



Sample of My function for TOSVERT VF-AS1 / VF-PS1



In My Function Tool V014



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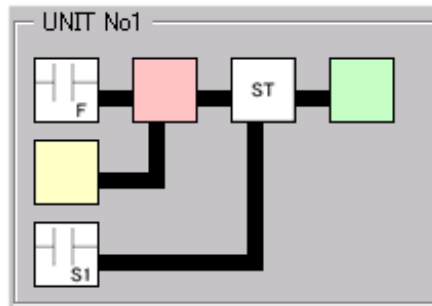
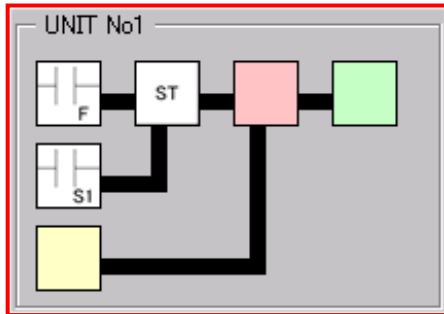
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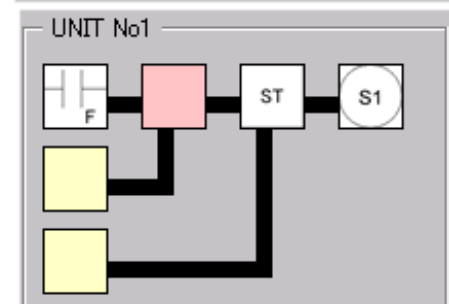
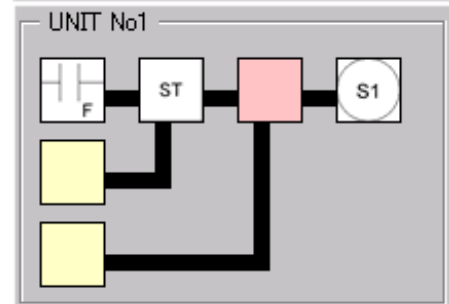
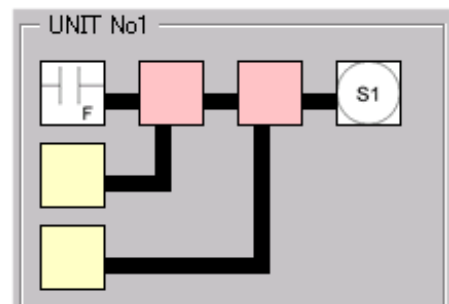
No.001(Basic function): ST(move) command

[Content]

S1 signal(Preset speed command 1) is turned ON by F signal(Forward run) only.



Possible to set
by these diagram.



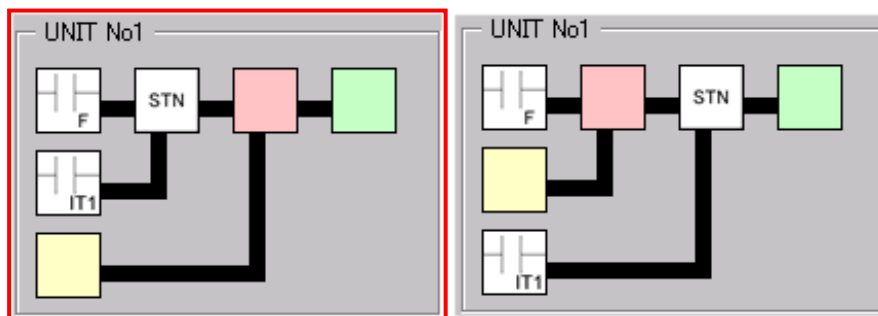


No.002(Basic function): STN(move inversion) command

[Content]

Keep information of F signal(Forward run) to IT1(Internal terminal 1).

Notice: IT1(Logic signal) doesn't have any functions.





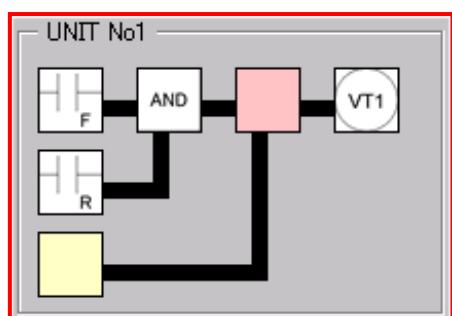
No.003(Basic function): AND(logical product) command

[Content]

VT1 is turned on when F signal(Forward run) and R signal(Reverse run) are turn on at same time.

Notice: VT1 is a input terminal function set by F973(Virtual input terminal selection 1)

$A \cap B$



Input	Input2	Output
ON	ON	ON
ON	OFF	OFF
OFF	ON	OFF
OFF	OFF	OFF

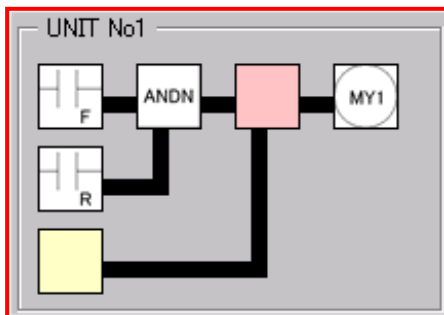


No.004(Basic function): ANDN(logical product) command

[Content]

MY1(My function output 1) is turned on by F signal(Forward run) without R signal(Reverse run).

Notice: MY1: Possible to set at output terminal. (ex. OUT1: F130=222)



$$A \cap \bar{B}$$

Input	Input2	Output
ON	ON	OFF
ON	OFF	ON
OFF	ON	OFF
OFF	OFF	OFF

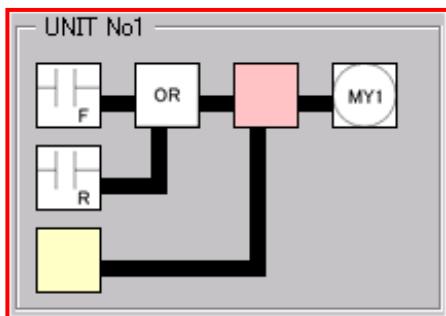


No.005(Basic function): OR(logical sum) command

[Content]

MY1(My function output 1) is turned on by F signal(Forward run) or R signal(Reverse run).

A U B



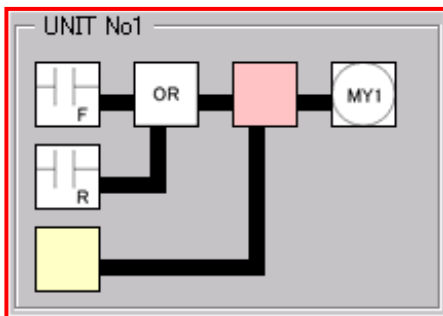
Input	Input2	Output
ON	ON	ON
ON	OFF	ON
OFF	ON	ON
OFF	OFF	OFF



No.006(Basic function): ORN(logical sum) command

[Content]

MY1(My function output 1) is turned on by R signal(Forward run) without R signal(Reverse run).



$$A \cup \bar{B}$$

Input	Input2	Output
ON	ON	ON
ON	OFF	ON
OFF	ON	OFF
OFF	OFF	ON

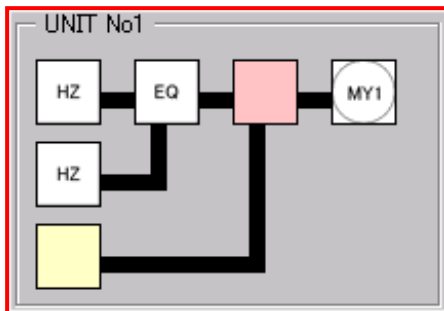


No.101(Operating function): EQ(equal) command

[Content]

MY1(My function output 1) is turned on that frequency command and output frequency are equal.

