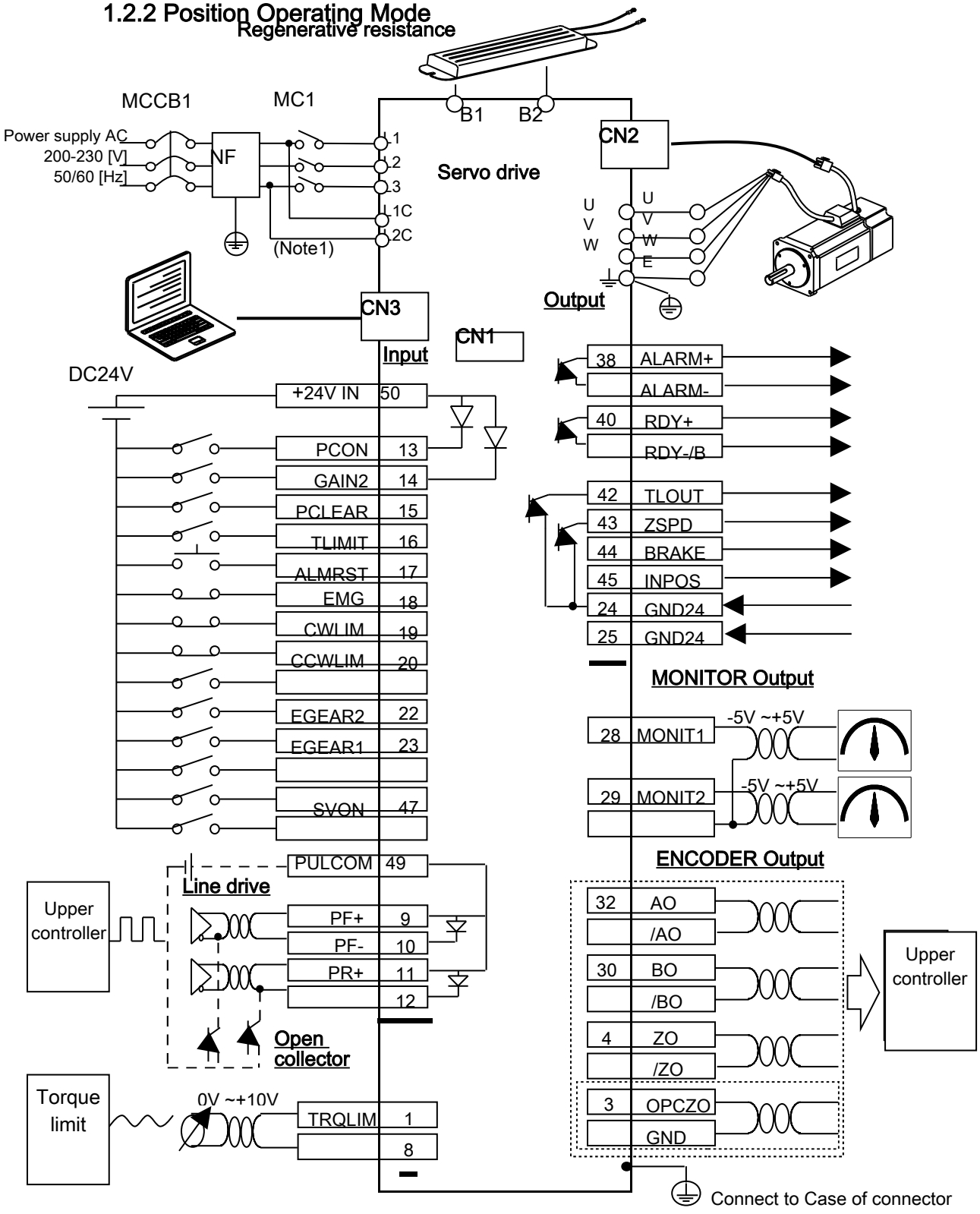
