Explanation of change of IC4-001-C into IC4-001-J

First of all , We would like to inform you that this document is not for your reference but it is just for explanation to end user only.

Overview

- The change point of C → D: The housing (body) is changed from paint to SUS specification
- Change D to G: Input signal function by adding EXTERNAL

  ※ and pin assignment was changed accordingly
- Change of end G → J: New board introduction (2 dimensional code correspondence)

  ※ Please refer to the red frame part of below "Excerpt of input signal" for the details of the added Signal

About the model of controller for PJ-1B

1. How to decide the controller type

The standard controller model has been established as follows according to company regulations

Usage purpose	C	Type of Gun	Input power supply	Correspondence dot	Special Notice

Usage purpose		Type of Gun		Input power supply		Correspondence dot		Special Notice	
Symbol	Content	Symbol	Content	Symbol	Content	Symbol	Content	Symbol	Content
I	For marking machine	1	LG type	10	100V	01	1 dot	A	PJ-1 system
M	For marking	2	MG type	11	110V	16	16 dot	B	PJ-1 special command response (Katakana)
S	For spray	3	PG type	20	200V	32	32 dot	C	PJ-1 Edit revision
		4	HG type	22	220V			D	Case SUS

According to PJ-1 standard controller for regulation are changed as below ;

Initial type : IC4-0016-A

March 2003 : IC4-0016-C

April 2004 : IC4-0016-D

2. About IC-4-2216-D (Reason to use SUS)

Initial stages

Both the pump unit and the controller were trial-painted by baking on steel plates.

However, customers use paint and cleaning agents, etc. in the in-use pump unit then problem is peeling off the paint from pump unit and the controller.

Decided to manufacture.

Along with this case , Printing machine and pump unit are SUS , Together the case of the controller are same.

As there is a sense of unity as a PJ-1B system by integrating

We decided to change the case of the trolley.

Based on the above history, the model was changed to distinguish it from the controller coated on a conventional steel plate.

As mentioned above, the difference between the end numbers C and D means that the material of the case is different in quality control.

It does not change the contents of the controller.

In the future, we will make a concerted effort to make better products, and may change without prior notice.

Thank you for your understanding.

About PJ-1B controller board usage

Change of PJ-1B controller board is to be informed.

Along with this change, the application and loader version were upgraded and controller model was changed.

Notification of change

1. Changed parts
   Controller board for PJ-1B (Model:BP07-34A)
2. Change time
   Changed from shipments in March 2019.

3. Reason of change
   Controller parts on the board were discontinued and not available

4. Content of change
   4-1. Controller board dimension



Left : Old type (225mmx190mm) , Right : New type (180mmx190mm)

4-2. Memory expansion

- Number of memory character codes：512bytes ⇒ 2048 bytes
- RAM ： 256Kbytes ⇒ 512Kbytes

4-3. Addition of AUTO and RESET function

Added external signal input (AUTO and RESET function

As a result , pin assignment of EXTERAL has been changed as follows

	Before change			After change	
Pin No.	Function	Input		Function	Output
1	PRINTING START 1	IN		PRINTING START 1	IN
2	RESET	IN		Print・Alarm RESET	IN
3	DUMPING	IN		DUMPING	IN
4	REVERSE	IN		REVERSE	IN
5	WASHING	IN		WASHING	IN
6	Spare INPUT	IN		AUTO INPUT	IN
7	During AUTO	OUT		During AUTO	OUT
8	ALARM	OUT		ALARM	OUT
9	During PRINTING	OUT		During PRINTING	OUT
10	NC	-		NC	-
11	PAINT LEVEL WARNING	OUT		PAINT LEVEL WARNING	OUT
12	CLEANING FLUID VOLUME ALARM	OUT	⇒	CLEANING FLUID VOLUME ALARM	OUT
13	COM. GND	-		Spare IN 1	IN
14	COM. GND	-		Spare IN 2	IN
15	COM. GND	-		Spare IN 3	IN
16	COM. GND	-		Spare IN 4	IN
17	COM. GND	-		Spare OUT 1	OUT
18	COM. GND	-		Spare OUT 2	OUT
19	COM. GND	-		Spare OUT 3	OUT
20	COM. GND	-		Spare OUT 4	OUT
21	COM. GND	-		COM. GND	-
22	COM. GND	-		COM. GND	-
23	COM. GND	-		COM. GND	-
24	COM. GND	-		COM. GND	-

*** If not set, pin no. 13-16 of spare IN and 17-20 spare can be used with COM , GND.

4-4. Application and loader version upgrade

Before change	After change	before change	After change
Application	Ver.03 ⇒	Ver.07	Loader Ver.00 ⇒ Ver.02

4-5. Controller board and controller model change

	Before change		After
Controller board	:BP36-34D	→	BP07-34A
Controller	:IC-1016-D	→	IC4-1016-G
	:IC-2216-D	→	IC4-2216-G

3. EXTERNAL signal description

(1) Input signal response pulse width : DC – 10ms approx..

(2) Input format : : DC24V photo coupler insulated input

(3) Output signal format : Transistor open collector output

(4) Output capacity : DC24V 0.5A or lower

(5) Signal type

Signal Type	Description
1) PRINTING START 1 (INPUT)	Printing start signal of Head 1: Operate by rising edge of signal
2) RESET(INPUT)	Stop automatic printing and Reset the number of block printing During number printing, printing is stopped and the number is Count up by 1.
3) DUMPING (INPUT)	This signal turns the head valve on / off with the time of parameter. While this signal is on, repeat the above operation for the parameter time
4) REVERSE(INPUT)	Print from start of printing line if this signal is OFF at the rising edge of PRITING START1 or 2 signal . Print from end of printing line if this signal is ON at the rising edge of printing Start1 or 2.
5) WASHING (INPUT)	Manual cleaning timing signal
6) AUTO IN(INPUT)	Switching between ONLINE/OFFLINE
7) Spare IN	INPUT function be added by software changes
8) OUTPUT during AUTO	ON when ONLINE
9) ALARM OUTPUT	ON when an error occurs or W.D.T times out.
10) OUTPUT during PRINTING	ON during printing
11) Liquid level alarm OUTPUT	Sent to the INTERNAL connector
12) Cleaning solution level OUTPUT	Sent to the INTERNAL connector

13) Paint and cleaning agent circulation command	Trigger for ON-OFF of the circulation SV of Paint and cleaning agent (Software change to enable function by meeting later).
14) Spare OUTPUT	OUTPUT function be added by software changes

(6) Connector model : Body side 57LE-40240-7700 (D12) (DDK Product)

Cable side 57-30240 (DDK Product)