

INSTRUCTION MANUAL SELEXVALVE

M4L210・M4L220

M4L230・M4L240

- Please read this instruction manual carefully before using this product, particularly the section describing safety.
- Retain this instruction manual with the product for further consultation whenever necessary.

For Safety Use

To use this product safely, basic knowledge of pneumatic equipment, including materials, piping, electrical system and mechanism, is required (to the level pursuant to JIS B 8370 Pneumatic System Rules) .

We do not bear any responsibility for accidents caused by any person without such knowledge or arising from improper operation.

Our customers use this product for a very wide range of applications, and we cannot keep track of all of them. Depending on operating conditions, the product may fail to operate to maximum performance, or cause an accident. Thus, before placing an order, examine whether the product meets your application, requirements, and how to use it.

This product incorporates many functions and mechanisms to ensure safety. However, improper operation could result in an accident. To prevent such accidents, read this operation manual carefully for proper operation.

Observe the cautions on handling described in this manual, as well as the following instructions :

Precautions

- Do not touch electric wiring connections (exposed live parts) : this will cause an electric shock. During wiring, keep the power off. Also, do not touch these live parts with wet hands.

Thank you very much for purchasing CKD's SELEX VALVE "4L2 SERIES".

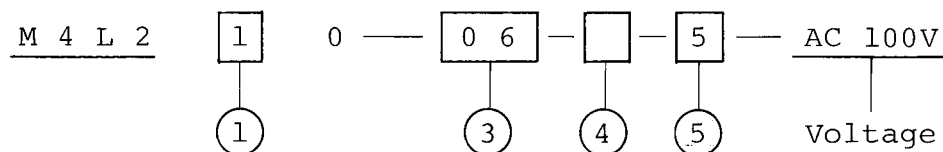
This INSTRUCTION MANUAL deals with the basic items regarding the installation, operation, maintenance, etc. required for bringing the efficiency of the SELEX VALVE into full play.

You are requested to thoroughly read through this INSTRUCTION MANUAL before use, and to perform correct operation and maintenance.

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1. How to see the model number



* The model number shown above means 4L2 manifold, 2-position single solenoid, solenoid valve, connecting pipe size, A·B port PT 1/8, P·R1·R2 port PT 1/4, 5 series, AC 100V, and 50/60 Hz.

①	Change over position
1	2-position single
2	2-position double
3	3-position closed center
4	3-position exhaust center
8	Mix manifold (2-position, 3-position)

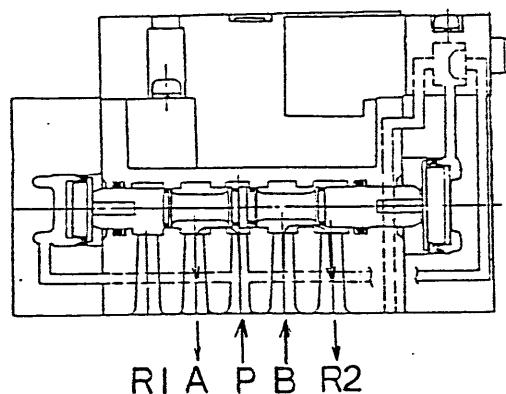
③	Connecting pipe size
06	PT 1/8
08	PT 1/4

④	Option
No mark	Manual non-lock
F	DIN terminal box
M1	Manual lock
L	with lamp

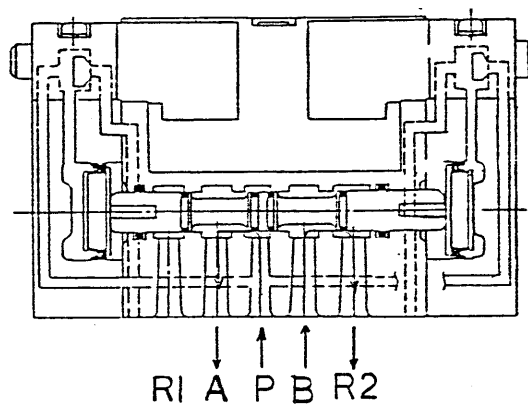
⑤	Series
2	2
10	10

2. Principle of operation (at de-energized)

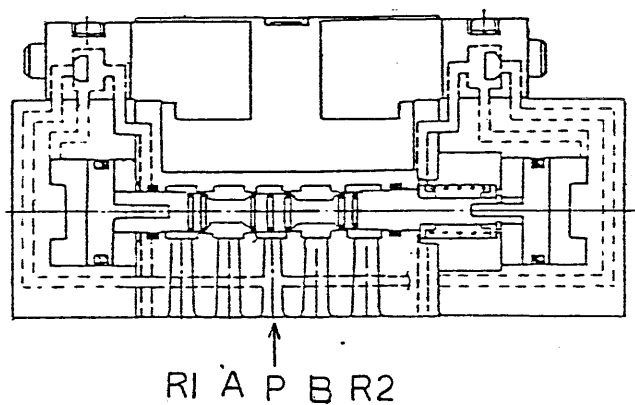
2-position single (4L210)



