

PULSE CONVERTER TYPE LNE



● INTRODUCTION

Thank you for your purchase of our electronic expansion valve controller type SNE-B100. You are requested to read this instruction manual carefully before starting the operation, and use this unit correctly. Keep this instruction manual within the operator's reach to be always ready for reading it at any time whenever necessary.

● LIMIT ON APPLICATION

This unit is neither designed nor manufactured for such equipment or system that is intended to be used under such circumstances as to affect people's lives. For the application requiring high reliability, in particular, please contact us in advance.

● CAUTIONS TO SAFETY Warnings

Don't mount the unit at a wet place or a place splashed with water or oil, otherwise a trouble or an ignition failure due to overheat may occur. Turn off the power source without fail before starting connections, otherwise a trouble may occur. A wrong connection to the controller may cause a trouble, a fire, or other accidents. Make sure that cables are connected correctly without fail before feeding power to the controller after connecting it.

● CAUTIONS ON WORK Cautions

To avoid damages, malfunctions and grievances, make sure to be attended to the following matters.

For Controller

Don't mount the unit at the following places

- A place is subjected to mechanical vibrations and shocks
- A dusty place
- A place where the ambient temperature of the unit exceeds a range of 0°C ~ 50°C.
- A place near a strong high-frequency noises generating unit

Storage and Transportation

- Do not drop and give damages the controller during storage and transportation because the controller itself is a precision mechanical equipment.

● OPERATION CHECK

Install and adjust the unit correctly, and then, check its operation to confirm normal functions of the entire system.

● SPECIFICATIONS

Controller Type	: LNE-ZN20-020
Power Supply	: AC/DC 24V, 50/60Hz
Power Consumption	: 15VA or less
Ambient Temperature in storage	: - 20 to +70°C
Ambient Temperature in usage	: - 10 to +50°C
Weight	: 210g

Input:

ON/OFF Input ... Dry Contact, DC12V 10mA should be supplied from controller.

Current Signal Input ... DC4 to 20mA (Control Signal)

DC0 to 22mA (Maximum Rating)

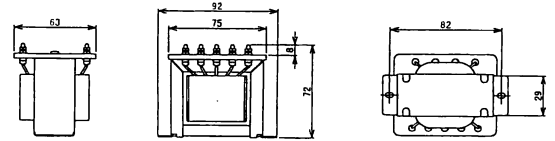
Electronic Expansion Valve specifications : Saginomiya KV series Expansion Valve

1 Converter can actuate one Expansion valve only

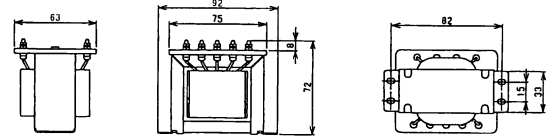
Coil Voltage DC12V, Amperage 0.38A per phase

● Dimensional outline

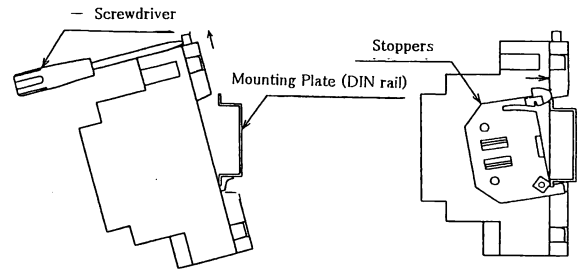
① SNE-PP10 (AC100V, AC110V)



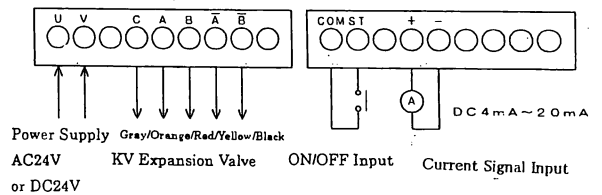
② SNE-PP20 (AC200V, AC220V)



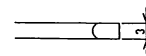
● MOUNTING METHOD



● WIRING METHOD

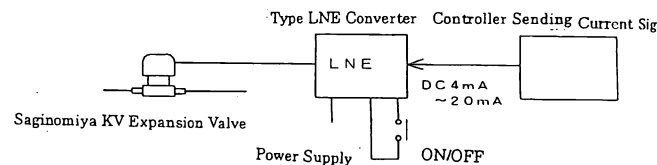


Applicable wire size : AWG 12, Outer Diameter ϕ 5mm or less, Strip End approx. 8mm.
One cable for one terminal
Suitable Screw-driver size for wiring



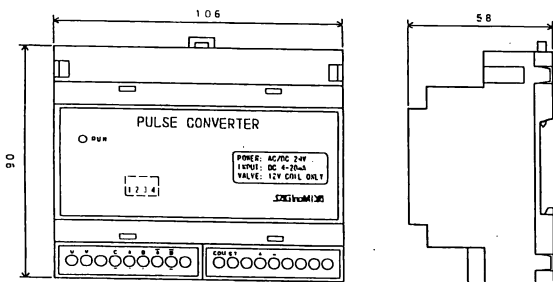
Note: Do not tie the wires together with Power Line Cable having large voltage, neither put wires along the Power Cable. Otherwise, it may lead to mal function.

