DVP可编程序控制器

使用手册

ES
EX
SS
系列

⚠

⚠

⚠

⚠ (OPEN TYPE)

/

(:

)

⚠ /

⚠

⚠

⚠

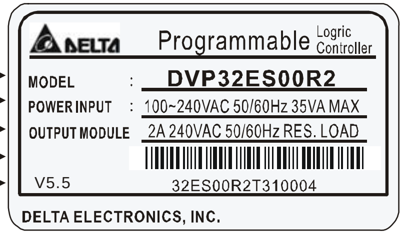
1.1.

DVP-ES/EX/SS ES/EX/SS 14~60 8~32
/ 128 / / / A/D D/A
SS (AD/DA/PT/TC/XA/RT) 8 SS
SS

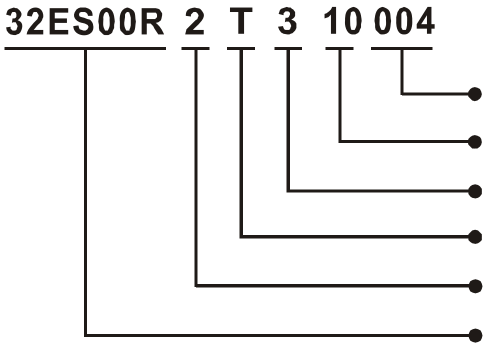
DVP-ES/EX/SS V4.9
V 4.7

Â

PLC

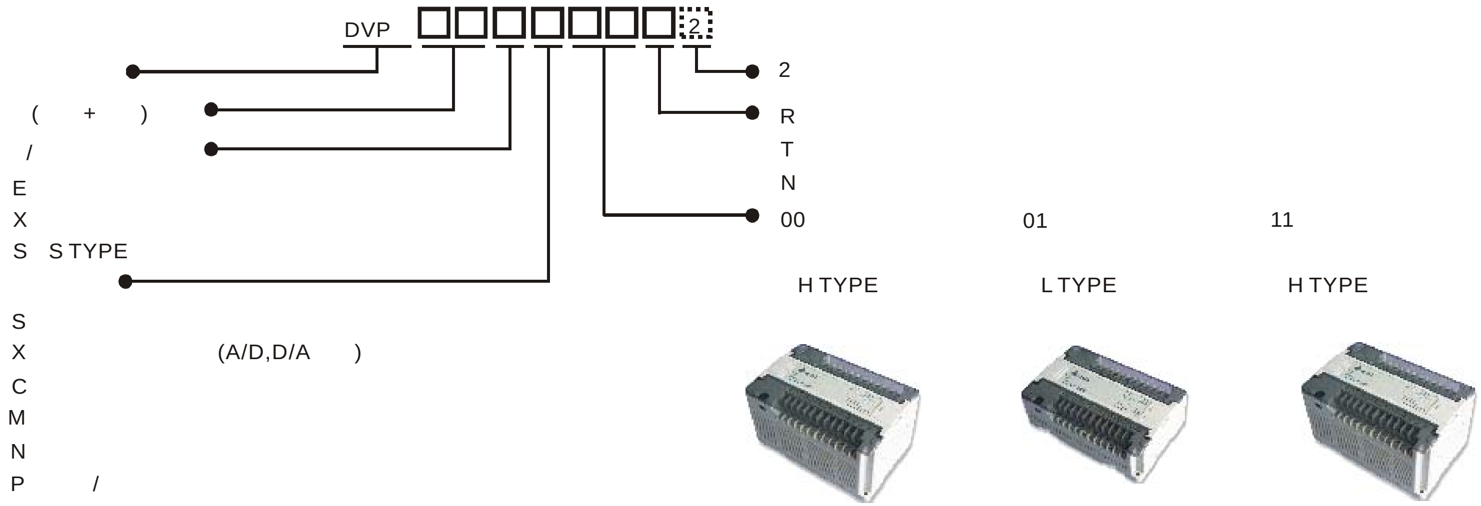


Â



(2003)
( )

Â



Â

DVPHPP02

WPLSoft Windows

DVPACAB115 HPP02 ė PLC / 1.5 DVPHPP02

DVPACAB215 PC 9 PIN & 25 PIN D-SUB ė PLC / 1.5

DVPACAB230 (PC 9 PIN & 25 PIN D-SUB ė PLC / 3)

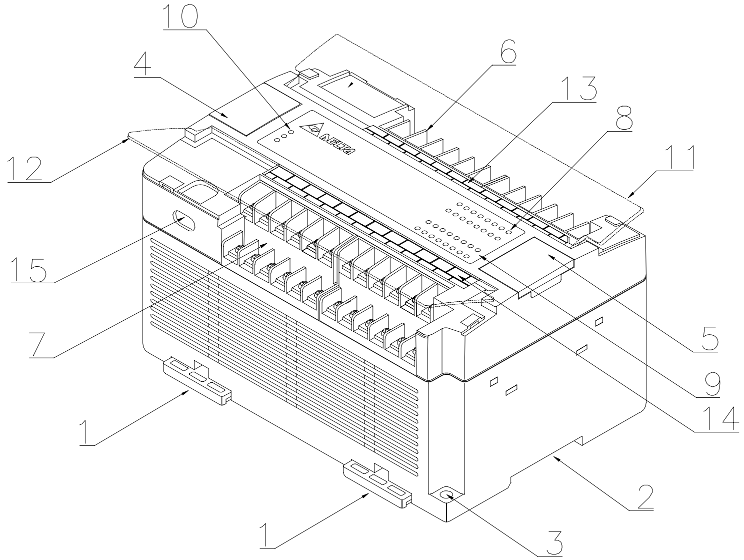
DVPACAB2A30 (PC 9 PIN D-SUB ė PLC / 3)

DVPACAB230 PC ė PLC / 3

DVPACAB315 HPP02 ė PC / 1.5

DVPACAB403 ė ė I/O 30

1.2.



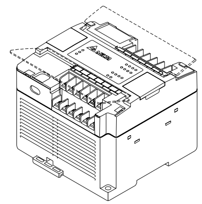
1-1

1	DIN	9	/
2	DIN 35mm	10	
3		11	/
4	/ RS-232C	12	/
5		13	/
6	/	14	/
7	/	15	RS-485
8	/		

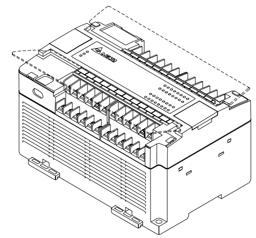
1.3.

MPU-00

	/					
DVP14ES00R2	100~240VAC +10% -15%	8	DC24V/5mA Sink Source	6	Relay	¬
DVP24ES00R2		16		8		-
DVP32ES00R2		16		16		
DVP60ES00R2		36		24		°
DVP14ES00T2		8		6	Transistor	¬
DVP24ES00T2		16		8		-
DVP32ES00T2		16		16		
DVP60ES00T2		36		24		°



¬

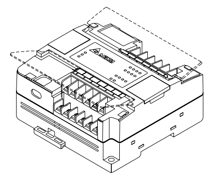


-

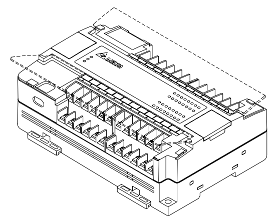
MPU-01

	/					
DVP14ES01R2	24VDC +20% -15%	8	DC24V/5mA Sink Source	6	Relay	®
DVP24ES01R2		16		8		—
DVP32ES01R2		16		16		
DVP14ES01T2		8		6	Transistor	®
DVP24ES01T2		16		8		—
DVP32ES01T2		16		16		

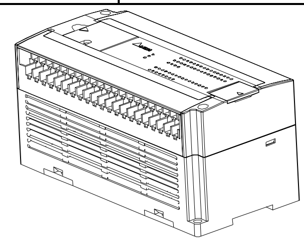
1. SINK SOURCE
2. /



®

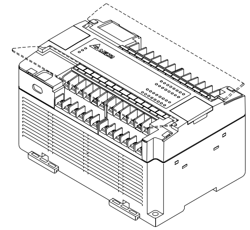


—

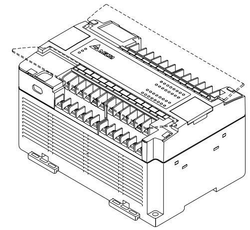


°

MPU-00

	/									
		DI	AI	DI	AI	DO	AO	DO	AO	
DVP20EX00R2	100~240VAC +10% -15%	8	4	DC24V/5mA Sink Source	-20mA~20mA -10V ~ +10 V	6	2	Relay	0~20mA 0 10V	
DVP20EX00T2		8	4			6	2	Transistor		

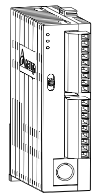
MPU-11

	/									
		DI	AI	DI	AI	DO	AO	DO	AO	
DVP20EX11R2	24VDC +20% -15%	8	4	DC24V/5mA Sink Source	-20mA~20mA -10V ~ +10 V	6	2	Relay	0~20mA 0 10V	
DVP20EX11T2		8	4			6	2	Transistor		

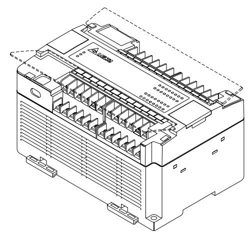
DI Digital Input
DO Digital Output
AI Analog Input
AO Analog Output

1. SINK SOURCE
2. /

MPU-11

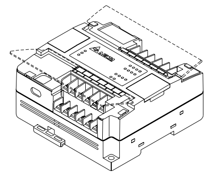
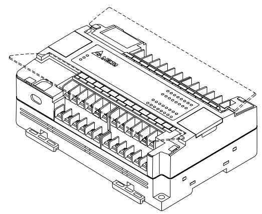
	/					
DVP14SS11R2	24VDC +20% -15%	8	DC24V/5mA Sink Source	6	Relay	
DVP14SS11T2		8		6	Transistor	

I/O –00

	/					
DVP24XN00R	100~240VAC +10% -15%	0	DC24V/5mA Sink Source	24	Relay	
DVP24XP00R		16		8		
DVP32XP00R		16		16		
DVP24XP00T		16		8	Transistor	
DVP24XN00T		0		24		
DVP32XP00T		16		16		

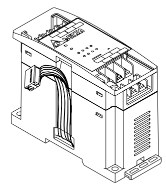
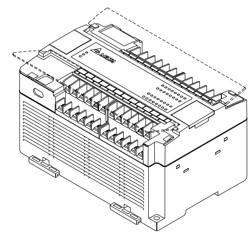
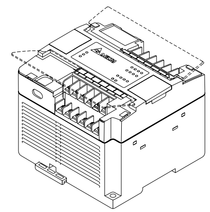
1. SINK SOURCE
2. /

I/O –01 (L TYPE)

DVP16XM01N	24VDC +20% -15%	16	DC24V/5mA Sink Source	0		¬	 ¬
DVP16XN01R		0		16	Relay	-	
DVP24XN01R		0		24			
DVP24XP01R		16		8			
DVP32XP01R		16		16			
DVP16XN01T		0		16	Transistor		 -
DVP24XN01T		0		24			
DVP24XP01T		16		8			
DVP32XP01T		16		16			