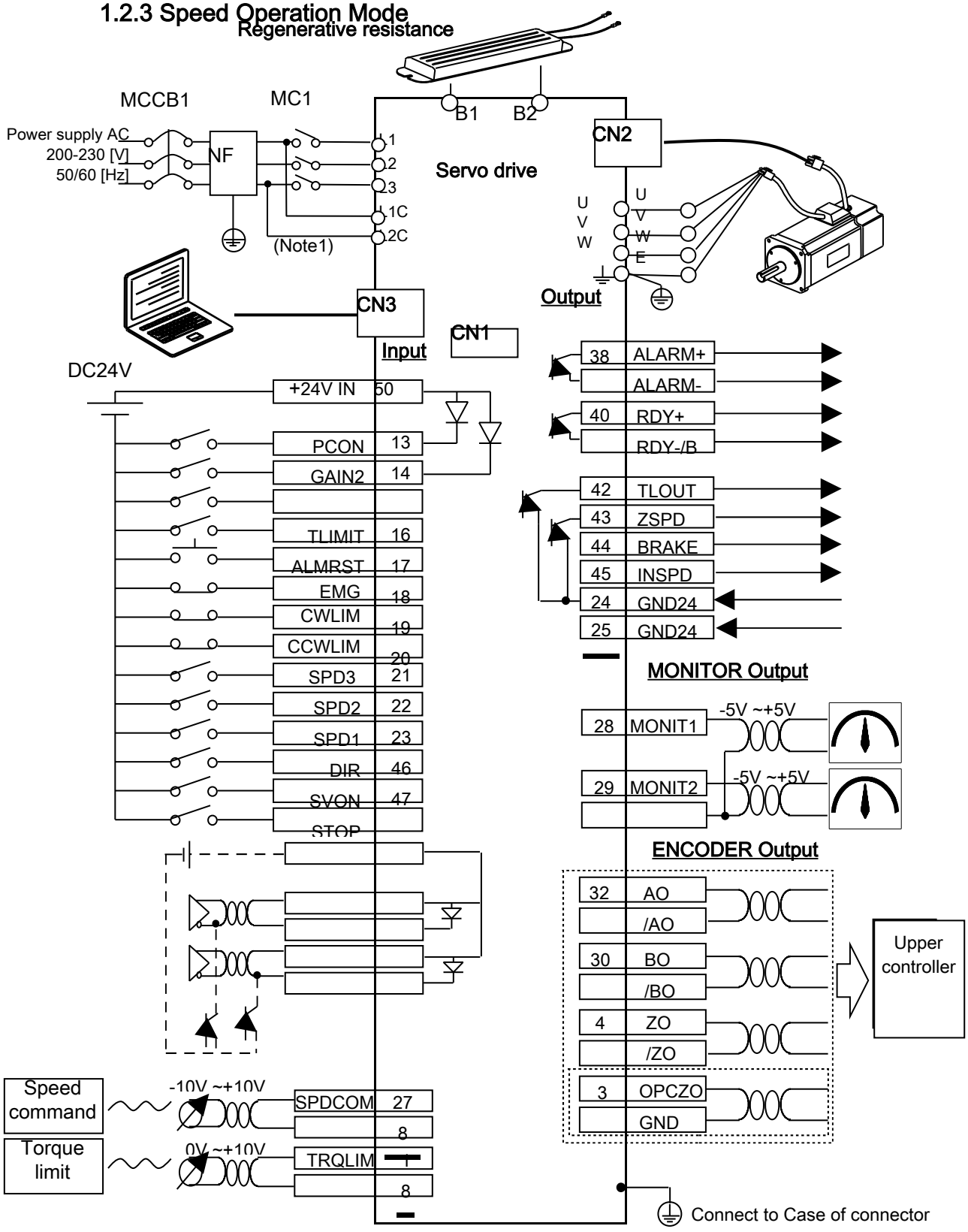
1.2.2 Position Operating Mode



