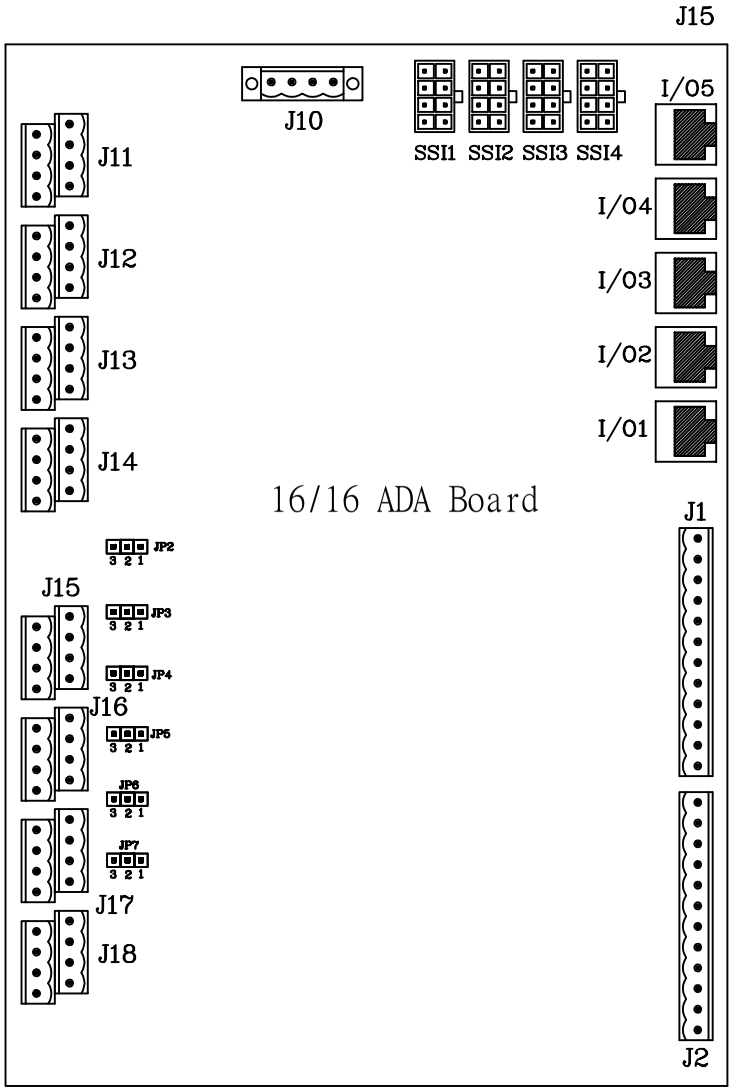
MX1 WIRING DIAGRAM

1. ADA BOARD

1-1 Jump,LED,Connector Posision:

MX1 AD(1~16) DA(1~16) Jumper,LED,
Connector Configuration diagram:



1 *Connectors:*

(1)J10:24V Power Input.
(2)J11:AD1/AD2 LPM mode.
(3)J12:AD3/AD4 LPM mode.
(4)J13:AD5/AD6 LPM mode.
(5)J14:AD7/AD8 sensor(Default) or LPM mode.
(6)J15:AD9/AD10 sensor(Default) or LPM mode.
(7)J16:AD11/AD12 sensor(Default) or LPM mode.
(8)J17/AD13/AD14 sensor mode.
(9)J18:AD15/AD16 sensor mode.

2 *Jumpers JP2~JP7:*

(1)pin1,pin2,pin3 open AD7~AD12 for Voltage sensor(0V~10V)。
pin2及pin3 Short,AD7~AD12 for LPM mode。

3 *RJ-45 I/01~I/05:*

(1)I/01~I/05:Etherent line,link In and out 1~32 point。
*I/O Link must be 1 to 5 sequence *

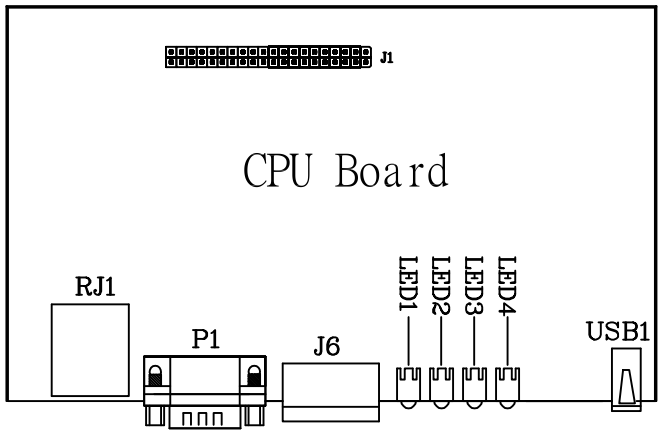
4 *SSI1~SSI4 Connectors:*

(1)SSI1~SSI4: Connector
SSIonly support 24bit,Gray code

5 *D/A Connectors:*

(1)J2:DA1~DA8(-10V~+10V)
(2)J1:DA9~DA16(-10V~+10V)

1-2 CPU board :



① *CPU LED:*

(1)LED1:System run

(2)LED2:PLC run

(3)LED3:Ethernet run

(4)LED4:RS485 temperature communication led

② *CPU Connector:*

(1)RJ1:Etherent link HMI LAN2。

(2)P1:COM1 port,System Program Diagnostics。

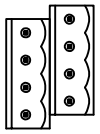
(3)J6:CAN/RS485 link MT-12 RS485 port。

(4)USB1:Update program and save draw file。

1-3 ADA Connector definition:

①J11~J13 Linear Potential meter input(LPM) :

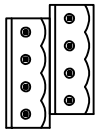
J11



LPM1 LPM2

PIN	def	PIN	def
1	LPM1-V	5	LPM2-V
2	LPM1-I	6	LPM2-I
3	LPM1-G	7	LPM2-G
4	PE	8	PE

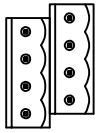
J12



LPM3 LPM4

PIN	def	PIN	def
1	LPM3-V	5	LPM4-V
2	LPM3-I	6	LPM4-I
3	LPM3-G	7	LPM4-G
4	PE	8	PE

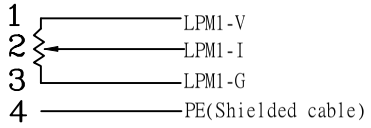
J13



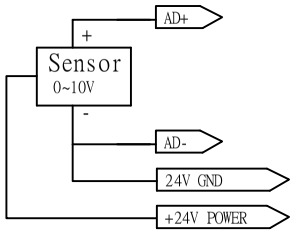
LPM5 LPM6

PIN	def	PIN	def
1	LPM5-V	5	LPM6-V
2	LPM5-I	6	LPM6-I
3	LPM5-G	7	LPM6-G
4	PE	8	PE

LPM wiring



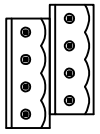
AD Sensor wiring



②J14~J16 Connector:General Analog Input

AD8~AD12 JUMP set for Analog Input

J14

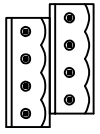


AD7 AD8

PIN	def	PIN	def
1	NC	5	NC
2	7+	6	8+
3	7-	7	8-
4	PE	8	PE

JP2/JP3 PIN open
AD7,AD8 for AD sensor

J15

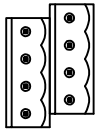


AD9 AD10

PIN	def	PIN	def
1	NC	5	NC
2	9+	6	10+
3	9-	7	10-
4	PE	8	PE

JP4/JP5 PIN open
AD9,AD10 for AD sensor

J16



AD11 AD12

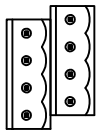
PIN	def	PIN	def
1	NC	5	NC
2	11+	6	12+
3	11-	7	12-
4	PE	8	PE

JP6/JP7 PIN open
AD11,AD12 for AD sensor

③J14~J16 Linear Potential meter input(LPM):

AD8~AD12 JUMP set for LPM

J14

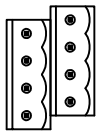


LPM7 LPM8

PIN	def	PIN	def
1	LPM7-V	5	LPM8-V
2	LPM7-I	6	LPM8-I
3	LPM7-G	7	LPM8-G
4	PE	8	PE

JP2/JP3 PIN2,PIN3 short
AD7,AD8 for LPM。

J15

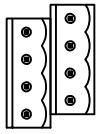


LPM9 LPM10

PIN	def	PIN	def
1	LPM9-V	5	LPM10-V
2	LPM9-I	6	LPM10-I
3	LPM9-G	7	LPM10-G
4	PE	8	PE

JP4/JP5 PIN2,PIN3 short
AD9,AD10 for LPM。

J16



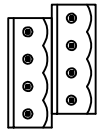
LPM11 LPM12

PIN	def	PIN	def
1	LPM11-V	5	LPM12-V
2	LPM11-I	6	LPM12-I
3	LPM11-G	7	LPM12-G
4	PE	8	PE

JP6/JP7 PIN2,PIN3 short
AD11,AD12 for LPM。

④J17~J18 Connector:General Analog Input

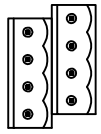
J17



AD13 AD14

PIN	def	PIN	def
1	NC	5	NC
2	13+	6	14+
3	13-	7	14-
4	PE	8	PE

J18

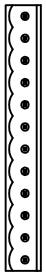


AD15 AD16

PIN	def	PIN	def
1	NC	5	NC
2	15+	6	16+
3	15-	7	16-
4	PE	8	PE

⑤J1,J2 Connector D/A -10~+10V (DA1~16):

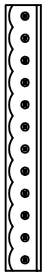
J1



DA9~DA16

PIN 順位	PIN定義
1	DG
2	DA8
3	DA7
4	DG
5	DA6
6	DA5
7	DG
8	DA4
9	DA3
10	DG
11	DA2
12	DA1

J2

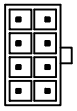


DA1~DA8

PIN 順位	PIN定義
1	DG
2	DA16
3	DA15
4	DG
5	DA14
6	DA13
7	DG
8	DA4
9	DA3
10	DG
11	DA2
12	DA1

⑥ Connector SSI1~SSI4:

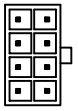
SSI1



SSI1

PIN	def	PIN	def
1	PE	5	PE
2	+24V	6	24VGND
3	DAT1+	7	DAT1−
4	CLK1+	8	CLK1−

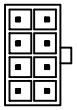
SSI2



SSI2

PIN	def	PIN	def
1	PE	5	PE
2	+24V	6	24VGND
3	DAT2+	7	DAT2−
4	CLK2+	8	CLK2−

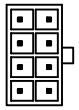
SSI3



SSI3

PIN	def	PIN	def
1	PE	5	PE
2	+24V	6	24VGND
3	DAT3+	7	DAT3−
4	CLK3+	8	CLK3−

SSI4

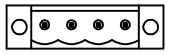


SSI4

PIN	def	PIN	def
1	PE	5	PE
2	+24V	6	24VGND
3	DAT4+	7	DAT4−
4	CLK4+	8	CLK4−

⑦J10Connector 24V Power input:

J10

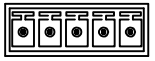


4 3 2 1

24V power

PIN	def
1	+24V
2	+24V
3	24VGND
4	24VGND

⑧CPU J6 Connector CAN/RS485:



J6

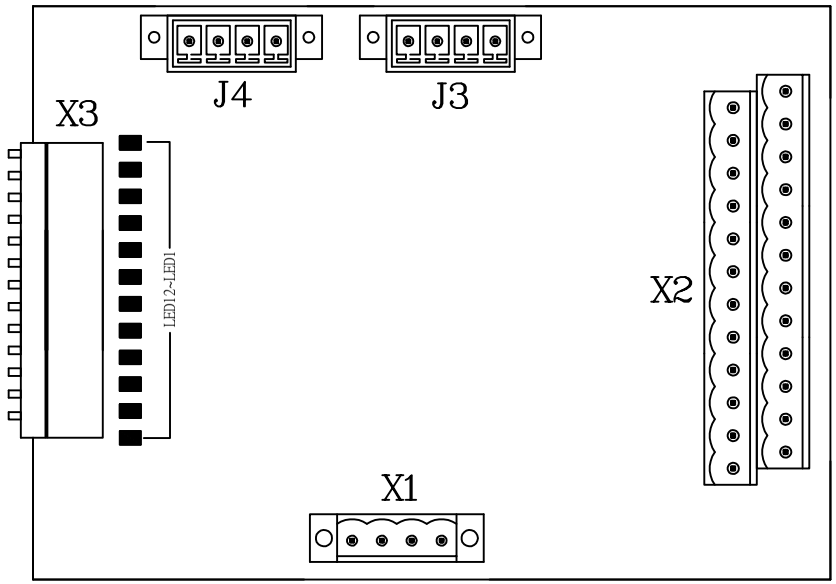
5 4 3 2 1

CAN/RS485

PIN	def
1	G
2	D−
3	D+
4	CAN L
5	CAN H

2. Mt-12 Temp. control

2-1 Thermal Couple Input(TC1~12) & Heater Output(HT1-12):



1 *TEMP. LED:*

(1)LED1~LED12: 1~12 Heater output led.

2 *TEMP. Connector:*

(1)X1:24V power input.

(2)X2:1~12 thermal couple input.

(3)X3:heater output connector.

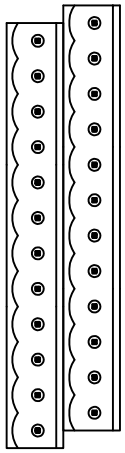
(4)J3:RS485-1 link CPU J6 CAN/RS485。

(5)J4:RS485-2 link the second temp. board。

2-2 Temperature connector definition:

1 X2 Connector :
Temp. sensor TC1~TC12。

X2

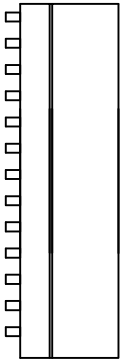


TC1~TC12

PIN 腳位	PIN 定義	PIN 腳位	PIN 定義
1	TC12−	1	TC6−
2	TC12+	2	TC6+
3	TC11−	3	TC5−
4	TC11+	4	TC5+
5	TC10−	5	TC4−
6	TC10+	6	TC4+
7	TC9−	7	TC3−
8	TC9+	8	TC3+
9	TC8−	9	TC2−
10	TC8+	10	TC2+
11	TC7−	11	TC1−
12	TC7+	12	TC1+

2 X3 Connector :
Heater output HT1~HT12。

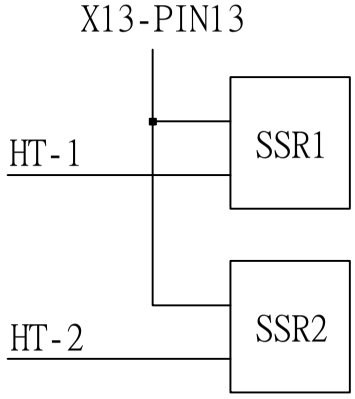
X3



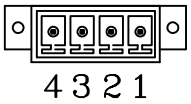
HT1~HT12

PIN 腳位	PIN 定義
1	HT1
2	HT2
3	HT3
4	HT4
5	HT5
6	HT6
7	HT7
8	HT8
9	HT9
10	HT10
11	HT11
12	HT12
13	24VGND

3 Heater output wiring:

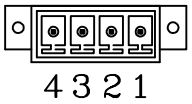


4 J3,J4 Connector RS485-1/RS485-2:
J3:RS485-1 link CPU CAN/RS-485.
J4:RS485-2 link the second temp. board。



RS485−1

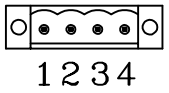
PIN	def
1	D+
2	D−
3	GND
4	PE



RS485−2

PIN	def
1	D+
2	D−
3	GND
4	PE

5 X1Connector 24V power input:

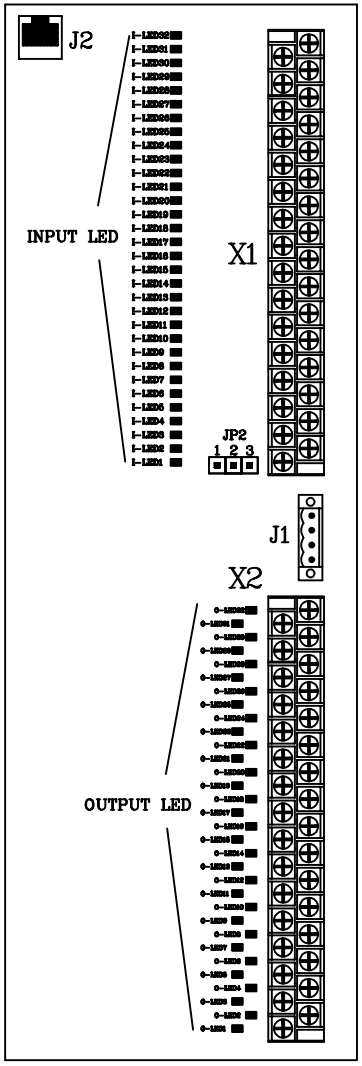


24V power

PIN	def
1	+24V
2	+24V
3	24VGND
4	24VGND

3. MX1 I/O board

3-1 LED,Connector descriptions:



1 *INPUT LED:*

(1)LED1~LED32:I/O board INPUT LED(1~32 point).

2 *OUTPUT LED:*

(1)LED1~LED32:I/O board OUTPUT LED,(1~32 point).

3 *Jumpers:INPUT set for NPN mode(DEFAUL).*

(1)JP2:pin1,pin2 short for PNP mode。
pin2,pin3 short for NPN mode。

4 *I/O Connector:*

*INPUT can choice NPN or PNP.

(1)X2:INPUT 1~32 point。

(2)X2:OUTPUT 1~32 point。

*OUTPUT only support NPN mode.

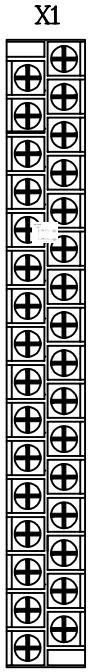
(3)J1:24V power input

(4)J2:Etherent link ADA I/O 1 ext.。

If to link second I/O board,
Seccon I/O board,Etherent link ADA I/O 2 ext.。

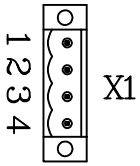
3-2 I/O Connector:

1 I/O Connector INPUT :



Upper	Lower
I-31	I-32
I-29	I-30
I-27	I-28
I-25	I-26
I-23	I-24
I-21	I-22
I-19	I-20
I-17	I-18
I-15	I-16
I-13	I-14
I-11	I-12
I-09	I-10
I-07	I-08
I-05	I-06
I-03	I-04
I-01	I-02

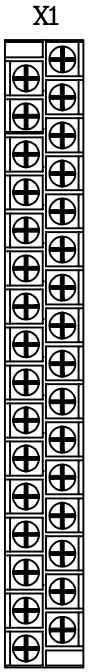
2 X1 Connector 24V power onput:



24V power

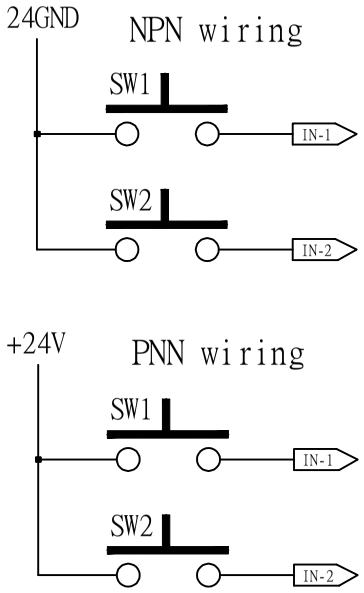
PIN	def
1	24VGND
2	24VGND
3	+24V
4	+24V

3 I/O Connector OUTPUT :

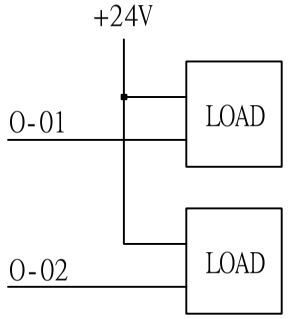


Upper	Lower
O-31	O-32
O-29	O-30
O-27	O-28
O-25	O-26
O-23	O-24
O-21	O-22
O-19	O-20
O-17	O-18
O-15	O-16
O-13	O-14
O-11	O-12
O-09	O-10
O-07	O-08
O-05	O-06
O-03	O-04
O-01	O-02

4 I/O INPUT wiring:



5 I/O OUTPUT NPN wiring:

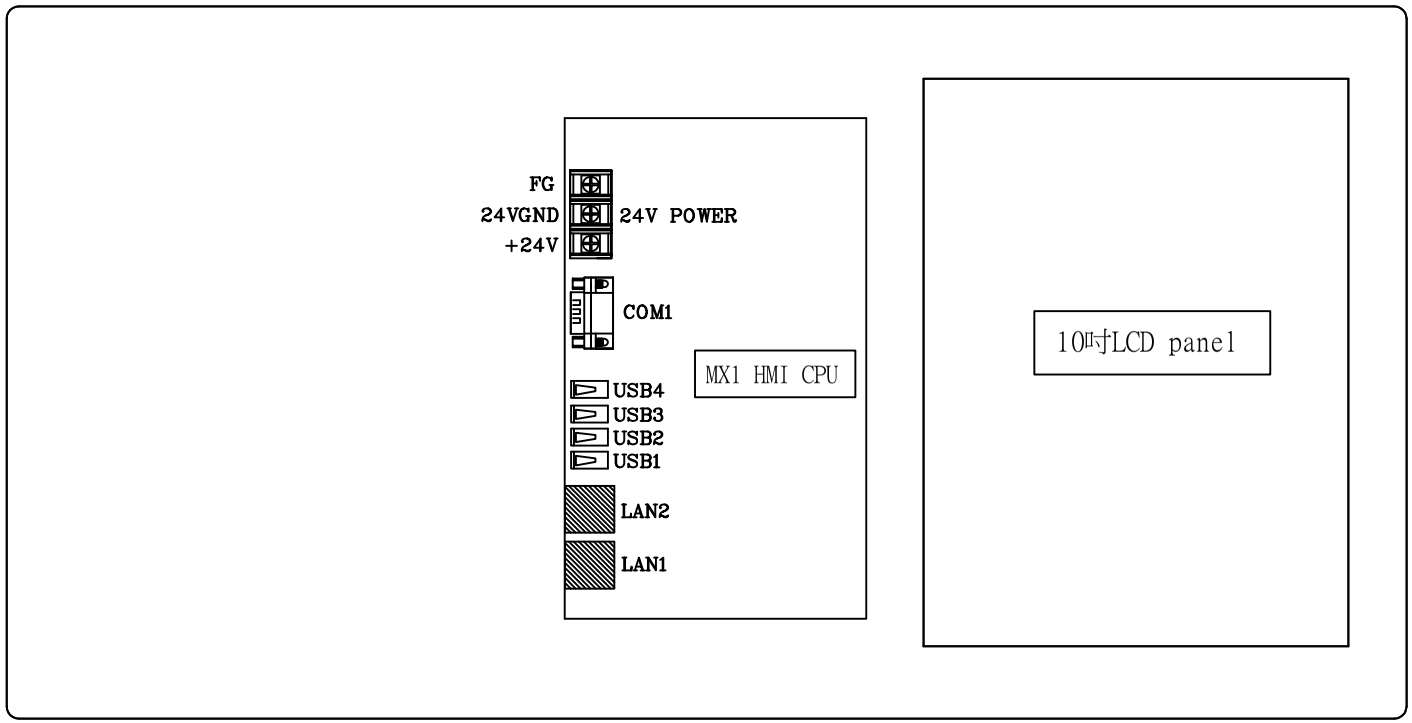


4. MX1 10" Operation panel

4-1 MX1 10" LCD panel

① *Connectors:*

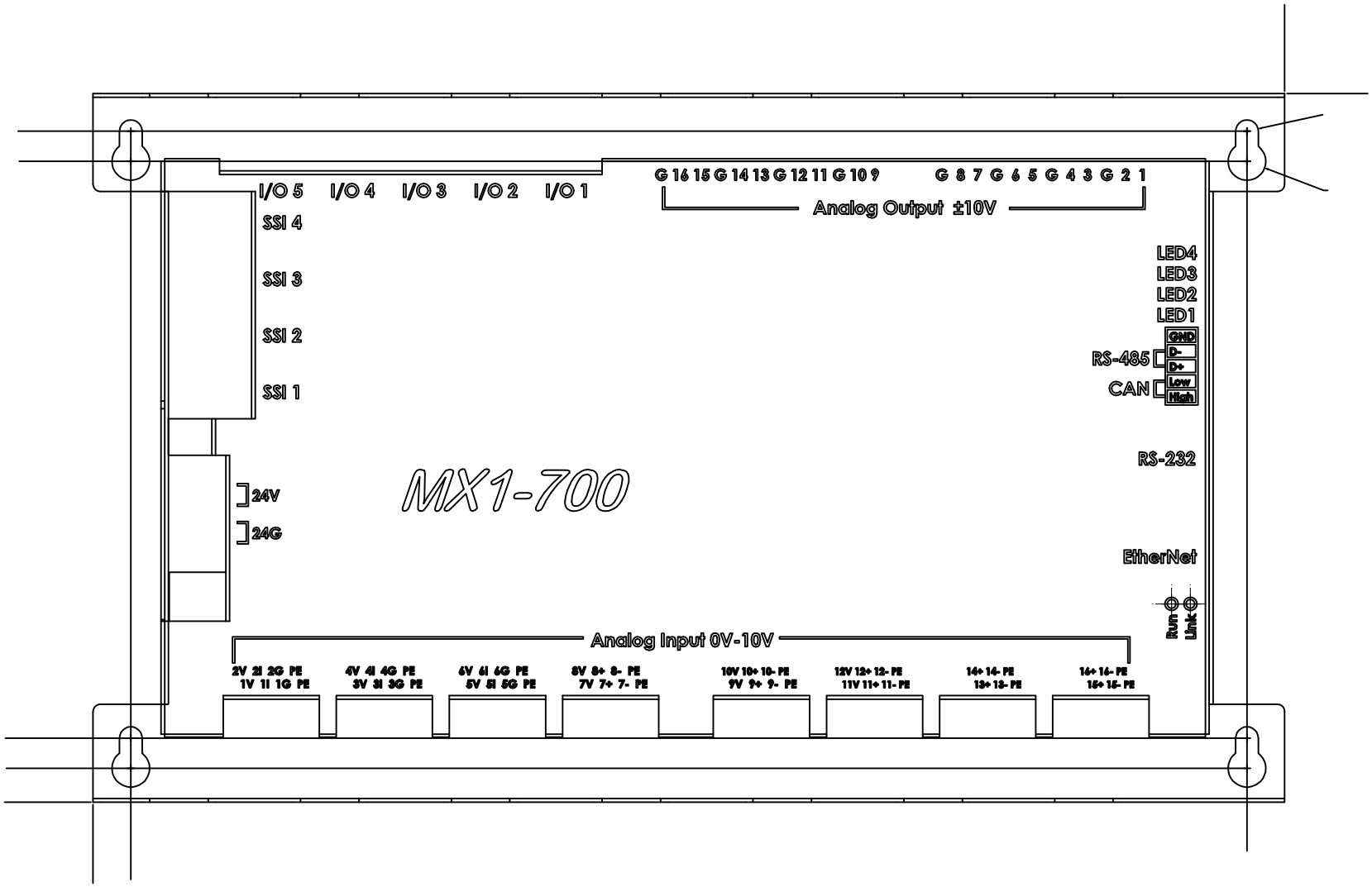
(1)24V POWR:24V power input.
(2)COM1~2: Reserved.
(3)USB1~4: update program or save draw、spc data ...
(4)LAN1:Ethernet link CPU board RJ1.
(5)LAN2:Remote connection.