● SYSTEM CONFIGURATION

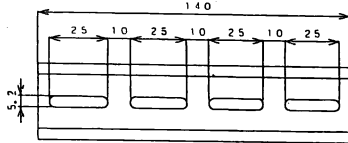


• In case of Power failure during controlling the valve, the valve stop at the last position.

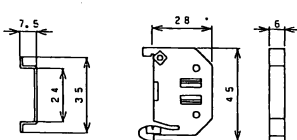
● CONTROLLER



● Mounting Plate: DIN rail (Accessory)



Stoppers (2pcs) for both side



● TRANSFORMER

The controller power supply is 24VAC \pm 10%, 50/60Hz. An external transformer is necessary. The following type or its equivalent is recommended.

Type	Specifications/makers	Input	Remarks
SNE-PP10	B B 2 4 1 / TOYOZUMI DENGEN KIKI Co.	AC100V AC110V	Shielded transformer for primary - secondary
SNE-PP20	2 B 2 4 1 / TOYOZUMI DENGEN KIKI Co.	AC200V AC220V	Shielded transformer for primary - secondary

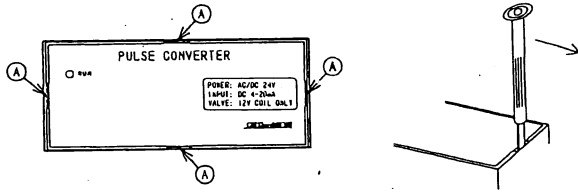
- The unit is resistible against noises by securely grounding the transformer.
- Even if 24V AC line voltage is available, it is recommended for reducing noises to use a 1:1 transformer.

● SETTING DIP SWITCHES

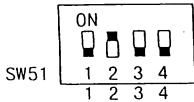
Open a front panel by removing 4 connection points with a Minus Screw-driver.

There are 4 Dip Switches below the front panel which can select functions as below table.

Changing the position of the switches to ON or OFF with a small plastic Minus screw-driver, as not touching to other parts or components on P.C.Board. Also it is recommended that you do not wear a cloth which is likely to generate static electricity.



Initial position when delivery : Only switch 2 is at ON position.



● FUNCTIONS of DIP Switches

1) Switch 1 : Selecting Output Pulse

ON : 0 to 480 Pulse ... In case of Lintern, this switch should be ON.
 OFF : 0 to 672 Pulse

2) Switch 2 : Selecting RA/DA Setting

ON : RA (Reverse Action) ... Input Current 4 mA Maximum Open
 20mA Minimum Open
 OFF : DA (Direct Action) ... Input Current 4 mA Minimum Open
 20mA Maximum Open

3) Switch 3 & 4 : Selecting Sampling Time

SWITCH 3	SWITCH 4	Sampling Time
OFF	OFF	1 second
OFF	ON	5 seconds
ON	OFF	10 seconds
ON	ON	0.1 second

● EXTERNAL INPUT

ON/OFF Input : OFF ... Stop controlling the valve open & close ; ON ... Start.

Valve position at OFF : RA ... Minimum open position regardless of Current Signal Input

DA ... Maximum open position regardless of Current Signal Input

Current Signal Input : DC 4 ~ 20mA (having Poles)

According to Current Signal value, valve open is determined during ON

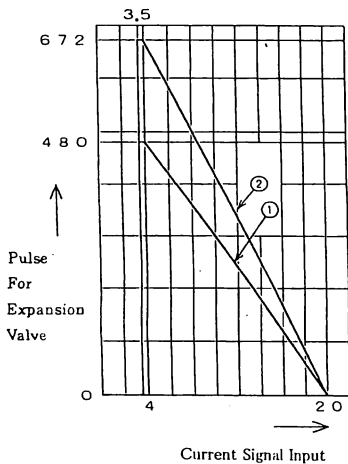
Be careful not to make wiring to wrong Pole and not to put voltage higher than the rating. Otherwise, it may damage the P.C. Board.

● DISPLAY

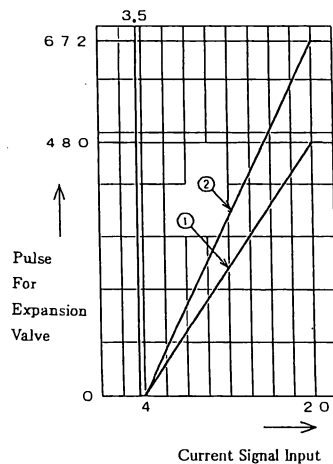
RUN LED lamp : light up when Electrical Power is supplied and External Input ON.

● INPUT - OUTPUT CHARACTERISTICS

RA Operation



DA Operation



- ① SWITCH 1 : ON
- ② SWITCH 1 : OFF
PLRCA.PI.V1.A1.02 / 520H3022

Scope of warranty

Unless otherwise agreed by the parties, warranty period of the Product shall be one year after delivery.

In case of failure attributable to the Company within such period, the Product shall be repaired or replaced provided that anyone of followings are out of the warranty.

1. Improper handling or application by user.
2. Modification or repair by other than the Company.
3. Any failure to be caused by acts of God, fire, storm or the like, war, riot or the like any other cause beyond the control of the parties concerned.

Warranty described in this paragraph means the warranty for the Product itself and does not include warranty for any consequential damage arising out of or occasioned by a defect or failure of the Product.

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