



OMRON

Ladder Program Converter

Operation Manual

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Introduction

This manual contains information required to use the Ladder Program Converter.

Please refer to the user's manual of PLC unit while you use Ladder Program Converter.

Intended Audience

This manual is intended for the following personnel, who must also have knowledge of electrical systems (an electrical engineer or the equivalent).

- Personnel in charge of installing FA systems.
- Personnel in charge of designing FA systems.
- Personnel in charge of managing FA systems and facilities.

Note

This manual contains information required to use the Ladder Program Converter.

Read this manual completely and be sure you understand the contents before attempting to use the Ladder Program Converter.

Please keep the manual and always keep it at hand after reading.

Read and Understand this Manual

1. WARRANTY

This software is used to convert the instructions of FX3/2/1N/1S series made by Mitsubishi Electric Corporation and S7-200 series made by Siemens to OMRON instructions according to the conversion rules as much as possible.

OMRON MAKES NO WARRANTY OR REPRESENTATION, EXPRESS OR IMPLIED, REGARDING NONINFRINGEMENT, MERCHANTABILITY, OR FITNESS FOR PARTICULAR PURPOSE OF THE PRODUCTS.

After conversion operation, the Programmable Logic Controller is responsible for the operation of CX-Programmer. Please refer to the programmable manual of our company.

Related Manuals

- CP1H CPU Unit Operation Manual (Cat. No.W450)
- CP1L CPU Unit Operation Manual (Cat. No.W462)
- CP1E CPU Unit Hardware User's Manual (Cat. No. W479)
- CP1E CPU Unit Software User's Manual (Cat. No. W480)

2. LIMITATIONS OF LIABILITY

OMRON SHALL NOT BE RESPONSIBLE FOR SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, LOSS OF PROFITS OR COMMERCIAL LOSS IN ANY WAY CONNECTED WITH THE PRODUCTS, WHETHER SUCH CLAIM IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, OR STRICT LIABILITY.

3. SUITABILITY FOR USE

OMRON shall not be responsible for conformity with any standards, codes, or regulations that apply to the combination of products in the customer's application or use of the products.

At the customer's request, OMRON will provide applicable third party certification documents identifying ratings and limitations of use that apply to the products. This information by itself is not sufficient for a complete determination of the suitability of the products in combination with the end product, machine, system, or other application or use.

The following are some examples of applications for which particular attention must be given. This is not intended to be an exhaustive list of all possible uses of the products, nor is it intended to imply that the uses listed may be suitable for the products:

- Outdoor use, uses involving potential chemical contamination or electrical interference, or conditions or uses not described in this manual.
- Nuclear energy control systems, combustion systems, railroad systems, aviation systems, medical equipment, amusement machines, vehicles, safety equipment, and installations subject to separate industry or government regulations.
- Systems, machines, and equipment that could present a risk to life or property.

Please know and observe all prohibitions of use applicable to the products.

NEVER USE THE PRODUCTS FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCTS ARE PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM.

4. CHANGE IN SPECIFICATIONS

Product specifications and accessories may be changed at any time based on improvements and other reasons.

Requirement of configuration

Environment of the converter can be installed

	Microsoft Windows 2000 Service Pack2 or higher	Microsoft Windows XP	Microsoft Windows Vista (32bit version)
CPU	Pentium series CPU 150MHz or better CPU Pentium III 1GHz or better central processors	Pentium series CPU 300MHz or better CPU Pentium III 1GHz or better central processors	Microsoft recommended configuration (1GHz or better CPU)
Memory(RAM)	256MB or more	384MB or more	Must be 512MB or more 1GB or more is better
Hard drive space	50MB of free	50MB of free	50MB of free

Trademarks

Windows is a registered trademark of Microsoft Corporation.

Other system names and product names in this document are the trademarks or registered trademarks of their respective companies.

Safety Precautions

Definition of Precautionary Information

The following notation is used in this manual to provide precautions required to ensure safe usage of Ladder Program Converter, CX-Programmer and Programmable Logic Controller (PLC). The safety precautions that are provided are extremely important to safety. Always read and heed the information provided in all safety precautions.

 WARNING	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. Additionally, there may be severe property damage.
 Caution	Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury, or property damage.

Precautions for Safe Use

Indicates precautions on what to do and what not to do to ensure using the product safely.

Precautions for Correct Use

Indicates precautions on what to do and what not to do to ensure proper operation and performance.

Additional Information

Additional information to increase understanding or make operation easier.

Symbols



The triangle symbol indicates precautions (including warnings). The specific operation is shown in the triangle and explained in text. This example indicates a precaution for electric shock.



The circle and slash symbol indicates operations that you must not do. The specific operation is shown in the circle and explained in text.



The filled circle symbol indicates operations that you must do. The specific operation is shown in the circle and explained in text. This example shows a general precaution for something that you must do.



The triangle symbol indicates precautions (including warnings). The specific operation is shown in the triangle and explained in text. This example indicates a general precaution.



The triangle symbol indicates precautions (including warnings). The specific operation is shown in the triangle and explained in text. This example indicates a precaution for hot surfaces.



WARNING

This tool is just used to convert the instructions of Mitsubishi and Siemens to instructions of OMRON according to the conversion rules as much as possible. Because the ladder program can not be converted completely, it is necessary to modify the instructions and memory area which have not been converted. The operation of the made ladder program must be confirmed enough before carrying out a formal operational.

System operation may be abnormal without confirmation.



The I/O memory convert specification is made before instruction conversion. If you want to add program after conversion, it is necessary to confirm there is no repetition of I/O memory.

System operation may be abnormal without confirmation.



1. About Ladder Program Converter

This tool is used to convert the instructions of Mitsubishi and Siemens to instructions of OMRON according to the conversion rules.

2. Operation Environment

2.1. Operation System

Ladder Program Converter can only run in Microsoft Windows 2000 (Service Pack2 or higher) 、 Microsoft Windows XP、 Microsoft Windows Vista (32bit version) .

2.2. Object PLC Series

PLC type of Conversion Source includes FX3/2/1N/1S of Mitsubishi as well as S7-200 series of Siemens.
OMRON PLC type of Conversion Destination is CP1H/CP1L/CP1E.

3. Installation and uninstall

3.1. Installation

The install steps are as follows:

- (1) Uninstall the previous version of Ladder Program Converter before installing the new version. Please refer to the section 3.2 for details of the method of uninstall.
- (2) Copy the install files of Ladder Program Converter to object folder specified by users.
- (3) Run "setup.exe" in the install files.
- (4) Install Ladder Program Converter according to the installation prompts.

Note:

When installing CX-Programmer 9.0, the converter tool "Ladder Program Converter v1.1" will be installed at the same time. For the new version with "Ladder Program Converter v1.2", please refer to the above install step (2) – (4).

3.2. Uninstall

Please perform the Uninstall of Ladder Program Converter through the *Add/Remove Programs*.

Select **Start -Setting - Control Panel - Add/Remove Programs**.

Select *Ladder Program Converter* from the dialogue box.

Click the **Remove** Button.

And then finish uninstall under the instruction of *install-shield wizard*.

Note:

- (1) Please don't delete the folder where Ladder Program Converter is installed directly, otherwise the operation of reinstall and uninstall can't carry out correctly.
- (2) If the converter tool is installed (updated) in the CX-Programmer 9.0, it can't be uninstalled without CX-Programmer 9.0. When uninstalling CX-Programmer 9.0, the converter tool will be uninstalled at the same time.

4. Notice about the conversion

4.1. Notice of the Copy-Paste Conversion Method

- (1) Setting FX3/2/1N/1S series of Mitsubishi as the copy source has been tested. The program of other series PLC could not be identified.
- (2) In Omron CX-P, paste can be performed in the Diagram view and Mnemonic view of Section.
- (3) The UNDEFINST will be output when Instruction of Mitsubishi can not be identified. The UNDEFOPER will be output to substitute for the operand of Mitsubishi which can not be identified.
- (4) When the Source instruction can not be converted to the OMRON instruction, a "Mi_" will be added before the Mitsubishi instruction and a "Si_" will be added before the Siemens instruction as the conversion result in the CXT file.
- (5) That copy from Siemens program should start with Network 1 and the minimum copy unit is one Network otherwise some programs will lost.
- (6) Because the Channel length of Siemens is different from that of MONRON, Siemens channel length is 8 bits, while OMRON channel length is 16 bits, the Error will occur during the conversion. Please pay more attention to it.

4.2. Conversion Limitation

- (1) About Siemens Instructions:

Problem	Detail
OB Series can not be converted	Converting will break the LD's structure, so it can not be converted.
TON	Because of the different Resolution, the Tim Number will change after converted.
TONR function is changed after being converted	When set value is arrived, OMRON TIM will stop and Siemens TIM will continue
DIV	It occur address across problem after converted.
SBR/CALL	It's a subroutine instruction. In Siemens, SBR/CALL is used to jump to the subroutine section directly, the section number is regarded as the sign. In OMRON, it jumps from SBS to SBN, SBN is regarded as the sign.
Float can not be converted directly	The OMRON PLC doesn't support float constant, so it can not be converted.
Flag SM1.1 can not be converted	The Flag SM1.1of Siemens needs the special Flags (P_CY, P_OF and P_UF) of OMRON to correspond.

(2) About Mitsubishi Instructions:

Problem	Detail
Mitsubishi area X,Y →Omron area CIO	Each point of Mitsubishi area X,Y corresponds a physical I/O. Not every point of Omron area CIO corresponds a physical I/O.
Mitsubishi area C200~C255→ Omron area C200~C255	The area C200~C255 of Mitsubishi is 32 bits length; The area C200~C255 of Omron is 16 bits length.
The marker bit and the structure of arithmetic is difference.	When data is beyond max. range in Mitsubishi, the result is recalculated from 0. The carry flag is active; When data is less than min. range in Mitsubishi, the result is recalculated from 0. The borrow flag is active. The flag couldn't reset until changing next time. Ex.when the operand is 16 bit length,, $32767+1=0$; $-32768-1=0$ The carry and borrow flag is the same flag (CF) in Omron. It's the difference with that in Mitsubishi. CF is active when data changes from plus to negative or from negative to plus. When data is beyond max. range in Omron, the data is cycle operation.The overflow flag is active. When data is less than min. range in Omron, the data is cycle operation. The underflow flag is active. The flag will reset next cycle. Ex.when the operand is 16 bit length, $32767+1=-32768$; $-32768-1=32767$
The pulse instruction of Mitsubishi is difference with that of Omron	Mitsubishi P instruction will execute one time after contact M8000. Omron @ instruction won't execute after cotact P_on.
Sequence Control Instructions and SUBROUTINE instructions will no function after being converted	Mitsubishi's sequence control logo can't be converted.So Function can not be achieved.
WDT function is changed after being converted	In Mitsubishi PLC, program can be divided into a shorter period of time, through WDT (watchdog timer) monitor the cycle time;
EI/DI function is changed after being converted	The Mitsubishi PLC default disable interrupts, The Omron PLC default ensable interrupts.
The function of ASCII code instructions is difference after being converted	To ASC instructions, if the string of first operand contains symbol ',', then the characters after this symbol will be abandoned.If this string contains two or more symbols ',', then the second operand will be abandoned too.

5. Copy-Paste Conversion Method in CX-P

The Ladder Program Converter supports copying the program from the conversion source software (Mitsubishi GX-Developer, Siemens STEP 7 MicroWIN) directly and pasting to the CX-Programmer 9.0, CX-Programmer for CP1E 1.00 or higher Version.

5.1. Copy Program from GX-Developer of Mitsubishi

Only Fx3/2/1N/1S series PLC of Mitsubishi supports the direct-copy method. The integrity of program reading can not be guaranteed when the method are used to other series PLC.

- (1) Open the source program in GX-Developer.

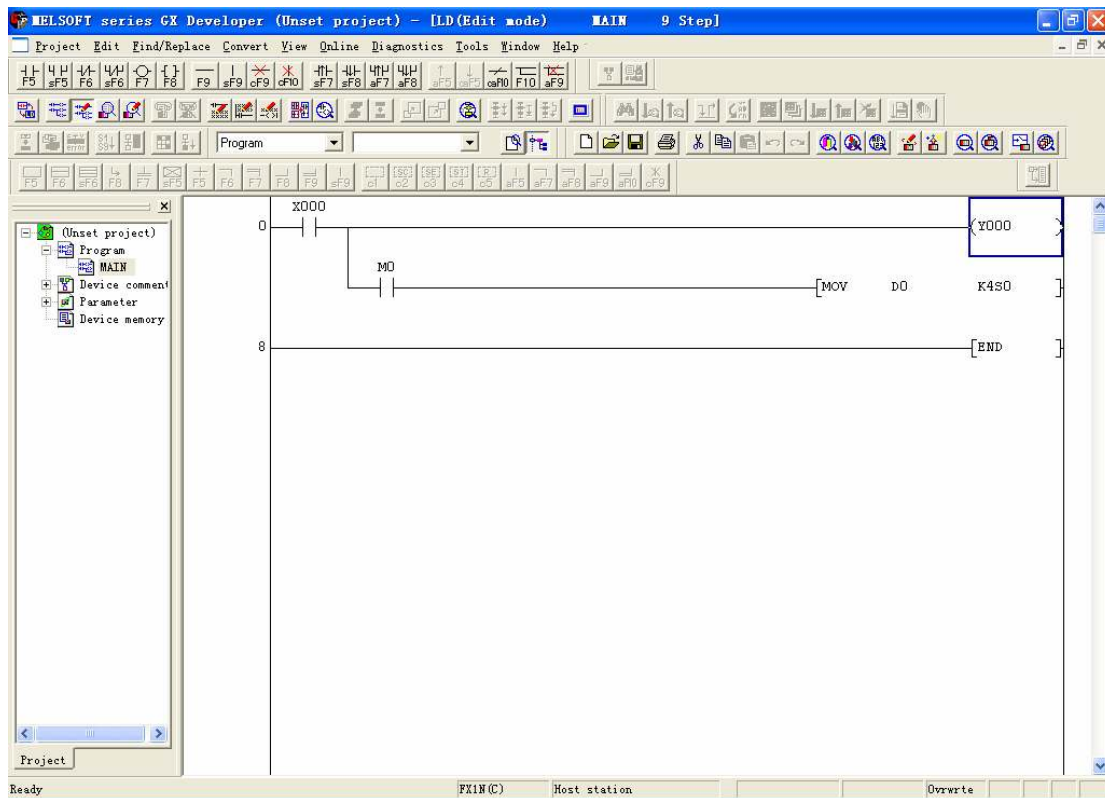


Fig.5-1 Mitsubishi GX-Developer

- (2) Click , enter the mnemonic list window.

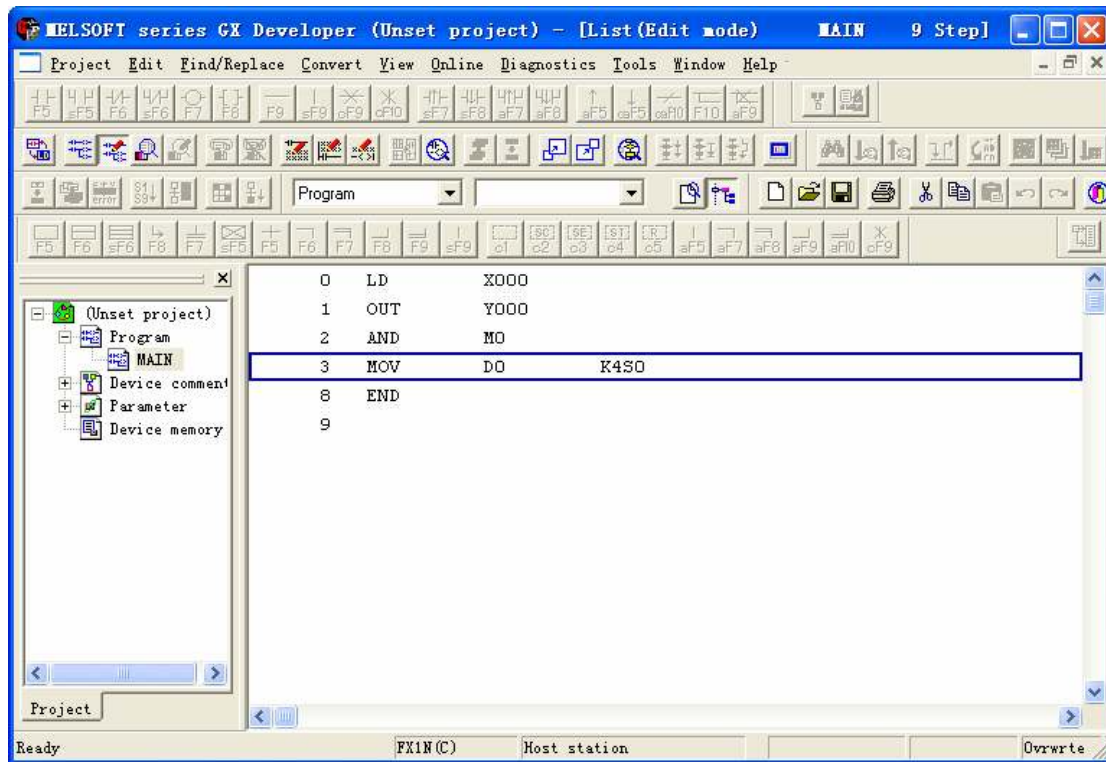


Fig.5-2 Mitsubishi instruction list View

- (3) Select the Program needed to be converted and copy it.

- (4) Start up CX-Programmer and create a new project.

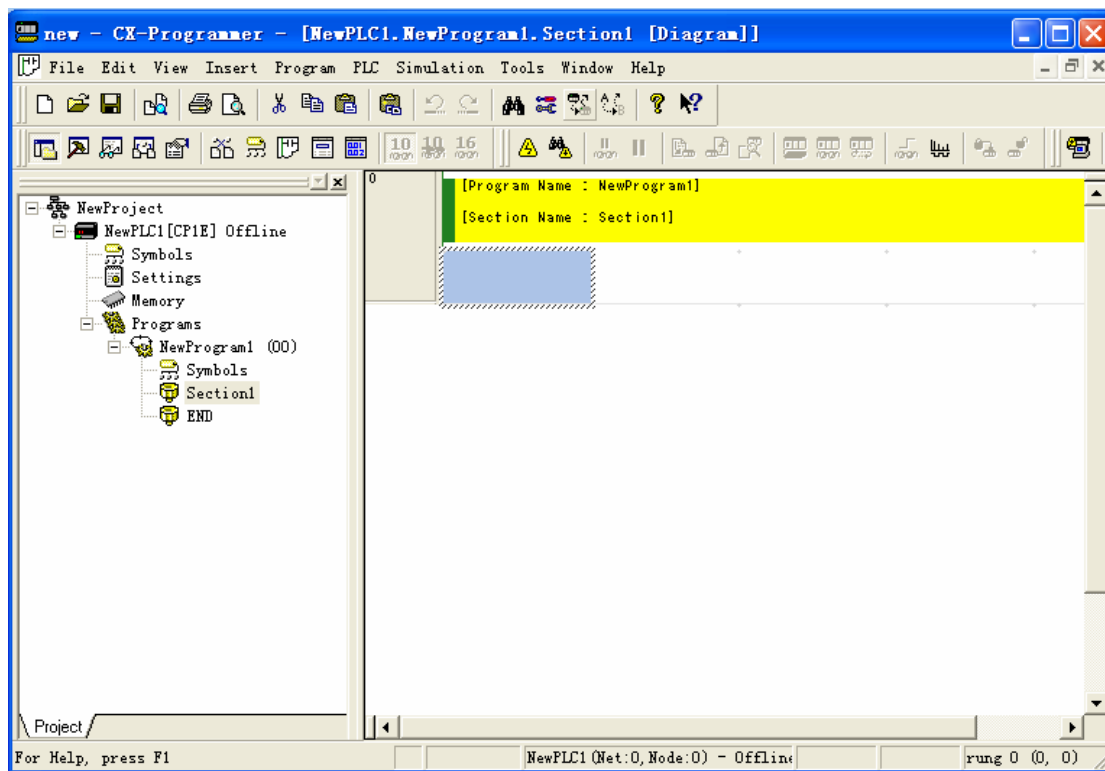


Fig.5-3 OMRON CX-Programmer View

- (5) Paste the source program in the Diagram view or Mnemonics view. And the following dialogue box will be displayed.

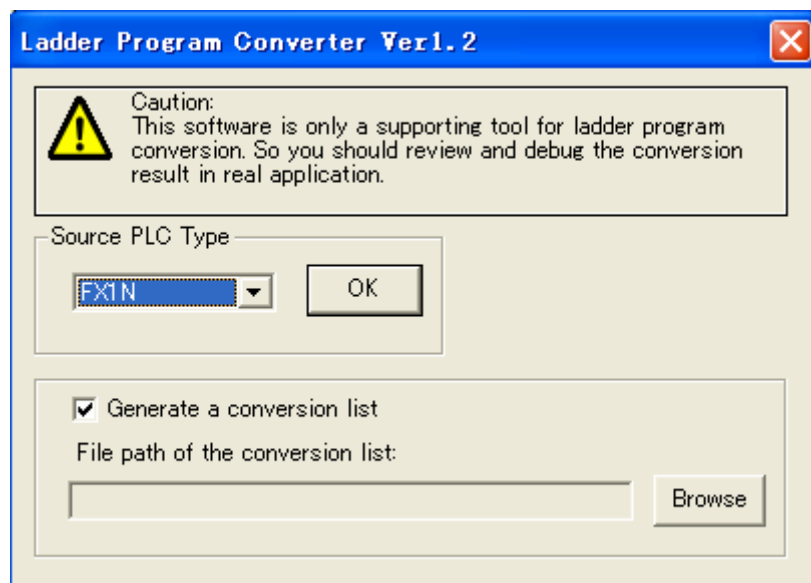


Fig. 5-4 Ladder Conversion Dialogue box

- (6) Click the **Browse** Button; designate the name and path of conversion list file.(Fig.5-5)

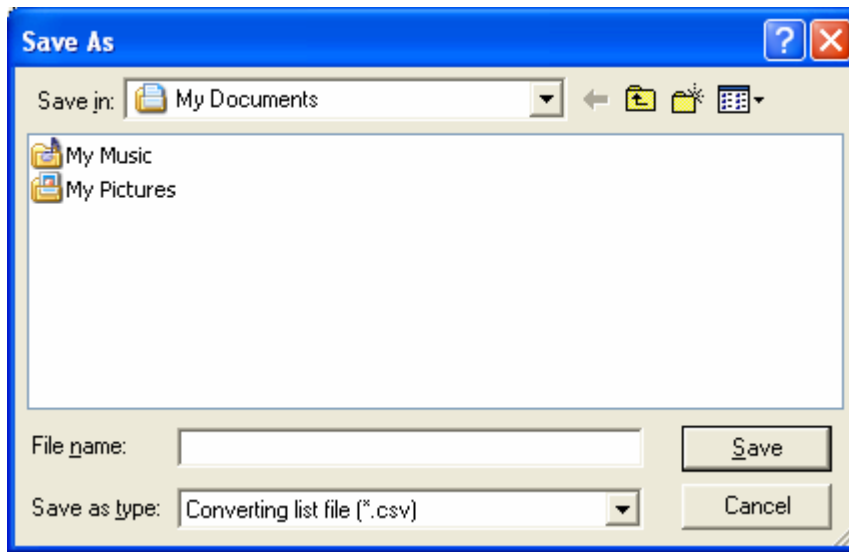


Fig. 5-5 Conversion list file saving dialogue box

- (7) Select the conversion source PLC type. Click the **OK** Button and the Converting progress bar will be displayed.



Fig. 5-6Converting progress bar

(8) The converted program will be displayed in the CX-Programmer.

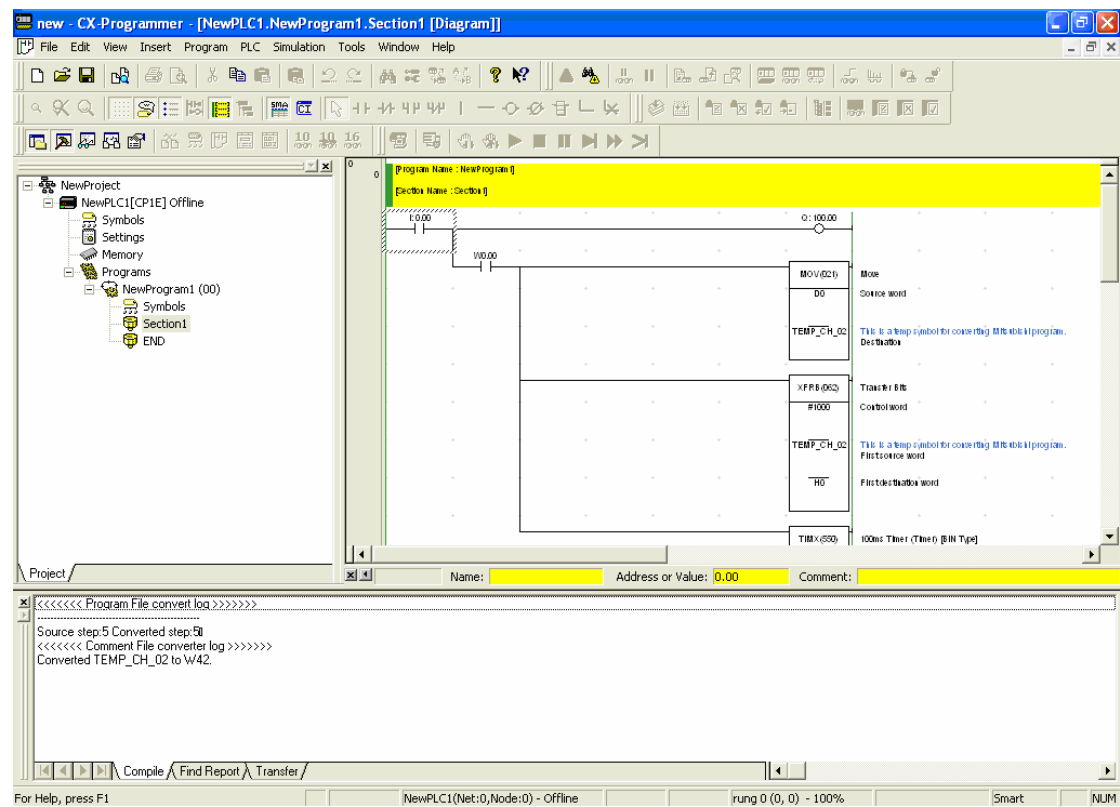


Fig.5-7 the result of conservation

(9) Insert the temporary variable created during the conversion into the global variable table.

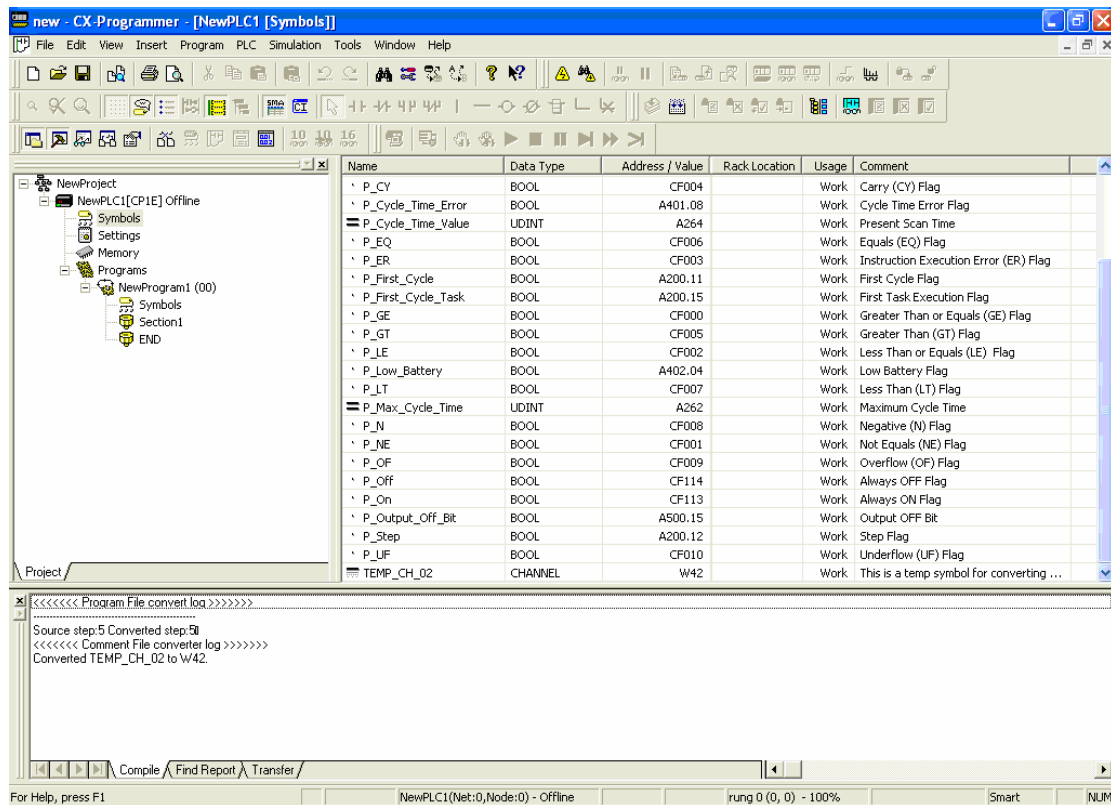


Fig. 5-8 insert the temporary variable

5.2. Copy Program from STEP 7 MicroWIN of Siemens

S7-200 series PLC of Siemens can be selected as the copy source.

- (1) Open the program needed to be converted by STEP 7 MicroWIN of Siemens.

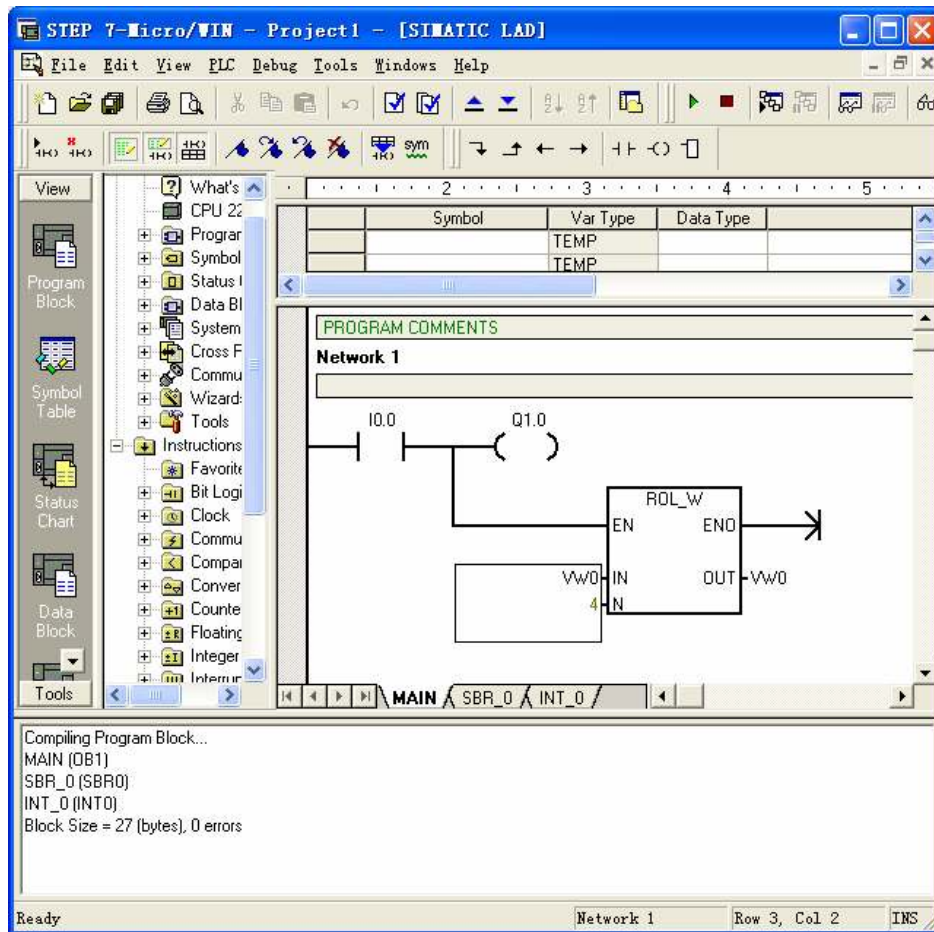


Fig.5-9 STEP 7 MicroWIN of Siemens

(2) Convert Siemens SIMATIC to International Symbol

When STEP 7 MicroWIN is started, click **Tools** menu or right button, select **Options**, the “Options” screen is displayed.

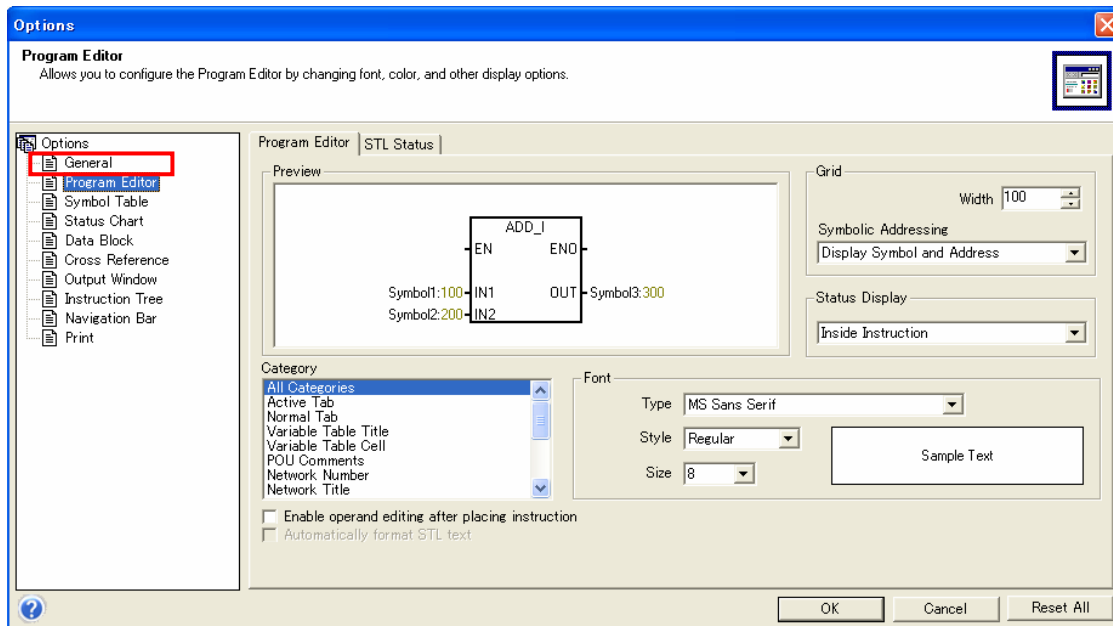


Fig.5-10 “Options” Screen of Siemens

Select **General** in the left tree menu and **International** in the item of **Mnemonic Set**.

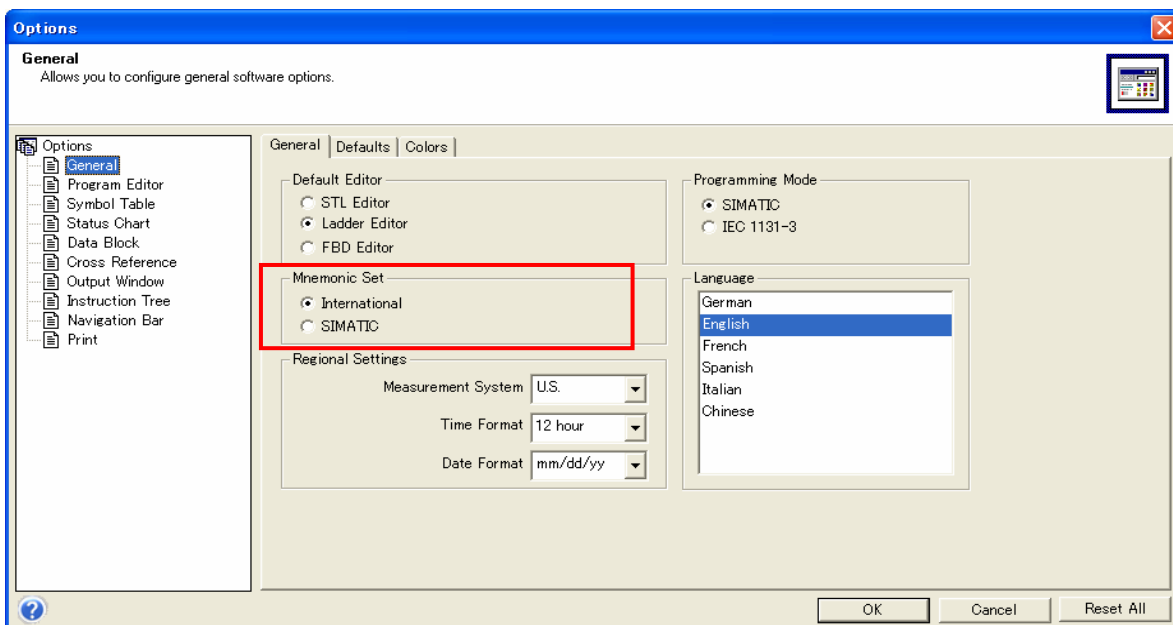


Fig.5-11 “General” Screen of Siemens

- (3) Select **view – STL**. View the program in STL mode (Mnemonic list).

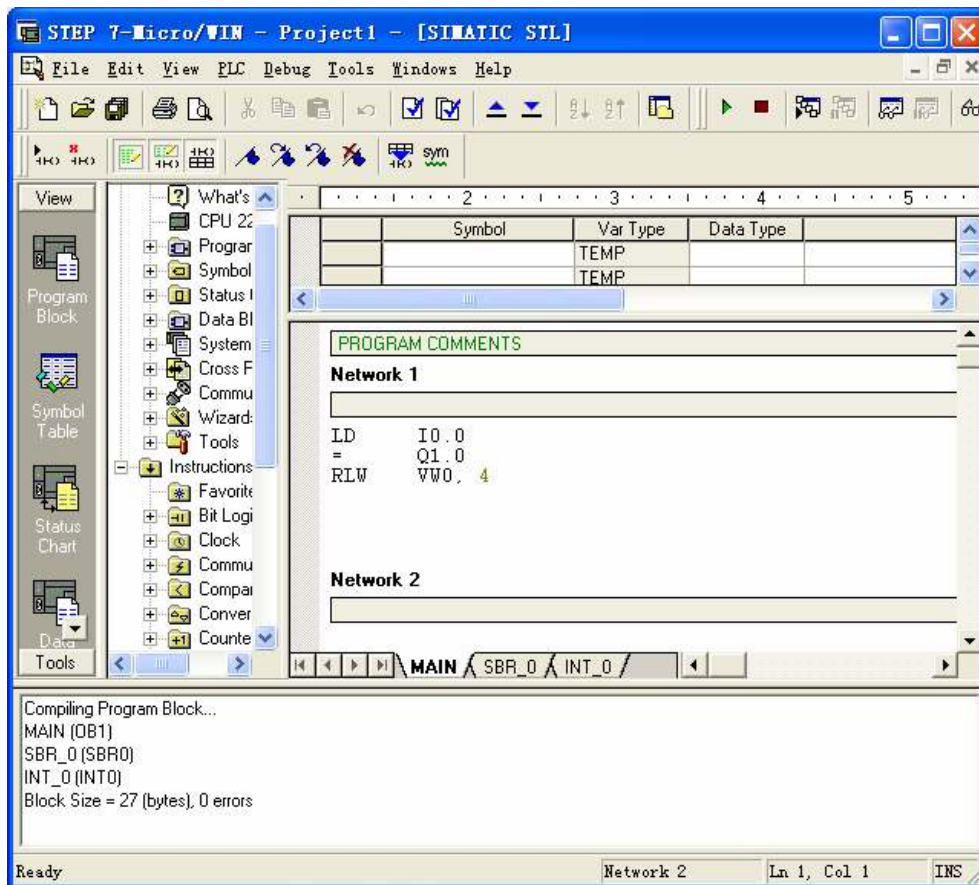


Fig. 5-12 Siemens Instruction (Mnemonic) list View

- (4) Select the program needed to be converted.

Note: It has to start from Network1, and the minimum copy unit is one Network.

- (5) Start up CX-Programmer and create a new project.

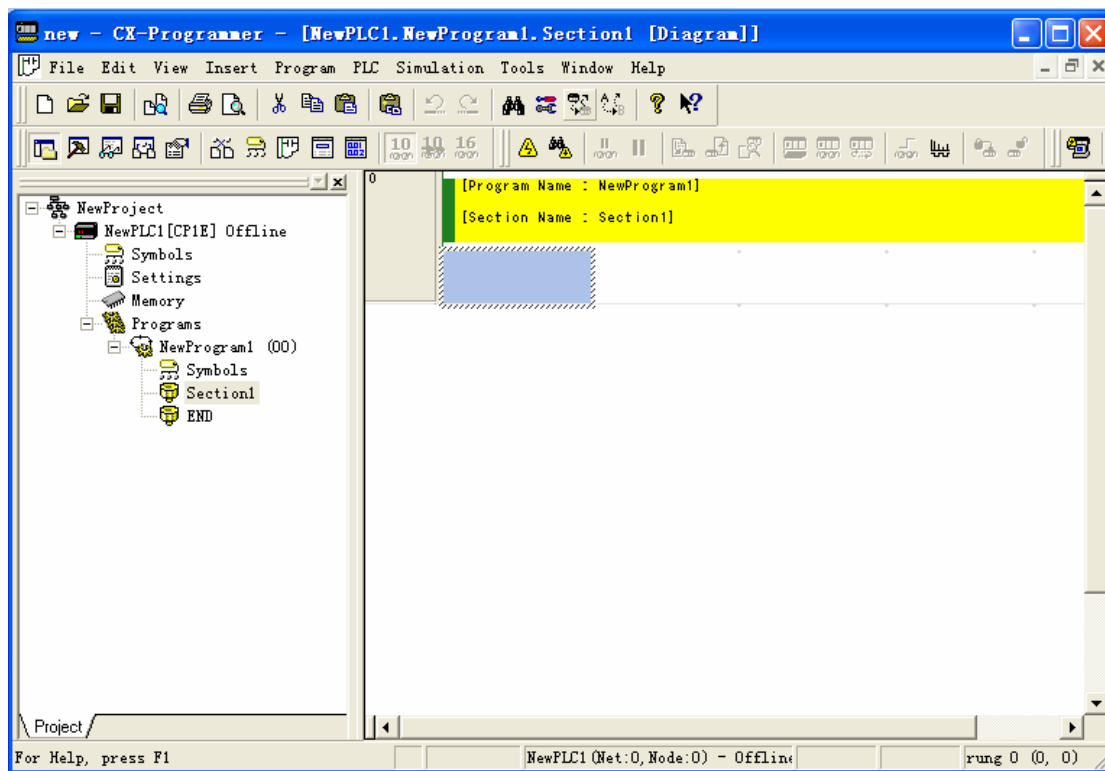


Fig. 5-13 OMRON CX-Programmer

- (6) Paste the source program in the Diagram view or Mnemonics view. And the in following dialogue box will be displayed.

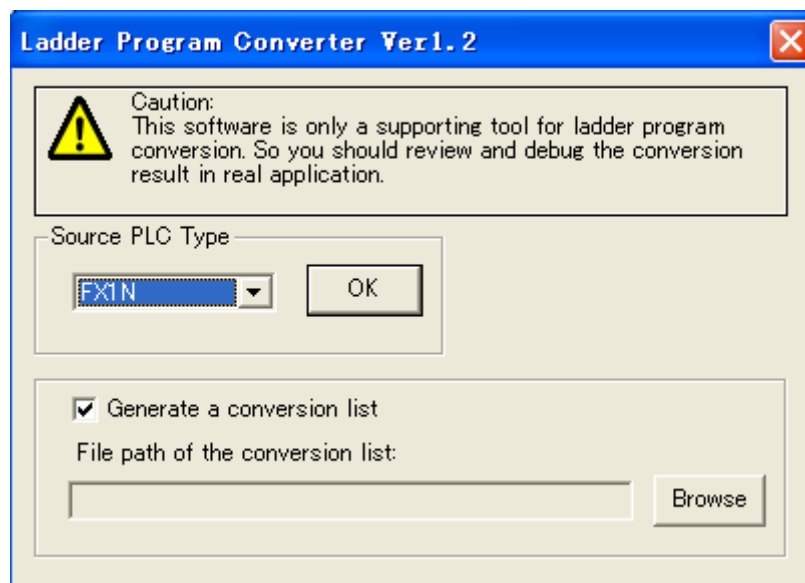


Fig. 5-14 Ladder Conversion Dialogue box

- (7) Click the **Browse** Button; Designate the name and path of conversion list file.

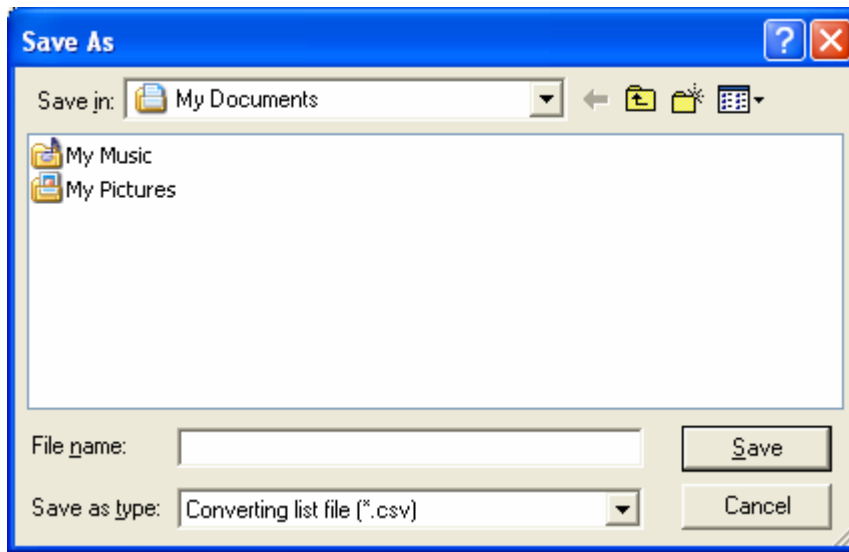


Fig.5-15 conversion list file selection Dialogue box

- (8) Select the conversion destination PLC type. Click the **OK** Button and the Converting progress bar will be displayed.



Fig. 5-16 Converting Progress Bar

- (9) The converted program will be displayed in the CX-Programmer. Corresponding converter information will display in the output window. If the conversion list file designated in step 6, the conversion results will be output to this file.

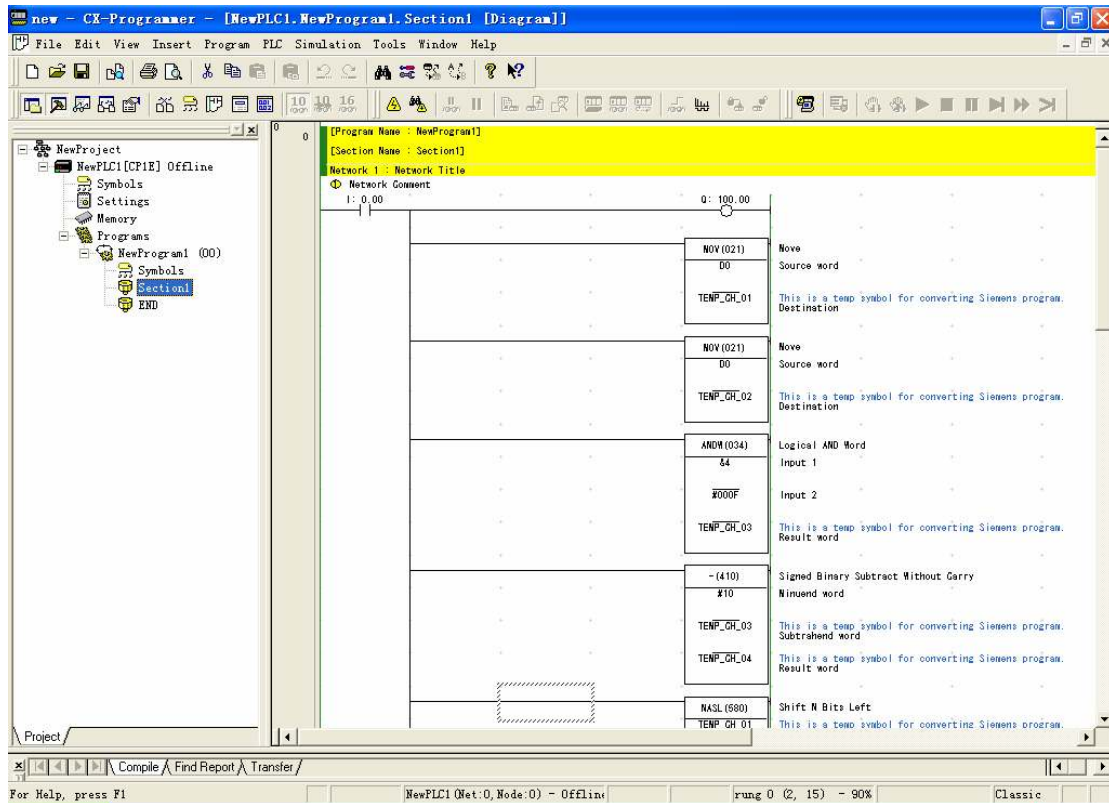


Fig. 5-17 the result of conversion

(10) Insert the temporary variables created during the conversion into the global variable table.

The screenshot displays the Siemens CX-Programmer software interface. The main window shows the Symbol table for a new project. The left pane shows the project structure with 'NewPLC1 [CP1E] Offline' selected. The bottom status bar indicates the project is offline and the CPU is running at 90%.

Name	Data Type	Address / V...	Rack Loca...	Usage	Comment
P_0_02s	BOOL		CF103	Work	0.02 second clock pulse bit
P_0_1s	BOOL		CF100	Work	0.1 second clock pulse bit
P_0_2s	BOOL		CF101	Work	0.2 second clock pulse bit
P_1min	BOOL		CF104	Work	1 minute clock pulse bit
P_1s	BOOL		CF102	Work	1.0 second clock pulse bit
P_AER	BOOL		CF011	Work	Access Error Flag
P_CY	BOOL		CF004	Work	Carry (CY) Flag
P_Cycle_Time_Error	BOOL	A401.08		Work	Cycle Time Error Flag
P_Cycle_Time_Value	UDINT	A264		Work	Present Scan Time
P_EQ	BOOL		CF006	Work	Equals (EQ) Flag
P_ER	BOOL		CF003	Work	Instruction Execution Error (ER) Flag
P_First_Cycle	BOOL	A200.11		Work	First Cycle Flag
P_First_Cycle_Task	BOOL	A200.15		Work	First Task Execution Flag
P_GE	BOOL		CF000	Work	Greater Than or Equals (GE) Flag
P_GT	BOOL		CF005	Work	Greater Than (GT) Flag
P_LE	BOOL		CF002	Work	Less Than or Equals (LE) Flag
P_Low_Battery	BOOL	A402.04		Work	Low Battery Flag
P_LT	BOOL		CF007	Work	Less Than (LT) Flag
P_Max_Cycle_Time	UDINT	A282		Work	Maximum Cycle Time
P_N	BOOL		CF008	Work	Negative (N) Flag
P_NE	BOOL		CF001	Work	Not Equals (NE) Flag
P_OF	BOOL		CF009	Work	Overflow (OF) Flag
P_OFF	BOOL		CF114	Work	Always OFF Flag
P_On	BOOL		CF113	Work	Always ON Flag
P_Output_Off_Bit	BOOL	A500.15		Work	Output OFF Bit
P_Step	BOOL	A200.12		Work	Step Flag
P_UF	BOOL		CF010	Work	Underflow (UF) Flag
TEMP_CH_01	CHANNEL	H41		Work	This is a temp symbol for converting Siemens p...
TEMP_CH_02	CHANNEL	H42		Work	This is a temp symbol for converting Siemens p...
TEMP_CH_03	CHANNEL	H43		Work	This is a temp symbol for converting Siemens p...
TEMP_CH_04	CHANNEL	H44		Work	This is a temp symbol for converting Siemens p...

Fig. 5-18 Insert temporary variable

5.3. Conversion List File

Conversion List File is the instruction list before and after the conversion. It is a CSV file.

(1) Conversion List File specification

6 columns:

- 1) Conversion Source Step (Step No. for Mitsubishi instruction, NetWork No. for Siemens instruction)
- 2) Conversion Source Instruction
- 3) Conversion Source Operand
- 4) Conversion Destination Step
- 5) Conversion Destination Instruction
- 6) Conversion Destination Operand

When the conversion type is 1:N^{*Note1}, only the first OMRON instruction of conversion destination has the Step No.

When the instruction conversion error occurs, the instruction of conversion destination has not Step No.

When the operand conversion error occurs, the Step No. will be generated normally.

When converting the Mitsubishi program by the COPY-PASTE conversion method, the content of CSV file first column (Conversion Source Step) is not the Step No. in GX-D but the Instruction Quantity No.

***Note 1:**

One source instruction is converted to more than one destination instruction or one source instruction being converted to one destination instruction with different number and order of operands

(2) Open the CSV File in Excel

When Opening the CSV file in Excel, please pay attention to the following items:

- 1) When the operand of OMRON instruction is bool type and the decimal fraction part is 0, the decimal fraction part will be lost. For example 0.00 will be displayed as 0.
- 2) The +L、-L、++L and --L instruction of OMRON will be displayed as “#NAME? ”. Please modify it manually.
- 3) The +、-、++ and -- instruction of OMRON in excel will be as maths symbols .Please modify it manually.
- 4) Please edit the CSV file in *Notepad*, not in Excel.

(3) Conversion Example

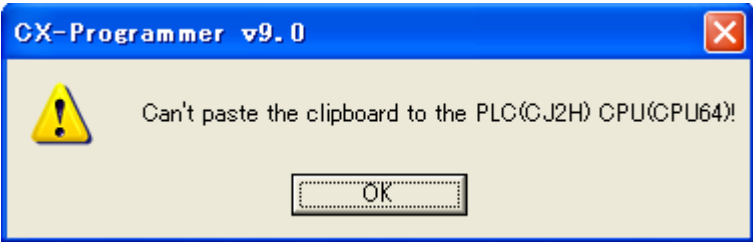
Example of Mitsubishi:

SrcStep	SrcInst	SrcMem	DstStep	DstInst	DstMem
0	LD	X000	0	LD	0.00
1	BIN	T0	1	BIN (023)	T0
		T1	(No Step number)		T1
6	LD	X001	2	LD	0.01
7	REF	X000	(No Step number)	MI_REF	X000
		K0	(No Step number)		K0
12	END		3	END	

Example of Siemens:

SrcStep	SrcInst	SrcMem	DstStep	DstInst	DstMem
NetWork 1	LD	I0.0	0	LD	0.00
NetWork 1	MOVW	VW0	1	MOV (021)	D0
		VW2	(No Step number)		D2
NetWork 2	LD	I0.1	2	LD	0.01
NetWork 2	STR	VB0	(No Step number)	SI_STR	VB0
		VB1	(No Step number)		VB1
		VB2	(No Step number)		VB2
END ORGANIZATION BLOCK	ENDP		3	END	

6. ERROR List and Solutions

Error List	Solutions
	Choose the “<i>Generated a conversion list</i>” and click the “OK” button when the path and name of conversion list file is not designated. The warning will be displayed.
	If the converter destination PLC type is not supported, the warning dialog box will display.

7. Appendix

7.1. Instruction Convert list

Conversion status:

○: Complete conversion △: Incomplete conversion (Restrict Condition)

×: No conversion ●: Corresponding Mitsubishi PLC

(1) Mitsubishi PLC Instruction Convert List

(Note: Specific conversion information, refer to Appendix: Mitsubishi Convert Specification)

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
1	LD	Load	Contact Instruction	●	●	●	●	○	
2	LDI	Load Inverse	Contact Instruction	●	●	●	●	○	
3	LDP	Load Pulse	Contact Instruction	●	●	●	●	○	
4	LDF	Load Falling Pulse	Contact Instruction	●	●	●	●	○	
5	AND	And	Contact Instruction	●	●	●	●	○	
6	ANI	And Inverse	Contact Instruction	●	●	●	●	○	
7	ANDP	And Pulse	Contact Instruction	●	●	●	●	○	
8	ANDF	And Falling Pulse	Contact Instruction	●	●	●	●	○	
9	OR	Or	Contact Instruction	●	●	●	●	○	
10	ORI	Or Inverse	Contact Instruction	●	●	●	●	○	
11	ORP	Or Pulse	Contact Instruction	●	●	●	●	○	
12	ORF	Or Falling Pulse	Contact Instruction	●	●	●	●	○	
13	ANB	And Block	Contact Instruction	●	●	●	●	○	
14	ORB	Or Block	Contact Instruction	●	●	●	●	○	
15	MPS	Memory Point Store	Contact Instruction	●	●	●	●	○	
16	MRD	Memory Read	Contact Instruction	●	●	●	●	○	
17	MPP	Memory POP	Contact Instruction	●	●	●	●	○	
18	INV	Inverse	Contact Instruction	●	●	●	●	○	
19	MEF	MEF	Contact Instruction	●				○	
20	MEP	MEP	Contact Instruction	●				○	
21	OUT	Out	Out Instruction	●	●	●	●	○	
22	OUT [C]	Out	Out Instruction	●	●	●	●	○	
23	OUT [T]	Out	Out Instruction	●	●	●	●	○	
24	SET	Set	Out Instruction	●	●	●	●	○	
25	RST	Reset	Out Instruction	●	●	●	●	○	
26	PLS	Pulse	Out Instruction	●	●	●	●	○	
27	PLF	Falling pulse	Out Instruction	●	●	●	●	○	
28	MC	Master Control	Master Control Instruction	●	●	●	●	○	
29	MCR	Master control reset	Master Control Instruction	●	●	●	●	○	
30	NOP	No Operation	Other Instruction	●	●	●	●	○	
31	END	End	End Instruction	●	●	●	●	○	
32	STL	Step Ladder	Step Ladder Instruction	●	●	●	●	×	
33	RET	Return	Step Ladder Instruction	●	●	●	●	×	
34	CJ	Conditional jump	Program Flow	●	●	●	●	○	
35	CJP	Conditional jump	Program Flow	●	●	●	●	○	
36	CALL	Call Subroutine	Program Flow	●	●	●	●	○	
37	CALLP	Call Subroutine	Program Flow	●	●	●	●	○	
38	SRET	Subroutine Return	Program Flow	●	●	●	●	○	
39	IRET	Interrupt Return	Program Flow	●	●	●	●	×	
40	EI	Enable Interrupt	Program Flow	●	●	●	●	○	
41	DI	Disable Interrupt	Program Flow	●	●	●	●	○	
42	FEND	Main Routine Program End	Program Flow	●	●	●	●	○	
43	WDT	Watchdog Timer Refresh	Program Flow	●	●	●	●	○	
44	WDTP	Watchdog Timer Refresh	Program Flow	●	●	●	●	○	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
45	FOR	Start of a For/Next loop	Program Flow	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
46	NEXT	End a For/Next loop	Program Flow	●	●	●	●	○	
47	CMP	Compare	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
48	CMPP	Compare	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
49	DCMP	Compare	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ NO conversion.
50	DCMPP	Compare	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ NO conversion.
51	ZCP	Zone Compare	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
52	ZCPP	Zone Compare	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
53	DZCP	Zone Compare	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ NO conversion.
54	DZCPP	Zone Compare	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ NO conversion.
55	MOV	Move	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
56	MOVP	Move	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
57	DMOV	Move	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ NO conversion.
58	DMOVP	Move	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ NO conversion.
59	SMOV	Shift Move	Move and Compare	●	●			×	
60	SMOVP	Shift Move	Move and Compare	●	●			×	
61	CML	Complement	Move and Compare	●	●			○	
62	CMLP	Complement	Move and Compare	●	●			○	
63	DCML	Complement	Move and Compare	●	●			△	To CP1E.No Conversion.
64	DCMLP	Complement	Move and Compare	●	●			△	To CP1E.No Conversion.
65	BMOV	Block Move	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
66	BMOVP	Block Move	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
67	FMOV	Fill Move	Move and Compare	●	●			×	
68	FMOVP	Fill Move	Move and Compare	●	●			×	
69	DFMOV	Fill Move	Move and Compare	●	●			×	
70	DFMOVP	Fill Move	Move and Compare	●	●			×	
71	XCH	Exchange	Move and Compare	●	●			○	
72	XCHP	Exchange	Move and Compare	●	●			○	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
73	DXCH	Exchange	Move and Compare	●	●			△	To CP1E.No Conversion.
74	DXCHP	Exchange	Move and Compare	●	●			△	To CP1E.No Conversion.
75	BCD	Conversion to Binary Coded Decimal	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
76	BCDP	Conversion to Binary Coded Decimal	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
77	DBCD	Conversion to Binary Coded Decimal	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
78	DBCDP	Conversion to Binary Coded Decimal	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
79	BIN	Conversion to Binary	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
80	BINP	Conversion to Binary	Move and Compare	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
81	DBIN	Conversion to Binary	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
82	DBINP	Conversion to Binary	Move and Compare	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
83	ADD	Addition	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
84	ADDP	Addition	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
85	DADD	Addition	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
86	DADDP	Addition	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
87	SUB	Subtraction	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
88	SUBP	Subtraction	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
89	DSUB	Subtraction	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
90	DSUBP	Subtraction	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
91	MUL	Multiplication	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
92	MULP	Multiplication	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
93	DMUL	Multiplication	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
94	DMULP	Multiplication	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
95	DIV	Division	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
96	DIVP	Division	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
97	DDIV	Division	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
98	DDIVP	Division	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
99	INC	Increment	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
100	INCP	Increment	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
101	DINC	Increment	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
102	DINCP	Increment	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
103	DEC	Decrement	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
104	DECP	Decrement	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
105	DDEC	Decrement	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
106	DDECP	Decrement	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
107	WAND	Logical Word AND	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
108	WANDP	Logical Word AND	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
109	DAND	Logical Word AND	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
110	DANDP	Logical Word AND	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
111	WOR	Logical Word OR	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
112	WORP	Logical Word OR	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
113	DOR	Logical Word OR	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
114	DORP	Logical Word OR	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
115	WXOR	Logical Exclusive OR	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
116	WXORP	Logical Exclusive OR	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
117	DXOR	Logical Exclusive OR	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
118	DXORP	Logical Exclusive OR	Arithmetic and Logical operations	●	●	●	●	△	Operand includes KZ, KXZ, KYZ, KSZ, KMZ, TZ, CZ. NO conversion.
119	NEG	Negation	Arithmetic and Logical operations	●	●			△	Operand includes address out of converter range and KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KYZ, KSZ, KMZ. NO conversion.
120	NEGP	Negation	Arithmetic and Logical operations	●	●			△	Operand includes address out of converter range and KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KYZ, KSZ, KMZ. NO conversion.
121	DNEG	Negation	Arithmetic and Logical operations	●	●			△	Operand includes address out of converter range and KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KYZ, KSZ, KMZ. NO conversion. To CP1E. NO conversion.
122	DNEGP	Negation	Arithmetic and Logical operations	●	●			△	Operand includes address out of converter range and KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KYZ, KSZ, KMZ. NO conversion. To CP1E. NO conversion.
123	ROR	Rotation Right	Rotation and Shift Operation	●	●			×	
124	RORP	Rotation Right	Rotation and Shift Operation	●	●			×	
125	DROR	Rotation Right	Rotation and Shift Operation	●	●			×	
126	DRORP	Rotation Right	Rotation and Shift Operation	●	●			×	
127	ROL	Rotation Left	Rotation and Shift Operation	●	●			×	
128	ROLP	Rotation Left	Rotation and Shift Operation	●	●			×	
129	DROL	Rotation Left	Rotation and Shift Operation	●	●			×	
130	DROLP	Rotation Left	Rotation and Shift Operation	●	●			×	
131	RCR	Rotation Right with Carry	Rotation and Shift Operation	●	●			×	
132	RCRP	Rotation Right with Carry	Rotation and Shift Operation	●	●			×	
133	DRCR	Rotation Right with Carry	Rotation and Shift Operation	●	●			×	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
134	DRCRP	Rotation Right with Carry	Rotation and Shift Operation	●	●			×	
135	RCL	Rotation Left with Carry	Rotation and Shift Operation	●	●			×	
136	RCLP	Rotation Left with Carry	Rotation and Shift Operation	●	●			×	
137	DRCL	Rotation Left with Carry	Rotation and Shift Operation	●	●			×	
138	DRCLP	Rotation Left with Carry	Rotation and Shift Operation	●	●			×	
139	SFTL	Bit Shift Left	Rotation and Shift Operation	●	●	●	●	△	
140	SFTLP	Bit Shift Left	Rotation and Shift Operation	●	●	●	●	△	
141	SFTR	Bit Shift Right	Rotation and Shift Operation	●	●	●	●	△	
142	SFTRP	Bit Shift Right	Rotation and Shift Operation	●	●	●	●	△	
143	WSFR	Word Shift Right	Rotation and Shift Operation	●	●			×	
144	WSFRP	Word Shift Right	Rotation and Shift Operation	●	●			×	
145	WSFL	Word Shift Left	Rotation and Shift Operation	●	●			×	
146	WSFLP	Word Shift Left	Rotation and Shift Operation	●	●			×	
147	SFWR	Shift write [FIFO/FILO control]	Rotation and Shift	●	●	●	●	△	Operand 1 includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion. Operand 2 isn't T, C, D. NO conversion.
148	SFWRP	Shift write [FIFO/FILO control]	Rotation and Shift	●	●	●	●	△	Operand 1 includes KZ, KV, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion. Operand 2 isn't T, C, D. NO conversion.
149	SFRD	Shift Read [FIFO Control]	Rotation and Shift	●	●	●	●	△	Operand 1 isn't T, C, D. NO conversion. Operand 2 isn't T, C, D, V, Z, DV, DZ. NO conversion.
150	SFRDP	Shift Read [FIFO Control]	Rotation and Shift	●	●	●	●	△	Operand 1 isn't T, C, D. NO conversion. Operand 2 isn't T, C, D, V, Z, DV, DZ. NO conversion.
151	ZRST	Zone Reset	Data Operation	●	●	●	●	△	Operand includes TZ, TV, CZ, CV. NO conversion.
152	ZRSTP	Zone Reset	Data Operation	●	●	●	●	△	Operand includes TZ, TV, CZ, CV. NO conversion.
153	DECO	Decode	Data Operation	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
154	DECOP	Decode	Data Operation	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV. NO conversion.
155	ENCO	Encode	Data Operation	●	●	●	●	△	Operand 1 isn't T, C, D, V, Z, DV, DZ. NO conversion. Operand 2 isn't T, C, D, V, Z, DV, DZ. NO conversion.