--- Signal of acceleration/deceleration completion



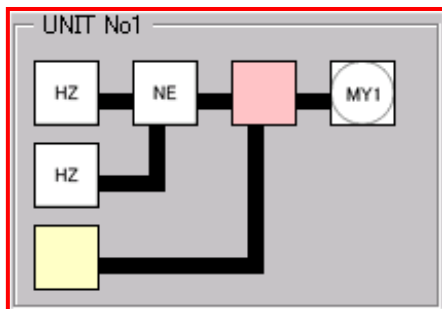


No.102(Operating function): NE(not equal) command

[Content]

MY1(My function output 1) is turned on that frequency command and output frequency are not equal.

--- Signal while acceleration/deceleration or stop



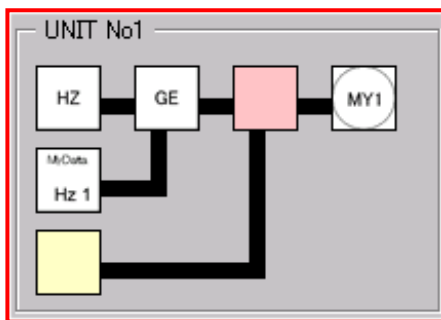


No.103(Operating function): GT(greater than), GE(greater or equal), LT(less than), LE(less or equal) command

[Content]

MY1(My function output 1) is turned on that output frequency is greater than F923(My function frequency data 1).

--- Low speed detection signal



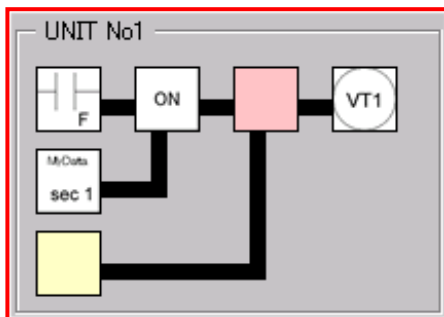


No.111(Operating function): ON(on delay timer), OFF(off delay timer) command

[Content]

VT1(Virtual input terminal 1: Forward run) is turned on after My function time data 1(F928) by F signal(no function) input.

Notice: Impossible to set ON and OFF command to 1 signal. In this case, please use SET and RESET command, too.



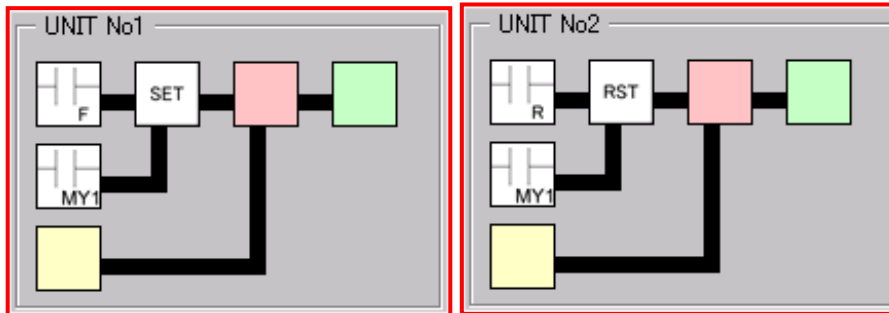


No.112(Operating function): SET(set), RESET(reset) command

[Content]

Keep MY1 signal by F signal input.

In case of R signal input, MY1 signal releases.

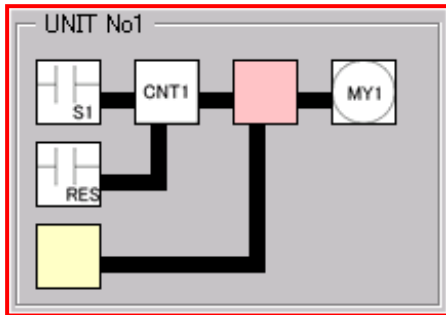




No.113(Operating function): COUNT(counter) command

[Content]

MY1 signal is turned on when count of S1 signal reaches F933(My function counter 1).
RES signal is a reset signal for F933 counter.



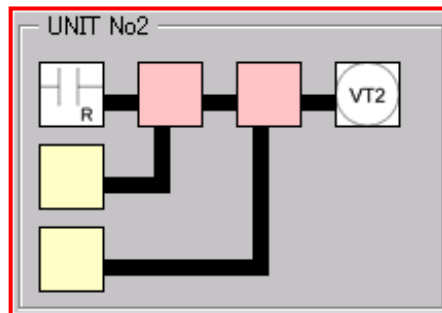
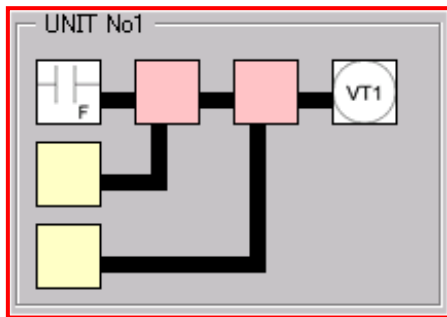


No.201(Logic I/O My function): Interlock with F/R terminal

[Content]

VT1 (standby) is turned on by F signal(Forward run).

VT2 (standby) is turned on by R signal(Reverse run).

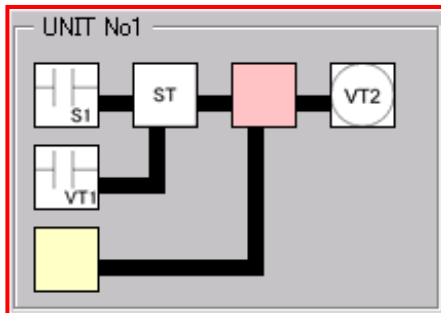




No.202(Logic I/O My function): 3 signal operation by 1 signal

[Content]

VT1(Forward run) and VT2(standby) are turned on by S1 signal(Preset speed command 1) input.



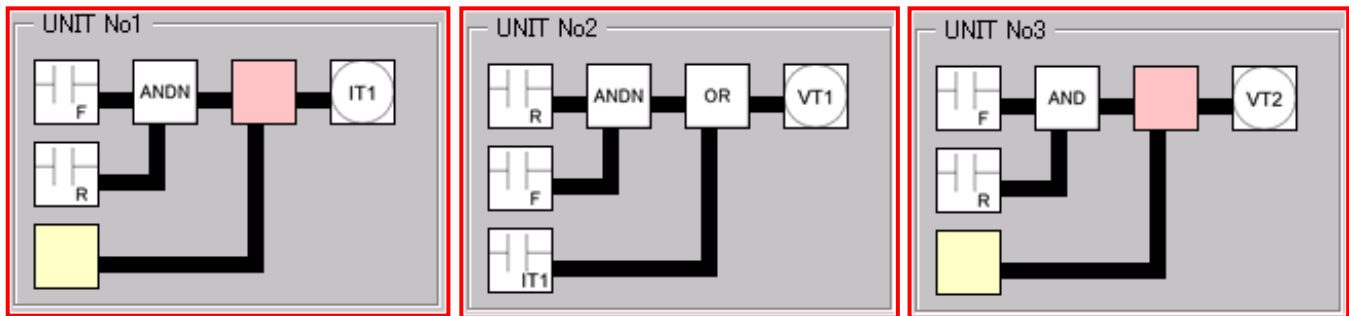


No.203(Logic I/O My function): Combination of 2 input signal

[Content]

VT1(Forward run) is turned on F signal(no function) or R signal(no function).

VT2(Reverse run) is turned on F signal(no function) and R signal(no function).