Note1) The models that are higher than VS05 have a control power terminal(L1C, L2C)

Note2) Surely use Twist pair shield cable for pulse command signal (PF+, PF-, PR+, PR-) and torque limit signal(TRQLIM).

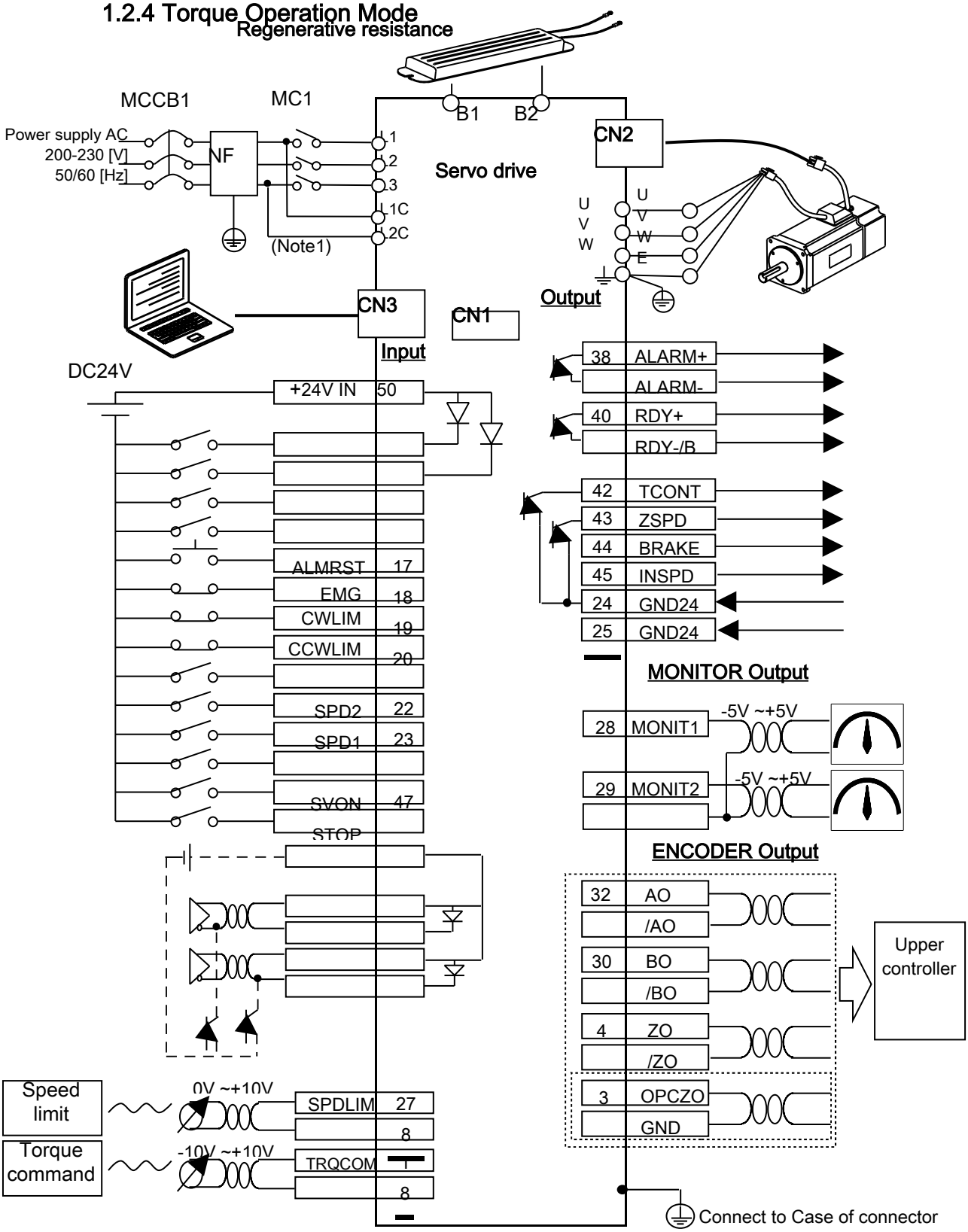
1.2.3 Speed Operation Mode



Note1) The models that are higher than VS05 have a control power terminal(L1C, L2C)

Note2) Surely use Twist Pair shield cable for SPDCOM, TRQLIM, GND.