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
156	ENCOP	Encode	Data Operation	●	●	●	●	△	Operand 1 isn't T、C、D、V、Z、DZ、DV. NO conversion. Operand 2 isn't T、C、D、V、Z、DV、DZ. NO conversion.
157	SUM	Sum of Active Bits	Data Operation	●	●			×	
158	SUMP	Sum of Active Bits	Data Operation	●	●			×	
159	DSUM	Sum of Active Bits	Data Operation	●	●			×	
160	DSUMP	Sum of Active Bits	Data Operation	●	●			×	
161	BON	Check Specified Bit Stauts	Data Operation	●	●			×	
162	BONP	Check Specified Bit Stauts	Data Operation	●	●			×	
163	DBON	Check Specified Bit Stauts	Data Operation	●	●			×	
164	DBONP	Check Specified Bit Stauts	Data Operation	●	●			×	
165	MEAN	Mean	Data Operation	●	●			×	
166	MEANP	Mean	Data Operation	●	●			×	
167	DMEAN	Mean	Data Operation	●	●			×	
168	DMEANP	Mean	Data Operation	●	●			×	
169	ANS	(Timed)Annunciator Set	Data Operation	●	●			×	
170	ANR	Annunciator Reset	Data Operation	●	●			×	
171	ANRP	Annunciator Reset	Data Operation	●	●			×	
172	SQR	Square Root	Data Operation	●	●			×	
173	SQRP	Square Root	Data Operation	●	●			×	
174	DSQR	Square Root	Data Operation	●	●			△	To CP1E.No Conversion.
175	DSQRP	Square Root	Data Operation	●	●			△	To CP1E.No Conversion.
176	FLT	Conversion to Floating Point	Data Operation	●	●			○	
177	FLTP	Conversion to Floating Point	Data Operation	●	●			○	
178	DFLT	Conversion to Floating Point	Data Operation	●	●			○	
179	DFLTP	Conversion to Floating Point	Data Operation	●	●			○	
180	REF	Refresh	High Speed Processing	●	●	●	●	×	
181	REFP	Refresh	High Speed Processing	●	●	●	●	×	
182	REFF	Refresh and filter adjust	High Speed Processing	●	●	●	●	×	
183	REFFP	Refresh and filter adjust	High Speed Processing	●	●	●	●	×	
184	MTR	Input matrix	High Speed Processing	●	●	●	●	×	
185	DHSCR	High speed cunter reset	High Speed Processing	●	●	●	●	×	
186	DHSCS	High speed cunter set	High Speed Processing	●	●	●	●	×	
187	DHSZ	High speed zone compare	High Speed Processing	●	●			×	
188	SPD	Speed detection	High Speed Processing	●	●	●	●	×	
189	DSPD	Speed detection	High Speed Processing	●				×	
190	PLSY	Pulse Y output	High Speed Processing	●	●	●	●	×	
191	DPLSY	Pulse Y output	High Speed Processing	●	●	●	●	×	
192	PWM	Pulse width modulation	High Speed Processing	●	●	●	●	×	
193	PLSR	Ramp Pulse output	High Speed Processing	●	●	●	●	×	
194	DPLSR	Ramp Pulse output	High Speed Processing	●	●	●	●	×	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
195	IST	Initial State	Handy Instructions	●	●	●	●	×	
196	SER	Search	Handy Instructions	●	●			×	
197	SERP	Search	Handy Instructions	●	●			×	
198	DSER	Search	Handy Instructions	●	●			×	
199	DSERP	Search	Handy Instructions	●	●			×	
200	ABSD	Absolute Drum	Handy Instructions	●	●	●	●	×	
201	DABSD	Absolute Drum	Handy Instructions	●	●	●	●	×	
202	INCD	Incremental Drum	Handy Instructions	●	●	●	●	×	
203	TTMR	Teaching Timer	Handy Instructions	●	●			×	
204	STMR	Special Timer - Definable	Handy Instructions	●	●			×	
205	ALT	Alternate State	Handy Instructions	●	●	●	●	×	
206	ALTP	Alternate State	Handy Instructions	●	●	●	●	×	
207	RAMP	Ramp-Variable Value	Handy Instructions	●	●	●	●	×	
208	ROTC	Rotary Table Control	Handy Instructions	●	●			×	
209	SORT	Sort Data	Handy Instructions	●	●			×	
210	TKY	Ten Key Input	External FX I/O Devices	●	●			×	
211	DTKY	Ten Key Input	External FX I/O Devices	●	●			×	
212	HKY	Hexadecimal Input	External FX I/O Devices	●	●			×	
213	DHKY	Hexadecimal Input	External FX I/O Devices	●	●			×	
214	DSW	Digital Switch	External FX I/O Devices	●	●	●	●	×	
215	SEGD	Seven Segment Decoder	External FX I/O Devices	●	●			×	
216	SEGDP	Seven Segment Decoder	External FX I/O Devices	●	●			×	
217	SEGL	Seven Segment With Latch	External FX I/O Devices	●	●	●	●	×	
218	ARWS	Arrow Switch	External FX I/O Devices	●	●			×	
219	ASC	ASCII Code	External FX I/O Devices	●	●			×	
220	PR	Print' To A Display	External FX I/O Devices	●	●			×	
221	FROM	Read From A Special Function Block	External FX I/O Devices	●	●	●		×	
222	FROMP	Read From A Special Function Block	External FX I/O Devices	●	●	●		×	
223	DFROM	Read From A Special Function Block	External FX I/O Devices	●	●	●		×	
224	DFROMP	Read From A Special Function Block	External FX I/O Devices	●	●	●		×	
225	TO	Write To A Special Function Block	External FX I/O Devices	●	●	●		×	
226	TOP	Write To A Special Function Block	External FX I/O Devices	●	●	●		×	
227	DTO	Write To A Special Function Block	External FX I/O Devices	●	●	●		×	
228	DTOP	Write To A Special Function Block	External FX I/O Devices	●	●	●		×	
229	RS	RS Communications	External FX Serial Devices	●	●	●	●	×	
230	PRUN	Parallel run	External FX Serial Devices	●	●	●	●	×	
231	PRUNP	Parallel run	External FX Serial Devices	●	●	●	●	×	
232	DPRUN	Parallel run	External FX Serial Devices	●	●	●	●	×	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
233	DPRUNP	Parallel run	External FX Serial Devices	●	●	●	●	×	
234	ASCI	HEX to ASCII	External FX Serial Devices	●	●	●	●	×	
235	ASCIP	HEX to ASCII	External FX Serial Devices	●	●	●	●	×	
236	HEX	ASCII to HEX	External FX Serial Devices	●	●	●	●	×	
237	HEXP	ASCII to HEX	External FX Serial Devices	●	●	●	●	×	
238	CCD	Check Code	External FX Serial Devices	●	●	●	●	×	
239	CCDP	Check Code	External FX Serial Devices	●	●	●	●	×	
240	VRRD	Volume Read	External FX Serial Devices	●	●	●	●	×	
241	VRRDP	Volume Read	External FX Serial Devices	●	●	●	●	×	
242	VRSC	Volume Scale	External FX Serial Devices	●	●	●	●	×	
243	VRSCP	Volume Scale	External FX Serial Devices	●	●	●	●	×	
244	RS2	Serial Communication 2	External FX Serial Devices	●				×	
245	PID	PID Control Loop	External FX Serial Devices	●	●	●		×	
246	ANRD	Analog Read	Special Module Instruction		●			×	
247	ANRDP	Analog Read	Special Module Instruction		●			×	
248	ANWR	Analog Write	Special Module Instruction		●			×	
249	ANWRP	Analog Write	Special Module Instruction		●			×	
250	BLK	BLOCK	Special Module Instruction		●			×	
251	BLKP	BLOCK	Special Module Instruction		●			×	
252	MCDE	Machine Code	Special Module Instruction		●			×	
253	MCDEP	Machine Code	Special Module Instruction		●			×	
254	MNET	Mini Net	Special Module Instruction		●			×	
255	MNETP	Mini Net	Special Module Instruction		●			×	
256	RMMN	RM Monitor	Special Module Instruction		●			×	
257	RMMNP	RM Monitor	Special Module Instruction		●			×	
258	RMRD	RM Read	Special Module Instruction		●			×	
259	RMRDP	RM Read	Special Module Instruction		●			×	
260	RMST	RM Start	Special Module Instruction		●			×	
261	RMWR	RM Write	Special Module Instruction		●			×	
262	RMWRP	RM Write	Special Module Instruction		●			×	
263	ZPUSH	Batch Store of Index Register	Data Transfer 2	●				×	
264	ZPUSHP	Batch Store of Index Register	Data Transfer 2	●				×	
265	ZPOP	Batch POP of Index Register	Data Transfer 2	●				×	
266	ZPOPP	Batch POP of Index Register	Data Transfer 2	●				×	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
267	DECMP	Floating Point Compare	Floating Point	●	●			×	
268	DECMPP	Floating Point Compare	Floating Point	●	●			×	
269	DEZCP	Floating Point Zone Compare	Floating Point	●	●			×	
270	DEZCPP	Floating Point Zone Compare	Floating Point	●	●			×	
271	DEMOV	Floating Point Move	Floating Point	●				○	
272	DEMOVP	Floating Point Move	Floating Point	●				○	
273	DESTR	Floating Point to Character String Conversion	Floating Point	●				×	
274	DESTRP	Floating Point to Character String Conversion	Floating Point	●				×	
275	DEVAL	Character String to Floating Point Conversion	Floating Point	●				○	
276	DEVALP	Character String to Floating Point Conversion	Floating Point	●				○	
277	DEBCD	Floating Point to Scientific	Floating Point	●	●			×	
278	DEBCDP	Floating Point to Scientific	Floating Point	●	●			×	
279	DEBIN	Scientific to Floating Point	Floating Point	●	●			×	
280	DEBINP	Scientific to Floating Point	Floating Point	●	●			×	
281	DEADD	Floating Point Add	Floating Point	●	●			○	
282	DEADDP	Floating Point Add	Floating Point	●	●			○	
283	DESUB	Floating Point Subtract	Floating Point	●	●			○	
284	DESUBP	Floating Point Subtract	Floating Point	●	●			○	
285	DEMUL	Floating Point Multiplication	Floating Point	●	●			○	
286	DEMULP	Floating Point Multiplication	Floating Point	●	●			○	
287	DEDIV	Floating Point Division	Floating Point	●	●			○	
288	DEDIVP	Floating Point Division	Floating Point	●	●			○	
289	DEXP	Floating Point Exponent	Floating Point	●				△	To CP1E.No Conversion.
290	DEXPP	Floating Point Exponent	Floating Point	●				△	To CP1E.No Conversion.
291	DLOGE	Floating Point Natural Logarithm	Floating Point	●				△	To CP1E.No Conversion.
292	DLOGEP	Floating Point Natural Logarithm	Floating Point	●				△	To CP1E.No Conversion.
293	DLOG10	Floating Point Common Logarithm	Floating Point	●				×	
294	DLOG10P	Floating Point Common Logarithm	Floating Point	●				×	
295	DESQR	Floating Point Square Root	Floating Point	●	●			△	To CP1E.No Conversion.
296	DESQRP	Floating Point Square Root	Floating Point	●	●			△	To CP1E.No Conversion.
297	DENEG	Floating Point Negation	Floating Point	●				×	
298	DENEGP	Floating Point Negation	Floating Point	●				×	
299	INT	Floating Point to Integer	Floating Point	●	●			○	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
300	INTP	Floating Point to Integer	Floating Point	●	●			○	
301	DINT	Floating Point to Integer	Floating Point	●	●			○	
302	DINTP	Floating Point to Integer	Floating Point	●	●			○	
303	DSIN	Sine	Floating Point	●	●			△	To CP1E.No Conversion.
304	DSINP	Sine	Floating Point	●	●			△	To CP1E.No Conversion.
305	DCOS	Cosine	Floating Point	●	●			△	To CP1E.No Conversion.
306	DCOSP	Cosine	Floating Point	●	●			△	To CP1E.No Conversion.
307	DTAN	Tangent	Floating Point	●	●			△	To CP1E.No Conversion.
308	DTANP	Tangent	Floating Point	●	●			△	To CP1E.No Conversion.
309	DASIN	Floating Point Arc Sine	Floating Point	●				△	To CP1E.No Conversion.
310	DASINP	Floating Point Arc Sine	Floating Point	●				△	To CP1E.No Conversion.
311	DACOS	Floating Point Arc Cosine	Floating Point	●				△	To CP1E.No Conversion.
312	DACOSP	Floating Point Arc Cosine	Floating Point	●				△	To CP1E.No Conversion.
313	DATAN	Floating Point Arc Tangent	Floating Point	●				△	To CP1E.No Conversion.
314	DATANP	Floating Point Arc Tangent	Floating Point	●				△	To CP1E.No Conversion.
315	DRAD	Floating Point Degrees to Radians Conversion	Floating Point	●				△	To CP1E.No Conversion.
316	DRADP	Floating Point Degrees to Radians Conversion	Floating Point	●				△	To CP1E.No Conversion.
317	DDEG	Floating Point Radians to Degrees Conversion	Floating Point	●				△	To CP1E.No Conversion.
318	DDEGP	Floating Point Radians to Degrees Conversion	Floating Point	●				△	To CP1E.No Conversion.
319	WSUM	Sum of Word Data	Data Operation 2	●				×	
320	WSUMP	Sum of Word Data	Data Operation 2	●				×	
321	DWSUM	Sum of Word Data	Data Operation 2	●				×	
322	DWSUMP	Sum of Word Data	Data Operation 2	●				×	
323	WTOB	WORD to BYTE	Data Operation 2	●				×	
324	WTOBP	WORD to BYTE	Data Operation 2	●				×	
325	BTOW	BYTE to WORD	Data Operation 2	●				×	
326	BTOWP	BYTE to WORD	Data Operation 2	●				×	
327	UNI	4-bit Linking of Word Data	Data Operation 2	●				×	
328	UNIP	4-bit Linking of Word Data	Data Operation 2	●				×	
329	DIS	4-bit Grouping of Word Data	Data Operation 2	●				×	
330	DISP	4-bit Grouping of Word Data	Data Operation 2	●				×	
331	SWAP	Float to Scientific	Data Operation 2	●	●			△	Operand includes address out of converter range and KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KYZ, KSZ, KMZ. NO conversion.
332	SWAPP	Float to Scientific	Data Operation 2	●	●			△	Operand includes address out of converter range and KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KYZ, KSZ, KMZ. NO conversion.

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
333	DSWAP	Float to Scientific	Data Operation 2	●	●			△	Operand includes address out of converter range and KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KYZ, KSZ, KMZ. NO conversion.
334	DSWAPP	Float to Scientific	Data Operation 2	●	●			△	Operand includes address out of converter range and KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KYZ, KSZ, KMZ. NO conversion.
335	SORT2	Sort Tabulated Data 2	Data Operation 2	●				×	
336	DSORT2	Sort Tabulated Data 2	Data Operation 2	●				×	
337	DSZR	DOG Search Zero Return	Positioning Control	●				×	
338	DVIT	Interrupt Positioning	Positioning Control	●				×	
339	DDVIT	Interrupt Positioning	Positioning Control	●				×	
340	DTBL	Batch Data Positioning Mode	Positioning Control	●				×	
341	DABS	Absolute current value read	Positioning Control	●	●	●	●	×	
342	ZRN	Zero return	Positioning Control	●	●	●	●	×	
343	DZRN	Zero return	Positioning Control	●	●	●	●	×	
344	PLSV	Pulse V	Positioning Control	●	●	●	●	×	
345	DPLSV	Pulse V	Positioning Control	●	●	●	●	×	
346	DRVl	Drive to increment	Positioning Control	●	●	●	●	×	
347	DDRVI	Drive to increment	Positioning Control	●	●	●	●	×	
348	DDRVA	Drive to absolute	Positioning Control	●	●	●	●	×	
349	DRVA	Drive to absolute	Positioning Control	●	●	●	●	×	
350	TCMP	Time Compare	Real Time clock Control	●	●	●	●	×	
351	TCMPP	Time Compare	Real Time clock Control	●	●	●	●	×	
352	TZCP	Time Zone Compare	Real Time clock Control	●	●	●	●	×	
353	TZCPP	Time Zone Compare	Real Time clock Control	●	●	●	●	×	
354	TADD	Time Add	Real Time clock Control	●	●	●	●	×	
355	TADDP	Time Add	Real Time clock Control	●	●	●	●	×	
356	TSUB	Time Subtract	Real Time clock Control	●	●	●	●	×	
357	TSUBP	Time Subtract	Real Time clock Control	●	●	●	●	×	
358	HTOS	Hour to second conversion	Real Time clock Control	●				×	
359	HTOSP	Hour to second conversion	Real Time clock Control	●				×	
360	DHTOS	Hour to second conversion	Real Time clock Control	●				×	
361	DHTOSP	Hour to second conversion	Real Time clock Control	●				×	
362	STOH	Second to hour conversion	Real Time clock Control	●				×	
363	STOHP	Second to hour conversion	Real Time clock Control	●				×	
364	DSTOH	Second to hour conversion	Real Time clock Control	●				×	
365	DSTOHP	Second to hour conversion	Real Time clock Control	●				×	
366	TRD	Read RTC data	Real Time clock Control	●	●	●	●	×	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
367	TRDP	Read RTC data	Real Time clock Control	●	●	●	●	×	
368	TWR	Set RTC data	Real Time clock Control	●	●	●	●	×	
369	TWRP	Set RTC data	Real Time clock Control	●	●	●	●	×	
370	DHOUR	Hour meter	Real Time clock Control	●	●	●	●	×	
371	HOUR	Hour meter	Real Time clock Control	●	●	●	●	×	
372	GRY	Decimal to Gray Code	Gray Codes	●	●			×	
373	GRYP	Decimal to Gray Code	Gray Codes	●	●			×	
374	DGRY	Decimal to Gray Code	Gray Codes	●	●			×	
375	DGRYP	Decimal to Gray Code	Gray Codes	●	●			×	
376	GBIN	Gray Code to Decimal	Gray Codes	●	●			×	
377	GBINP	Gray Code to Decimal	Gray Codes	●	●			×	
378	DGBIN	Gray Code to Decimal	Gray Codes	●	●			×	
379	DGBINP	Gray Code to Decimal	Gray Codes	●	●			×	
380	RD3A	Read form Dedicated Analog Block	External Device	●	●	●		×	
381	RD3AP	Read form Dedicated Analog Block	External Device	●	●	●		×	
382	WR3A	Write to Dedicated Analog Block	External Device	●	●	●		×	
383	WR3AP	Write to Dedicated Analog Block	External Device	●	●	●		×	
384	EXTR	External ROM Function	Extension Function	●	●			×	
385	EXTRP	External ROM Function	Extension Function	●	●			×	
386	DEXTR	External ROM Function	Extension Function	●	●			×	
387	DEXTRP	External ROM Function	Extension Function	●	●			×	
388	COMRD	Read Device Comment Data	Others	●				×	
389	COMRDP	Read Device Comment Data	Others	●				×	
390	RND	Random Number Generation	Others	●				×	
391	RNDP	Random Number Generation	Others	●				×	
392	DUTY	Timing Pulse Generation	Others	●				×	
393	CRC	Cyclic Redundancy Check	Others	●				×	
394	CRCP	Cyclic Redundancy Check	Others	●				×	
395	DHCMOV	High Speed Counter Move	Others	●				×	
396	ADPRW	Adapter	Others	●				×	
397	BK+	Block Data Addition	Block Data Operation	●				×	
398	BK+P	Block Data Addition	Block Data Operation	●				×	
399	DBK+	Block Data Addition	Block Data Operation	●				×	
400	DBK+P	Block Data Addition	Block Data Operation	●				×	
401	BK-	Block Data Subtraction	Block Data Operation	●				×	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
402	BK-P	Block Data Subtraction	Block Data Operation	●				×	
403	DBK-	Block Data Subtraction	Block Data Operation	●				×	
404	DBK-P	Block Data Subtraction	Block Data Operation	●				×	
405	BKCMP=	Block Data Compare S1=S2	Block Data Operation	●				×	
406	BKCMP=P	Block Data Compare S1=S2	Block Data Operation	●				×	
407	DBKCMP=	Block Data Compare S1=S2	Block Data Operation	●				×	
408	DBKCMP=P	Block Data Compare S1=S2	Block Data Operation	●				×	
409	BKCMP>	Block Data Compare S1>S2	Block Data Operation	●				×	
410	BKCMP>P	Block Data Compare S1>S2	Block Data Operation	●				×	
411	DBKCMP>	Block Data Compare S1>S2	Block Data Operation	●				×	
412	DBKCMP>P	Block Data Compare S1>S2	Block Data Operation	●				×	
413	BKCMP<	Block Data Compare S1<S2	Block Data Operation	●				×	
414	BKCMP<P	Block Data Compare S1<S2	Block Data Operation	●				×	
415	DBKCMP<	Block Data Compare S1<S2	Block Data Operation	●				×	
416	DBKCMP<P	Block Data Compare S1<S2	Block Data Operation	●				×	
417	BKCMP<>	Block Data Compare S1<>S2	Block Data Operation	●				×	
418	BKCMP<>P	Block Data Compare S1<>S2	Block Data Operation	●				×	
419	DBKCMP<>	Block Data Compare S1<>S2	Block Data Operation	●				×	
420	DBKCMP<>P	Block Data Compare S1<>S2	Block Data Operation	●				×	
421	BKCMP<=	Block Data Compare S1<=S2	Block Data Operation	●				×	
422	BKCMP<=P	Block Data Compare S1<=S2	Block Data Operation	●				×	
423	DBKCMP<=	Block Data Compare S1<=S2	Block Data Operation	●				×	
424	DBKCMP<=P	Block Data Compare S1<=S2	Block Data Operation	●				×	
425	BKCMP>=	Block Data Compare S1>=S2	Block Data Operation	●				×	
426	BKCMP>=P	Block Data Compare S1>=S2	Block Data Operation	●				×	
427	DBKCMP>=	Block Data Compare S1>=S2	Block Data Operation	●				×	
428	DBKCMP>=P	Block Data Compare S1>=S2	Block Data Operation	●				×	
429	STR	BIN to Character String Conversion	Character String Control	●				×	
430	STRP	BIN to Character String Conversion	Character String Control	●				×	
431	DSTR	BIN to Character String Conversion	Character String Control	●				×	
432	DSTRP	BIN to Character String Conversion	Character String Control	●				×	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
433	VAL	Character String to BIN Conversion	Character String Control	●				×	
434	VALP	Character String to BIN Conversion	Character String Control	●				×	
435	DVAL	Character String to BIN Conversion	Character String Control	●				×	
436	DVALP	Character String to BIN Conversion	Character String Control	●				×	
437	\$+	Link Character Strings	Character String Control	●				△	To CP1E.No Conversion.
438	\$+P	Link Character Strings	Character String Control	●				△	To CP1E.No Conversion.
439	LEN	Character String Length Detection	Character String Control	●				△	To CP1E.No Conversion.
440	LENP	Character String Length Detection	Character String Control	●				△	To CP1E.No Conversion.
441	RIGHT	Extracting Character String Data from the Right	Character String Control	●				△	Operand includes address out of converter range and KX, KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KXZ, KYZ, KSZ, KMZ. NO conversion. To CP1E.No Conversion.
442	RIGHTP	Extracting Character String Data from the Right	Character String Control	●				△	Operand includes address out of converter range and KX, KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KXZ, KYZ, KSZ, KMZ. NO conversion. To CP1E.No Conversion.
443	LEFT	Extracting Character String Data from the Left	Character String Control	●				△	Operand includes address out of converter range and KX, KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KXZ, KYZ, KSZ, KMZ. NO conversion. To CP1E.No Conversion.
444	LEFTP	Extracting Character String Data from the Left	Character String Control	●				△	Operand includes address out of converter range and KX, KY, KM, KS, TV, TZ, CV, CZ, DV, DZ, KXZ, KYZ, KSZ, KMZ. NO conversion. To CP1E.No Conversion.
445	MIDR	Random Selection of Character Strings	Character String Control	●				×	
446	MIDRP	Random Selection of Character Strings	Character String Control	●				×	
447	MIDW	Random Replacement of Character Strings	Character String Control	●				×	
448	MIDWP	Random Replacement of Character Strings	Character String Control	●				×	
449	INSTR	Character string search	Character String Control	●				×	
450	INSTRP	Character string search	Character String Control	●				×	
451	\$MOV	Character String Transfer	Character String Control	●				○	To CP1E.No Conversion.

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
452	\$MOVP	Character String Transfer	Character String Control	●				○	To CP1E.No Conversion.
453	FDEL	Deleting Data from Tables	Data Operation 3	●				△	Operand includes address out of converter range and TV, TZ, CV, CZ, DV, DZ. NO conversion. To CP1E.No Conversion.
454	FDELP	Deleting Data from Tables	Data Operation 3	●				△	Operand includes address out of converter range and TV, TZ, CV, CZ, DV, DZ. NO conversion. To CP1E.No Conversion.
455	FINS	Inserting Data to Tables	Data Operation 3	●				△	Operand includes address out of converter range and TV, TZ, CV, CZ, DV, DZ. NO conversion. To CP1E.No Conversion.
456	FINSP	Inserting Data to Tables	Data Operation 3	●				△	Operand includes address out of converter range and TV, TZ, CV, CZ, DV, DZ.NO conversion. To CP1E.No Conversion.
457	POP	Shift Last Data Read FILO Control	Data Operation 3	●				×	
458	POPP	Shift Last Data Read FILO Control	Data Operation 3	●				×	
459	SFR	Bit Shift Right with Carry	Data Operation 3	●				○	
460	SFRP	Bit Shift Right with Carry	Data Operation 3	●				○	
461	SFL	Bit Shift Left with Carry	Data Operation 3	●				○	
462	SFLP	Bit Shift Left with Carry	Data Operation 3	●				○	
463	LD=	(S1)=(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
464	LDD=	(S1)=(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
465	LD>	(S1)>(S1)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
466	LD<	(S1)<(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
467	LDD>	(S1)>(S1)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
468	LDD<	(S1)<(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
469	LD<>	(S1)≠(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
470	LDD<>	(S1)≠(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
471	LD<=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
472	LDD<=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
473	LD>=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
474	LDD>=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
475	AND=	(S1)=(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
476	ANDD=	(S1)=(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
477	AND>	(S1)>(S1)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
478	ANDD>	(S1)>(S1)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
479	AND<	(S1)<(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
480	ANDD<	(S1)<(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
481	AND<>	(S1)≠(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
482	ANDD<>	(S1)≠(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
483	AND<=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
484	ANDD<=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
485	AND>=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
486	ANDD>=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
487	OR=	(S1)=(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
488	ORD=	(S1)=(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
489	OR>	(S1)>(S1)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
490	ORD>	(S1)>(S1)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
491	OR<	(S1)<(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
492	ORD<	(S1)<(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
493	OR<>	(S1)≠(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
494	ORD<>	(S1)≠(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
495	OR<=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
496	ORD<=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
497	OR>=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
498	ORD>=	(S1)□(S2)	Inline Comparisons	●	●	●	●	△	Operand includes KZ, KV, KX, KY, KS, KM, KXZ, KYZ, KSZ, KMZ, TZ, TV, CZ, CV, DZ, DV. NO conversion.
499	LIMIT	Limit Control	Data Table Operation	●				×	
500	LIMITP	Limit Control	Data Table Operation	●				×	
501	DLIMIT	Limit Control	Data Table Operation	●				×	
502	DLIMITP	Limit Control	Data Table Operation	●				×	
503	BAND	Dead Band Control	Data Table Operation	●				×	
504	BANDP	Dead Band Control	Data Table Operation	●				×	
505	DBAND	Dead Band Control	Data Table Operation	●				×	
506	DBANDP	Dead Band Control	Data Table Operation	●				×	
507	ZONE	Zone Control	Data Table Operation	●				×	
508	ZONEP	Zone Control	Data Table Operation	●				×	
509	DZONE	Zone Control	Data Table Operation	●				×	
510	DZONEP	Zone Control	Data Table Operation	●				×	
511	SCL	Scaling (Coordinate by Point Data)	Data Table Operation	●				×	
512	SCLP	Scaling (Coordinate by Point Data)	Data Table Operation	●				×	
513	DSCL	Scaling (Coordinate by Point Data)	Data Table Operation	●				×	
514	DSCLP	Scaling (Coordinate by Point Data)	Data Table Operation	●				×	
515	DABIN	Decimal ASCII to BIN Conversion	Data Table Operation	●				×	
516	DABINP	Decimal ASCII to BIN Conversion	Data Table Operation	●				×	
517	DDABIN	Decimal ASCII to BIN Conversion	Data Table Operation	●				×	
518	DDABINP	Decimal ASCII to BIN Conversion	Data Table Operation	●				×	
519	BINDA	BIN to Decimal ASCII Conversion	Data Table Operation	●				×	
520	BINDAP	BIN to Decimal ASCII Conversion	Data Table Operation	●				×	
521	DBINDA	BIN to Decimal ASCII Conversion	Data Table Operation	●				×	
522	DBINDAP	BIN to Decimal ASCII Conversion	Data Table Operation	●				×	

No.	Instruction	Function	Class	Fx 3	Fx 2	Fx 1N	Fx 1S	Convert Status	Remark
523	SCL2	Scaling 2 (Coordinate by X/Y Data)	Data Table Operation	●				×	
524	SCL2P	Scaling 2 (Coordinate by X/Y Data)	Data Table Operation	●				×	
525	DSCL2	Scaling 2 (Coordinate by X/Y Data)	Data Table Operation	●				×	
526	DSCL2P	Scaling 2 (Coordinate by X/Y Data)	Data Table Operation	●				×	
527	IVCK	Inverter Status Check	External Device Communication	●				×	
528	IVDR	Inverter Drive	External Device Communication	●				×	
529	IVRD	Inverter Parameter Read	External Device Communication	●				×	
530	IVWR	Inverter Parameter Write	External Device Communication	●				×	
531	IVBWR	Inverter Parameter Block Write	External Device Communication	●				×	
532	RBFM	Divided BFM Read	Data Transfer 3	●				×	
533	WBFM	Divided BFM Write	Data Transfer 3	●				×	
534	DHSCT	High Speed Counter Compare With Data Table	High Speed Processing 2	●				×	
535	LOADR	Load From ER	Extension File Register Control	●				×	
536	LOADRP	Load From ER	Extension File Register Control	●				×	
537	SAVER	Save to ER	Extension File Register Control	●				×	
538	INITR	Initialize R and ER	Extension File Register Control	●				×	
539	INITRP	Initialize R and ER	Extension File Register Control	●				×	
540	LOGR	Logging R and ER	Extension File Register Control	●				×	
541	LOGRP	Logging R and ER	Extension File Register Control	●				×	
542	RWER	Rewrite to ER	Extension File Register Control	●				×	
543	RWERP	Rewrite to ER	Extension File Register Control	●				×	
544	INITER	Initialize ER	Extension File Register Control	●				×	
545	INITERP	Initialize ER	Extension File Register Control	●				×	

(2) Siemens PLC Instruction Convert List

(Note: Specific conversion information, refer to Appendix: Siemens Convert Specification)

No.	Instruction (S7-200)	Class	Function	Convert Status	Remark
1	AENO	Bit Logic Instructions	And ENO	○	
2	LD	Bit Logic Instructions	Load	○	
3	LDN	Bit Logic Instructions	Load Not	○	
4	A	Bit Logic Instructions	And	○	
5	AN	Bit Logic Instructions	And Not	○	
6	O	Bit Logic Instructions	Or	○	
7	ON	Bit Logic Instructions	Or Not	○	
8	LDI	Bit Logic Instructions	Load immediate	○	
9	LDNI	Bit Logic Instructions	Load Not immediate	○	
10	AI	Bit Logic Instructions	And immediate	○	
11	ANI	Bit Logic Instructions	And Not immediate	○	
12	OI	Bit Logic Instructions	Or immediate	○	
13	ONI	Bit Logic Instructions	Or Not immediate	○	
14	ALD	Bit Logic Instructions	And Block	○	
15	OLD	Bit Logic Instructions	Or Block	○	
16	NOT	Bit Logic Instructions	Not	○	
17	EU	Bit Logic Instructions	Pulse	○	
18	ED	Bit Logic Instructions	Falling Pulse	○	
19	=	Bit Logic Instructions	Output	○	
20	=I	Bit Logic Instructions	Output immediate	○	
21	S	Bit Logic Instructions	Set	○	
22	R	Bit Logic Instructions	Reset	○	
23	SI	Bit Logic Instructions	Set immediate	×	
24	RI	Bit Logic Instructions	Reset immediate	×	
25	SR	Bit Logic Instructions	Set Dominant Bistable	○	
26	RS	Bit Logic Instructions	Reset Dominant Bistable instruction	×	
27	NOP	Bit Logic Instructions	Nop	×	
28	LDB=	Compare Instructions	Compare Load Byte N1=N2	○	
29	LDB<	Compare Instructions	Compare Load Byte N1<N2	○	
30	LDB>	Compare Instructions	Compare Load Byte N1>N2	○	
31	LDB<>	Compare Instructions	Compare Load Byte N1<>N2	○	
32	LDB<=	Compare Instructions	Compare Load Byte N1<=N2	○	
33	LDB>=	Compare Instructions	Compare Load Byte N1>=N2	○	
34	LDW=	Compare Instructions	Compare Load Word N1=N2	○	
35	LDW<	Compare Instructions	Compare Load Word N1<N2	○	
36	LDW>	Compare Instructions	Compare Load Word N1>N2	○	
37	LDW<>	Compare Instructions	Compare Load Word N1<>N2	○	
38	LDW<=	Compare Instructions	Compare Load Word N1<=N2	○	
39	LDW>=	Compare Instructions	Compare Load Word N1>=N2	○	
40	LDD=	Compare Instructions	Compare Load Double Word N1=N2	○	
41	LDD<	Compare Instructions	Compare Load Double Word N1<N2	○	
42	LDD>	Compare Instructions	Compare Load Double Word N1>N2	○	

No.	Instruction (S7-200)	Class	Function	Convert Status	Remark
43	LDD<>	Compare Instructions	Compare Load Double Word N1<>N2	○	
44	LDD<=	Compare Instructions	Compare Load Double Word N1<=N2	○	
45	LDD>=	Compare Instructions	Compare Load Double Word N1>=N2	○	
46	LDR=	Compare Instructions	Compare Load Real N1=N2	○	
47	LDR<	Compare Instructions	Compare Load Real N1<N2	○	
48	LDR>	Compare Instructions	Compare Load Real N1>N2	○	
49	LDR<>	Compare Instructions	Compare Load Real N1<>N2	○	
50	LDR<=	Compare Instructions	Compare Load Real N1<=N2	○	
51	LDR>=	Compare Instructions	Compare Load Real N1>=N2	○	
52	AB=	Compare Instructions	Compare And Byte N1=N2	○	
53	AB<	Compare Instructions	Compare And Byte N1<N2	○	
54	AB>	Compare Instructions	Compare And Byte N1>N2	○	
55	AB<>	Compare Instructions	Compare And Byte N1<>N2	○	
56	AB<=	Compare Instructions	Compare And Byte N1<=N2	○	
57	AB>=	Compare Instructions	Compare And Byte N1>=N2	○	
58	AW=	Compare Instructions	Compare And Word N1=N2	○	
59	AW<	Compare Instructions	Compare And Word N1<N2	○	
60	AW>	Compare Instructions	Compare And Word N1>N2	○	
61	AW<>	Compare Instructions	Compare And Word N1<>N2	○	
62	AW<=	Compare Instructions	Compare And Word N1<=N2	○	
63	AW>=	Compare Instructions	Compare And Word N1>=N2	○	
64	AD=	Compare Instructions	Compare And Double Word N1=N2	○	
65	AD<	Compare Instructions	Compare And Double Word N1<N2	○	
66	AD>	Compare Instructions	Compare And Double Word N1>N2	○	
67	AD<>	Compare Instructions	Compare And Double Word N1<>N2	○	
68	AD<=	Compare Instructions	Compare And Double Word N1<=N2	○	
69	AD>=	Compare Instructions	Compare And Double Word N1>=N2	○	
70	AR=	Compare Instructions	Compare And Real N1=N2	○	
71	AR<	Compare Instructions	Compare And Real N1<N2	○	
72	AR>	Compare Instructions	Compare And Real N1>N2	○	
73	AR<>	Compare Instructions	Compare And Real N1<>N2	○	
74	AR<=	Compare Instructions	Compare And Real N1<=N2	○	
75	AR>=	Compare Instructions	Compare And Real N1>=N2	○	
76	OB=	Compare Instructions	Compare Or Byte N1=N2	○	
77	OB<	Compare Instructions	Compare Or Byte N1<N2	○	
78	OB>	Compare Instructions	Compare Or Byte N1>N2	○	
79	OB<>	Compare Instructions	Compare Or Byte N1<>N2	○	
80	OB<=	Compare Instructions	Compare Or Byte N1<=N2	○	
81	OB>=	Compare Instructions	Compare Or Byte N1>=N2	○	
82	OW=	Compare Instructions	Compare Or Word N1=N2	○	
83	OW<	Compare Instructions	Compare Or Word N1<N2	○	
84	OW>	Compare Instructions	Compare Or Word N1>N2	○	

No.	Instruction (S7-200)	Class	Function	Convert Status	Remark
85	OW<>	Compare Instructions	Compare Or Word N1<>N2	○	
86	OW<=	Compare Instructions	Compare Or Word N1<=N2	○	
87	OW>=	Compare Instructions	Compare Or Word N1>=N2	○	
88	OD=	Compare Instructions	Compare Or Double Word N1=N2	○	
89	OD<	Compare Instructions	Compare Or Double Word N1<N2	○	
90	OD>	Compare Instructions	Compare Or Double Word N1>N2	○	
91	OD<>	Compare Instructions	Compare Or Double Word N1<>N2	○	
92	OD<=	Compare Instructions	Compare Or Double Word N1<=N2	○	
93	OD>=	Compare Instructions	Compare Or Double Word N1>=N2	○	
94	OR=	Compare Instructions	Compare Or Real N1=N2	○	
95	OR<	Compare Instructions	Compare Or Real N1<N2	○	
96	OR>	Compare Instructions	Compare Or Real N1>N2	○	
97	OR<>	Compare Instructions	Compare Or Real N1<>N2	○	
98	OR<=	Compare Instructions	Compare Or Real N1<=N2	○	
99	OR>=	Compare Instructions	Compare Or Real N1>=N2	○	
100	LDS=	Compare Instructions	Compare Load String IN1=IN2	×	
101	LDS<>	Compare Instructions	Compare Load String IN1<>IN2	×	
102	AS=	Compare Instructions	Compare And String IN1=IN2	×	
103	AS<>	Compare Instructions	Compare And String IN1<>IN2	×	
104	OS=	Compare Instructions	Compare Or String IN1=IN2	×	
105	OS<>	Compare Instructions	Compare Or String IN1<>IN2	×	
106	TON	Timer Instructions	On-Delay Timer	○	
107	TONR	Timer Instructions	Retentive On-Delay Timer	○	
108	TOF	Timer Instructions	Off-Delay Timer	×	
109	TP	Timer Instructions	Pulse Timer	×	
110	BGN_ITIME	Timer Instructions	Beginning Interval Time	×	
111	CAL_ITIME	Timer Instructions	Calculate Interval Time	×	
112	CTU	Counter Instructions	CU increments the current value	○	
113	CTUD	Counter Instructions	CU increments the current value CD decrements the current value	○	
114	CTD	Counter Instructions	CD decrements the current value	○	
115	ADD_I	Math Instructions	Add Integer IN1+OUT=OUT	○	
116	SUB_I	Math Instructions	Subtract Integer IN1-OUT=OUT	○	
117	ADD_DI	Math Instructions	Add double Integer IN1+OUT=OUT	○	
118	SUB_DI	Math Instructions	Subtract Integer IN1-OUT=OUT	○	
119	MUL_I	Math Instructions	Multiply Integer IN1*OUT=OUT	○	
120	DIV_I	Math Instructions	Divide Integer IN1/OUT=OUT	○	
121	MUL_DI	Math Instructions	Multiply Double Integer IN1*OUT=OUT	○	
122	DIV_DI	Math Instructions	Divide Double Integer IN1/OUT=OUT	○	
123	MUL	Math Instructions	Multiply Integer to Double Integer (16*16-> 32)	○	
124	DIV	Math Instructions	Divide Integer (16/16-> 32)	○	

No.	Instruction (S7-200)	Class	Function	Convert Status	Remark
125	INCB	Math Instructions	Bit Increment	○	
126	DECB	Math Instructions	Bit Decrement	○	
127	INCW	Math Instructions	Word Increment	○	
128	DECW	Math Instructions	Word Decrement	○	
129	INCD	Math Instructions	Double Word Increment	○	
130	DECD	Math Instructions	Double Word Decrement	○	
131	ADD_R	Real Math Instructions	Add Real IN1+OUT=OUT	○	
132	SUB_R	Real Math Instructions	Subtract Real IN1-OUT=OUT	○	
133	MUL_R	Real Math Instructions	Multiply Real IN1*OUT=OUT	○	
134	DIV_R	Real Math Instructions	Divide Real IN1/OUT=OUT	○	
135	SQRT	Real Math Instructions	Square Root	×	
136	LN	Real Math Instructions	Natural Logarithm	×	
137	EXP	Real Math Instructions	Natural Exponential	×	
138	SIN	Real Math Instructions	Sine	×	
139	COS	Real Math Instructions	Cosine	×	
140	TAN	Real Math Instructions	Tangent	×	
141	PID	Real Math Instructions	PID Loop	×	
142	MOV_B	Move Instructions	Move Byte	○	
143	MOV_W	Move Instructions	Move Word	○	
144	MOV_DW	Move Instructions	Move Double Word	○	
145	MOV_R	Move Instructions	Move Real	○	
146	BLKMOV_B	Move Instructions	Block Move Byte	×	
147	BLKMOV_W	Move Instructions	Block Move Word	○	
148	BLKMOV_D	Move Instructions	Block Move Double Word	○	
149	SWAP	Move Instructions	Conversion Byet	○	
150	MOV_BIR	Move Instructions	Move Byte Immediate Read	×	
151	MOV_BIW	Move Instructions	Move Byte Immediate Write	×	
152	WAND_B	Logical Operations Instructions	And Byte	○	
153	WOR_B	Logical Operations Instructions	Or Byte	○	
154	WXOR_B	Logical Operations Instructions	Exclusive Or Byet	○	
155	WAND_W	Logical Operations Instructions	And Word	○	
156	WOR_W	Logical Operations Instructions	Or Word	○	
157	WXOR_W	Logical Operations Instructions	Exclusive Or Word	○	
158	WAND_DW	Logical Operations Instructions	And Double Word	○	
159	WOR_DW	Logical Operations Instructions	Or Double Word	○	
160	WXOR_DW	Logical Operations Instructions	Exclusive Or Double Word	○	
161	INV_B	Logical Operations Instructions	Invert Byte	○	
162	INV_W	Logical Operations Instructions	Invert Word、	○	
163	INV_DW	Logical Operations Instructions	Invert Double Word	○	

No.	Instruction (S7-200)	Class	Function	Convert Status	Remark
164	SHR_B	Shift and Rotate Instructions	Shift Right Byte	×	
165	SHL_B	Shift and Rotate Instructions	Shift Left Byte	×	
166	SHR_W	Shift and Rotate Instructions	Shift Right Word	○	
167	SHL_W	Shift and Rotate Instructions	Shift Left Word	○	
168	SHR_DW	Shift and Rotate Instructions	Shift Right Double Word	○	
169	SHL_DW	Shift and Rotate Instructions	Shift Left Double Word	○	
170	ROR_B	Shift and Rotate Instructions	Rotate Right Byte	×	
171	ROL_B	Shift and Rotate Instructions	Rotate Left Byte	×	
172	ROR_W	Shift and Rotate Instructions	Rotate Right Word	○	
173	ROL_W	Shift and Rotate Instructions	Rotate Left Word	○	
174	ROR_DW	Shift and Rotate Instructions	Rotate Right Double Word	○	
175	ROL_DW	Shift and Rotate Instructions	Rotate Left Double Word	○	
176	SHRB	Shift and Rotate Instructions	Shift and Rotate Register	×	
177	BCD_I	Conversion Instructions	BCD to integer	○	
178	I_BCD	Conversion Instructions	Integer to BCD	○	
179	DI_R(DTR)	Conversion Instructions	Double Integer to Real	○	
180	ROUND	Conversion Instructions	Round	○	
181	TRUNC	Conversion Instructions	Truncate	○	
182	DI_I	Conversion Instructions	Double Integer to Integer	×	
183	I_DI	Conversion Instructions	Integer to Double Integer	○	
184	B_I	Conversion Instructions	Byte to Integer	×	
185	I_B	Conversion Instructions	Integer to byte	×	
186	DECO	Conversion Instructions	Decode	○	
187	ENCO	Conversion Instructions	Encode	○	
188	SEG	Conversion Instructions	Segment	○	
189	ATH	Conversion Instructions	ASCII to Hexadecimal	×	
190	HTA	Conversion Instructions	Hexadecimal to ASCII	×	
191	ITA	Conversion Instructions	Integer to ASCII	×	
192	DTA	Conversion Instructions	Double Integer to ASCII	×	
193	RTA	Conversion Instructions	Real to ASCII	×	
194	I_S	Conversion Instructions	Integer to String	×	

No.	Instruction (S7-200)	Class	Function	Convert Status	Remark
195	DI_S	Conversion Instructions	Double Integer to String	×	
196	R_S	Conversion Instructions	Real to String	○	
197	S_I	Conversion Instructions	String to Integer	×	
198	S_DI	Conversion Instructions	String to Double Integer	×	
199	S_R	Conversion Instructions	String to Real	○	
200	JMP	Program Control Instructions	Jump to Label	○	
201	LBL	Program Control Instructions	Label	○	
202	SBR	Program Control Instructions	Subroutine Start	○	
203	CRET	Program Control Instructions	Conditional Return from Subroutine	×	
204	FOR	Program Control Instructions	For/Next Loop	○	
205	NEXT	Program Control Instructions	For/Next Loop	○	
206	SCR	Program Control Instructions	Load SCR	○	
207	SCRT	Program Control Instructions	SCR Transition	○	
208	CSCRE	Program Control Instructions	Conditional SCR End	×	
209	SCRE	Program Control Instructions	SCR End	×	
210	CALL	Program Control Instructions	Call Subroutine	○	
211	FINAL	Program Control Instructions	FOR/NEXT loop number (Included in FOR when converted)	○	
212	END	Program Control Instructions	END	×	
213	DIAG_LED	Program Control Instructions	Diagnostic LED	×	
214	STOP	Program Control Instructions	Stop	×	
215	WDR	Program Control Instructions	Watchdog Reset (300ms)	×	
216	LPS	Logic Stack Instructions	Logic Push	○	
217	LRD	Logic Stack Instructions	Logic Read	○	
218	LPP	Logic Stack Instructions	Logic Pop	○	
219	LDS	Logic Stack Instructions	Load Stack	×	
220	HDEF	High-Speed Counter Instructions	High-Speed Counter Definition	×	
221	HSC	High-Speed Counter Instructions	High-Speed Counter	×	
222	PLS	High-Speed Counter Instructions	Pulse Output	×	
223	READ_RTC	Clock Instructions	Read-Time Clock	×	
224	SET_RTC	Clock Instructions	Set Read-Time Clock	×	
225	READ_RTC X	Clock Instructions	Read Real Time Clock Extended	×	

No.	Instruction (S7-200)	Class	Function	Convert Status	Remark
226	SET_RTCX	Clock Instructions	Set Real Time Clock Extended	×	
227	ATT	Table Instructions	Add to Table	×	
228	FND=	Table Instructions	Table Find	×	
229	FND<>	Table Instructions	Table Find	×	
230	FND<	Table Instructions	Table Find	×	
231	FND>	Table Instructions	Table Find	×	
232	FIFO	Table Instructions	First-In-First-Out	×	
233	LIFO	Table Instructions	Last-In-First-Out	×	
234	FILL	Table Instructions	Memory Fill	×	
235	ATCH	Interrupt Instructions	Attach Interrupt	×	
236	DTCH	Interrupt Instructions	Detach Interrupt	×	
237	CRETI	Interrupt Instructions	Conditional Return from Interrupt	×	
238	ENI	Interrupt Instructions	Enable Interrupt	×	
239	DISI	Interrupt Instructions	Disable Interrupt	×	
240	CEVNT	Interrupt Instructions	Clear Interrupt Event	×	
241	NETR	Communications Instructions	Network Read	×	
242	NETW	Communications Instructions	Network Write	×	
243	XMT	Communications Instructions	Transmit	×	
244	RCV	Communications Instructions	Receive	×	
245	GET_ADDR	Communications Instructions	Get Port Address	×	
246	SET_ADDR	Communications Instructions	Set Port Address	×	
247	STR_LEN	String Instructions	String Length	×	
248	STR_CPY	String Instructions	Copy String	×	
249	STR_CAT	String Instructions	Concatenate String	×	
250	SSTR_CPY	String Instructions	Copy Substring from String	×	
251	STR_FIND	String Instructions	Find String Within String	×	
252	CHR_FIND	String Instructions	Find First Character Within String	×	

Ladder Program Converter
Operation Manual - Appendix

Mitsubishi Conversion Specification

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Appendix 1: Mitsubishi Instruction Convert List

Convert Solution: 1: 1: Convert Solution 1: 1

1: N: Convert Solution 1: N

×: No Convert Solution

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
1	LD	LD	1:1	1:1	1:1	Load
2	LDI	LDNOT	1:1	1:1	1:1	Load Inverse
3	LDP	@LD	1:1	1:1	1:1	Load Pulse
4	LDF	%LD	1:1	1:1	1:1	Load Falling Pulse
5	AND	AND	1:1	1:1	1:1	And
6	ANI	ANDNOT	1:1	1:1	1:1	And Inverse
7	ANDP	@AND	1:1	1:1	1:1	And Pulse
8	ANDF	%AND	1:1	1:1	1:1	And Falling Pulse
9	OR	OR	1:1	1:1	1:1	Or
10	ORI	ORNOT	1:1	1:1	1:1	Or Inverse
11	ORP	@OR	1:1	1:1	1:1	Or Pulse
12	ORF	%OR	1:1	1:1	1:1	Or Falling Pulse
13	ANB	ANDLD	1:1	1:1	1:1	And Block
14	ORB	ORLD	1:1	1:1	1:1	Or Block
15	MPS	OUT TR	1:1	1:1	1:1	Memory Point Store
16	MRD	LD TR	1:1	1:1	1:1	Memory Read
17	MPP	LD TR	1:1	1:1	1:1	Memory POP
18	INV	NOT	1:1	1:1	1:1	Inverse
19	MEF	DOWN	1:1	×	×	MEF
20	MEP	UP	1:1	×	×	MEP
21	OUT	OUT	1:1	1:1	1:1	Out
22	OUT [C]	TIMX/TIMHX/TMHHX/ TTIMX	1:1	1:1	1:1	Out
23	OUT [T]	CNTX	1:1	1:1	1:1	Out
24	SET	SET	1:1	1:1	1:1	Set
25	RST	RST	1:1	1:1	1:1	Reset
26	PLS	DIFU	1:1	1:1	1:1	Pulse
27	PLF	DIFD	1:1	1:1	1:1	Falling pulse
28	MC	MILR	1:1	1:1	1:1	Master Control
29	MCR	MILC	1:1	1:1	1:1	Master control reset
30	NOP	NOP	1:1	1:1	1:1	No Operation
31	END	END	1:1	1:1	1:1	End
32	STL	MI_STL	×	×	×	Step Ladder
33	RET	MI_RET	×	×	×	Return
34	CJ	CJP	1:1	1:1	1:1	Conditional jump
35	CJP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Conditional jump

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
36	CALL	SBS	1:1	1:1	1:1	Call Subroutine
37	CALLP	@SBS	1:1	1:1	1:1	Call Subroutine
38	SRET	RET	1:1	1:1	1:1	Subroutine Return
39	IRET	MI_IRET	×	×	×	Interrupt Return
40	EI	EI	1:1	1:1	1:1	Enable Interrupt
41	DI	DI	1:1	1:1	1:1	Disable Interrupt
42	FEND	END	1:1	1:1	1:1	Main Routine Program End
43	WDT	WDT	1:1	1:1	1:1	Watchdog Timer Refresh
44	WDTP	@WDT	1:1	1:1	1:1	Watchdog Timer Refresh
45	FOR	FOR	1:1	1:1	1:1	Start of a For/Next loop
46	NEXT	NEXT	1:1	1:1	1:1	End a For/Next loop
47	CMP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare
48	CMPP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare
49	DCMP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare
50	DCMPP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare
51	ZCP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Zone Compare
52	ZCPP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Zone Compare
53	DZCP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Zone Compare
54	DZCPP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Zone Compare
55	MOV	MOV	1:1	1:1	1:1	Move
56	MOVP	@MOV	1:1	1:1	1:1	Move
57	DMOV	MOVL	1:1	1:1	1:1	Move
58	DMOVP	@MOVL	1:1	1:1	1:1	Move
59	SMOV	MI_SMOV	×	×	×	Shift Move
60	SMOVP	MI_SMOVP	×	×	×	Shift Move
61	CML	MVN	1:1	1:1	×	Complement
62	CMLP	@MVN	1:1	1:1	×	Complement
63	DCML	MVNL	1:1	1:1	×	Complement
64	DCMLP	@MVNL	1:1	1:1	×	Complement
65	BMOV	XFER	1:1	1:1	1:1	Block Move
66	BMOVP	@XFER	1:1	1:1	1:1	Block Move
67	FMOV	MI_FMOV	×	×	×	Fill Move

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
68	FMOVP	MI_FMOVP	×	×	×	Fill Move
69	DFMOV	MI_DFMOV	×	×	×	Fill Move
70	DFMOVP	MI_DFMOVP	×	×	×	Fill Move
71	XCH	XCHG	1:1	1:1	1:1	Exchange
72	XCHP	@XCHG	1:1	1:1	1:1	Exchange
73	DXCH	XCGL	1:1	1:1	×	Exchange
74	DXCHP	@XCGL	1:1	1:1	×	Exchange
75	BCD	BCD	1:1	1:1	1:1	Conversion to Binary Coded Decimal
76	BCDP	@BCD	1:1	1:1	1:1	Conversion to Binary Coded Decimal
77	DBCD	BCDL	1:1	1:1	1:1	Conversion to Binary Coded Decimal
78	DBCDP	@BCDL	1:1	1:1	1:1	Conversion to Binary Coded Decimal
79	BIN	BIN	1:1	1:1	1:1	Conversion to Binary
80	BINP	@BIN	1:1	1:1	1:1	Conversion to Binary
81	DBIN	BINL	1:1	1:1	1:1	Conversion to Binary
82	DBINP	@BINL	1:1	1:1	1:1	Conversion to Binary
83	ADD	+	1:1	1:1	1:1	Addition
84	ADDP	@+	1:1	1:1	1:1	Addition
85	DADD	+L	1:1	1:1	1:1	Addition
86	DADDP	@+L	1:1	1:1	1:1	Addition
87	SUB	-	1:1	1:1	1:1	Subtraction
88	SUBP	@-	1:1	1:1	1:1	Subtraction
89	DSUB	-L	1:1	1:1	1:1	Subtraction
90	DSUBP	@-L	1:1	1:1	1:1	Subtraction
91	MUL	*	1:1	1:1	1:1	Multiplication
92	MULP	@*	1:1	1:1	1:1	Multiplication
93	DMUL	*L	1:1	1:1	1:1	Multiplication
94	DMULP	@*L	1:1	1:1	1:1	Multiplication
95	DIV	/	1:1	1:1	1:1	Division
96	DIVP	@/	1:1	1:1	1:1	Division
97	DDIV	/L	1:1	1:1	1:1	Division
98	DDIVP	@/L	1:1	1:1	1:1	Division
99	INC	++	1:1	1:1	1:1	Increment
100	INCP	@++	1:1	1:1	1:1	Increment
101	DINC	++L	1:1	1:1	1:1	Increment
102	DINCP	@++L	1:1	1:1	1:1	Increment
103	DEC	--	1:1	1:1	1:1	Decrement
104	DECP	@--	1:1	1:1	1:1	Decrement

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
105	DDEC	--L	1:1	1:1	1:1	Decrement
106	DDECP	@--L	1:1	1:1	1:1	Decrement
107	WAND	ANDW	1:1	1:1	1:1	Logical Word AND
108	WANDP	@ANDW	1:1	1:1	1:1	Logical Word AND
109	DAND	ANDL	1:1	1:1	1:1	Logical Word AND
110	DANDP	@ANDL	1:1	1:1	1:1	Logical Word AND
111	WOR	ORW	1:1	1:1	1:1	Logical Word OR
112	WORP	@ORW	1:1	1:1	1:1	Logical Word OR
113	DOR	ORWL	1:1	1:1	1:1	Logical Word OR
114	DORP	@ORWL	1:1	1:1	1:1	Logical Word OR
115	WXOR	XORW	1:1	1:1	1:1	Logical Exclusive OR
116	WXORP	@XORW	1:1	1:1	1:1	Logical Exclusive OR
117	DXOR	XORL	1:1	1:1	1:1	Logical Exclusive OR
118	DXORP	@XORL	1:1	1:1	1:1	Logical Exclusive OR
119	NEG	NEG	1:1	1:1	1:1	Negation
120	NEGP	@NEG	1:1	1:1	1:1	Negation
121	DNEG	NEGL	1:1	1:1	1:1	Negation
122	DNEGP	@NEGL	1:1	1:1	1:1	Negation
123	ROR	MI_ROR	×	×	×	Rotation Right
124	RORP	MI_RORP	×	×	×	Rotation Right
125	DROR	MI_DROR	×	×	×	Rotation Right
126	DRORP	MI_DRORP	×	×	×	Rotation Right
127	ROL	MI_ROL	×	×	×	Rotation Left
128	ROLP	MI_ROLP	×	×	×	Rotation Left
129	DROL	MI_DROL	×	×	×	Rotation Left
130	DROLP	MI_DROLP	×	×	×	Rotation Left
131	RCR	MI_RCR	×	×	×	Rotation Right with Carry
132	RCRP	MI_RCRP	×	×	×	Rotation Right with Carry
133	DRCR	MI_DRCR	×	×	×	Rotation Right with Carry
134	DRCRP	MI_DRCRP	×	×	×	Rotation Right with Carry
135	RCL	MI_RCL	×	×	×	Rotation Left with Carry
136	RCLP	MI_RCLP	×	×	×	Rotation Left with Carry
137	DRCL	MI_DRCL	×	×	×	Rotation Left with Carry
138	DRCLP	MI_DRCLP	×	×	×	Rotation Left with Carry
139	SFTL	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Bit Shift Left
140	SFTLP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Bit Shift Left
141	SFTR	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Bit Shift Right