No.204(Logic I/O My function): Signal hold operation

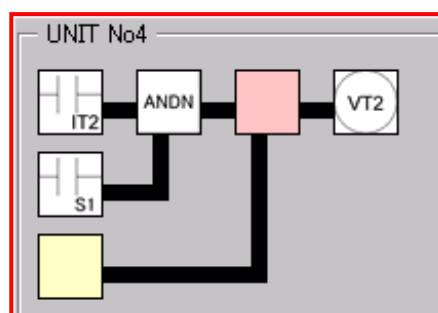
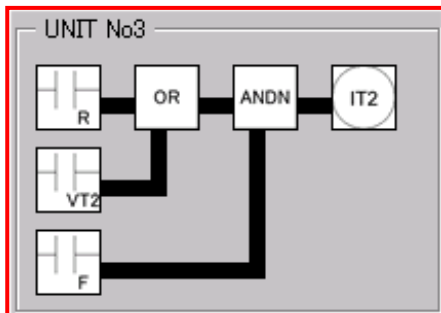
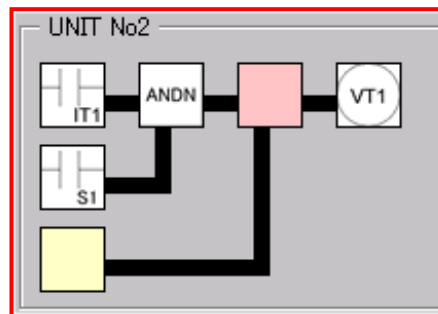
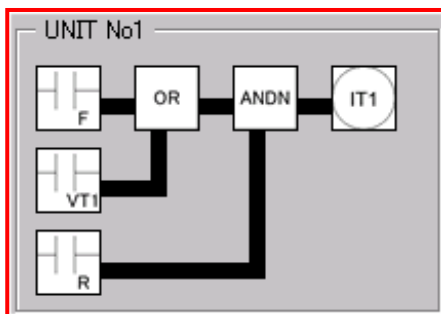
[Content]

Hold VT1(Forward run) or VT2(Reverse run) by momentary signal.

F signal(no function) --- Hold VT1(Forward run) only.

R signal(no function) --- Hold VT2(Reverse run) only.

S1 signal(no function) --- Release VT1 and VT2.

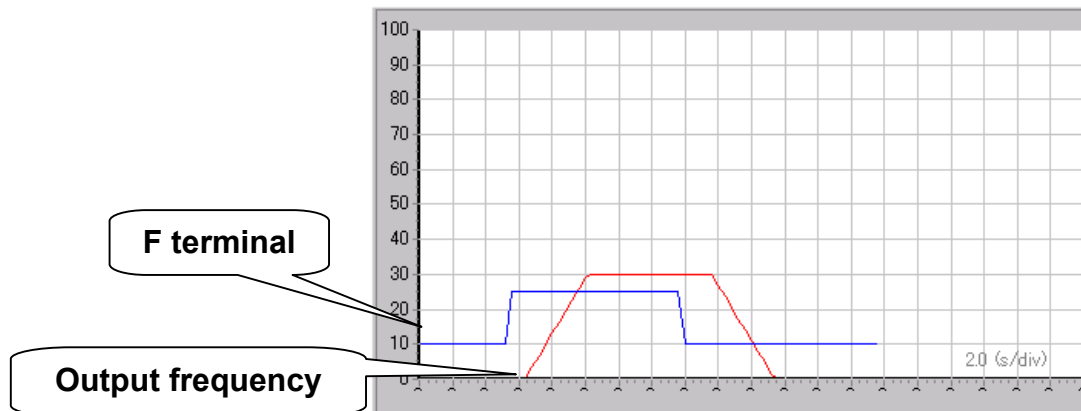




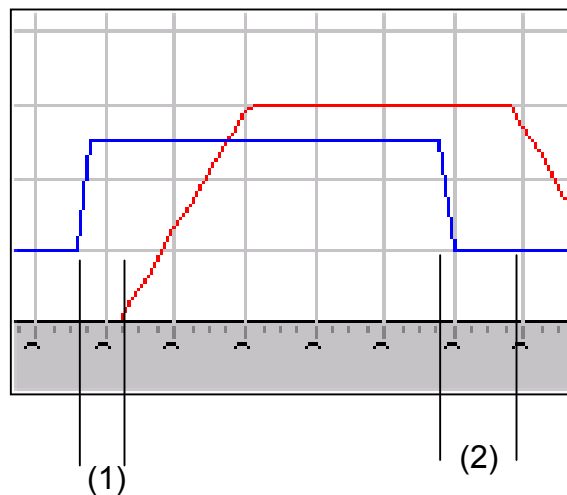
No.221(Logic I/O My function): On delay timer/ Off delay timer

[Content]

VT1(Forward run) holds by F signal(no function) with on delay timer and off delay timer.



(1): On delay
(2): Off delay

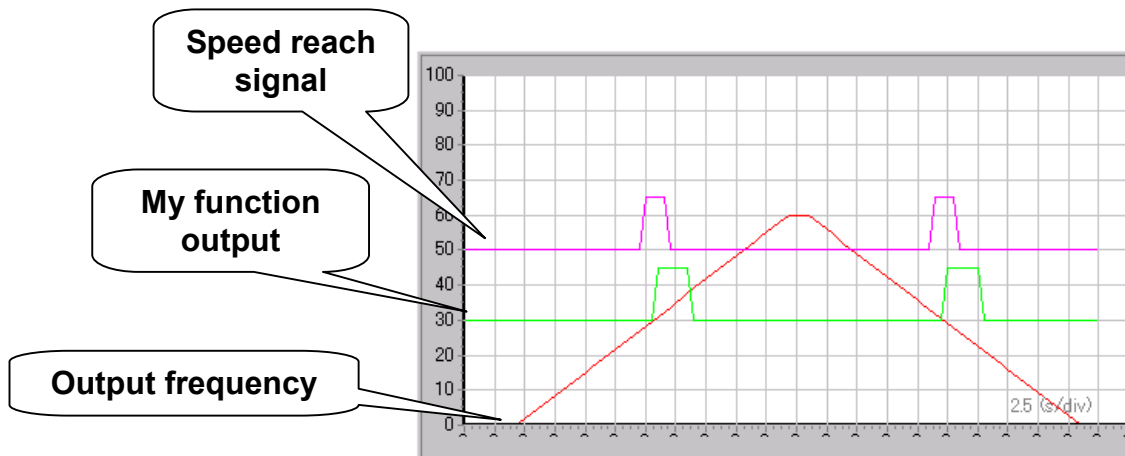




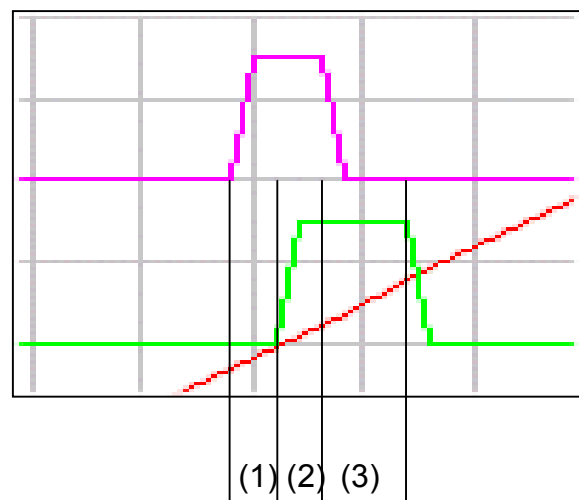
No.251(Logic I/O My function): Set minimum pulse width for output terminal

[Content]

Speed reach signal is set minimum pulse width by
On delay timer, holding and off delay timer.