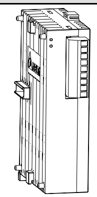
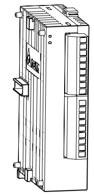
1. SINK SOURCE
2. /

I/O –11 (H TYPE)

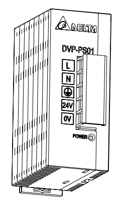
DVP08XM11N	24VDC +20% -15%	8	DC24V/5mA Sink Source	0		¬	 ¬	 ®
DVP16XM11N		16		0		-		
DVP08XN11R		0		8	Relay	¬		
DVP16XN11R		0		16		®		
DVP24XN11R		0		24				
DVP08XP11R		4		4		¬		
DVP24XP11R		16		8		®		
DVP32XP11R		16		16			 -	
DVP08XN11T		0		8	Transistor	¬		
DVP16XN11T		0		16		®		
DVP24XN11T		0		24				
DVP08XP11T		4		4		¬		
DVP24XP11T		16		8		®		
DVP32XP11T		16		16				

1. SINK SOURCE .
2. /
3. DVP08XP11R/T EX I/O

I/O

	/					
DVP08SM11N	24VDC +20% -15%	8	DC24V/5mA Sink Source	0		
DVP08SN11R		0		8	Relay	
DVP08SN11T		0		8	Transistor	
DVP08SP11R		4		4	Relay	
DVP16SP11R		8		8		
DVP08SP11T		4		4	Transistor	
DVP16SP11T		8		8		

SS

	/		
DVPPS01	100~240VAC +10% -15%	24VDC 1A	

Â

/		(END)	/ /
		us	10 ~ us
		+ + SFC	
		3792 STEPS	EEPROM
		32 ( )	107
( )		10	S0~S9
		118	S10~S127
		512+232	M000~M511+M768~M999
		256	M512~M767
		280	M1000~M1279
		64	T0~T63 100 ms
		63	T64~T126 10 ms M1028 On
		1	T127 1 ms
		112	C0~C111 (16bits
		16	C112~C127 (16bits)
		13 1 30KHz 2 7KHz	C235~C254 32bits
		408	D0 ~ D407
		192	D408~D599
		312	D1000~D1311
/	A / D	4 EX	10
	D / A	2 EX	8
/	P / I	P 64 / I 4	P0~P63 / I001 I101 I201 I301
	E / F	2	E (=D1028), F (=D1029)
	1 0 K	16 -32768~+32767	32 -2147483648~+2147483647
	1 6 H	16 0000~FFFF	32 00000000~FFFFFFFF
		/ RS-232C RS-485 RS	
/		/	
/		/	

Â

	DVP-14ES00□	DVP-24ES00□	DVP-32ES00□	DVP-60ES00□	DVP-20EX00□	DVP-14ES01□	DVP-24ES01□	DVP-32ES01□	DVP-20EX11□
	100~240VAC (-15%~10%), 50/60Hz ± 5%					24VDC (-15%~20%)			
	95~100VAC PLC 70VAC PLC 10ms					5ms			
	2 A / 250VAC					2 A / 250VAC			
	20 VA	25VA	30VA	35VA	30 VA	5.5 W	6.5 W	8 W	8 W
DC24V	400mA	400mA	400mA	200mA	400mA	–	–	–	–
	DC24V								
	1500VAC(Primary-secondary) 1500VAC(Primary-PE) 500VAC(Secondary-PE)								
	5 MΩ (/ 500VDC)								
	ESD: 8KV Air Discharge EFT: Power Line: 2KV, Digital I/O: 1KV, Analog & Communication I/O: 250V Damped-Oscillatory Wave: Power Line: 1KV, Digital I/O: 1KV RS: 26MHz~1GHz, 10V/m								
	L, N PLC								
/	0 ~55 ( ) 50~95%( ) 2 -25 ~70 ( ) 5~95%								
/	IEC1131-2, IEC 68-2-6 TEST Fc / IEC1131-2 & IEC 68-2-27 (TEST Ea)								
( ), (g)	400	552	580	750	536	260	414	430	386

		(EX)
	(SINK SOURCE) 24VDC 5mA	-10V~+10V 40KΩ -20mA~+20mA 250Ω
( )	Off→On 10VDC On→Off 9VDC	10 10
	10ms (D1020 D1021 0~15ms)	5ms(D1118)

	-R	-T	EX
	2A/1 5A/COM	0.3A/1 1.2A/COM	0~20mA
	250VAC,30VDC	30VDC	0V~10V
	100 VA 120 W	9W	0.2W
	10 ms	Off→On 20us On→Off 30us	10ms
	–	–	8

Â

	DVPPS01	DVP14SS11R2/T2	DVP08SM11N	DVP08SN11R/T	DVP08SP11R/T	DVP-16SP11R/T
	100~240VAC (50/60Hz)	24VDC (-15%~20%) ( )				
	5ms					
		2A / 250VAC				
		5 W			8 W	
		5 MΩ (/ 500VDC)				
	ESD: 8KV Air Discharge EFT: Power Line: 2KV, Digital I/O: 1KV, Analog & Communication I/O: 250V Damped-Oscillatory Wave: Power Line: 1KV, Digital I/O: 1KV RS: 26MHz~1GHz, 10V/m					
	L, N PLC					
/	0 ~55 ( ) 50~95%( ) 2 -25 ~70 ( ) 5~95%					
/	IEC1131-2, IEC 68-2-6 TEST Fc / IEC1131-2 & IEC 68-2-27 (TEST Ea)					
( ), (g)	210	214/208	128	154 /146	141 /136	162 /154

	SINK SOURCE
	24VDC 7mA
	Off→On 10VDC
	On→Off 9VDC
	10ms D1020 D1021 0~15ms

	-R	-T
	2A/1 5A/COM	55 0.1A/1 50 0.15A/1 45 0.2A/1 40 0.3A/1 2A/COM
	250VAC,30VDC	30VDC
	100 VA	7.2W
	120 W	
	10 ms	Off→On 15us On→Off 25us

Â ES/EX I/O 8

3.

3.1.

PLC	
M1000	a
M1001	b
M1002	RUN ’On’
M1003	RUN ’Off’
M1004	
M1008	WDT On
M1009	24VDC
M1010	PLSY Y0 , On
M1011	10msec
M1012	100msec
M1013	1sec
M1014	1min
M1020	Zero flag
M1021	Borrow flag
M1022	Carry flag
M1023	PLSY Y1 , On
M1024	
M1025	
M1028	100ms /10 ms
M1029	PLSY Y0
M1030	PLSY Y1
M1070	PWM Y1 On 100us Off 1ms
M1031	
M1032	
M1033	
M1034	
M1039	

M1040	
M1041	
M1042	
M1043	
M1044	
M1045	
M1046	STL On
M1047	STL
M1050	I 001
M1051	I 101
M1052	I 201
M1053	I 301
M1060	CPU
M1061	CPU
M1062	CPU BIOS ROM
M1063	CPU RAM
M1064	
M1065	
M1066	
M1067	
M1068	D1068
PLC	
M1072	PLC RUN
M1073	
M1078	Y0
M1079	Y1
M1083	FROM/TO
RS-485	
M1120	
M1121	

M1122	
M1123	
M1124	
M1125	
M1126	STX/ETX
M1127	MODRD RDST
M1128	/
M1129	
M1130	/ STX/ETX
M1131	MODRD/RDST/MODRW HEX M1131=On
M1140	MODRD / MODWR
M1141	MODRD / MODWR
M1142	VFD-A
M1143	ASCII / RTU
M1161	8 On 8
1 1	
M1235	C235 On
M1236	C236 On
M1237	C237 On
M1238	C238 On
M1241	C241 On
M1242	C242 On
M1244	C244 On
1 2	
M1246	C246 On
M1247	C247 On
M1249	C249 On
2	
M1251	C251 On
M1252	C252 On
M1254	C254 On

3.2.

PLC	
D1000	WDT :ms
D1001	DVP
D1002	
D1003	
D1004	
D1005	
D1008	WDT On STEP
D1010	0.1ms
D1011	0.1ms
D1012	0.1ms
D1020	X0~X7 0~15ms
D1021	X10~X17 0~15ms
D1022	AB
D1025	
D1028	E
D1029	F
D1030	Y0 Low word
D1031	Y0 High word
D1032	Y1 Low word
D1033	Y1 High word
D1038	PLC 0.1ms
D1039	ms
D1040	On 1
D1041	On 2
D1042	On 3
D1043	On 4
D1044	On 5
D1045	On 6
D1046	On 7
D1047	On 8

D1061	PLC
D1065	
D1066	
D1067	
D1068	
D1069	M1065 M1067
D1050 Ć D1055	PLC D1070~D1085 ASCII HEX 16 PLC
D1070 Ć D1085	PLC RS-485 D1070~D1085 PLC
D1089 Ć D1099	PLC RS-485 D1089~D1099 PLC
D1256 Ć D1295	PLC RS-485 MODRW D1256~D1295 (V4.9 MOV DMOV BMOV)
D1296 Ć D1311	PLC ASCII HEX 16 (MOV DMOV BMOV)

/ EX	
D1056	0 (CH 0)
D1057	1 (CH 1)
D1058	2 (CH 2)
D1059	3 (CH 3)
D1110	0 (CH 0)
D1111	1 (CH 1)
D1112	2 (CH 2)
D1113	3 (CH 3)
D1116	0 (CH 0)
D1117	1 (CH 1)
D1118	EX / 0 1ms D1118 5 5ms
PLC	
D1119	PLC
D1121	PLC
RS-485	
D1120	RS-485
D1122	
D1123	
D1124	STX
D1125	ETX1
D1126	ETX2
D1129	ms
D1130	MODBUS
D1136	C400
D1137	
D1140	
D1141	
D1142	X
D1143	Y

M M1131,M1132

D

PLC

M1025	HPP, PC MMI( ) PLC PLC M1025 D1025	D1001	PLC : D1001 = H 4027, V2.7, HPP , Knnnnn, <H> 16 (H)	D1121	PLC
				D1122	C251 C252 C254 AB K1:1 K4:4 :2
M1028	Off , T64~T126 100ms, On, 10ms	D1003	PLC PLC	D1119	PLC 1: A/D 2: D/A 3: A/D, D/A 4: (DI/DO)
M1143	MODRD/MODWR Off ASCII On RTU	D1025	01: 02: 03: 07: (CheckSum)		

3.3.