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
142	SFTRP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Bit Shift Right
143	WSFR	MI_WSFR	×	×	×	Word Shift Right
144	WSFRP	MI_WSFRP	×	×	×	Word Shift Right
145	WSFL	MI_WSFL	×	×	×	Word Shift Left
146	WSFLP	MI_WSFLP	×	×	×	Word Shift Left
147	SFWR	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Shift write [FIFO/FILO control]
148	SFWRP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Shift write [FIFO/FILO control]
149	SFRD	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Shift Read [FIFO Control]
150	SFRDP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Shift Read [FIFO Control]
151	ZRST	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Zone Reset
152	ZRSTP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Zone Reset
153	DECO	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Decode
154	DECOP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Decode
155	ENCO	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Encode
156	ENCOP	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Encode
157	SUM	MI_SUM	×	×	×	Sum of Active Bits
158	SUMP	MI_SUMP	×	×	×	Sum of Active Bits
159	DSUM	MI_DSUM	×	×	×	Sum of Active Bits
160	DSUMP	MI_DSUMP	×	×	×	Sum of Active Bits
161	BON	MI_BON	×	×	×	Check Specified Bit Stauts
162	BONP	MI_BONP	×	×	×	Check Specified Bit Stauts
163	DBON	MI_DBON	×	×	×	Check Specified Bit Stauts
164	DBONP	MI_DBONP	×	×	×	Check Specified Bit Stauts
165	MEAN	MI_MEAN	×	×	×	Mean
166	MEANP	MI_MEANP	×	×	×	Mean
167	DMEAN	MI_DMEAN	×	×	×	Mean
168	DMEANP	MI_DEMEANP	×	×	×	Mean
169	ANS	MI_ANS	×	×	×	(Timed)Annunciator Set
170	ANR	MI_ANR	×	×	×	Annunciator Reset
171	ANRP	MI_ANRP	×	×	×	Annunciator Reset

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
172	SQR	MI_SQR	×	×	×	Square Root
173	SQRP	MI_SQRP	×	×	×	Square Root
174	DSQR	ROTB	1:1	1:1	×	Square Root
175	DSQRP	@ROTB	1:1	1:1	×	Square Root
176	FLT	FLT	1:1	1:1	1:1	Conversion to Floating Point
177	FLTP	@FLT	1:1	1:1	1:1	Conversion to Floating Point
178	DFLT	FLTL	1:1	1:1	1:1	Conversion to Floating Point
179	DFLTP	@FLTL	1:1	1:1	1:1	Conversion to Floating Point
180	REF	MI_REF	×	×	×	Refresh
181	REFP	MI_REFP	×	×	×	Refresh
182	REFF	MI_REFF	×	×	×	Refresh and filter adjust
183	REFFP	MI_REFFP	×	×	×	Refresh and filter adjust
184	MTR	MI_MTR	×	×	×	Input matrix
185	DHSCR	MI_DHSCR	×	×	×	High speed cunter reset
186	DHSCS	MI_DHSCS	×	×	×	High speed cunter set
187	DHSZ	MI_DHSZ	×	×	×	High speed zone compare
188	SPD	MI_SPD	×	×	×	Speed detection
189	DSPD	MI_DSPD	×	×	×	Speed detection
190	PLSY	MI_PLSY	×	×	×	Pulse Y output
191	DPLSY	MI_DPLSY	×	×	×	Pulse Y output
192	PWM	MI_PWM	×	×	×	Pulse width modulation
193	PLSR	MI_PLSR	×	×	×	Ramp Pulse output
194	DPLSR	MI_DPLSR	×	×	×	Ramp Pulse output
195	IST	MI_IST	×	×	×	Initial State
196	SER	MI_SER	×	×	×	Search
197	SERP	MI_SERP	×	×	×	Search
198	DSER	MI_DSER	×	×	×	Search
199	DSERP	MI_DSERP	×	×	×	Search
200	ABSD	MI_ABSD	×	×	×	Absolute Drum
201	DABSD	MI_DABSD	×	×	×	Absolute Drum
202	INCD	MI_INCD	×	×	×	Incremental Drum
203	TTMR	MI_TTMR	×	×	×	Teaching Timer
204	STMR	MI_STMR	×	×	×	Special Timer - Definable
205	ALT	MI_ALT	×	×	×	Alternate State
206	ALTP	MI_ALTP	×	×	×	Alternate State
207	RAMP	MI_RAMP	×	×	×	Ramp-Variable Value
208	ROTC	MI_ROTC	×	×	×	Rotart Table Control

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
209	SORT	MI_SORT	×	×	×	Sort Data
210	TKY	MI_TKY	×	×	×	Ten Key Input
211	DTKY	MI_DTKY	×	×	×	Ten Key Input
212	HKY	MI_HKY	×	×	×	Hexadecimal Input
213	DHKY	MI_DHKY	×	×	×	Hexadecimal Input
214	DSW	MI_DSW	×	×	×	Digital Switch
215	SEGD	MI_SEGD	×	×	×	Seven Segment Decoder
216	SEGDP	MI_SEGDP	×	×	×	Seven Segment Decoder
217	SEGL	MI_SEGL	×	×	×	Seven Segment With Latch
218	ARWS	MI_ARWS	×	×	×	Arrow Switch
219	ASC	MI_ASC	×	×	×	ASCII Code
220	PR	MI_PR	×	×	×	Print' To A Display
221	FROM	MI_FROM	×	×	×	Read From A Special Function Block
222	FROMP	MI_FROMP	×	×	×	Read From A Special Function Block
223	DFROM	MI_DFROM	×	×	×	Read From A Special Function Block
224	DFROMP	MI_DFROPMP	×	×	×	Read From A Special Function Block
225	TO	MI_TO	×	×	×	Write To A Special Function Block
226	TOP	MI_TOP	×	×	×	Write To A Special Function Block
227	DTO	MI.DTO	×	×	×	Write To A Special Function Block
228	DTOP	MI.DTOP	×	×	×	Write To A Special Function Block
229	RS	MI_RS	×	×	×	RS Communications
230	PRUN	MI_PRUN	×	×	×	Parallel run
231	PRUNP	MI_PRUNP	×	×	×	Parallel run
232	DPRUN	MI.DPRUN	×	×	×	Parallel run
233	DPRUNP	MI.DPRUNP	×	×	×	Parallel run
234	ASCI	MI.ASCI	×	×	×	HEX to ASCII
235	ASCIP	MI.ASCIP	×	×	×	HEX to ASCII
236	HEX	MI.HEX	×	×	×	ASCII to HEX
237	HEXP	MI.HEXP	×	×	×	ASCII to HEX
238	CCD	MI.CCD	×	×	×	Check Code
239	CCDP	MI.CCDP	×	×	×	Check Code
240	VRRD	MI.VRRD	×	×	×	Volume Read

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
241	VRRDP	MI_VRRDP	×	×	×	Volume Read
242	VRSC	MI_VRSC	×	×	×	Volume Scale
243	VRSCP	MI_VRSCP	×	×	×	Volume Scale
244	RS2	MI_RS2	×	×	×	Serial Communication 2
245	PID	MI_PID	×	×	×	PID Control Loop
246	ANRD	MI_ANRD	×	×	×	Analog Read
247	ANRDP	MI_ANRDP	×	×	×	Analog Read
248	ANWR	MI_ANWR	×	×	×	Analog Write
249	ANWRP	MI_ANWRP	×	×	×	Analog Write
250	BLK	MI_BLK	×	×	×	BLOCK
251	BLKP	MI_BLKP	×	×	×	BLOCK
252	MCDE	MI_MCDE	×	×	×	Machine Code
253	MCDEP	MI_MCDEP	×	×	×	Machine Code
254	MNET	MI_MNET	×	×	×	Mini Net
255	MNETP	MI_MNETP	×	×	×	Mini Net
256	RMMN	MI_RMMN	×	×	×	RM Monitor
257	RMMNP	MI_RMMNP	×	×	×	RM Monitor
258	RMRD	MI_RMRD	×	×	×	RM Read
259	RMRDP	MI_RMRDP	×	×	×	RM Read
260	RMST	MI_RMST	×	×	×	RM Start
261	RMWR	MI_RMWR	×	×	×	RM Write
262	RMWRP	MI_RMWRP	×	×	×	RM Write
263	ZPUSH	MI_ZPUSH	×	×	×	Batch Store of Index Register
264	ZPUSHP	MI_ZPUSHP	×	×	×	Batch Store of Index Register
265	ZPOP	MI_ZPOP	×	×	×	Batch POP of Index Register
266	ZPOPP	MI_ZPOPP	×	×	×	Batch POP of Index Register
267	DECMP	MI_DECMP	×	×	×	Floating Point Compare
268	DECMPP	MI_DECMPP	×	×	×	Floating Point Compare
269	DEZCP	MI_DEZCP	×	×	×	Floating Point Zone Compare
270	DEZCPP	MI_DEZCPP	×	×	×	Floating Point Zone Compare
271	DEMOV	MOVL	1:1	1:1	1:1	Floating Point Move
272	DEMOV P	@MOVL	1:1	1:1	1:1	Floating Point Move
273	DESTR	MI_DESTR	×	×	×	Floating Point to Character String Conversion

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
274	DESTRP	MI_DESTRP	×	×	×	Floating Point to Character String Conversion
275	DEVAL	FVAL	1:1	1:1	1:1	Character String to Floating Point Conversion
276	DEVALP	@FVAL	1:1	1:1	1:1	Character String to Floating Point Conversion
277	DEBCD	MI_DEBCD	×	×	×	Floating Point to Scientific
278	DEBCDP	MI_DEBCDP	×	×	×	Floating Point to Scientific
279	DEBIN	MI_DEBIN	×	×	×	Scientific to Floating Point
280	DEBINP	MI_DEBINP	×	×	×	Scientific to Floating Point
281	DEADD	+F	1:1	1:1	1:1	Floating Point Add
282	DEADDP	@+F	1:1	1:1	1:1	Floating Point Add
283	DESUB	-F	1:1	1:1	1:1	Floating Point Subtract
284	DESUBP	@-F	1:1	1:1	1:1	Floating Point Subtract
285	DEMUL	*F	1:1	1:1	1:1	Floating Point Multiplication
286	DEMULP	@F	1:1	1:1	1:1	Floating Point Multiplication
287	DEDIV	/F	1:1	1:1	1:1	Floating Point Division
288	DEDIVP	@/F	1:1	1:1	1:1	Floating Point Division
289	DEXP	EXP	1:1	1:1	×	Floating Point Exponent
290	DEXPP	@EXP	1:1	1:1	×	Floating Point Exponent
291	DLOGE	LOG	1:1	1:1	×	Floating Point Natural Logarithm
292	DLOGEP	@LOG	1:1	1:1	×	Floating Point Natural Logarithm
293	DLOG10	MI_DLOG10	×	×	×	Floating Point Common Logarithm
294	DLOG10P	MI_DLOG10P	×	×	×	Floating Point Common Logarithm
295	DESQR	SQRT	1:1	1:1	×	Floating Point Square Root
296	DESQRP	@SQRT	1:1	1:1	×	Floating Point Square Root
297	DENEG	MI_DENEG	×	×	×	Floating Point Negation
298	DENEGP	MI_DENEGP	×	×	×	Floating Point Negation
299	INT	FIX	1:1	1:1	1:1	Floating Point to Integer
300	INTP	@FIX	1:1	1:1	1:1	Floating Point to Integer
301	DINT	FIXL	1:1	1:1	1:1	Floating Point to Integer
302	DINTP	@FIXL	1:1	1:1	1:1	Floating Point to Integer

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
303	DSIN	SIN	1:1	1:1	×	Sine
304	DSINP	@SIN	1:1	1:1	×	Sine
305	DCOS	COS	1:1	1:1	×	Cosine
306	DCOSP	@COS	1:1	1:1	×	Cosine
307	DTAN	TAN	1:1	1:1	×	Tangent
308	DTANP	@TAN	1:1	1:1	×	Tangent
309	DASIN	ASIN	1:1	1:1	×	Floating Point Arc Sine
310	DASINP	@ASIN	1:1	1:1	×	Floating Point Arc Sine
311	DACOS	ACOS	1:1	1:1	×	Floating Point Arc Cosine
312	DACOSP	@ACOS	1:1	1:1	×	Floating Point Arc Cosine
313	DATAN	ATAN	1:1	1:1	×	Floating Point Arc Tangent
314	DATANP	@ATAN	1:1	1:1	×	Floating Point Arc Tangent
315	DRAD	RAD	1:1	1:1	×	Floating Point Degrees to Radians Conversion
316	DRADP	@RAD	1:1	1:1	×	Floating Point Degrees to Radians Conversion
317	DDEG	DEG	1:1	1:1	×	Floating Point Radians to Degrees Conversion
318	DDEGP	@DEG	1:1	1:1	×	Floating Point Radians to Degrees Conversion
319	WSUM	MI_WSUM	×	×	×	Sum of Word Data
320	WSUMP	MI_WSUMP	×	×	×	Sum of Word Data
321	DWSUM	MI_DWSUM	×	×	×	Sum of Word Data
322	DWSUMP	MI_DWSUMP	×	×	×	Sum of Word Data
323	WTOB	MI_WTOB	×	×	×	WORD to BYTE
324	WTOBP	MI_WTOBP	×	×	×	WORD to BYTE
325	BTOW	MI_BTOW	×	×	×	BYTE to WORD
326	BTOWP	MI_BTOWP	×	×	×	BYTE to WORD
327	UNI	MI_UNI	×	×	×	4-bit Linking of Word Data
328	UNIP	MI_UNIP	×	×	×	4-bit Linking of Word Data
329	DIS	MI_DIS	×	×	×	4-bit Grouping of Word Data
330	DISP	MI_DISP	×	×	×	4-bit Grouping of Word Data
331	SWAP	SWAP	1:1	1:1	1:1	Float to Scientific
332	SWAPP	@SWAP	1:1	1:1	1:1	Float to Scientific
333	DSWAP	SWAP	1:1	1:1	1:1	Float to Scientific
334	DSWAPP	@SWAP	1:1	1:1	1:1	Float to Scientific
335	SORT2	MI_SORT2	×	×	×	Sort Tabulated Data 2
336	DSORT2	MI_DSORT2	×	×	×	Sort Tabulated Data 2
337	DSZR	MI_DSZR	×	×	×	DOG Search Zero Return

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
338	DVIT	MI_DVIT	×	×	×	Interrupt Positioning
339	DDVIT	MI_DDVT	×	×	×	Interrupt Positioning
340	DTBL	MI_DTBL	×	×	×	Batch Data Positioning Mode
341	DABS	MI_DABS	×	×	×	Absolute current value read
342	ZRN	MI_ZRN	×	×	×	Zero return
343	DZRN	MI_DZRN	×	×	×	Zero return
344	PLSV	MI_PLSV	×	×	×	Pulse V
345	DPLSV	MI_DPLSV	×	×	×	Pulse V
346	DRVI	MI_DRVI	×	×	×	Drive to increment
347	DDRVI	MI_DDRVI	×	×	×	Drive to increment
348	DDRVA	MI_DRVA	×	×	×	Drive to absolute
349	DRVA	MI_DDRVA	×	×	×	Drive to absolute
350	TCMP	MI_TCMP	×	×	×	Time Compare
351	TCMPP	MI_TCMPP	×	×	×	Time Compare
352	TZCP	MI_TZCP	×	×	×	Time Zone Compare
353	TZCPP	MI_TZCPP	×	×	×	Time Zone Compare
354	TADD	MI_TADD	×	×	×	Time Add
355	TADDP	MI_TADDP	×	×	×	Time Add
356	TSUB	MI_TSUB	×	×	×	Time Subtract
357	TSUBP	MI_TSUBP	×	×	×	Time Subtract
358	HTOS	MI_HTOS	×	×	×	Hour to second conversion
359	HTOSP	MI_HTOSP	×	×	×	Hour to second conversion
360	DHTOS	MI_DHTOS	×	×	×	Hour to second conversion
361	DHTOSP	MI_DHTOSP	×	×	×	Hour to second conversion
362	STOH	MI_STOH	×	×	×	Second to hour conversion
363	STOHP	MI_STOHP	×	×	×	Second to hour conversion
364	DSTOH	MI_DSTOH	×	×	×	Second to hour conversion
365	DSTOHP	MI_DSTOHP	×	×	×	Second to hour conversion
366	TRD	MI_TRD	×	×	×	Read RTC data
367	TRDP	MI_TRDP	×	×	×	Read RTC data
368	TWR	MI_TWR	×	×	×	Set RTC data

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
369	TWRP	MI_TWRP	×	×	×	Set RTC data
370	DHOUR	MI_DHOUR	×	×	×	Hour meter
371	HOURL	MI_HOURL	×	×	×	Hour meter
372	GRY	MI_GRY	×	×	×	Decimal to Gray Code
373	GRYP	MI_GRYP	×	×	×	Decimal to Gray Code
374	DGRY	MI_DGRY	×	×	×	Decimal to Gray Code
375	DGRYP	MI_DGRYP	×	×	×	Decimal to Gray Code
376	GBIN	MI_GBIN	×	×	×	Gray Code to Decimal
377	GBINP	MI_GBINP	×	×	×	Gray Code to Decimal
378	DGBIN	MI_DGBIN	×	×	×	Gray Code to Decimal
379	DGBINP	MI_DGBINP	×	×	×	Gray Code to Decimal
380	RD3A	MI_RD3A	×	×	×	Read form Dedicated Analog Block
381	RD3AP	MI_RD3AP	×	×	×	Read form Dedicated Analog Block
382	WR3A	MI_WR3A	×	×	×	Write to Dedicated Analog Block
383	WR3AP	MI_WR3AP	×	×	×	Write to Dedicated Analog Block
384	EXTR	MI_EXTR	×	×	×	External ROM Function
385	EXTRP	MI_EXTRP	×	×	×	External ROM Function
386	DEXTR	MI_DEXTR	×	×	×	External ROM Function
387	DEXTRP	MI_DEXTRP	×	×	×	External ROM Function
388	COMRD	MI_COMRD	×	×	×	Read Device Comment Data
389	COMRDP	MI_COMRDP	×	×	×	Read Device Comment Data
390	RND	MI_RND	×	×	×	Random Number Generation
391	RNDP	MI_RNDP	×	×	×	Random Number Generation
392	DUTY	MI_DUTY	×	×	×	Timing Pulse Generation
393	CRC	MI_CRC	×	×	×	Cyclic Redundancy Check
394	CRCP	MI_CRCP	×	×	×	Cyclic Redundancy Check
395	DHCMOV	MI_DHCMOV	×	×	×	High Speed Counter Move
396	ADPRW	MI_ADPRW	×	×	×	Adapter
397	BK+	MI_BK+	×	×	×	Block Data Addition
398	BK+P	MI_BK+P	×	×	×	Block Data Addition
399	DBK+	MI_DBK+	×	×	×	Block Data Addition
400	DBK+P	MI_DBK_+P	×	×	×	Block Data Addition
401	BK-	MI_BK-	×	×	×	Block Data Subtraction

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
402	BK-P	MI_BK-P	×	×	×	Block Data Subtraction
403	DBK-	MI_DBK-	×	×	×	Block Data Subtraction
404	DBK-P	MI_DBK-P	×	×	×	Block Data Subtraction
405	BKCMP=	MI_BKCMP=	×	×	×	Block Data Compare S1=S2
406	BKCMP=P	MI_BKCMP=P	×	×	×	Block Data Compare S1=S2
407	DBKCMP=	MI_DBKCMP=	×	×	×	Block Data Compare S1=S2
408	DBKCMP=P	MI_DBKCMP=P	×	×	×	Block Data Compare S1=S2
409	BKCMP>	MI_BKCMP>	×	×	×	Block Data Compare S1>S2
410	BKCMP>P	MI_BKCMP>P	×	×	×	Block Data Compare S1>S2
411	DBKCMP>	MI_DBKCMP>	×	×	×	Block Data Compare S1>S2
412	DBKCMP>P	MI_DBKCMP>P	×	×	×	Block Data Compare S1>S2
413	BKCMP<	MI_BKCMP<	×	×	×	Block Data Compare S1<S2
414	BKCMP<P	MI_BKCMP<P	×	×	×	Block Data Compare S1<S2
415	DBKCMP<	MI_DBKCMP<	×	×	×	Block Data Compare S1<S2
416	DBKCMP<P	MI_DBKCMP<P	×	×	×	Block Data Compare S1<S2
417	BKCMP<>	MI_BKCMP<>	×	×	×	Block Data Compare S1<>S2
418	BKCMP<>P	MI_BKCMP<>P	×	×	×	Block Data Compare S1<>S2
419	DBKCMP<>	MI_DBKCMP<>	×	×	×	Block Data Compare S1<>S2
420	DBKCMP<>P	MI_DBKCMP<>P	×	×	×	Block Data Compare S1<>S2
421	BKCMP<=	MI_BKCMP<=	×	×	×	Block Data Compare S1<=S2
422	BKCMP<=P	MI_BKCMP<=P	×	×	×	Block Data Compare S1<=S2
423	DBKCMP<=	MI_DBKCMP<=	×	×	×	Block Data Compare S1<=S2

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
424	DBKCMP<=P	MI_DBKCMP<=P	×	×	×	Block Data Compare S1<=S2
425	BKCMP>=	MI_BKCMP>=	×	×	×	Block Data Compare S1>=S2
426	BKCMP>=P	MI_BKCMP>=P	×	×	×	Block Data Compare S1>=S2
427	DBKCMP>=	MI_DBKCMP>=	×	×	×	Block Data Compare S1>=S2
428	DBKCMP>=P	MI_DBKCMP>=P	×	×	×	Block Data Compare S1>=S2
429	STR	MI_STR	×	×	×	BIN to Character String Conversion
430	STRP	MI_STRP	×	×	×	BIN to Character String Conversion
431	DSTR	MI_DSTR	×	×	×	BIN to Character String Conversion
432	DSTRP	MI_DSTRP	×	×	×	BIN to Character String Conversion
433	VAL	MI_VAL	×	×	×	Character String to BIN Conversion
434	VALP	MI_VALP	×	×	×	Character String to BIN Conversion
435	DVAL	MI_DVAL	×	×	×	Character String to BIN Conversion
436	DVALP	MI_DVALP	×	×	×	Character String to BIN Conversion
437	\$+	+\$	1:1	1:1	×	Link Character Strings
438	\$+P	@+\$	1:1	1:1	×	Link Character Strings
439	LEN	LEN\$	1:1	1:1	×	Character String Length Detection
440	LENP	@LEN\$	1:1	1:1	×	Character String Length Detection
441	RIGHT	RIGHT\$	1:1	1:1	×	Extracting Character String Data from the Right
442	RIGHTP	@RIGHT	1:1	1:1	×	Extracting Character String Data from the Right
443	LEFT	LEFT\$	1:1	1:1	×	Extracting Character String Data from the Left

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
444	LEFTP	@LEFT\$	1:1	1:1	×	Extracting Character String Data from the Left
445	MIDR	MI_MIDR	×	×	×	Random Selection of Character Strings
446	MIDRP	MI_MIDRP	×	×	×	Random Selection of Character Strings
447	MIDW	MI_MIDW	×	×	×	Random Replacement of Character Strings
448	MIDWP	MI_MIDWP	×	×	×	Random Replacement of Character Strings
449	INSTR	MI_INSTR	×	×	×	Character string search
450	INSTRP	MI_INSTRP	×	×	×	Character string search
451	\$MOV	MOV\$	1:1	1:1	×	Character String Transfer
452	\$MOVP	@MOVS	1:1	1:1	×	Character String Transfer
453	FDEL	SDEL	1:1	1:1	×	Deleting Data from Tables
454	FDELP	@SDEL	1:1	1:1	×	Deleting Data from Tables
455	FINS	SINS	1:1	1:1	×	Inserting Data to Tables
456	FINSP	@SINS	1:1	1:1	×	Inserting Data to Tables
457	POP	MI_POP	×	×	×	Shift Last Data Read FILO Control]
458	POPP	MI_POPP	×	×	×	Shift Last Data Read FILO Control]
459	SFR	NASR	1:1	1:1	1:1	Bit Shift Right with Carry
460	SFRP	@NASR	1:1	1:1	1:1	Bit Shift Right with Carry
461	SFL	NASL	1:1	1:1	1:1	Bit Shift Left with Carry
462	SFLP	@NASL	1:1	1:1	1:1	Bit Shift Left with Carry
463	LD=	LD=S	1:1	1:1	1:1	(S1)=(S2)
464	LDD=	LD=SL	1:1	1:1	1:1	(S1)=(S2)
465	LD>	LD>S	1:1	1:1	1:1	(S1)>(S1)
466	LD<	LD>SL	1:1	1:1	1:1	(S1)<(S2)
467	LDD>	LD<S	1:1	1:1	1:1	(S1)>(S1)
468	LDD<	LD<SL	1:1	1:1	1:1	(S1)<(S2)
469	LD<>	LD<>S	1:1	1:1	1:1	(S1)≠(S2)
470	LDD<>	LD<>SL	1:1	1:1	1:1	(S1)≠(S2)
471	LD<=	LD<=S	1:1	1:1	1:1	(S1)≡(S2)
472	LDD<=	LD<=SL	1:1	1:1	1:1	(S1)≡(S2)
473	LD>=	LD>=S	1:1	1:1	1:1	(S1)≡(S2)
474	LDD>=	LD>=SL	1:1	1:1	1:1	(S1)≡(S2)

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
475	AND=	AND=S	1:1	1:1	1:1	(S1)=(S2)
476	ANDD=	AND=SL	1:1	1:1	1:1	(S1)=(S2)
477	AND>	AND>S	1:1	1:1	1:1	(S1)>(S1)
478	ANDD>	AND>SL	1:1	1:1	1:1	(S1)>(S1)
479	AND<	AND<S	1:1	1:1	1:1	(S1)<(S2)
480	ANDD<	AND<SL	1:1	1:1	1:1	(S1)<(S2)
481	AND<>	AND<>S	1:1	1:1	1:1	(S1)≠(S2)
482	ANDD<>	AND<>SL	1:1	1:1	1:1	(S1)≠(S2)
483	AND<=	AND<=S	1:1	1:1	1:1	(S1)≡(S2)
484	ANDD<=	AND<=SL	1:1	1:1	1:1	(S1)≡(S2)
485	AND>=	AND>=S	1:1	1:1	1:1	(S1)≡(S2)
486	ANDD>=	AND>=SL	1:1	1:1	1:1	(S1)≡(S2)
487	OR=	OR=S	1:1	1:1	1:1	(S1)=(S2)
488	ORD=	OR=SL	1:1	1:1	1:1	(S1)=(S2)
489	OR>	OR>S	1:1	1:1	1:1	(S1)>(S1)
490	ORD>	OR>SL	1:1	1:1	1:1	(S1)>(S1)
491	OR<	OR<S	1:1	1:1	1:1	(S1)<(S2)
492	ORD<	OR<SL	1:1	1:1	1:1	(S1)<(S2)
493	OR<>	OR<>S	1:1	1:1	1:1	(S1)≠(S2)
494	ORD<>	OR<>SL	1:1	1:1	1:1	(S1)≠(S2)
495	OR<=	OR<=S	1:1	1:1	1:1	(S1)≡(S2)
496	ORD<=	OR<=SL	1:1	1:1	1:1	(S1)≡(S2)
497	OR>=	OR>=S	1:1	1:1	1:1	(S1)≡(S2)
498	ORD>=	OR>=SL	1:1	1:1	1:1	(S1)≡(S2)
499	LIMIT	MI_LIMIT	×	×	×	Limit Control
500	LIMITP	MI_LIMITP	×	×	×	Limit Control
501	DLIMIT	MI_DLIMIT	×	×	×	Limit Control
502	DLIMITP	MI_DLIMITP	×	×	×	Limit Control
503	BAND	MI_BAND	×	×	×	Dead Band Control
504	BANDP	MI_BANDP	×	×	×	Dead Band Control
505	DBAND	MI_DBAND	×	×	×	Dead Band Control
506	DBANDP	MI_DBANDP	×	×	×	Dead Band Control
507	ZONE	MI_ZONE	×	×	×	Zone Control
508	ZONEP	MI_ZONEP	×	×	×	Zone Control
509	DZONE	MI_DZONE	×	×	×	Zone Control
510	DZONEP	MI_DZONEP	×	×	×	Zone Control
511	SCL	MI_SCL	×	×	×	Scaling (Coordinate by Point Data)
512	SCLP	MI_SCLP	×	×	×	Scaling (Coordinate by Point Data)

No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
513	DSCL	MI_DSCL	×	×	×	Scaling (Coordinate by Point Data)
514	DSCLP	MI_DSCLP	×	×	×	Scaling (Coordinate by Point Data)
515	DABIN	MI_DABIN	×	×	×	Decimal ASCII to BIN Conversion
516	DABINP	MI_DABINP	×	×	×	Decimal ASCII to BIN Conversion
517	DDABIN	MI_DDABIN	×	×	×	Decimal ASCII to BIN Conversion
518	DDABINP	MI_DDABINP	×	×	×	Decimal ASCII to BIN Conversion
519	BINDA	MI_BINDA	×	×	×	BIN to Decimal ASCII Conversion
520	BINDAP	MI_BINDAP	×	×	×	BIN to Decimal ASCII Conversion
521	DBINDA	MI_DBINDA	×	×	×	BIN to Decimal ASCII Conversion
522	DBINDAP	MI_DBINDAP	×	×	×	BIN to Decimal ASCII Conversion
523	SCL2	MI_SCL2	×	×	×	Scaling 2 (Coordinate by X/Y Data)
524	SCL2P	MI_SCL2P	×	×	×	Scaling 2 (Coordinate by X/Y Data)
525	DSCL2	MI_DSCL2	×	×	×	Scaling 2 (Coordinate by X/Y Data)
526	DSCL2P	MI_DSCL2P	×	×	×	Scaling 2 (Coordinate by X/Y Data)
527	IVCK	MI_IVCK	×	×	×	Inverter Status Check
528	IVDR	MI_IVDR	×	×	×	Inverter Drive
529	IVRD	MI_IVRD	×	×	×	Inverter Parameter Read
530	IVWR	MI_IVWR	×	×	×	Inverter Parameter Write
531	IVBWR	MI_IVBWR	×	×	×	Inverter Parameter Block Write
532	RBFM	MI_RBFM	×	×	×	Divided BFM Read
533	WBFM	MI_WBFM	×	×	×	Divided BFM Write
534	DHSCT	MI_DHSCT	×	×	×	High Speed Counter Compare With Data Table
535	LOADR	MI_LOADR	×	×	×	Load From ER
536	LOADRP	MI_LOADRP	×	×	×	Load From ER

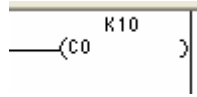
No.	Source Instruction	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
537	SAVER	MI_SAVER	×	×	×	Save to ER
538	INITR	MI_INITR	×	×	×	Initialize R and ER
539	INITRP	MI_INITRP	×	×	×	Initialize R and ER
540	LOGR	MI_LOGR	×	×	×	Logging R and ER
541	LOGRP	MI_LOGRP	×	×	×	Logging R and ER
542	RWER	MI_RWER	×	×	×	Rewrite to ER
543	RWERP	MI_RWERP	×	×	×	Rewrite to ER
544	INITER	MI_INITER	×	×	×	Initialize ER
545	INITERP	MI_INITERP	×	×	×	Initialize ER

Appendix 2: Mitsubishi Instruction Convert Solution 1: N

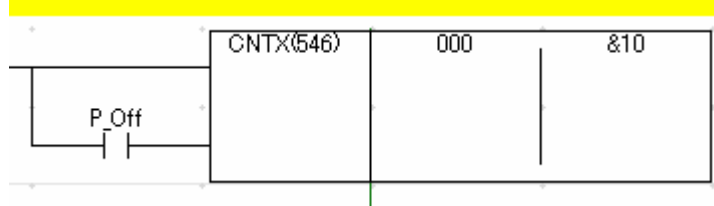
OUT instruction

Operand type is C (Count instruction)

From: Mitsubishi ladder



To: Omron ladder



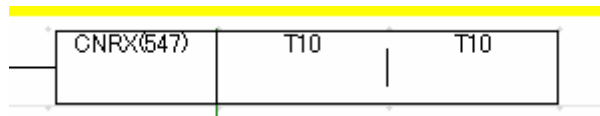
RST instruction

Operand type are T、C

From: Mitsubishi ladder



To: Omron ladder



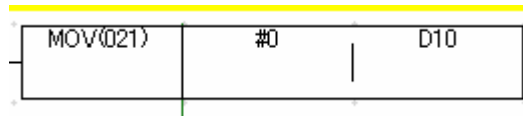
RST instruction

Operand type are D、Z、V

From: Mitsubishi ladder



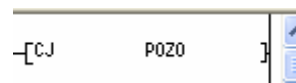
To: Omron ladder



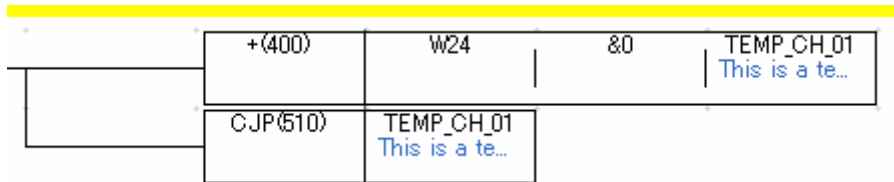
CJ instruction

Operand type are PZ、PV

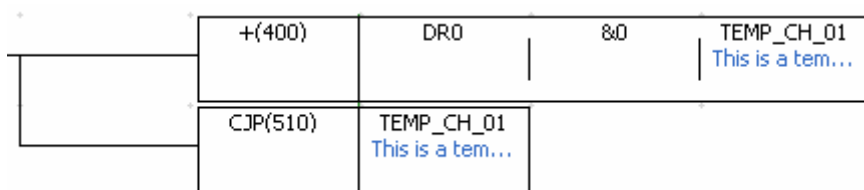
From: Mitsubishi ladder



To: Omron ladder (CP1E)



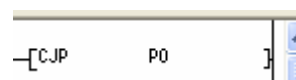
To: Omron ladder (CP1H/CP1L)



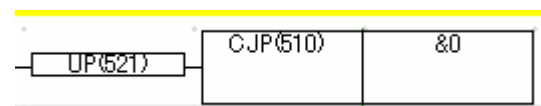
CJP instruction

Operand type is P

From: Mitsubishi ladder



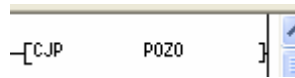
To: Omron ladder



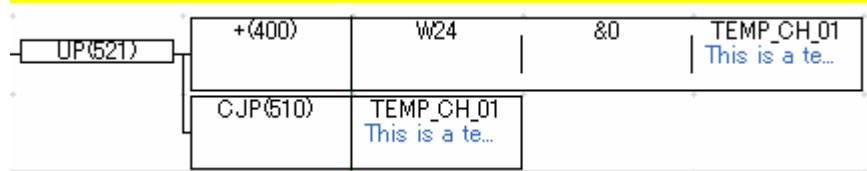
CJP instruction

Operand type are PZ、PV

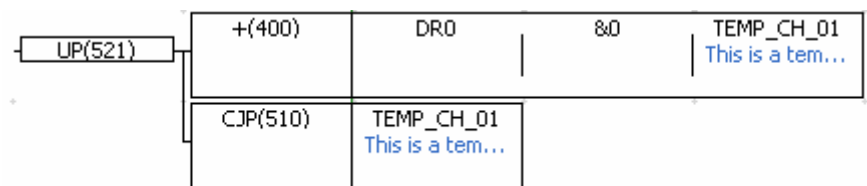
From: Mitsubishi ladder



To: Omron ladder (CP1E)



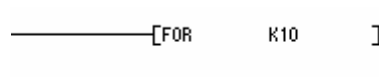
To: Omron ladder (CP1H/CP1L)



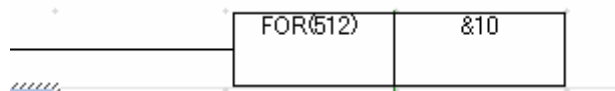
FOR instruction

Operand type are K、H、T、C、D、V、Z

From: Mitsubishi ladder



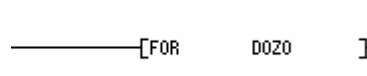
To: Omron ladder



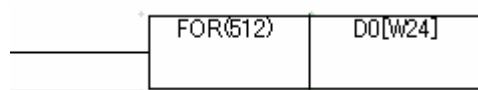
FOR instruction

Operand type are DZ、DV

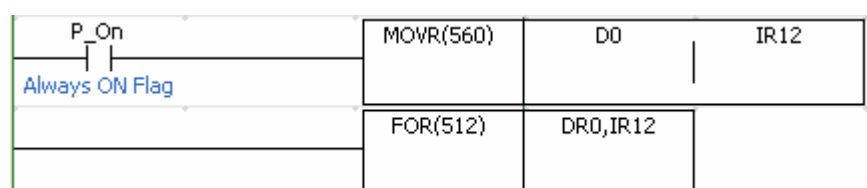
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



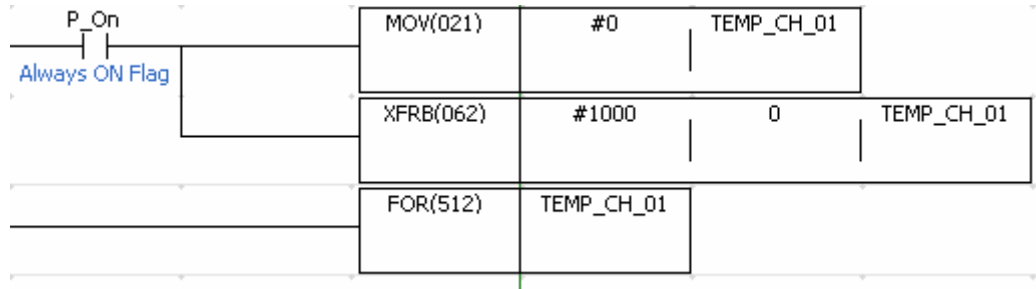
FOR instruction

Operand type are KX、KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



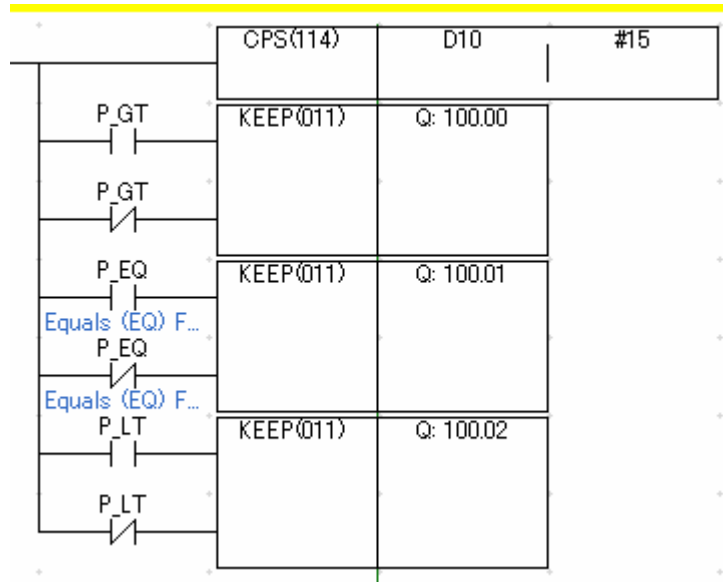
CMP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z

From: Mitsubishi ladder



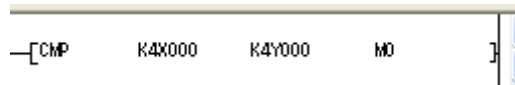
To: Omron ladder



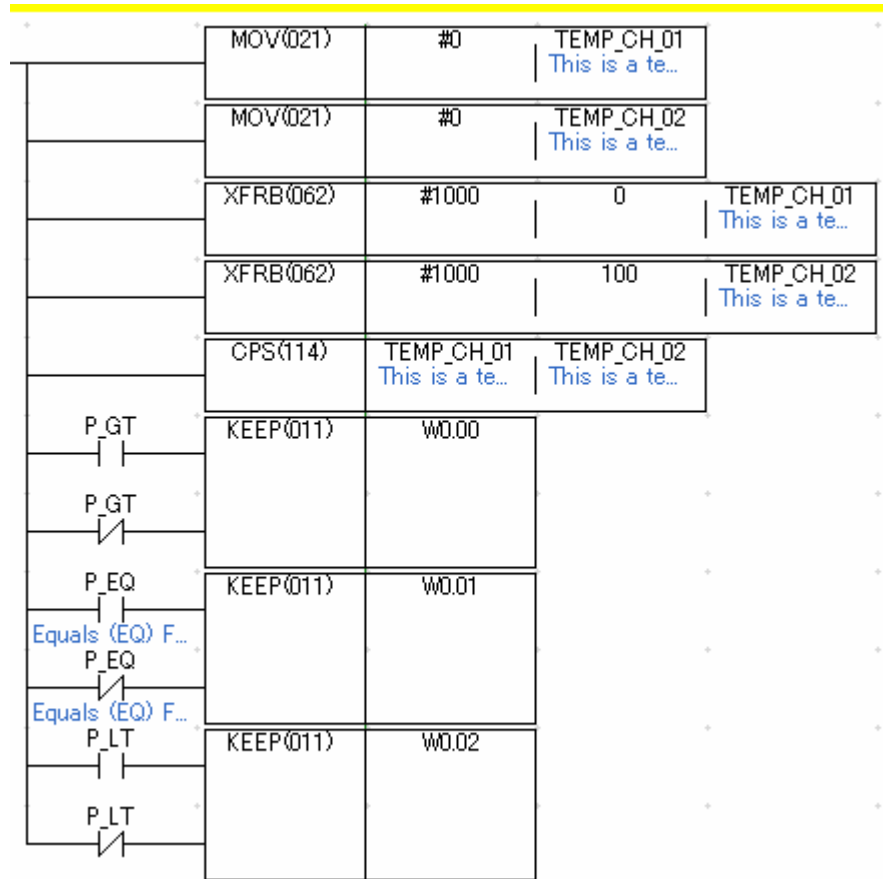
CMP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS

From: Mitsubishi ladder



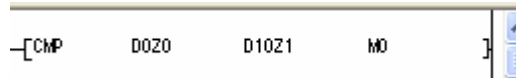
To: Omron ladder



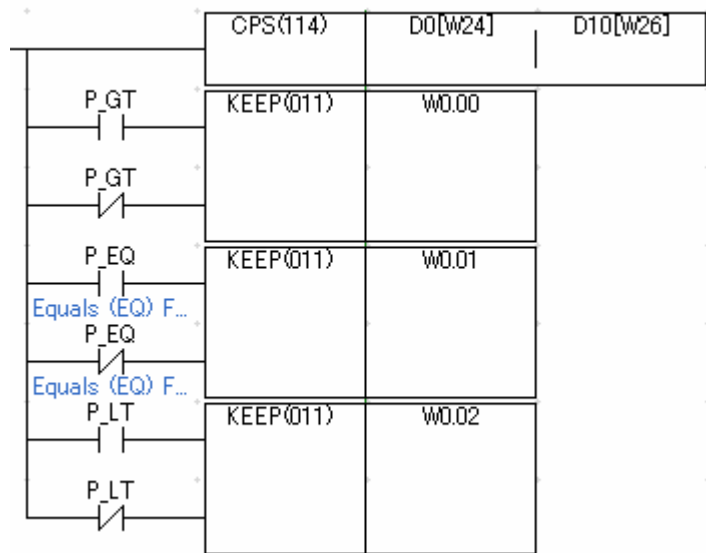
CMP instruction

Operand 1 type and Operand 2 type are DZ、DV

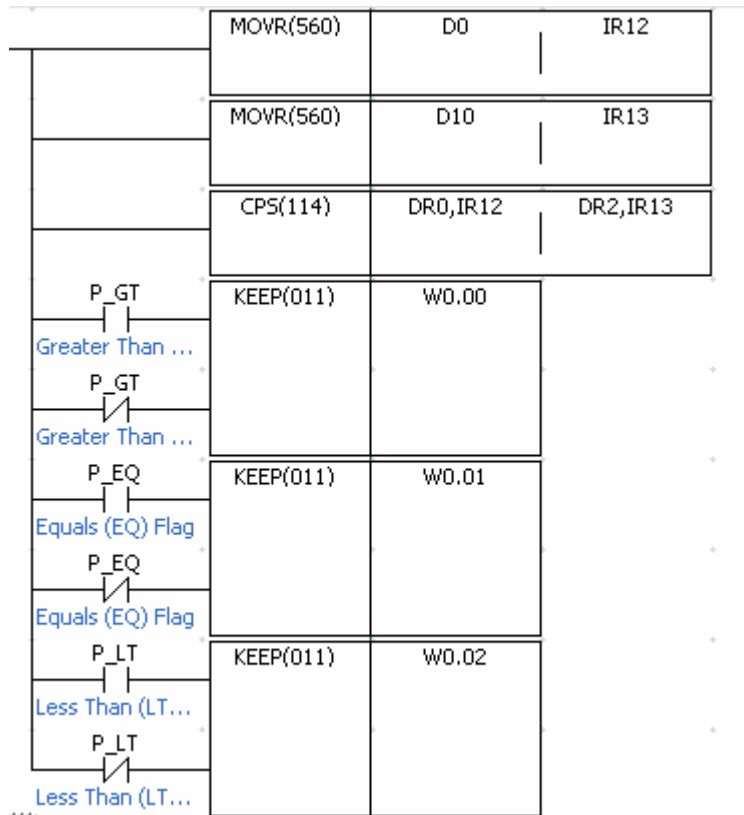
From: Mitsubishi ladder



To: Omron ladder (CP1E)



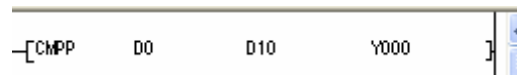
To: Omron ladder (CP1H/CP1L)



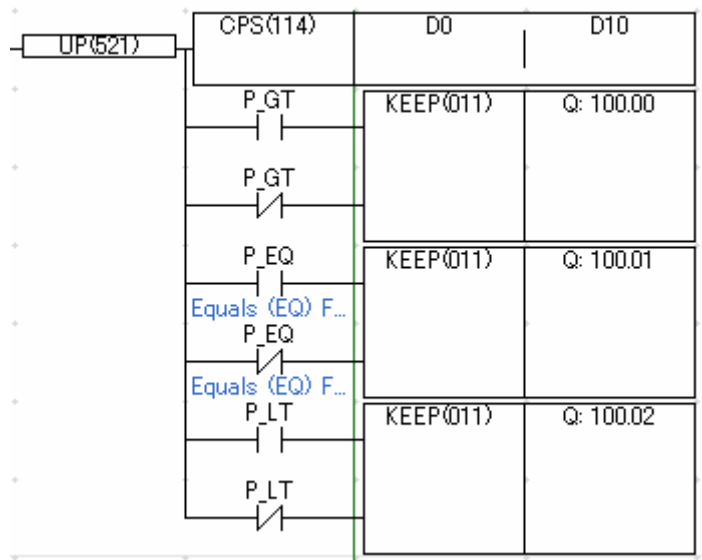
CMPP instruction

Operand 1 type and Operand 2 type are K, H, T, C, D, V, Z

From: Mitsubishi ladder



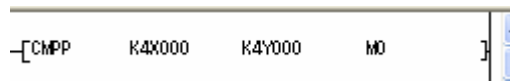
To: Omron ladder



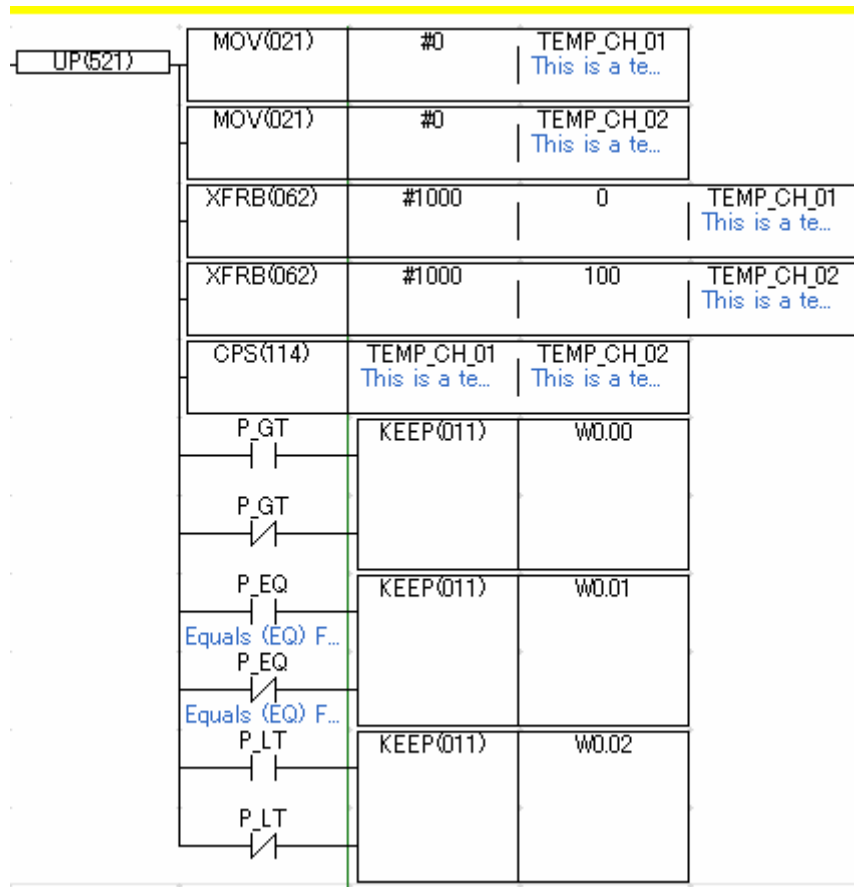
CMPP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS

From: Mitsubishi ladder



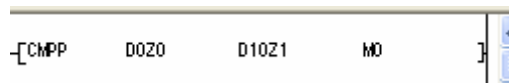
To: Omron ladder



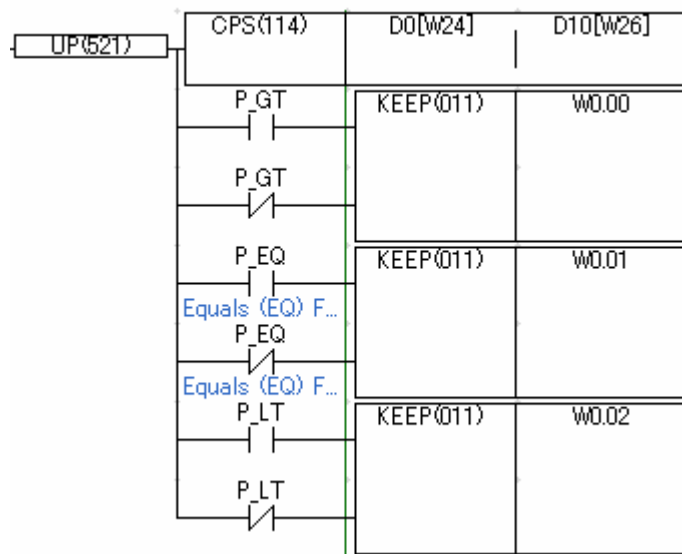
CMPP instruction

Operand 1 type and Operand 2 type are DZ、DV

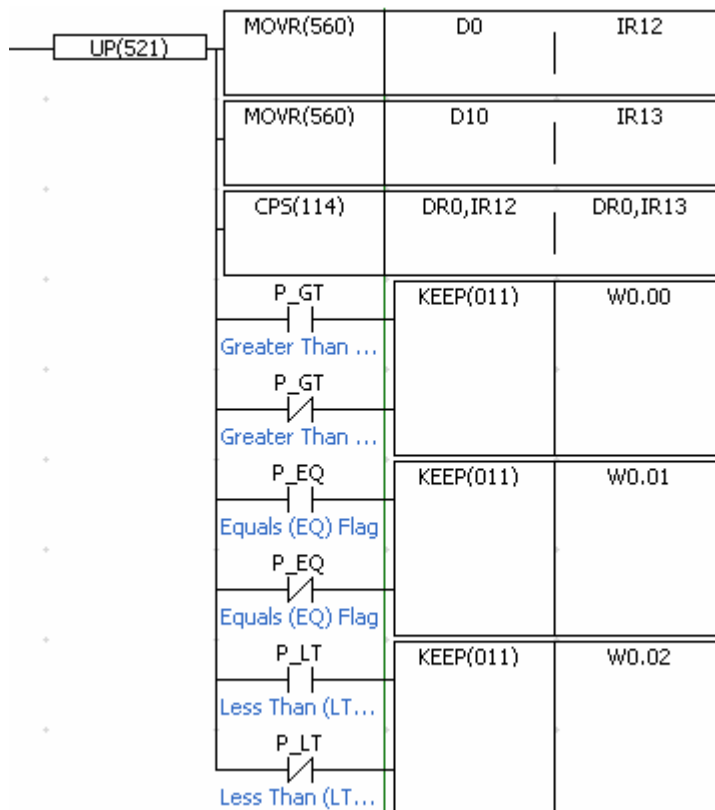
From: Mitsubishi ladder



To: Omron ladder (CP1E)



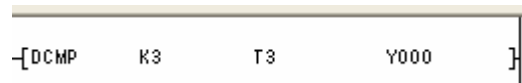
To: Omron ladder (CP1H/CP1L)



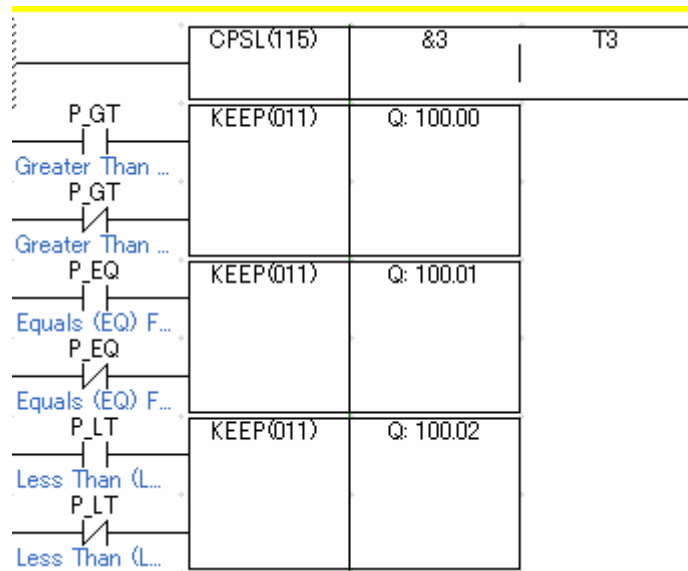
DCMP instruction

Operand 1 type and Operand 2 type are K, H, T, C, D, Z

From: Mitsubishi ladder



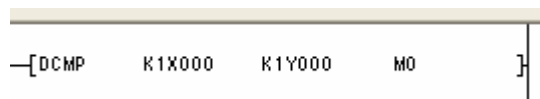
To: Omron ladder



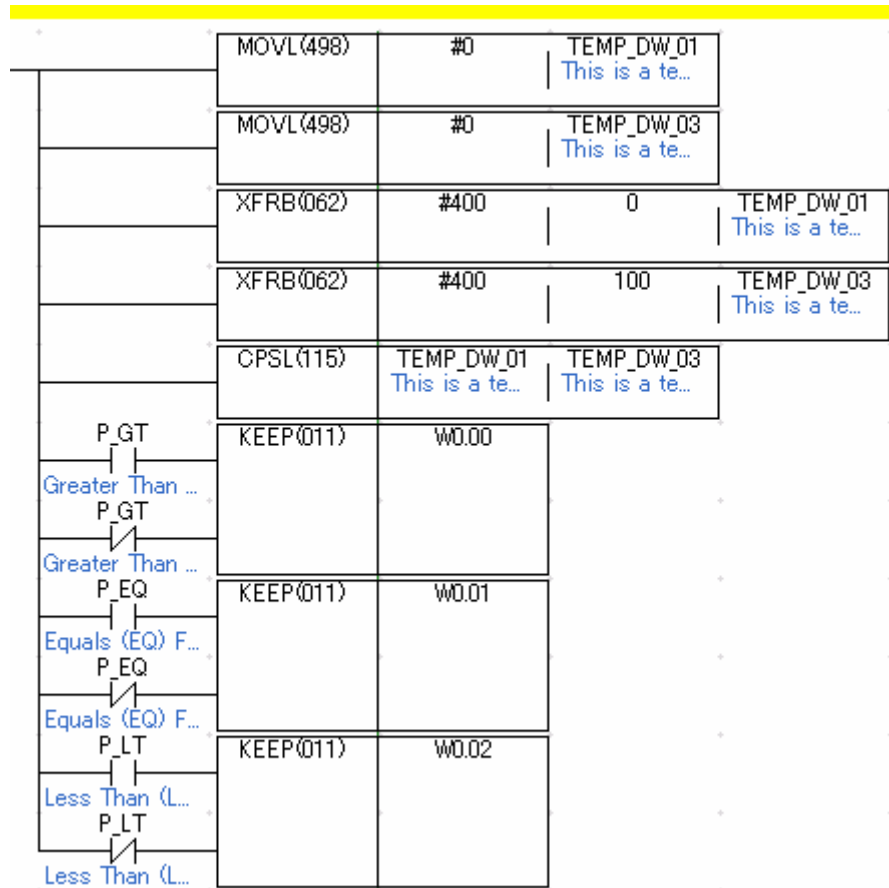
DCMP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS

From: Mitsubishi ladder



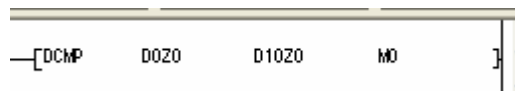
To: Omron ladder



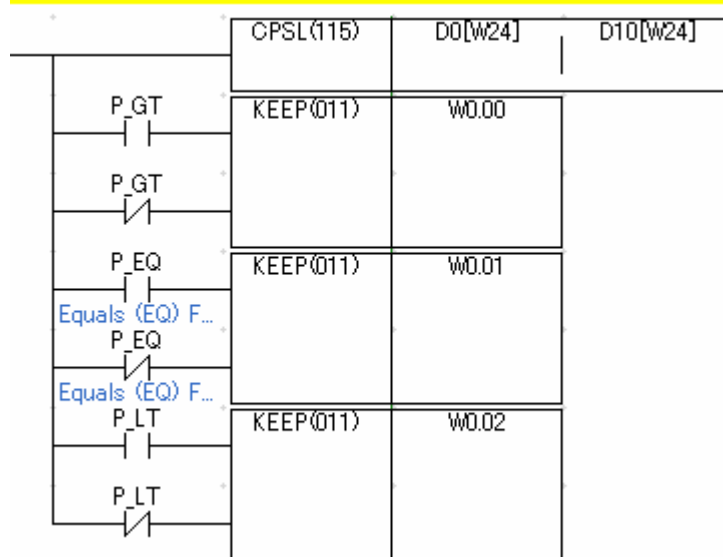
DCMP instruction

Operand 1 type and Operand 2 type are DZ

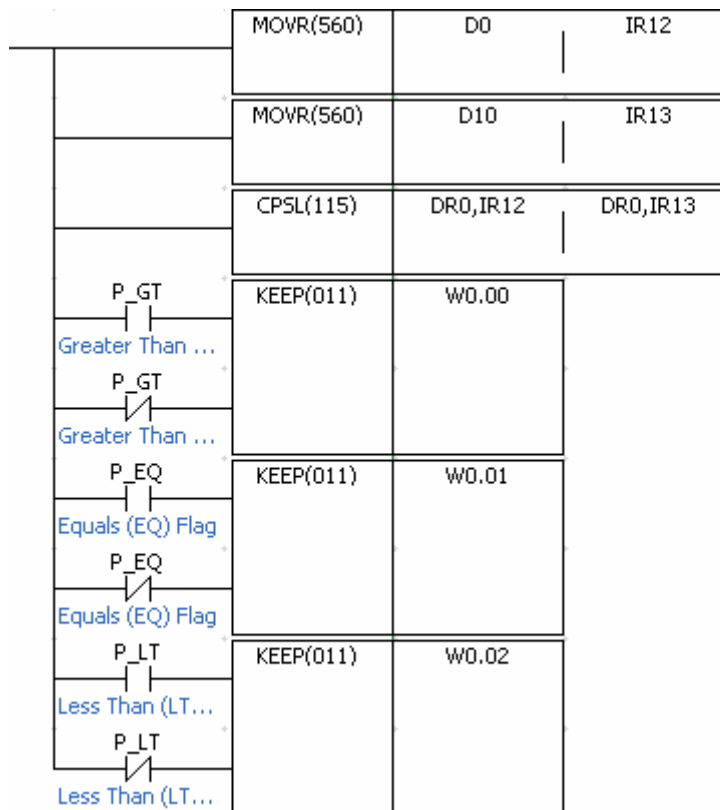
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



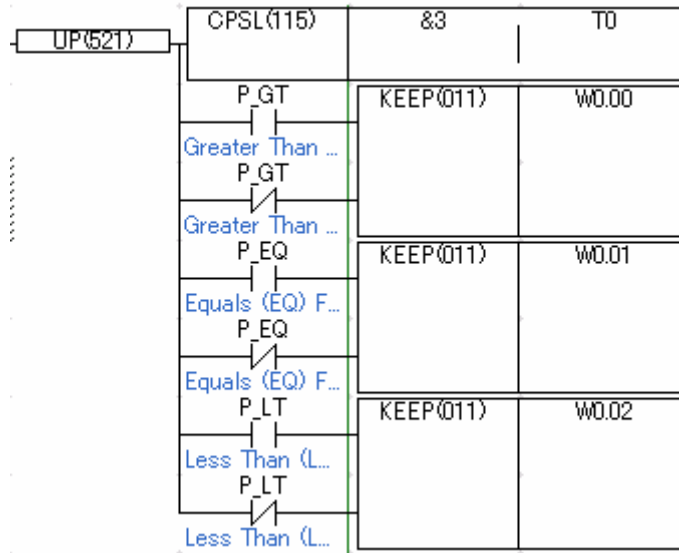
DCMPP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、Z

From: Mitsubishi ladder



To: Omron ladder



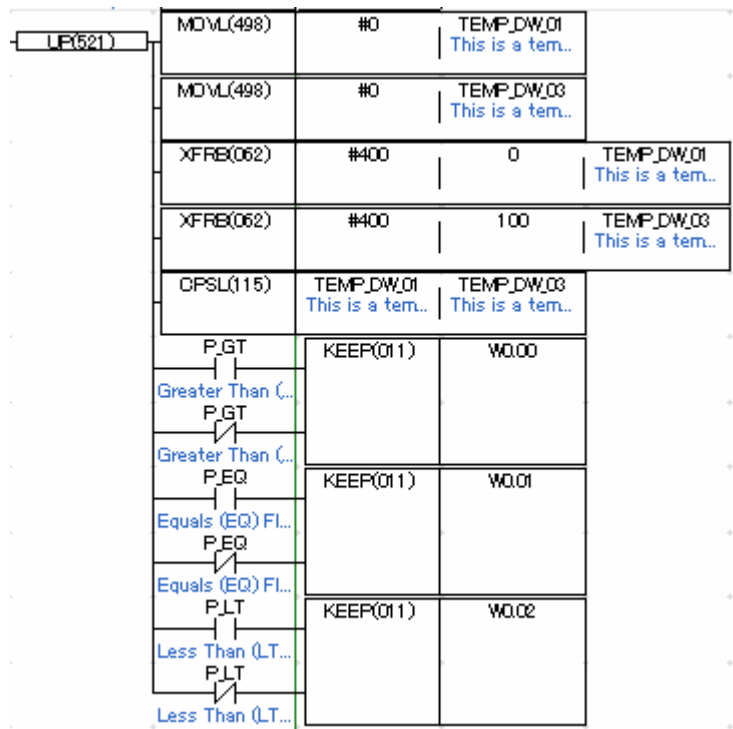
DCMPP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS

From: Mitsubishi ladder



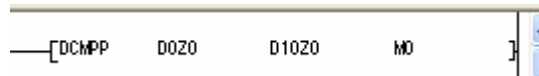
To: Omron ladder



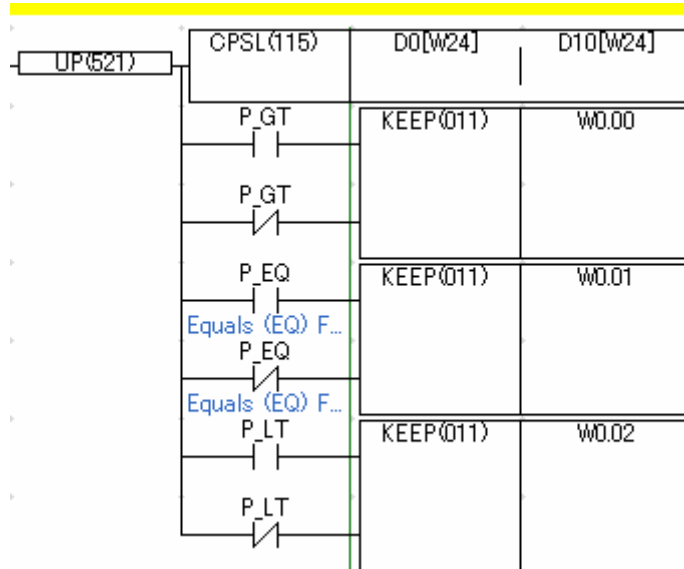
DCMPP instruction

Operand 1 type and Operand 2 type are DZ

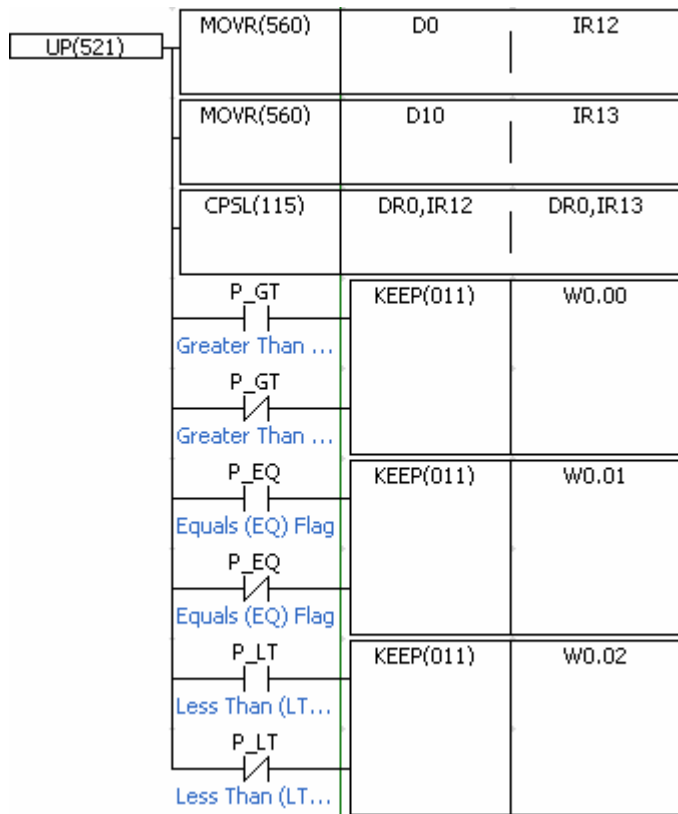
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



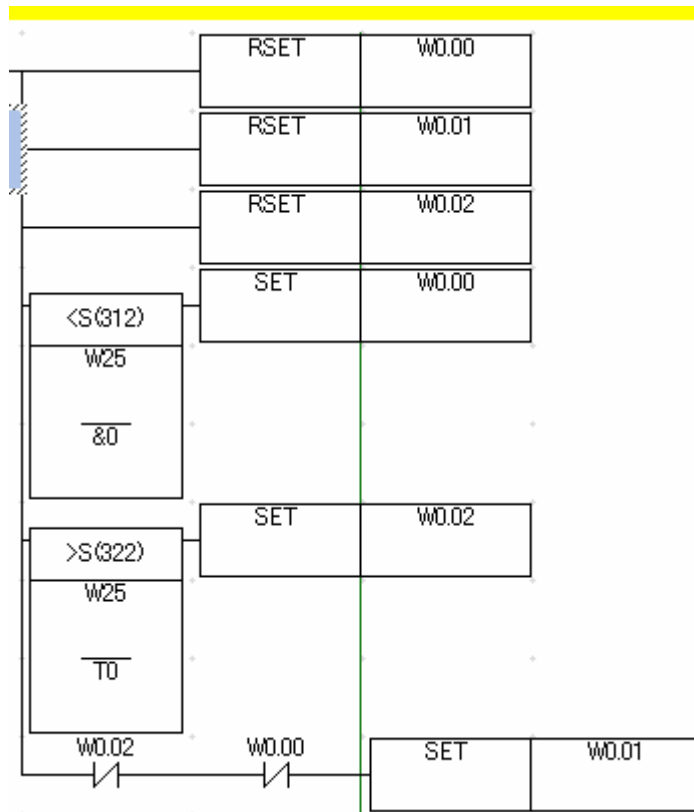
ZCP instruction

Operand 1 type , Operand 2 type and Operand 3 type are K、H、T、C、D、Z

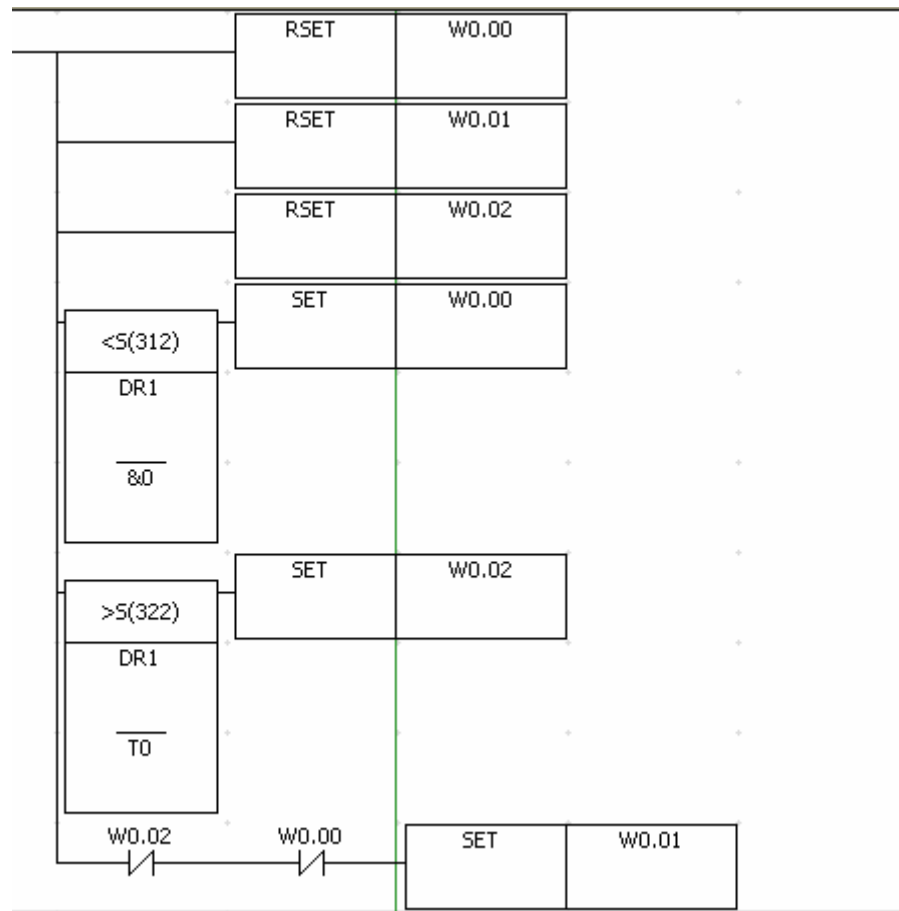
From: Mitsubishi ladder



To: Omron ladder (CP1E)



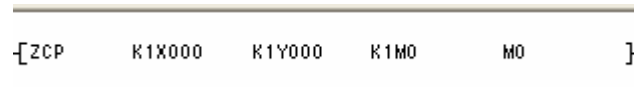
To: Omron ladder (CP1H/CP1L)



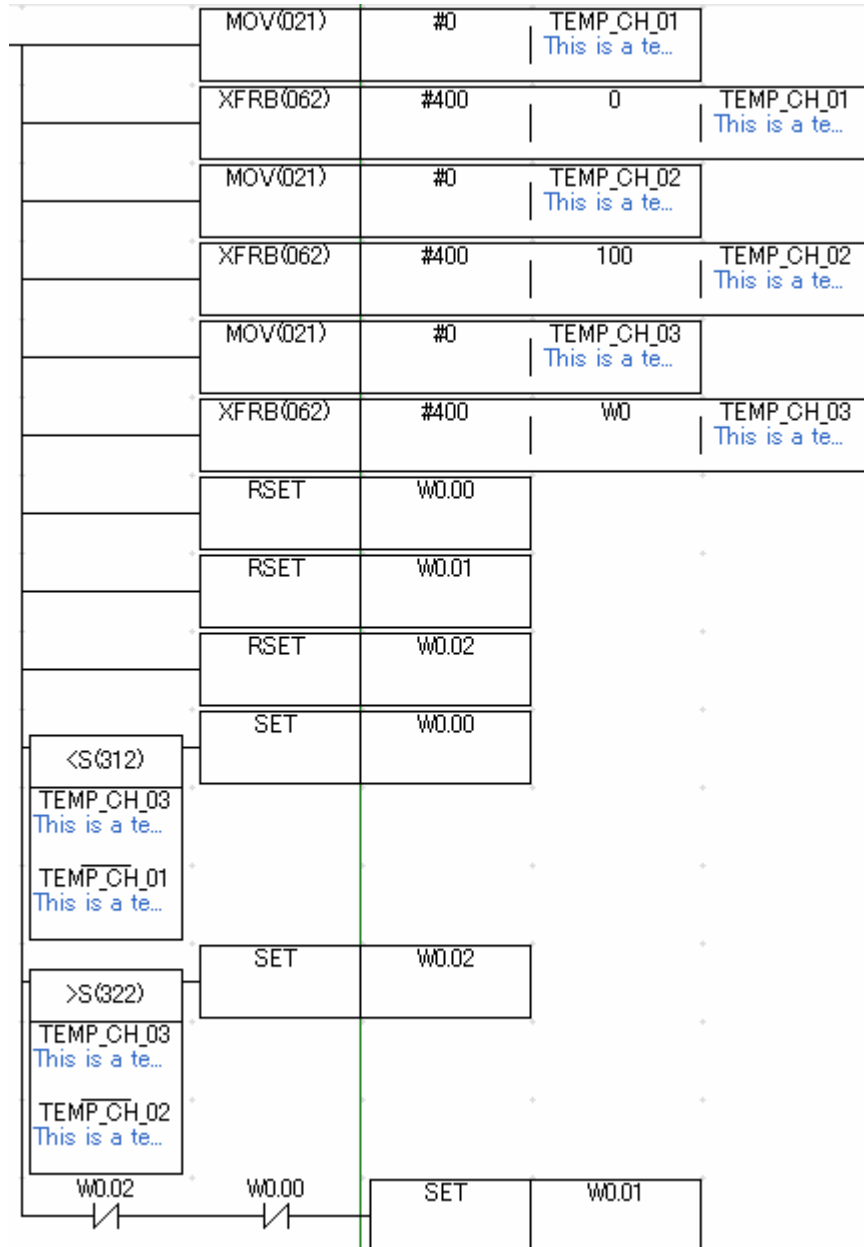
ZCP instruction

Operand 1 type , Operand 2 type and Operand 3 type are KX、KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



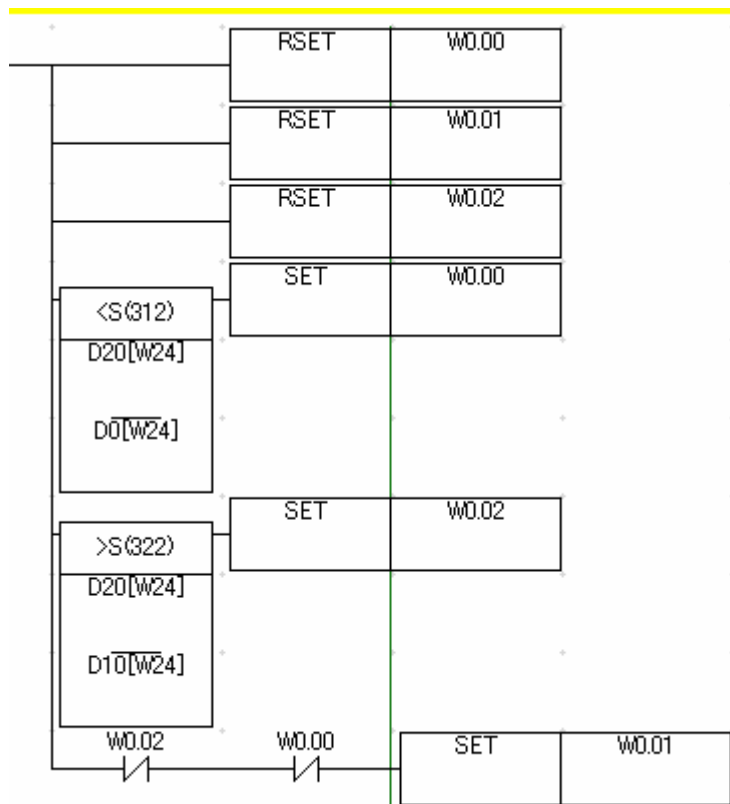
ZCP instruction

Operand 1 type , Operand 2 type and Operand 3 type are DZ、 DV

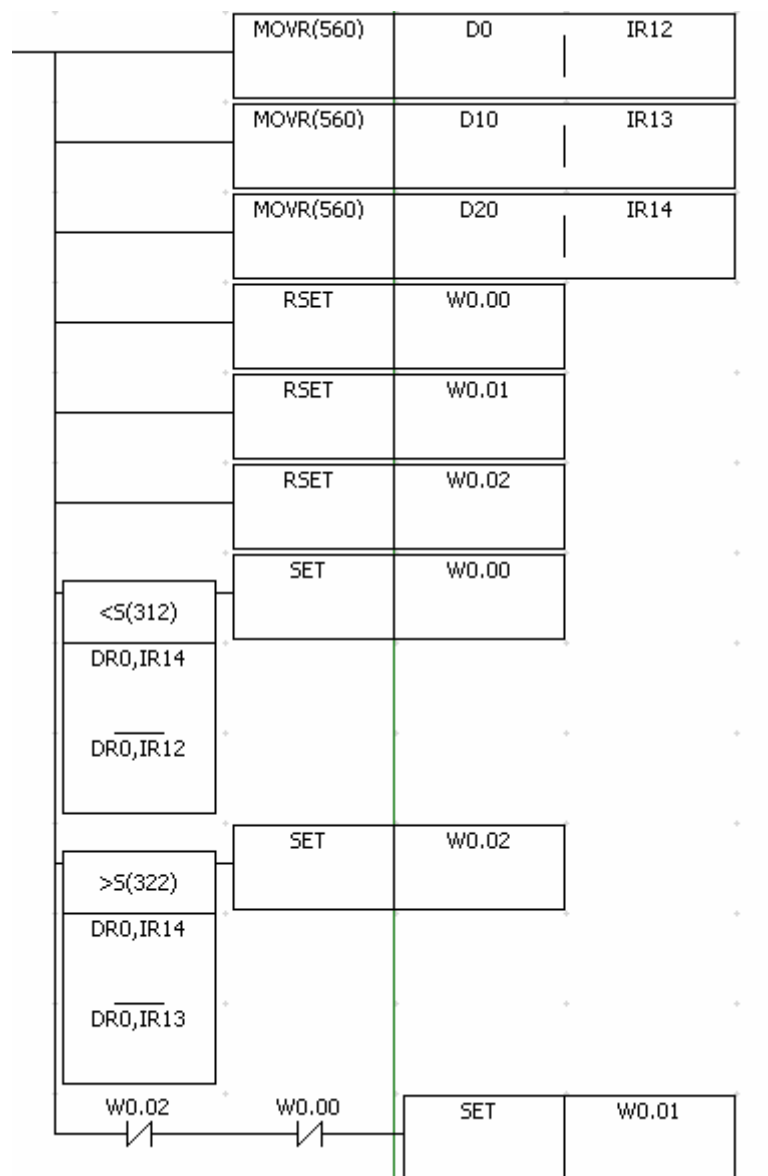
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



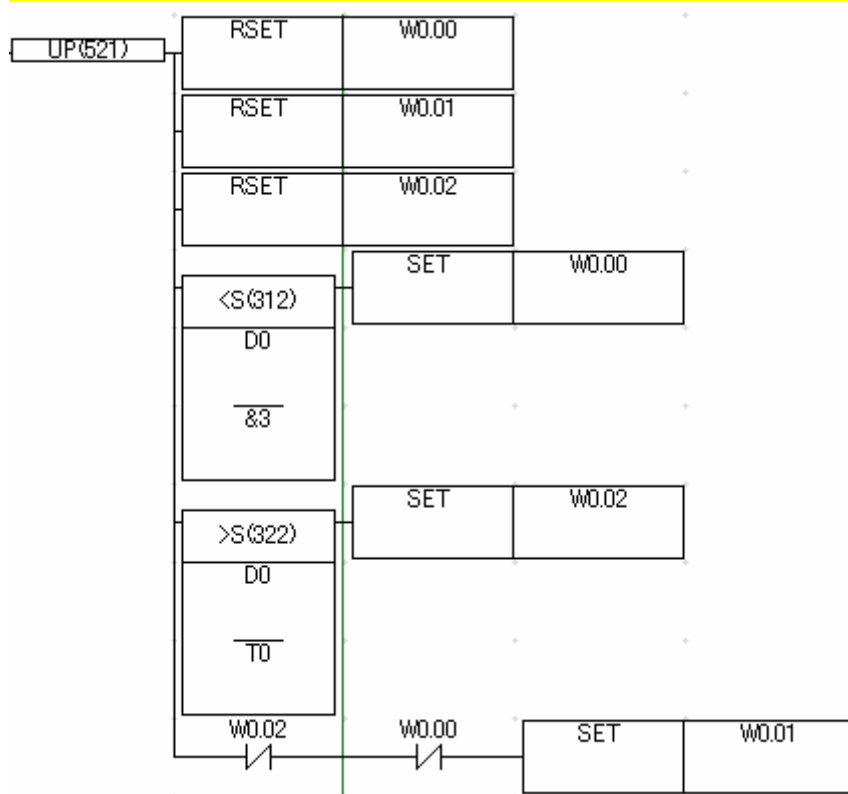
ZCPP instruction

Operand 1 type , Operand 2 type and Operand 3 type are K、H、T、C、D、Z

From: Mitsubishi ladder

```
[ZCPP K3 T0 D0 M0 ]
```

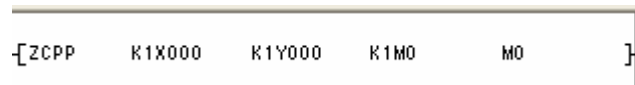
To: Omron ladder



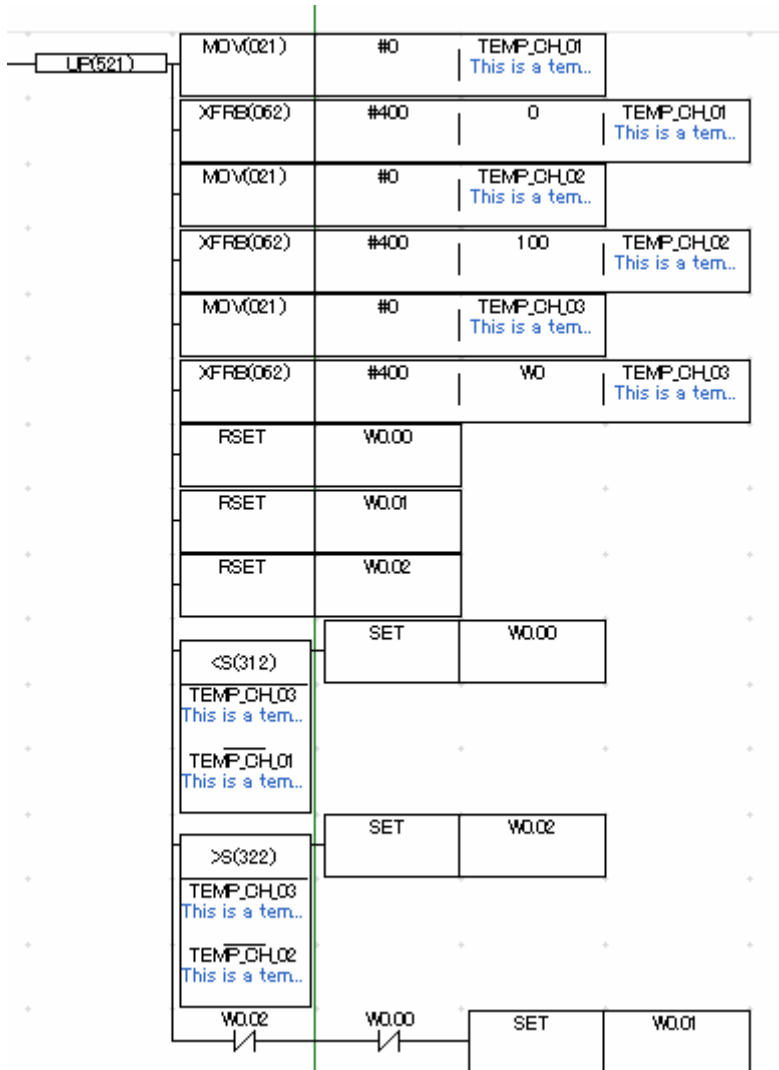
ZCPP instruction

Operand 1 type , Operand 2 type and Operand 3 type are KX、KY、KM、KS

From: Mitsubishi ladder



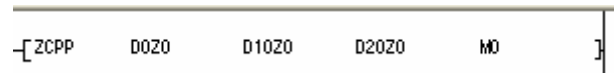
To: Omron ladder



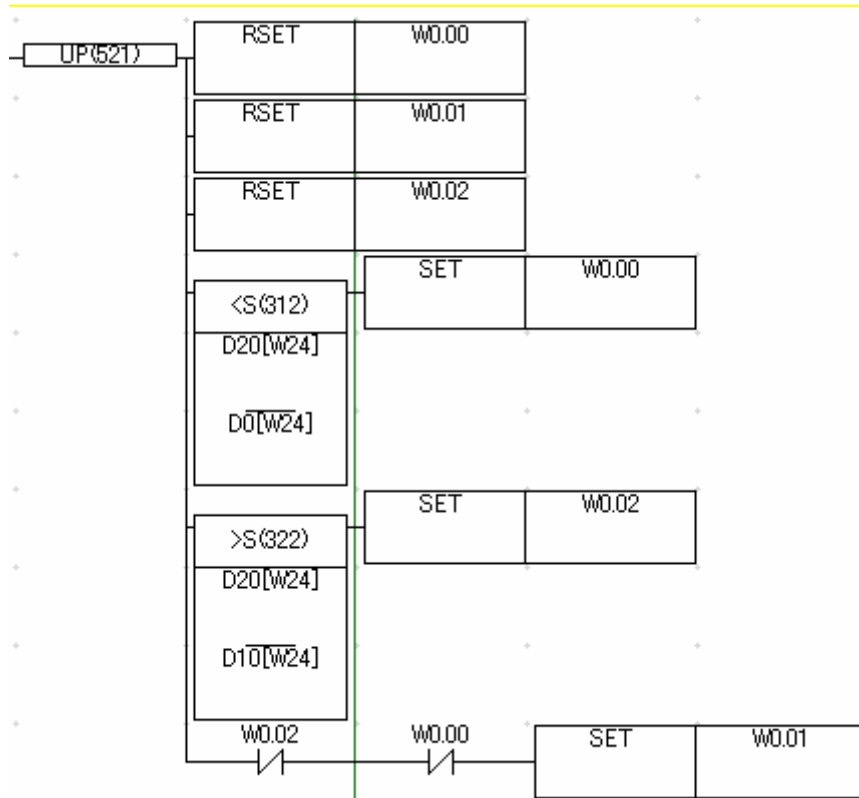
ZCPP instruction

Operand 1 type , Operand 2 type and Operand 3 type are DZ、DV

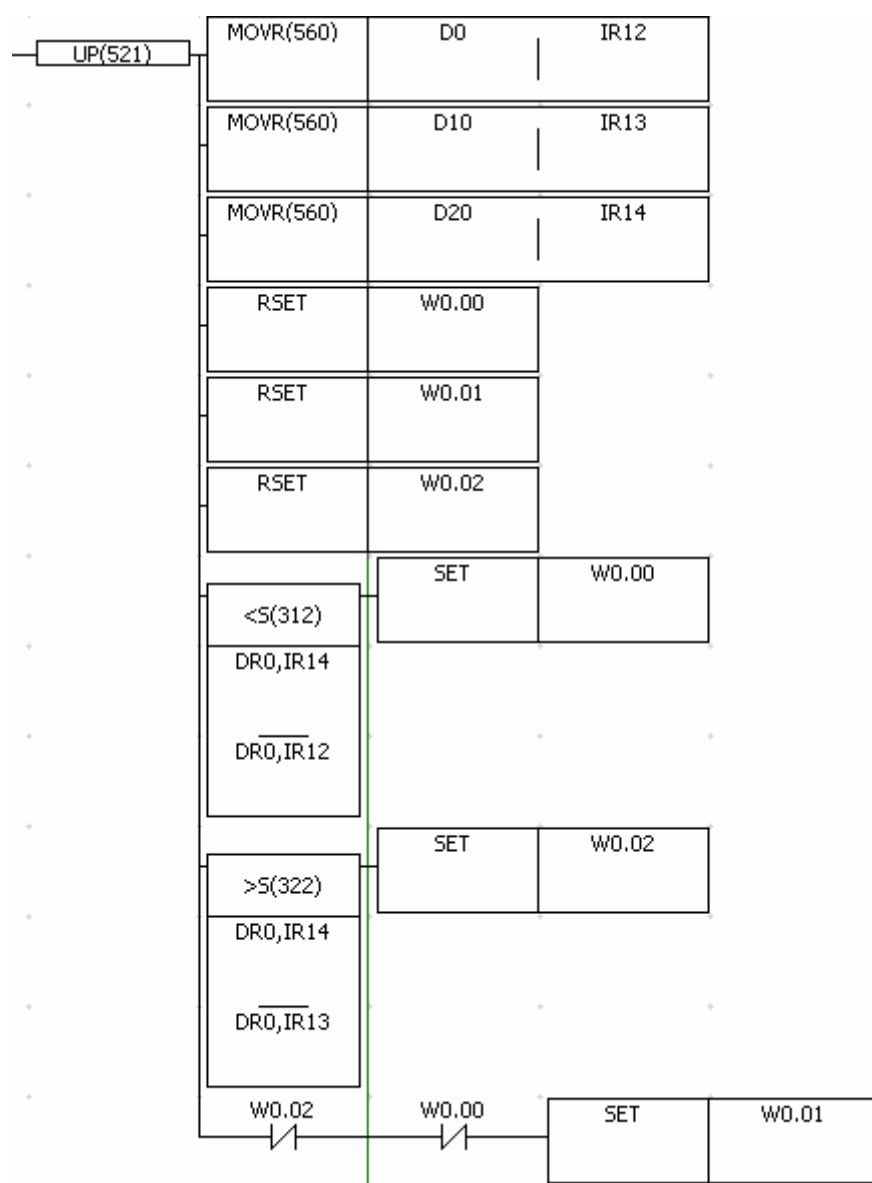
From: Mitsubishi ladder



To: Omron ladder (CP1E)



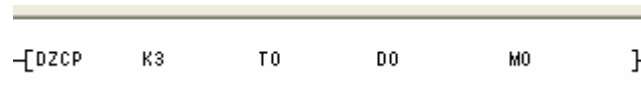
To: Omron ladder (CP1H/CP1L)



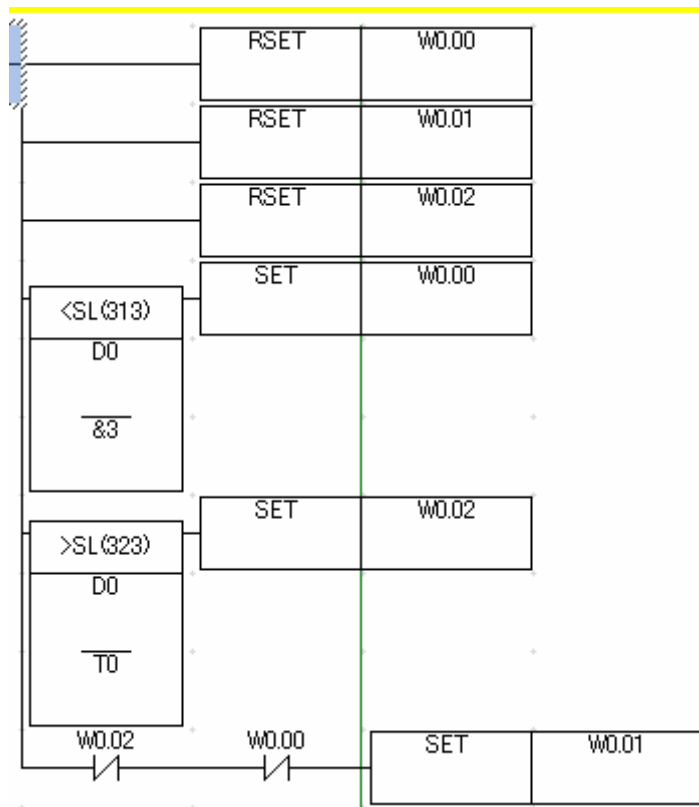
DZCP instruction

Operand 1 type , Operand 2 type and Operand 3 type are K、H、T、C、D、Z

From: Mitsubishi ladder



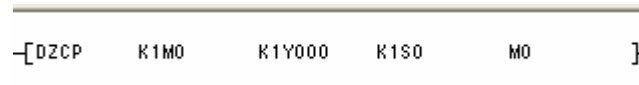
To: Omron ladder



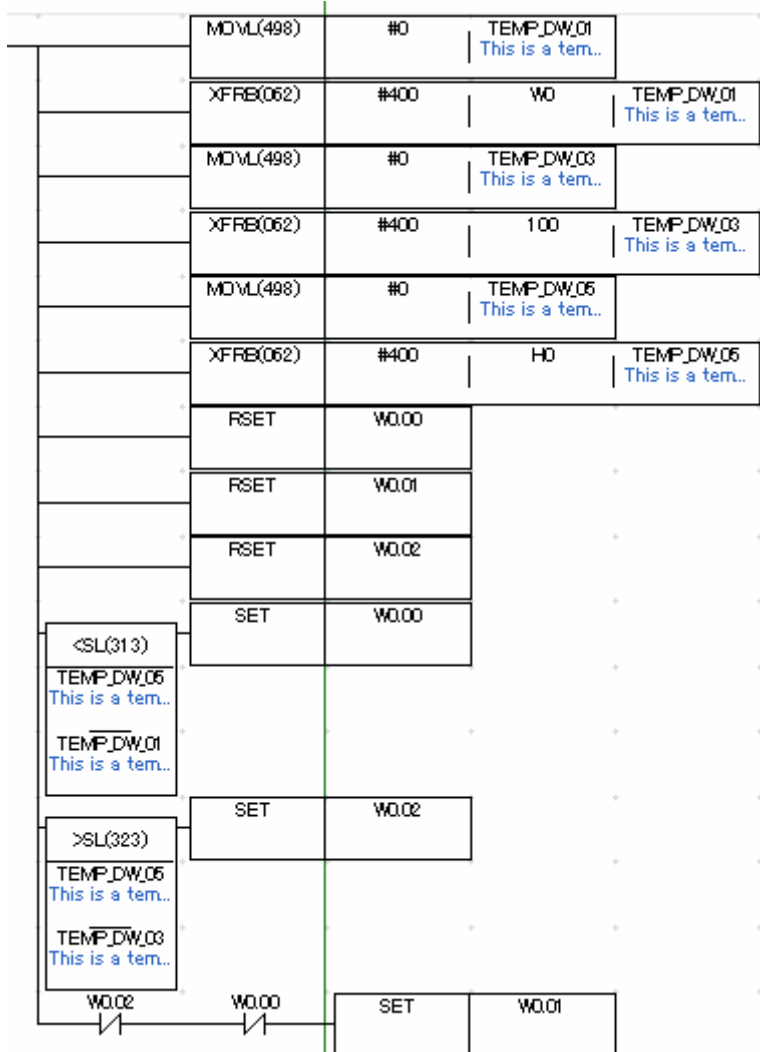
DZCP instruction

Operand 1 type , Operand 2 type and Operand 3 type are KX、KY、KM、KS

From: Mitsubishi ladder



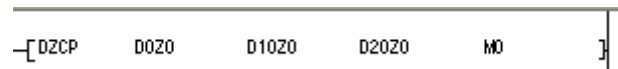
To: Omron ladder



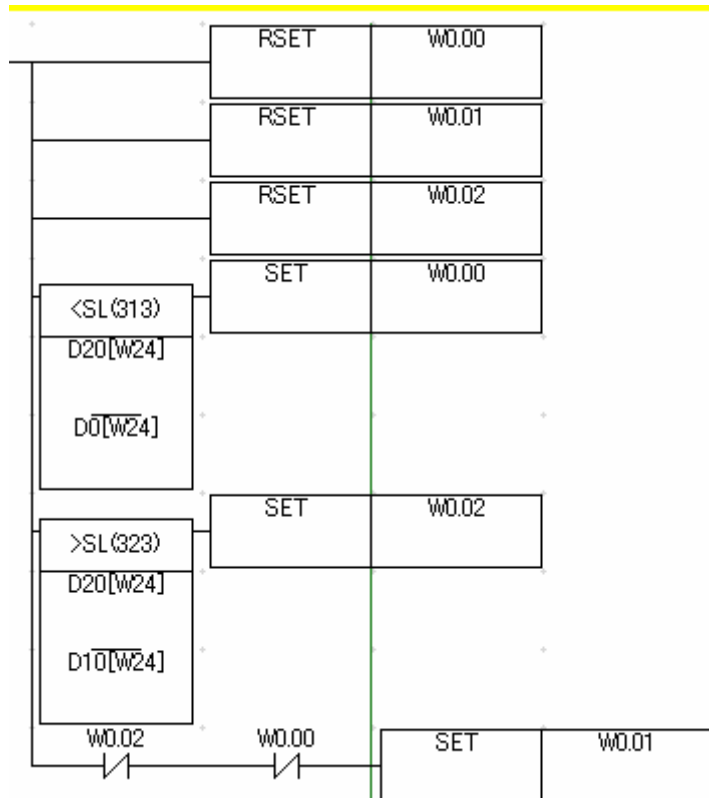
DZCP instruction

Operand 1 type , Operand 2 type and Operand 3 type are DZ

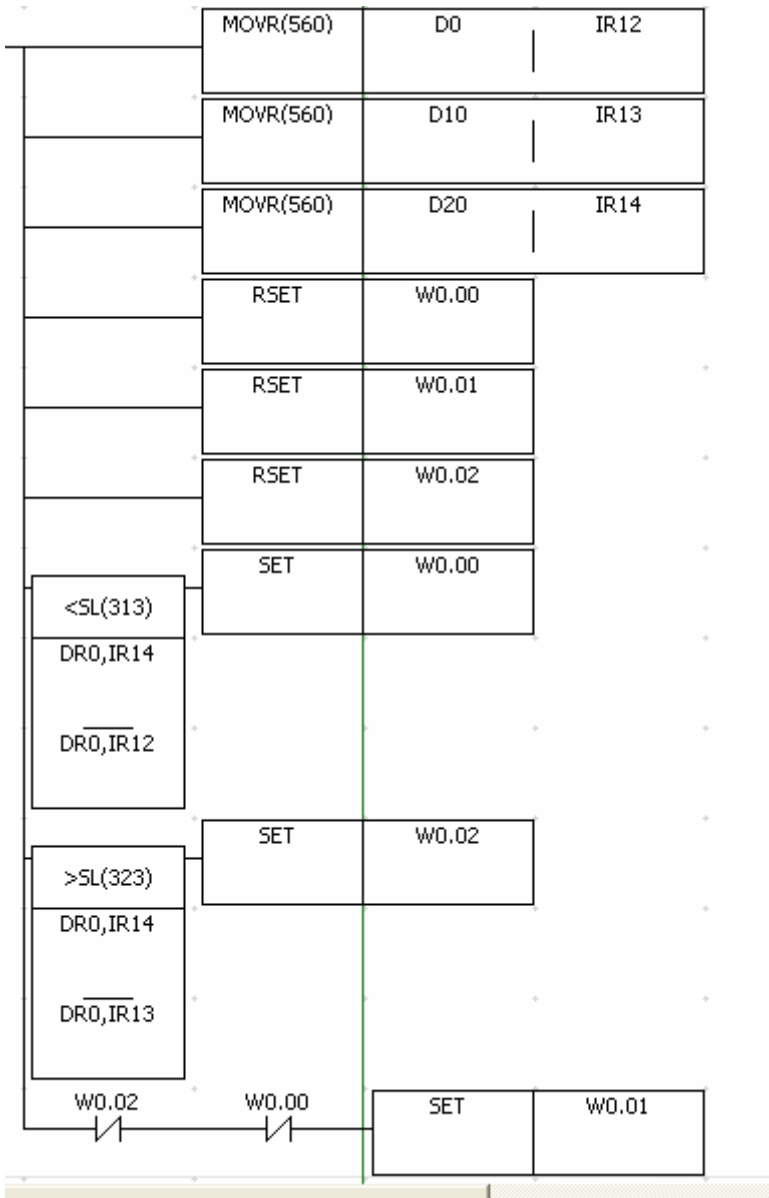
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



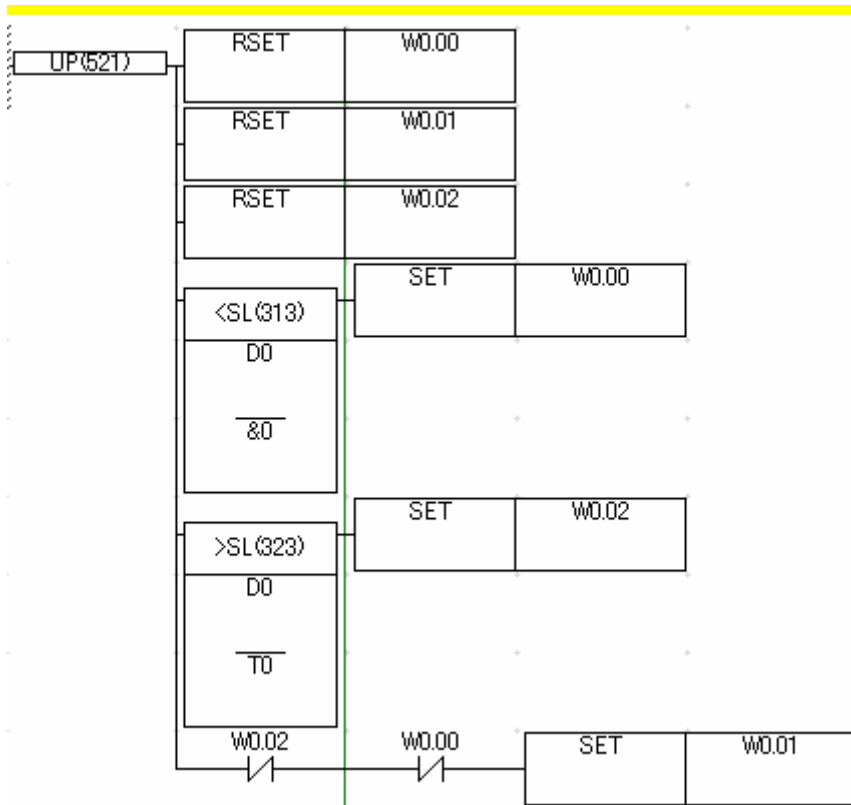
DZCPP instruction

Operand 1 type , Operand 2 type and Operand 3 type are K、H、T、C、D、Z

From: Mitsubishi ladder



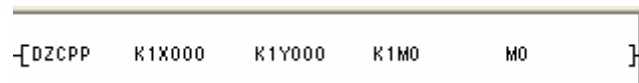
To: Omron ladder



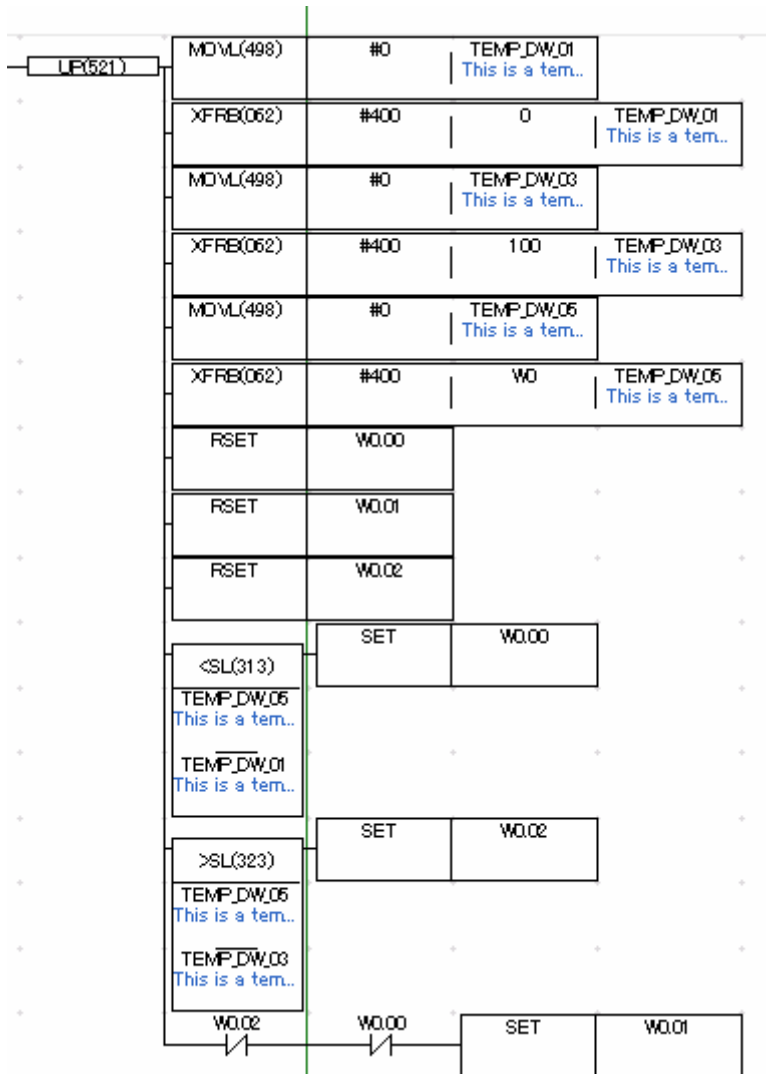
DZCPP instruction

Operand 1 type , Operand 2 type and Operand 3 type are KX、KY、KM、KS

From: Mitsubishi ladder



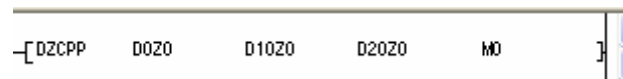
To: Omron ladder



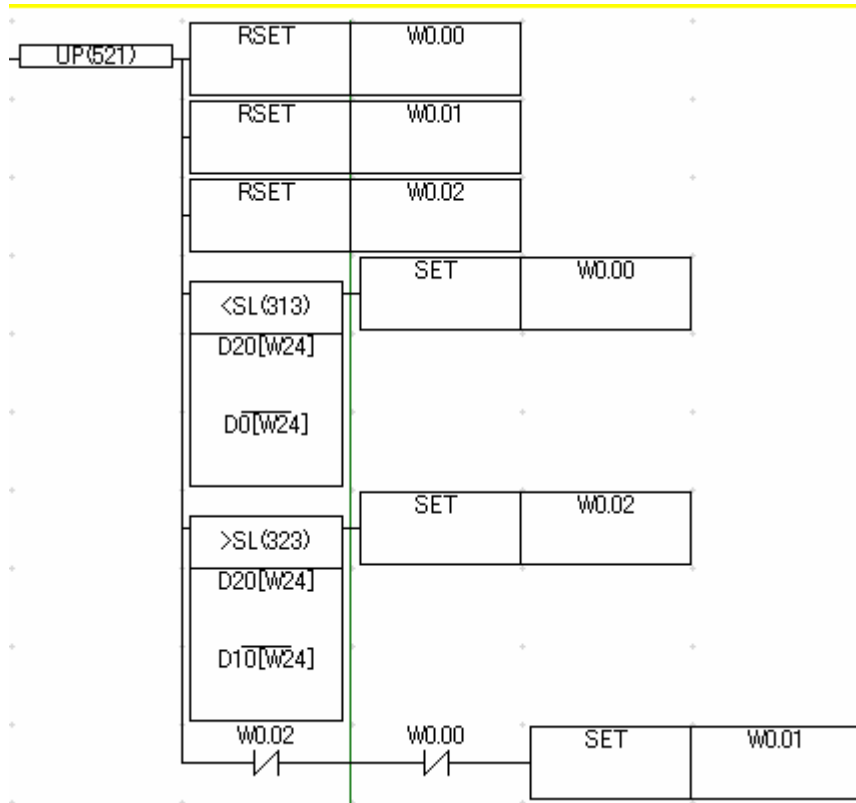
DZCPP instruction

Operand 1 type , Operand 2 type and Operand 3 type are DZ

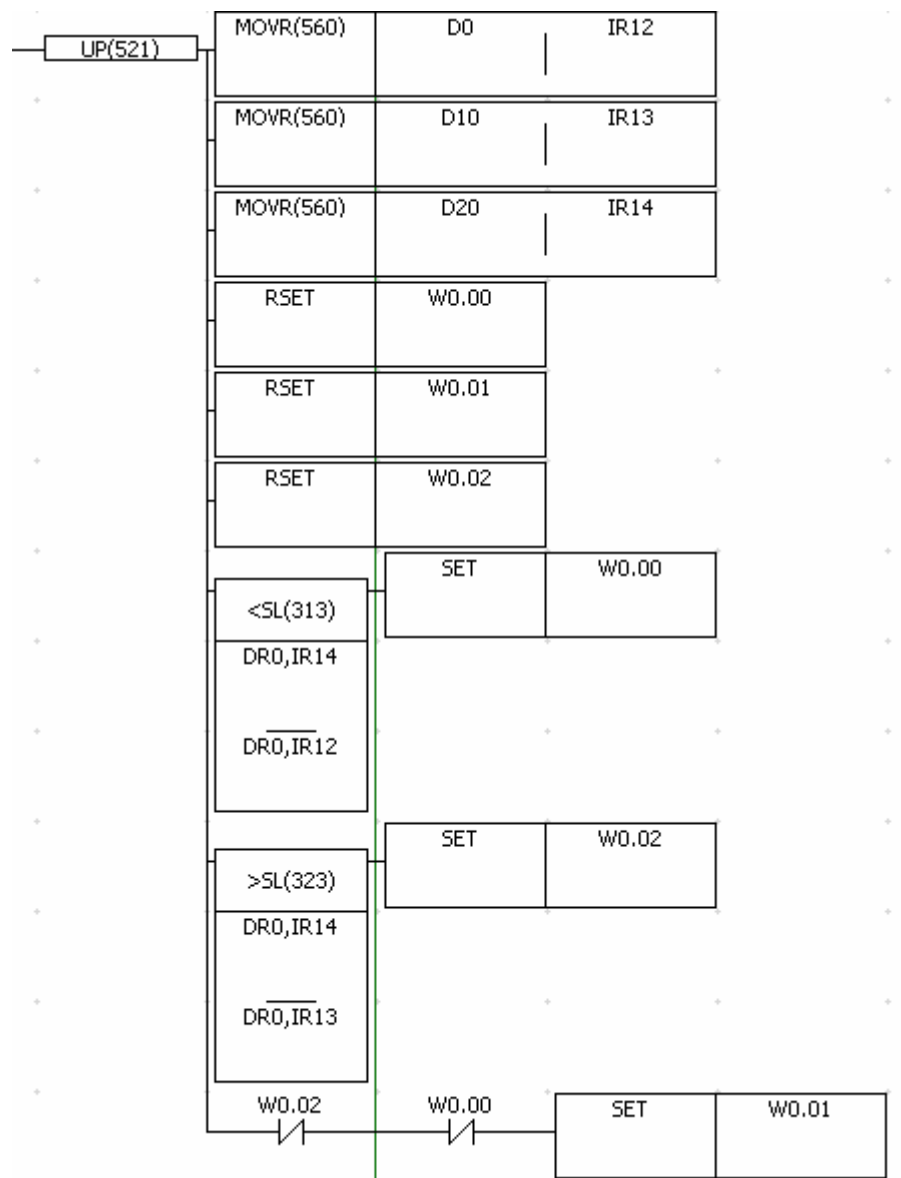
From: Mitsubishi ladder



To: Omron ladder (CP1E)



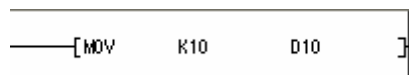
To: Omron ladder (CP1H/CP1L)



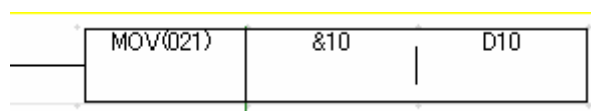
MOV instruction

Operand 1 type are K、H、T、C、D、V、Z, Operand 2 are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



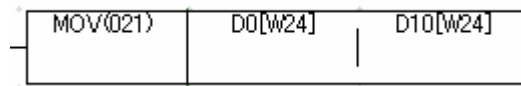
MOV instruction

Operand 1 type and Operand 2 type are DZ、DV

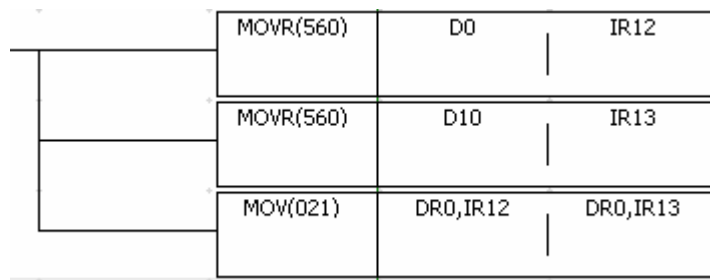
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1E)



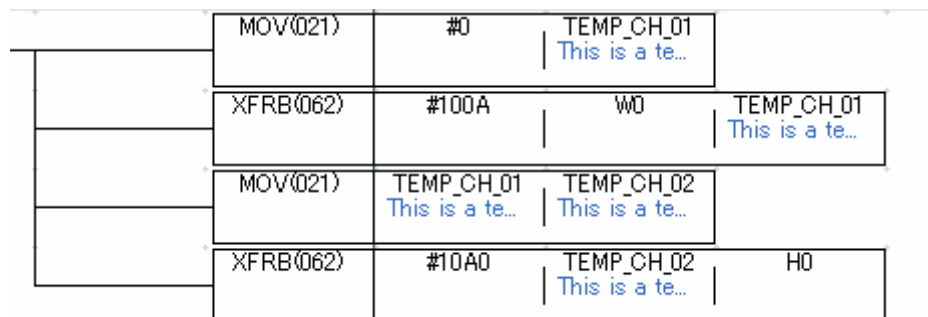
MOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



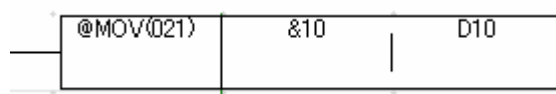
MOVP instruction

Operand 1 type are K、H、T、C、D、V、Z, Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



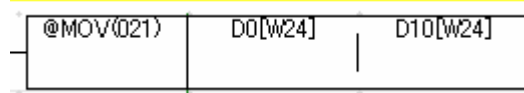
MOVP instruction

Operand 1 type and Operand 2 type are DZ、DV

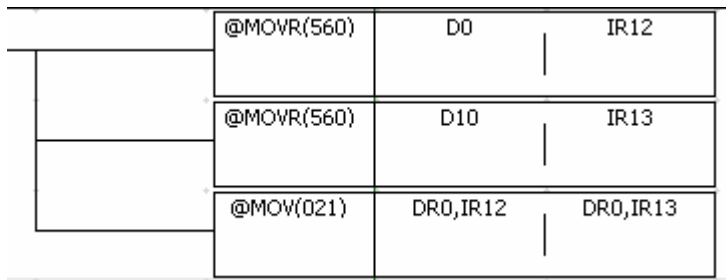
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



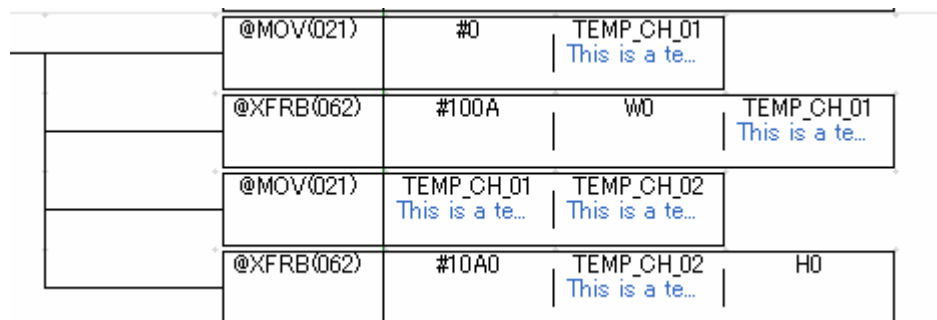
MOVP instruction

Operand 1 type are KX、KY、KM、KS、 Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



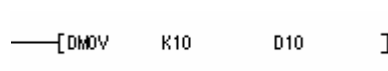
To: Omron ladder



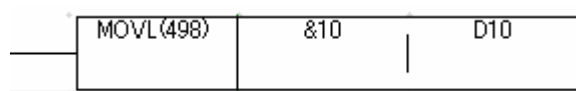
DMOV instruction

Operand 1 type are K、H、T、C、D、V、Z、 Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



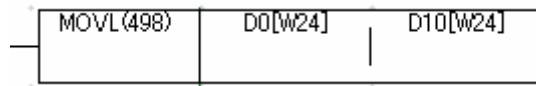
DMOV instruction

Operand 1 type and Operand 2 type are DZ

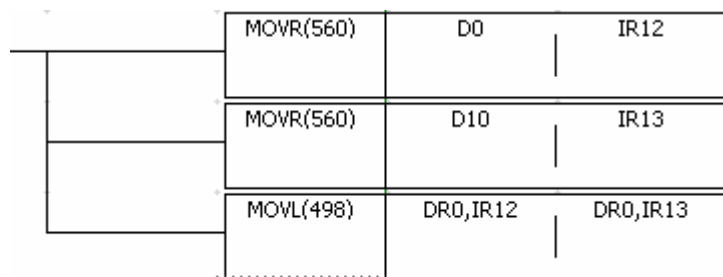
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



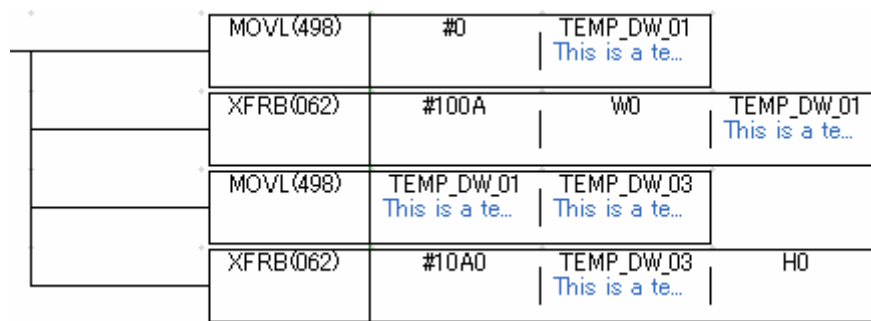
DMOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



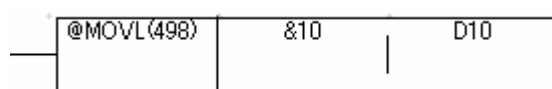
DMOV instruction

Operand 1 type are K、H、T、C、D、V、Z, Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



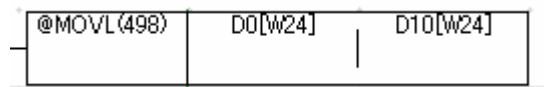
DMOV instruction

Operand 1 type and Operand 2 type are DZ

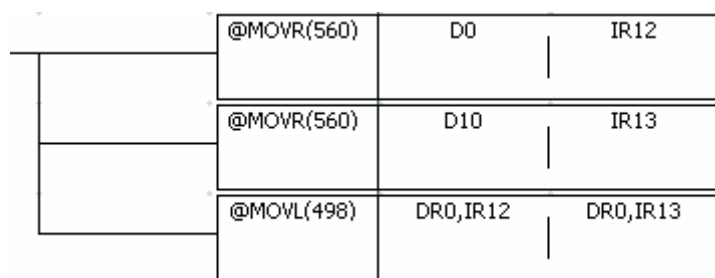
From: Mitsubishi ladder



To: Omron ladder (CP1E)



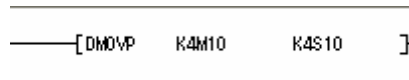
To: Omron ladder (CP1H/CP1L)



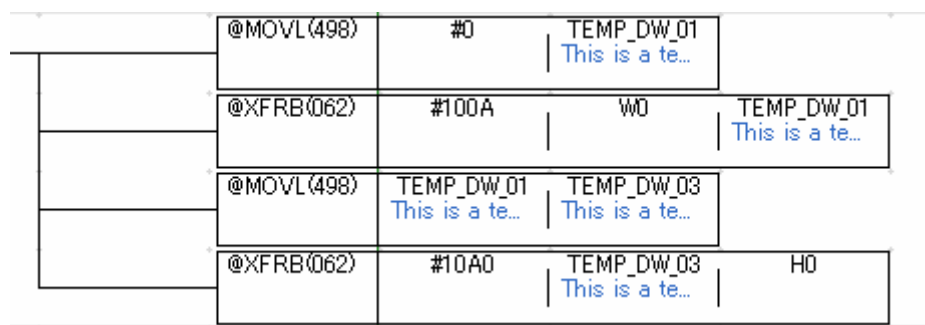
DMOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



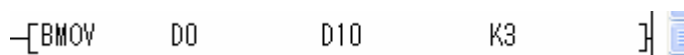
To: Omron ladder



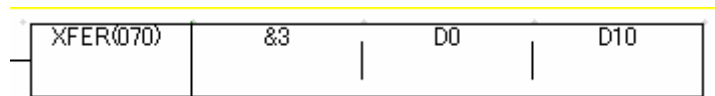
BMOV instruction

Operand 1 type and Operand 2 type are T、C、D, Operand 3 type are K、H、D

From: Mitsubishi ladder



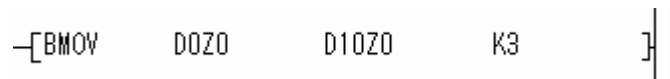
To: Omron ladder



BMOV instruction

Operand 1 type and Operand 2 type are DZ、DV, Operand 3 type are K、H、D

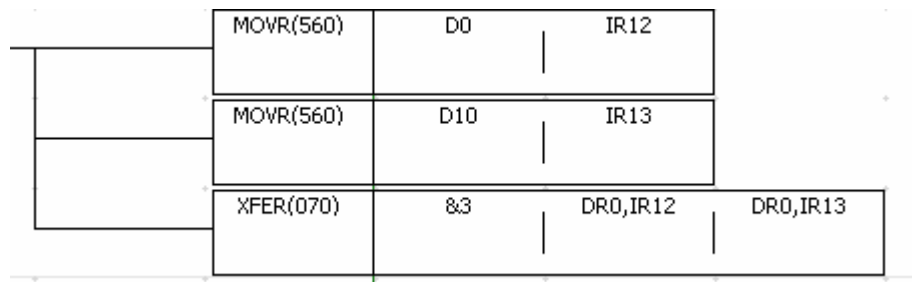
From: Mitsubishi ladder



To: Omron ladder (CP1E)



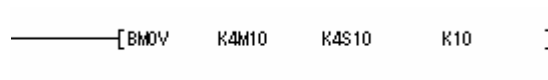
To: Omron ladder (CP1H/CP1L)



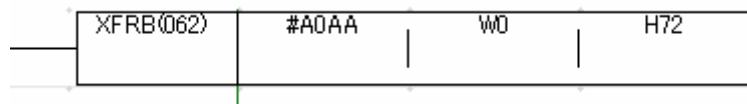
BMOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS, Operand 3 type are K、H

From: Mitsubishi ladder



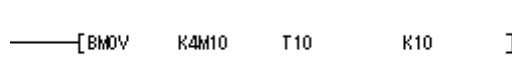
To: Omron ladder



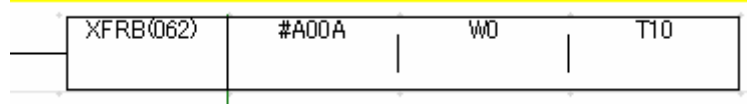
BMOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are T、C、D, Operand 3 type are K、H

