pages)