	1 1							1 2			2		
	C235	C236	C237	C238	C241	C242	C244	C246	C247	C249	C251	C252	C254
X0	U/D				U/D		U/D	U	U	U	A	A	A
X1		U/D			R		R	D	D	D	B	B	B
X2			U/D			U/D			R	R		R	R
X3				U/D		R	S			S			S

U A A S
D B B R

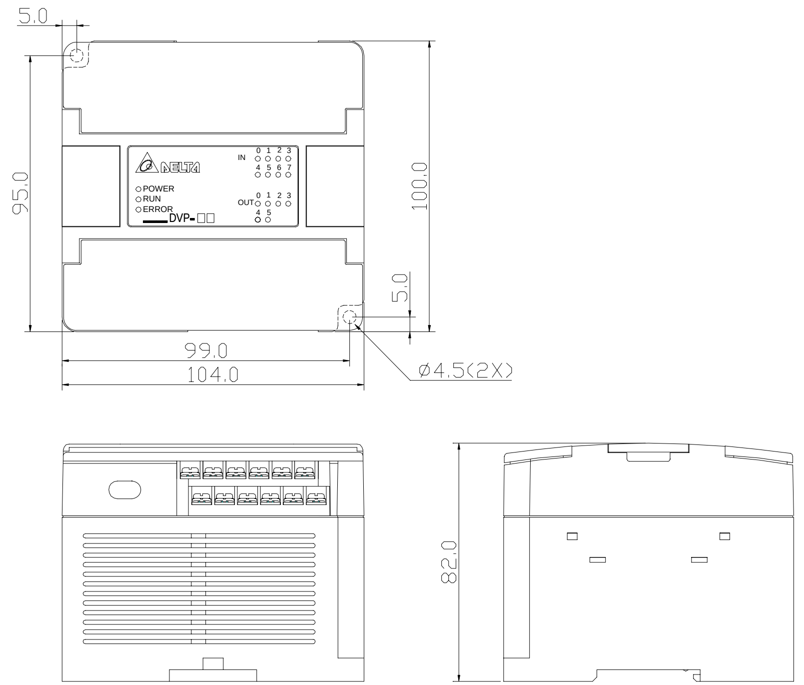
F C235~C254 ERROR

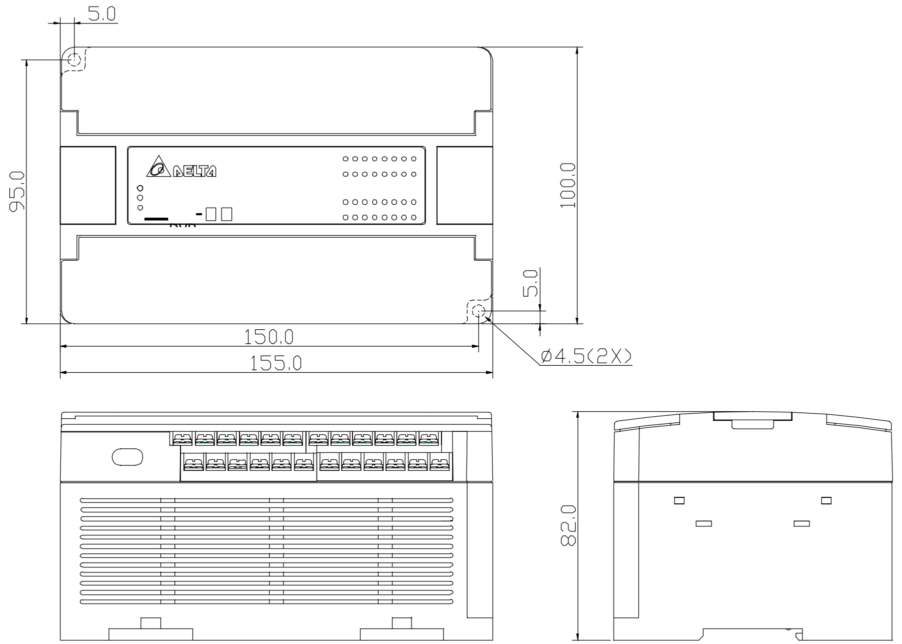
F CH 7 API53 DHSCS API54 DHSCR

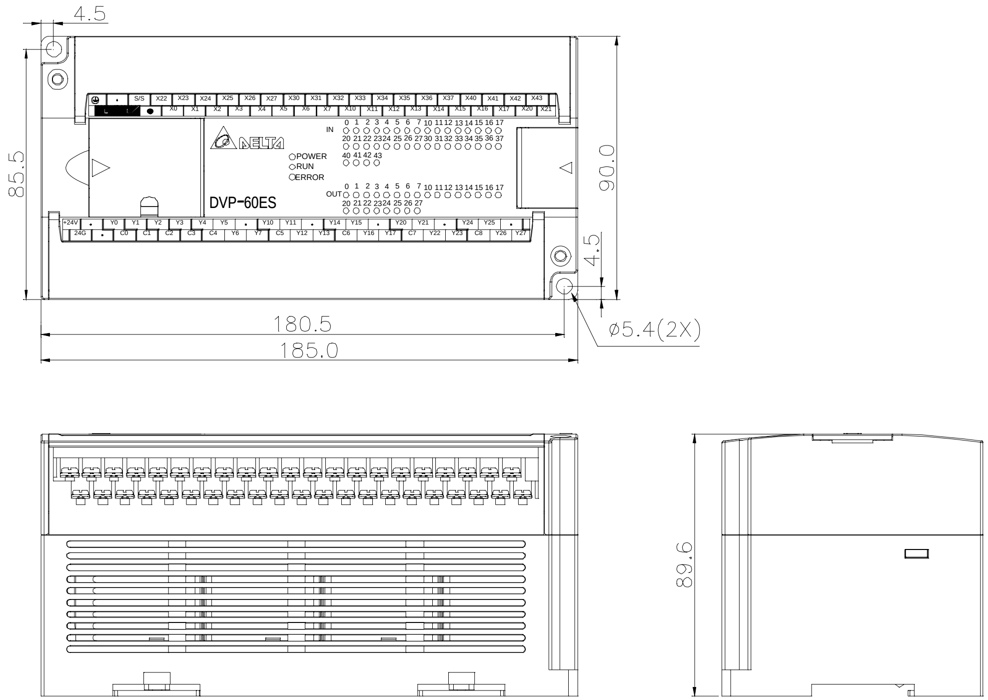
4.

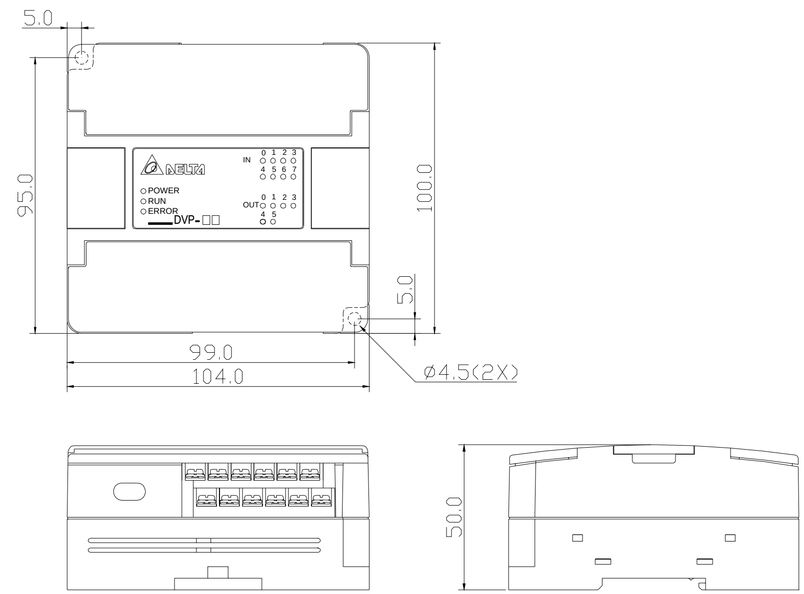
4.1.

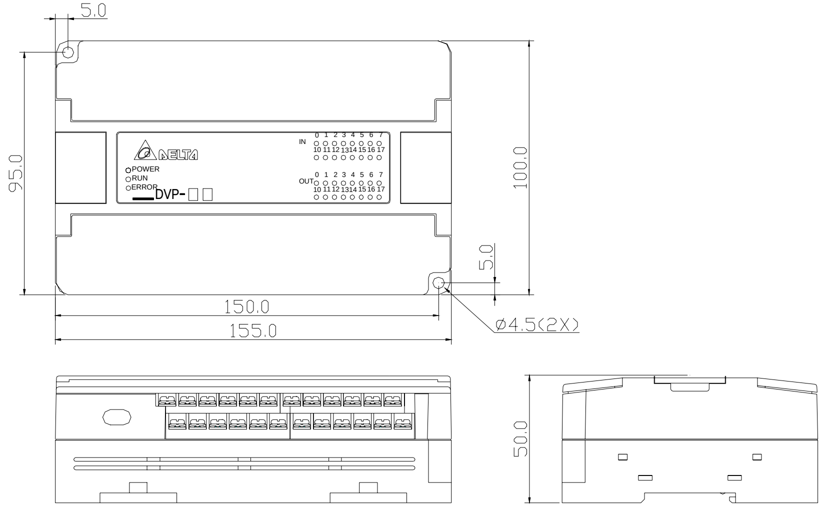
Â ES/EX

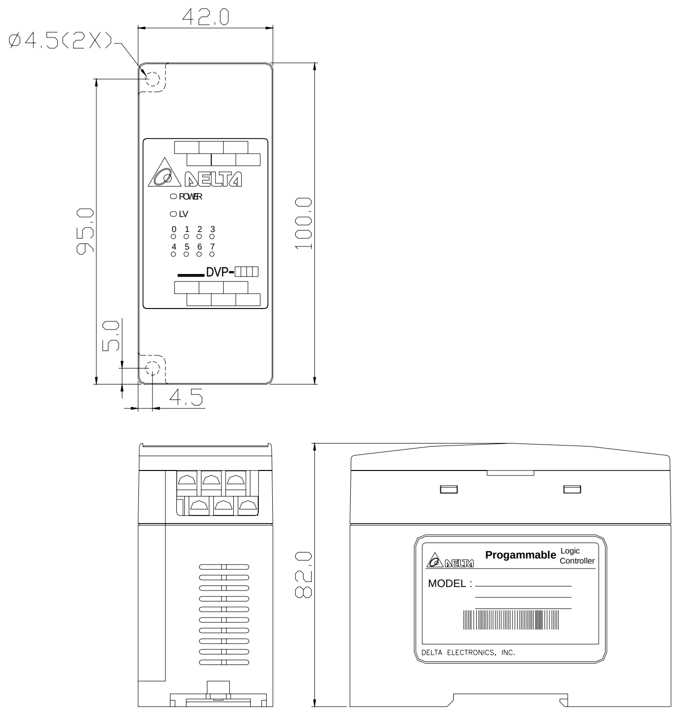
	DVP14ES00 R2/T2	
I / O	DVP16XM11N	

	DVP24ES00 R2/T2 DVP32ES00 R2/T2 DVP20EX00 R2/T2	
	DVP20EX11 R2/T2	
I / O	DVP24XP00 R/T DVP24XN00 R/T DVP32XP00 R/T	
I / O (　　　　　)	DVP16XN11 R/T DVP24XN11 R/T DVP24XP11 R/T DVP32XP11 R/T	