- (1): On delay
- (2): Hold
- (3): Off delay



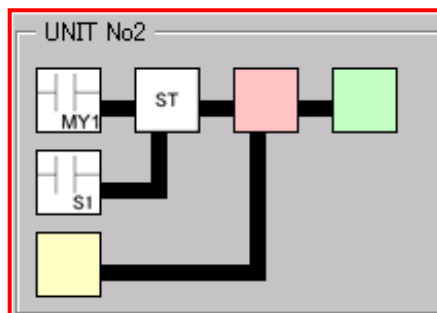
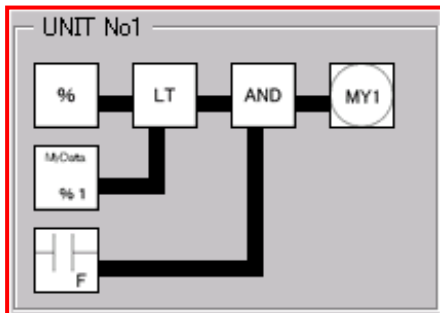


No.252(Logic I/O My function): Failure detection of 4-20mA input

[Content]

Automatically switching to preset speed 1(Sr1) at failure detection of 4-20mA input.

When VI/II input level is less than F918(My output percentage data 1) setting and while running, MY1 signal and S1 signal(Preset speed 1) are turned on.





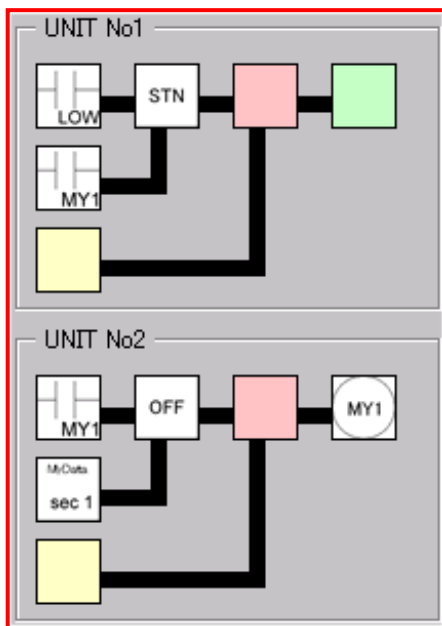
No.253(Logic I/O My function): Off delay time for LOW reverse signal

[Content]

This is a OFF delay timer for LOW reverse signal.

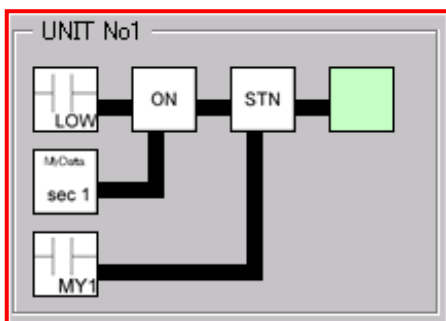
Because the LOW signal is a triggered signal by F100 setting.

Therefore this My-function is possible to avoid unexpected ON/OFF for LOW.



No.254(Logic I/O My function): Off delay time for LOW reverse signal

Same as No.253





No.401(Analog output My function): Monitor output to CC-LINK communication

[Content]

In CC-LINK option, you can monitor at monitor code '30H'
by set F965(Monitor output function target) and
F966(Monitor output function command).

* CC-LINK option is assigned My function monitor 1 at '30H'.



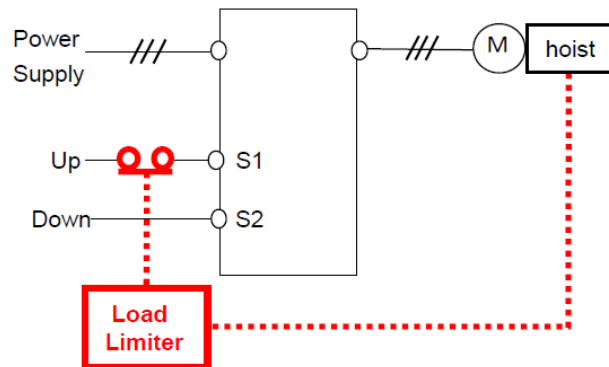
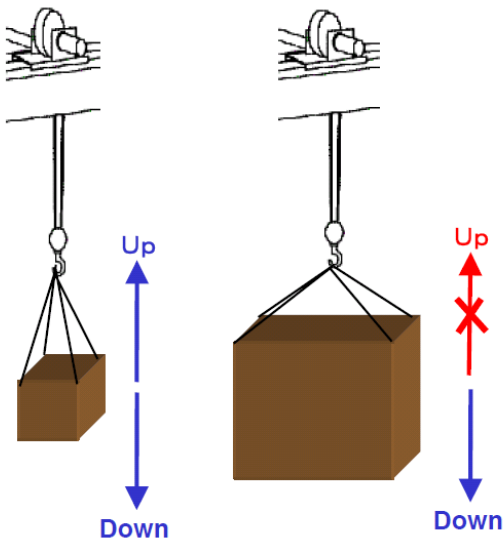
No.901(Application): Hoist(load-limit function)

[Content]

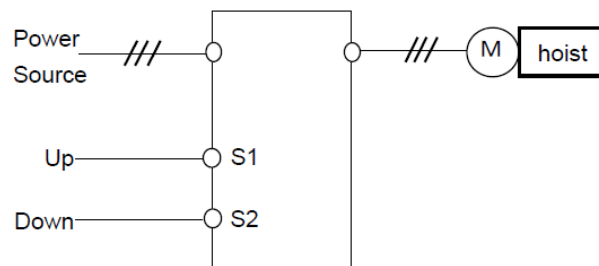
Like as load-limit function that is for lift application

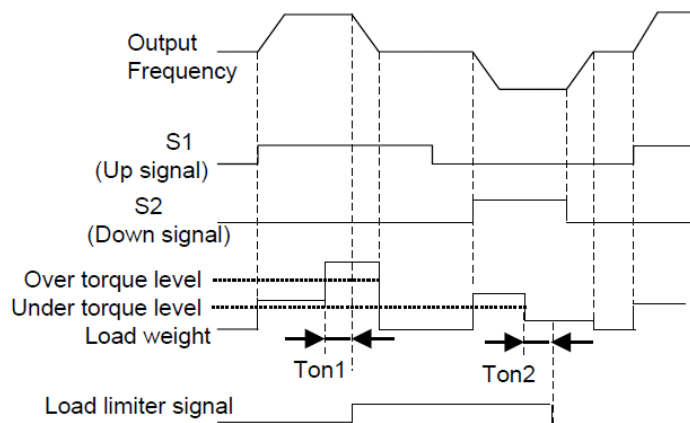
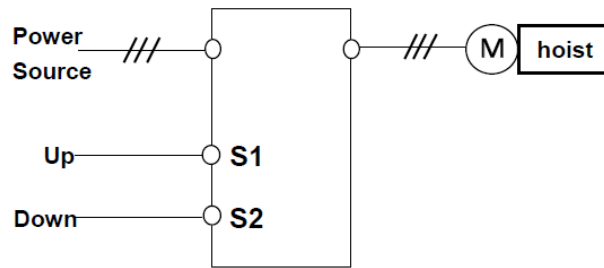
The function has next contents.