2-position double (4L220)



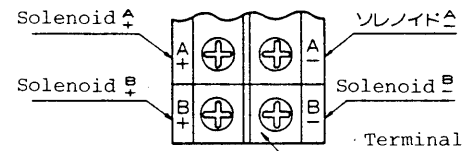
3-position closed center (4L230)
3-position exhaust center (4L240)



3. Cautions for use

3-1 Cautions for use

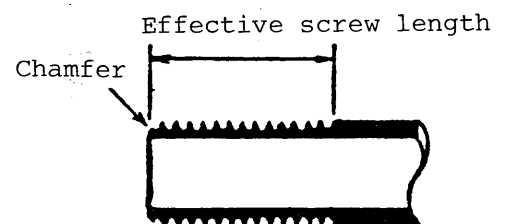
- (1) Connect the wires in accordance with the marks; A A B B
+ . - . + . -
on the terminals.



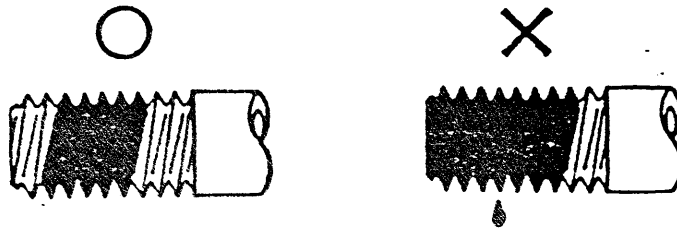
- (2) Installing condition of the valve, if used as a single solenoid, is not restricted. But if it is a double solenoid type, be sure to install the valve so that the spool is placed parallel to the installing surface. Installation to such a place as where vibrates, the spool shall be right angle to the vibrating direction.
- (3) To install and remove the solenoid valve to the sub-plate, pull it upward or downward. Pulling it in diagonal direction may damage the valve.
- (4) Push the non lock type (standard) valve with a (+) screwdriver.
For non lock type (option), turn the terminal 90° with a (-) screwdriver.
- (5) The type equipped with a lamp (option) has no TAG nameplate.

3-2 Cautions for piping

- (1) Keep the effective screw length for the screw length of a gas pipe.
In addition, perform the chamfered finish for half a pitch from the extreme point of a screw area.
- (2) Perform flushing to remove the foreign matter, chips and the like in the pipe before piping.



- (3) When the lines are connected to the product, cautions should be taken to the amount of a sealant, the applied position, and also to the wound position of a sealing tape, so that the sealant, the sealing tape and the like may not enter the lines.



3-3 Cautions for wiring

- (1) Be sure to use electric wires whose sectional areas are more than 0.5 mm^2 .

In case of DIN terminal box, use electric wires whose sectional areas are within the range from 0.5 to 1.5 mm^2 .

In addition, we recommend you to use 9 and 11 mm outer diameter cabtyre cord for higher waterproofing performance.

- (2) The electric circuit shall adopt the switching circuit which does not produce contact point chattering.
- (3) Use 1A rating fuse in the electric circuit.
- (4) The voltage used shall be $\pm 10 \%$ of the rated voltage.
- (5) Be cautious to the leakage current when using a non contact point relay circuit.

Select the switch which meets the following conditions.

AC coil: Less than 15% of the rated current.

DC coil: Less than 1% of the rated current.

