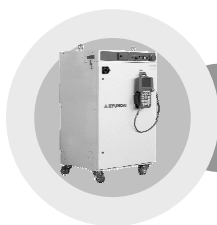**WARNING**

THE INSTALLATION SHALL BE MADE BY QUALIFIED INSTALLATION PERSONNEL AND SHOULD CONFORM TO ALL NATIONAL AND LOCAL CODES

Hyundai Robot

Hi4a Controller Function Manual

Interrupt

HYUNDAI
HEAVY INDUSTRIES CO.,LTD.

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Contents

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Overview

Interrupt processing fuction is the function which handles as following.

(1) Execute command of interrupt definition that is consisted of parameter in the interrupt number, occurence condition and calling program

(2) Inspect occurrence condition of interrupt every 20ms inside of interrupt watch segment

(3) Execute the interrupt program as saving current program counter if satisfying the interrupt condition,

(4) Execute continuously from the execution location (program count) in the previous program after ending the execution of interrupt program

Save the program counter and execute interrupt program even if interrupt condition is satisfied as executing interrupt program. Namely, it permits the occurrence of multiplex interrupt.

2
Command

2.1. Interrupt Define/Delete (INTDEF)

It is the command to define the interrupt to use or to delete the interrupt that has already been defined.

Command type: INTDEF ON,NO=1,DI1=1,PN=10,[Single]

    (1) 1 factor : ON (ON/OFF)
        If it is ON, it defines the interrupt and activates the interrupt condition.   However if it is OFF, it deletes the defined interrupt and ignores about the factor 3 afterwards.

    (2) 2 factors : NO=1
        Use 1 to 2 as the factor that represents the interrupt number.

    (3) 3 factors : DI1=1
        It is the factor that represents the interrupt condition and various conditional formulas can be used as arithmetic, string-alphabetic, and pose formula and so on.

    (4) 4 factors : PN=10
        It represents the program number to call when the interrupt condition is satisfied. (1~999)

    (5) 5 factors : [Single]
        It decides the parameter to allow the occurrence of interrupt only once or continuously within the inspection segment of interrupt. If it's the second one, this factor won't be recorded.

2.2. Interrupt Enable/Disable (INTENBL)

It is to make the interrupt condition active or inactive entirely or individually about all defined interrupt.

Command type: INTENBL ON,NO=1

    (1) 1 factor : ON (ON/OFF)
        It converts the interrupt in activation or deactivation condition.

    (2) 2 factor : NO=1
        It is the factor that represents the interrupt number.   In the case that this factor is not recorded, it shows all interrupts that is defined.

2.3. Variable of System (INTNUM)

Variable Type : INTNUM

When the interrupt occurs, the calling program can be identical. This is the variable to use when wanting to know what kind of interrupt condition is satisfied from the called program.

3

Other Factors

3.1. Point of Interrupt Delete

(1)   When starting after inputting the [Reset]+[Set]

(2)   When executing the cycle start of program

(3)   When starting after changing step or fuction

3.2. Quick Open

The editing about the interrupt program is possible by pressing the [Quick Open] key at interrupt definition command.

3.3. Restriction

It currently doesn't support that the activation of interrupt when using continuous path function and usage of continuous path function within the inspection segment of interrupt.

3.4. Key words

(1)   Interrupt Number : It is used as the specific number when defining the interrupt.

(2)   Interrupt Occurrence Condition: It is the condition to make the interrupt occur within the inspection segment of interrupt. the calling program executes when this occurrence condition changes from dissatisfaction to satisfaction.

(3)   Interrupt Inspection Segment: Segment from the interrupt is activated to inactivated.

(4)   Interrupt Program: It is the calling program to handle when the interrupt occurs.

4

Troubleshooting

E1351: Interrupt defined duplicated.
It occurs when redefining without elimination about the interrupt number that is already defined.

E1352 : Pre-execute interrupt definition**.**
It occurs when INTENBL ON command executes without INTDEF ON command execution.

E1358 : Interrupt enable at continue path**.**
It occurs when INTDEF ON or INTENBL ON command executes in the continuous path segment.

E1359 : Set continuous path at Int enable**.**
It occurs when continuous path function operates in the inspection segment of interrupt.

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