From: Mitsubishi ladder



To: Omron ladder



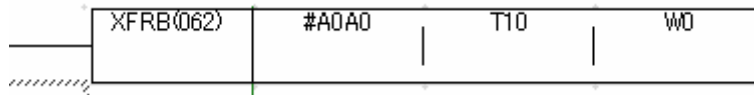
BMOV instruction

Operand 1 type are T、C、D, Operand 2 type are KX、KY、KM、KS, Operand 3 type are K、H

From: Mitsubishi ladder



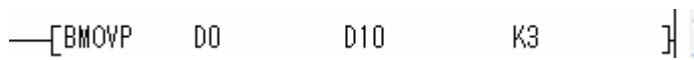
To: Omron ladder



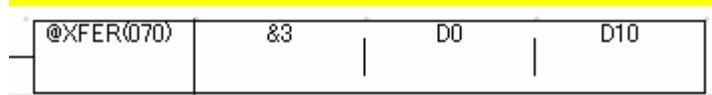
BMOV P instruction

Operand 1 type and Operand 2 type are T、C、D, Operand 3 type are K、H、D

From: Mitsubishi ladder



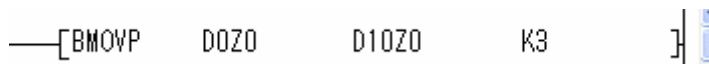
To: Omron ladder



BMOV P instruction

Operand 1 type and Operand 2 type are DZ、DV, Operand 3 type are K、H、D

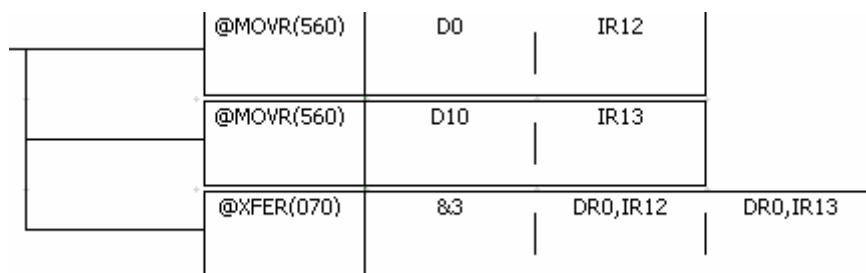
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



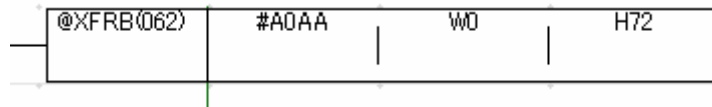
BMOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS, Operand 3 type are K、H

From: Mitsubishi ladder



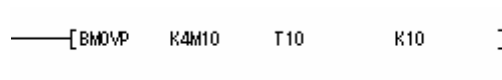
To: Omron ladder



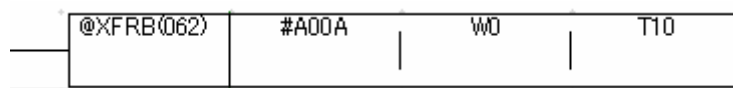
BMOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are T、C、D, Operand 3 type are K、H

From: Mitsubishi ladder



To: Omron ladder



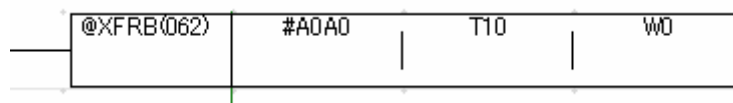
BMOV instruction

Operand 1 type are T、C、D, Operand 2 type are KX、KY、KM、KS, Operand 3 type are K、H

From: Mitsubishi ladder



To: Omron ladder



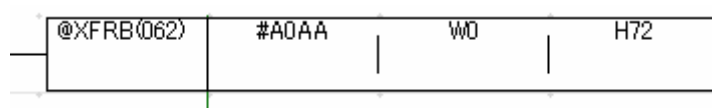
BMOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS, Operand 3 type are K、H

From: Mitsubishi ladder



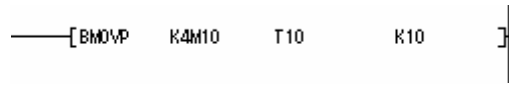
To: Omron ladder



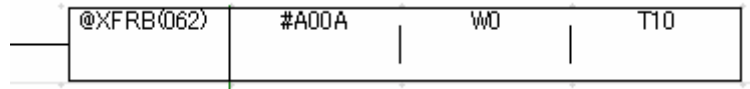
BMOV instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are T、C、D, Operand 3 type are K、H

From: Mitsubishi ladder



To: Omron ladder



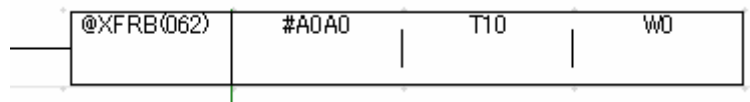
BMOV instruction

Operand 1 type are T、C、D, Operand 2 type are KX、KY、KM、KS, Operand 3 type are K、H

From: Mitsubishi ladder



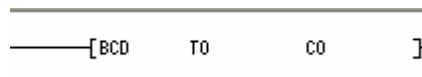
To: Omron ladder



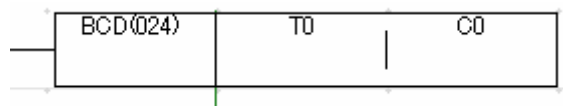
BCD instruction

Operand 1 type and Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



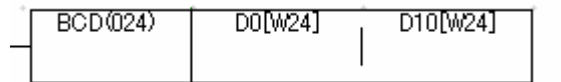
BCD instruction

Operand 1 type and Operand 2 type are DZ、DV

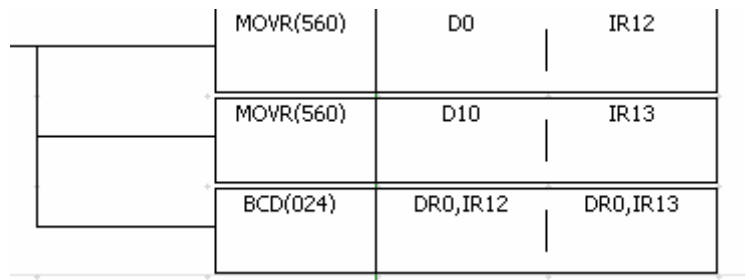
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



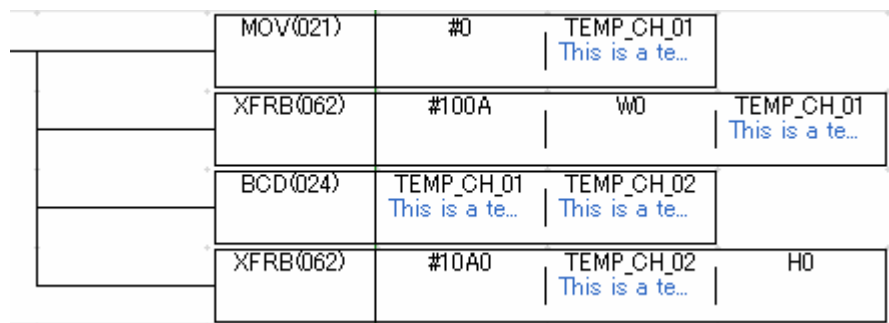
BCD instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



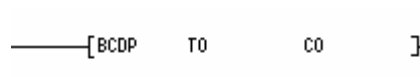
To: Omron ladder



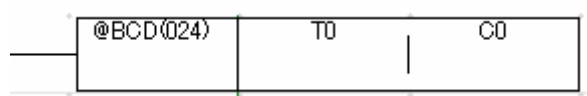
BCDP instruction

Operand 1 type and Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



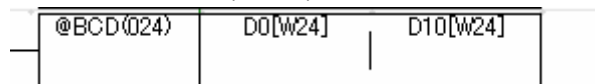
BCDP instruction

Operand 1 type and Operand 2 type are DZ、DV

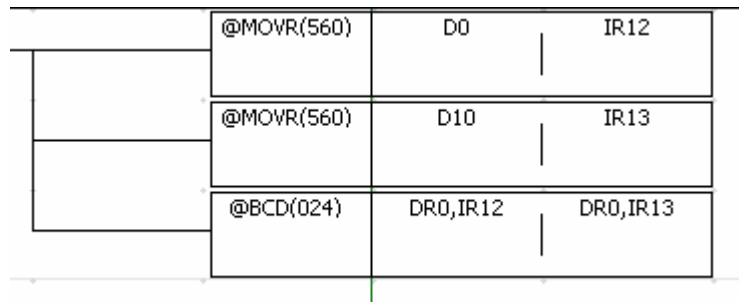
From: Mitsubishi ladder



To: Omron ladder (CP1E)



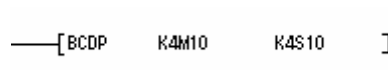
To: Omron ladder (CP1H/CP1L)



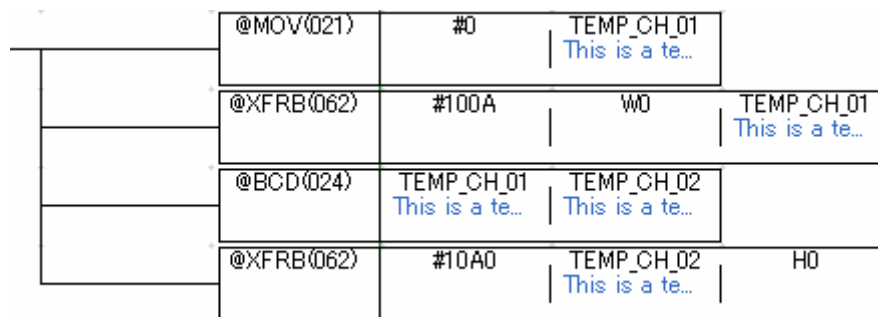
BCDP instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



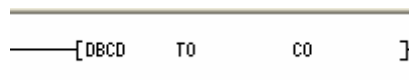
To: Omron ladder



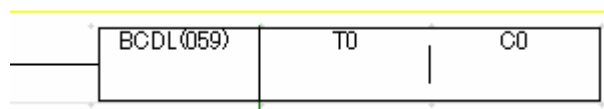
DBCD instruction

Operand 1 type and Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



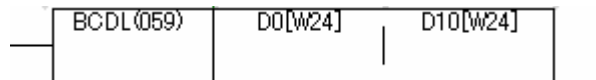
DBCD instruction

Operand 1 type and Operand 2 type are DZ

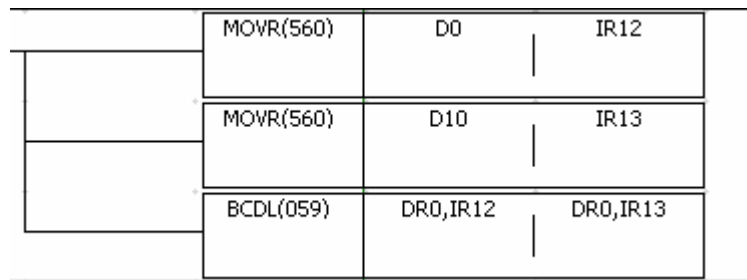
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1L/1H)



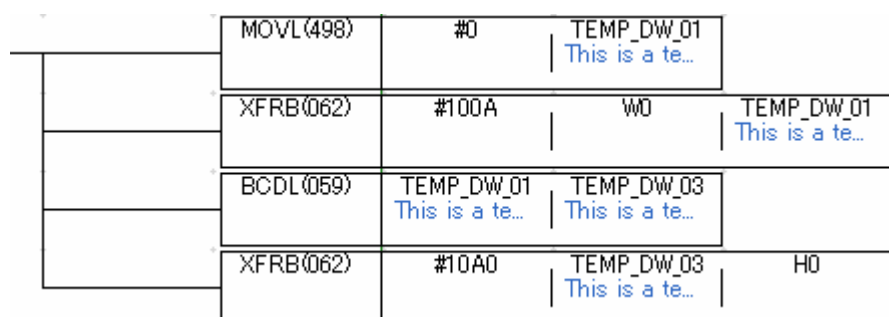
DBCD instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



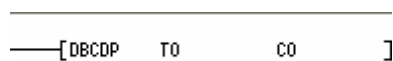
To: Omron ladder



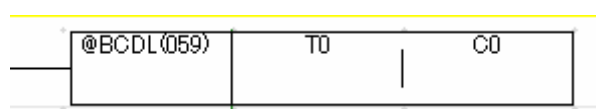
DBCDP instruction

Operand 1 type and Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



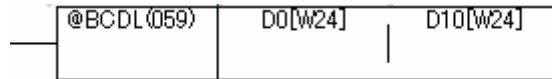
DBCDP instruction

Operand 1 type and Operand 2 type are DZ

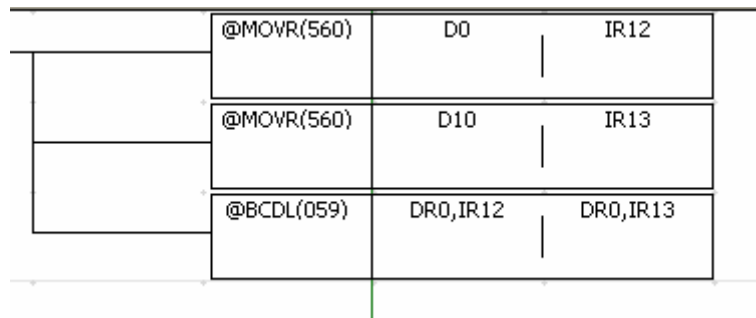
From: Mitsubishi ladder



To: Omron ladder (CP1E)



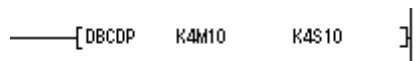
To: Omron ladder (CP1H/CP1L)



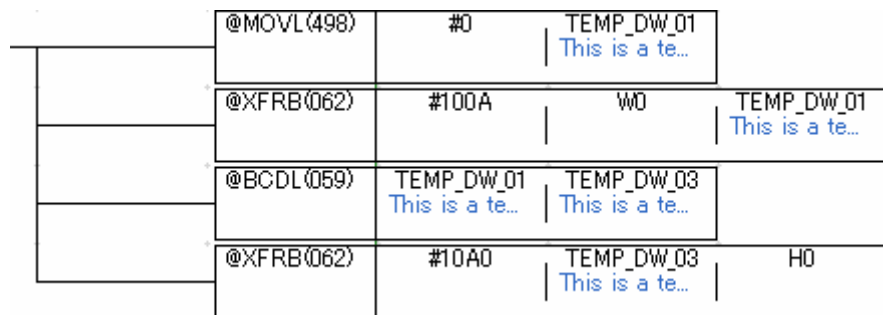
DBCDP instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



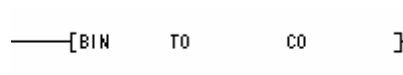
To: Omron ladder



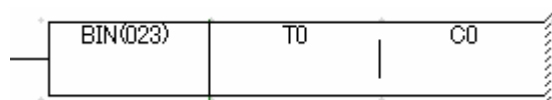
BIN instruction

Operand 1 type and Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



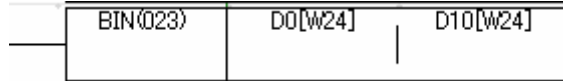
BIN instruction

Operand 1 type and Operand 2 type are DZ、DV

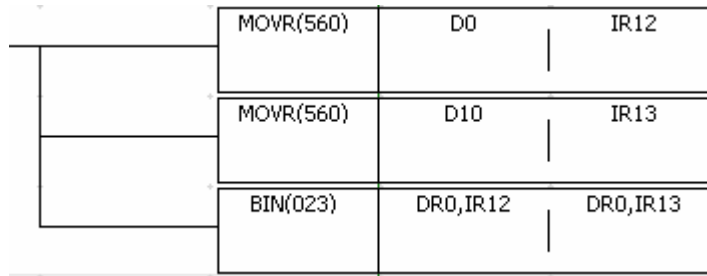
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



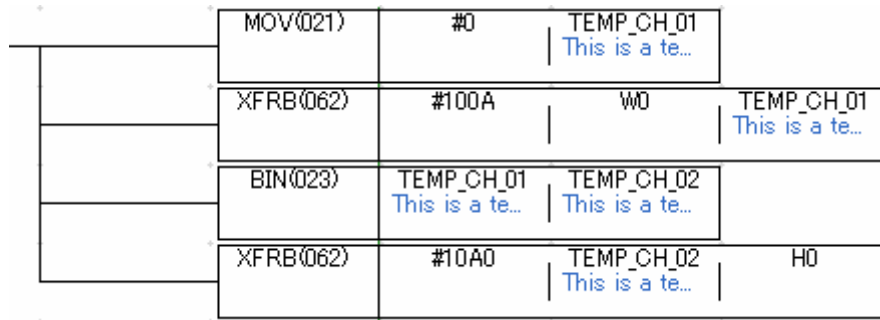
BIN instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



BINP instruction

Operand 1 type and Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



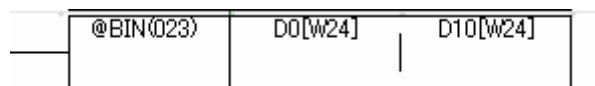
BINP instruction

Operand 1 type and Operand 2 type are DZ、DV

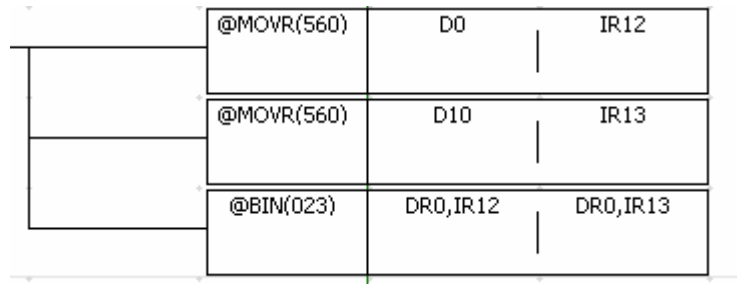
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1L/CP1H)



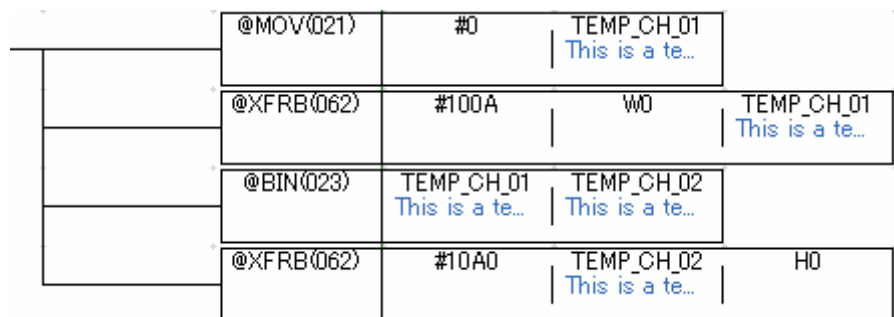
BINP instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



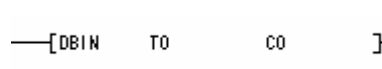
To: Omron ladder



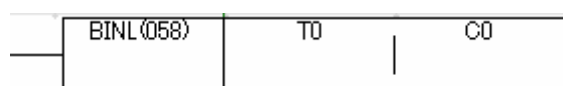
DBIN instruction

Operand 1 type and Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



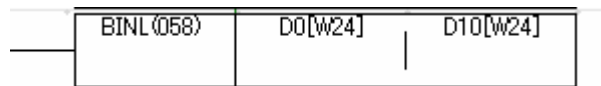
DBIN instruction

Operand 1 type and Operand 2 type are DZ

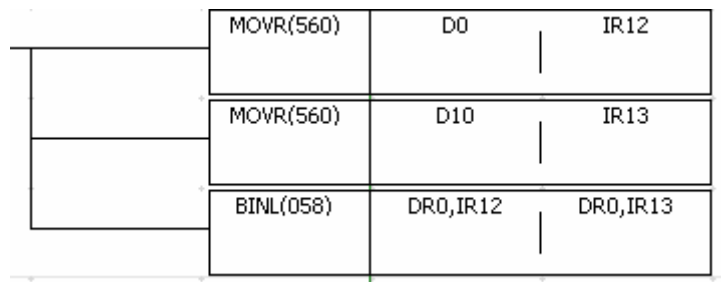
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



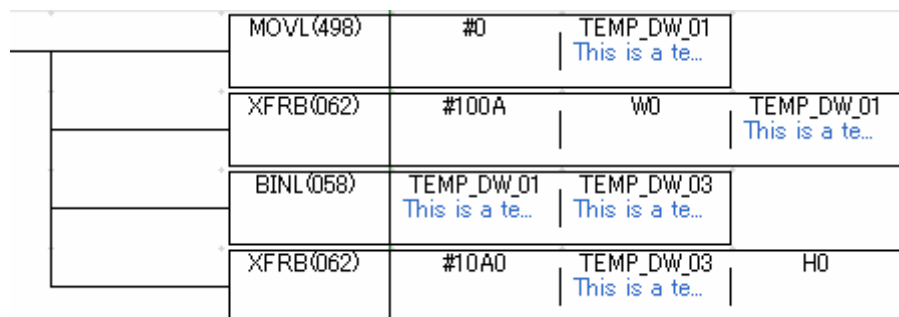
DBIN instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



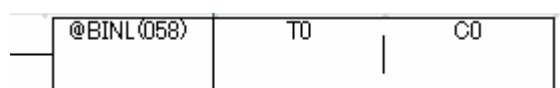
DBINP instruction

Operand 1 type and Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder



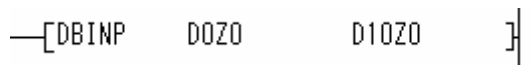
To: Omron ladder



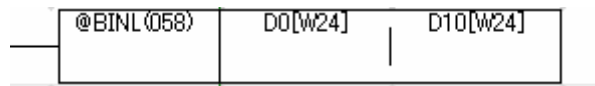
DBINP instruction

Operand 1 type and Operand 2 type are DZ

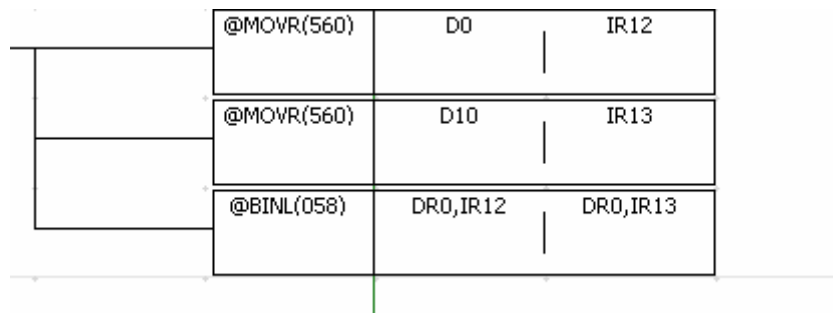
From: Mitsubishi ladder



To: Omron ladder (CP1E)



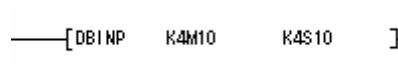
To: Omron ladder (CP1H/CP1L)



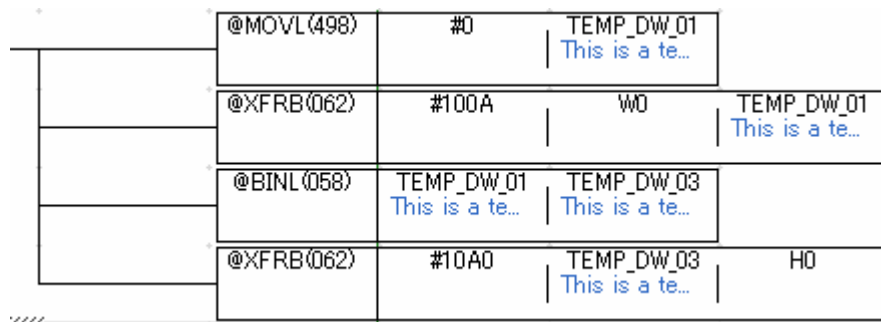
DBINP instruction

Operand 1 type are KX、KY、KM、KS, Operand 2 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



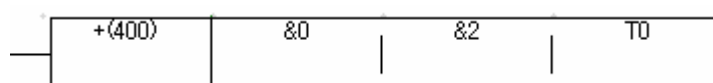
ADD instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



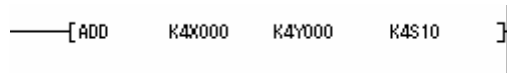
To: Omron ladder



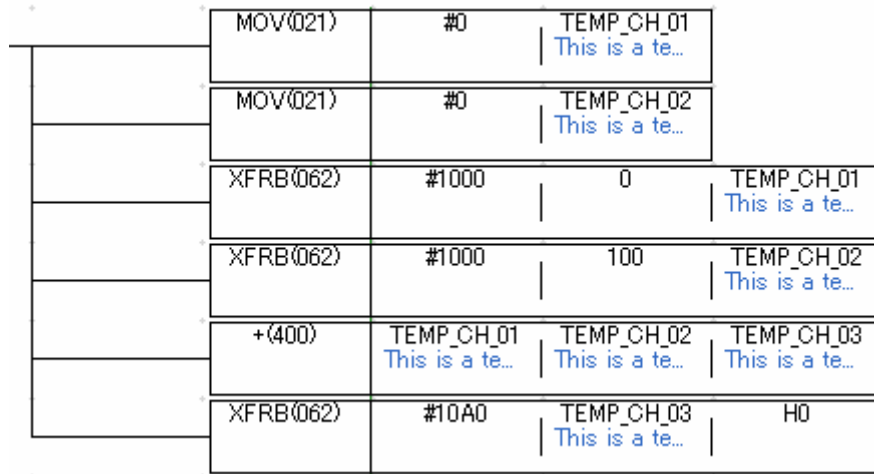
ADD instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



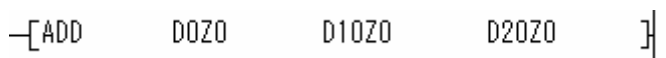
To: Omron ladder



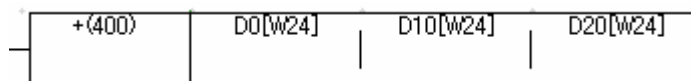
ADD instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ、DV

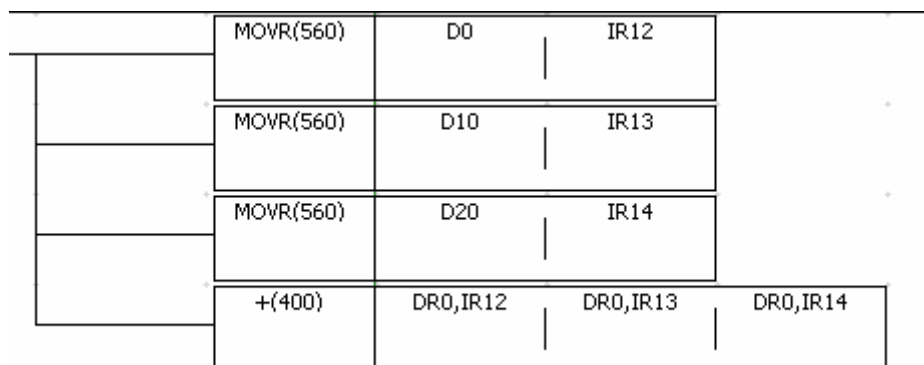
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



ADDP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

—[ADDP K0 K2 T0]

To: Omron ladder

—	@+(400)	&0		&2		T0
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ADDP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[ADDP K4X000 K4Y000 K4S10]

To: Omron ladder

	@MOV(021)	#0	TEMP_CH_01 This is a te...
	@MOV(021)	#0	TEMP_CH_02 This is a te...
	@XFRB(062)	#1000 0	TEMP_CH_01 This is a te...
	@XFRB(062)	#1000 100	TEMP_CH_02 This is a te...
	@+(400)	TEMP_CH_01 This is a te...	TEMP_CH_02 This is a te...
	@XFRB(062)	#10A0 TEMP_CH_03 This is a te...	H0

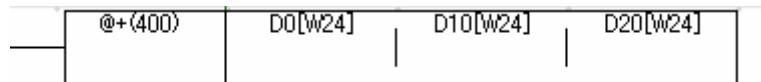
ADDP instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ、DV

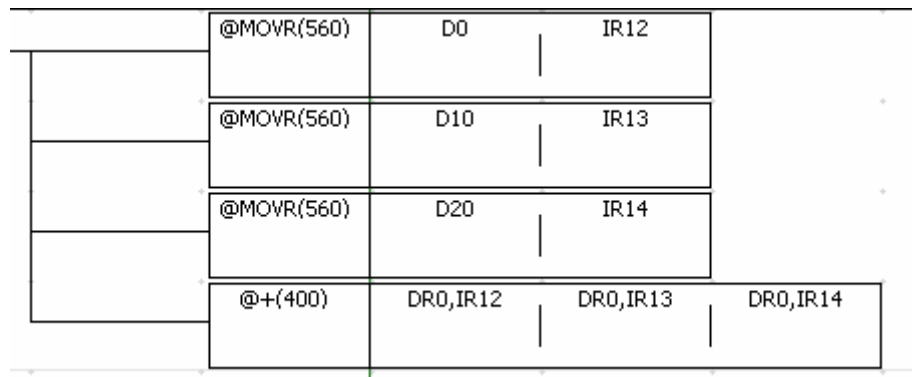
From: Mitsubishi ladder

—[ADDP D0Z0 D10Z0 D20Z0]|

To: Omron ladder (CP1E)



To: Omron ladder (CP1L/1H)



DADD instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

—[DADD K0 K2 T0]|

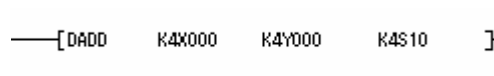
To: Omron ladder



DADD instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



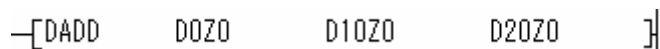
To: Omron ladder

	MOV(L(498)	#0	TEMP_DW_01 This is a te...
	MOV(L(498)	#0	TEMP_DW_03 This is a te...
	XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	+L(401)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	XFRB(062)	#10A0	TEMP_DW_05 This is a te... H0

DADD instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder



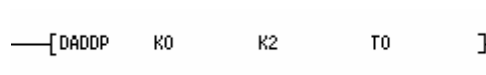
To: Omron ladder

+L(401)	D0[W24]	D10[W24]	D20[W24]
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DADDP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder

@+L(401)	&0	&2	T0
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DADDP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[DADDP K4X000 K4Y000 K4S10]|

To: Omron ladder

	@MOVL(498)	#0	TEMP_DW_01 This is a te...
	@MOVL(498)	#0	TEMP_DW_03 This is a te...
	@XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	@XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	@+L(401)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	@XFRB(062)	#10A0	TEMP_DW_05 This is a te... H0

DADDP instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DADDP D0Z0 D10Z0 D20Z0]|

To: Omron ladder (CP1E)

@+L(401)	D0[W24]	D10[W24]	D20[W24]
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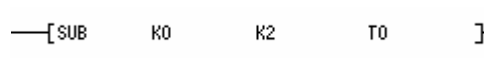
To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	D0	IR12
	@MOVR(560)	D10	IR13
	@MOVR(560)	D20	IR14
@+L(401)	DR0,IR12	DR0,IR13	DR0,IR14

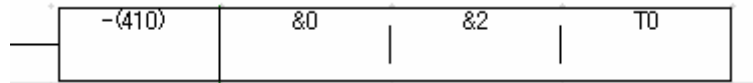
SUB instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



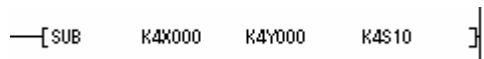
To: Omron ladder



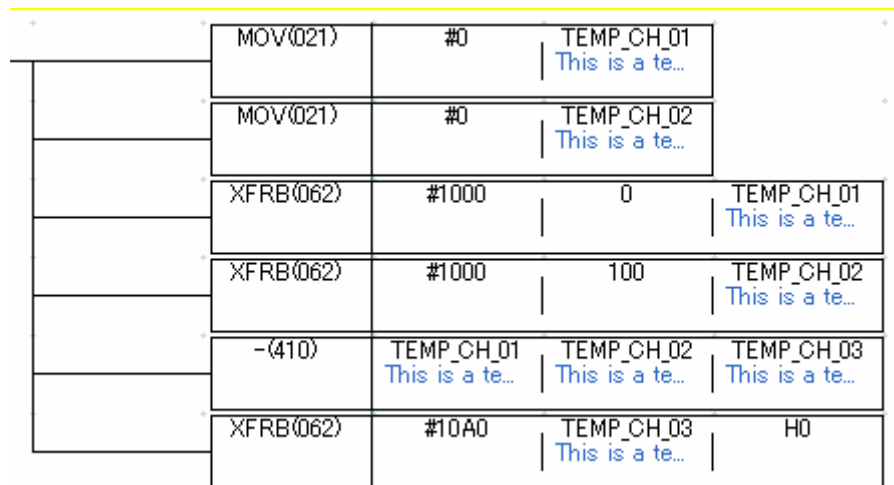
SUB instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



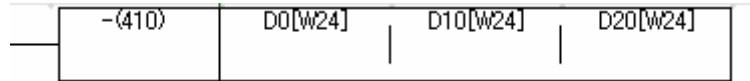
SUB instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ、DV

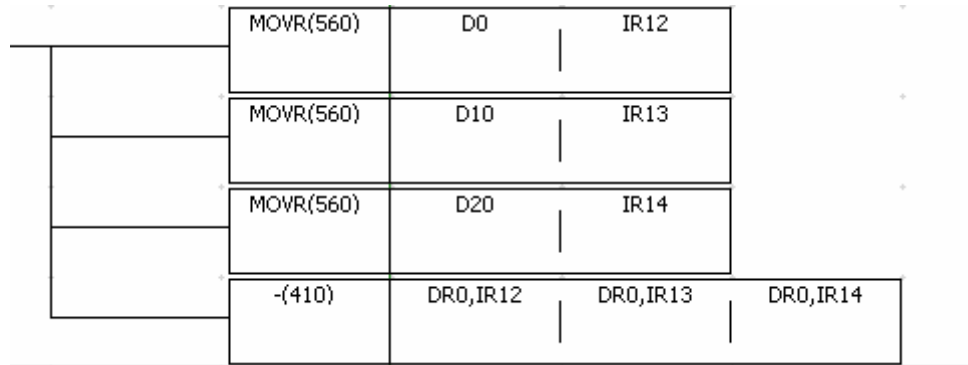
From: Mitsubishi ladder



To: Omron ladder (CP1E)



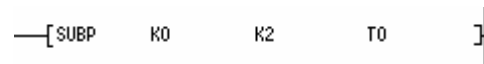
To: Omron ladder (CP1H/CP1L)



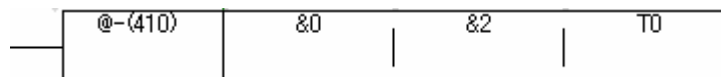
SUBP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



SUBP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[SUBP K4X000 K4Y000 K4S10]

To: Omron ladder

	@MOV(021)	#0	TEMP_CH_01 This is a te...
	@MOV(021)	#0	TEMP_CH_02 This is a te...
	@XFRB(062)	#1000	0 TEMP_CH_01 This is a te...
	@XFRB(062)	#1000	100 TEMP_CH_02 This is a te...
	@-(410)	TEMP_CH_01 This is a te...	TEMP_CH_02 This is a te... TEMP_CH_03 This is a te...
	@XFRB(062)	#10A0	TEMP_CH_03 This is a te... H0

SUBP instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ、DV

From: Mitsubishi ladder

```
[SUBP    D0Z0    D10Z0    D20Z0    ]
```

To: Omron ladder (CP1E)

@-(410)	D0[W24]	D10[W24]	D20[W24]
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To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	D0		IR12		
	@MOVR(560)	D10		IR13		
	@MOVR(560)	D20		IR14		
	@-(410)	DR0,IR12		DR0,IR13		DR0,IR14

DSUB instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

```
[DSUB    K0      K2      T0      ]
```

To: Omron ladder

-(410)	&0	&2	T0
--------	----	----	----

DSUB instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

```

┌[DSUB    K4X000    K4Y000    K4S10    ]
└

```

To: Omron ladder

	MOVL(498)	#0	TEMP_DW_01 This is a te...
	MOVL(498)	#0	TEMP_DW_03 This is a te...
	XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	-L(411)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	XFRB(062)	#10A0	TEMP_DW_05 This is a te... H0

DSUB instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DSUB D0Z0 D10Z0 D20Z0]|

To: Omron ladder (CP1E)

—	-L(411)	D0[W24]		D10[W24]		D20[W24]
---	---------	---------	--	----------	--	----------

To: Omron ladder (CP1H/CP1L)

	MOVR(560)	D0		IR12	
	MOVR(560)	D10		IR13	
	MOVR(560)	D20		IR14	
	-L(411)	DR0,IR12		DR0,IR13	DR0,IR14

DSUBP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

—[DSUBP K0 K2 T0]|

To: Omron ladder

—	@-L(411)	&0		&2		T0
---	----------	----	--	----	--	----

DSUBP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[DSUBP K4X000 K4Y000 K4S10]

To: Omron ladder

	@MOVL(498)	#0	TEMP_DW_01 This is a te...
	@MOVL(498)	#0	TEMP_DW_03 This is a te...
	@XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	@XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	@-L(411)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	@XFRB(062)	#10A0	TEMP_DW_05 This is a te... H0

DSUBP instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DSUBP D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)

@-L(411)	D0[W24]	D10[W24]	D20[W24]
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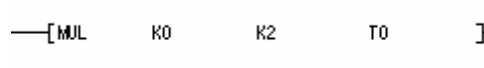
To: Omron ladder (CP1E)

	@MOVR(560)	D0	IR12
	@MOVR(560)	D10	IR13
	@MOVR(560)	D20	IR14
	@-L(411)	DR0,IR12	DR0,IR13 DR0,IR14

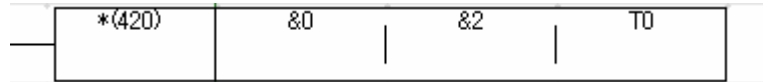
MUL instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



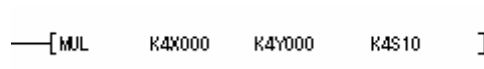
To: Omron ladder



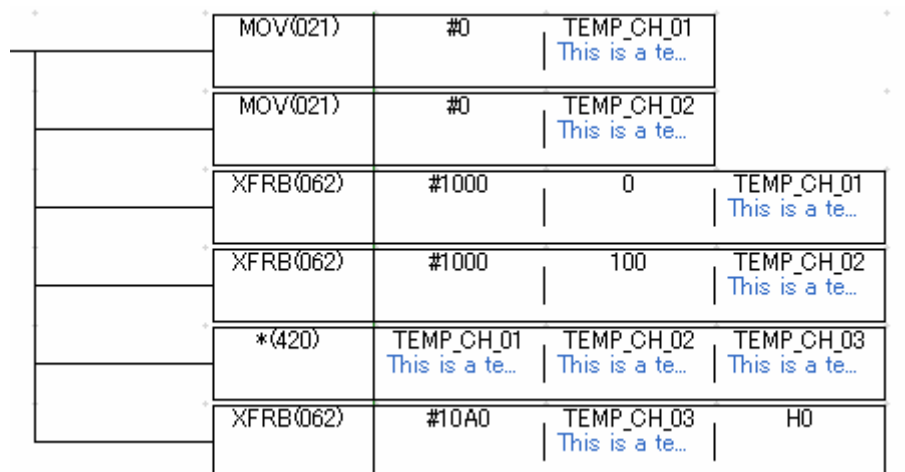
MUL instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



MUL instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ、DV

From: Mitsubishi ladder

```
┌[ MUL      D0Z0      D10Z0      D20Z0      ]┐
```

To: Omron ladder (CP1E)

*{420}	D0[W24]	D10[W24]	D20[W24]
--------	---------	----------	----------

To: Omron ladder (CP1H/CP1L)

	MOVR(560)	D0	IR12	
	MOVR(560)	D10	IR13	
	MOVR(560)	D20	IR14	
	*(420)	DR0,IR12	DR0,IR13	DR0,IR14

MULP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

```
┌[ MULP     K0        K2        T0        ]┐
```

To: Omron ladder

@*{420}	&0	&2	T0
---------	----	----	----

MULP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[MULP K4X000 K4Y000 K4S10]

To: Omron ladder

	@MOV(021)	#0	TEMP_CH_01 This is a te...
	@MOV(021)	#0	TEMP_CH_02 This is a te...
	@XFRB(062)	#1000 0	TEMP_CH_01 This is a te...
	@XFRB(062)	#1000 100	TEMP_CH_02 This is a te...
	@*(420)	TEMP_CH_01 This is a te...	TEMP_CH_02 This is a te...
	@XFRB(062)	#10A0 TEMP_CH_03 This is a te...	H0

MULP instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ、DV

From: Mitsubishi ladder

—[MULP D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)

	@*(420)	D0[W24]	D10[W24]	D20[W24]
--	---------	---------	----------	----------

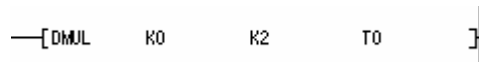
To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	D0	IR12
	@MOVR(560)	D10	IR13
	@MOVR(560)	D20	IR14
	@*(420)	DR0,IR12	DR0,IR13
			DR0,IR14

DMUL instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



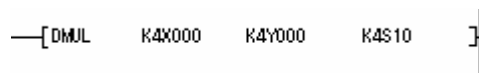
To: Omron ladder



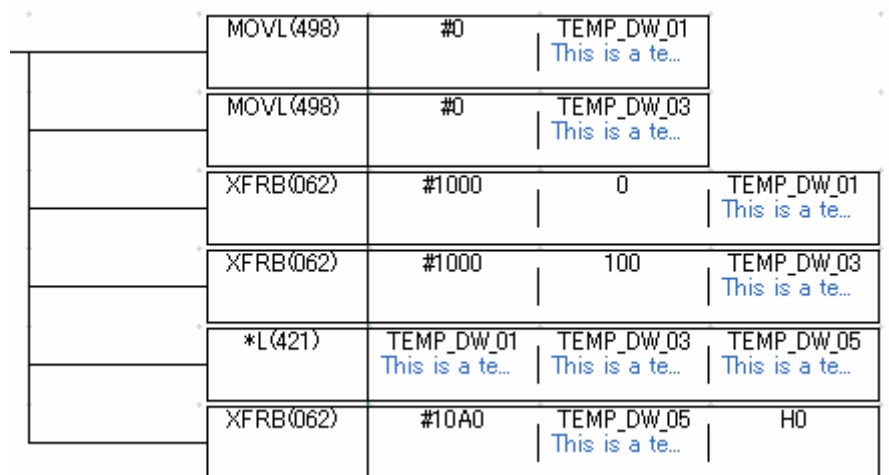
DMUL instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



DMUL instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DMUL D0Z0 D10Z0 D20Z0]|

To: Omron ladder (CP1E)

*L(421)	D0[W24]	D10[W24]	D20[W24]
---------	---------	----------	----------

To: Omron ladder (CP1E)

MOV(R)(560)	D0	IR12	
MOV(R)(560)	D10	IR13	
MOV(R)(560)	D20	IR14	
*L(421)	DR0,IR12	DR0,IR13	DR0,IR14

DMULP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

—[DMULP K0 K2 T0]|

To: Omron ladder

@*L(421)	&0	&2	T0
----------	----	----	----

DMULP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[DMULP K4X000 K4Y000 K4S10]

To: Omron ladder

	@MOVL(498)	#0	TEMP_DW_01 This is a te...
	@MOVL(498)	#0	TEMP_DW_03 This is a te...
	@XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	@XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	@*L(421)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	@XFRB(062)	#10A0	TEMP_DW_05 This is a te... H0

DMULP instruction

Operand 1 type , Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

[DMULP D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)

@*L(421)	D0[W24]	D10[W24]	D20[W24]
----------	---------	----------	----------

To: Omron ladder (CP1H/CP1L)

	@MOV(R560)	D0	IR12	
	@MOV(R560)	D10	IR13	
	@MOV(R560)	D20	IR14	
	@*L(421)	DR0,IR12	DR0,IR13	DR0,IR14

DIV instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

[DIV K0 K2 T0]

To: Omron ladder

/ (430)	&0	&2	T0
---------	----	----	----

DIV instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[DIV K4X000 K4Y000 K4S10]

To: Omron ladder

	MOV(021)	#0	TEMP_CH_01 This is a te...
	MOV(021)	#0	TEMP_CH_02 This is a te...
	XFRB(062)	#1000	0 TEMP_CH_01 This is a te...
	XFRB(062)	#1000	100 TEMP_CH_02 This is a te...
	/ (430)	TEMP_CH_01 This is a te...	TEMP_CH_02 This is a te... TEMP_CH_03 This is a te...
	XFRB(062)	#10A0	TEMP_CH_03 This is a te... H0

DIV instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ、DV

From: Mitsubishi ladder

—[DIV D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)

/ (430)	D0[W24]	D10[W24]	D20[W24]
---------	---------	----------	----------

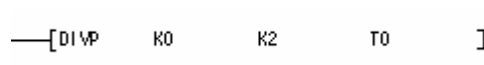
To: Omron ladder (CP1H/CP1L)

	MOVR(560)	D0	IR12
	MOVR(560)	D10	IR13
	MOVR(560)	D20	IR14
/ (430)	DR0,IR12	DR0,IR13	DR0,IR14

DIVP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



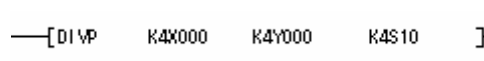
To: Omron ladder



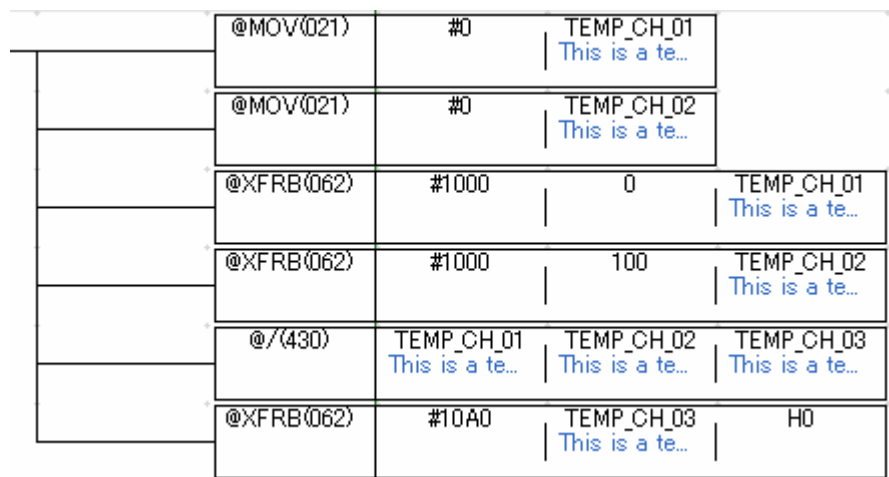
DIVP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



DIVP instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ、DV

From: Mitsubishi ladder

—[DIVP D0Z0 D10Z0 D20Z0]|

To: Omron ladder (CP1E)

@/(430)	D0[W24]		D10[W24]		D20[W24]
---------	---------	--	----------	--	----------

To: Omron ladder (CP1L/1H)

	@MOV(R560)	D0		IR12	
	@MOV(R560)	D10		IR13	
	@MOV(R560)	D20		IR14	
	@/(430)	DR0,IR12		DR0,IR13	DR0,IR14

DDIV instruction: Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

—[DDIV K0 K2 T0]|

To: Omron ladder

/L(431)	&0		&2		T0
---------	----	--	----	--	----

DDIV instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[DDIV K4X000 K4Y000 K4S10]

To: Omron ladder

	MOV L(498)	#0	TEMP_DW_01 This is a te...
	MOV L(498)	#0	TEMP_DW_03 This is a te...
	XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	/L(431)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	XFRB(062)	#10A0	TEMP_DW_05 This is a te... H0

DDIV instruction

Operand 1 type 、Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DDIV D0Z0 D10Z0 D20Z0]|

To: Omron ladder (CP1E)

/L(431)	D0[W24]	D10[W24]	D20[W24]
---------	---------	----------	----------

To: Omron ladder (CP1H/CP1L)

	MOVR(560)	D0	IR12
	MOVR(560)	D10	IR13
	MOVR(560)	D20	IR14
/L(431)	DR0,IR12	DR0,IR13	DR0,IR14

DDIVP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z,Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

—[DDIVP K0 K2 T0]|

To: Omron ladder

@/L(431)	&0	&2	T0
----------	----	----	----

DDIVP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

```

┌[DDIVP  K4X000  K4Y000  K4S10  ]

```

To: Omron ladder

	@MOVL(498)	#0	TEMP_DW_01 This is a te...	
	@MOVL(498)	#0	TEMP_DW_03 This is a te...	
	@XFRB(062)	#1000	0	TEMP_DW_01 This is a te...
	@XFRB(062)	#1000	100	TEMP_DW_03 This is a te...
	@/L(431)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te...	TEMP_DW_05 This is a te...
	@XFRB(062)	#10A0	TEMP_DW_05 This is a te...	H0

DDIVP instruction

Operand 1 type , Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DDIVP D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)

@/L(431)	D0[W24]	D10[W24]	D20[W24]
----------	---------	----------	----------

To: Omron ladder (CP1E)

	@MOV(560)	D0	IR12
	@MOV(560)	D10	IR13
	@MOV(560)	D20	IR14
	@/L(431)	DR0,IR12	DR0,IR13 DR0,IR14

INC instruction

Operand 1 type are T、C、D、V、Z

From: Mitsubishi ladder

—[INC T0]

To: Omron ladder

++(590)	T0
---------	----

INC instruction

Operand 1 type are DV、DZ

From: Mitsubishi ladder

—[INC D0Z0]

To: Omron ladder (CP1E)

++(590)	D0[W24]
---------	---------

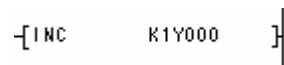
To: Omron ladder (CP1H/CP1L)

	MOV(560)	D0	IR12
	++(590)	DR0,IR12	

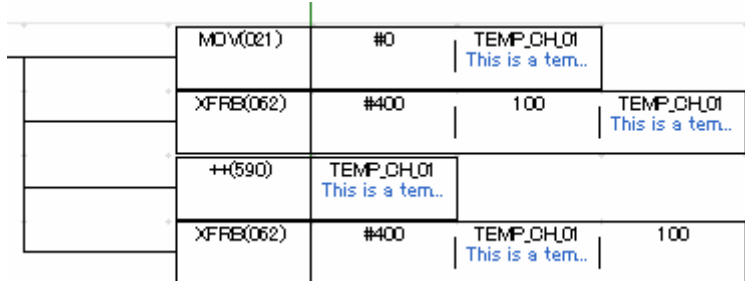
INC instruction

Operand 1 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



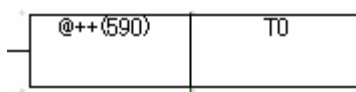
INCP instruction

Operand 1 type are T、C、D、V、Z

From: Mitsubishi ladder



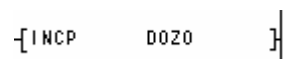
To: Omron ladder



INCP instruction

Operand 1 type are DV、DZ

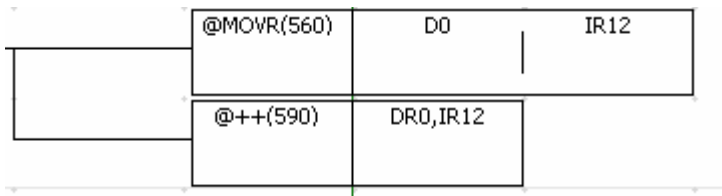
From: Mitsubishi ladder



To: Omron ladder (CP1E)



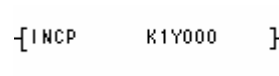
To: Omron ladder (CP1H/CP1L)



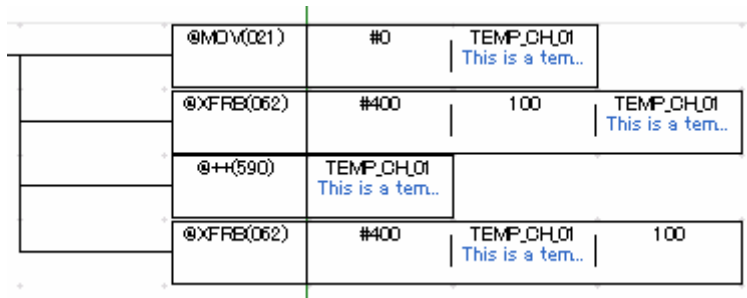
INCP instruction

Operand 1 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



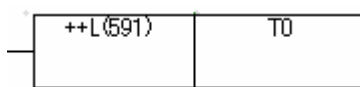
DINC instruction

Operand 1 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



DINC instruction

Operand 1 type is DZ

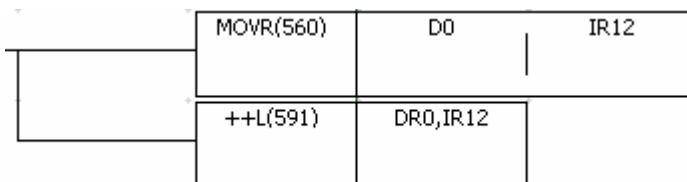
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



DINC instruction

Operand 1 type are KY、KM、KS

From: Mitsubishi ladder

`[DINC K1Y000]`

To: Omron ladder

	MDVL(498)	#0	TEMP_DW_01 <i>This is a tem...</i>
	XFRB(062)	#400	100 TEMP_DW_01 <i>This is a tem...</i>
	++L(591)	TEMP_DW_01 <i>This is a tem...</i>	
	XFRB(062)	#400	TEMP_DW_01 <i>This is a tem...</i> 100

DINCP instruction

Operand 1 type are T、C、D、V、Z

From: Mitsubishi ladder

`[DINCP T0]`

To: Omron ladder

@++L(591)	T0
-----------	----

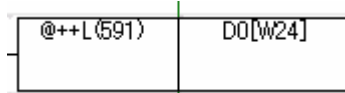
DINCP instruction

Operand 1 type is DZ

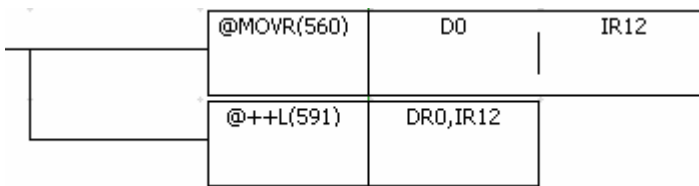
From: Mitsubishi ladder

[DINCP D0Z0]

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



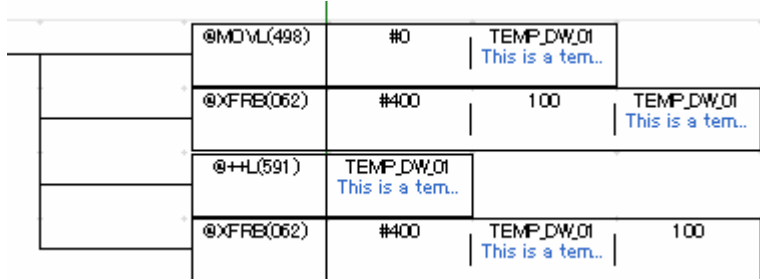
DINCP instruction

Operand 1 type are KY、KM、KS

From: Mitsubishi ladder

[DINCP K1Y000]

To: Omron ladder



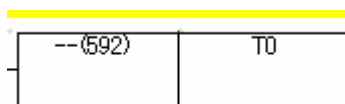
DEC instruction

Operand 1 type are T、C、D、V、Z

From: Mitsubishi ladder

[DEC T0]

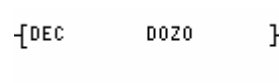
To: Omron ladder



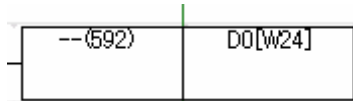
DEC instruction

Operand 1 type are DV、DZ

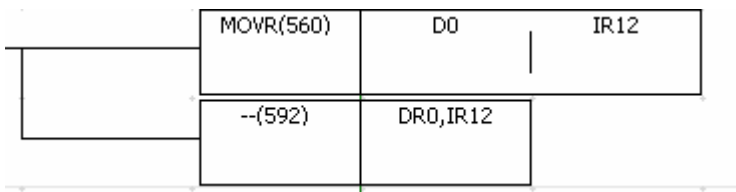
From: Mitsubishi ladder



To: Omron ladder (CP1E)



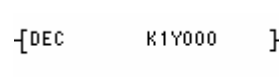
To: Omron ladder (CP1H/CP1L)



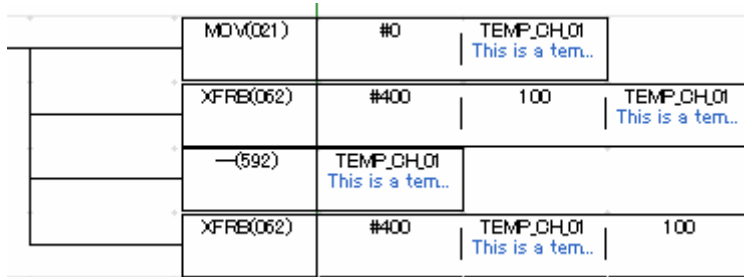
DEC instruction

Operand 1 type are KY、KM、KS

From: Mitsubishi ladder



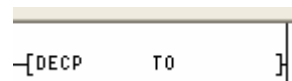
To: Omron ladder



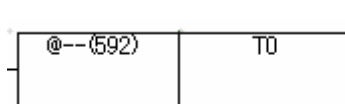
DECP instruction

Operand 1 type are T、C、D、V、Z

From: Mitsubishi ladder



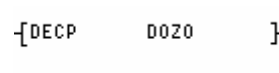
To: Omron ladder



DECP instruction

Operand 1 type are DV、DZ

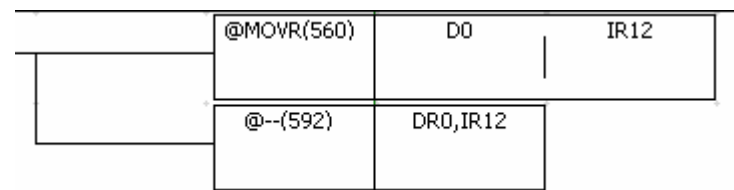
From: Mitsubishi ladder



To: Omron ladder (CP1E)



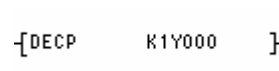
To: Omron ladder (CP1H/CP1L)



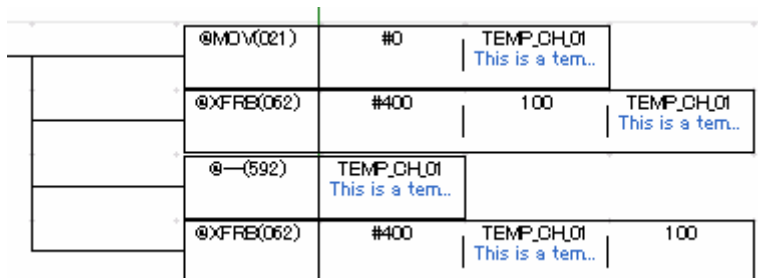
DECP instruction

Operand 1 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



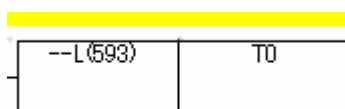
DDEC instruction

Operand 1 type are T、C、D、V、Z

From: Mitsubishi ladder



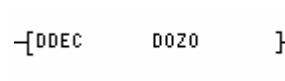
To: Omron ladder



DDEC instruction

Operand 1 type are DZ

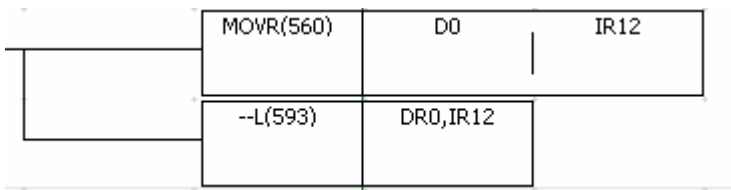
From: Mitsubishi ladder



To: Omron ladder (CP1E)



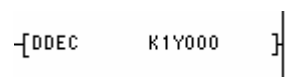
To: Omron ladder (CP1H/CP1L)



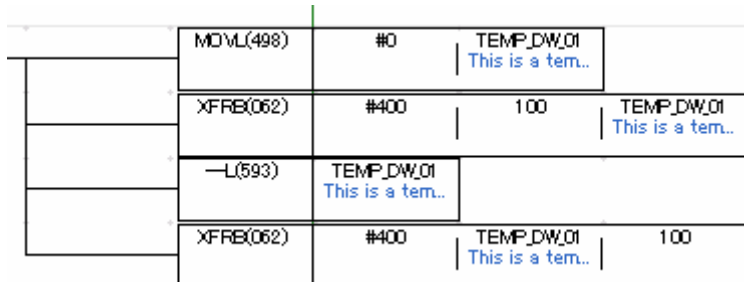
DDEC instruction

Operand 1 type are KY, KM, KS

From: Mitsubishi ladder



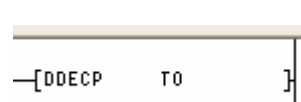
To: Omron ladder



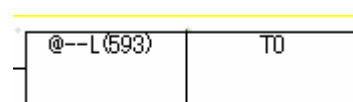
DDECP instruction

Operand 1 type are T, C, D, V, Z

From: Mitsubishi ladder



To: Omron ladder



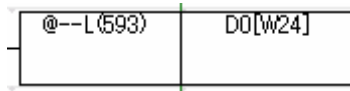
DDECP instruction

Operand 1 type are DZ

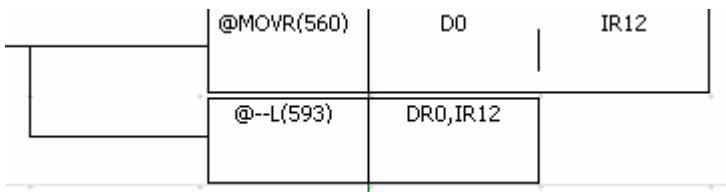
From: Mitsubishi ladder

```
[DDECP D0Z0 ]
```

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



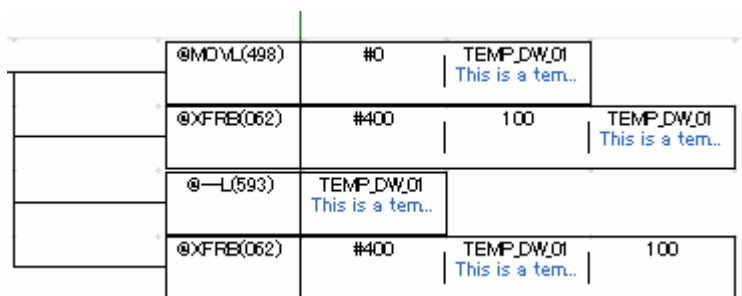
DDECP instruction

Operand 1 type are KY、KM、KS

From: Mitsubishi ladder

```
[DDECP K1Y000 ]
```

To: Omron ladder



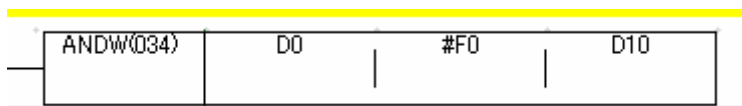
WAND instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

```
[WAND D0 H0F0 D10 ]
```

