

INSTRUCTIONS FOR

SOFT STARTERS TYPE JZSP-12

SNAP-IN MODULES FOR YASKAWA VS DRIVE CONTROL DEVICES



C730

ETD-E-1006E

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IMPORTANT

This instruction manual must be read by the operator before installing or operating this unit.

The soft starter type JZSP-12 is designed to change the input reference to VS control devices into a linear reference signal. It adjusts the acceleration/deceleration time and soften shocks at starting and stopping.

Acceleration time and deceleration time are adjustable independently from 1.5 to 30 seconds according to application requirements.

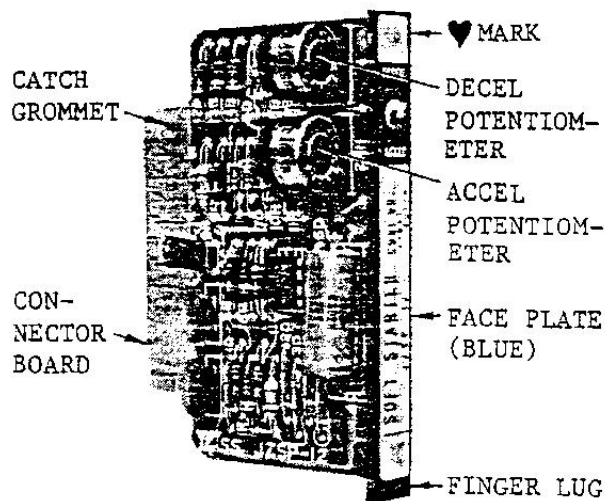


Fig. 1 Soft Starter Module and Parts Location

1. RATINGS AND SPECIFICATIONS

Table 1 Ratings and Specifications

Items	Descriptions
Rated DC Supply Voltage	±15 V, ±5%
Rated Supply Current	Within ±10 mA
Rated Input Voltage	B : 6 V/100%, C : 10 V/100%, D : 12 V/100%*
Rated Output Voltage	F : +10 V
Maximum Rated Output Current	F : 2.5 mA
Accel and Decel Time Adjustable Range	1.5 to 30 seconds
Temperature Characteristics	±5%/35°C
Input/Output Conversion Error	Within ±4%
Output Offset Voltage	Within ±10 mV

* Values shown with the following external resistor.

B : 3 kΩ, C : 11 kΩ, D : 15 kΩ

2. BLOCK DIAGRAM

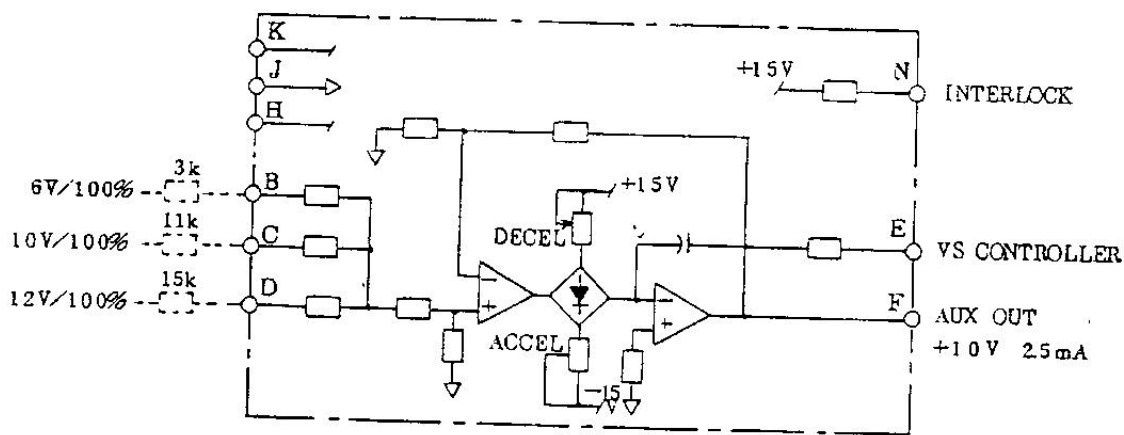


Fig. 2 Soft Starter Block Diagram

3. DEVICES TO BE CONNECTED

- VS Controller Type CVSR-404H (Placed in the receptacle marked "♥.")
- VS Operator Type JVOP-03, -04, and -08
- VS System Modules Type JGSM-09, and -11

4. MOUNTING AND REMOVING

4.1 Mounting

Before installing the snap-in module, refer to the control system drawing (separately submitted) and confirm the device to be added. Fig. 3, 4, and 5 show the modules built in the VS controller, the VS operator, and the VS system module, respectively. To mount the module, follow the procedure below.