1. Detect over load condition.
2. Stop by automatically.
3. Available only down operation.

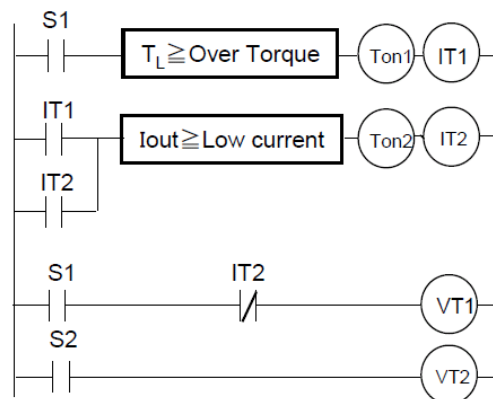


My function





< Timing chart >



- S1 (Input terminal) : Up signal
- S2 (Input terminal) : Down signal
- IT1 (Internal terminal) : Load limit detection
- IT2 (Internal terminal) : Reset to load limit
- VT1 (Virtual terminal) : Forward run command
- VT2 (Virtual terminal) : Reverse run command
- T_L (Output torque) : Output torque
- Ton1 (ON timer) : Load limit detection time
- Iout (Output current) : Motor current
- Ton2 (ON timer) : ON Timer

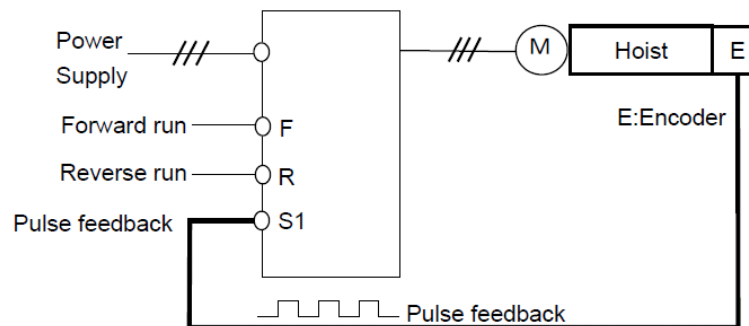
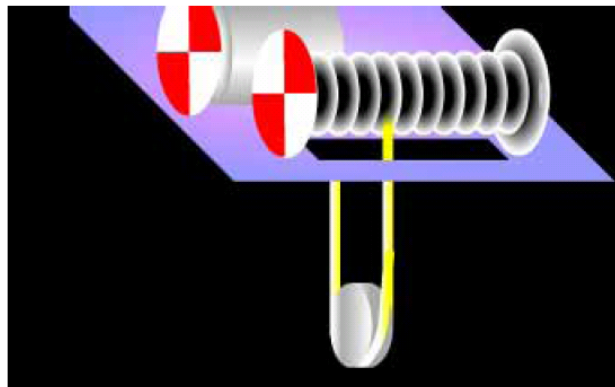
< My function ladder chart >

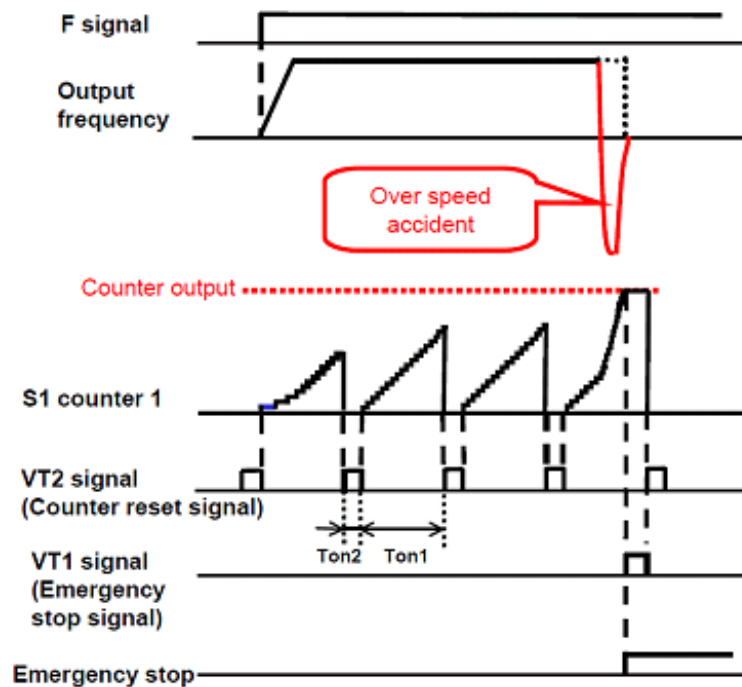


No.902(Application): Hoist(Over-speed detection)

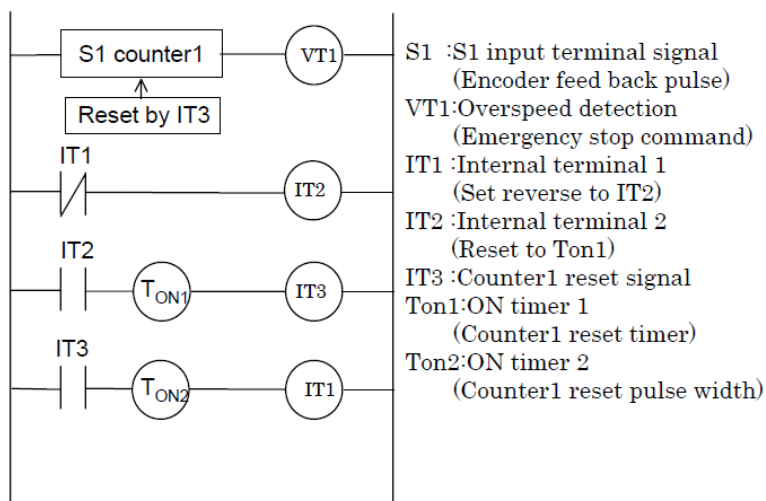
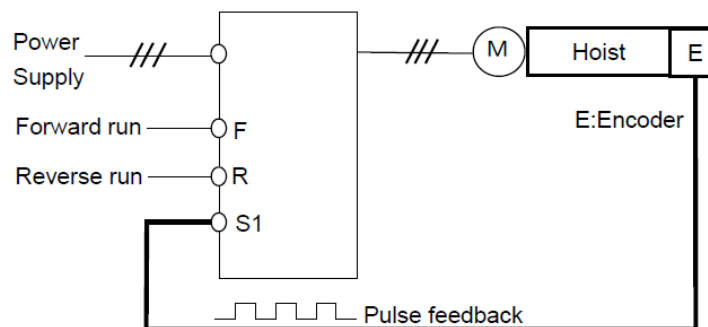
[Content]

Over-speed detection in hoist application.





< Timing chart >



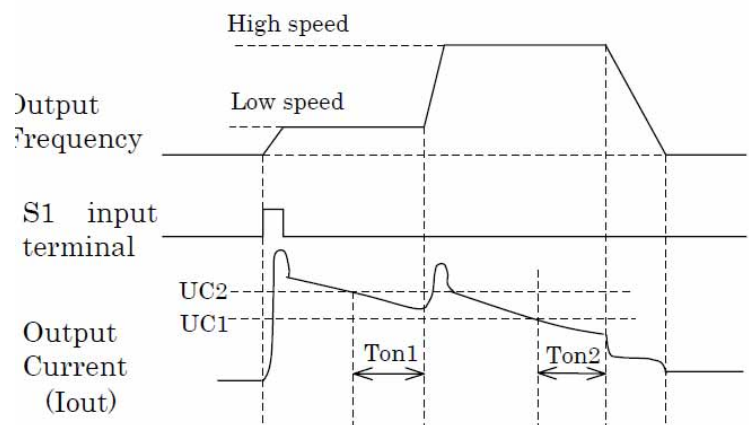
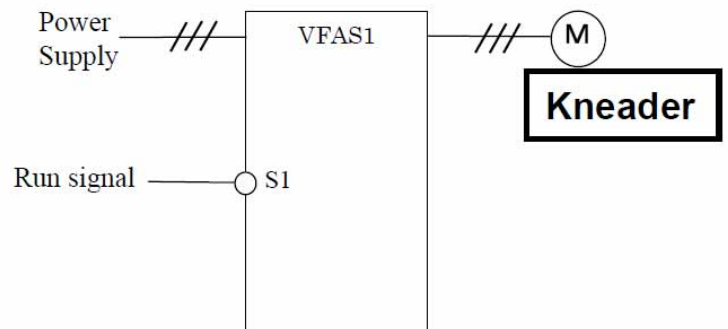
< My function ladder chart >