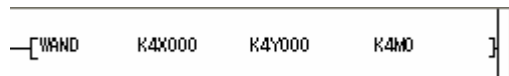
To: Omron ladder



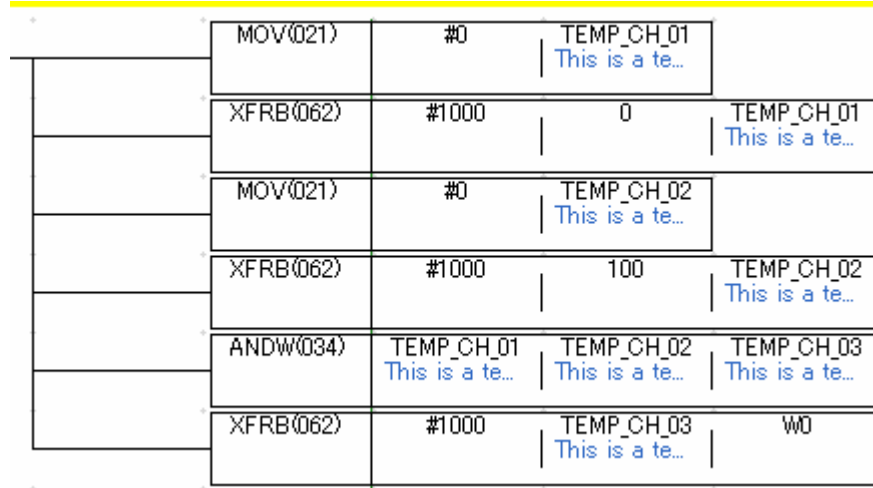
WAND instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



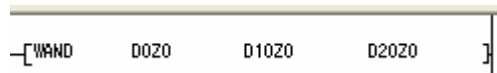
To: Omron ladder



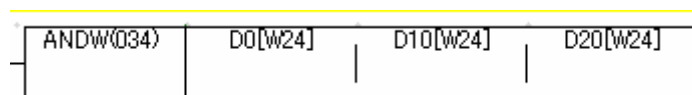
WAND instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ、DV

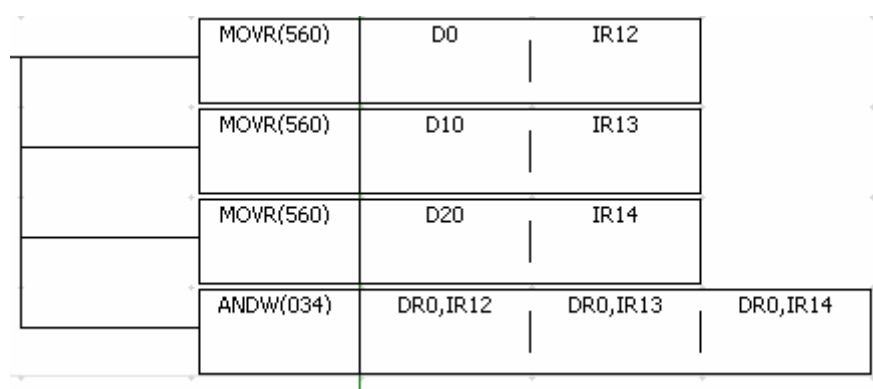
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1E)



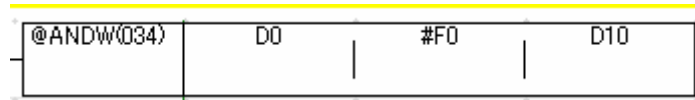
WANDP instruction

Operand 1 type and Operand 2 type are K, H, T, C, D, V, Z, Operand 3 type are T, C, D, V, Z

From: Mitsubishi ladder



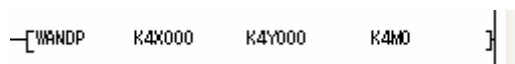
To: Omron ladder



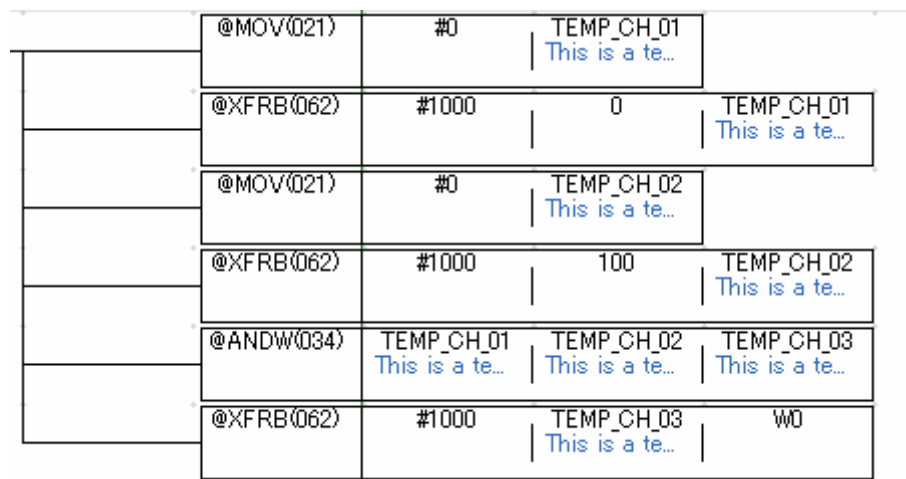
WANDP instruction

Operand 1 type and Operand 2 type are KX, KY, KM, KS, Operand 3 type are KY, KM, KS

From: Mitsubishi ladder



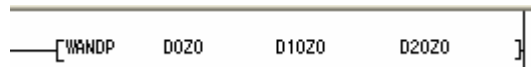
To: Omron ladder



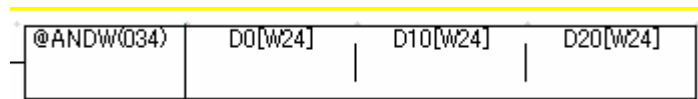
WANDP instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ、DV

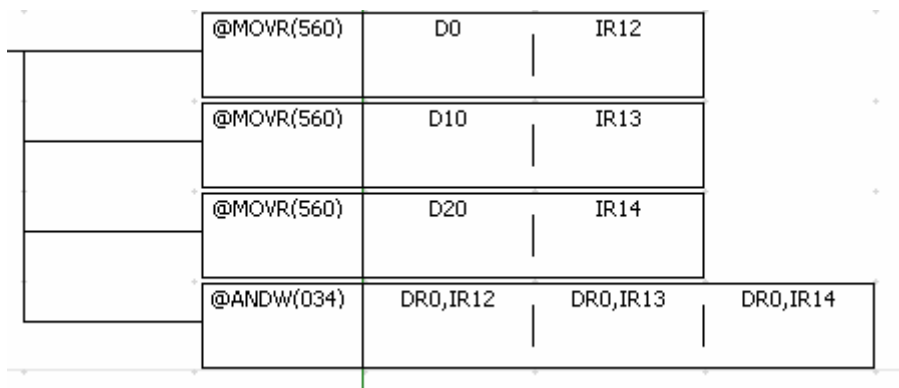
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



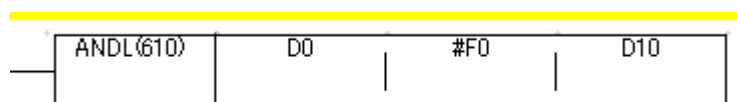
DAND instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

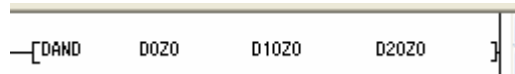
—[DAND	K4X000	K4Y000	K4M0
--------	--------	--------	------

	MOVW(498)	#0	TEMP_DW_01 This is a te...	
	XFRB(062)	#1000	0	TEMP_DW_01 This is a te...
	MOVL(498)	#0	TEMP_DW_03 This is a te...	
	XFRB(062)	#1000	100	TEMP_DW_03 This is a te...
	ANDL(610)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te...	TEMP_DW_05 This is a te...
	XFRB(062)	#1000	TEMP_DW_05 This is a te...	W0

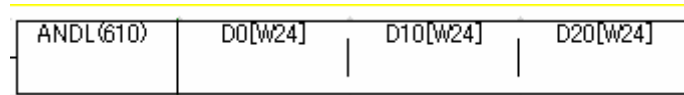
DAND instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ

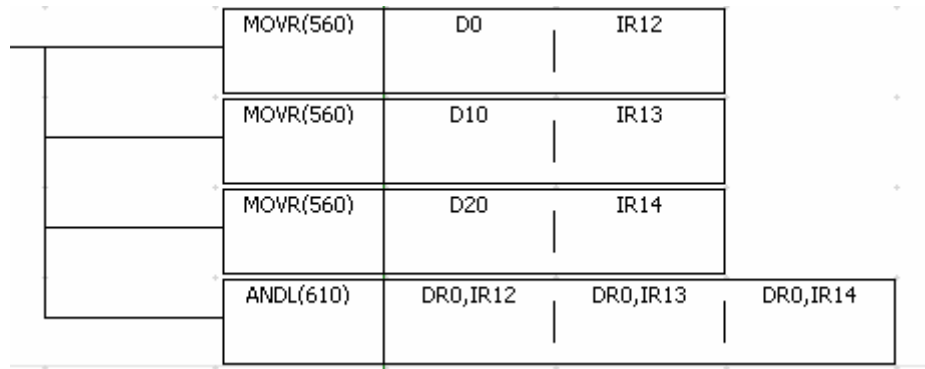
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



DANDP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



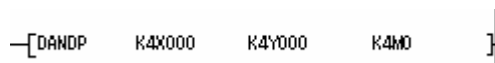
To: Omron ladder



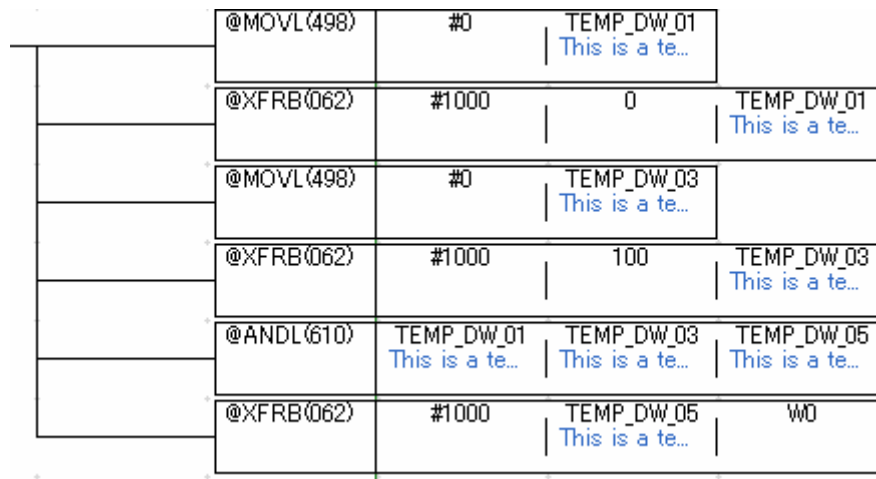
DANDP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



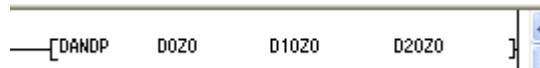
To: Omron ladder



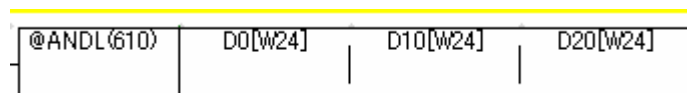
DANDP instruction

Operand 1 type, Operand 2 type and Operand 3 type are DZ

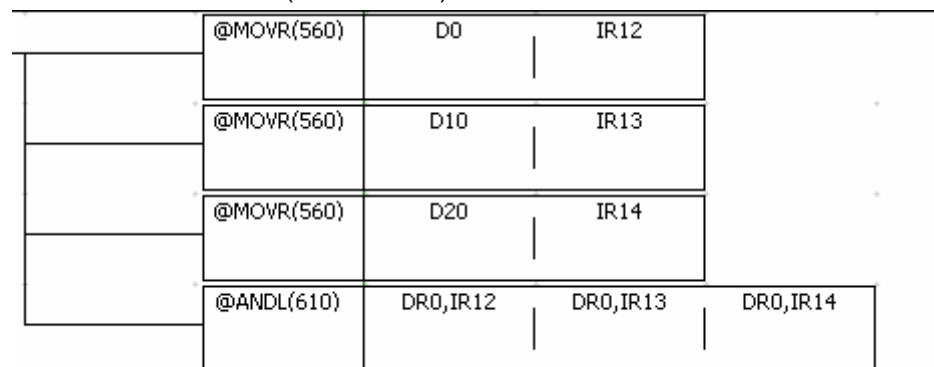
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



WOR instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



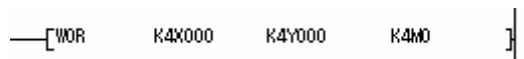
To: Omron ladder



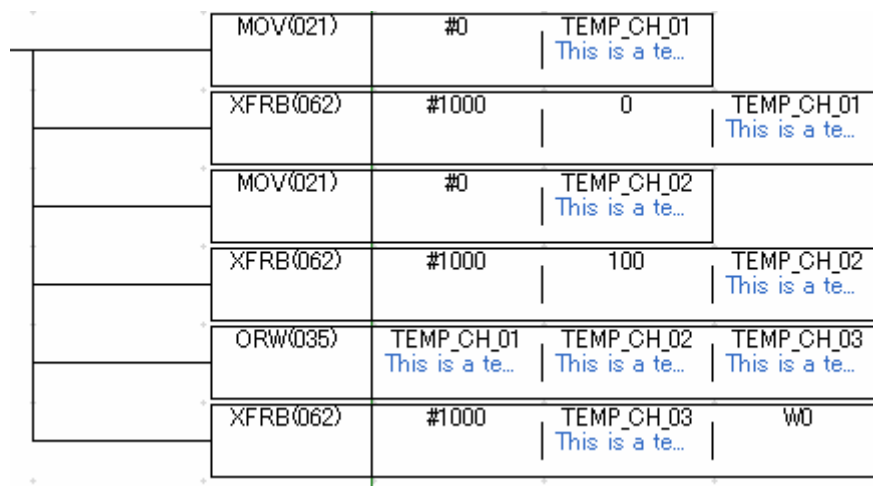
WOR instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



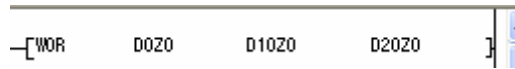
To: Omron ladder



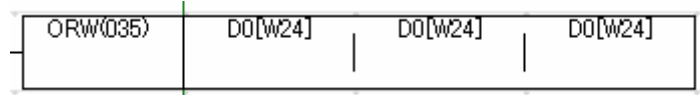
WOR instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ、DV

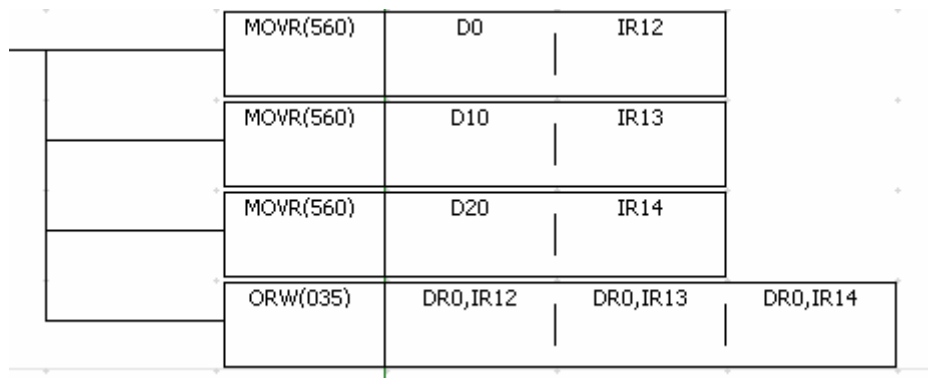
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



WORP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



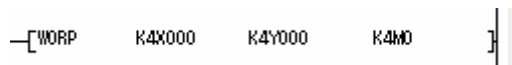
To: Omron ladder



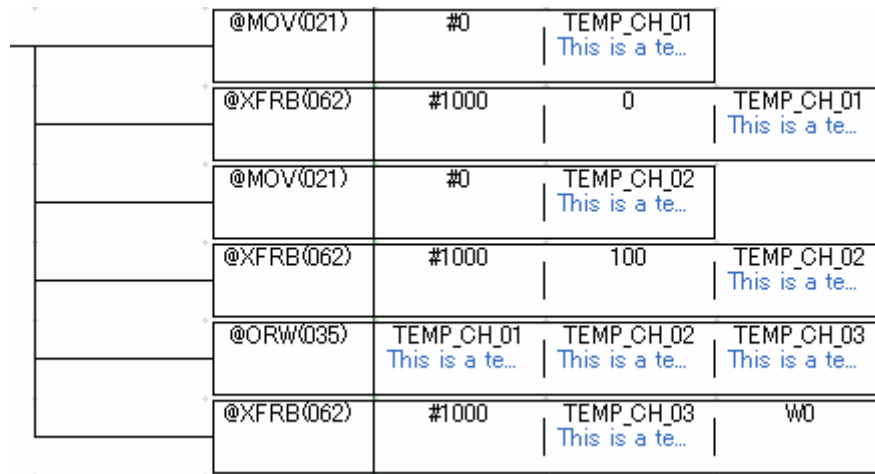
WORP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



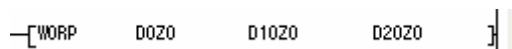
To: Omron ladder



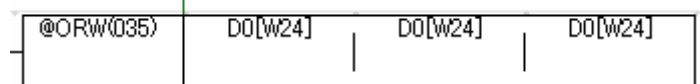
WORP instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ、DV

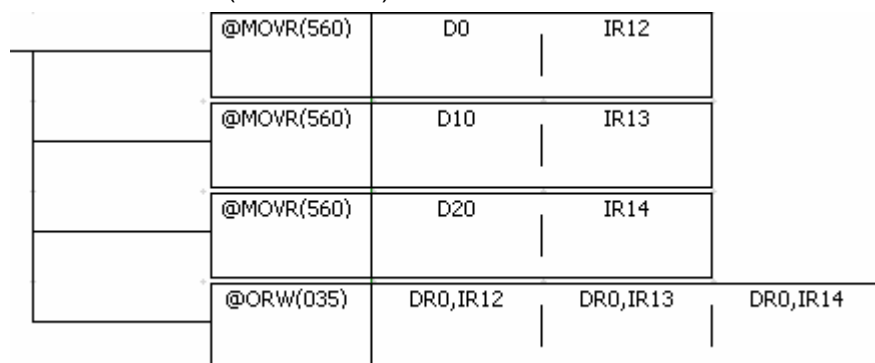
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



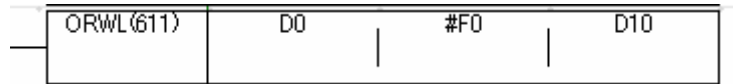
DOR instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



To: Omron ladder



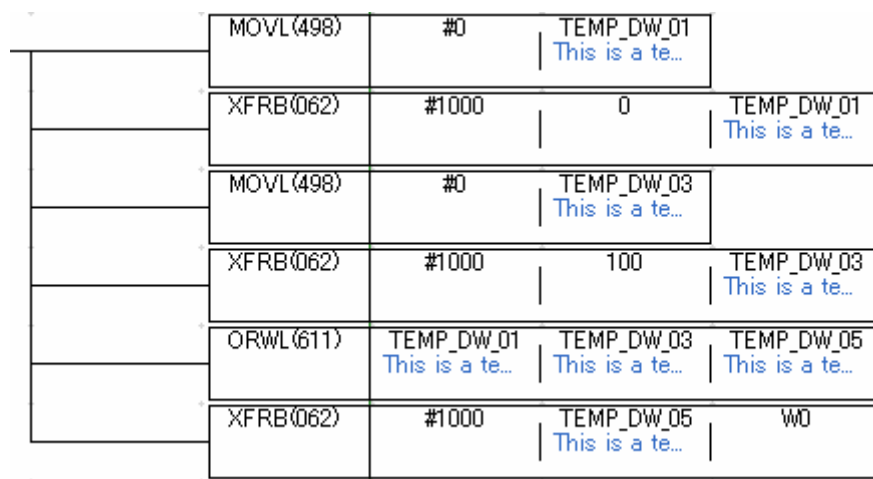
DOR instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



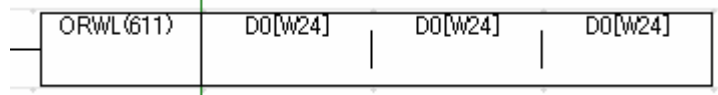
DOR instruction

Operand 1 type, Operand 2 type and Operand 3 type are DZ

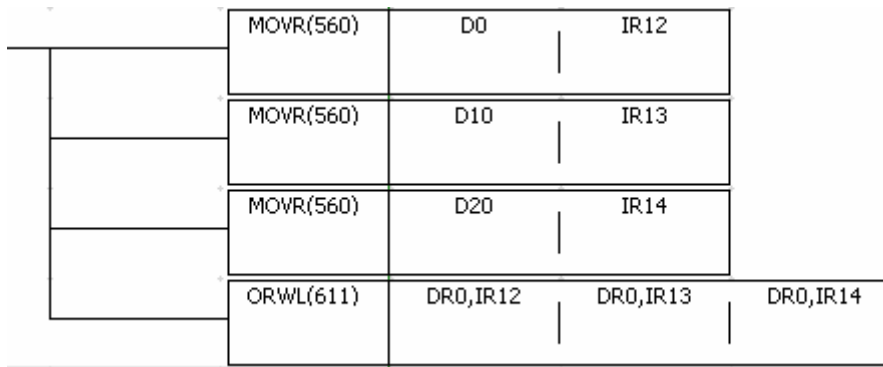
From: Mitsubishi ladder

[DOR D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



DORP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

[DORP D0 H0F0 D10]

To: Omron ladder



DORP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[DORP K4X000 K4Y000 K4M0]

To: Omron ladder

	@MOVL(498)	#0	TEMP_DW_01 This is a te...
	@XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	@MOVL(498)	#0	TEMP_DW_03 This is a te...
	@XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	@ORWL(611)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	@XFRB(062)	#1000	TEMP_DW_05 This is a te... W0

DORP instruction

Operand 1 type, Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DORP D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)

	@ORWL(611)	D0[W24]	D0[W24]	D0[W24]
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To: Omron ladder (CP1H/CP1L)

	@MOVL(498)	#0	TEMP_DW_01 This is a te...
	@XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	@MOVL(498)	#0	TEMP_DW_03 This is a te...
	@XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	@ORWL(611)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	@XFRB(062)	#1000	TEMP_DW_05 This is a te... W0

WXOR instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



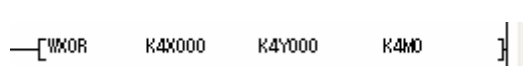
To: Omron ladder



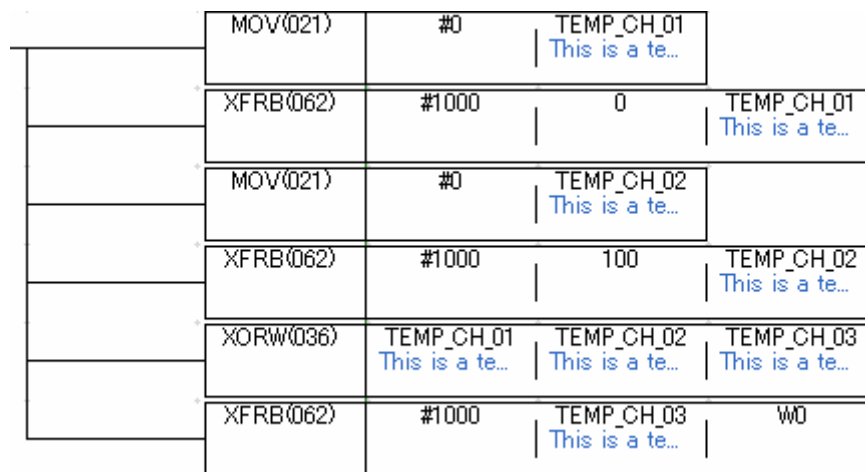
WXOR instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



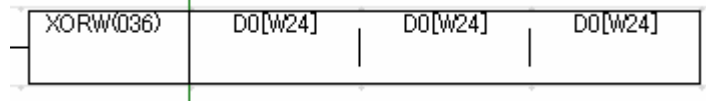
WXOR instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ、DV

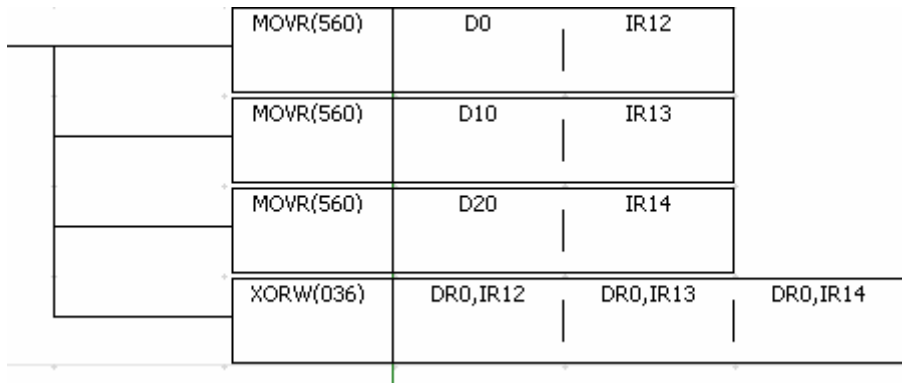
From: Mitsubishi ladder

—[WXOR D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



WXORP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

—[WXORP D0 H0F0 D10]

To: Omron ladder



WXORP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

```

┌[WXORP    K4X000    K4Y000    K4M0    ]
└

```

To: Omron ladder

	@MOV(021)	#0	TEMP_CH_01 This is a te...
	@XFRB(062)	#1000	0 TEMP_CH_01 This is a te...
	@MOV(021)	#0	TEMP_CH_02 This is a te...
	@XFRB(062)	#1000	100 TEMP_CH_02 This is a te...
	@XORW(036)	TEMP_CH_01 This is a te...	TEMP_CH_02 This is a te... TEMP_CH_03 This is a te...
	@XFRB(062)	#1000	TEMP_CH_03 This is a te... W0

WXORP instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ、DV

From: Mitsubishi ladder

```

┌[WXORP    D0Z0    D10Z0    D20Z0    ]
└

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To: Omron ladder (CP1E)

@XORW(036)	D0[W24]	D0[W24]	D0[W24]
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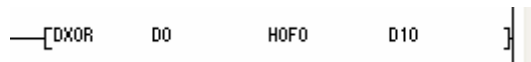
To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	D0	IR12
	@MOVR(560)	D10	IR13
	@MOVR(560)	D20	IR14
	@XORW(036)	DR0,IR12	DR0,IR13 DR0,IR14

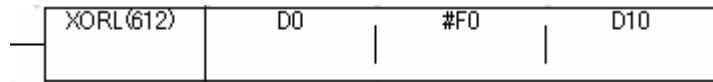
DXOR instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder



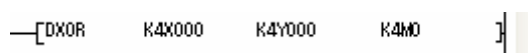
To: Omron ladder



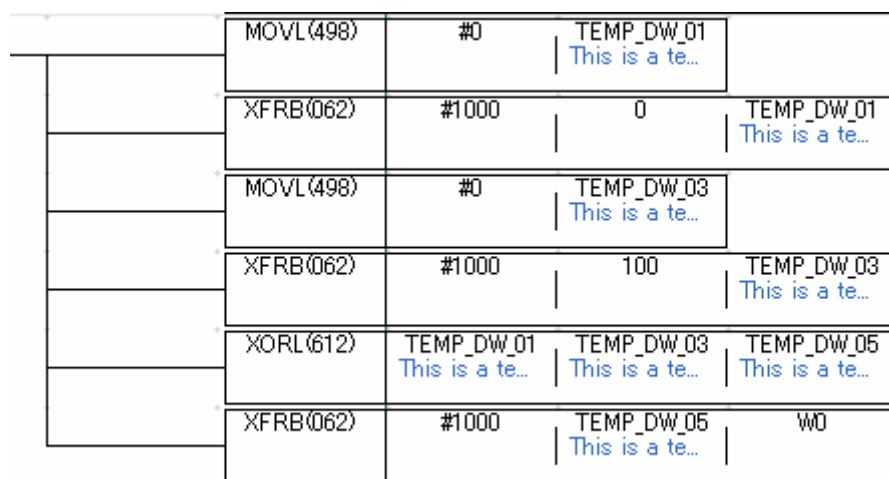
DXOR instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder



To: Omron ladder



DXOR instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DXOR D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)

XORL(612)	D0[W24]	D0[W24]	D0[W24]
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To: Omron ladder (CP1H/CP1L)

	MOVR(560)	D0	IR12
	MOVR(560)	D10	IR13
	MOVR(560)	D20	IR14
	XORL(612)	DR0,IR12	DR0,IR13 DR0,IR14

DXORP instruction

Operand 1 type and Operand 2 type are K、H、T、C、D、V、Z, Operand 3 type are T、C、D、V、Z

From: Mitsubishi ladder

—[DXORP D0 H0F0 D10]

To: Omron ladder

@XORL(612)	D0	#F0	D10
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DXORP instruction

Operand 1 type and Operand 2 type are KX、KY、KM、KS, Operand 3 type are KY、KM、KS

From: Mitsubishi ladder

—[DXORP K4X000 K4Y000 K4M0]

To: Omron ladder

	@MOVL(498)	#0	TEMP_DW_01 This is a te...
	@XFRB(062)	#1000	0 TEMP_DW_01 This is a te...
	@MOVL(498)	#0	TEMP_DW_03 This is a te...
	@XFRB(062)	#1000	100 TEMP_DW_03 This is a te...
	@XORL(612)	TEMP_DW_01 This is a te...	TEMP_DW_03 This is a te... TEMP_DW_05 This is a te...
	@XFRB(062)	#1000	TEMP_DW_05 This is a te... W0

DXORP instruction

Operand 1 type ,Operand 2 type and Operand 3 type are DZ

From: Mitsubishi ladder

—[DXORP D0Z0 D10Z0 D20Z0]

To: Omron ladder (CP1E)

@XORL(612)	D0[W24]	D0[W24]	D0[W24]
------------	---------	---------	---------

To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	D0	IR12
	@MOVR(560)	D10	IR13
	@MOVR(560)	D20	IR14
	@XORL(612)	DR0,IR12	DR0,IR13 DR0,IR14

SFTR instruction

From: Mitsubishi ladder

[SFTR X000 Y004 K4 K2]

To: Omron ladder

	XFRB(062)	#246	100	100
	XFRB(062)	#260	0	100

SFTRP instruction

From: Mitsubishi ladder

[SFTRP X000 Y004 K4 K2]

To: Omron ladder

	@XFRB(062)	#246	100	100
	@XFRB(062)	#260	0	100

SFTL instruction

From: Mitsubishi ladder

[SFTL X000 Y004 K4 K2]

To: Omron ladder

	XFRB(062)	#264	100	100
	XFRB(062)	#240	0	100

SFTLP instruction

From: Mitsubishi ladder

[SFTLP X000 Y004 K4 K2]

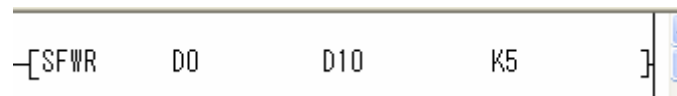
To: Omron ladder

	@XFRB(062)	#264	100	100
	@XFRB(062)	#240	0	100

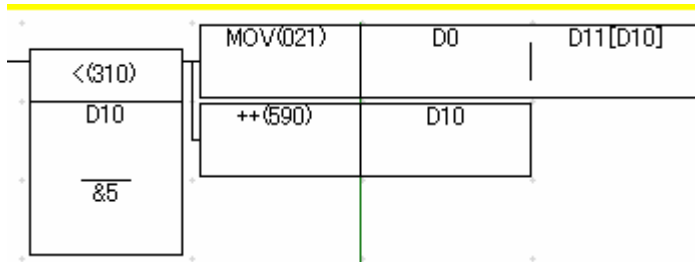
SFWR instruction

Operand 1 type are K、H、T、C、D、V、Z

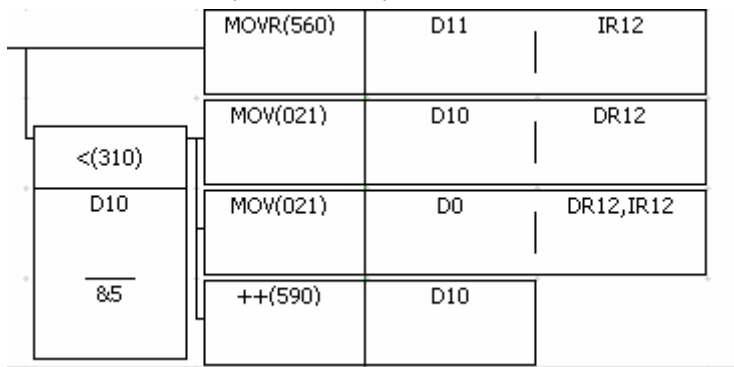
From: Mitsubishi ladder



To: Omron ladder (CP1E)



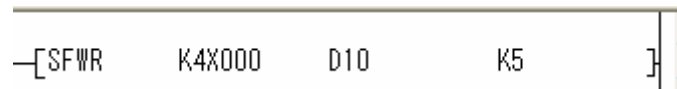
To: Omron ladder (CP1H/CP1L)



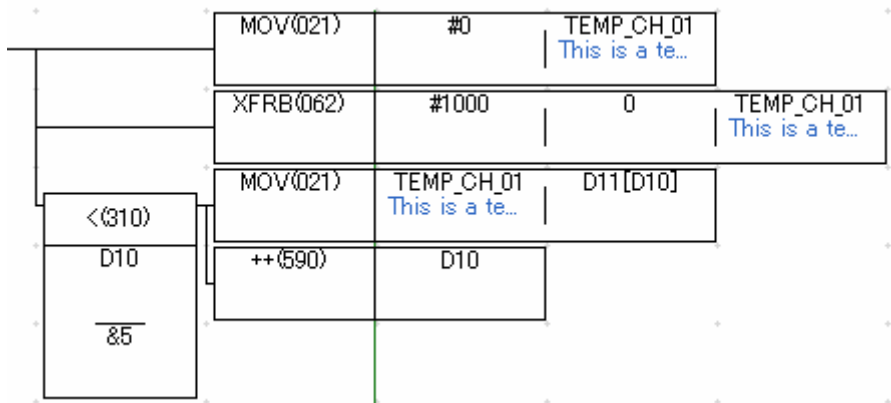
SFWR instruction

Operand 1 type are KX、KY、KM、KS

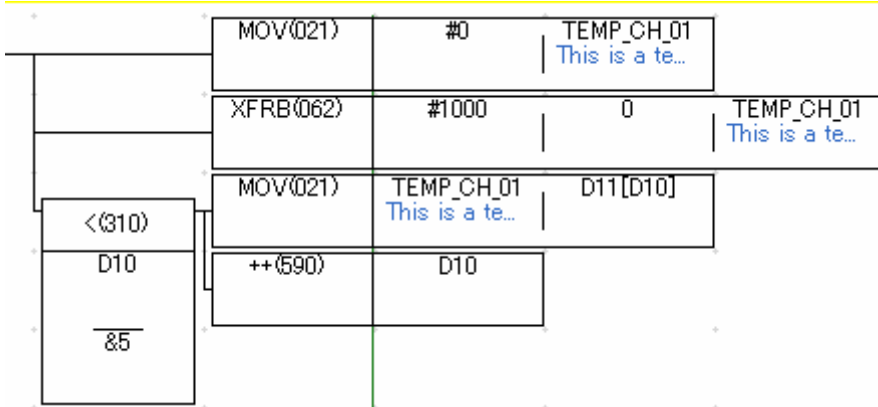
From: Mitsubishi ladder



To: Omron ladder (CP1E)



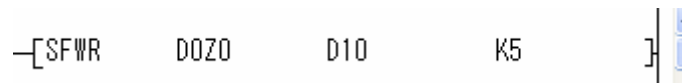
To: Omron ladder (CP1H/CP1L)



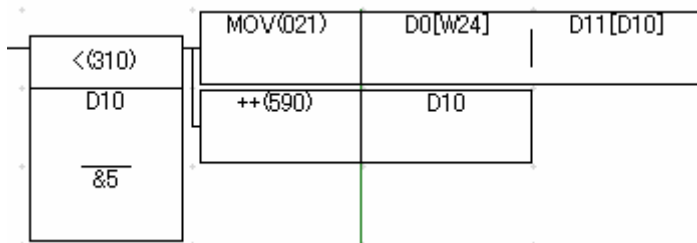
SFWR instruction

Operand 1 type are DZ、DV

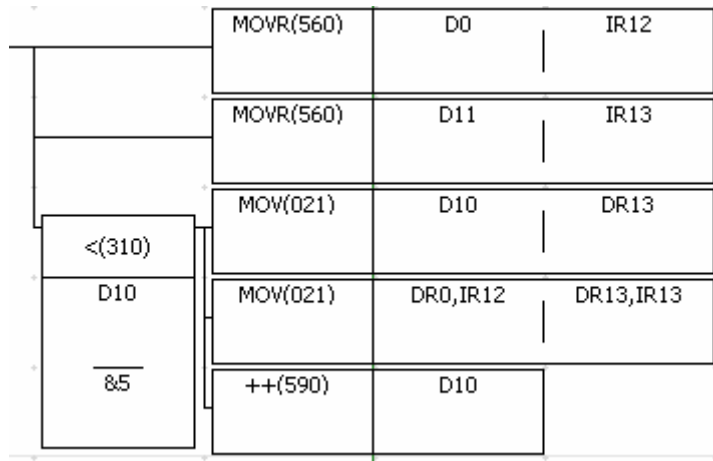
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



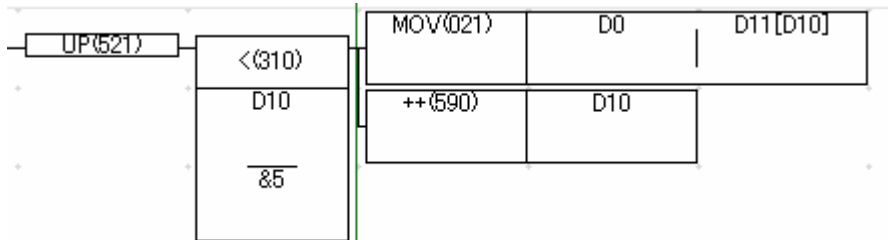
SFWRP instruction

Operand 1 type are K、H、T、C、D、V、Z

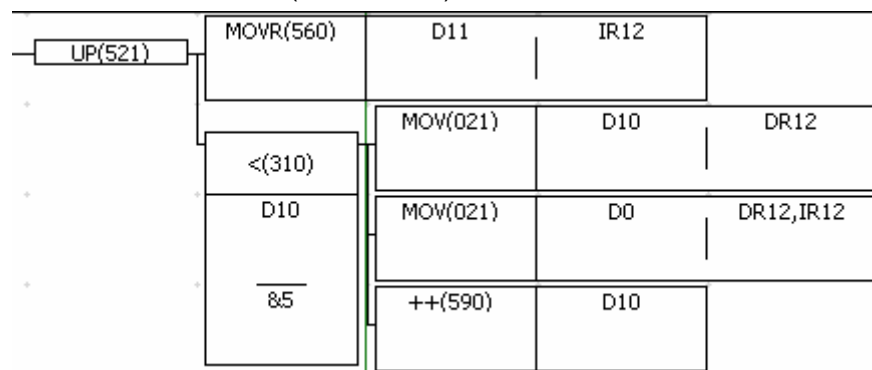
From: Mitsubishi ladder

```
—[SFWRP    D0          D10          K5          ]
```

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



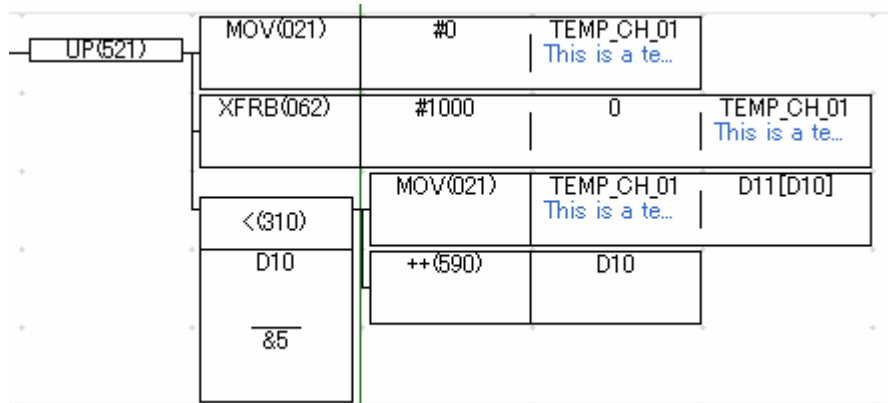
SFWRP instruction

Operand 1 type are KX、KY、KM、KS

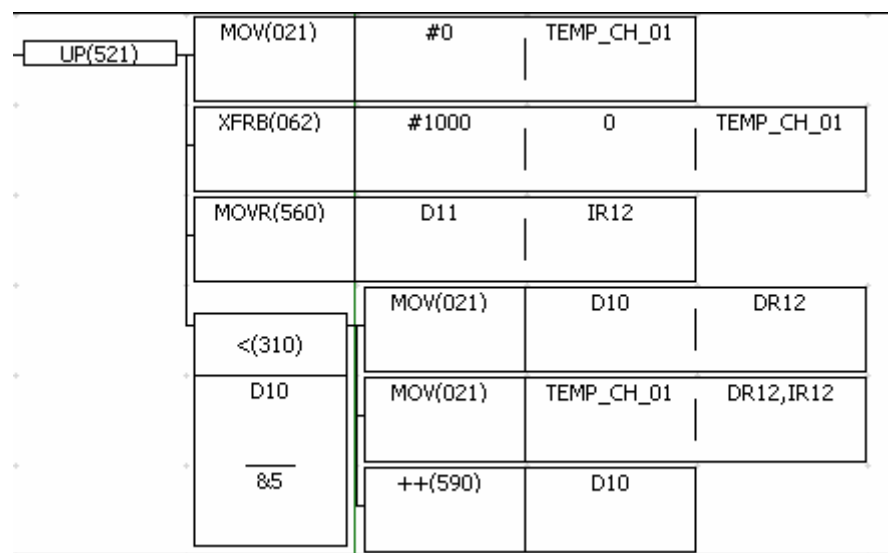
From: Mitsubishi ladder

```
—[SFWRP    K4X000    D10    K5    ]
```

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



SFWRP instruction

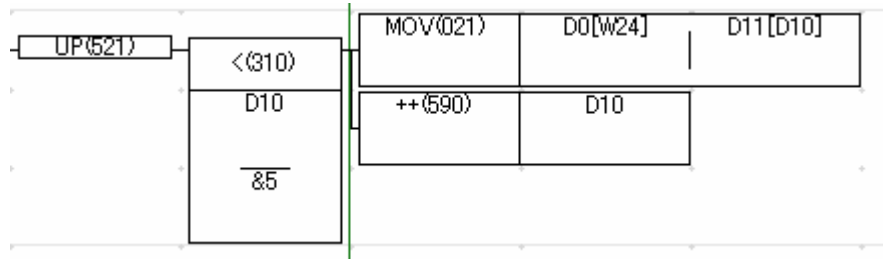
Operand 1 type are DZ、DV

From: Mitsubishi ladder

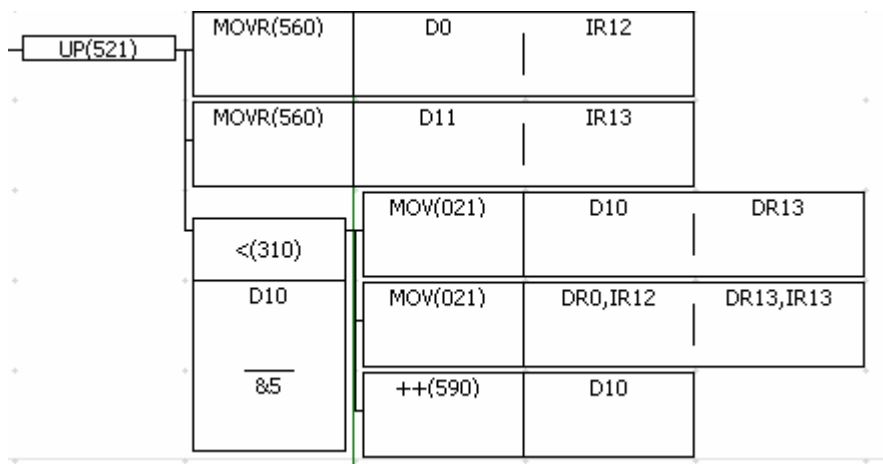
```

┌[SFWRP    D0Z0    D10    K5    ]
└
  
```

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



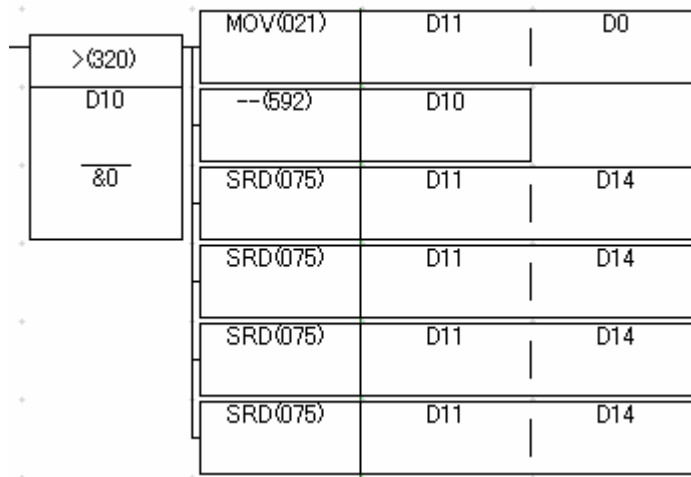
SFRD instruction

Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder

—[SFRD D10 D0 K5]|

To: Omron ladder



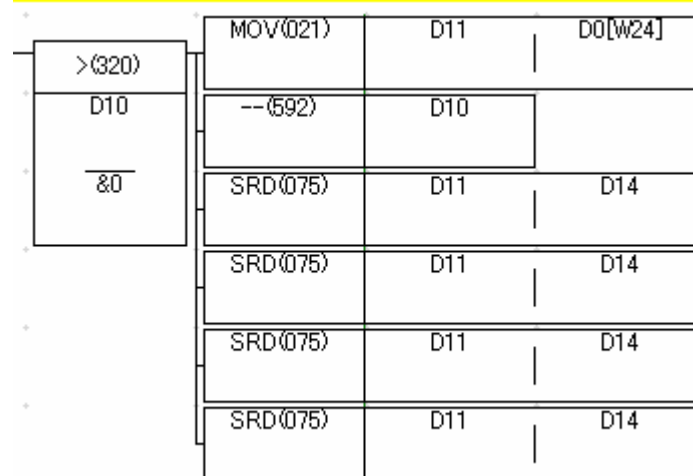
SFRD instruction

Operand 2 type are DZ、DV

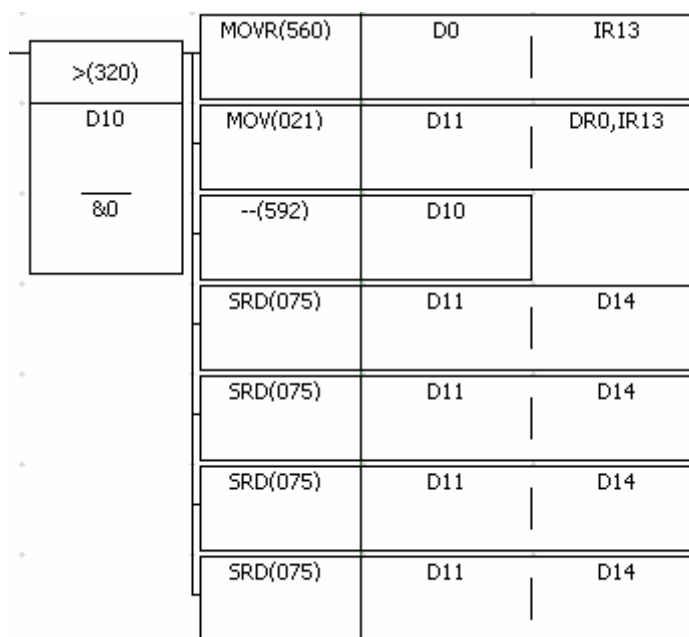
From: Mitsubishi ladder

```
—[SFRD    D10      D0Z0      K5      ]|
```

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



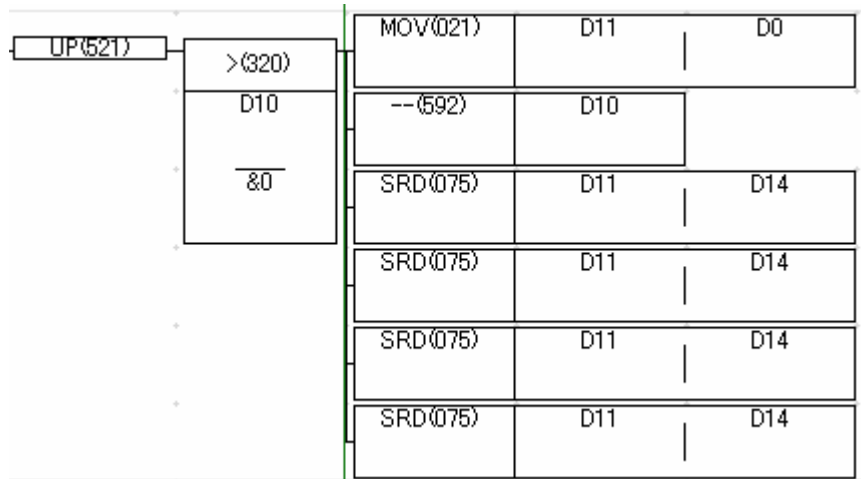
SFRDP instruction

Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder

```
—[SFRDP    D10      D0      K5      ]|
```

To: Omron ladder



SFRDP instruction

Operand 2 type are DZ、DV

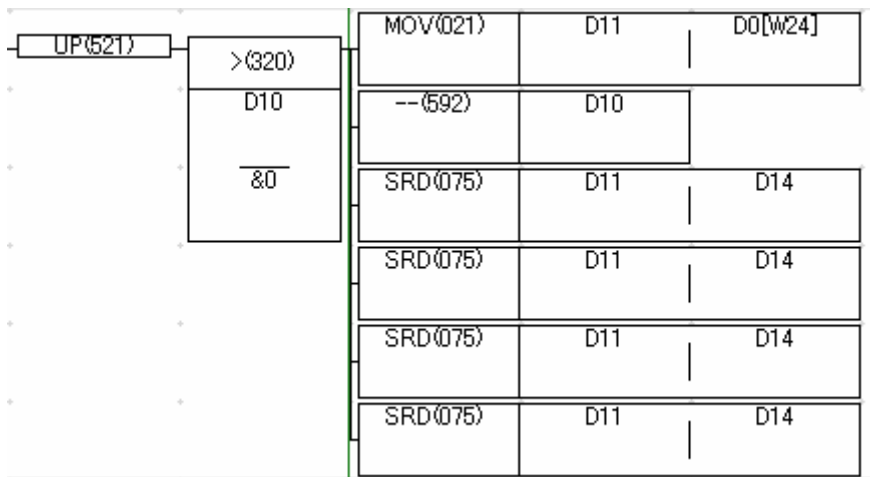
From: Mitsubishi ladder

```

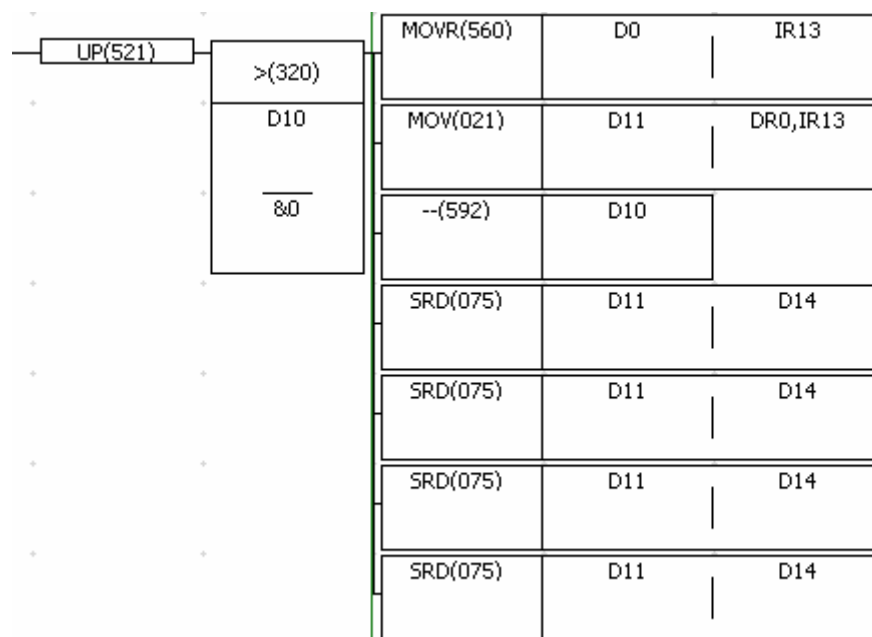
┌[SFRDP    D10      D0Z0      K5      ]┐

```

To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



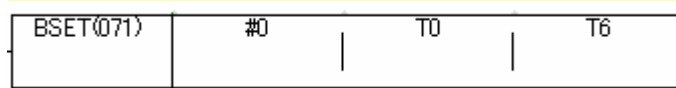
ZRST instruction

Operand 1 type and Operand 2 type are C、T、D

From: Mitsubishi ladder



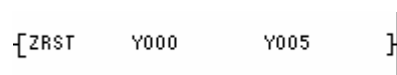
To: Omron ladder



ZRST instruction

Operand 1 type and Operand 2 type are Y、M、S

From: Mitsubishi ladder



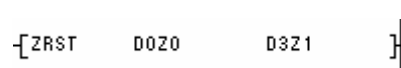
To: Omron ladder



ZRST instruction

Operand 1 type and Operand 2 type are DZ、DV

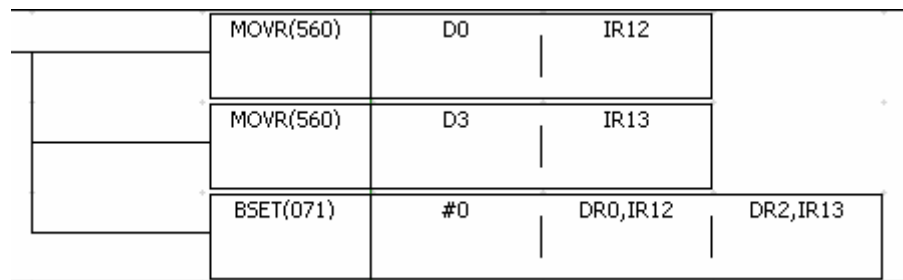
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



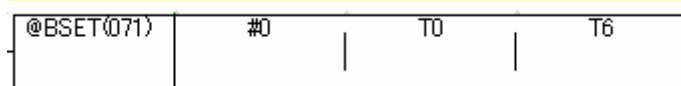
ZRSTP instruction

Operand 1 type and Operand 2 type are C、T、D

From: Mitsubishi ladder



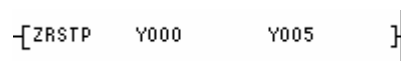
To: Omron ladder



ZRSTP instruction

Operand 1 type and Operand 2 type are Y、M、S

From: Mitsubishi ladder



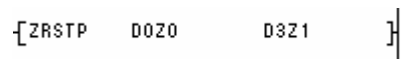
To: Omron ladder



ZRSTP instruction

Operand 1 type and Operand 2 type are DZ、DV

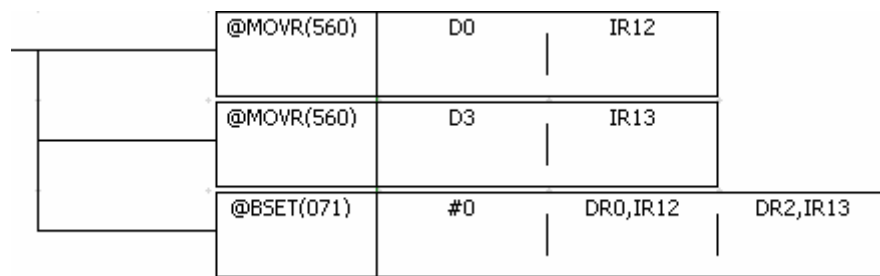
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1E)



DECO instruction

Operand 1 type are T、C、D、V、Z、X、Y、M、S; Operand 2 type are T、C、D

From: Mitsubishi ladder

└┐	DECO	D0	D10	K3	┐└
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To: Omron ladder

	MOV(021)	#0	TEMP_CH_01
	XFRB(062)	#300	D0
	MLPX(076)	TEMP_CH_01	#0

DECO instruction

Operand 1 type are T、C、D、V、Z、X、Y、M、S; Operand 2 type are Y、M、S

From: Mitsubishi ladder

└┐	DECO	D0	Y000	K3	┐└
----	------	----	------	----	----

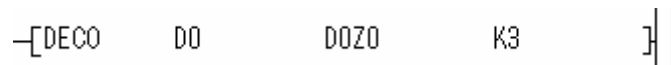
To:
Omron ladder

	MOV(021)	#0	TEMP_CH_01
	XFRB(062)	#300	D0
	RSTA(531)	100	#0
	SET	100.00[TEMP...	#8

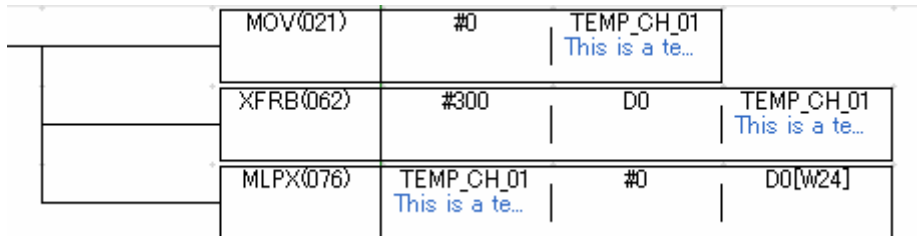
DECO instruction

Operand 1 type are T、C、D、V、Z、X、Y、M、S; Operand 2 type are DZ、DV

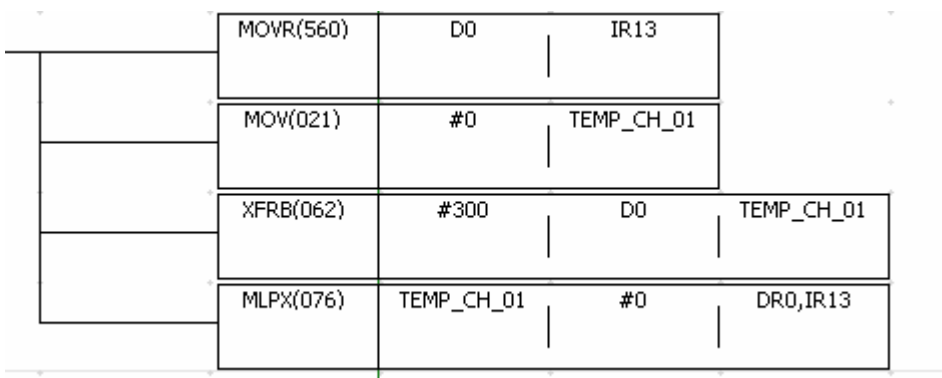
From: Mitsubishi ladder



To: Omron ladder (CP1E)



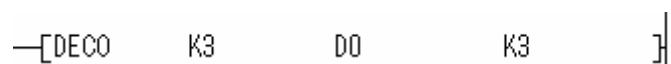
To: Omron ladder (CP1H/CP1L)



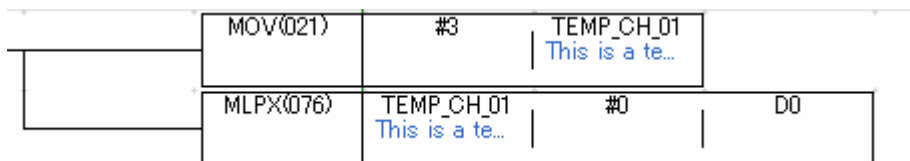
DECO instruction

Operand 1 type are K、H; Operand 2 type are T、C、D

From: Mitsubishi ladder



To: Omron ladder



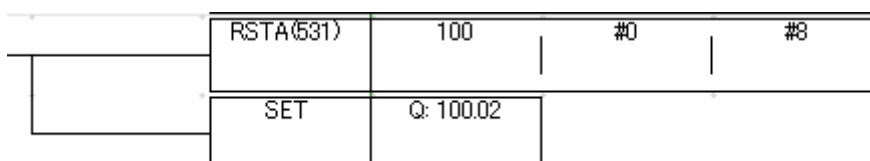
DECO instruction

Operand 1 type are K、H; Operand 2 type are Y、M、S

From: Mitsubishi ladder



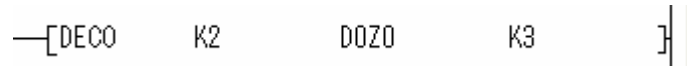
To: Omron ladder



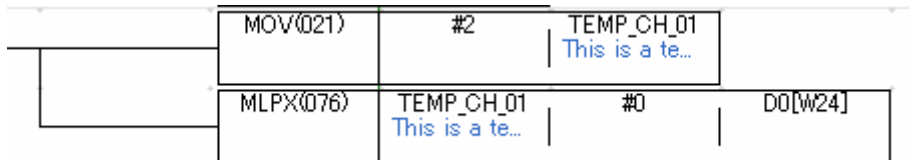
DECO instruction

Operand 1 type are K、H: Operand 2 type are DZ、DV

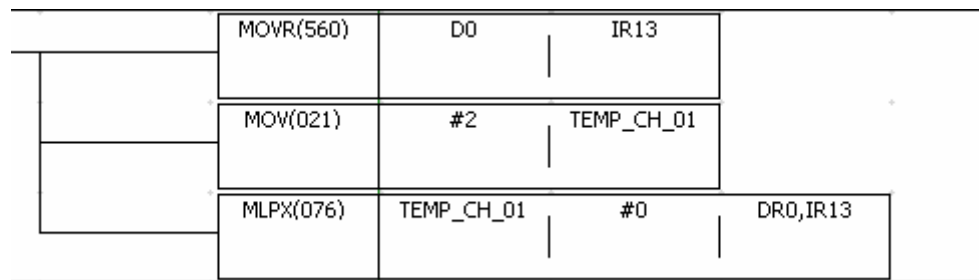
From: Mitsubishi ladder



To: Omron ladder (CP1E)



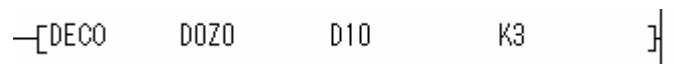
To: Omron ladder (CP1H/CP1L)



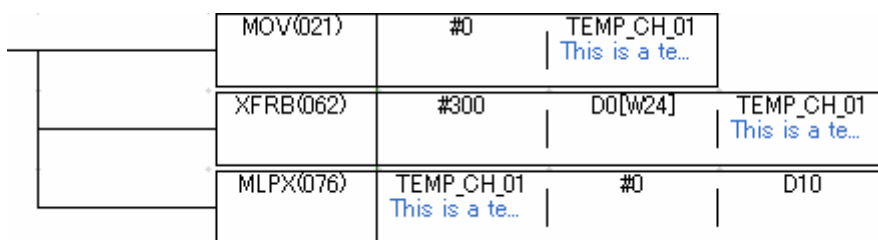
DECO instruction

Operand 1 type are DZ、DV; Operand 2 type are T、C、D

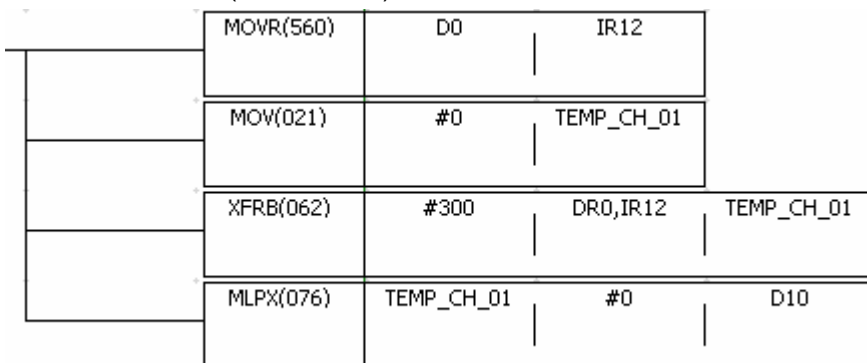
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



DECO instruction

Operand 1 type are DZ、DV; Operand 2 type are Y、M、S

From: Mitsubishi ladder

—[DECO D0Z0 Y000 K3]|

To: Omron ladder (CP1E)

	MOV(021)	#0	TEMP_CH_01 This is a te...
	XFRB(062)	#300	D0[W24] TEMP_CH_01 This is a te...
	RSTA(531)	100	#0 #8
	SET	100.00[TEMP...	

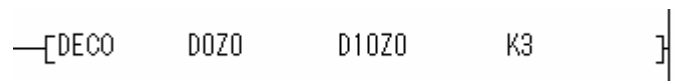
To: Omron ladder (CP1H/CP1L)

	MOVR(560)	D0	IR12
	MOVR(560)	100.00	IR13
	MOV(021)	#0	TEMP_CH_01
	XFRB(062)	#300	DR0,IR12 TEMP_CH_01
	MOV(021)	TEMP_CH_01	DR13
	RSTA(531)	100	#0 #8
	SET	DR13,IR13	

DECO instruction

Operand 1 type are DZ、DV; Operand 2 type are DZ、DV

From: Mitsubishi ladder



To: Omron ladder (CP1E)

	MOV(021)	#0	TEMP_CH_01 <i>This is a te...</i>
	XFRB(062)	#300	D0[W24] TEMP_CH_01 <i>This is a te...</i>
	MLPX(076)	TEMP_CH_01 <i>This is a te...</i>	#0 D10[W24]

To: Omron ladder (CP1H/CP1L)

	MOVR(560)	D0	IR12
	MOVR(560)	D10	IR13
	MOV(021)	#0	TEMP_CH_01
	XFRB(062)	#300	DR0,IR12 TEMP_CH_01
	MLPX(076)	TEMP_CH_01	#0 DR0,IR13

DECOP instruction

Operand 1 type are T、C、D、V、Z、X、Y、M、S; Operand 2 type are T、C、D

From: Mitsubishi ladder



To: Omron ladder

	@MOV(021)	#0	TEMP_CH_01 <i>This is a te...</i>
	@XFRB(062)	#300	D0 TEMP_CH_01 <i>This is a te...</i>
	@MLPX(076)	TEMP_CH_01 <i>This is a te...</i>	#0 D10

DECOP instruction

Operand 1 type are T、C、D、V、Z、X、Y、M、S; Operand 2 type are Y、M、S

From: Mitsubishi ladder