1. Turn off the power supply to the associate device.
2. Remove the shortcircuit board type JZSP-00, if any, in the receptacle. (Retain the board since it is used for troubleshooting of the snap-in modules.)
3. Place the module lightly on the receptacle, and push straight until the catch grommet on the connector board clicks.
4. To mount the module on the VS controller CVSR-404H, insert to the receptacle marked "♥," sliding in the guide slit on the terminal block.



Fig. 3 Insertion of Module to VS Controller

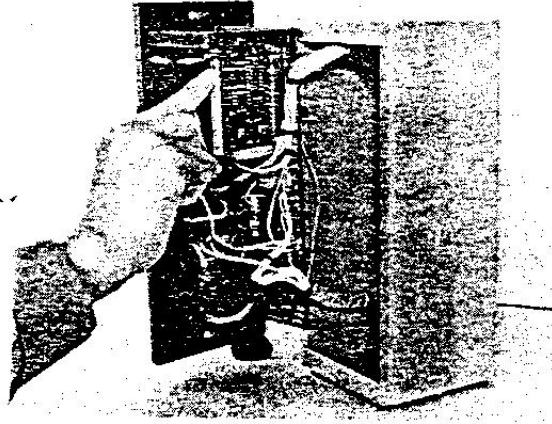


Fig. 4 Mounting of Module to VS Operator

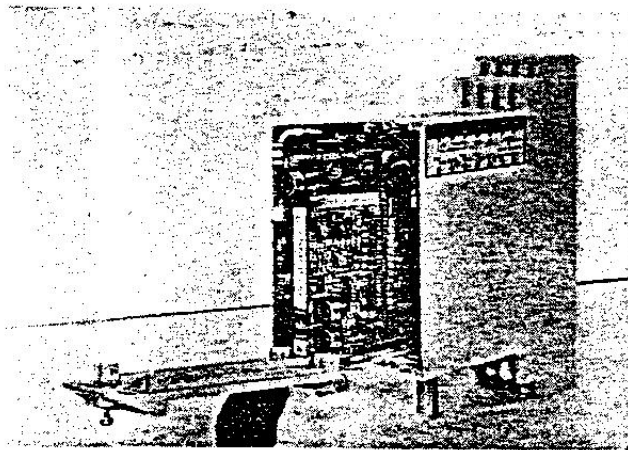


Fig. 5 Module in VS System Module

4.2 Removing

To remove the module, hold the finger lug on the lower edge of the face plate marked "PULL," and pull upward, rotating with the catch grommet as the center.

Pulling straight out by holding the face plate may not permit easy removal of the module as the grommet is latched by clip.

Detachment of the module is shown in Fig. 6, from VS controller, in Fig. 7, from VS operator, and in Fig. 8, from VS system module, respectively.