	DVP60ES00 R2/T2	

	DVP14ES01 R2/T2	
I / O	DVP16XM01N	

	DVP24ES01 R2/T2 DVP32ES01 R2/T2	
I / O	DVP16XN01 R/T DVP24XP01 R/T DVP24XN01 R/T DVP32XP01 R/T	

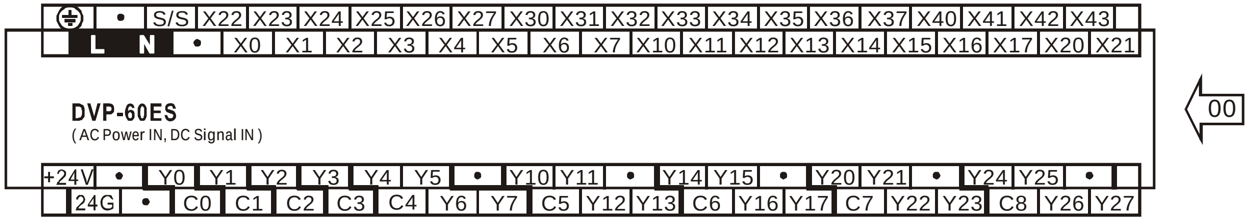
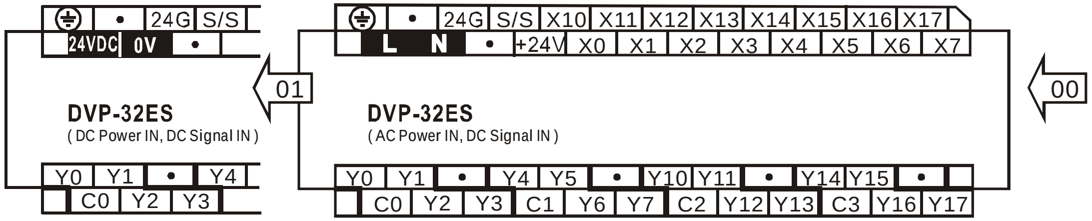
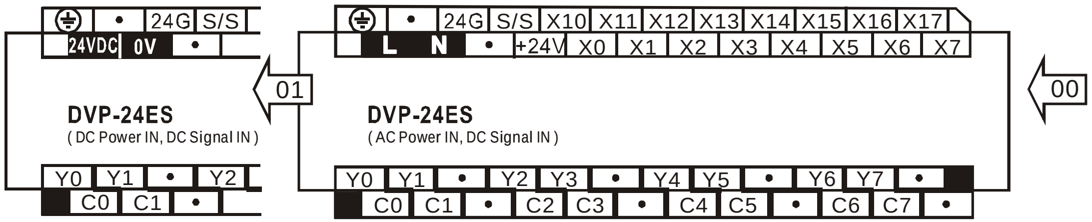
I / O	DVP08XM11N DVP08XN11 R/T DVP08XP11 R/T	

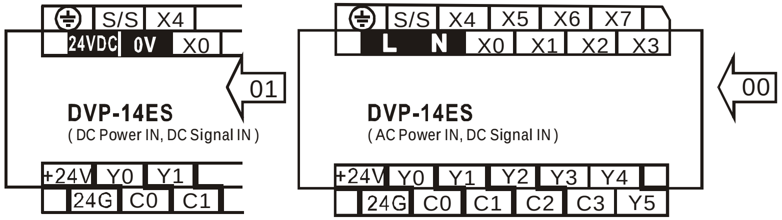
Â SS

4.2.

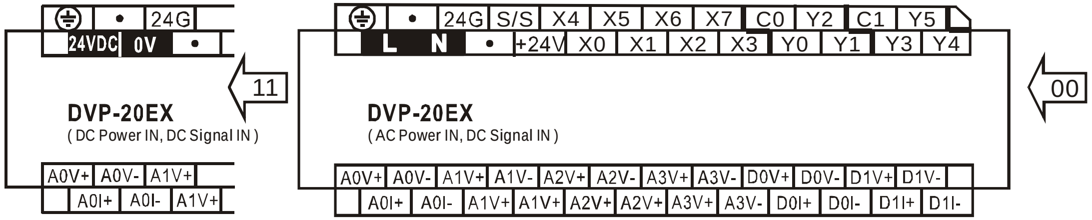
Â ES

DVP ES 1.2 1-1 13 14

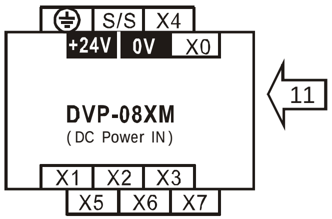
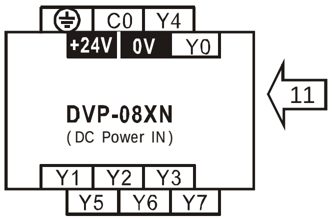
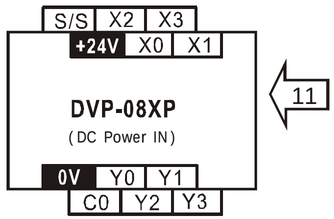
DVP60ES	
DVP32ES	
DVP24ES	

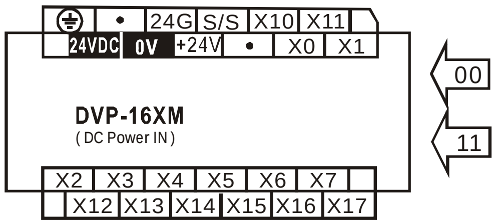
DVP14ES	

Â EX

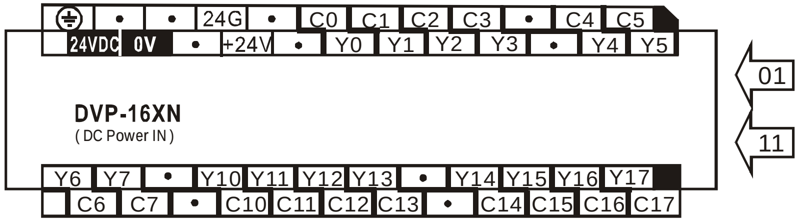
DVP20EX	

Â EX/ES

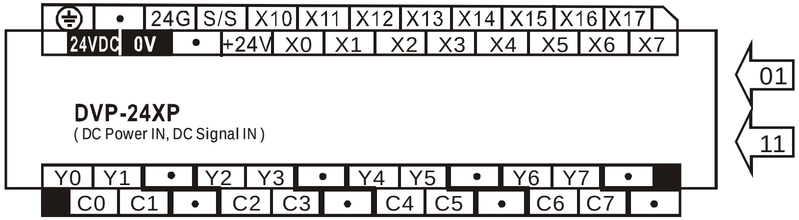
DVP08XM		DVP08XN		DVP08XP	

DVP16XM	

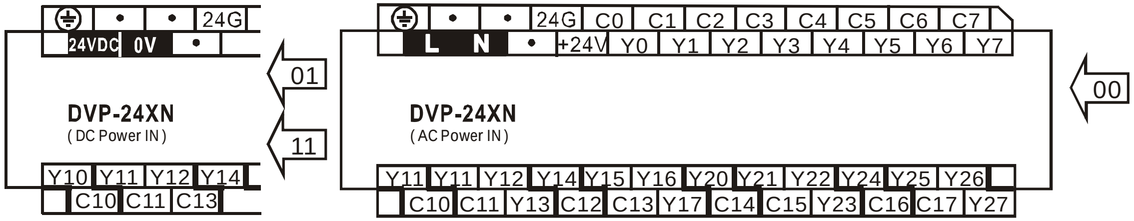
DVP16XN



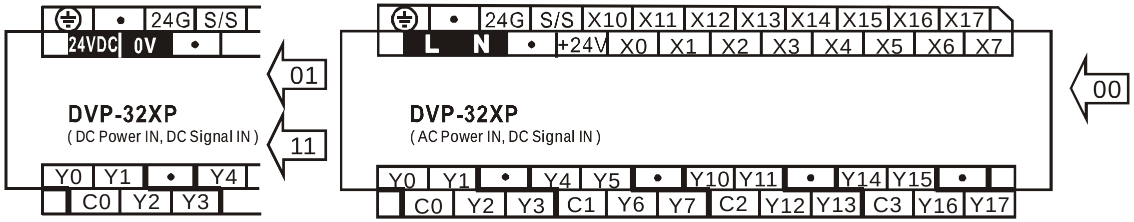
DVP24XP



DVP24XN



DVP32XP

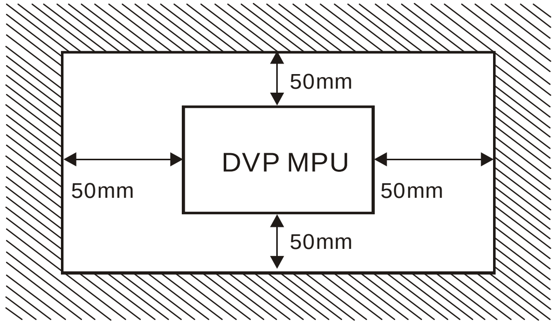


Â SS

4.3.

DVP PLC

PLC

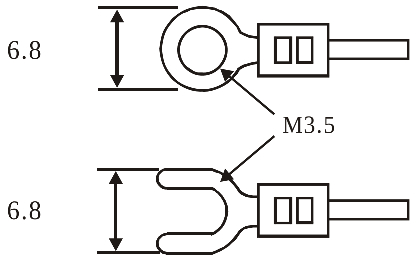


Â DIN

35mm DIN

Â

M4

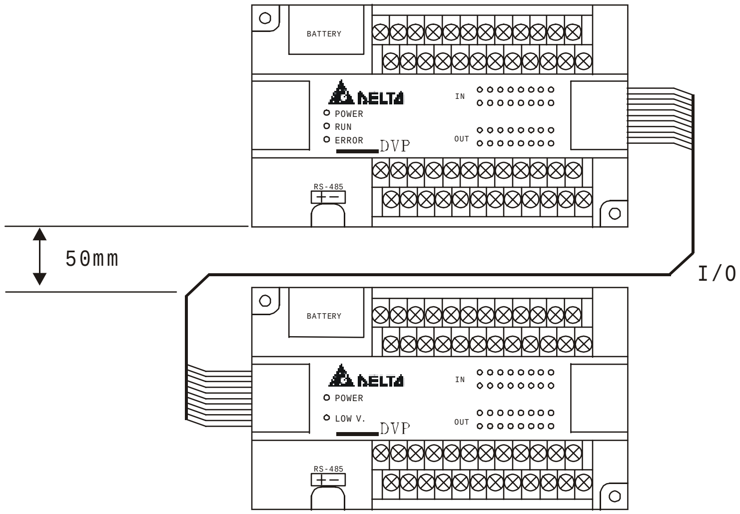


1. / O Y PLC
5~8 kg-cm (4.3~6.9 in-lbs)

2. 

3.

4.



1. / I/O
I/O
50mm

2. I/O I/O
I/O

3. 80mm

300mm DVPACAB403

X

1. PLC
2. PLC
3. PLC

X

1. PLC PLC

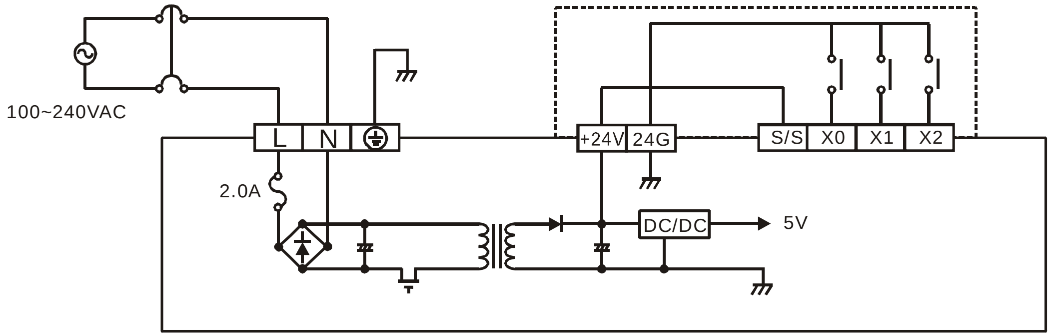
2. PLC 50mm

4.4.