```
—[DECOP    D0          Y000      K3      ]
```

To: Omron ladder (CP1E)

	@MOV(021)	#0	TEMP_CH_01	This is a te...
	@XFRB(062)	#300	D0	TEMP_CH_01 This is a te...
	@RSTA(531)	100	#0	#8
	@SET	100.00[TEMP...		

To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	100.00	IR12	
	@MOV(021)	#0	TEMP_CH_01	
	@XFRB(062)	#300	D0	TEMP_CH_01
	@MOV(021)	TEMP_CH_01	DR12	
	@RSTA(531)	100	#0	#8
	@SET	DR12,IR12		

DECOP instruction

Operand 1 type are T、C、D、V、Z、X、Y、M、S; Operand 2 type are DZ、DV

From: Mitsubishi ladder

```
—[DECOP    D0          D0Z0      K3          ]|
```

To: Omron ladder (CP1E)

	@MOV(021)	#0	TEMP_CH_01 <i>This is a te...</i>
	@XFRB(062)	#300	D0 TEMP_CH_01 <i>This is a te...</i>
	@MLPX(076)	TEMP_CH_01 <i>This is a te...</i>	#0 D0[W24]

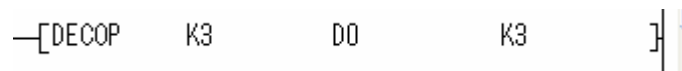
To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	D0	IR13
	@MOV(021)	#0	TEMP_CH_01
	@XFRB(062)	#300	D0 TEMP_CH_01
	@MLPX(076)	TEMP_CH_01	#0 DR0,IR13

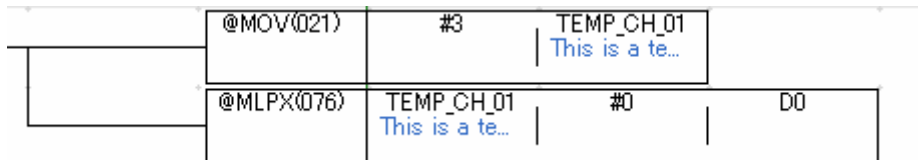
DECOP instruction

Operand 1 type are K、H; Operand 2 type are T、C、D

From: Mitsubishi ladder



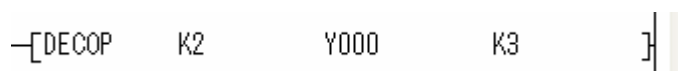
To: Omron ladder



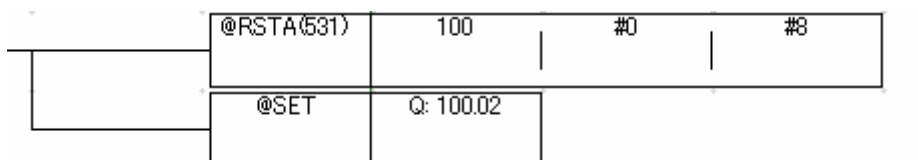
DECOP instruction

Operand 1 type are K、H; Operand 2 type are Y、M、S

From: Mitsubishi ladder



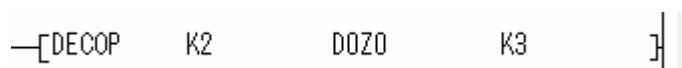
To: Omron ladder



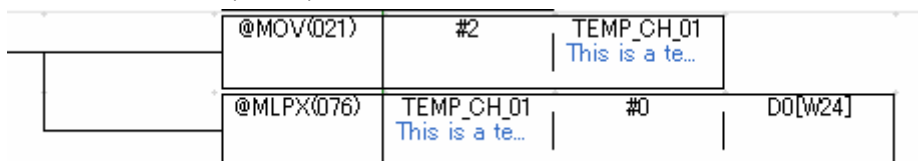
DECOP instruction

Operand 1 type are K、H; Operand 2 type are DZ、DV

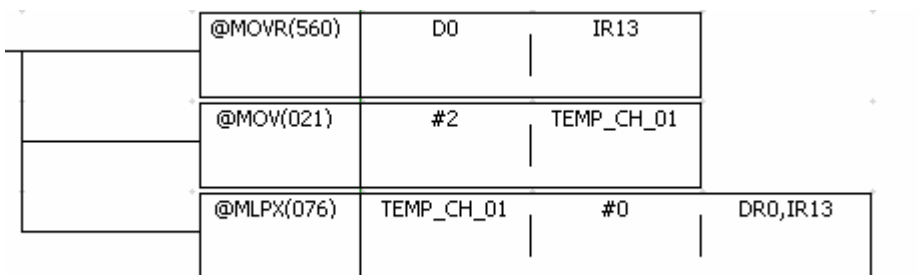
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



DECOP instruction

Operand 1 type are DZ、DV; Operand 2 type are T、C、D

From: Mitsubishi ladder

—[DECOP D0Z0 D10 K3]

To: Omron ladder (CP1E)

	@MOV(021)	#0	TEMP_CH_01 This is a te...
	@XFRB(062)	#300	D0[W24] TEMP_CH_01 This is a te...
	@MLPX(076)	TEMP_CH_01 This is a te...	#0 D10

To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	D0	IR13
	@MOV(021)	#2	TEMP_CH_01
	@MLPX(076)	TEMP_CH_01	#0 DR0,IR13

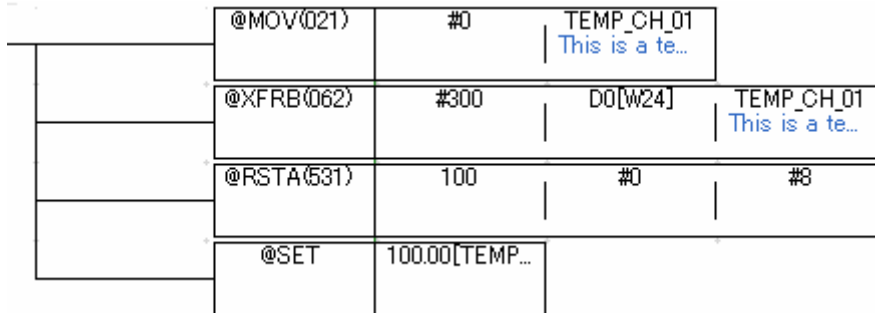
DECOP instruction

Operand 1 type are DZ、DV; Operand 2 type are Y、M、S

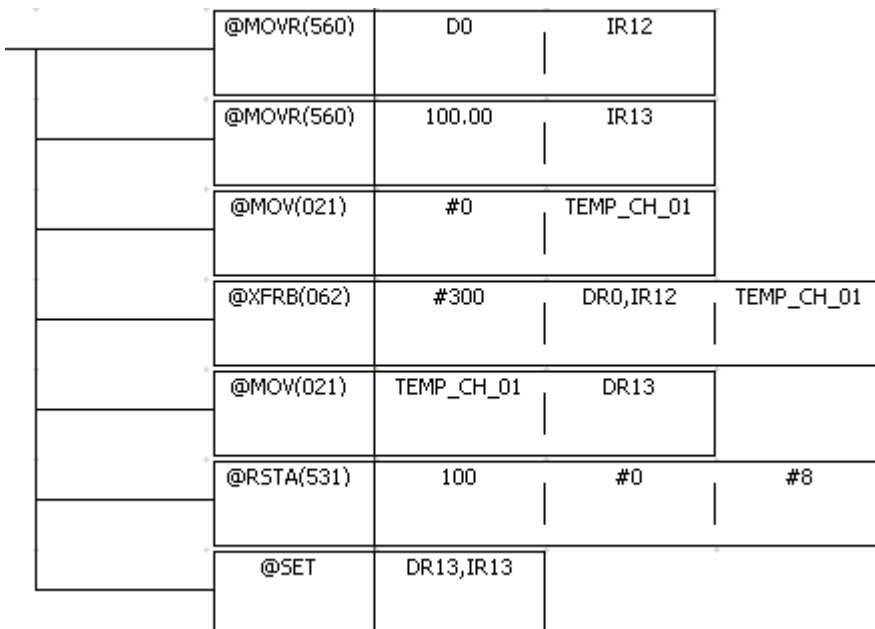
From: Mitsubishi ladder



To: Omron ladder (CP1E)



To: Omron ladder (CP1H/CP1L)



DECOP instruction

Operand 1 type are DZ、DV; Operand 2 type are DZ、DV

From: Mitsubishi ladder

—[DECOP D0Z0 D10Z0 K3]

To: Omron ladder (CP1E)

	@MOV(021)	#0	TEMP_CH_01 This is a te...
	@XFRB(062)	#300	D0[W24] TEMP_CH_01 This is a te...
	@MLPX(076)	TEMP_CH_01 This is a te...	#0 D10[W24]

To: Omron ladder (CP1H/CP1L)

	@MOVR(560)	D0	IR12
	@MOVR(560)	D10	IR13
	@MOV(021)	#0	TEMP_CH_01
	@XFRB(062)	#300	DR0,IR12 TEMP_CH_01
	@MLPX(076)	TEMP_CH_01	#0 DR0,IR13

ENCO instruction

Operand 1 type are T、C、D、V、Z; Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder

—[ENCO D0 D10 K3]

To: Omron ladder

	MOV(021)	#0	TEMP_CH_01 This is a te...
	XFRB(062)	#300	D0 TEMP_CH_01 This is a te...
	DMPX(077)	TEMP_CH_01 This is a te...	D10 #0

ENCO instruction

Operand 1 type are DZ、DV; Operand 2 type are DZ、DV

From: Mitsubishi ladder

—[ENCO D0Z0 D10Z1 K3]

To: Omron ladder (CP1E)

	MOV(021)	#0	TEMP_CH_01 <i>This is a te...</i>
	XFRB(062)	#800	D0[W24] TEMP_CH_01 <i>This is a te...</i>
	DMPX(077)	TEMP_CH_01 <i>This is a te...</i>	D10[W26] #0

To: Omron ladder (CP1H/CP1L)

	MOV(021)	#0	TEMP_CH_01
	MOVR(560)	D0	IR12
	MOVR(560)	D10	IR13
	XFRB(062)	#800	DR0,IR12 TEMP_CH_01
	DMPX(077)	TEMP_CH_01	DR0,IR13 #0

ENCOP instruction

Operand 1 type are T、C、D、V、Z; Operand 2 type are T、C、D、V、Z

From: Mitsubishi ladder

—[ENCOP D0 D10 K3]

To: Omron ladder

	@MOV(021)	#0	TEMP_CH_01 <i>This is a te...</i>
	@XFRB(062)	#800	D0 TEMP_CH_01 <i>This is a te...</i>
	@DMPX(077)	TEMP_CH_01 <i>This is a te...</i>	D10 #0

ENCOP instruction

Operand 1 type are DZ、DV 第二操作数类型为 DZ、DV

From: Mitsubishi ladder

—[ENCOP D0Z0 D10Z1 K3]

To: Omron ladder (CP1E)

	@MOV(021)	#0	TEMP_CH_01 <i>This is a te...</i>
	@XFRB(062)	#800	D0[W24] TEMP_CH_01 <i>This is a te...</i>
	@DMPX(077)	TEMP_CH_01 <i>This is a te...</i>	D10[W26] #0

To: Omron ladder (CP1H/CP1L)

	@MOV(021)	#0	TEMP_CH_01
	@MOVR(560)	D0	IR12
	@MOVR(560)	D10	IR13
	@XFRB(062)	#800	DR0,IR12 TEMP_CH_01
	@DMPX(077)	TEMP_CH_01	DR2,IR13 #0

Appendix 3: Mitsubishi I/O Memory Convert Table

1. FX1 series I/O memory Convert Table

(1) I/O memory Convert Table (FX1S to CP1E-E□□D□-□/CP1E-N□□D□-□)

FX1S					CP1E-E□□D□-□/CP1E-N□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X17	Octal	-	Input Area	0.00	0.15	16bit
Y	Output	Y000	Y15	Octal	-	Output Area	100	100.13	16bit
M	Auxiliary relay	M0	M383	Decimal	W	Work Area	W0.00	W23.15	16bit
		M384	M511	Decimal	H	Holding Area	H8.00	H15.15	16bit
T	Timer	T0	T62	Decimal	T	Timer	T0	T62	-
		T63	-	Decimal			-	-	Can not convert
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C235	C255	Decimal			-	-	Can not convert
D	Data Register	D0	D255	Decimal	D	Data Register	D0	D255	-
		D8000	D8255	Decimal			-	-	Can not convert
V ,Z	Index Register	Z0	V0	Decimal	W	Work Area	W24	W25	-
		Z1	V1	Decimal			W26	W27	-
		Z2	V2	Decimal			W28	W29	-
		Z3	V3	Decimal			W30	W31	-
		Z4	V4	Decimal			W32	W33	-
		Z5	V5	Decimal			W34	W35	-
		Z6	V6	Decimal			W36	W37	-
		Z7	V7	Decimal			W38	W39	-
S	State relays	S0	S127	Decimal	H	Holding Area	H0.00	H7.15	16bit
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.07	-
						TEMP_CH	W40	W47	-
						TEMP_DW	W40	W47	-

(2) I/O memory Convert Table(FX1N to CP1E-E□□D□-□)

FX1N					CP1E-E□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X177	Octal	-	Input Area	0.00	7.15	16bit
Y	Output	Y000	Y177	Octal	-	Output Area	100.00	107.15	16bit
M	Auxiliary relay	M0	M383	Decimal	W	Work Area	W0.00	W23.15	16bit
		M384	M511	Decimal	H	Holding Area	H8.00	H15.15	16bit
		M512	M1055	Decimal			H16.00	H49.15	16bit
		M1056	M1535	Decimal			-	-	Can not convert
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not convert
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not convert
D	Data Register	D0	D127	Decimal	D	Data Register	D0	D127	-
		D128	D2047	Decimal			D128	D2047	-
		D2048	D7999	Decimal			-	-	Can not convert
		D8000	D8255	Decimal			-	-	Can not convert
V ,Z	Index Register	Z0	V0	Decimal	W	Work Area	W24	W25	-
		Z1	V1	Decimal			W26	W27	-
		Z2	V2	Decimal			W28	W29	-
		Z3	V3	Decimal			W30	W31	-
		Z4	V4	Decimal			W32	W33	-
		Z5	V5	Decimal			W34	W35	-
		Z6	V6	Decimal			W36	W37	-
		Z7	V7	Decimal			W38	W39	-
S	State relays	S0	S127	Decimal	H	Holding Area	H0.00	H7.15	16bit
		S128	S999	Decimal			-	-	Can not convert
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.7	-
						TEMP_CH	W40	W47	-
						TEMP_DW	W40	W47	-

(3) I/O memory Convert Table(FX1N to CP1E-N□□D□-□)

FX1N					CP1E-N□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X177	Octal	-	Input Area	0.00	7.15	16bit
Y	Output	Y000	Y177	Octal	-	Output Area	100.00	107.15	16bit
M	Auxiliary relay	M0	M383	Decimal	W	Work Area	W0.00	W23.15	16bit
		M384	M511	Decimal	H	Holding Area	H8.00	H15.15	16bit
		M512	M1055	Decimal			H16.00	H49.15	16bit
		M1056	M1535	Decimal			-	-	Can not convert
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not convert
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not convert
D	Data Register	D0	D127	Decimal	D	Data Register	D0	D127	-
		D128	D7999	Decimal			D128	D7999	-
		D8000	D8255	Decimal			-	-	Can not convert
V ,Z	Index Register	Z0	V0	Decimal	W	Work Area	W24	W25	-
		Z1	V1	Decimal			W26	W27	-
		Z2	V2	Decimal			W28	W29	-
		Z3	V3	Decimal			W30	W31	-
		Z4	V4	Decimal			W32	W33	-
		Z5	V5	Decimal			W34	W35	-
		Z6	V6	Decimal			W36	W37	-
		Z7	V7	Decimal			W38	W39	-
S	State relays	S0	S127	Decimal	H	Holding Area	H0.00	H7.15	16bit
		S128	S999	Decimal			-	-	Can not convert
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.7	-
						TEMP_CH	W40	W47	-
						TEMP_DW	W40	W47	-

(4) I/O memory Convert Table(FX1N to CP1H/CP1L)

FX1N					CP1H/CP1L				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X177	Octal	-	Input Area	0.00	9.15	16bit
Y	Output	Y000	Y177	Octal	-	Output Area	100.00	109.15	16bit
M	Auxiliary relay	M0	M383	Decimal	W	Work Area	W0.00	W23.15	16bit
		M384	M511	Decimal	H	Holding Area	H0.00	H71.15	16bit
		M512	M1055	Decimal			-	-	Can not change
		M1056	M1535	Decimal			-	-	Can not change
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not change
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not change
D	Data Register	D0	D127	Decimal	D	Data Register	D0	D127	-
		D128	D7999	Decimal			D128	D7999	-
		D8000	D8255	Decimal			-	-	Can not change
V ,Z	Index Register	Z0	V0	Decimal	DR	Data Register	DR0	DR1	-
		Z1	V1	Decimal			DR2	DR3	-
		Z2	V2	Decimal			DR4	DR5	-
		Z3	V3	Decimal			DR6	DR7	-
		Z4	V4	Decimal			DR8	DR9	-
		Z5	V5	Decimal			DR10	DR11	-
		Z6	V6	Decimal			DR12	DR13	-
		Z7	V7	Decimal			DR14	DR15	-
S	State relays	S0	S991	Decimal	H	Holding Area	H72.00	H133.15	16bit
		S992	S999	Decimal			H134.00	H134.07	16bit
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.7	-
						TEMP_CH	W24	W31	-
						TEMP_DW	W24	W31	-
						TEMP_IR	IR8	IR15	
						TEMP_DR	DR8	DR15	

(5) I/O memory Convert Table(FX1S to CP1H/CP1L)

FX1S					CP1H/CP1L				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X17	Octal	-	Input Area	0.00	0.15	16bit
Y	Output	Y000	Y17	Octal	-	Output Area	100.00	100.13	16bit
M	Auxiliary relay	M0	M383	Decimal	W	Work Area	W0.00	W23.15	16bit
		M384	M511	Decimal	H	Holding Area	H8.00	H15.15	16bit
		M512	M1055	Decimal			-	-	Can not change
		M1056	M1535	Decimal			-	-	Can not change
T	Timer	T0	T63	Decimal	T	Timer	T0	T63	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C235	C255	Decimal			C235	C255	-
D	Data Register	D0	D127	Decimal	D	Data Register	D0	D127	-
		D128	D255	Decimal			D128	D255	-
		D8000	D8255	Decimal			-	-	Can not change
V ,Z	Index Register	Z0	V0	Decimal	DR	Data Register	DR0	DR1	-
		Z1	V1	Decimal			DR2	DR3	-
		Z2	V2	Decimal			DR4	DR5	-
		Z3	V3	Decimal			DR6	DR7	-
		Z4	V4	Decimal			DR8	DR9	-
		Z5	V5	Decimal			DR10	DR11	-
		Z6	V6	Decimal			DR12	DR13	-
		Z7	V7	Decimal			DR14	DR15	-
S	State relays	S0	S127	Decimal	H	Holding Area	H8.00	H15.15	16bit
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.7	-
						TEMP_CH	W24	W31	-
						TEMP_DW	W24	W31	-
						TEMP_IR	IR8	IR15	
						TEMP_DR	DR8	DR15	

(6) Auxiliary Relay Convert Table (Fx1 to CP1H/CP1L/CP1E)

FX1S		CP1H/CP1L/CP1E	
Name	Relay number	Name	Relay number
RUN monitor NO contact	M8000	Always ON Flag	P_On(CF113)
RUN monitor NC contact	M8001	Always OFF Flag	P_Off(CF114)
Initial pulse NO contact	M8002	First Cycle Flag	A200.11
Battery voltage Low	M8005	Battery Error Flag	A402.04
Battery error latch	M8006	Battery Error Flag	A402.04
100 msec clock pulse	M8012	0.1 s Clock Pulse	P_0_1s(CF100)
1 sec clock pulse	M8013	1 s Clock Pulse	P_1s(CF102)
1 min clock pulse	M8014	1 min Clock Pulse	P_1s(CF104)
Zero	M8020	Equals Flag	P_EQ(CF6)
Borrow	M8021	Underflow Flag	P_UF(CF10)
Carry	M8022	Overflow Flag	P_OF(CF9)
Memory hold in 'stop' mode	M8033	IOM Hold Bit	A500.12
All outputs disable	M8034	Output OFF Bit	A500.15

2. FX2 series I/O memory Convert Table

(1) I/O memory Convert Table (FX2 to CP1E-N□□D□-□)

FX2					CP1E-N□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X377	Octal	-	Input Area	0.00	15.15	16bit
Y	Output	Y000	Y377	Octal	-	Output Area	100.00	115.15	16bit
M	Auxiliary relay	M0	M1599	Decimal	W	Work Area	W0.00	W99.15	16bit
		M1600	M3071	Decimal			-	-	Can not change
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not change
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not change
D	Data Register	D0	D8191	Decimal	D	Data Register	D0	D8191	-
		D8192	D8255	Decimal			-	-	Can not change
V ,Z	Index Register	Z0	V0	Decimal	H	Holding Area	H0	H1	-
		Z1	V1	Decimal			H2	H3	-
		Z2	V2	Decimal			H4	H5	-
		Z3	V3	Decimal			H6	H7	-
		Z4	V4	Decimal			H8	H9	-
		Z5	V5	Decimal			H10	H11	-
		Z6	V6	Decimal			H12	H13	-
		Z7	V7	Decimal			H14	H15	-
S	State relays	S0	S991	Decimal		CH I/O Area	116.00	177.15	16bit
		S992	S999	Decimal			178.00	178.07	16bit
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.07	-
						TEMP_CH	33	40	-
						TEMP_DW	33	40	-

(2) I/O memory Convert Table (FX2 to CP1E-E□□D□-□)

FX2					CP1E-E□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X377	Octal	-	Input Area	0.00	15.15	16bit
Y	Output	Y000	Y377	Octal	-	Output Area	100.00	115.15	16bit
M	Auxiliary relay	M0	M1599	Decimal	W	Work Area	W0.00	W99.15	16bit
		M1600	M3071	Decimal			-	-	Can not change
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not change
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not change
D	Data Register	D0	D2047	Decimal	D	Work Area	D0	D2047	-
		D2048	D8255	Decimal			-	-	Can not change
V ,Z	Index Register	Z0	V0	Decimal	H	Holding Area	H0	H1	-
		Z1	V1	Decimal			H2	H3	-
		Z2	V2	Decimal			H4	H5	-
		Z3	V3	Decimal			H6	H7	-
		Z4	V4	Decimal			H8	H9	-
		Z5	V5	Decimal			H10	H11	-
		Z6	V6	Decimal			H12	H13	-
		Z7	V7	Decimal			H14	H15	-
S	State relays	S0	S991	Decimal	H	Holding Area	116.00	177.15	16bit
		S992	S999	Decimal			178.00	178.07	16bit
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.07	-
						TEMP_CH	33	40	-
						TEMP_DW	33	40	-

(3) I/O memory Convert Table (FX2 to CP1H/CP1L)

FX2					CP1H/CP1L				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X377	Octal	-	Input Area	0.00	15.15	16bit
Y	Output	Y000	Y377	Octal	-	Output Area	100.00	115.15	16bit
M	Auxiliary relay	M0	M3071	Decimal	W	Work Area	W0.00	W191.15	16bit
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not change
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not change
D	Data Register	D0	D8255	Decimal	D	Data Register	D0	D8255	-
V ,Z	Index Register	Z0	V0	Decimal	DR	Data Register	DR0	DR1	-
		Z1	V1	Decimal			DR2	DR3	-
		Z2	V2	Decimal			DR4	DR5	-
		Z3	V3	Decimal			DR6	DR7	-
		Z4	V4	Decimal			DR8	DR9	-
		Z5	V5	Decimal			DR10	DR11	-
		Z6	V6	Decimal			DR12	DR13	-
		Z7	V7	Decimal			DR14	DR15	-
S	State relays	S0	S991	Decimal		Work Area	3800.00	3861.15	16bit
		S992	S999	Decimal			3862.00	3862.07	16bit
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.07	-
						TEMP_CH	33	40	-
						TEMP_DW	33	40	-
						TEMP_IR	IR8	IR15	
						TEMP_DR	DR8	DR15	

(4) Auxiliary Relay Convert Table (FX2 to CP1E)

FX2		CP1E-E□□D□-□/ CP1E-N□□D□-□	
Name	Area number	Name	Area number
RUN monitor NO contact	M8000	Always ON Flag	P_On(CF113)
RUN monitor NC contact	M8001	Always OFF Flag	P_Off(CF114)
Initial pulse NO contact	M8002	First Cycle Flag	A200.11
Initial pulse NC contact	M8003	First Cycle Flag	A200.11
Battery voltage Low	M8005	Battery Error Flag	A402.04
Battery error latch	M8006	Battery Error Flag	A402.04
1 sec clock pulse	M8013	1 s Clock Pulse	P_1s(CF102)
Carry	M8022	Flow Flag	P_OF(CF4)

(5) Auxiliary Relay Convert Table (FX2 to CP1H/CP1L)

FX2		CP1H/CP1L	
Name	Area number	Name	Area number
RUN monitor NO contact	M8000	Always ON Flag	P_On(CF113)
RUN monitor NC contact	M8001	Always OFF Flag	P_Off(CF114)
Initial pulse NO contact	M8002	First Cycle Flag	A200.11
Initial pulse NC contact	M8003	First Cycle Flag	A200.11
Error Happen	M8004	Work Area	W480.04
Battery voltage Low	M8005	Battery Error Flag	A402.04
Battery error latch	M8006	Battery Error Flag	A402.04
Flags	M8007~M8012	Work Area	W480.07~W480.12
1 sec clock pulse	M8013	1 s Clock Pulse	P_1s(CF102)
Flags	M8014~M8015	Work Area	W480.14~W480.15
Flags	M8016~M8021	Work Area	W481.00~W481.05
Carry	M8022	Flow Flag	P_OF(CF4)
Flags	M8023~M8031	Work Area	W481.07~W481.15
Flags	M8032~M8255	Work Area	W482.00~W495.15

3. FX3 series I/O memory Convert Table

(1) I/O memory Convert Table (FX3 to CP1E-N□□D□-□)

FX3					CP1E-N□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X377	Octal	-	Input Area	0.00	15.15	16bit
Y	Output	Y000	Y377	Octal	-	Output Area	100.00	115.15	16bit
M	Auxiliary relay	M0	M1599	Decimal	W	Work Area	W0.00	W99.15	16bit
		M1600	M3071	Decimal			-	-	Can not change
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not change
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not change
D	Data Register	D0	D8191	Decimal	D	Data Register	D0	D8191	-
		D8192	D8255	Decimal			-	-	Can not change
V ,Z	Index Register	Z0	V0	Decimal	H	Work Area	H0	H1	-
		Z1	V1	Decimal			H2	H3	-
		Z2	V2	Decimal			H4	H5	-
		Z3	V3	Decimal			H6	H7	-
		Z4	V4	Decimal			H8	H9	-
		Z5	V5	Decimal			H10	H11	-
		Z6	V6	Decimal			H12	H13	-
		Z7	V7	Decimal			H14	H15	-
S	State relays	S0	S991	Decimal		CH I/O Area	116.00	177.15	16bit
		S992	S999	Decimal			178.00	178.07	16bit
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	200.00	200.07	-
						TEMP_CH	33	40	-
						TEMP_DW	33	40	-

(2) I/O memory Convert Table (FX3 to CP1E-E□□D□-□)

FX3					CP1E-E□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X377	Octal	-	Input Area	0.00	15.15	16bit
Y	Output	Y000	Y377	Octal	-	Output Area	100.00	115.15	16bit
M	Auxiliary relay	M0	M1599	Decimal	W	Work Area	W0.00	W99.15	16bit
		M1600	M3071	Decimal			-	-	Can not change
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not change
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not change
D	Data Register	D0	D2047	Decimal	D	Work Area	D0	D2047	-
		D2048	D8255	Decimal			-	-	Can not change
V ,Z	Index Register	Z0	V0	Decimal	H	Holding Area	H0	H1	-
		Z1	V1	Decimal			H2	H3	-
		Z2	V2	Decimal			H4	H5	-
		Z3	V3	Decimal			H6	H7	-
		Z4	V4	Decimal			H8	H9	-
		Z5	V5	Decimal			H10	H11	-
		Z6	V6	Decimal			H12	H13	-
		Z7	V7	Decimal			H14	H15	-
S	State relays	S0	S991	Decimal	H	Holding Area	116.00	177.15	16bit
		S992	S999	Decimal			178.00	178.07	16bit
WorkArea (Don’ t use this area when you add ladder.)						TEMP_BIT	200.00	200.07	-
						TEMP_CH	33	40	-
						TEMP_DW	33	40	-

(3) I/O memory Convert Table (FX3 to CP1H/CP1L)

FX3					CP1H/CP1L				
	Area	Start Bit/CH	Final Bit/CH	Area number		Area	Start Bit/CH	Final Bit/CH	Bit width
X	Input	X000	X377	Octal	-	Input Area	0.00	15.15	16bit
Y	Output	Y000	Y377	Octal	-	Output Area	100.00	115.15	16bit
M	Auxiliary relay	M0	M7679	Decimal	W	Work Area	W0.00	W479.15	16bit
T	Timer	T0	T245	Decimal	T	Timer	T0	T245	-
		T246	T249	Decimal			-	-	Can not change
		T250	T255	Decimal			T250	T255	-
C	Counter	C0	C31	Decimal	C	Counter	C0	C31	-
		C200	C255	Decimal			-	-	Can not change
D	Data Register	D0	D8511	Decimal	D	Data Register	D0	D8511	-
V ,Z	Index Register	Z0	V0	Decimal	DR	Data Register	DR0	DR1	-
		Z1	V1	Decimal			DR2	DR3	-
		Z2	V2	Decimal			DR4	DR5	-
		Z3	V3	Decimal			DR6	DR7	-
		Z4	V4	Decimal			DR8	DR9	-
		Z5	V5	Decimal			DR10	DR11	-
		Z6	V6	Decimal			DR12	DR13	-
		Z7	V7	Decimal			DR14	DR15	-
S	State relays	S0	S991	Decimal		Work Area	3800.00	3861.15	16bit
		S992	S999	Decimal			3862.00	3862.07	16bit
WorkArea (Don’ t use this area when you add ladder.)						TEMP_BIT	200.00	200.07	-
						TEMP_CH	33	40	-
						TEMP_DW	33	40	-
						TEMP_IR	IR8	IR15	
						TEMP_DR	DR8	DR15	

(4) Auxiliary Relay Convert Table (FX3 to CP1E)

FX3		CP1E-E□□D□-□/ CP1E -N□□D□-□	
Name	Arenumber	Name	Arenumber
RUN monitor NO contact	M8000	Always ON Flag	P_On(CF113)
RUN monitor NC contact	M8001	Always OFF Flag	P_Off(CF114)
Initial pulse NO contact	M8002	First Cycle Flag	A200.11
Initial pulse NC contact	M8003	First Cycle Flag	A200.11
Battery voltage Low	M8005	Battery Error Flag	A402.04
Battery error latch	M8006	Battery Error Flag	A402.04
1 sec clock pulse	M8013	1 s Clock Pulse	P_1s(CF102)
Carry	M8022	Flow Flag	P_OF(CF4)

(5) Auxiliary Relay Convert Table (Fx3 to CP1H/CP1L)

FX3		CP1H/CP1L	
Name	Arenumber	Name	Arenumber
RUN monitor NO contact	M8000	Always ON Flag	P_On(CF113)
RUN monitor NC contact	M8001	Always OFF Flag	P_Off(CF114)
Initial pulse NO contact	M8002	First Cycle Flag	A200.11
Initial pulse NO contact	M8003	First Cycle Flag	A200.11
Error Happen	M8004	Work Area	W480.04
Battery voltage Low	M8005	Battery Error Flag	A402.04
Battery error latch	M8006	Battery Error Flag	A402.04
Flags	M8007~M8012	Work Area	W480.07~W480.12
1 sec clock pulse	M8013	1 s Clock Pulse	P_1s(CF102)
Flags	M8014~M8015	Work Area	W480.14~W480.15
Flags	M8016~M8021	Work Area	W481.00~W481.05
Carry	M8022	Flow Flag	P_OF(CF4)
Flags	M8023~M8031	Work Area	W481.07~W481.15
Flags	M8032~M8511	Work Area	W482.00~W511.15

Ladder Program Converter
Operation Manual - Appendix

Siemens Conversion Specification

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Appendix 1: Siemens Instruction Convert List

Convert Solution: 1: 1: Convert Solution 1: 1
 1: N: Convert Solution 1: N
 ×: No Convert Solution

No	Source Instruction (S7-200)	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
1	AENO	P_ER	1:1	1:1	1:1	And ENO
2	LD	LD	1:1	1:1	1:1	Load
3	LDN	LD NOT	1:1	1:1	1:1	Load Not
4	A	AND	1:1	1:1	1:1	And
5	AN	AND NOT	1:1	1:1	1:1	And Not
6	O	OR	1:1	1:1	1:1	Or
7	ON	OR NOT	1:1	1:1	1:1	Or Not
8	LDI	ILD	1:1	1:1	1:1	Load immediate
9	LDNI	ILD NOT	1:1	1:1	1:1	Load Not immediate
10	AI	IAND	1:1	1:1	1:1	And immediate
11	ANI	IAND NOT	1:1	1:1	1:1	And Not immediate
12	OI	IOR	1:1	1:1	1:1	Or immediate
13	ONI	IOR NOT	1:1	1:1	1:1	Or Not immediate
14	ALD	AND LD	1:1	1:1	1:1	And Block
15	OLD	OR LD	1:1	1:1	1:1	Or Block
16	NOT	NOT	1:1	1:1	1:1	Not
17	EU	UP	1:1	1:1	1:1	Pulse
18	ED	DOWN	1:1	1:1	1:1	Falling Pulse
19	=	OUT	1:1	1:1	1:1	Set
20	=I	!OUT	1:1	1:1	1:1	Set immediate
21	S	SETA	1:1	1:1	1:1	Set Zone
22	R	RSTA	1:1	1:1	1:1	Reset Zone
23	SI	SI_SI	×	×	×	Set Zone immediate
24	RI	SI_RI	×	×	×	Reset Zone immediate
25	SR	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Set Register
26	RS	SI_RS	×	×	×	Reset Register
27	NOP	SI_NOP	×	×	×	Nop
28	LDB=	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare Load Byte N1=N2
29	LDB<	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare Load Byte N1<N2
30	LDB>	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare Load Byte N1>N2
31	LDB<>	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare Load Byte N1<>N2

No	Source Instruction (S7-200)	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
32	LDB<=	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare Load Byte N1<=N2
33	LDB>=	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare Load Byte N1>=N2
34	LDW=	LD=S	1:1	1:1	1:1	Compare Load Word N1=N2
35	LDW<	LD<S	1:1	1:1	1:1	Compare Load Word N1<N2
36	LDW>	LD>S	1:1	1:1	1:1	Compare Load Word N1>N2
37	LDW<>	LD<>S	1:1	1:1	1:1	Compare Load Word N1<>N2
38	LDW<=	LD<=S	1:1	1:1	1:1	Compare Load Word N1<=N2
39	LDW>=	LD>=S	1:1	1:1	1:1	Compare Load Word N1>=N2
40	LDD=	LD=SL	1:1	1:1	1:1	Compare Load Double Word N1=N2
41	LDD<	LD<SL	1:1	1:1	1:1	Compare Load Double Word N1<N2
42	LDD>	LD>SL	1:1	1:1	1:1	Compare Load Double Word N1>N2
43	LDD<>	LD<>SL	1:1	1:1	1:1	Compare Load Double Word N1<>N2
44	LDD<=	LD<=SL	1:1	1:1	1:1	Compare Load Double Word N1<=N2
45	LDD>=	LD>=SL	1:1	1:1	1:1	Compare Load Double Word N1>=N2
46	LDR=	LD=F	1:1	1:1	1:1	Compare Load Real N1=N2
47	LDR<	LD<F	1:1	1:1	1:1	Compare Load Real N1<N2
48	LDR>	LD>F	1:1	1:1	1:1	Compare Load Real N1>N2
49	LDR<>	LD<>F	1:1	1:1	1:1	Compare Load Real N1<>N2
50	LDR<=	LD<=F	1:1	1:1	1:1	Compare Load Real N1<=N2
51	LDR>=	LD<>F	1:1	1:1	1:1	Compare Load Real N1>=N2
52	AB=	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare And Byte N1=N2
53	AB<	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare And Byte N1<N2
54	AB>	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare And Byte N1>N2
55	AB<>	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare And Byte N1<>N2
56	AB<=	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare And Byte N1<=N2
57	AB>=	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Compare And Byte N1>=N2
58	AW=	AND=S	1:1	1:1	1:1	Compare And Word N1=N2
59	AW<	AND<S	1:1	1:1	1:1	Compare And Word N1<N2
60	AW>	AND>S	1:1	1:1	1:1	Compare And Word N1>N2
61	AW<>	AND<>S	1:1	1:1	1:1	Compare And Word N1<>N2
62	AW<=	AND<=S	1:1	1:1	1:1	Compare And Word N1<=N2
63	AW>=	AND>=S	1:1	1:1	1:1	Compare And Word N1>=N2
64	AD=	AND=SL	1:1	1:1	1:1	Compare And Double Word N1=N2

No	Source Instruction (S7-200)	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
65	AD<	AND<SL	1:1	1:1	1:1	Compare And Double Word N1<N2
66	AD>	AND>SL	1:1	1:1	1:1	Compare And Double Word N1>N2
67	AD<>	AND<>SL	1:1	1:1	1:1	Compare And Double Word N1<>N2
68	AD<=	AND<=SL	1:1	1:1	1:1	Compare And Double Word N1<=N2
69	AD>=	AND>=SL	1:1	1:1	1:1	Compare And Double Word N1>=N2
70	AR=	AND=F	1:1	1:1	1:1	Compare And Real N1=N2
71	AR<	AND<F	1:1	1:1	1:1	Compare And Real N1<N2
72	AR>	AND>F	1:1	1:1	1:1	Compare And Real N1>N2
73	AR<>	AND<>	1:1	1:1	1:1	Compare And Real N1<>N2
74	AR<=	AND<=F	1:1	1:1	1:1	Compare And Real N1<=N2
75	AR>=	AND>=F	1:1	1:1	1:1	Compare And Real N1>=N2
76	OB=	SI_OB=	×	×	×	Compare Or Byte N1=N2
77	OB<	SI_OB<	×	×	×	Compare Or Byte N1<N2