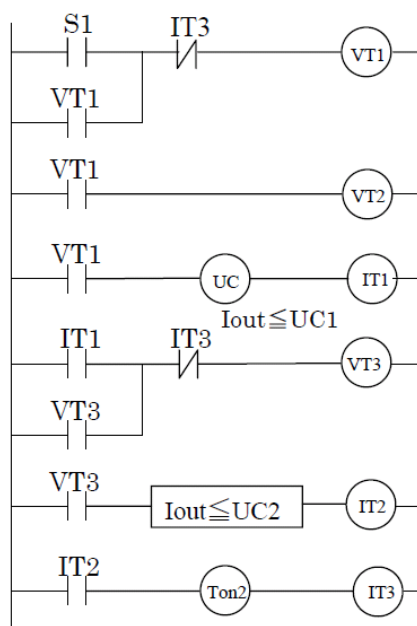
No.903(Application): Kneader

[Content]

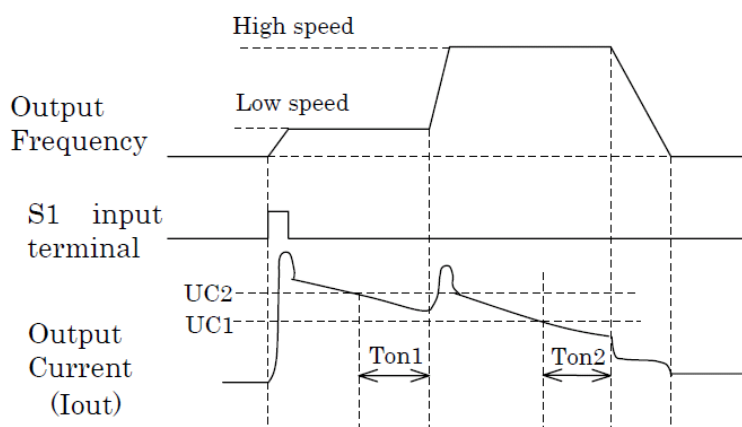
1. Start at lower speed.
2. Switch the high speed when the viscosity of load will be set value.
3. Stop when load value reach finished value.



< Timing chart >



< My function ladder chart >



- S1 (Input terminal) : Start signal
- IT1 (Internal terminal) : Start signal to high speed running
- IT2 (Internal terminal) : Detection signal for UC2
- IT3 (Internal terminal) : Stop signal
- VT1 (Virtual terminal) : Preset speed 1 command (Low speed)
- VT2 (Virtual terminal) : Forward operation signal
- VT3 (Virtual terminal) : Preset speed 2 command (High speed)
- UC (Low current alarm) : Low current alarm function
 $I_{out} \leq UC1$ and Timer (Ton1)
- Iout (Output current) : Load current
- Ton2 (ON Timer) : ON Timer

< Timing chart >

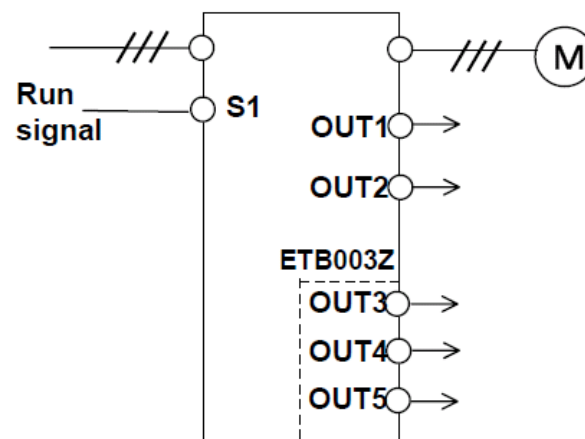


No.904(Application): Centrifugal

[Content]

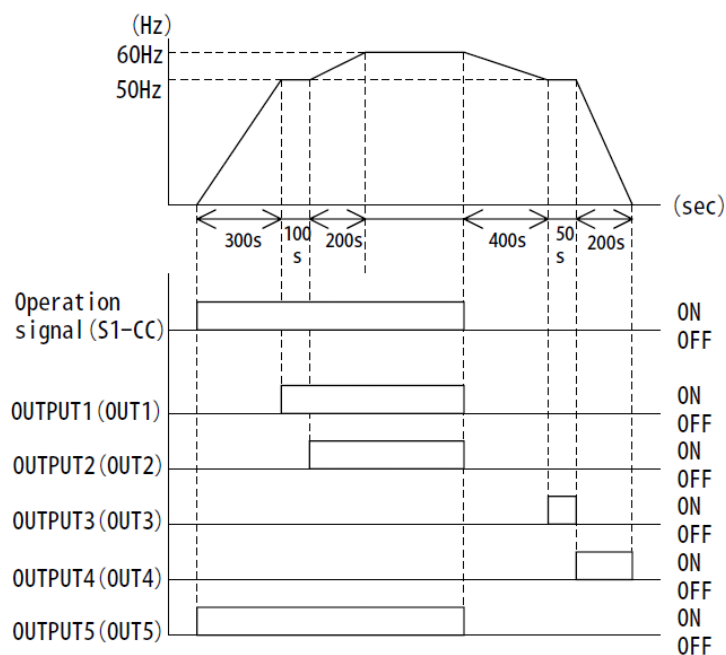
Two functions for centrifugal application.

1. 2 kind of acceleration/deceleration pattern.
2. Momentary stop operation while acceleration/deceleration

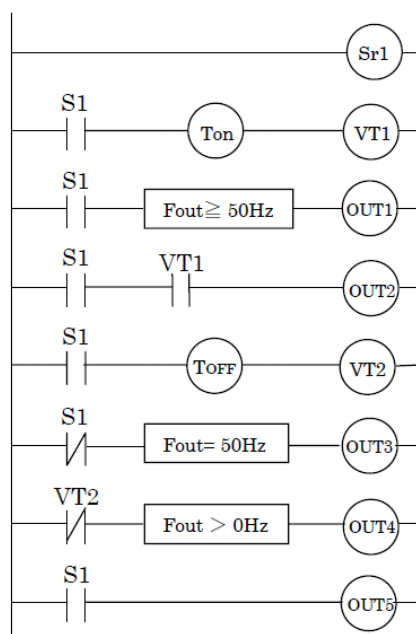


TOSVERT VF-AS1

Flexible for you



< Timing chart >



S1 : S1 input terminal signal
VT1 : Preset speed 2 operation
VT2 : Forward operation
Ton : ON timer (400s)
Toff : OFF timer (450s)

OUT1 : Output signal 1
OUT2 : Output signal 2
OUT3 : Output signal 3
OUT4 : Output signal 4
OUT5 : Output signal 5
Sr1 : Preset speed 1 operation
F : Forward operation
Fout : Output frequency

< My function ladder chart >



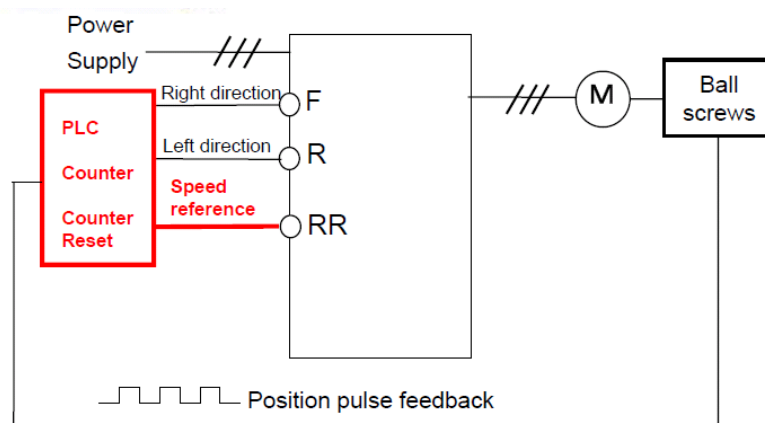
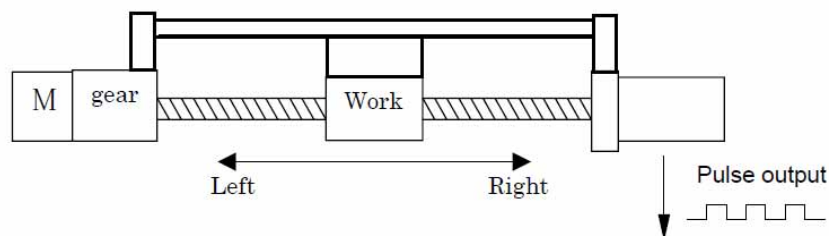
No.905(Application): Ball screws

[Content]

Positioning control for ball screw application (reciprocation).