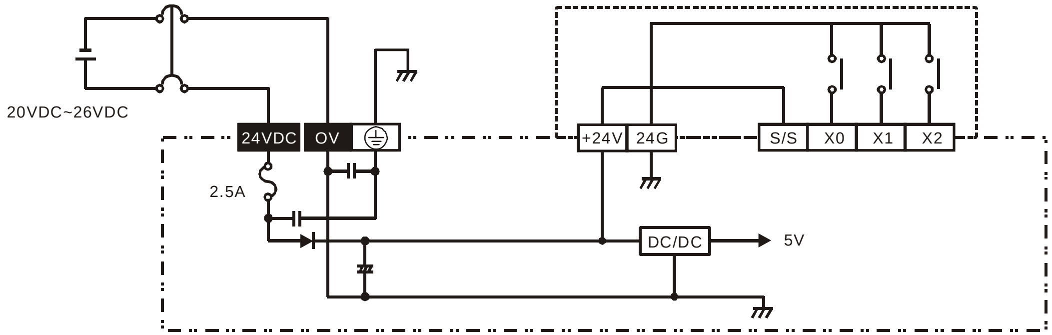
Â

DVP PLC

1. 100VAC~240VAC L N AC110V AC220V +24V PLC
2. I/O On Off
3. 1.6mm
4. 10ms PLC PLC Off PLC PLC

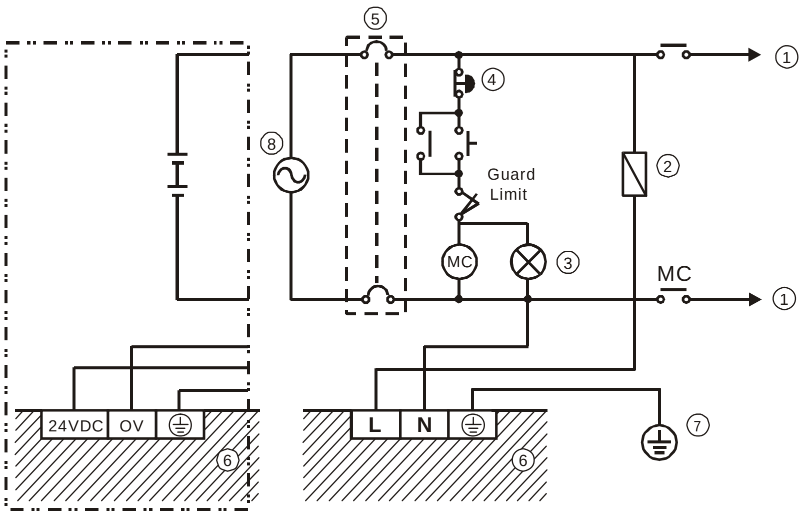
	 Â +24V 0.4A 6~7mA 16 100mA +24V 300mA

5. PLC 24VDC 0V 20.4VDC~26.4VDC 17.5VDC PLC Off ERROR LED

Â

PLC



¡

¢ 3A

£

¤

¥

¦ DVP PLC

§ 100 Ω

¨

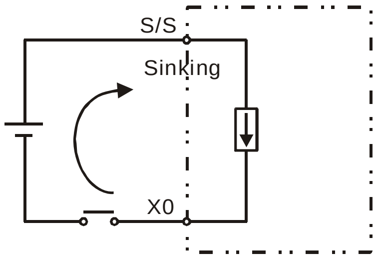
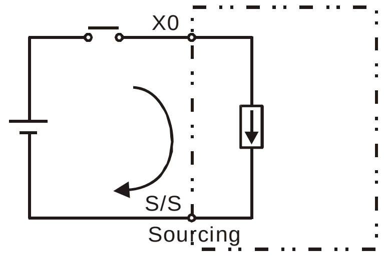
AC 100~240VAC, 50/60Hz

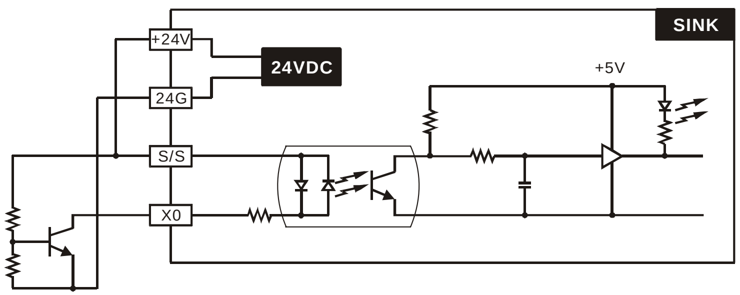
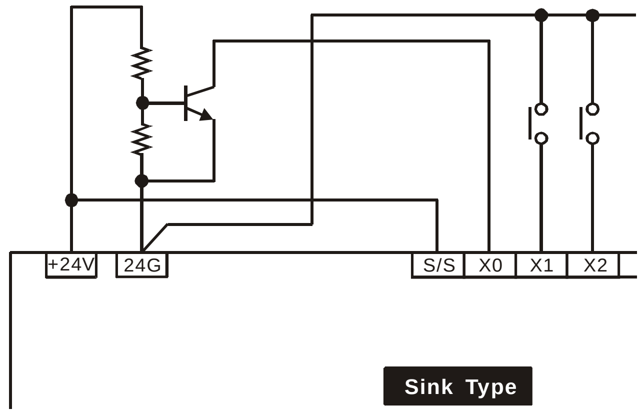
DC 24VDC

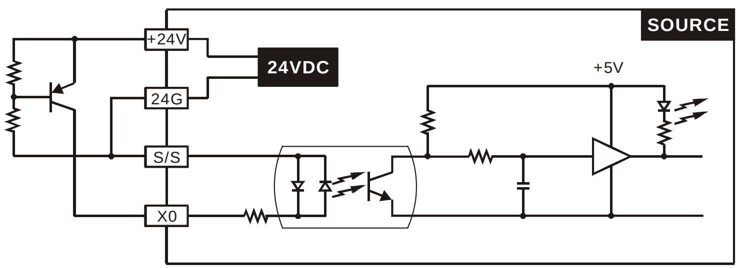
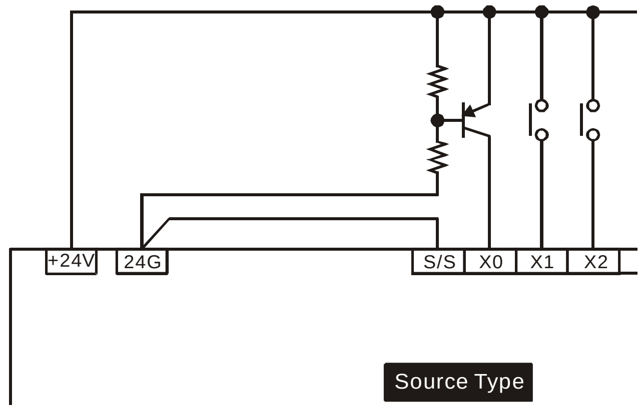
Â

DC DC SINK SOURCE

DC DC SINK SOURCE

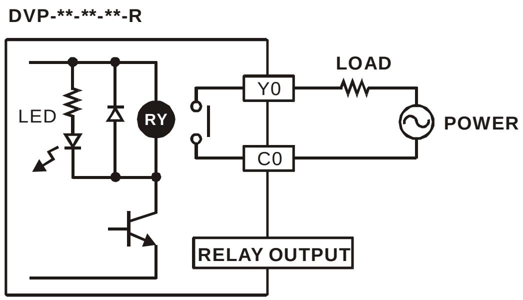
<table>
<tr><td>Sink = S/S</td><td>Source = S/S</td></tr>
<tr><td>
</td><td>
</td></tr>
</table>

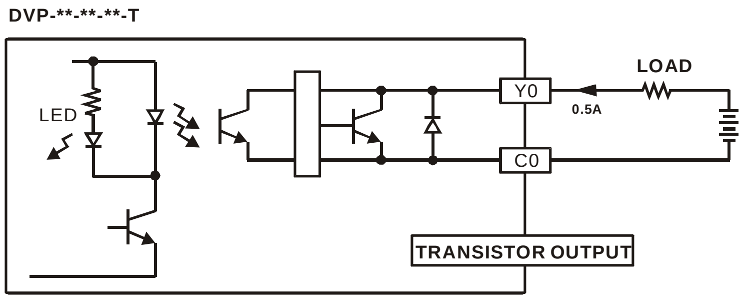
<table>
<tr><td></td><td></td><td></td></tr>
<tr><td>DC Signal IN</td><td rowspan="2">
</td><td rowspan="2">
</td></tr>
<tr><td>SINK</td></tr>
</table>

DC Signal IN		
SOURCE		

PLC

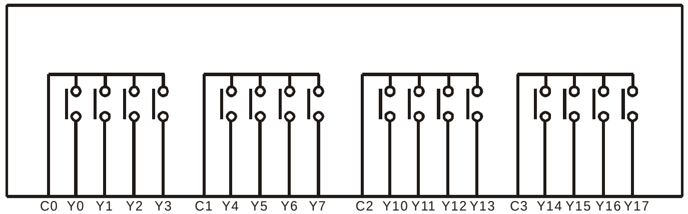
Â





1. DVP PLC

2.
DVP32ES00R Y0~Y3 C0
Y4~Y7 C1 Y10~Y13 C2 Y14~Y17 C3



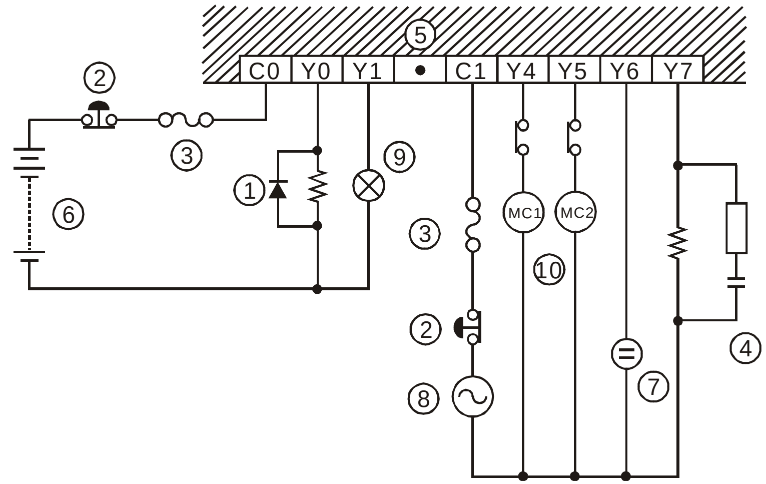
4.2

3.