78	OB>	SI_OB>	×	×	×	Compare Or Byte N1>N2
79	OB<>	SI_OB<>	×	×	×	Compare Or Byte N1<>N2
80	OB<=	SI_OB<=	×	×	×	Compare Or Byte N1<=N2
81	OB>=	SI_OB>=	×	×	×	Compare Or Byte N1>=N2
82	OW=	OR=S	1:1	1:1	1:1	Compare Or Word N1=N2
83	OW<	OR<S	1:1	1:1	1:1	Compare Or Word N1<N2
84	OW>	OR>S	1:1	1:1	1:1	Compare Or Word N1>N2
85	OW<>	OR<>S	1:1	1:1	1:1	Compare Or Word N1<>N2
86	OW<=	OR<=S	1:1	1:1	1:1	Compare Or Word N1<=N2
87	OW>=	OR>=S	1:1	1:1	1:1	Compare Or Word N1>=N2
88	OD=	OR=SL	1:1	1:1	1:1	Compare Or Double Word N1=N2
89	OD<	OR<SL	1:1	1:1	1:1	Compare Or Double Word N1<N2
90	OD>	OR>SL	1:1	1:1	1:1	Compare Or Double Word N1>N2
91	OD<>	OR<>SL	1:1	1:1	1:1	Compare Or Double Word N1<>N2
92	OD<=	OR<=SL	1:1	1:1	1:1	Compare Or Double Word N1<=N2
93	OD>=	OB>=SL	1:1	1:1	1:1	Compare Or Double Word N1>=N2
94	OR=	OR=F	1:1	1:1	1:1	Compare Or Real N1=N2
95	OR<	OR<F	1:1	1:1	1:1	Compare Or Real N1<N2
96	OR>	OR>F	1:1	1:1	1:1	Compare Or Real N1>N2
97	OR<>	OR<>F	1:1	1:1	1:1	Compare Or Real N1<>N2
98	OR<=	OR<=F	1:1	1:1	1:1	Compare Or Real N1<=N2
99	OR>=	OR>=F	1:1	1:1	1:1	Compare Or Real N1>=N2
100	LDS=	SI_LDS=	1:1	1:1	×	Compare Load String IN1=IN2
101	LDS<>	SI_LDS<>	1:1	1:1	×	Compare Load String IN1<>IN2
102	AS=	SI_AS=	1:1	1:1	×	Compare And String IN1=IN2
103	AS<>	SI_AS<>	1:1	1:1	×	Compare And String IN1<>IN2
104	OS=	SI_OS=	1:1	1:1	×	Compare Or String IN1=IN2
105	OS<>	SI_OS<>	1:1	1:1	×	Compare Or String IN1<>IN2

No	Source Instruction (S7-200)	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
106	TON	TIM,TIMH,TMHH	1:1	1:1	1:1	On-Delay Timer
107	TONR	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Retentive On-Delay Timer
108	TOF	SI_TOF	×	×	×	Off-Delay Timer
109	TP	SI_TP	×	×	×	Pulse Timer
110	BGN_ITIME	SI_BGN_ITIME	×	×	×	Beginning Interval Time
111	CAL_ITIME	SI_CAL_ITIME	×	×	×	Calculate Interval Time
112	CTU	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	CU increments the current value
113	CTUD	CNTR	1:1	1:1	1:1	CU increments the current value CD decrements the current value
114	CTD	CNT	1:1	1:1	1:1	CD decrements the current value
115	ADD_I	+	1:1	1:1	1:1	Add Integer IN1+OUT=OUT
116	SUB_I	-	1:1	1:1	1:1	Subtract Integer IN1-OUT=OUT
117	ADD_DI	+L	1:1	1:1	1:1	Add double Integer IN1+OUT=OUT
118	SUB_DI	-L	1:1	1:1	1:1	Subtract Integer IN1-OUT=OUT
119	MUL_I	*	1:1	1:1	1:1	Multiply Integer IN1*OUT=OUT
120	DIV_I	/	1:1	1:1	1:1	Divide Integer IN1/OUT=OUT
121	MUL_DI	*L	1:1	1:1	1:1	Multiply Double Integer IN1*OUT=OUT
122	DIV_DI	/L	1:1	1:1	1:1	Divide Double Integer IN1/OUT=OUT
123	MUL	*	1:1	1:1	1:1	Multiply Integer to Double Integer (16*16-> 32)
124	DIV	/	1:1	1:1	1:1	Divide Integer (16/16-> 32)
125	INCB	++	1:1	1:1	1:1	Bit Increment
126	DECB	--	1:1	1:1	1:1	Bit Decrement
127	INCW	++	1:1	1:1	1:1	Word Increment
128	DECW	--	1:1	1:1	1:1	Word Decrement
129	INCD	++L	1:1	1:1	1:1	Double Word Increment
130	DECD	--L	1:1	1:1	1:1	Double Word Decrement
131	ADD_R	+F	1:1	1:1	1:1	Add Real IN1+OUT=OUT
132	SUB_R	-F	1:1	1:1	1:1	Subtract Real IN1-OUT=OUT
133	MUL_R	*F	1:1	1:1	1:1	Multiply Real IN1*OUT=OUT
134	DIV_R	/F	1:1	1:1	1:1	Divide Real IN1/OUT=OUT
135	SQRT	SQRT	1:1	1:1	×	Square Root
136	LN	LOG	1:1	1:1	×	Natural Logarithm
137	EXP	EXP	1:1	1:1	×	Natural Exponential
138	SIN	SIN	1:1	1:1	×	Sine
139	COS	COS	1:1	1:1	×	Cosine
140	TAN	TAN	1:1	1:1	×	Tangent
141	PID	SI_PID	×	×	×	PID Loop
142	MOV_B	MOVD	1:1	1:1	1:1	Move Byte
143	MOV_W	MOV	1:1	1:1	1:1	Move Word
144	MOV_DW	MOVL	1:1	1:1	1:1	Move Double Word

No	Source Instruction (S7-200)	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
145	MOV_R	MOVL	1:1	1:1	1:1	Move Real
146	BLKMOV_B	SI_BLKMOV_B	×	×	×	Block Move Byte
147	BLKMOV_W	XFER	1:1	1:1	1:1	Block Move Word
148	BLKMOV_D	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Block Move Double Word
149	SWAP	SWAP	1:1	1:1	1:1	Swap Bytes
150	MOV_BIR	SI_MOV_BIR	×	×	×	Move Byte Immediate Read
151	MOV_BIW	SI_MOV_BIW	×	×	×	Move Byte Immediate Write
152	WAND_B	ANDW	1:1	1:1	1:1	And Byte
153	WOR_B	ORW	1:1	1:1	1:1	Or Byte
154	WXOR_B	XORW	1:1	1:1	1:1	Exclusive Or Byte
155	WAND_W	ANDW	1:1	1:1	1:1	And Word
156	WOR_W	ORW	1:1	1:1	1:1	Or Word
157	WXOR_W	XORW	1:1	1:1	1:1	Exclusive Or Word
158	WAND_DW	ANDL	1:1	1:1	1:1	And Double Word
159	WOR_DW	ORWL	1:1	1:1	1:1	Or Double Word
160	WXOR_DW	XORL	1:1	1:1	1:1	Exclusive Or Double Word
161	INV_B	COM	1:1	1:1	1:1	Invert Byte
162	INV_W	COM	1:1	1:1	1:1	Invert Word
163	INV_DW	COML	1:1	1:1	1:1	Invert Double Word
164	SHR_B	SI_SHR_B	×	×	×	Shift Right Byte
165	SHL_B	SI_SHL_B	×	×	×	Shift Left Byte
166	SHR_W	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Shift Right Word
167	SHL_W	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Shift Left Word
168	SHR_DW	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Shift Right Double Word
169	SHL_DW	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Shift Left Double Word
170	ROR_B	SI_ROR_B	×	×	×	Rotate Right Byte
171	ROL_B	SI_ROL_B	×	×	×	Rotate Left Byte
172	ROR_W	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Rotate Right Word
173	ROL_W	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Rotate Left Word
174	ROR_DW	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Rotate Right Double Word
175	ROL_DW	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Rotate Left Double Word
176	SHRB	SI_SHRB	×	×	×	Shift and Rotate Register

No	Source Instruction (S7-200)	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
177	BCD_I	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	BCD to integer
178	I_BCD	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Integer to BCD
179	DI_R(DTR)	FTL	1:1	1:1	1:1	Double Integer to Real
180	ROUND	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Round
181	TRUNC	FIXL	1:1	1:1	1:1	Truncate
182	DI_I	SI_DI_I	×	×	×	Double Integer to Integer
183	I_DI	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Integer to Double Integer
184	B_I	SI_B_I	×	×	×	Byte to Integer
185	I_B	SI_I_B	×	×	×	Integer to byte
186	DECO	MLPX	1:1	1:1	1:1	Decode
187	ENCO	DMPX	1:1	1:1	1:1	Encode
188	SEG	SDEC	1:1	1:1	1:1	Segment
189	ATH	SI_ATH	×	×	×	ASCII to Hexadecimal
190	HTA	SI_HTA	×	×	×	Hexadecimal to ASCII
191	ITA	SI_ITA	×	×	×	Integer to ASCII
192	DTA	SI_DTA	×	×	×	Double Integer to ASCII
193	RTA	SI_RTA	×	×	×	Real to ASCII
194	I_S	SI_I_S	×	×	×	Integer to String
195	DI_S	SI_DI_S	×	×	×	Double Integer to String
196	R_S	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	Real to String
197	S_I	SI_S_I	×	×	×	String to Integer
198	S_DI	SI_S_DI	×	×	×	String to Double Integer
199	S_R	SI_STR	×	×	×	String to Real
200	JMP	CJP	1:1	1:1	1:1	Jump to Label
201	LBL	JME	1:1	1:1	1:1	Label
202	SBR	SBN	1:1	1:1	1:1	Subroutine Start
203	CRET	SI_CRET	×	×	×	Conditional Return from Subroutine
204	FOR	Refer to Appendix 2 Convert Solution	1:N	1:N	1:N	For/Next Loop
205	NEXT	NEXT	1:1	1:1	1:1	For/Next Loop
206	SCR	STEP	1:1	1:1	1:1	Load SCR
207	SCRT	SNXT	1:1	1:1	1:1	SCR Transition
208	CSCRE	SI_CSCRE	×	×	×	Conditional SCR End
209	SCRE	SI_SCRE	×	×	×	SCR End
210	CALL	SBS	1:1	1:1	1:1	Call Subroutine

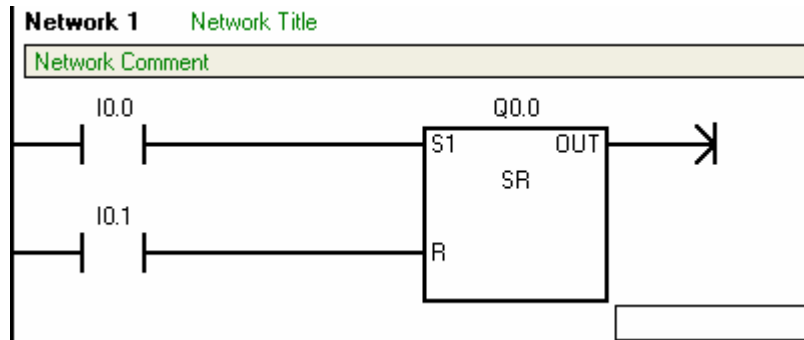
No	Source Instruction (S7-200)	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
211	FINAL	Refer to FOR Instruction	1:1	1:1	1:1	FOR/NEXT loop number (Included in FOR when converted)
212	END	SI_END	×	×	×	END
213	DIAG_LED	SI_DIAG_LED	×	×	×	Diagnostic LED
214	STOP	SI_STOP	×	×	×	Stop
215	WDR	SI_WDR	×	×	×	Watchdog Reset (300ms)
216	LPS	OUT TR0	1:1	1:1	1:1	Logic Push
217	LRD	LD TR0	1:1	1:1	1:1	Logic Read
218	LPP	LD TR0	1:1	1:1	1:1	Logic Pop
219	LDS	SI_LDS	×	×	×	Load Stack
220	HDEF	SI_HDEF	×	×	×	High-Speed Counter Definition
221	HSC	SI_HSC	×	×	×	High-Speed Counter
222	PLS	SI_PLS	×	×	×	Pulse Output
223	READ_RTC	SI_READ_RTC	×	×	×	Read-Time Clock
224	SET_RTC	SI_SET_RTC	×	×	×	Set Read-Time Clock
225	READ_RTCX	SI_READ_RTCX	×	×	×	Read Real Time Clock Extended
226	SET_RTCX	SI_SET_RTCX	×	×	×	Set Real Time Clock Extended
227	ATT	SI_ATT	×	×	×	Add to Table
228	FND=	SI_FND=	×	×	×	Table Find
229	FND<>	SI_FND<>	×	×	×	Table Find
230	FND<	SI_FND<	×	×	×	Table Find
231	FND>	SI_FND>	×	×	×	Table Find
232	FIFO	SI_FIFO	×	×	×	First-In-First-Out
233	LIFO	SI_LIFO	×	×	×	Last-In-First-Out
234	FILL	SI_FILL	×	×	×	Memory Fill
235	ATCH	SI_ATCH	×	×	×	Attach Interrupt
236	DTCH	SI_DTCH	×	×	×	Detach Interrupt
237	CRETI	SI_CRET I	×	×	×	Conditional Return from Interrupt
238	ENI	SI_ENI	×	×	×	Enable Interrupt
239	DISI	SI_DISI	×	×	×	Disable Interrupt
240	CEVNT	SI_CEVNT	×	×	×	Clear Interrupt Event
241	NETR	SI_NETR	×	×	×	Network Read
242	NETW	SI_NETW	×	×	×	Network Write
243	XMT	SI_XMT	×	×	×	Transmit
244	RCV	SI_RCV	×	×	×	Receive
245	GET_ADDR	SI_GET_ADDR	×	×	×	Get Port Address
246	SET_ADDR	SI_SET_ADDR	×	×	×	Set Port Address
247	STR_LEN	LEN\$	1:1	1:1	×	String Length
248	STR_CPY	MOV\$	1:1	1:1	×	Copy String
249	STR_CAT	+\$	1:1	1:1	×	Concatenate String
250	SSTR_CPY	MID\$	1:1	1:1	×	Copy Substring from String

No	Source Instruction (S7-200)	Destination Instruction	CP 1H	CP 1L	CP 1E	Function
251	STR_FIND	FINDS	1:1	1:1	×	Find String Within String
252	CHR_FIND	SI_CHR_FIND	×	×	×	Find First Character Within String

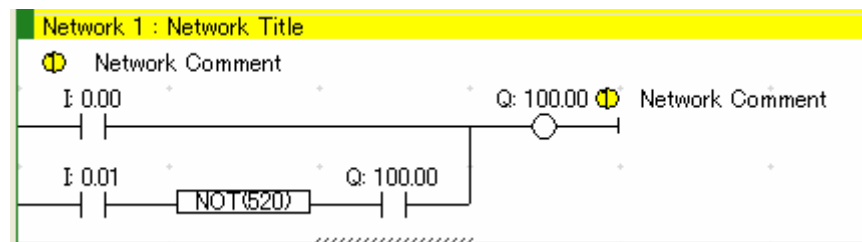
Appendix 2: Siemens instruction Convert Solution 1: N

SIEMENS S7-200(Ladder) Instruction	Class	Detail
SR	Bit Logic Instructions	Set Dominant Bistable

From: Siemens ladder

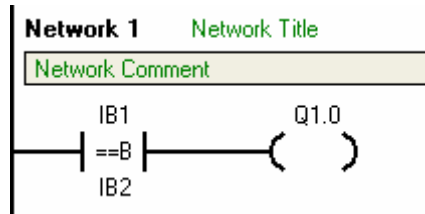


To: Omron ladder

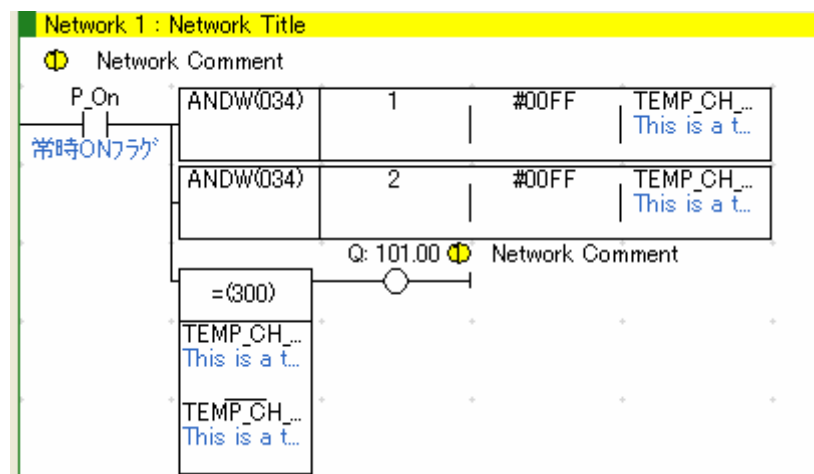


SIEMENS S7-200(Ladder) Instruction	Class	Detail
LDB=	Compare Instructions	Compare Load Byte N1=N2

From: Siemens ladder



To: Omron ladder

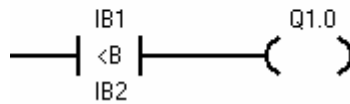


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
LDB<	Compare Instructions	Compare Load Byte N1<N2

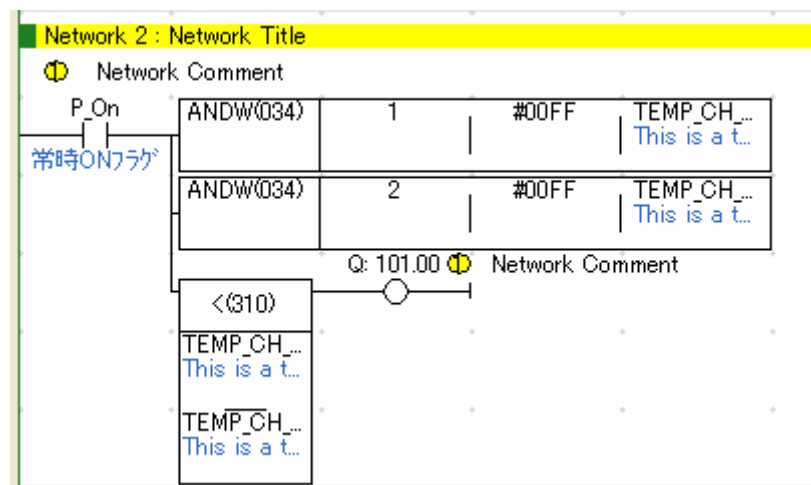
From: Siemens ladder

Network 2 Network Title

Network Comment

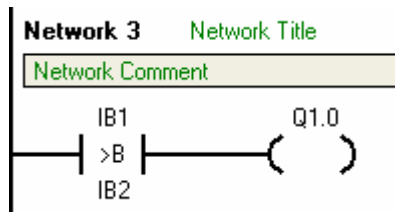


To: Omron ladder

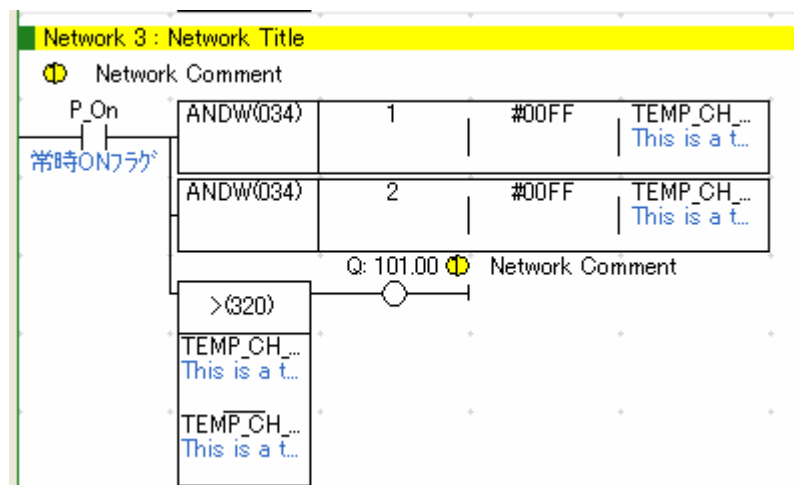


SIEMENS S7-200(Ladder) Instruction	Class	Detail
LDB>	Compare Instructions	Compare Load Byte N1>N2

From: Siemens ladder

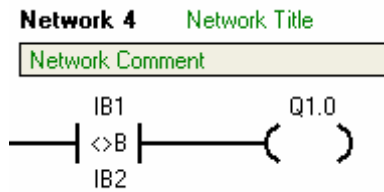


To: Omron ladder

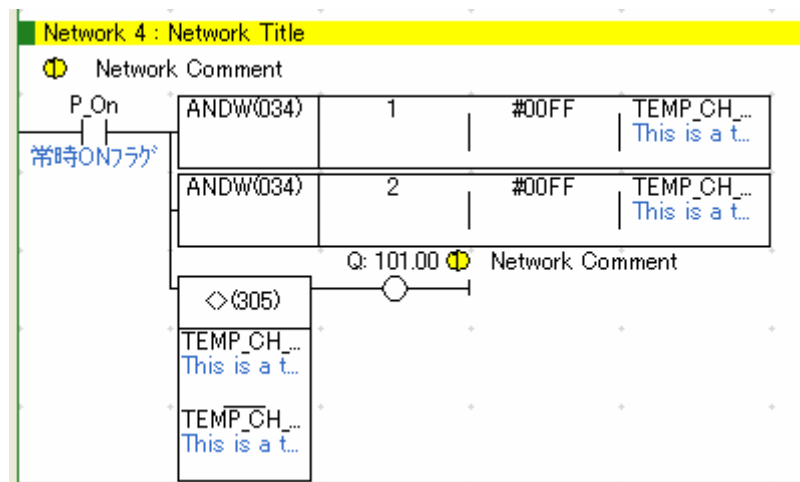


SIEMENS S7-200(Ladder) Instruction	Class	Detail
LDB<>	Compare Instructions	Compare Load Byte N1<>N2

From: Siemens ladder

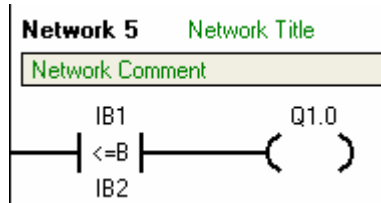


To: Omron ladder

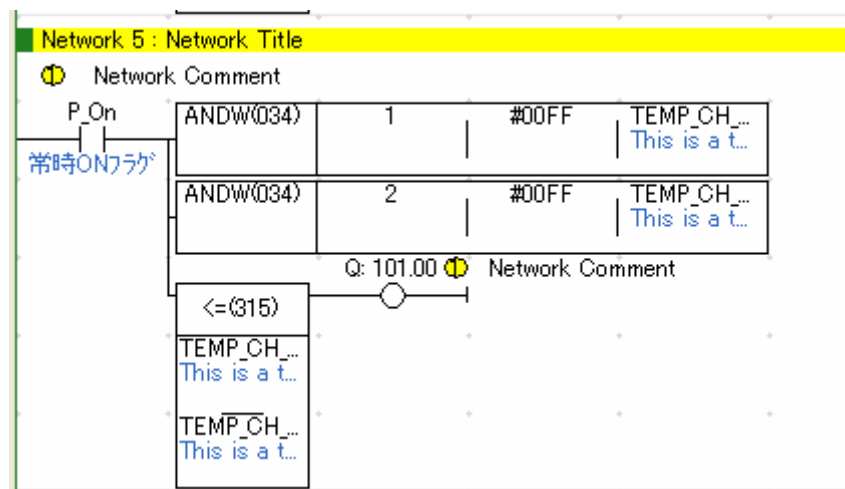


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
LDB<=	Compare Instructions	Compare Load Byte N1<=N2

From: Siemens ladder

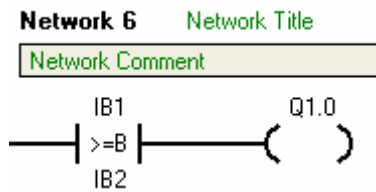


To: Omron ladder

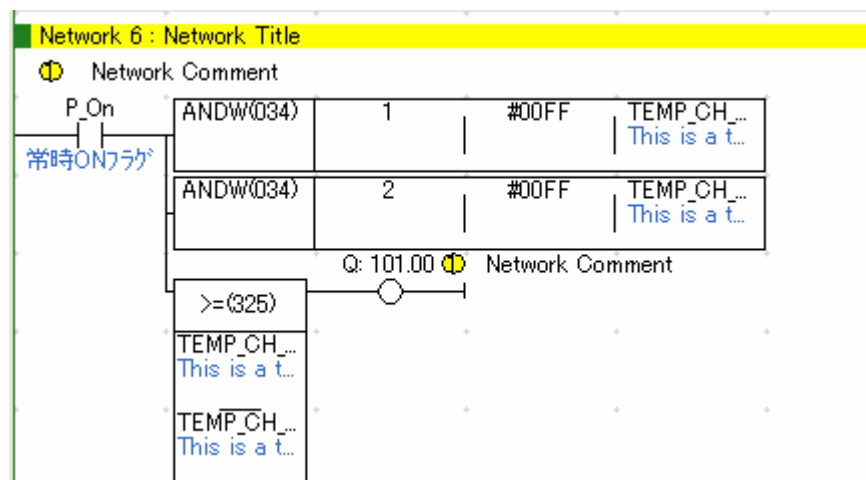


SIEMENS S7-200(Ladder) Instruction	Class	Detail
LDB>=	Compare Instructions	Compare Load Byte N1>=N2

From: Siemens ladder

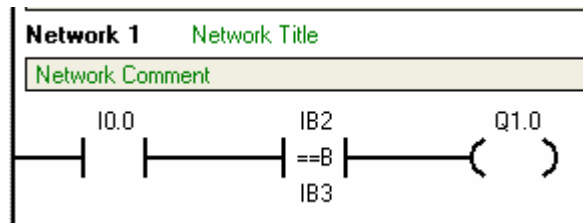


To: Omron ladder

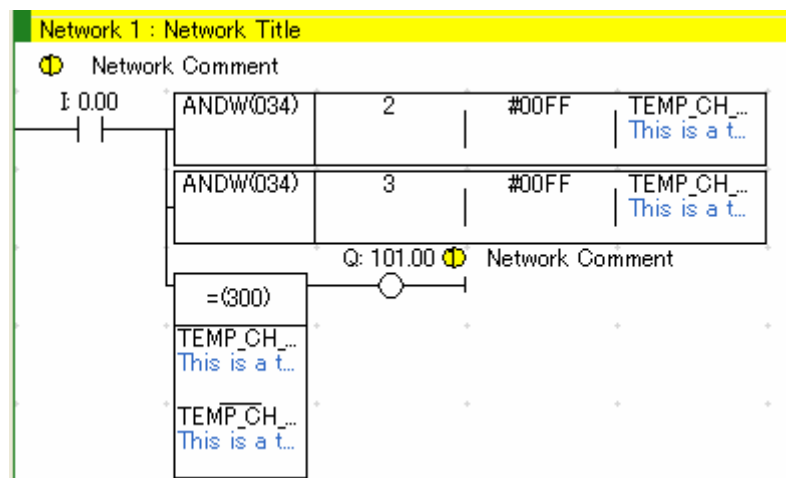


SIEMENS S7-200(Ladder) Instruction	Class	Detail
AB=	Compare Instructions	Compare And Byte N1=N2

From: Siemens ladder

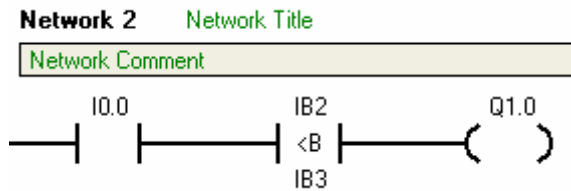


To: Omron ladder

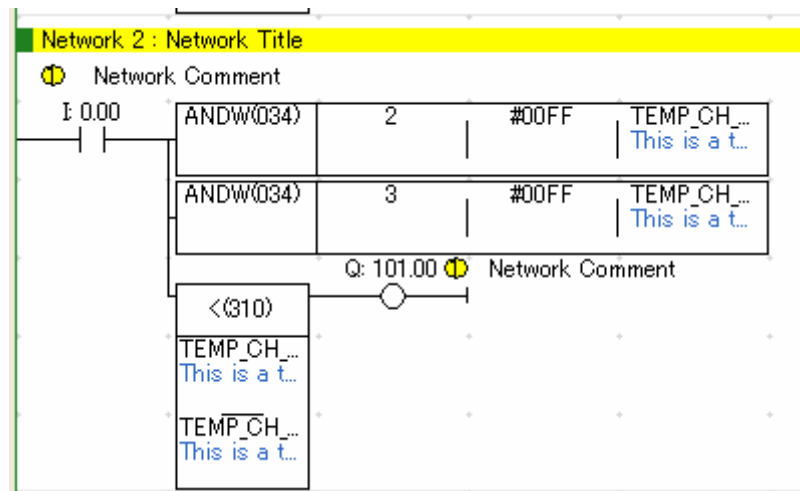


SIEMENS S7-200(Ladder) Instruction	Class	Detail
AB<	Compare Instructions	Compare And Byte N1<N2

From: Siemens ladder

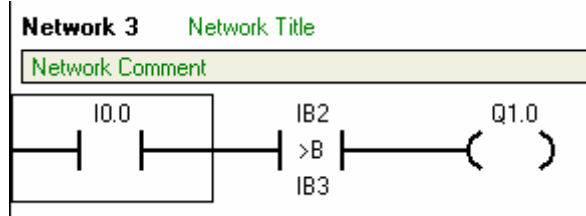


To: Omron ladder

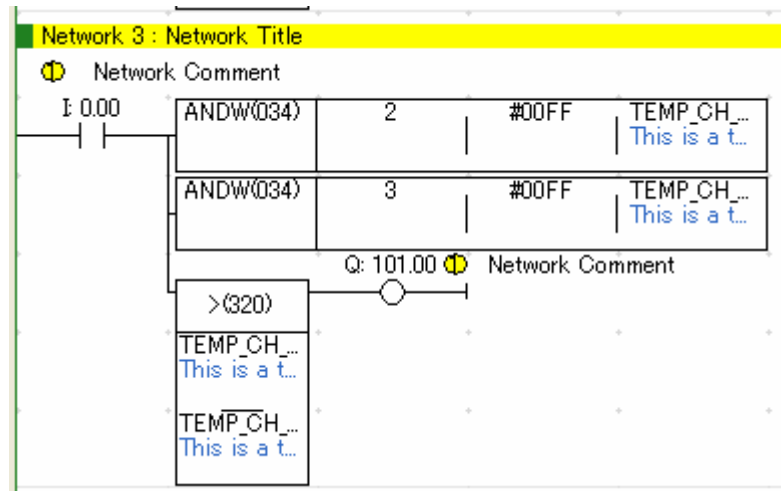


SIEMENS S7-200(Ladder) Instruction	Class	Detail
AB>	Compare Instructions	Compare And Byte N1>N2

From: Siemens ladder

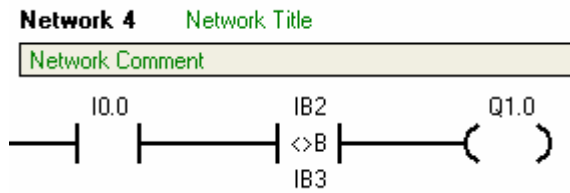


To: Omron ladder

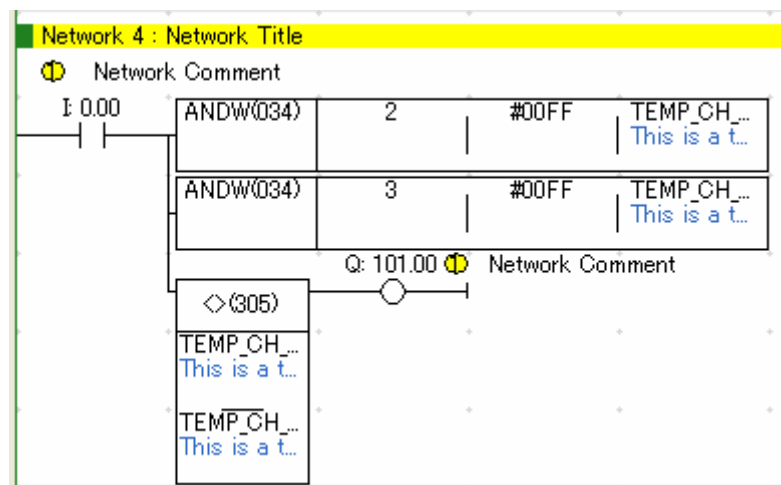


SIEMENS S7-200(Ladder) Instruction	Class	Detail
AB<>	Compare Instructions	Compare And Byte N1<>N2

From: Siemens ladder

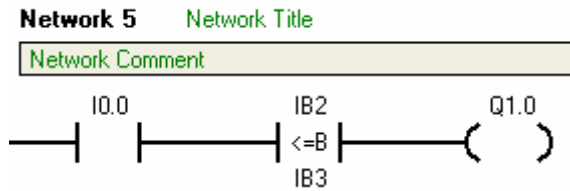


To: Omron ladder

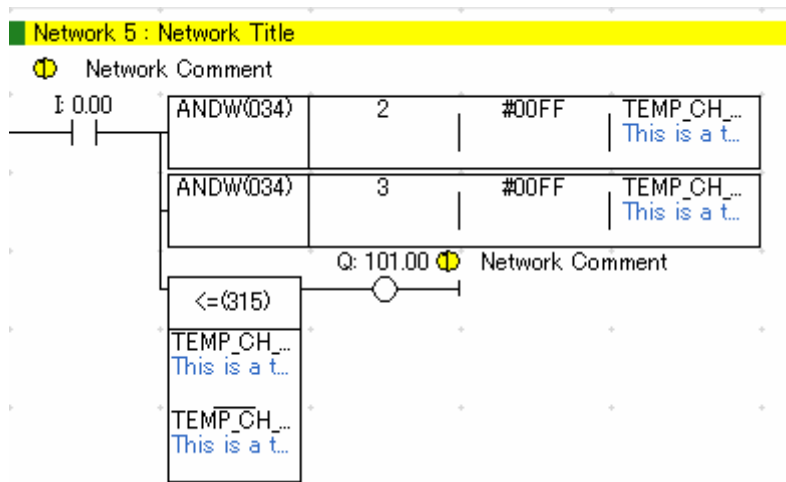


SIEMENS S7-200(Ladder) Instruction	Class	Detail
AB<=	Compare Instructions	Compare And Byte N1<=N2

From: Siemens ladder

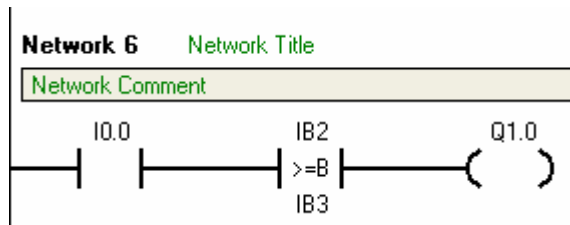


To: Omron ladder

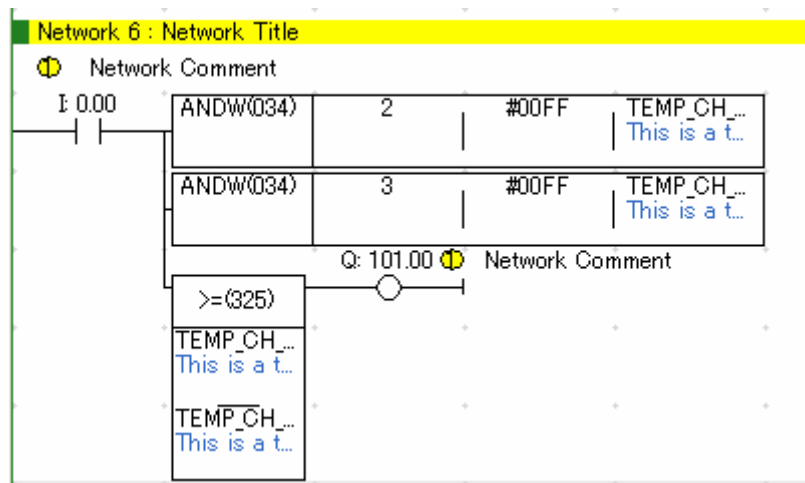


SIEMENS S7-200(Ladder) Instruction	Class	Detail
AB>=	Compare Instructions	Compare And Byte N1>=N2

From: Siemens ladder

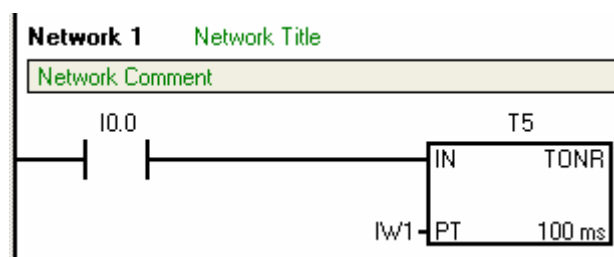


To: Omron ladder

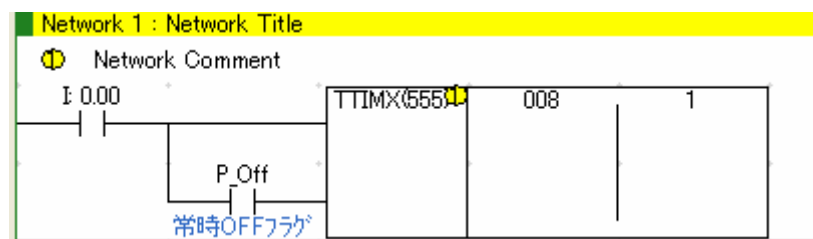


SIEMENS S7-200(Ladder) Instruction	Class	Detail
TONR	Timer Instructions	Retentive On-Delay Timer

From: Siemens ladder

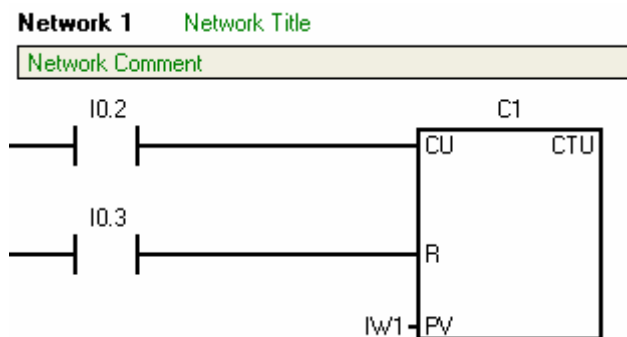


To: Omron ladder

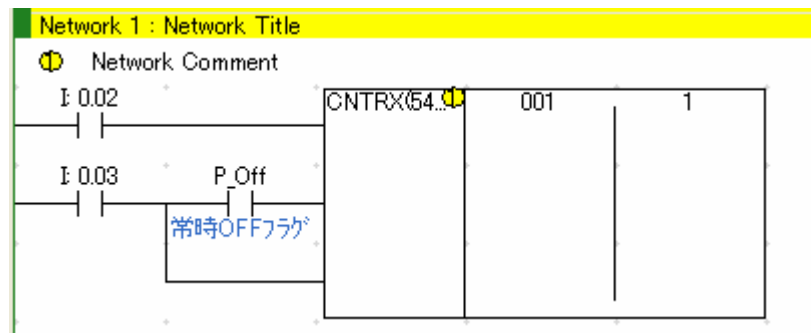


SIEMENS S7-200(Ladder) Instruction	Class	Detail
CTU	Counter Instructions	CU increments the current value

From: Siemens ladder

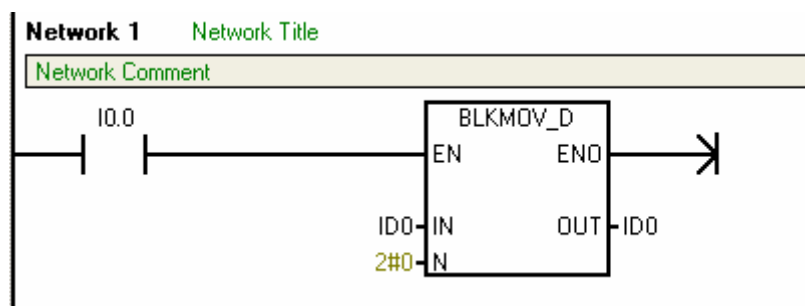


To: Omron ladder

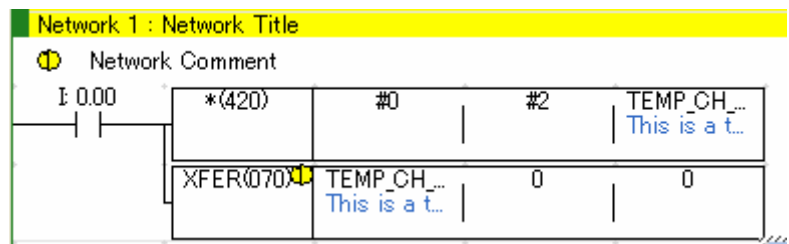


SIEMENS S7-200(Ladder) Instruction	Class	Detail
BLKMOV_D	Move Instructions	Block Move Double Word

From: Siemens ladder

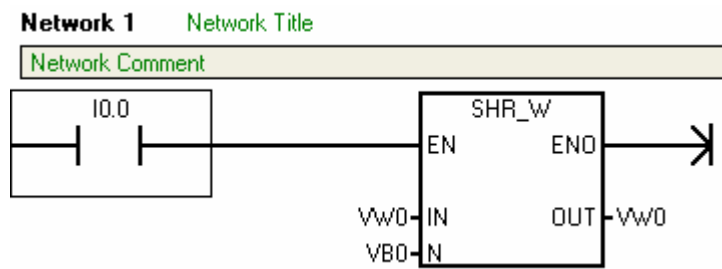


To: Omron ladder

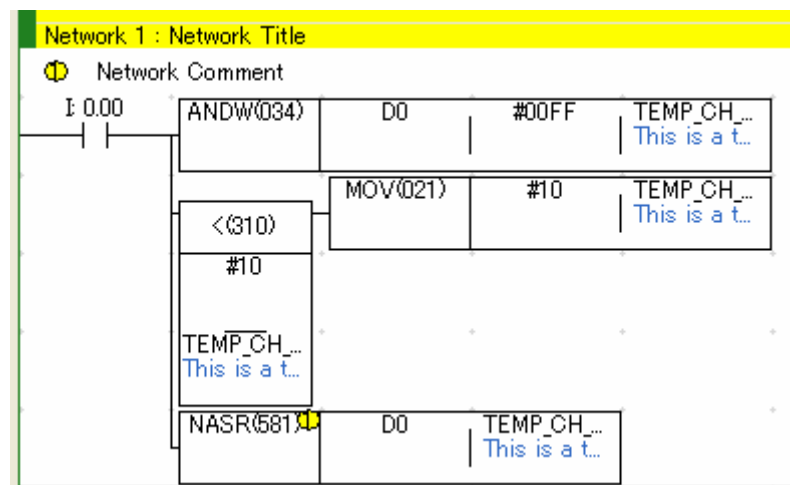


SIEMENS S7-200(Ladder) Instruction	Class	Detail
SHR_W	Shift and Rotate Instructions	Shift Right Word

From: Siemens ladder

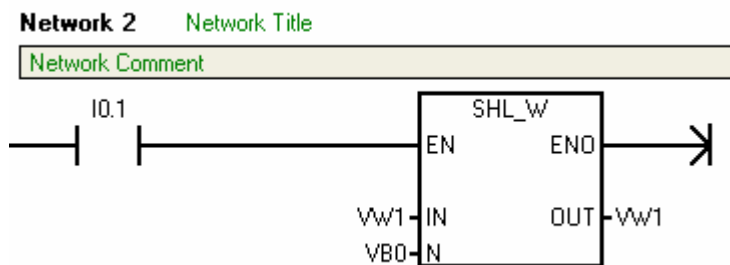


To: Omron ladder

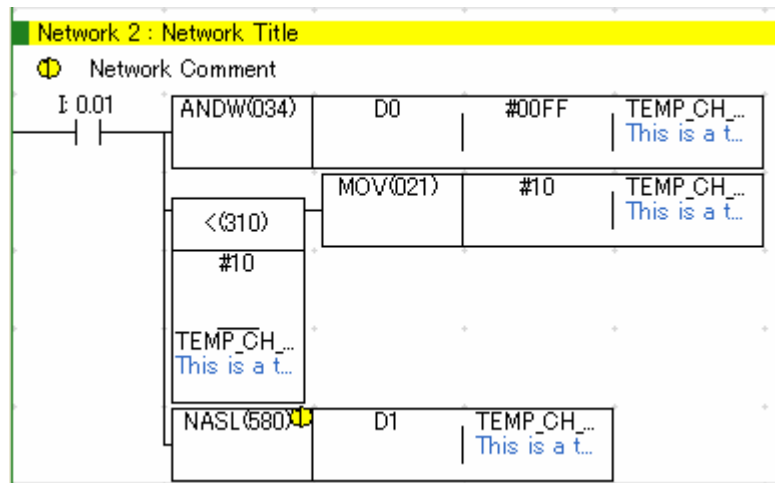


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
SHL_W	Shift and Rotate Instructions	Shift Left Word

From: Siemens ladder

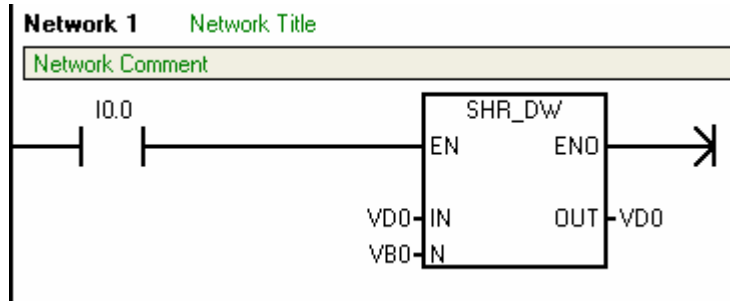


To: Omron ladder

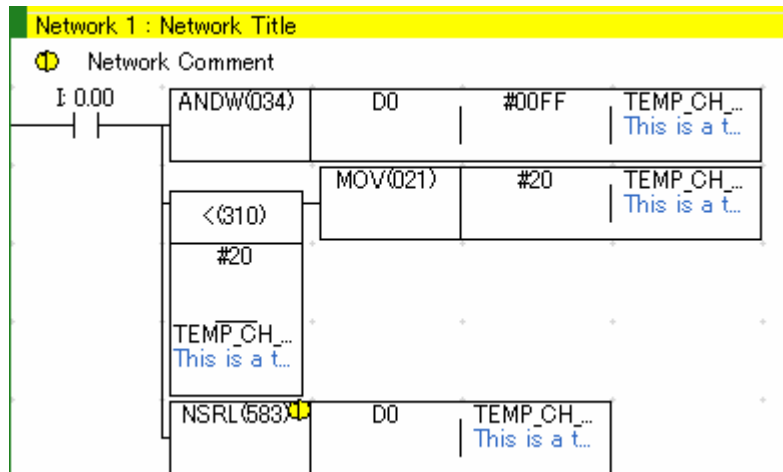


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
SHR_DW	Shift and Rotate Instructions	Shift Right Double Word

From: Siemens ladder

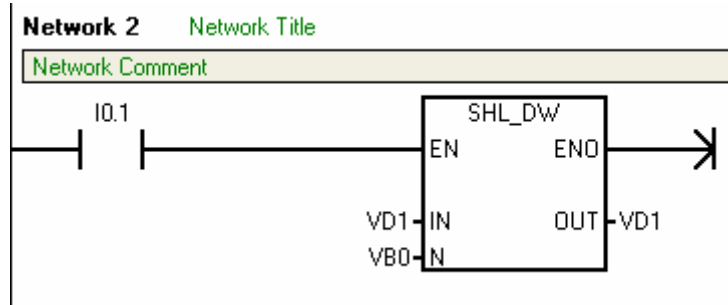


To: Omron ladder

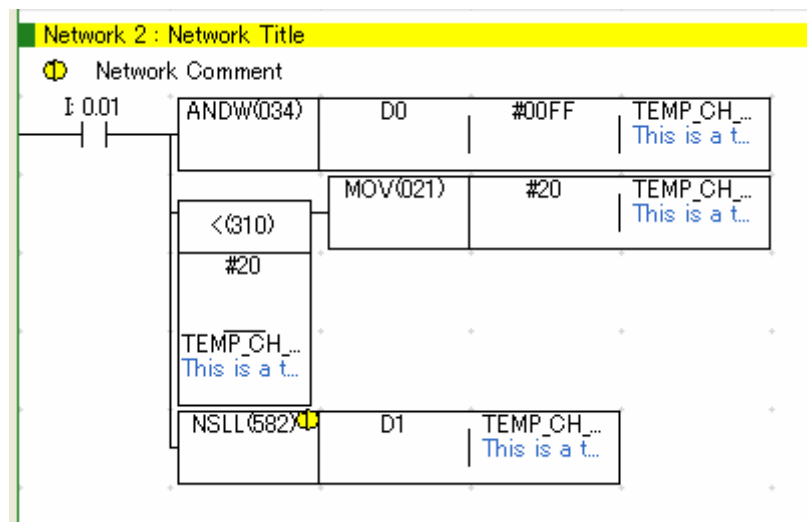


SIEMENS S7-200(Ladder) Instruction	Class	Detail
SHL_DW	Shift and Rotate Instructions	Shift Left Double Word

From: Siemens ladder

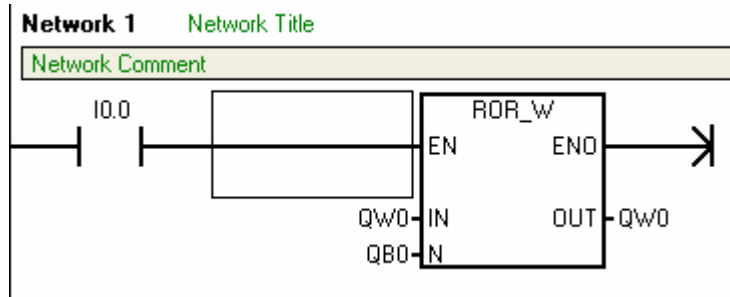


To: Omron ladder

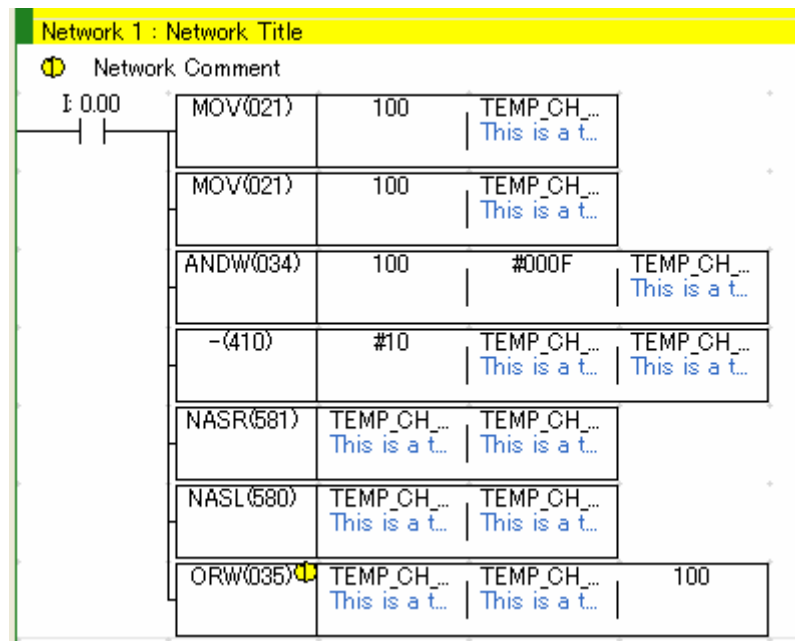


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
ROR_W	Shift and Rotate Instructions	Rotate Right Word

From: Siemens ladder

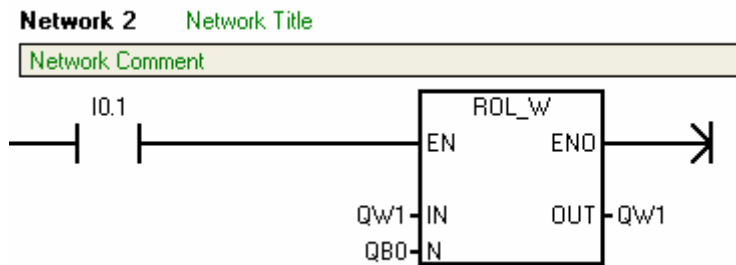


To: Omron ladder

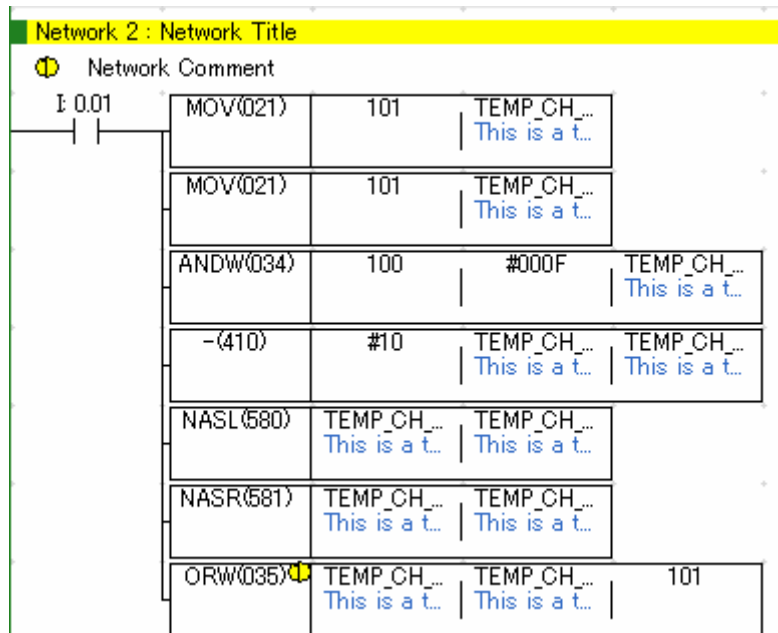


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
ROL_W	Shift and Rotate Instructions	Rotate Left Word

From: Siemens ladder



To: Omron ladder

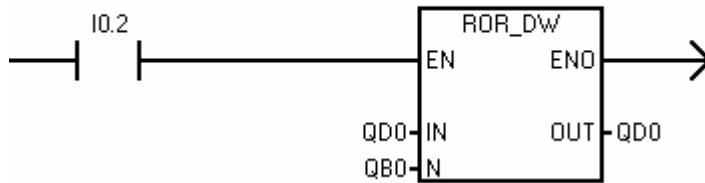


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
ROR_DW	Shift and Rotate Instructions	Rotate Right Double Word

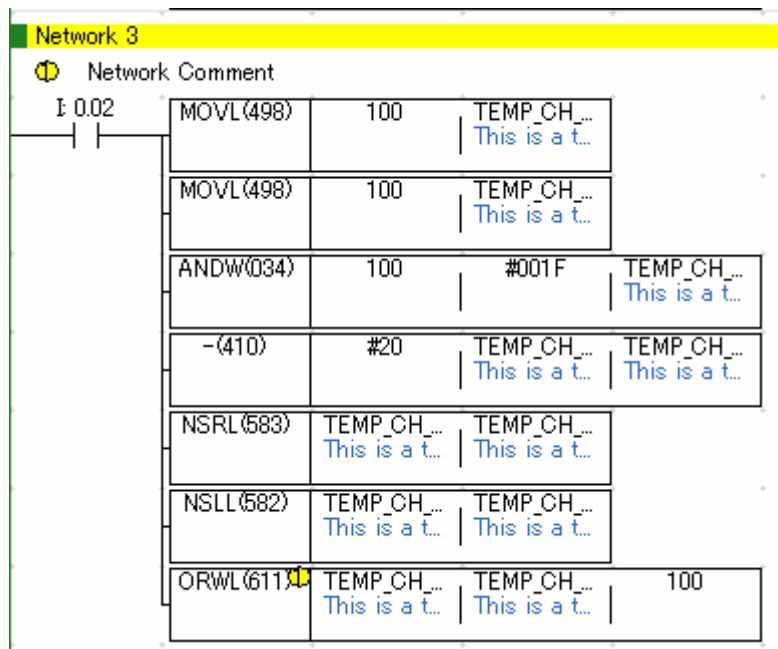
From: Siemens ladder

Network 3

Network Comment

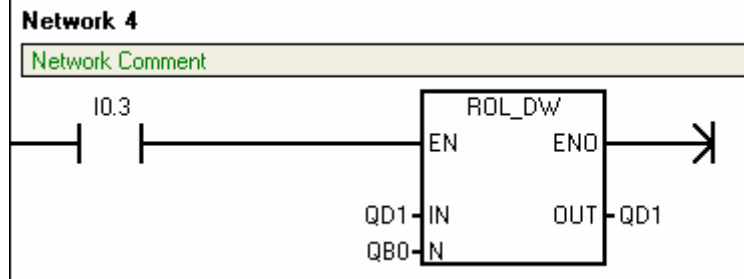


To: Omron ladder

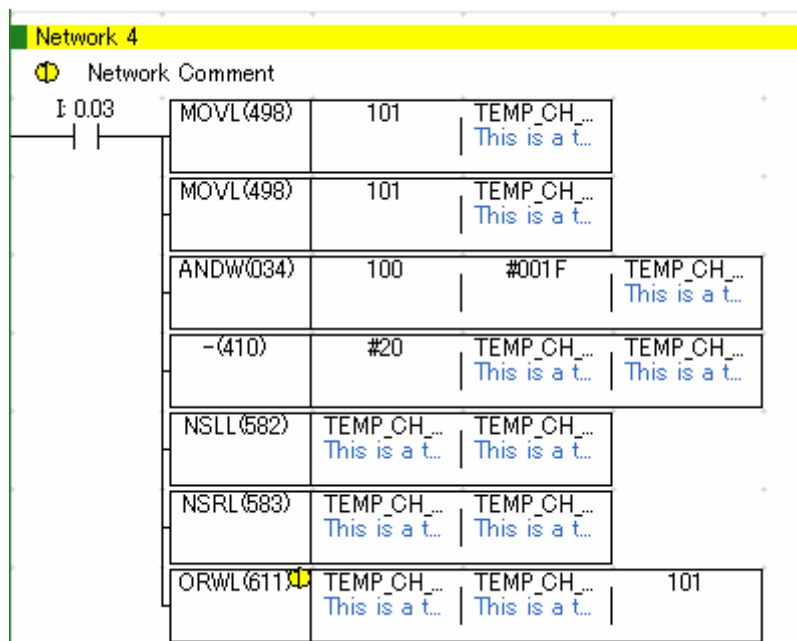


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
ROL_DW	Shift and Rotate Instructions	Rotate Left Double Word

From: Siemens ladder

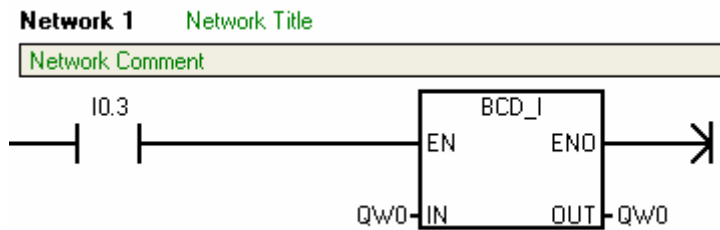


To: Omron ladder

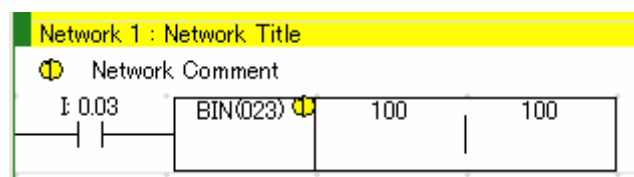


SIEMENS S7-200(Ladder) Instruction	Class	Detail
BCD_I	Conversion Instructions	BCD to Integer

From: Siemens ladder

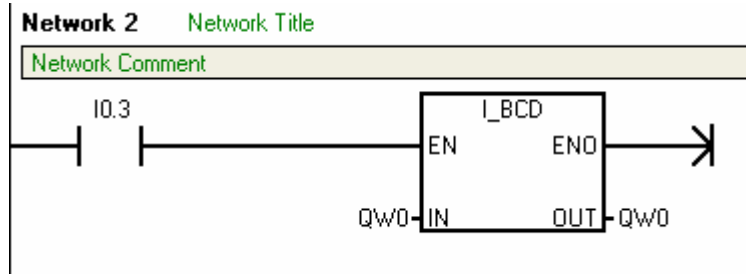


To: Omron ladder

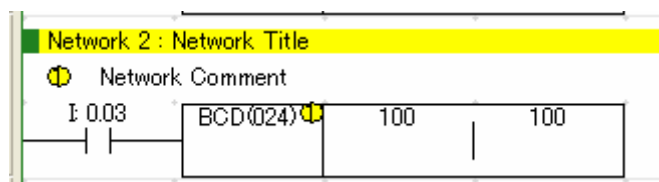


SIEMENS S7-200(Ladder) Instruction	Class	Detail
I_BCD	Conversion Instructions	Integer to BCD

From: Siemens ladder

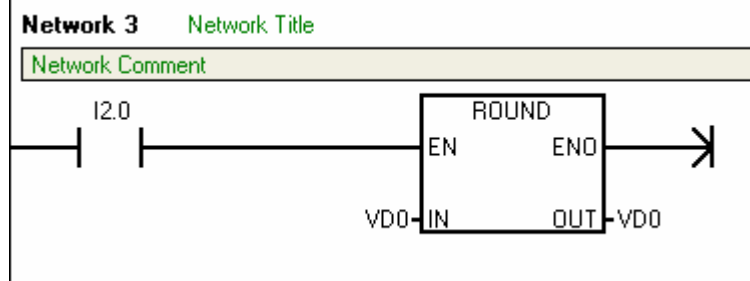


To: Omron ladder

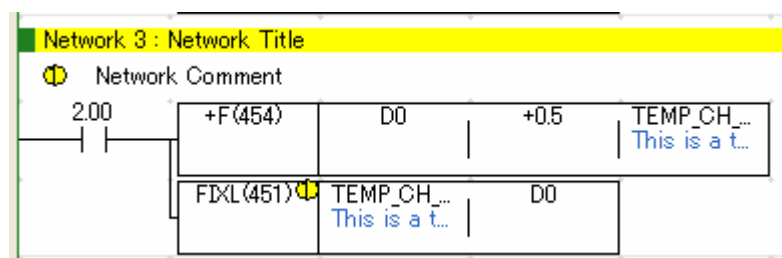


SIEMENS S7-200(Ladder) Instruction	Class	Detail
ROUND	Conversion Instructions	Real to Double Word(Round)

From: Siemens ladder

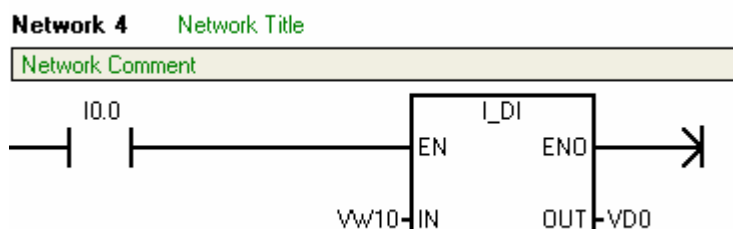


To: Omron ladder

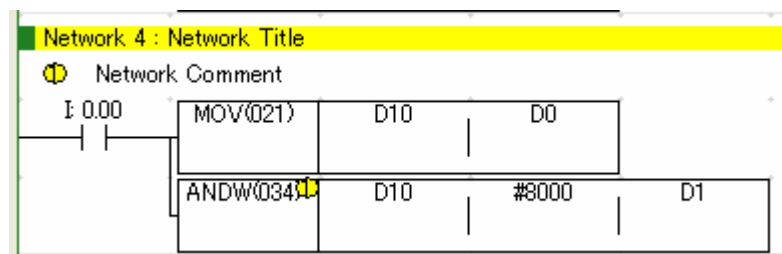


SIEMENS S7-200(Ladder) Instruction	Class	Detail
I_DI	Conversion Instructions	Integer to Double Integer

From: Siemens ladder

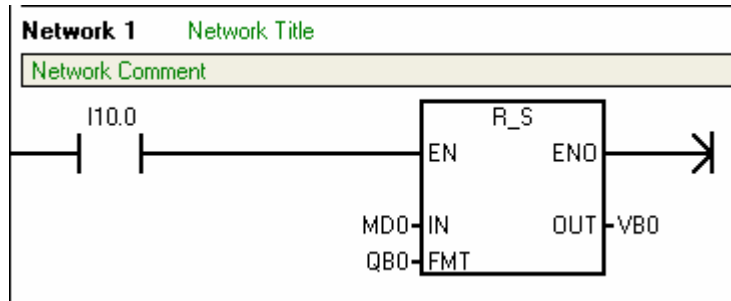


To: Omron ladder

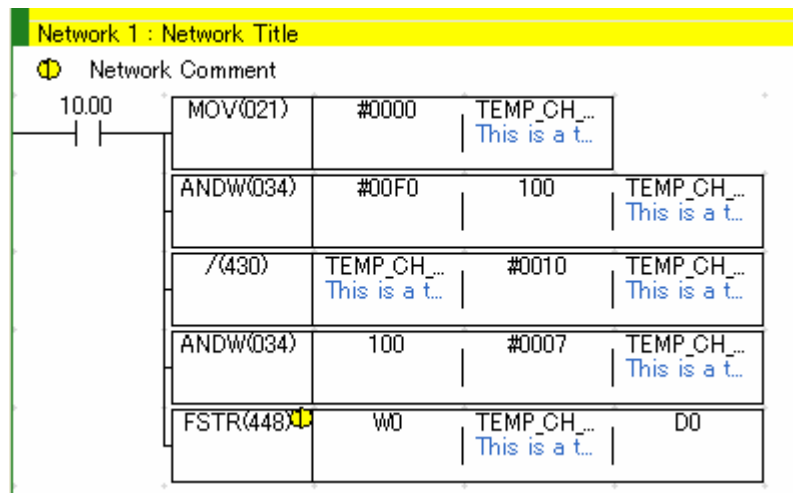


SIEMENS S7-200(Ladder)	Class	Detail
Instruction		
R_S	Conversion Instructions	Real to String

From: Siemens ladder

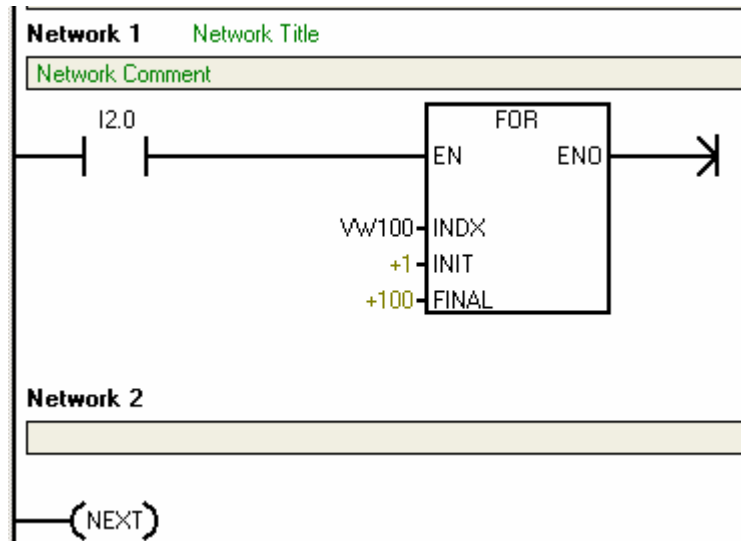


To: Omron ladder

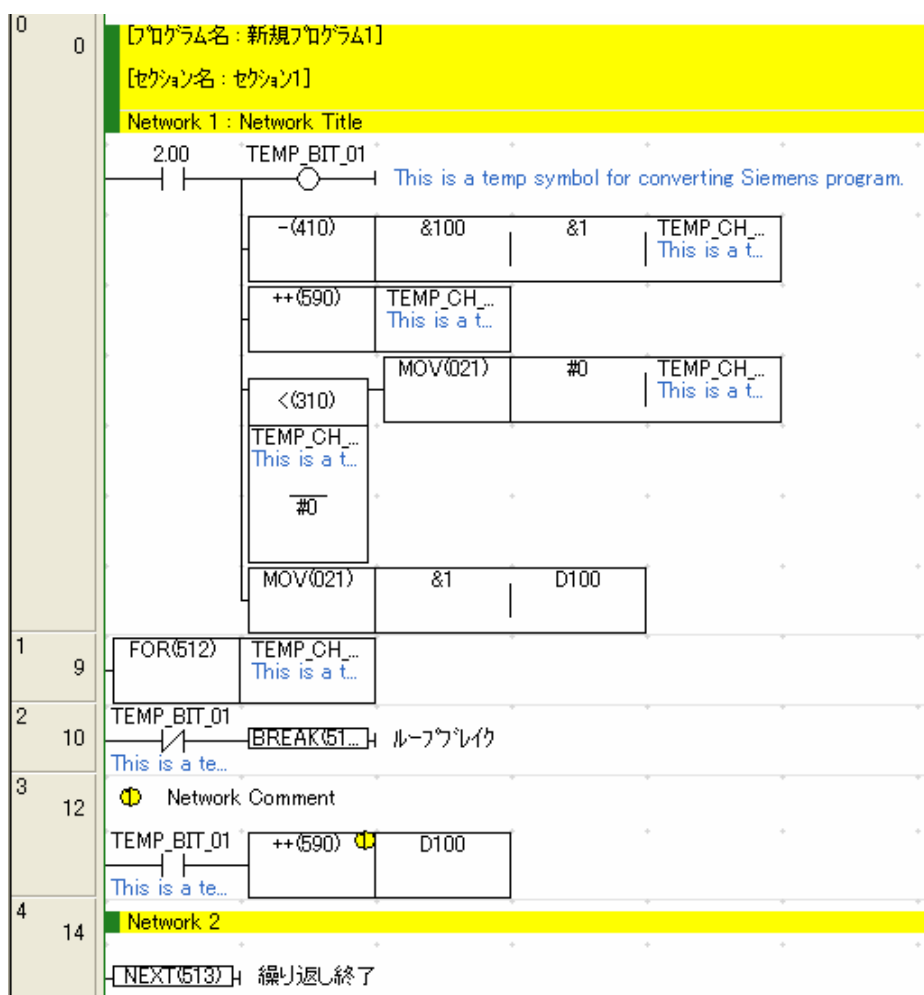


SIEMENS S7-200(Ladder) Instruction	Class	Detail
FOR	Program Control Instructions	For/Next Loop

Form: Siemens ladder



To: Omron ladder



Appendix 3: Siemens I/O Memory Convert Table
(1) I/O memory Convert Table (S7-200 to CP1E-E)

S7-200					CP1E-E□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Bit width		Area	Start Bit/CH	Final Bit/CH	Bit width
I	Input register	I0.0	I15.7	1bit	-	Input Area	0.00	15.07	1bit
		IB0	IB15	8bit			0	15	8bit
		IW0	IW14	16bit			0	14	16bit
		ID0	ID12	32bit			0	12	32bit
Q	Output register	Q0.0	Q15.7	1bit	-	Output Area	100	115.07	1bit
		QB0	QB15	8bit			100	115	8bit
		QW0	QW14	16bit			100	114	16bit
		QD0	QD12	32bit			100	112	32bit
V	Variable memory	V0.0	V2047.7	1bit	D	Data Register	-	-	Can not convert
		V2048.0	V10239.7	1bit			-	-	Can not convert
		VB0	VB2047	8bit			D0	D2047	8bit
		VB2048	VB10239	8bit			-	-	Can not convert
		VW0	VW2046	16bit			D0	D2046	16bit
		VW2048	VW10238	16bit			-	-	Can not convert
		VD0	VD2044	32bit			D0	D2044	32bit
		VD2048	VD10236	32bit			-	-	Can not convert
M	Bit memory	M0.0	M31.7	1bit	W	Work Area	W0.0	W31.7	1bit
		MB0	MB31	8bit			W0	W31	8bit
		MW0	MW30	16bit			W0	W30	16bit
		MD0	MD28	32bit			W0	W28	32bit
T	Timer	T0	-	-	T	Timer	T0	-	-
		T1	T31	-			T4	T34	-
		T32	-	-			T1	-	-
		T33	T63	-			T35	T65	-
		T64	-	-			T2	-	-
		T65	T95	-			T66	T96	-
		T96	-	-			T3	-	-
		T97	T255	-			T97	T255	-
C	Counter	C0	C255	-	C	Counter	C0	C255	-
L	Local memory	L0.0	L24.07	1bit		Holding Area /CIO Area	264.0	288.07	1bit
		L25.0	L63.7	1bit			H0.0	H38.07	1bit
		LB0	LB24	8bit			264	288	8bit
		LB25	LB63	8bit			H0	H38	8bit
		LW0	LW24	16bit			264	288	16bit
		LW25	LW62	16bit			H0	H37	16bit
		LD0	LD23	32bit			264	287	32bit
		LD24	LD60	32bit			H0	H36	32bit
S	Sequential control relay	S0.0	S31.7	1bit	W	Work Area	W32.00	W63.07	1bit
		SB0	SB31	8bit			W32	W63	8bit
		SW0	SW30	16bit			W32	W62	16bit
		SD0	SD28	32bit			W32	W60	32bit
AIW	Analog input	AIW0	AIW62	16bit	-	Input Area	16	78	16bit
AQW	Analog output	AQW0	AQW62	16bit	-	Output Area	116	178	16bit
AC	Accumulator register	AC0	AC3	8bit	-	-	-	-	Can not convert
HC	High-Speed counter	HC0	HC5	16bit	-	-	-	-	Can not convert
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	H48.00	H48.07	-
						TEMP_CH	H40	H47	-
						TEMP_DW	H40	H47	-

(2) I/O memory Convert Table (S7-200 to CP1E-N)

S7-200					CP1E-N□□D□-□				
	Area	Start Bit/CH	Final Bit/CH	Bit width		Area	Start Bit/CH	Final Bit/CH	Bit width
I	Input register	I0.0	I15.7	1bit	-	Input Area	0.00	15.07	1bit
		IB0	IB15	8bit			0	15	8bit
		IW0	IW14	16bit			0	14	16bit
		ID0	ID12	32bit			0	12	32bit
Q	Output register	Q0.0	Q15.7	1bit	-	Output Area	100	115.07	1bit
		QB0	QB15	8bit			100	115	8bit
		QW0	QW14	16bit			100	114	16bit
		QD0	QD12	32bit			100	112	32bit
V	Variable memory	V0.0	V8191.7	1bit	D	Data Register	-	-	Can not convert
		V8192.0	V10239.7	1bit			-	-	Can not convert
		VB0	VB8191	8bit			D0	D8191	8bit
		VB8192	VB10239	8bit			-	-	Can not convert
		VW0	VW8191	16bit			D0	D8191	16bit
		VW8192	VW10238	16bit			-	-	Can not convert
		VD0	VD8190	32bit			D0	D8190	32bit
		VD8191	VD10236	32bit			-	-	Can not convert
M	Bit memory	M0.0	M31.7	1bit	W	Work Area	W0.0	W31.7	1bit
		MB0	MB31	8bit			W0	W31	8bit
		MW0	MW30	16bit			W0	W30	16bit
		MD0	MD28	32bit			W0	W28	32bit
T	Timer	T0	-	-	T	Timer	T0	-	-
		T1	T31	-			T4	T34	-
		T32	-	-			T1	-	-
		T33	T63	-			T35	T65	-
		T64	-	-			T2	-	-
		T65	T95	-			T66	T96	-
		T96	-	-			T3	-	-
		T97	T255	-			T97	T255	-
C	Counter	C0	C255	-	C	Counter	C0	C255	-
L	Local memory	L0.0	L24.07	1bit		Holding Area /CIO Area	264.0	288.07	1bit
		L25.0	L63.7	1bit			H0.0	H38.07	1bit
		LB0	LB24	8bit			264	288	8bit
		LB25	LB63	8bit			H0	H38	8bit
		LW0	LW24	16bit			264	288	16bit
		LW25	LW62	16bit			H0	H37	16bit
		LD0	LD23	32bit			264	287	32bit
		LD24	LD60	32bit			H0	H36	32bit
S	Sequential control relay	S0.0	S31.7	1bit	W	Work Area	W32.00	W63.07	1bit
		SB0	SB31	8bit			W32	W63	8bit
		SW0	SW30	16bit			W32	W62	16bit
		SD0	SD28	32bit			W32	W60	32bit
AIW	Analog input	AIW0	AIW62	16bit	-	Input Area	16	78	16bit
AQW	Analog output	AQW0	AQW62	16bit	-	Output Area	116	178	16bit
AC	Accumulator register	AC0	AC3	8bit	-	-	-	-	Can not convert
HC	High-Speed counter	HC0	HC5	16bit	-	-	-	-	Can not convert
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	H48.00	H48.07	-
						TEMP_CH	H40	H47	-
						TEMP_DW	H40	H47	-

(3) I/O memory Convert Table (S7-200 to CP1L-L, L10)

S7-200					CP1L-L, L10				
	Area	Start Bit/CH	Final Bit/CH	Bit width		Area	Start Bit/CH	Final Bit/CH	Bit width
I	Input register	I0.0	I15.7	1bit	-	Input Area	0.00	15.07	1bit
		IB0	IB15	8bit			0	15	8bit
		IW0	IW14	16bit			0	14	16bit
		ID0	ID12	32bit			0	12	32bit
Q	Output register	Q0.0	Q15.7	1bit	-	Output Area	100.00	115.07	1bit
		QB0	QB15	8bit			100	115	8bit
		QW0	QW14	16bit			100	114	16bit
		QD0	QD12	32bit			100	112	32bit
V	Variable memory	V0.0	V2047.7	1bit	D	Data Register	-	-	Can not convert
		V2048.0	V10239.7	1bit			-	-	Can not convert
		VB0	VB9999	8bit			D0	D9999	8bit
		VB10000	VB10239	8bit			D32400	D32639	8bit
		VW0	VW9999	16bit			D0	D9999	16bit
		VW10000	VW10238	16bit			32400	32638	16bit
		VD0	VD9998	32bit			D0	D9998	32bit
		VD9999	-	32bit			-	-	Can not convert
		VD10000	VD10236	32bit			D10000	D32636	32bit
M	Bit memory	M0.0	M31.7	1bit	W	Work Area	W0.00	W31.07	1bit
		MB0	MB31	8bit			W0	W31	8bit
		MW0	MW30	16bit			W0	W30	16bit
		MD0	MD28	32bit			W0	W28	32bit
T	Timer	T0	-	-	T	Timer	T0	-	-
		T1	T31	-			T4	T34	-
		T32	-	-			T1	-	-
		T33	T63	-			T35	T65	-
		T64	-	-			T2	-	-
		T65	T95	-			T66	T96	-
		T96	-	-			T3	-	-
		T97	T255	-			T97	T255	-
C	Counter	C0	C255	-	C	Counter	C0	C255	-
L	Local memory	L0.0	L63.7	1bit		CIO Area	264.00	327.07	1bit
		LB0	LB63	8bit			264	327	8bit
		LW0	LW62	16bit			264	326	16bit
		LD0	LD60	32bit			264	324	32bit
S	Sequential control relay	S0.0	S31.7	1bit	W	Work Area	W32.00	W63.07	1bit
		SB0	SB31	8bit			W32	W63	8bit
		SW0	SW30	16bit			W32	W62	16bit
		SD0	SD28	32bit			W32	W60	32bit
AIW	Analog input	AIW0	AIW62	16bit	-	Input Area	16	78	16bit
AQW	Analog output	AQW0	AQW62	16bit	-	Output Area	116	178	16bit
AC	Accumulator register	AC0	AC3	8bit	-	-	-	-	Can not convert
HC	High-Speed counter	HC0	HC5	16bit	-	-	-	-	Can not convert
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	H48.00	H48.7	-
						TEMP_CH	H40	H47	-
						TEMP_DW	H40	H47	-

(4) I/O memory Convert Table (S7-200 to CP1L-M, CP1H)

S7-200					CP1L-M,CP1H				
	Area	Start Bit/CH	Final Bit/CH	Bit width		Area	Start Bit/CH	Final Bit/CH	Bit width
I	Input register	I0.0	I15.7	1bit	-	Input Area	0.00	15.07	1bit
		IB0	IB15	8bit			0	15	8bit
		IW0	IW14	16bit			0	14	16bit
		ID0	ID12	32bit			0	12	32bit
Q	Output register	Q0.0	Q15.7	1bit	-	Output Area	100.00	115.07	1bit
		QB0	QB15	8bit			100	115	8bit
		QW0	QW14	16bit			100	114	16bit
		QD0	QD12	32bit			100	112	32bit
V	Variable memory	V0.0	V2047.7	1bit	D	Data Register	-	-	Can not convert
		V2048.0	V10239.7	1bit			-	-	Can not convert
		VB0	VB10239	8bit			D0	D10239	8bit
		VW0	VW10238	16bit			D0	D10238	16bit
		VD0	VD10236	32bit			D0	D10236	32bit
M	Bit memory	M0.0	M31.7	1bit	W	Work Area	W0.00	W31.07	1bit
		MB0	MB31	8bit			W0	W31	8bit
		MW0	MW30	16bit			W0	W30	16bit
		MD0	MD28	32bit			W0	W28	32bit
T	Timer	T0	-	-	T	Timer	T0	-	-
		T1	T31	-			T4	T34	-
		T32	-	-			T1	-	-
		T33	T63	-			T35	T65	-
		T64	-	-			T2	-	-
		T65	T95	-			T66	T96	-
		T96	-	-			T3	-	-
		T97	T255	-			T97	T255	-
C	Counter	C0	C255	-	C	Counter	C0	C255	-
L	Local memory	L0.0	L63.7	1bit		CIO Area	264.00	327.07	1bit
		LB0	LB63	8bit			264	327	8bit
		LW0	LW62	16bit			264	326	16bit
		LD0	LD60	32bit			264	324	32bit
S	Sequential control relay	S0.0	S31.7	1bit	W	Work Area	W32.00	W63.07	1bit
		SB0	SB31	8bit			W32	W63	8bit
		SW0	SW30	16bit			W32	W62	16bit
		SD0	SD28	32bit			W32	W60	32bit
AIW	Analog input	AIW0	AIW62	16bit	-	Input Area	16	78	16bit
AQW	Analog output	AQW0	AQW62	16bit	-	Output Area	116	178	16bit
AC	Accumulator register	AC0	AC3	8bit	-	-	-	-	Can not convert
HC	High-Speed counter	HC0	HC5	16bit	-	-	-	-	Can not convert
WorkArea (Don't use this area when you add ladder.)						TEMP_BIT	H48.00	H48.7	-
						TEMP_CH	H40	H47	-
						TEMP_DW	H40	H47	-

(5) Special Memory bit Convert Table (S7-200 to CP1)

S7-200		CP1	
Name	Relay number	Name	Relay number
Always ON	SM0.0	Always ON Flag	P_On(CF113)
First Scan	SM0.1	First Cycle Flag	A200.11
Power up	SM0.3	First Cycle Flag	A200.11
30 s off / 30 s on	SM0.4	1 min Clock Pulse	P_1min(CF104)
0.5 s off / 0.5 s on	SM0.5	1 s Clock Pulse	P_1s(CF102)
Zero	SM1.0	Equals Flag	P_EQ(CF6)
Negative	SM1.2	Negative Flag	P_NE(CF8)



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