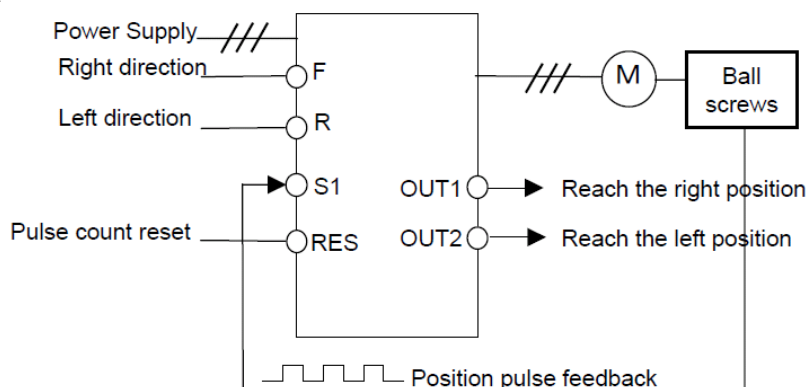
Automatically control by pulse count.

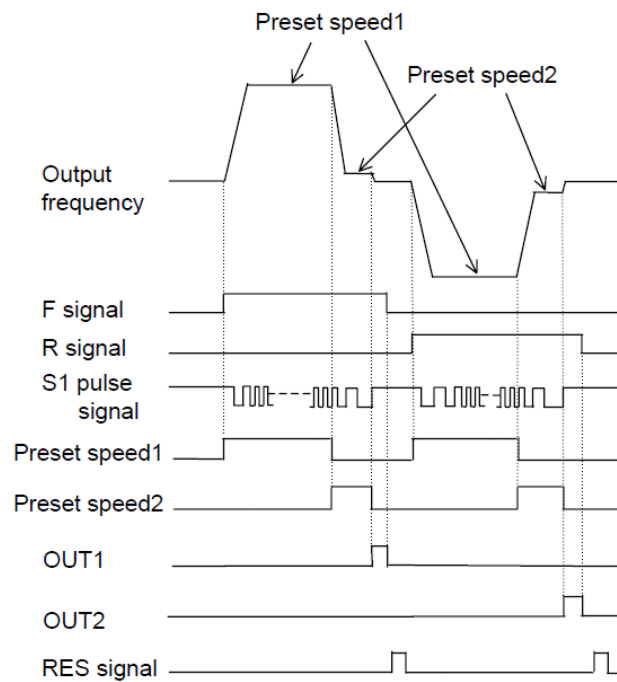
1. High speed
2. Creep speed run
3. Stop



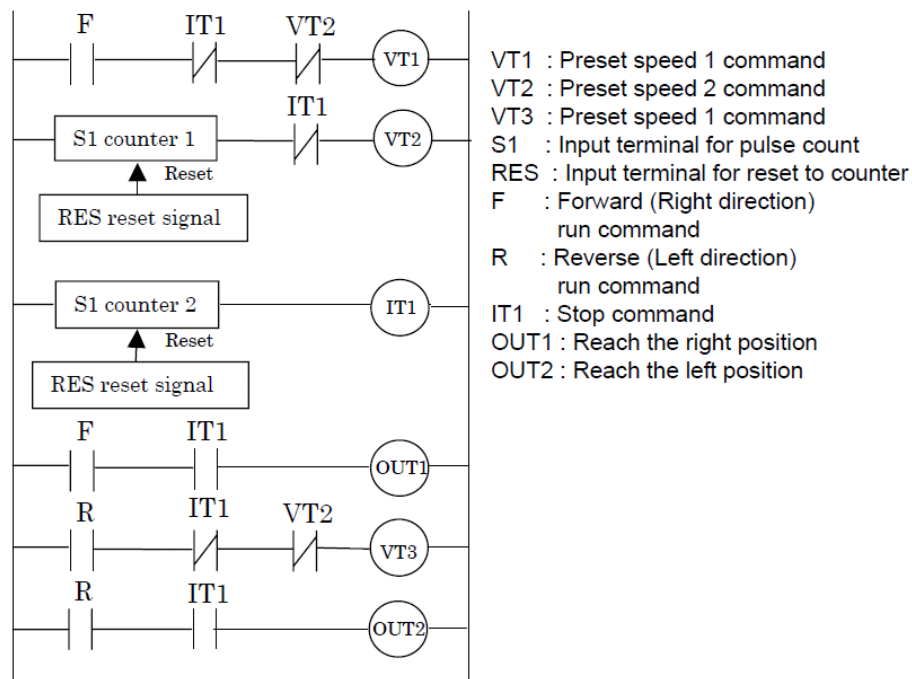
My function

ut





< Timing chart >



< My function ladder chart >



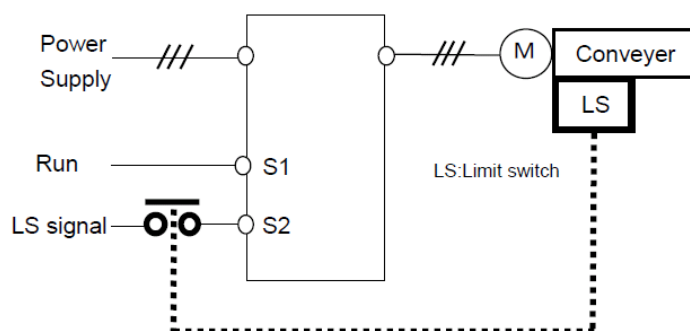
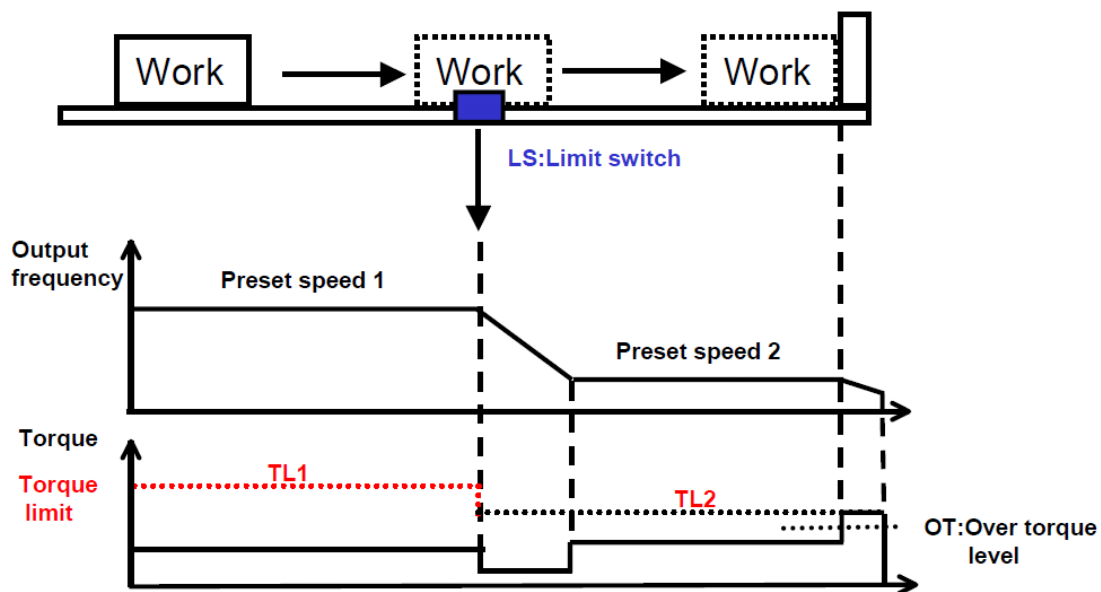
No.906(Application): Conveyer(Snap stop control)