1.2.4 Torque Operation Mode



Note1) The models that are higher than VS05 have a control power terminal(L1C, L2C)

Note2) Surely use Twist Pair shield cable for SPDCOM, TRQLIM, GND.

Note3) Surely set Speed limit type by SPDLIM, SP01, SP2D terminal.

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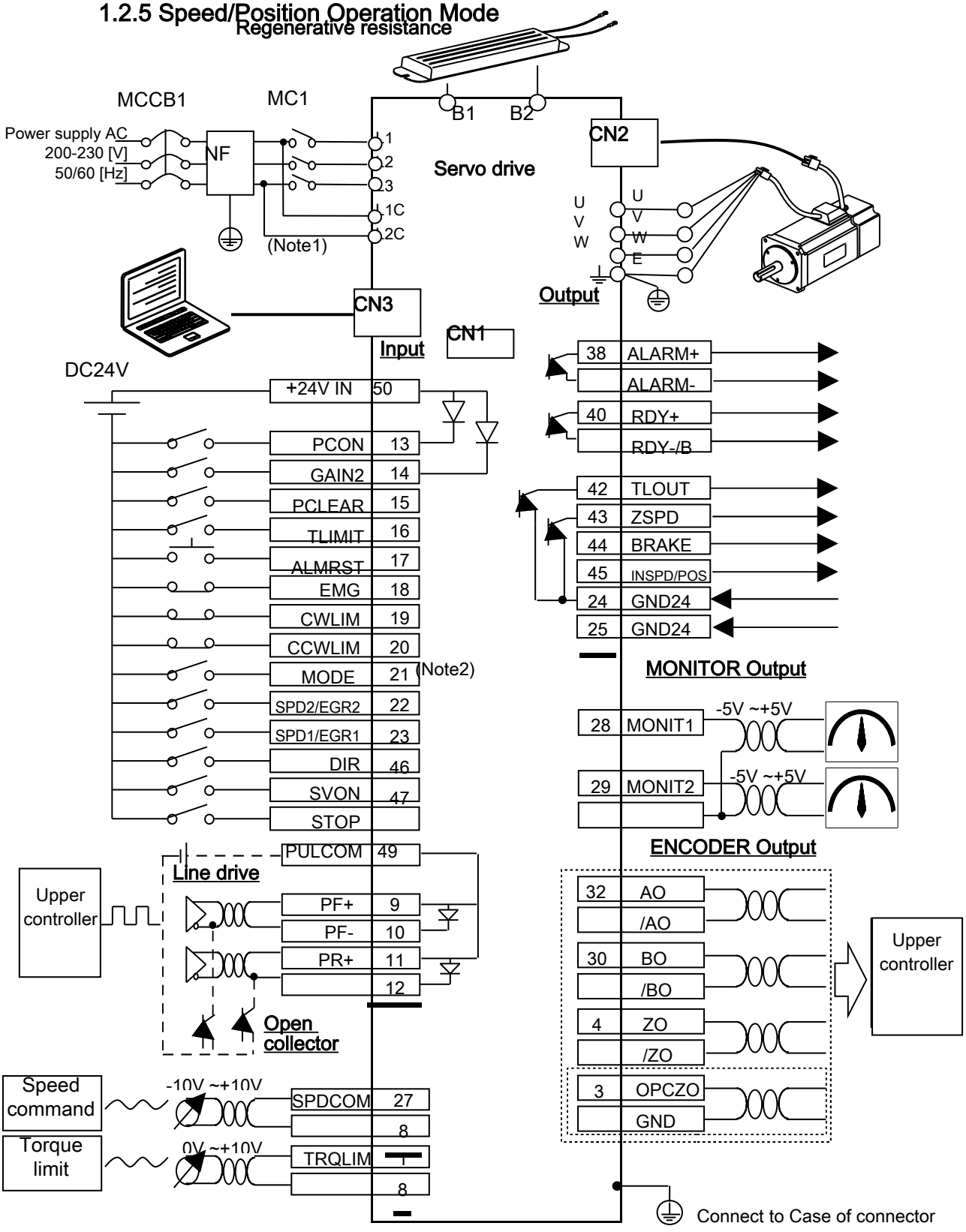
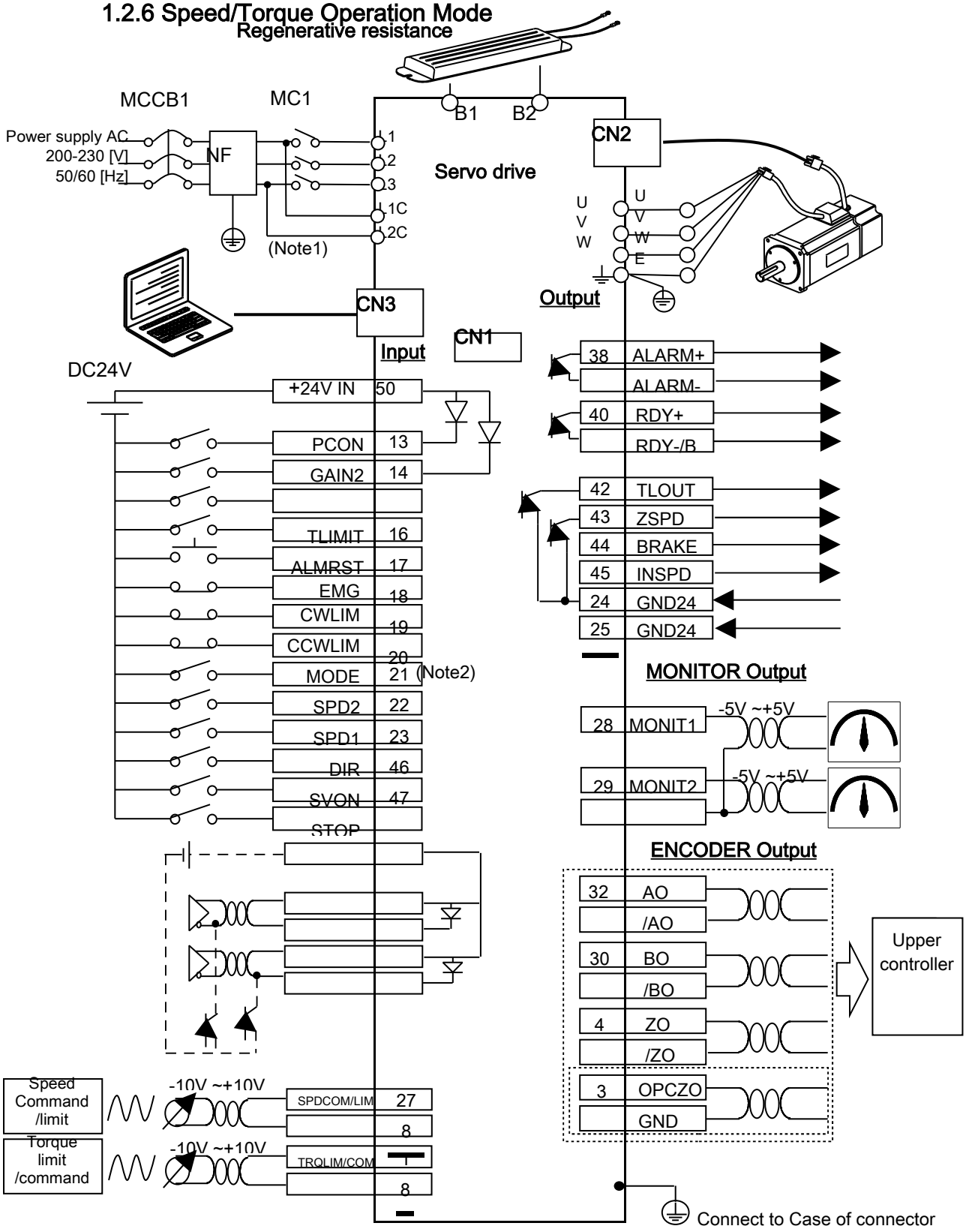
1.2.5 Speed/Position Operation Mode