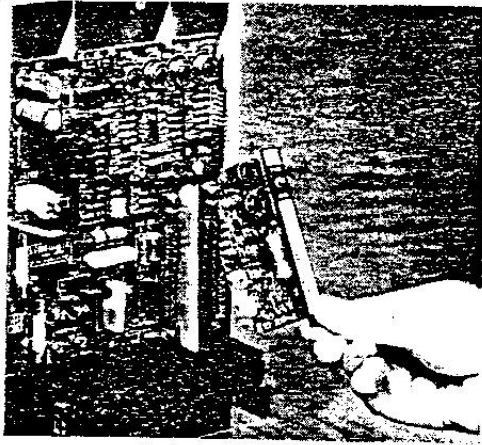


Fig. 6 Detachment from
VS Controller

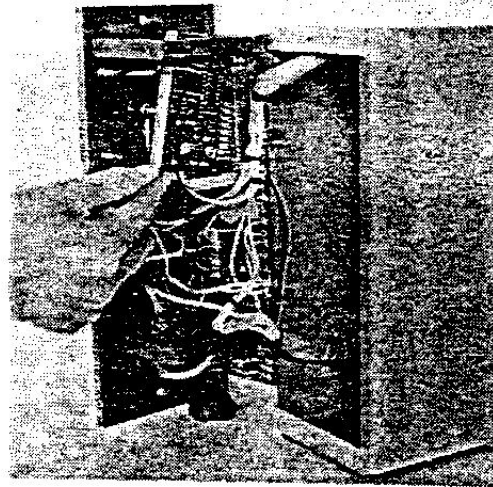


Fig. 7 Detachment from
VS Operator

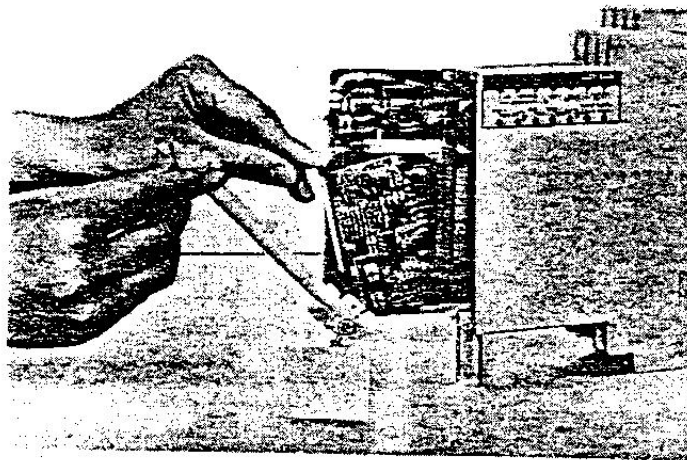


Fig. 8 Detachment from VS System Module

5. ADJUSTMENT

The potentiometers ACCEL and DECEL are set to minimum scale at factory. Referring to Fig. 9, adjust the potentiometers by turning the dial with a screw driver so as to obtain a curve TYP and give fine adjustment, if necessary, to meet actual machine conditions. Turning clockwise the potentiometer dial increases accel/decel time.

Caution: If deceleration time adjustment is not required, set the DECEL potentiometer to a minimum scale.

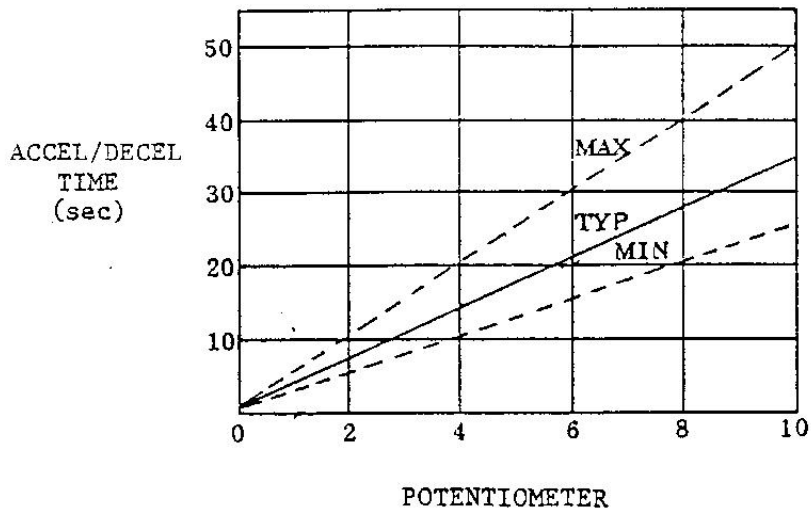


Fig. 9 Potentiometer Scale-Time Curve

6. TROUBLE CHECK

Where the module is suspected to be defective, remove and replace the module with new one, or with shortcircuit board type JZSP-00 so that the source of trouble can be located on either of the module or the associate devices.

Should the snap-in module be found defective, replace it with a spare.

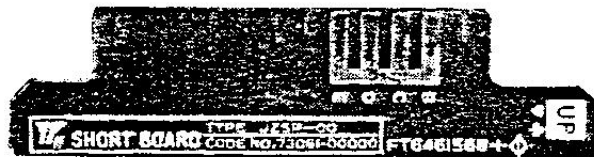


Fig. 10 Shortcircuit Board Type JZSP-00

7. HANDLING

- Use utmost care to always keep the connector board clean.
- Snap-in module is shipped in a vinyl packing coated with electrostatic prevention agent. Be sure to keep it in this packing for storage.
- Do not tamper with the module, or wiring as connections may be broken because no guard is provided on the module.
- Copy the last two letters of type name of the snap-in module in the suffix blank of the type name of the associate unit. This provides quick reference for correct module location at maintenance.



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