4. PLC

⚠

5 2 2 1.5



¡

¢

£ 5~10A

¤

¥

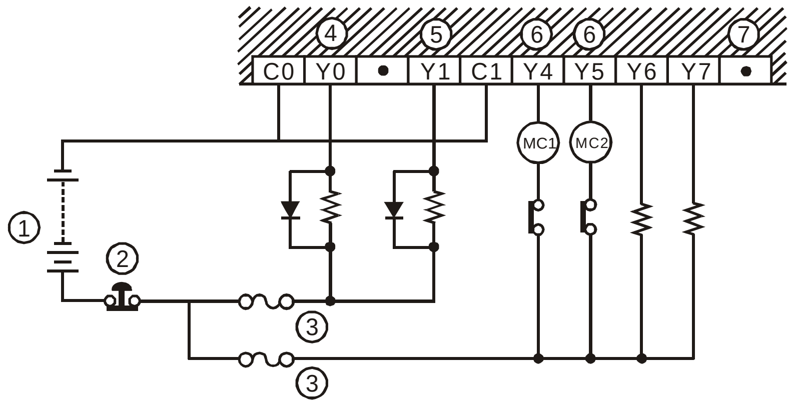
¦

§

¨

©

ª PLC



¡

¢

£

¤ (Open Collector) Y0
(PLSY)
0.1A

¥ (Open Collector) Y1
(PWM)
0.1A

¦ PLC

§

Â

1. POWER LED
LED
PLC
24V +24V 24G
DC24V
ERROR LED PLC
+24V

2. LOW V.

Â

1. /
AC110V AC220V
PLC

2. ERROR
RUN

3. HPP On/Off

Â

1. ERROR RUN
RUN

2. HPP (T) (C)

(D) On/Off
ERROR

On/Off PLC STOP

Â PLC /

PLC

= +

+

	10ms( ) 0~15ms D1020~1021
	D1010
	10ms 20~30us

Â

			STEPS
LD	A	S X Y M T C	1
LDI	B	S X Y M T C	1
AND	A	S X Y M T C	1
ANI	B	S X Y M T C	1
OR	A	S X Y M T C	1
ORI	B	S X Y M T C	1
OUT		S Y M	1
SET	(On)	S Y M	1
ANB			1
ORB			1
MPS			1
MRD	( )		1
MPP			1
NOP			1
MC		N0~N7	3
MCR		N0~N7	3
RST		S Y M T C D	3
P		P0~P63	1
I		I001 / I101 / I201 / I301	1
END			1

F API
DVPHPP01 HPP02
API

API				STEPS
96	TMR	16	T-K T-D	4
97	CNT	16	C-K C-D 16	4
97	DCNT	32	C-K C-D 32	6

F API DVP
HPP01 HPP02 API

API				STEPS
89	PLS		Y M	3
90	LDP		S X Y M T C	3
91	LDF		S X Y M T C	3
92	ANDP		S X Y M T C	3
93	ANDF		S X Y M T C	3
94	ORP		S X Y M T C	3
95	ORF		S X Y M T C	3
98	INV			1
99	PLF		Y M	3

Â

			STEPS
STL		S	1
RET			1

Â

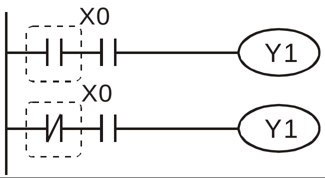
LD / LDI	S0~S127	X0~X177	Y0~Y177	M0~M1279	T0~T127	C0~C127 C235~C254
	V	V	V	V	V	V

LD/LDI A /B

F

LD X0

LDI X0



AND / ANI	S0~S127	X0~X177	Y0~Y177	M0~M1279	T0~T127	C0~C127 C235~C254
	V	V	V	V	V	V

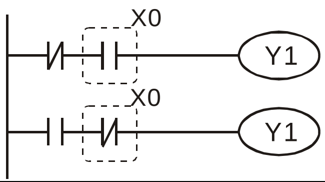
AND/ANI A /B

“ ” AND

F

AND X0

ANDI X0



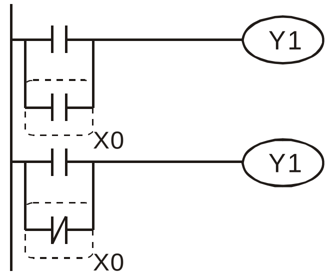
OR / ORI	S0~S127	X0~X177	Y0~Y177	M0~M1279	T0~T127	C0~C127 C235~C254
	V	V	V	V	V	V

OR/ORI A /B

“ ” OR

OR X0

ORI X0

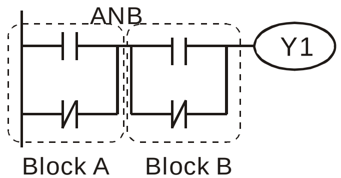


ANB / ORB	

ANB ORB “ ”
“ ”

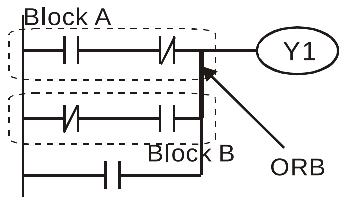
F

ANB



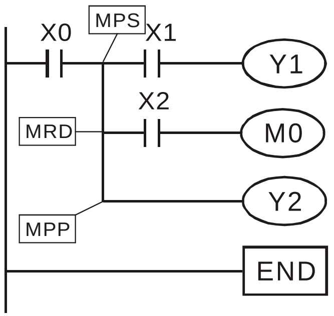
F

ORB



MPS / MRD / MPP	

- MPS
- MRD
- MPP




```
LD    X0
MPS
AND   X1
OUT   Y1
MRD
AND   X2
OUT   M0
MPP
OUT   Y2
END
```

Â

OUT	S0~S127	X0~X177	Y0~Y177	M0~M1279	T0~T127	C0~C127 C235~C254
	V		V	V		

OUT

F

OUT Y1

	OUT		
		a	b
FALSE	Off		
TRUE	On		

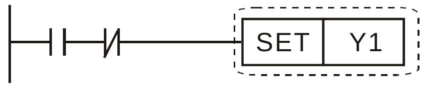
SET	S0~S127	X0~X177	Y0~Y177	M0~M1279	T0~T127	C0~C127 C235~C254
	V		V	V		

SET On

On SET RST Off

F

SET Y1



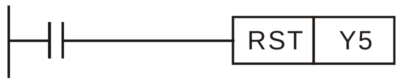
RST	S0~S127	Y0~Y177	M0~M1279	T0~T127	D0~D1143	C0~C127 C235~C254
	V	V	V	V	V	V

RST

S, Y, M	Off
T, C	0 Off
D	0

RST

F



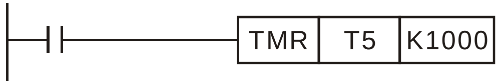
TMR	T-K	T0~T127, K0~K32767
	T-D	T0~T127, D0~D1143

TMR

>=

NO	
NC	

F

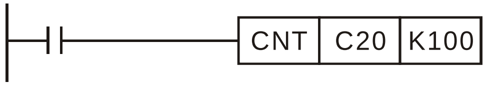


CNT	C-K	C0~C127, K0~K32767
	C-D	C0~C127, D0~D1143

CNT Off Ą On Ą
1 =

NO	
NC	

F

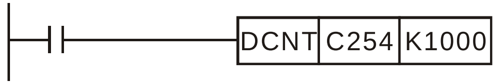


RST

DCNT	C-K	C235~C254, K-2147483648~K2147483647
	C-D	C235~C254, D0~D1143

DCNT C235 C254 32
16 C0~C127 DCNT
32
Off Ą On On Off
(X0~X3) (,
,) 3.3

F



DCNT Off
RST C2XX

Â

MC / MCR	N0 ~ N7

MC

MC MC MC MCR
MC Off MC MCR

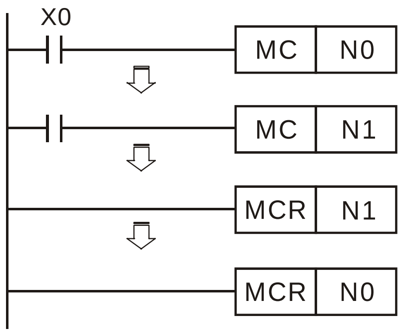
OUT	
SET RST	

MCR

MCR MCR

MC-MCR 8 N0~
N7

F



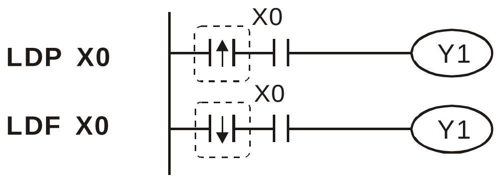
Â /

LDP / LDF	S0~S127	X0~X177	Y0~Y177	M0~M1279	T0~T127	C0~C127 C235~C254
	V	V	V	V	V	V

LDP/LDF LD/LDI

/

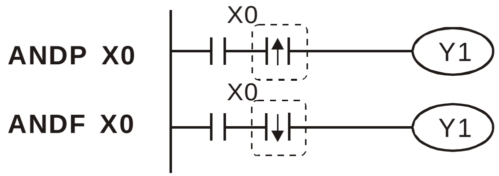
F



ANDP / ANDF	S0~S127	X0~X177	Y0~Y177	M0~M1279	T0~T127	C0~C127 C235~C254
	V	V	V	V	V	V

ANDP/ANDF /

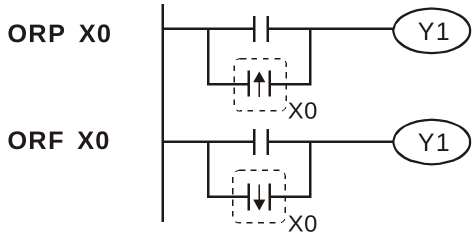
F



ORP / ORF	S0~S127	X0~X177	Y0~Y177	M0~M1279	T0~T127	C0~C127 C235~C254
	V	V	V	V	V	V

ORP/ORF /

F

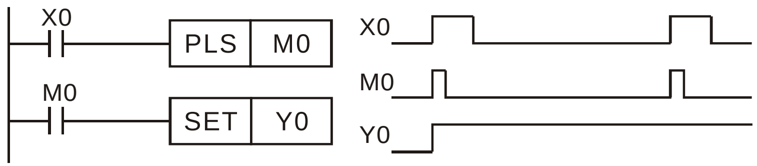


Â

PLS	S0~S127	X0~X177	Y0~Y177	M0~M999	T0~T127	C0~C127 C235~C254
			V	V		

PLS X0=Off→On( ) PLS M0

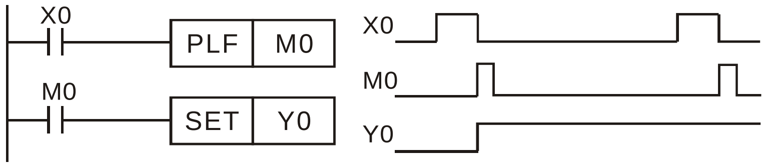
F



PLF	S0~S127	X0~X177	Y0~Y177	M0~M999	T0~T127	C0~C127 C235~C254
			V	V		

PLF X0= On→Off ( ) PLF
M0

F



Â

END	

END PLC 0
END 0

F

Â

NOP	

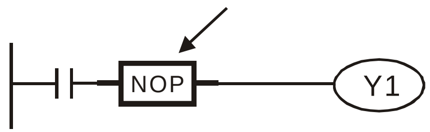
NOP

1. PLC

2. NOP

3. NOP

NOP

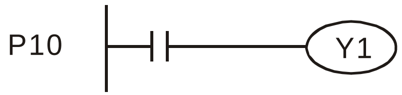


P / I	P0 ~ P63 / I001, I101, I201, I301, I6□ □, I150

(P)
P CJ CALL 0

1. CJ
P
2. CALL
P

F



(I)

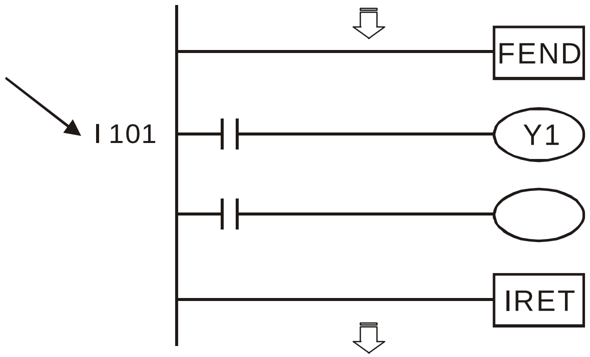
1. : I001, I101, I201, I301, 4

2. : I6□ □, 1 (□ □=10~99, =1ms)

3. : I150, 1 ( )

IXXX
IRET .