5. MX1 Controller of the board fixed size

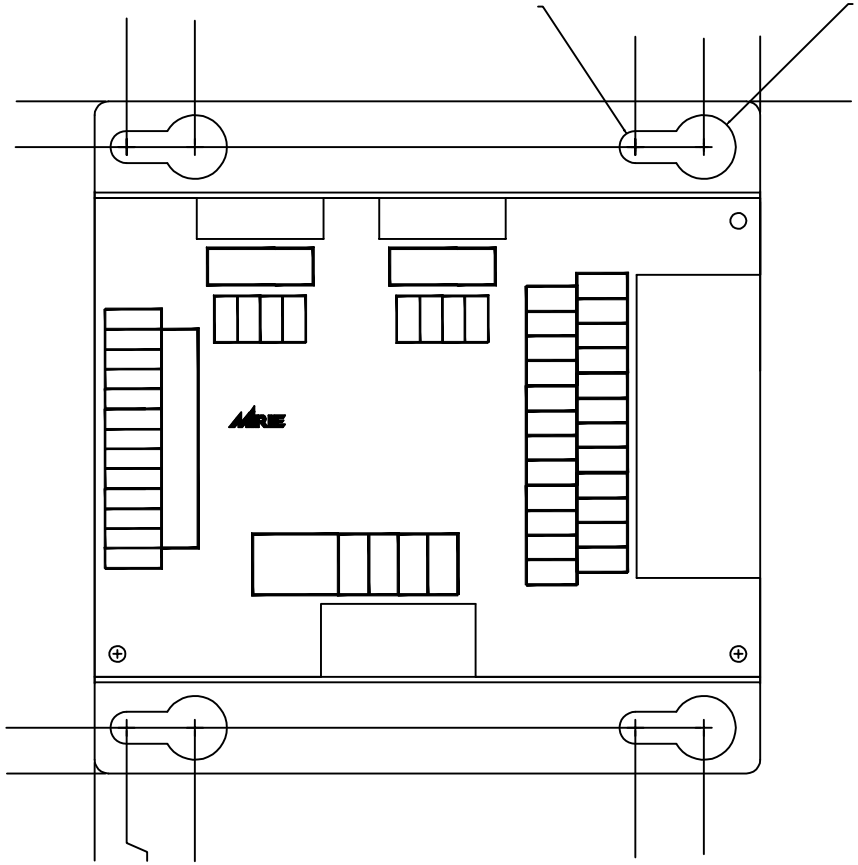
5-1 MX1 ADA Sheet metal fixed size

unit:mm



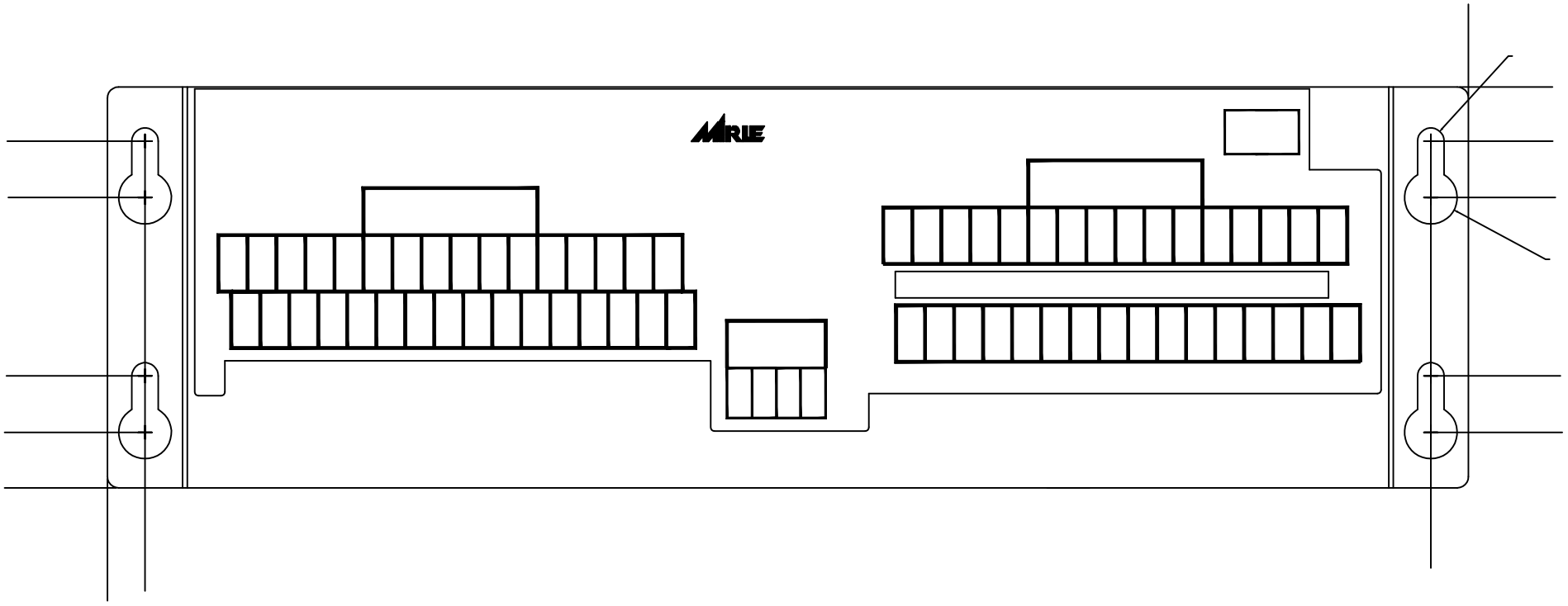
5-2 MX1 Temperature plate sheet metal fixed size

unit:mm



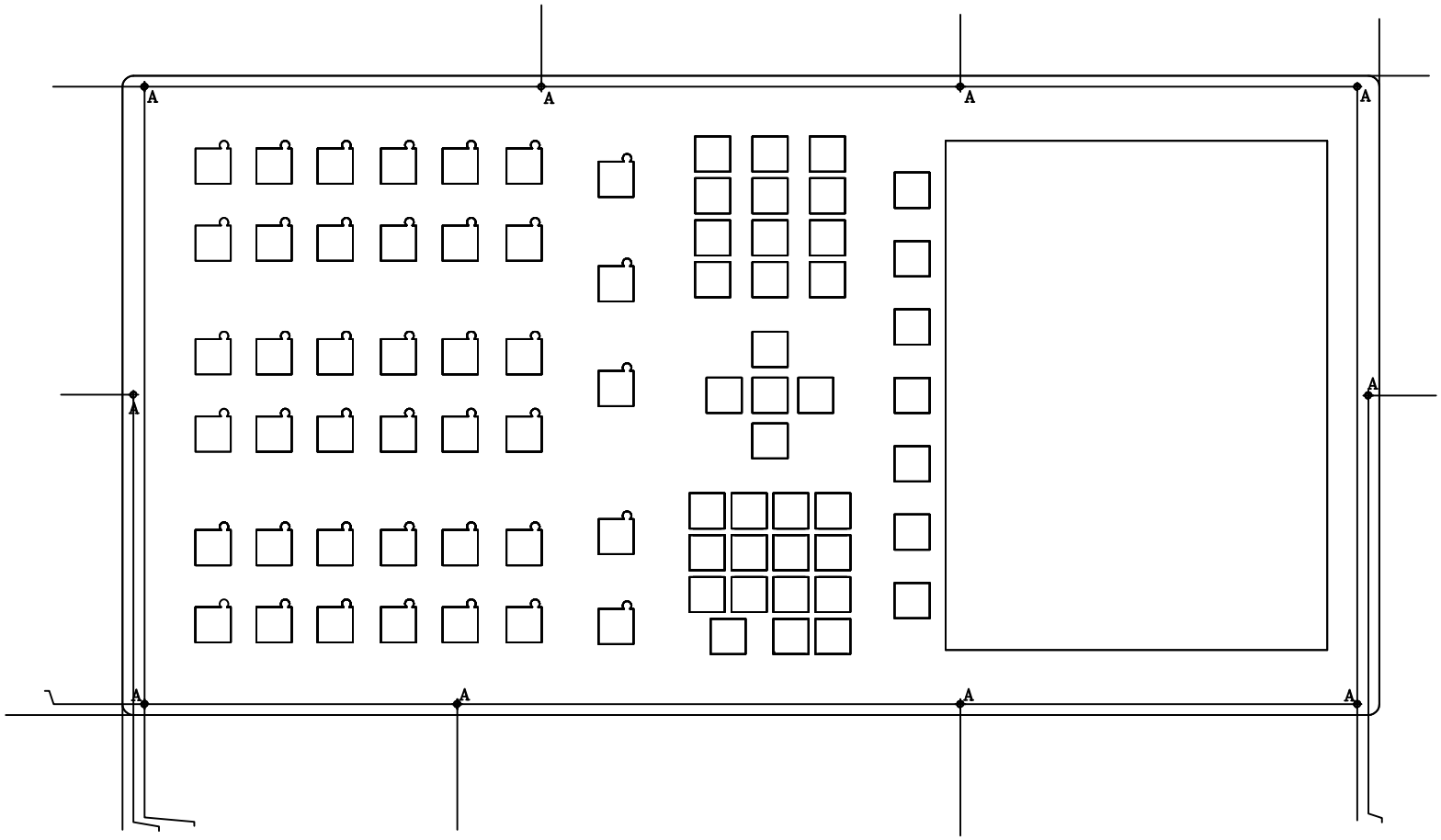
5-3 MX1 I/O 32 Control panel sheet metal fixed size