Note1)The models that are higher than VS05 have a control power terminal(L1C, L2C)

Note2)Input contact MODE=ON:Speed control mode, MODE=OFF:Position control mode

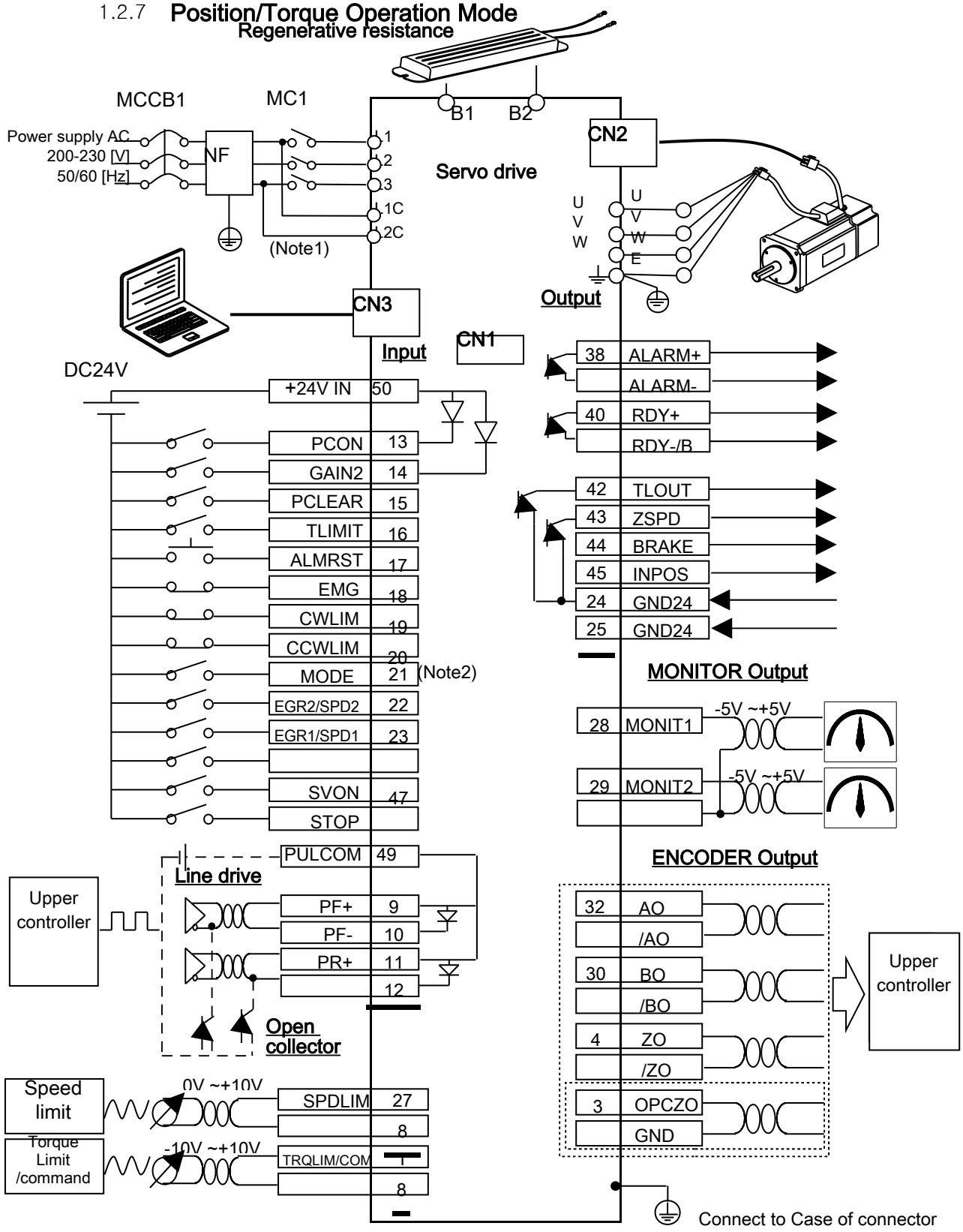
1.2.6 Speed/Torque Operation Mode



Note1) The models that are higher than VS05 have a control power terminal(L1C, L2C)

Note2) Input contact MODE=ON:Speed control mode, Mode=OFF:Torque control mode

1.2.7 Position/Torque Operation Mode



Mote1)The models that are higher than VS05 have a control power terminal(L1C, L2C)

Note2)Input contact MODE=ON:Position control mode, MODE=OFF:Torque control mode

1.3 Signal Explanation

1) Input contacts signal

Pin No.	Name	Function and Use	Application table on operation mode					
			P	S	T	S /P	S /T	P /T
50	+24V IN	Input contact +24[V] power supply	O	O	O	O	O	O
13	PCON	P control operating	O	O	X	O	O/X	O/X
14	GAIN2	Selecting gain2	O	O	X	O	O/X	O/X
15	PCLEAR	Input pulse clear	O	X	X	X/O	X	O/X
16	TLIMIT	ON : Torque limit by TRQLIM value OFF : Torque limit by parameter	O	O	X	O	O/X	O/X