[Content]

Snap stop control:

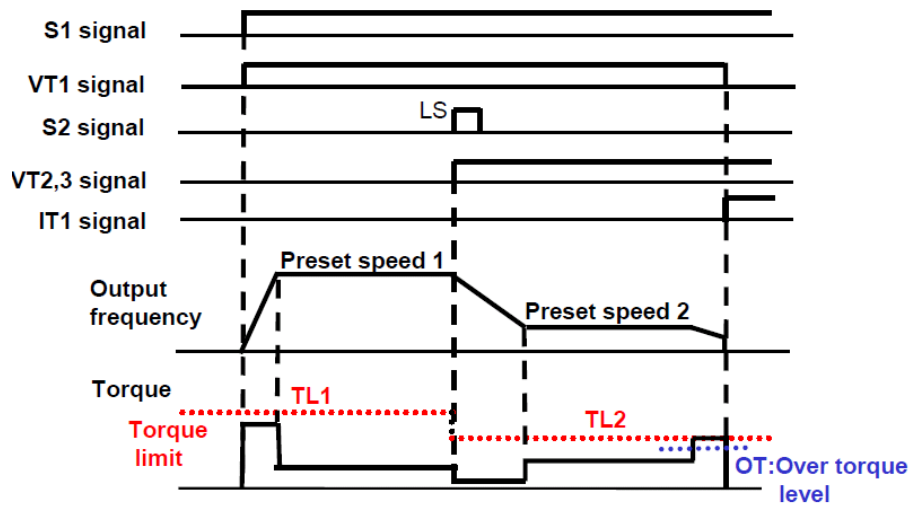
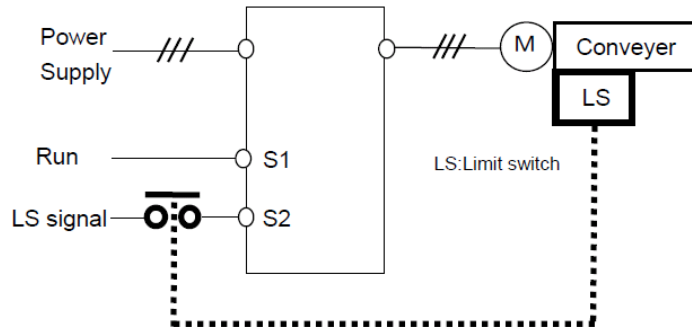
Switch the 'Torque limit control' and 'creeping speed' when 'Work' reaches 'LS' position.

When 'Torque limit control' is enabled, 'RUN' signal will be OFF by 'torque alarm'.

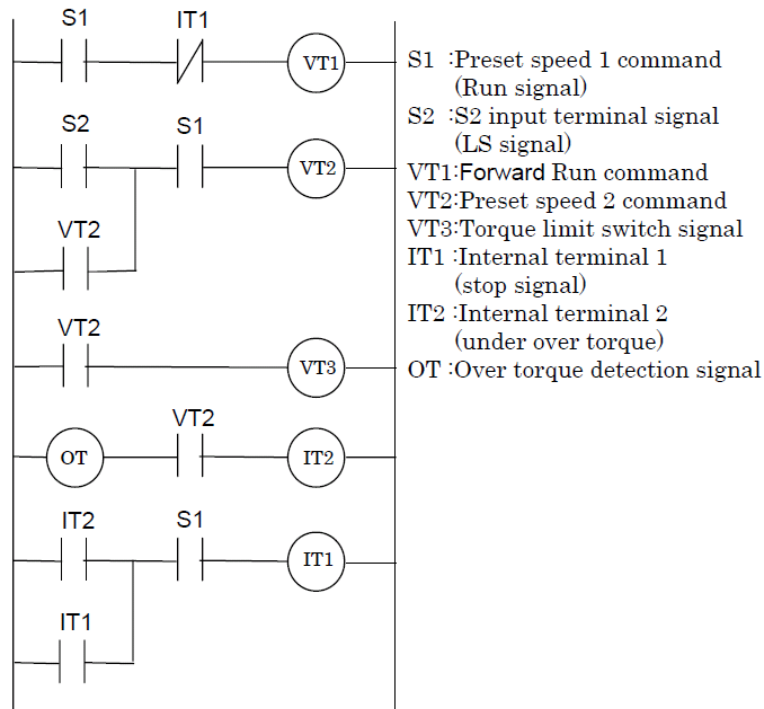


TOSVERT VF-AS1

Flexible for you



< Timing chart >



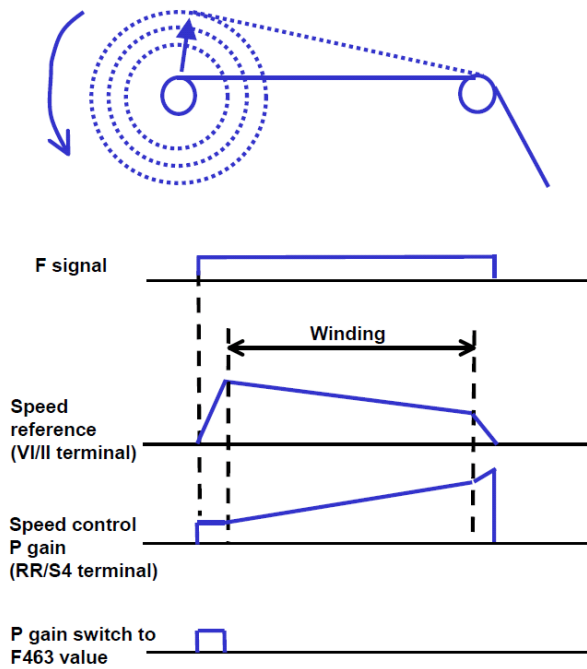
< My function ladder chart >



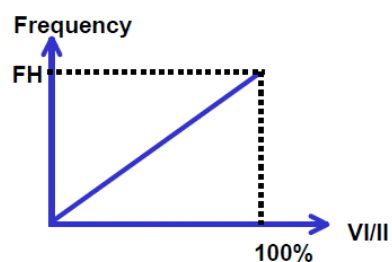
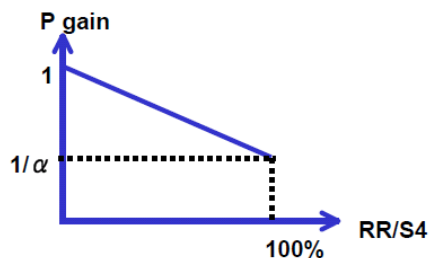
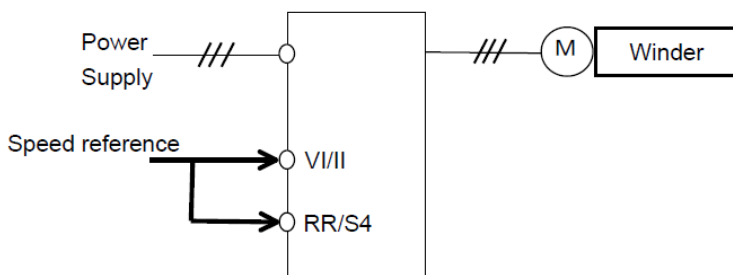
No.907(Application): Winder

[Content]

Automatic control with P gain by My function.



< Timing chart >



< Characteristic of analog input >