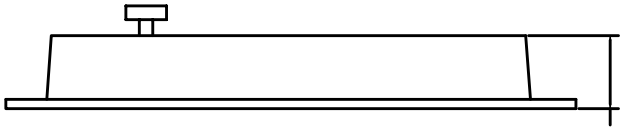
unit:mm

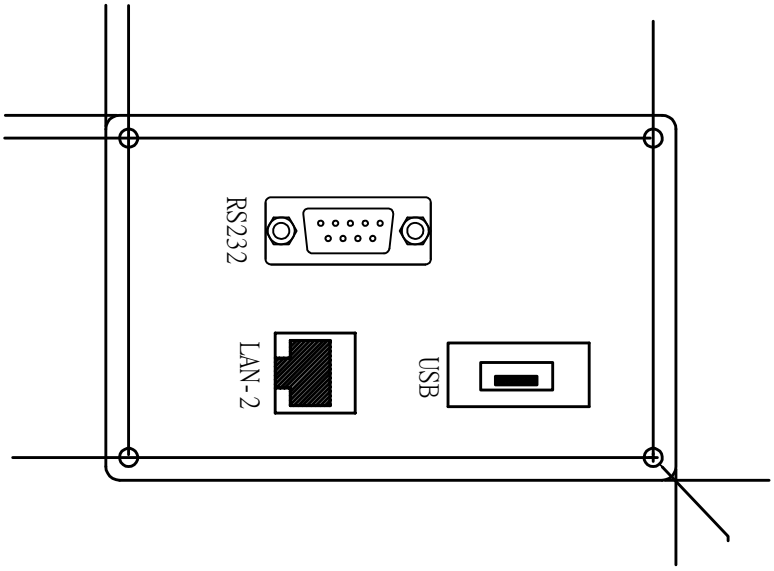


5-4 MX1 10 inch panel fixed size

unit:mm





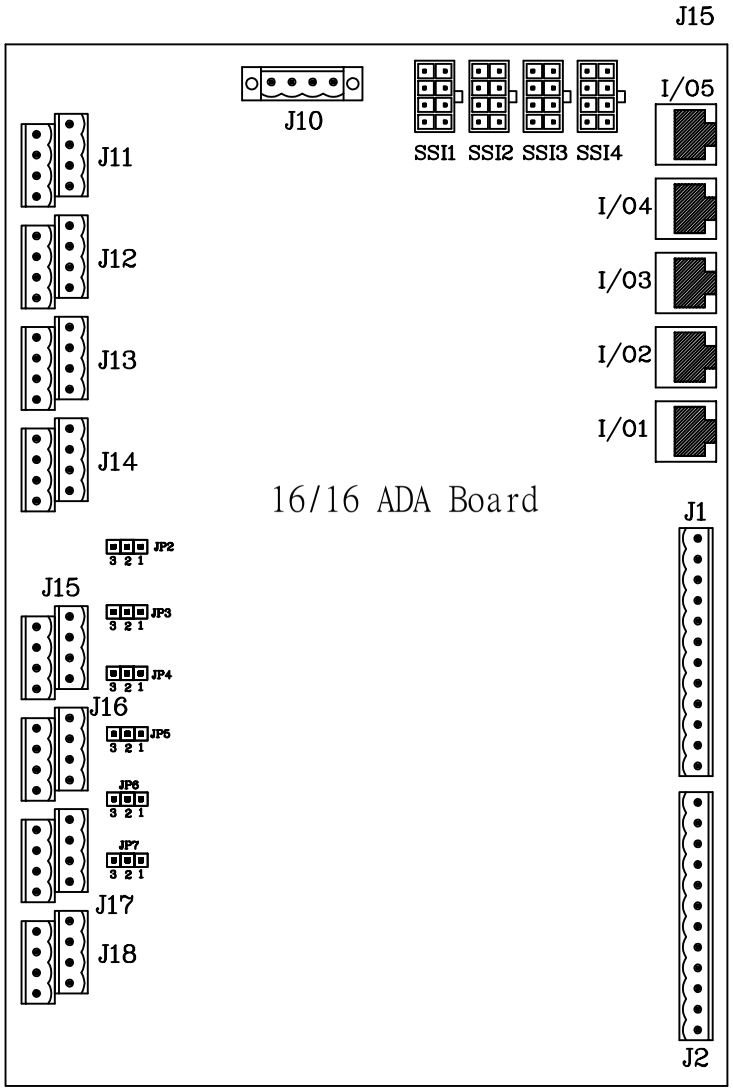

RS232
LAN-2
USB

MX1 WIRING DIAGRAM

1. ADA BOARD

1-1 Jump,LED,Connector Posision:

MX1 AD(1~16) DA(1~16) Jumper,LED,
Connector Configuration diagram:



1 *Connectors:*

(1)J10:24V Power Input.
(2)J11:AD1/AD2 LPM mode.
(3)J12:AD3/AD4 LPM mode.
(4)J13:AD5/AD6 LPM mode.
(5)J14:AD7/AD8 sensor(Default) or LPM mode.
(6)J15:AD9/AD10 sensor(Default) or LPM mode.
(7)J16:AD11/AD12 sensor(Default) or LPM mode.
(8)J17/AD13/AD14 sensor mode.
(9)J18:AD15/AD16 sensor mode.

2 *Jumpers JP2~JP7:*

(1)pin1,pin2,pin3 open AD7~AD12 for Voltage sensor(0V~10V)。
pin2及pin3 Short,AD7~AD12 for LPM mode。

3 *RJ-45 I/01~I/05:*

(1)I/01~I/05:Etherent line,link In and out 1~32 point。
*I/O Link must be 1 to 5 sequence *

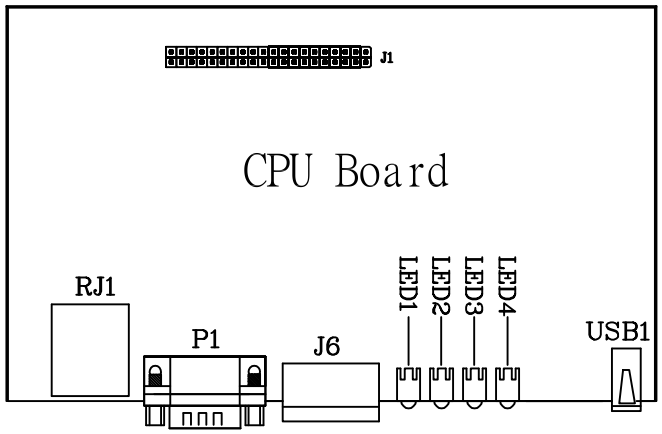
4 *SSI1~SSI4 Connectors:*

(1)SSI1~SSI4: Connector
SSIonly support 24bit,Gray code

5 *D/A Connectors:*

(1)J2:DA1~DA8(-10V~+10V)
(2)J1:DA9~DA16(-10V~+10V)

1-2 CPU board :



① *CPU LED:*

(1)LED1:System run

(2)LED2:PLC run

(3)LED3:Ethernet run

(4)LED4:RS485 temperature communication led

② *CPU Connector:*

(1)RJ1:Etherent link HMI LAN2。

(2)P1:COM1 port,System Program Diagnostics。

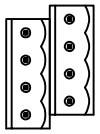
(3)J6:CAN/RS485 link MT-12 RS485 port。

(4)USB1:Update program and save draw file。

1-3 ADA Connector definition:

①J11~J13 Linear Potential meter input(LPM) :

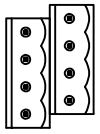
J11



LPM1 LPM2

PIN	def	PIN	def
1	LPM1-V	5	LPM2-V
2	LPM1-I	6	LPM2-I
3	LPM1-G	7	LPM2-G
4	PE	8	PE

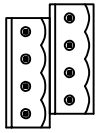
J12



LPM3 LPM4

PIN	def	PIN	def
1	LPM3-V	5	LPM4-V
2	LPM3-I	6	LPM4-I
3	LPM3-G	7	LPM4-G
4	PE	8	PE

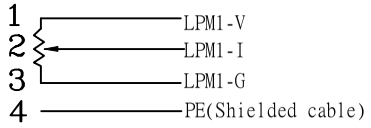
J13



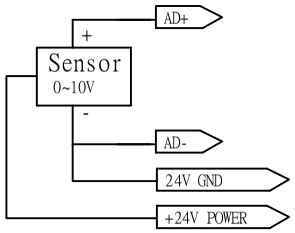
LPM5 LPM6

PIN	def	PIN	def
1	LPM5-V	5	LPM6-V
2	LPM5-I	6	LPM6-I
3	LPM5-G	7	LPM6-G
4	PE	8	PE

LPM wiring



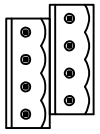
AD Sensor wiring



②J14~J16 Connector:General Analog Input

AD8~AD12 JUMP set for Analog Input

J14

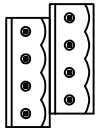


AD7 AD8

PIN	def	PIN	def
1	NC	5	NC
2	7+	6	8+
3	7-	7	8-
4	PE	8	PE

JP2/JP3 PIN open
AD7,AD8 for AD sensor

J15

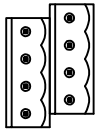


AD9 AD10

PIN	def	PIN	def
1	NC	5	NC
2	9+	6	10+
3	9-	7	10-
4	PE	8	PE

JP4/JP5 PIN open
AD9,AD10 for AD sensor

J16



AD11 AD12

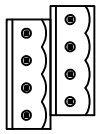
PIN	def	PIN	def
1	NC	5	NC
2	11+	6	12+
3	11-	7	12-
4	PE	8	PE

JP6/JP7 PIN open
AD11,AD12 for AD sensor

③J14~J16 Linear Potential meter input(LPM):

AD8~AD12 JUMP set for LPM

J14

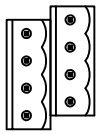


LPM7 LPM8

PIN	def	PIN	def
1	LPM7-V	5	LPM8-V
2	LPM7-I	6	LPM8-I
3	LPM7-G	7	LPM8-G
4	PE	8	PE

JP2/JP3 PIN2,PIN3 short
AD7,AD8 for LPM。

J15

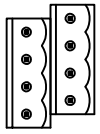


LPM9 LPM10

PIN	def	PIN	def
1	LPM9-V	5	LPM10-V
2	LPM9-I	6	LPM10-I
3	LPM9-G	7	LPM10-G
4	PE	8	PE

JP4/JP5 PIN2,PIN3 short
AD9,AD10 for LPM。

J16



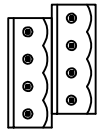
LPM11 LPM12

PIN	def	PIN	def
1	LPM11-V	5	LPM12-V
2	LPM11-I	6	LPM12-I
3	LPM11-G	7	LPM12-G
4	PE	8	PE

JP6/JP7 PIN2,PIN3 short
AD11,AD12 for LPM。

④J17~J18 Connector:General Analog Input

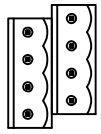
J17



AD13 AD14

PIN	def	PIN	def
1	NC	5	NC
2	13+	6	14+
3	13-	7	14-
4	PE	8	PE

J18

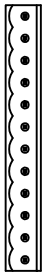


AD15 AD16

PIN	def	PIN	def
1	NC	5	NC
2	15+	6	16+
3	15-	7	16-
4	PE	8	PE

⑤J1,J2 Connector D/A -10~+10V (DA1~16):

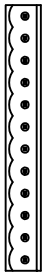
J1



DA9~DA16

PIN 順位	PIN定義
1	DG
2	DA8
3	DA7
4	DG
5	DA6
6	DA5
7	DG
8	DA4
9	DA3
10	DG
11	DA2
12	DA1

J2

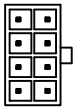


DA1~DA8

PIN 順位	PIN定義
1	DG
2	DA16
3	DA15
4	DG
5	DA14
6	DA13
7	DG
8	DA4
9	DA3
10	DG
11	DA2
12	DA1

⑥ Connector SSI1~SSI4:

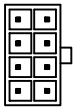
SSI1



SSI1

PIN	def	PIN	def
1	PE	5	PE
2	+24V	6	24VGND
3	DAT1+	7	DAT1−
4	CLK1+	8	CLK1−

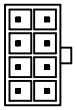
SSI2



SSI2

PIN	def	PIN	def
1	PE	5	PE
2	+24V	6	24VGND
3	DAT2+	7	DAT2−
4	CLK2+	8	CLK2−

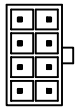
SSI3



SSI3

PIN	def	PIN	def
1	PE	5	PE
2	+24V	6	24VGND
3	DAT3+	7	DAT3−
4	CLK3+	8	CLK3−

SSI4

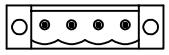


SSI4

PIN	def	PIN	def
1	PE	5	PE
2	+24V	6	24VGND
3	DAT4+	7	DAT4−
4	CLK4+	8	CLK4−

⑦J10Connector 24V Power input:

J10

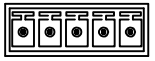


4 3 2 1

24V power

PIN	def
1	+24V
2	+24V
3	24VGND
4	24VGND

⑧CPU J6 Connector CAN/RS485:



J6

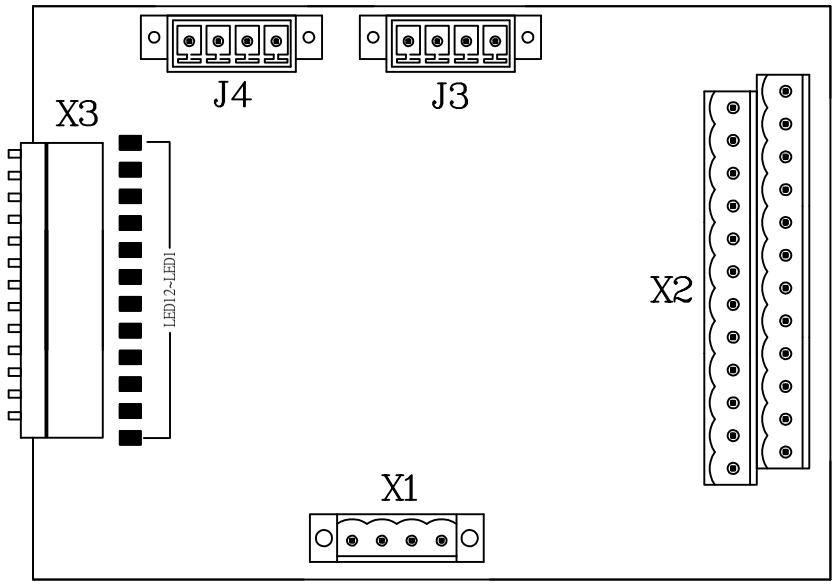
5 4 3 2 1

CAN/RS485

PIN	def
1	G
2	D−
3	D+
4	CAN L
5	CAN H

2. Mt-12 Temp. control

2-1 Thermal Couple Input(TC1~12) & Heater Output(HT1-12):



1 *TEMP. LED:*

(1)LED1~LED12: 1~12 Heater output led.

2 *TEMP. Connector:*

(1)X1:24V power input.

(2)X2:1~12 thermal couple input.

(3)X3:heater output connector.

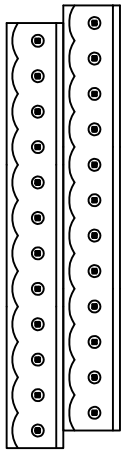
(4)J3:RS485-1 link CPU J6 CAN/RS485。

(5)J4:RS485-2 link the second temp. board。

2-2 Temperature connector definition:

1 X2 Connector :
Temp. sensor TC1~TC12。

X2

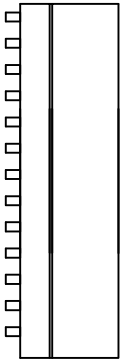


TC1~TC12

PIN 腳位	PIN 定義	PIN 腳位	PIN 定義
1	TC12−	1	TC6−
2	TC12+	2	TC6+
3	TC11−	3	TC5−
4	TC11+	4	TC5+
5	TC10−	5	TC4−
6	TC10+	6	TC4+
7	TC9−	7	TC3−
8	TC9+	8	TC3+
9	TC8−	9	TC2−
10	TC8+	10	TC2+
11	TC7−	11	TC1−
12	TC7+	12	TC1+

2 X3 Connector :
Heater output HT1~HT12。

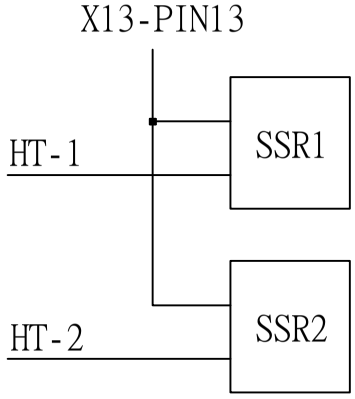
X3



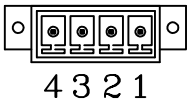
HT1~HT12

PIN 腳位	PIN 定義
1	HT1
2	HT2
3	HT3
4	HT4
5	HT5
6	HT6
7	HT7
8	HT8
9	HT9
10	HT10
11	HT11
12	HT12
13	24VGND

3 Heater output wiring:

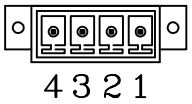


4 J3,J4 Connector RS485-1/RS485-2:
J3:RS485-1 link CPU CAN/RS-485.
J4:RS485-2 link the second temp. board。



RS485−1

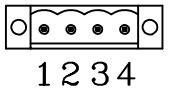
PIN	def
1	D+
2	D−
3	GND
4	PE



RS485−2

PIN	def
1	D+
2	D−
3	GND
4	PE

5 X1Connector 24V power input:

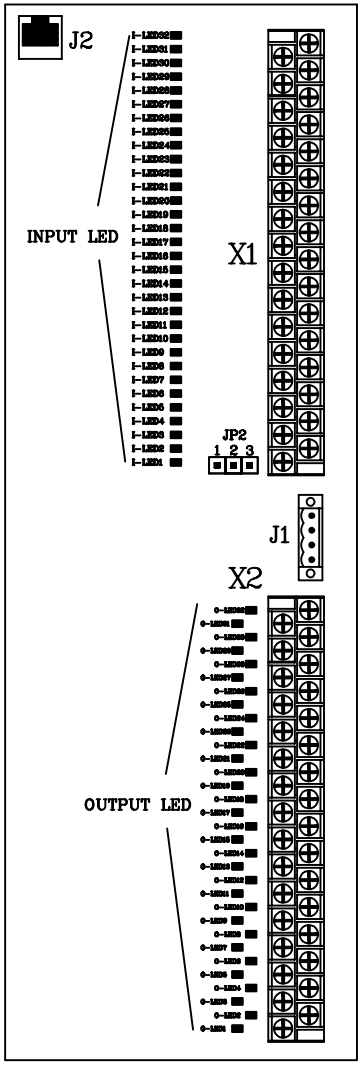


24V power

PIN	def
1	+24V
2	+24V
3	24VGND
4	24VGND

3. MX1 I/O board

3-1 LED,Connector descriptions:



1 *INPUT LED:*

(1)LED1~LED32:I/O board INPUT LED(1~32 point).

2 *OUTPUT LED:*

(1)LED1~LED32:I/O board OUTPUT LED,(1~32 point).

3 *Jumpers:INPUT set for NPN mode(DEFAUL).*

(1)JP2:pin1,pin2 short for PNP mode。
pin2,pin3 short for NPN mode。

4 *I/O Connector:*

*INPUT can choice NPN or PNP.

(1)X2:INPUT 1~32 point。

(2)X2:OUTPUT 1~32 point。

*OUTPUT only support NPN mode.

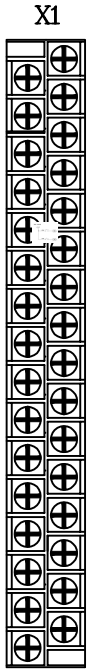
(3)J1:24V power input

(4)J2:Etherent link ADA I/O 1 ext.。

If to link second I/O board,
Seccon I/O board,Etherent link ADA I/O 2 ext.。

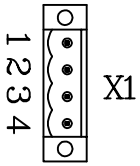
3-2 I/O Connector:

1 I/O Connector INPUT :



Upper	Lower
I-31	I-32
I-29	I-30
I-27	I-28
I-25	I-26
I-23	I-24
I-21	I-22
I-19	I-20
I-17	I-18
I-15	I-16
I-13	I-14
I-11	I-12
I-09	I-10
I-07	I-08
I-05	I-06
I-03	I-04
I-01	I-02

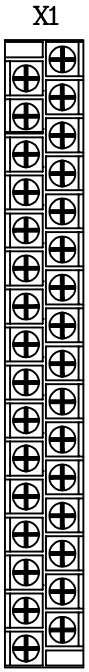
2 X1 Connector 24V power onput:



24V power

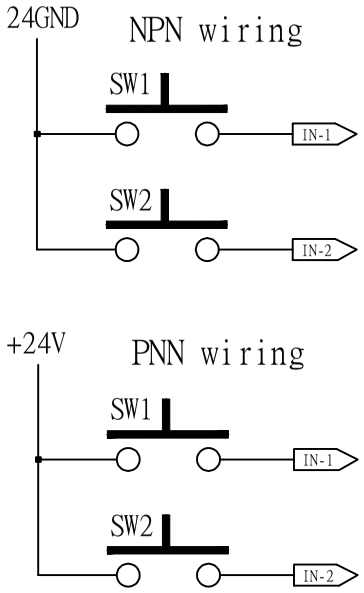
PIN	def
1	24VGND
2	24VGND
3	+24V
4	+24V

3 I/O Connector OUTPUT :

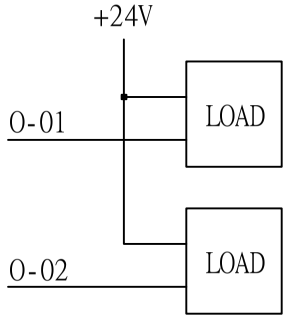


Upper	Lower
O-31	O-32
O-29	O-30
O-27	O-28
O-25	O-26
O-23	O-24
O-21	O-22
O-19	O-20
O-17	O-18
O-15	O-16
O-13	O-14
O-11	O-12
O-09	O-10
O-07	O-08
O-05	O-06
O-03	O-04
O-01	O-02

4 I/O INPUT wiring:



5 I/O OUTPUT NPN wiring:

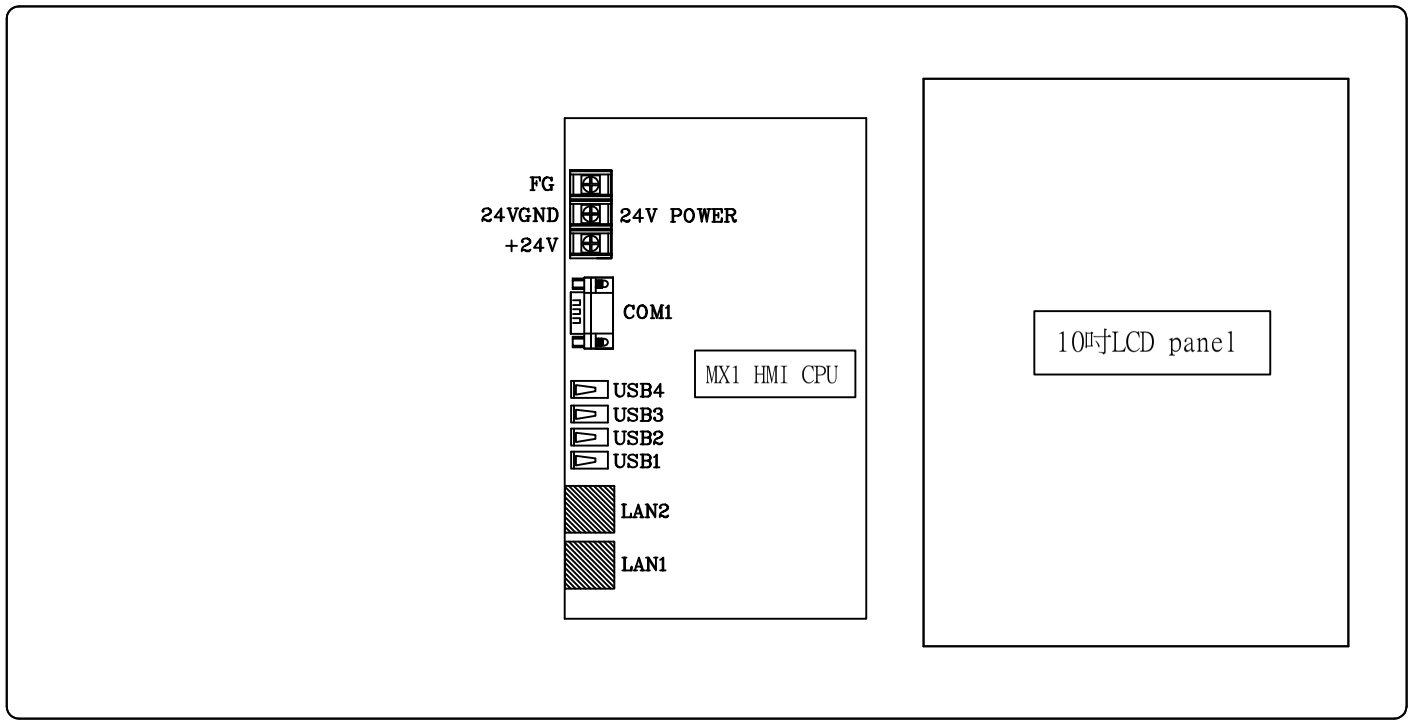


4. MX1 10" Operation panel

4-1 MX1 10" LCD panel

① *Connectors:*

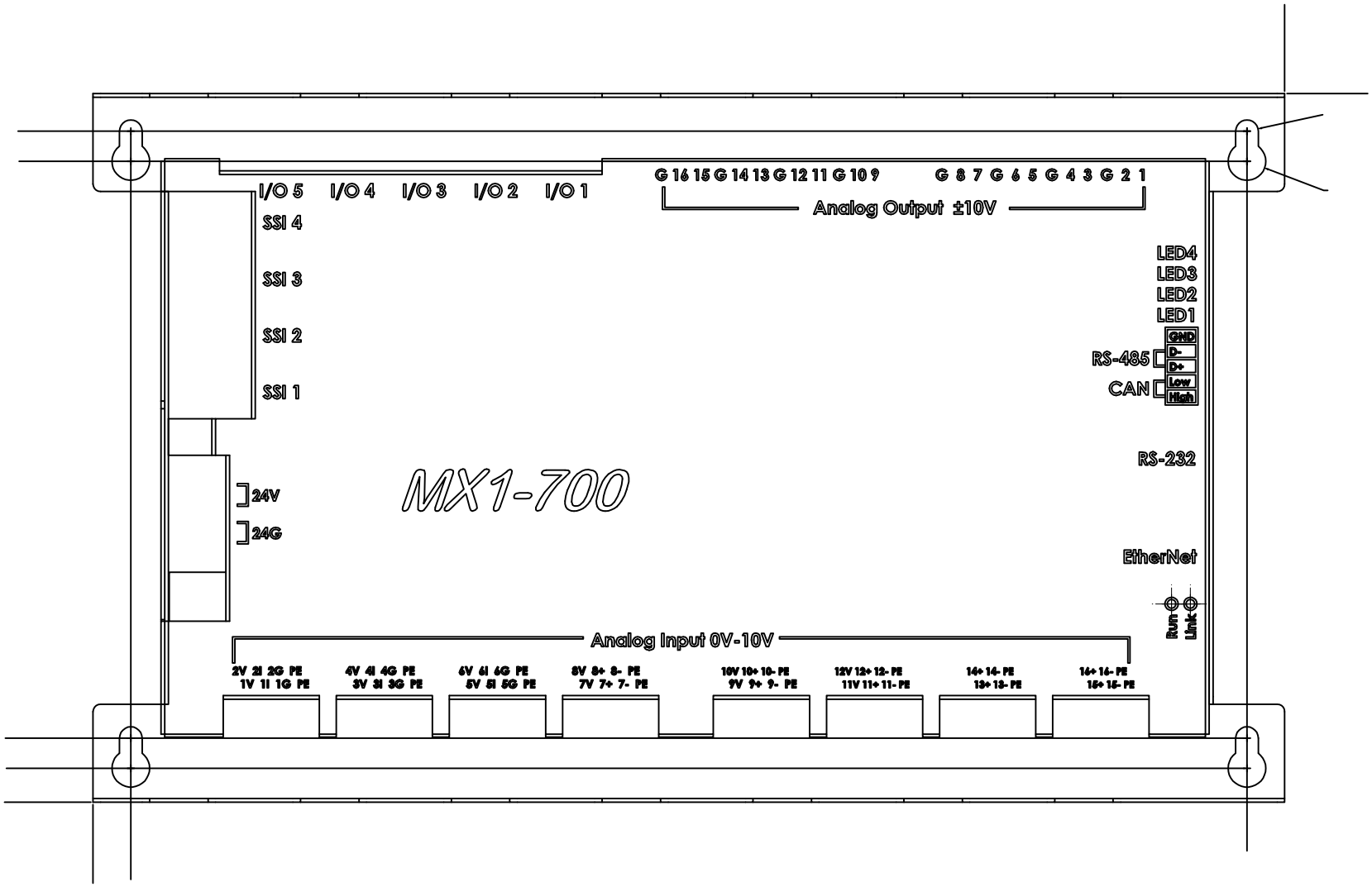
(1)24V POWR:24V power input.
(2)COM1~2: Reserved.
(3)USB1~4: update program or save draw、spc data ...
(4)LAN1:Ethernet link CPU board RJ1.
(5)LAN2:Remote connection.