17	ALMRST	RESET at ALARM	O	O	O	O	O	O
18	EMG	Emergency Stop	O	O	O	O	O	O
19	CWLIM	Prohibit CW rotating (reverse direction)	O	O	O	O	O	O
20	CCWLIM	Prohibit CWW rotating (forward direction)	O	O	O	O	O	O
21	SPD3	Selecting Speed3	X	O	X	X	X	X
	MODE	Switching control mode	X	X	X	O	O	O
22	SPD2	Selecting Command2 / Selecting Speed limit2	X	O	O	O/X	O	X/O
	EGEAR2	Switching electronic gear ratio2	O	X	X	X/O	X	O/X
23	SPD1	Selecting Command1 / Selecting Speed limit1	X	O	O	O/X	O	X/O
	EGEAR1	Switching electronic gear ratio1	O	X	X	X/O	X	O/X
46	DIR	Selecting rotating direction	X	O	X	O/X	O/X	X
47	SVON	Servo Operating	O	O	O	O	O	O
48	STOP	Motor Stop	X	O	O	O/X	O	X/O

Note1) P=Position, S=Speed, T=Torque

Note2) In case Speed operation, ‘DIR’ and ‘STOP’ contacts are operated as below by the menu [PE-514]

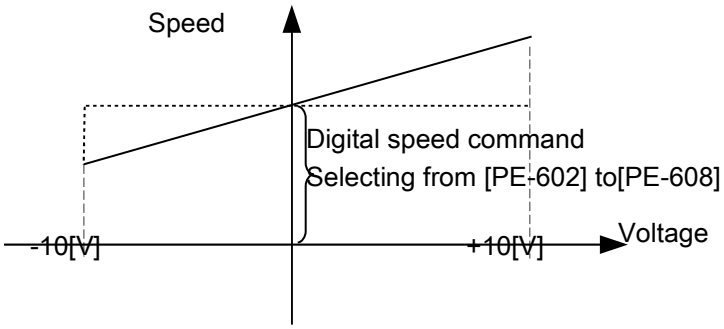
Set up [PE-514]	Operating Method					
	CCW		CW		Stop	
	DIR	STOP	DIR	STOP	DIR	STOP
0	OFF	OFF	ON	OFF	×	ON
1	OFF	ON	ON	OFF	ON	ON
					OFF	OFF