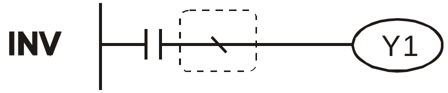
F



INV	

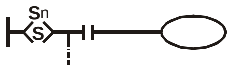
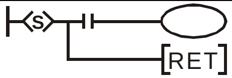
INV

F



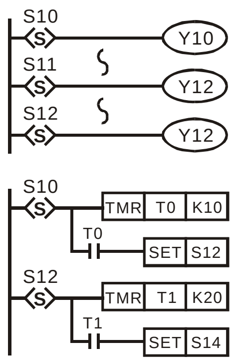
Â

¸

STL [Sn]	( )		¸ 1 Step ¸ [Sn] S0~S127 ¸ S0~S9 ¸ S
RET		 RET STL	¸ 1 Step ¸ **S0~S9**

¸

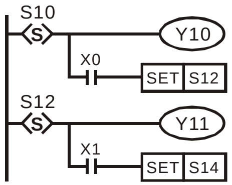
STL Sn STL RET
S0~S9 SFC STL/RET



F Sn On Sn Off 1

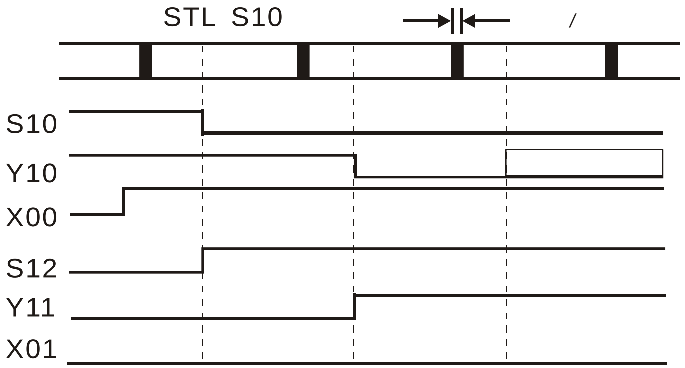
F Y12 S11 S12 On Y12 S11 S12 Y12 S12 On Y12 S11 S12=On Y12 On

F



F S10 S12 1

Y10 Č Off Y11 Č On

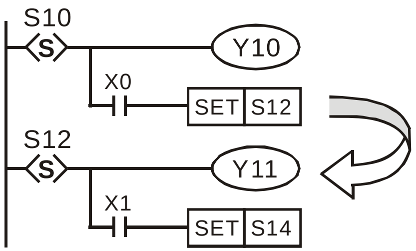


¸

SET Sn OUT Sn

S S0~S9

SET Sn OUT Sn

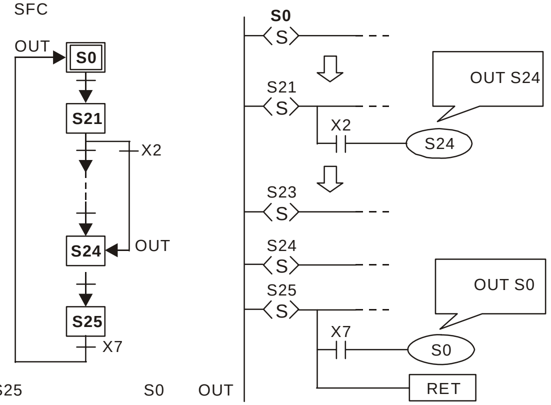
SET Sn	 SET S12 S11 , S12 S11 (Y10)