4. Maintenance and inspection

4-1 Periodic inspection

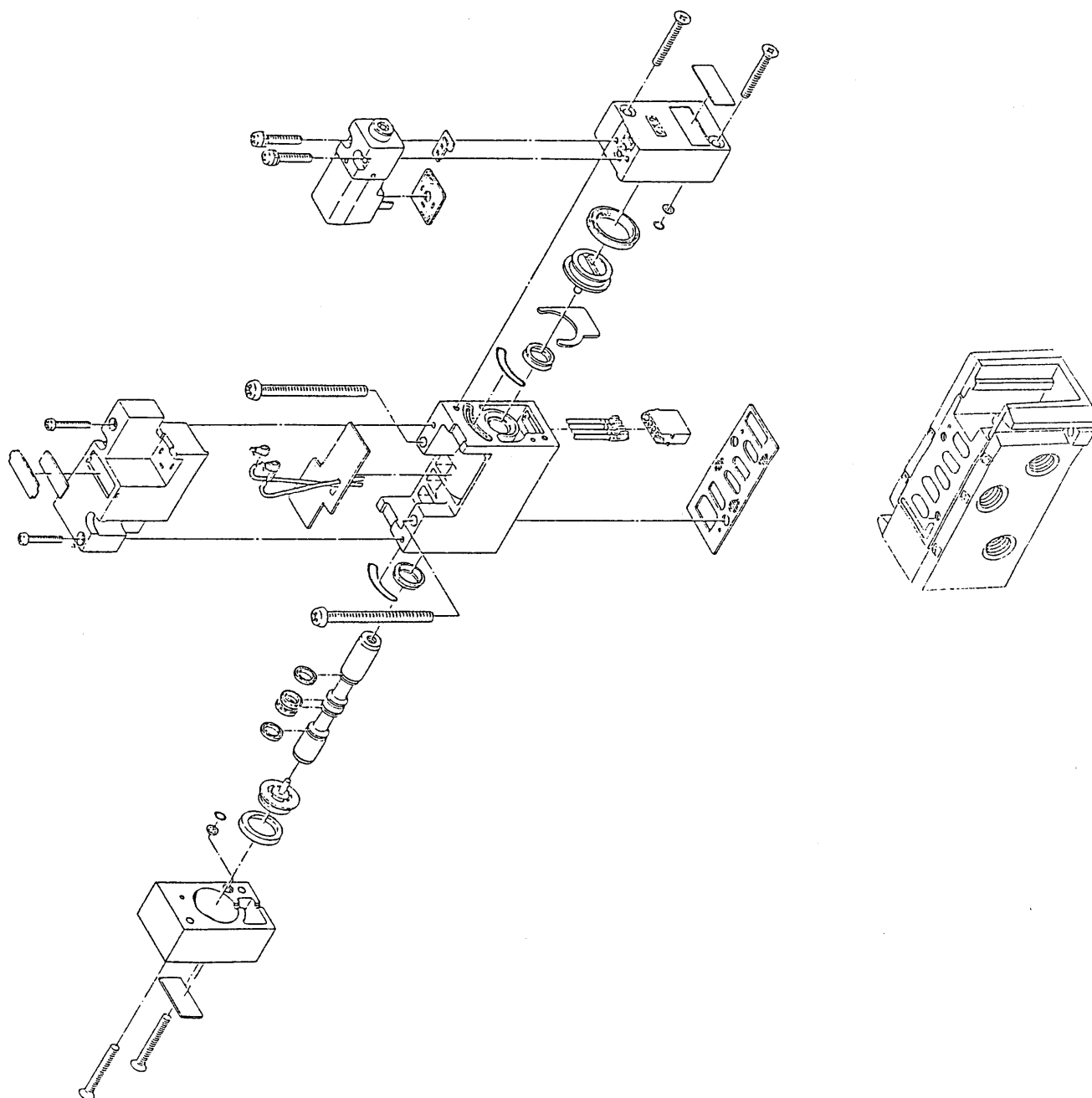
(1) In order to use the solenoid valve under the best condition, carry out periodic inspection once or twice a year.