5. MX1 Controller of the board fixed size

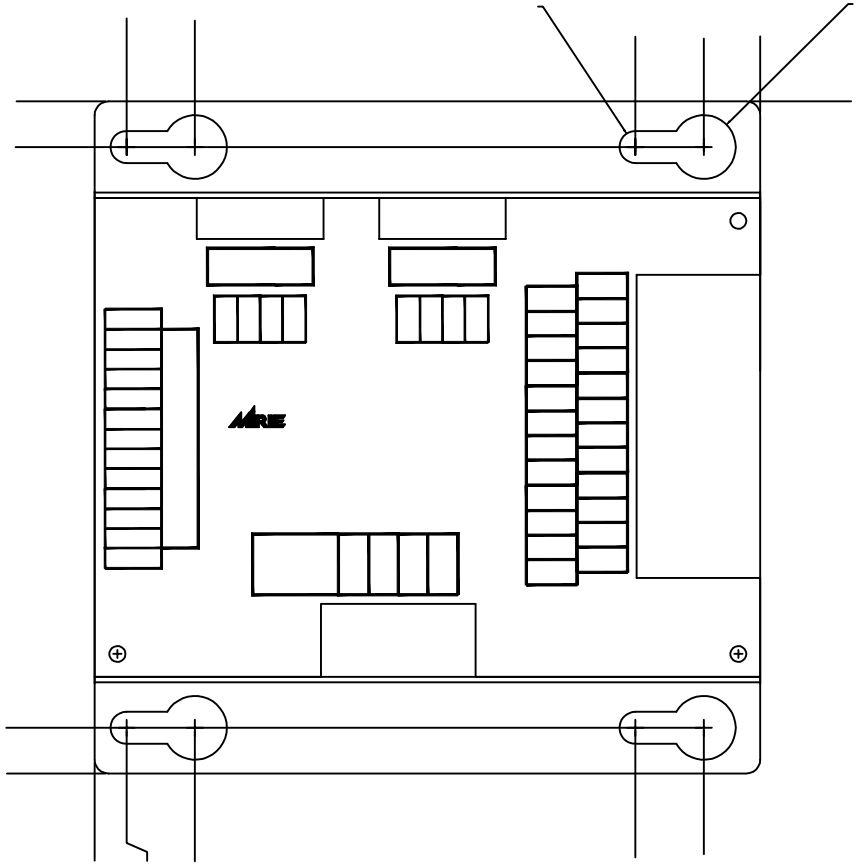
5-1 MX1 ADA Sheet metal fixed size

unit:mm



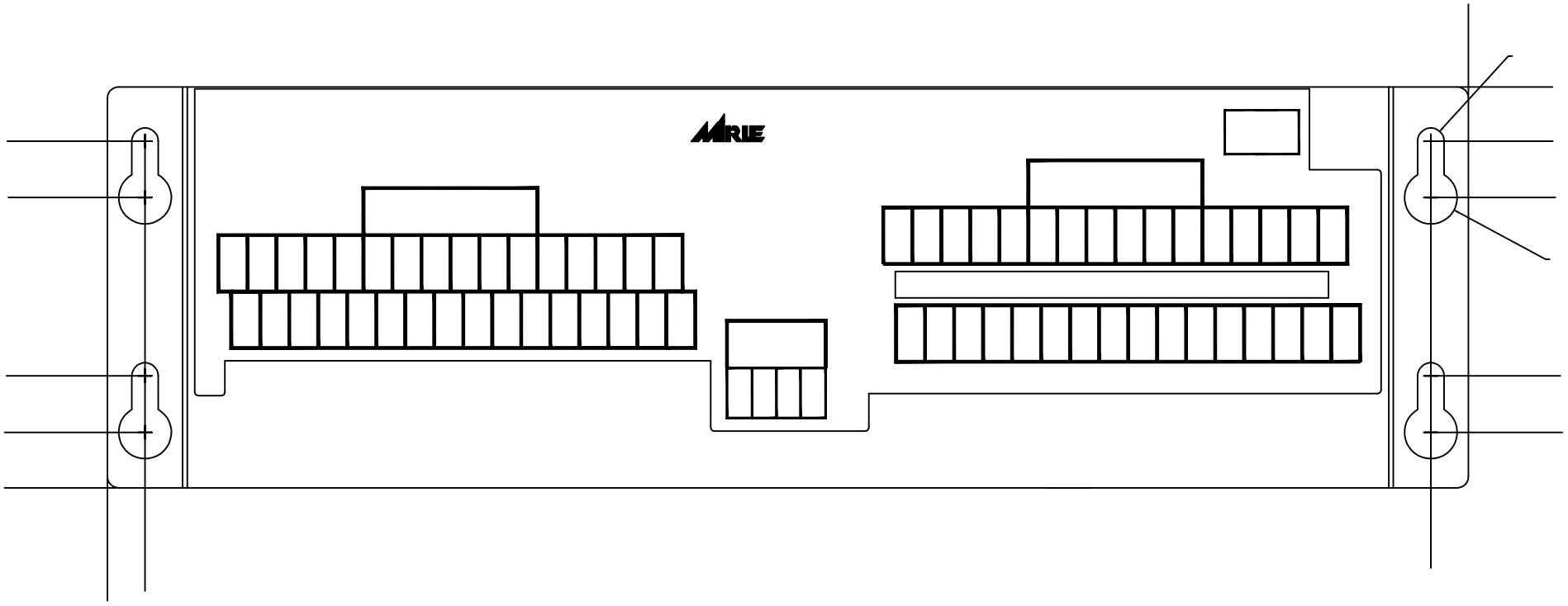
5-2 MX1 Temperature plate sheet metal fixed size

unit:mm



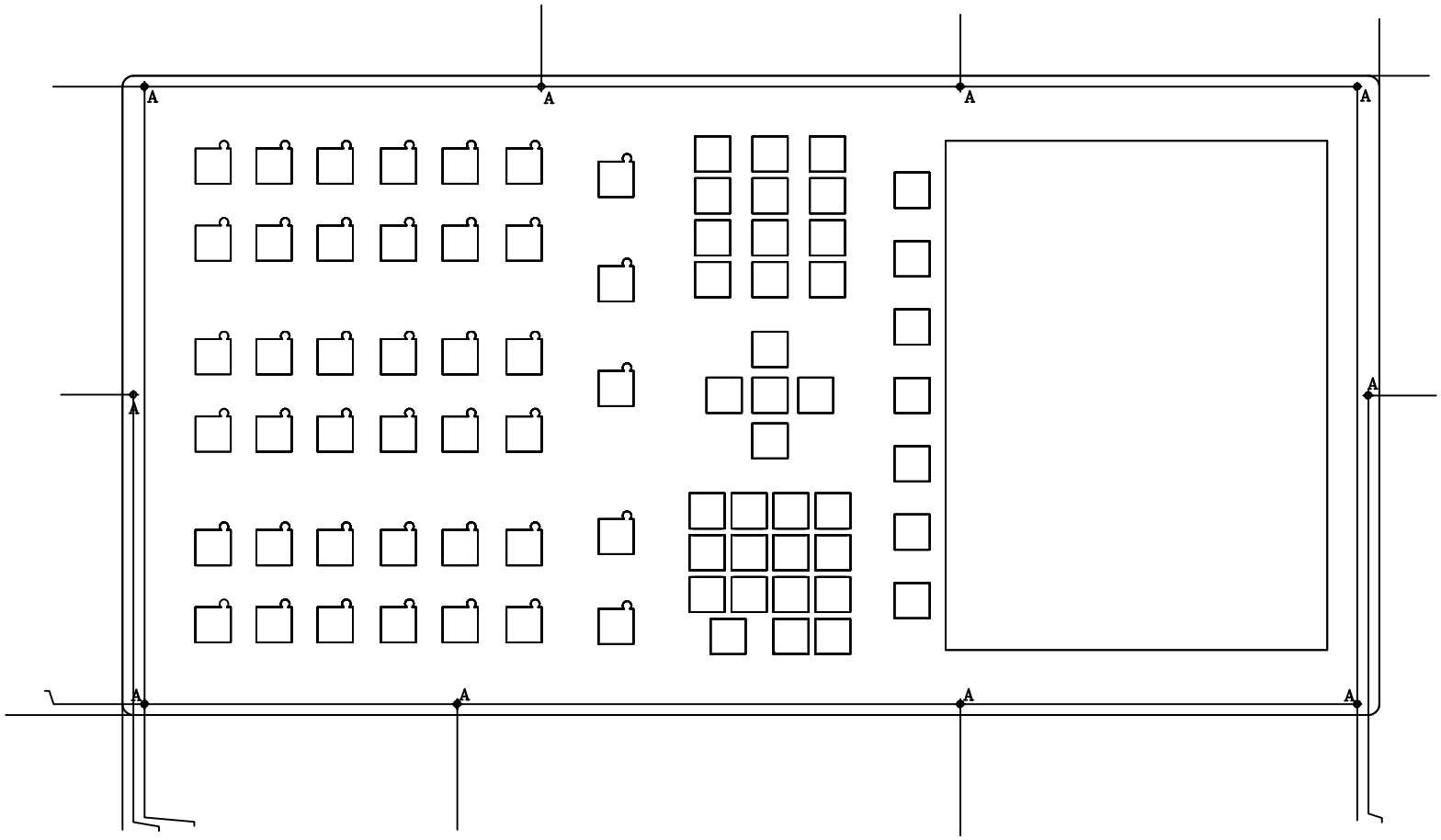
5-3 MX1 I/O 32 Control panel sheet metal fixed size

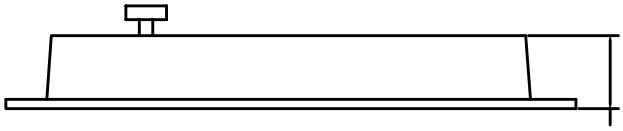
unit:mm

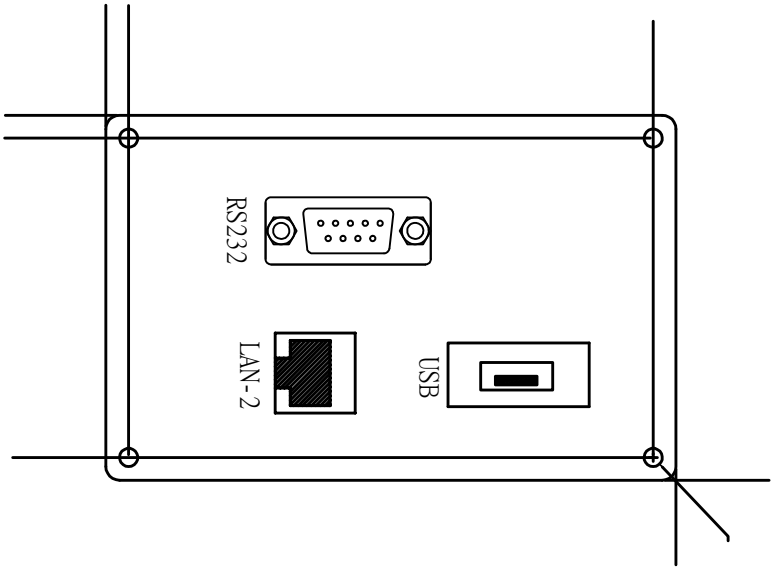


5-4 MX1 10 inch panel fixed size

unit:mm






RS232
LAN-2
USB