OUT Sn

¡

¢

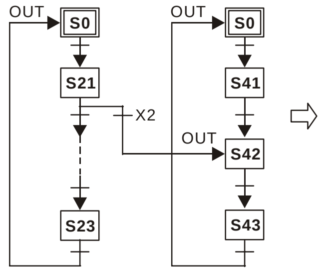
SFC



S25 S0 OUT

£

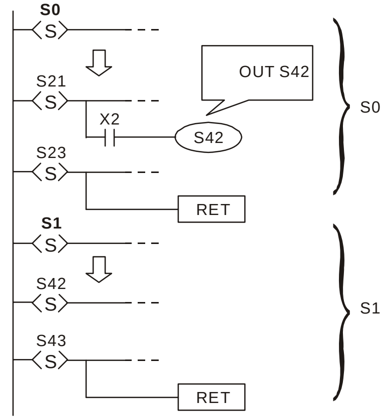
SFC



S0 S1

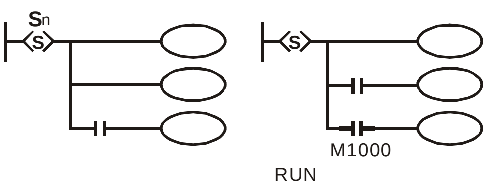
S23 S0 OUT

S43 S1 OUT



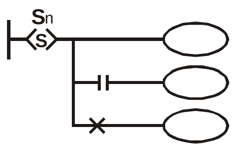
¸

LD LDI



F STL

STL



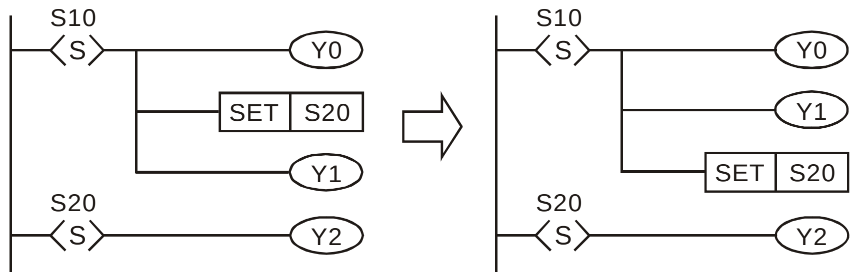
1. MC/MCR
2. STL
3. STL CJ

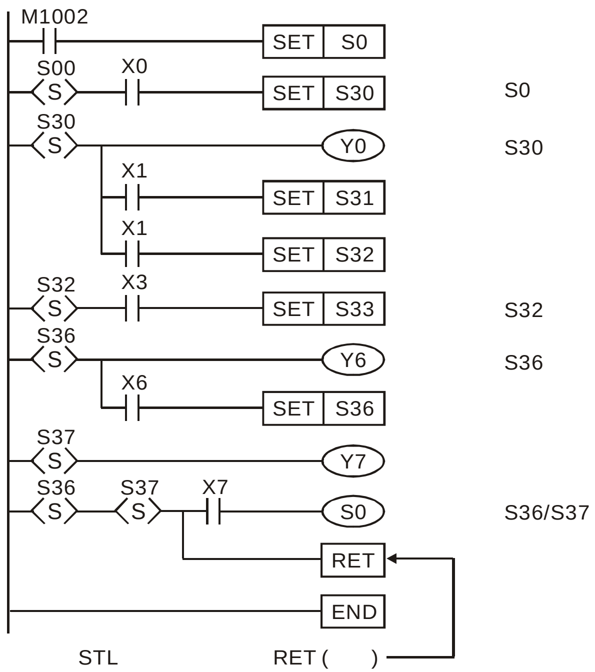
(SET S□) F

SET S20 S10

OUT Y1 SET S20

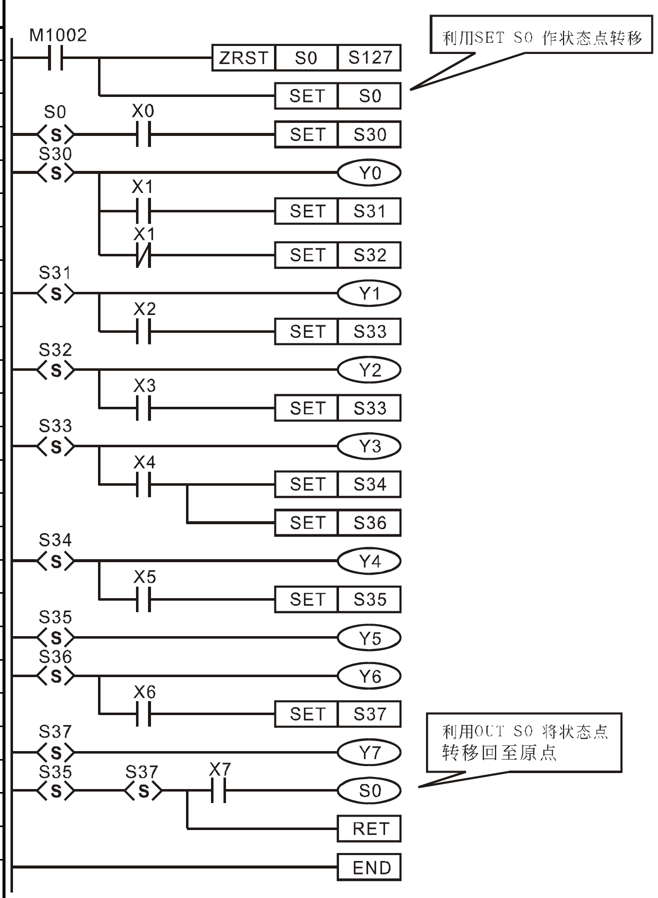
OUT Y1

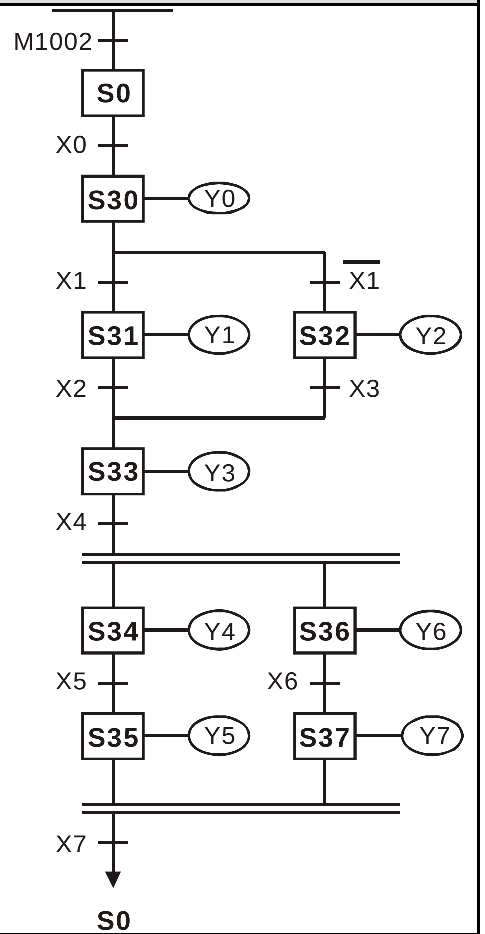




É

						(SFC)
0	LD	M1002	29	STL	S34	
1	ZRST	S0 S127	30	OUT	Y4	
6	SET	S0	31	LD	X5	
7	STL	S0	32	SET	S35	
8	LD	X0	33	STL	S35	
9	SET	S30	34	OUT	Y5	
10	STL	S30	35	STL	S36	
11	OUT	Y0	36	OUT	Y6	
12	LD	X1	37	LD	X6	
13	SET	S31	38	SET	S37	
14	LDI	X1	39	STL	S37	
15	SET	S32	40	OUT	Y7	
16	STL	S31	41	STL	S35	
17	OUT	Y1	42	STL	S37	
18	LD	X2	43	LD	X7	
19	SET	S33	44	OUT	S0	
20	STL	S32	45	RET		
21	OUT	Y2	46	END		
22	LD	X3				
23	SET	S33				
24	STL	S33				
25	OUT	Y3				
26	LD	X4				
27	SET	S34				
28	SET	S36				





API	16 bit	32 bit			STEPS 16bit	STEPS 32bit
150	MODRW	–	MODBUS	S1 S2 S3 S4 n	11	–
224	LD=	DLD=	S1 S2	S1 S2	5	9
225	LD>	DLD>	S1 S2	S1 S2	5	9
226	LD<	DLD<	S1 S2	S1 S2	5	9
228	LD<>	DLD<>	S1 ≠ S2	S1 S2	5	9
229	LD<=	DLD<=	S1 S2	S1 S2	5	9
230	LD>=	DLD>=	S1 S2	S1 S2	5	9
232	AND=	DAND=	S1 S2	S1 S2	5	9
233	AND>	DAND>	S1 S2	S1 S2	5	9
234	AND<	DAND<	S1 S2	S1 S2	5	9
236	AND<>	DAND<>	S1 ≠ S2	S1 S2	5	9
237	AND<=	DAND<=	S1 S2	S1 S2	5	9
238	AND>=	DAND>=	S1 S2	S1 S2	5	9
240	OR=	DOR=	S1 S2	S1 S2	5	9
241	OR>	DOR>	S1 S2	S1 S2	5	9
242	OR<	DOR<	S1 S2	S1 S2	5	9
244	OR<>	DOR<>	S1 ≠ S2	S1 S2	5	9
245	OR<=	DOR<=	S1 S2	S1 S2	5	9
246	OR>=	DOR>=	S1 S2	S1 S2	5	9

API 89~99
CH6

API * V5.4

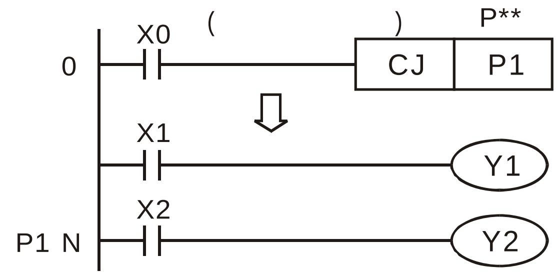
API V5.7

00	CJ P** P 00 ~ P 63

Â X0=On 0 N
P1

Â TMR
X0=Off 0
CJ

Â



X0=On 0 N P1

X0=Off CJ 0

01	CALL P** P 0 ~ P 63

Â CALL 5

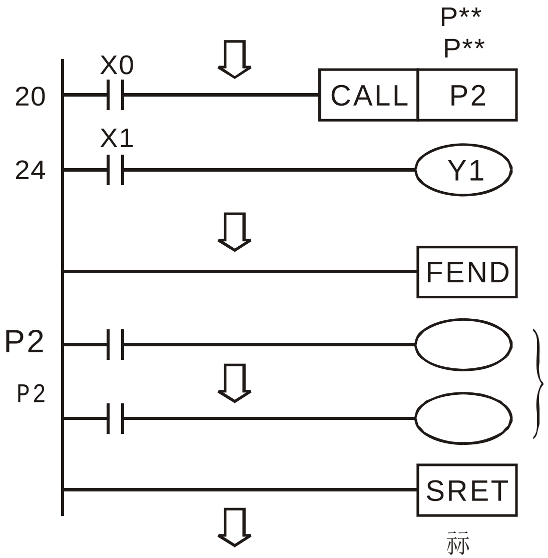
Â P**

02	SRET

Â

Â SRET CALL

Â



X0 On CALL P2
SRET 24

FEND
P0 ~ P63 CALL CJ

03	IRET

Â

04	EI

05	DI

Â PLC EI DI X1 X2
On I101 I201 IRET

Â M1050~M1053

Â I001 I101 I201 I301 I6□□ I150
FEND

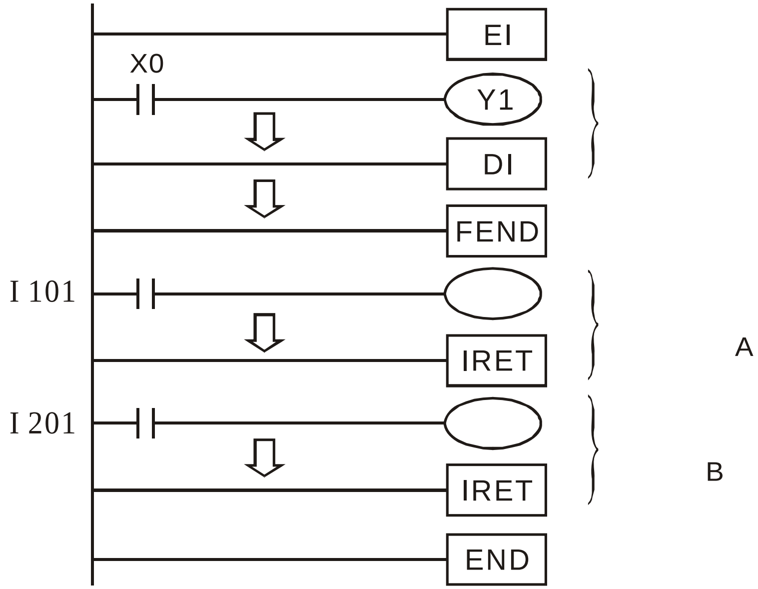
06	FEND

Â PLC END

Â CALL FEND
SRET FEND
IRET

Â FEND
FEND END

Â



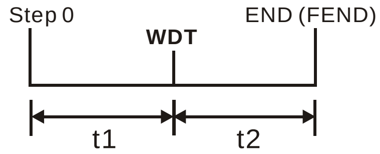
07	WDT

Â WDT PLC

Â PLC 0 END FEND

200ms PLC ERROR
PLC Off On PLC STOP

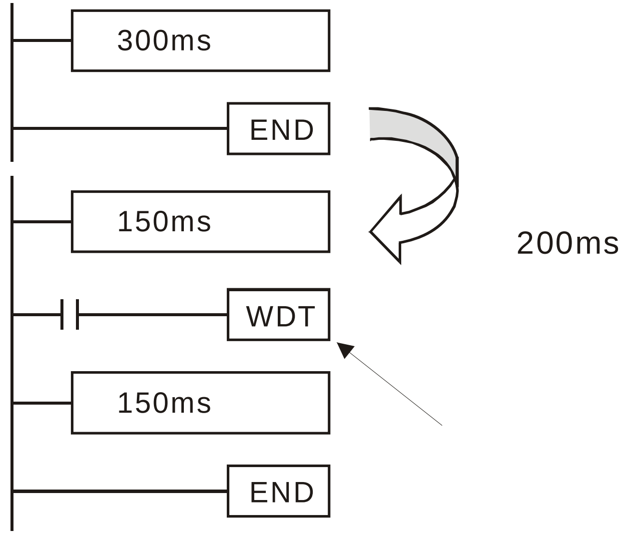
Â 300ms
2 WDT
200ms



Â D1000 200ms

Â PLC ERROR M1008 D1008

Â



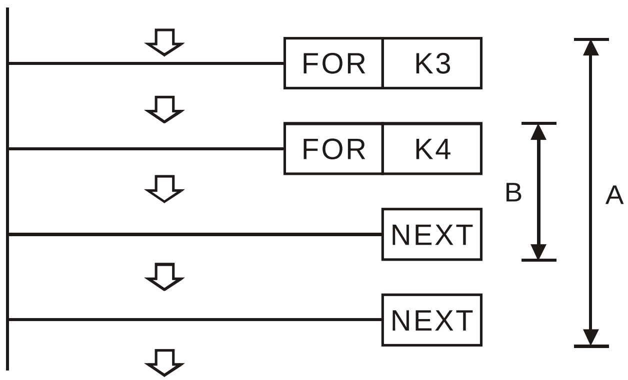
08	FOR	S

	X	Y	M	S	K	H	KnX	KnY	KnM	KnS	T	C	D	E	F
S															

09	NEXT

Â FOR FOR~NEXT N FOR~NEXT FOR~NEXT 4 FOR~NEXT A B

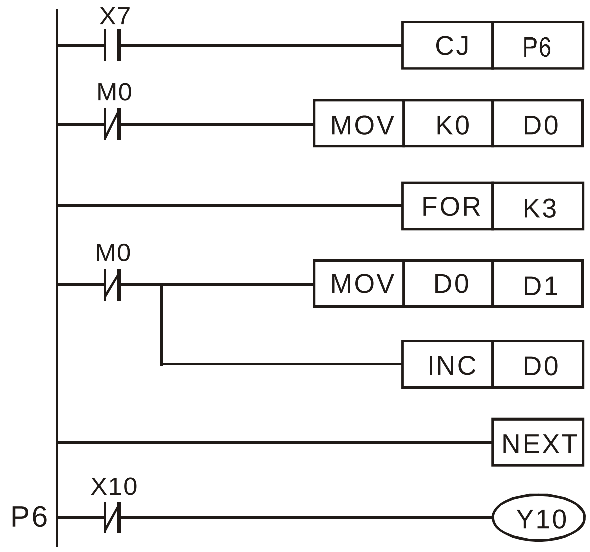
Â A 1 B 4 B 3 4 12



Â FOR~NEXT CJ

Â

Â



X7 = Off PLC FOR-NEXT X7 = On FOR-NEXT

D 10	CMP	S1	S2	D

	X	Y	M	S	K	H	KnX	KnY	KnM	KnS	T	C	D	E	F
S1															
S2															
D															

Â S1 S2 D