2) Analog Input Signal

Pin No.	Name	Function and Use	Application table on operation mode					
			P	S	T	S /P	S /T	P /T
27	SPDCOM	Analog speed command (-10~+10[V])	X	O	X	O/X	O/X	X
	SPDLIM	Analog speed limit input (0~+10[V])	X	X	O	X	X/O	X/O
1	TRQCOM	Analog torque command input (-10~+10[V])	X	X	O	X	X/O	X/O
	TRQLIM	Analog torque limit input (0~+10[V])	O	O	X	O	O/X	O/X
8	GND	Analog Signal ground	O	O	O	O	O	O

Note1) P=Position, S=Speed, T=Torque

* On Analog speed command, In case of override speed operation (set up as “1” on menu[PE-405]), operation is executed by speed command that is repeated on digital speed command.



3) Pulse Input Signal

Pin No.	Name	Function and Use	Application table on operation mode					
			P	S	T	S /P	S /T	P /T
9	PF+	Line drive(5V) : F+ pulse input Open collector(24V) : Not Used	O	X	X	X/O	X	O/X
10	PF-	Line drive(5V) : F- pulse input Open collector(24V) : F pulse input	O	X	X	X/O	X	O/X
11	PR+	Line drive(5V) : R+ pulse input Open collector(24V) : Not Used	O	X	X	X/O	X	O/X
12	PR-	Line drive(5V) : R- pulse input Open collector(24V) : R pulse input	O	X	X	X/O	X	O/X
49	PULCOM	Line drive(5V) : Not Used Open collector(24V) : +24V Power supply input	O	X	X	X/O	X	O/X

4) Output Contacts Signal

Pin No.	Name	Function and Use	Application table on operation mode					
			P	S	T	S /P	S /T	P /T
38 /39	ALARM+/-	ALARM state output ON : normal state OFF : ALARM state	O	O	O	O	O	O
40 /41	RDY+/-	ON at Complete operating ready state	O	O	O	O	O	O
42	TLOUT	Torque limit	O	O	O	O	O	O
43	ZSPD	Output at servo stop (speed is zero)	O	O	O	O	O	O
44	BRAKE	Brake operating signal output (ON at servo dirving)	O	O	O	O	O	O
45	INSPD	Output complete signal of target speed reaching	X	O	X	O/X	O/X	X
	INPOS	Output complete signal of target position reaching	O	X	X	X/O	X	O/X
24 25	GND24	Ground for operating power supply(24V) of I/O contacts	O	O	O	O	O	O

5) Monitor Output Signal and Output Power Supply

Pin No.	Name	Function and Use	Application table on operation mode					
			P	S	T	S /P	S /T	P /T
28	MONIT1	Analog monitor output1(-5~+5[V])	O	O	O	O	O	O
29	MONIT2	Analog monitor output2(-5~+5[V])	O	O	O	O	O	O
37	GND	Analog output signal ground	O	O	O	O	O	O
34	+15V	+15[V]Power supply output terminal	O	O	O	O	O	O
35	-15V	-15[V]Power supply output terminal	O	O	O	O	O	O

6) ENCODER Output Signal

Pin No.	Name	Function and Use	Application table on operation mode					
			P	S	T	S /P	S /T	P /T
32 33 30 31	AO /AO BO /BO	Divide the Encoder signal by set values of menu [PE-501] (5[V] Line drive type)	O	O	O	O	O	O
4 5	ZO /ZO	Encoder Z signal output by motor (5[V] Line drive type)	O	O	O	O	O	O
3 36	OPCZO GND	Encoder Z signal output by motor (Open collector type)	O	O	O	O	O	O

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