(2) Content of inspection

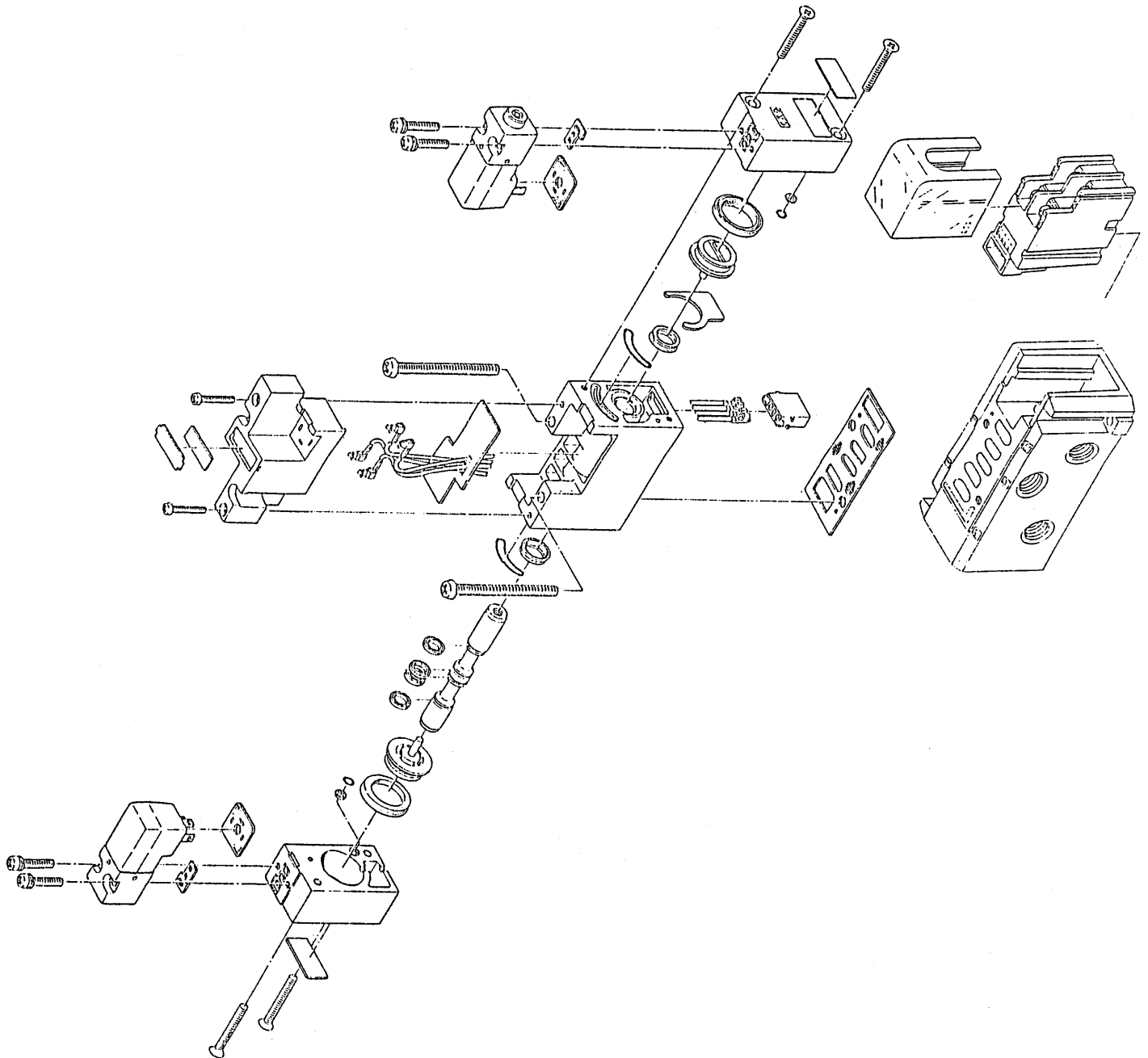
(a) Check to see if any dust, foreign substance, etc. is accumulated or high viscosity substance is stuck in the valve.

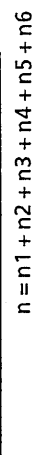
If any of them is found, disassemble the valve and clean it thoroughly.

4 - 2 Exploded view of the product



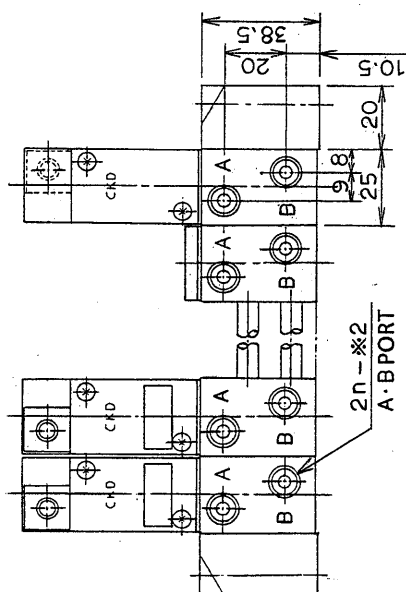
4 - 2 Exploded view of the product





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☆1 4L210-220 ☆2 4L230-240-250
NOTE: RESPONSE TIME IS THE VALUE AT 0.50MPa
NO LUBRICATION WHILE IT IS ON. THE VALUE VARIES
DEPEND ON SUPPLY PRESSURE AND QUALITY OF OIL
WHEN LUBRICATED.
☆ AS FOR PRESSURE UNIT, SUCH APPROXIMATE VALUE
☆ AS FOLLOWING IS APPLIED.



NOS OF STATION		2	3	4	5	6	7	8	9	10
SYMBOL		(m)								
A		78	103	128	153	178	203	228	253	278
B		90	115	140	165	190	215	240	265	290

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