SYNTEC TECHNOLOGY CO.,LTD.

11A Series Controller

Basic Installation Instructions V2.2

1. Applicable Controller Series:

This manual applies to the controller series below:

|	Serial Number	Product Name
1	F01-11MA-SEP	11MA Milling Machine Controller_10.4-inch Split type
2	F01-LS11MA	11MA Milling Machine Controller_10.4-inch Split type (For Vietnam customers of SUN-CNC)
3	F00-LS11MA	11MA Milling Machine Controller_The Second-Half Split type
4	F01-11TA-SEP	11TA Lathe Controller_10.4-inch Split type

2. Back/ Front Interface of the Controller

（Front View of The Second-Half Split Type Series）　（Front View of the 10.4-inch Split Type Series）

A	Baffle	Monitor Baffle	C	Function Buttons	Functions correspond to the monitor
B	Flip Cover	Includes 2 USB ports	D	Monitor	Display Area

（Back View）
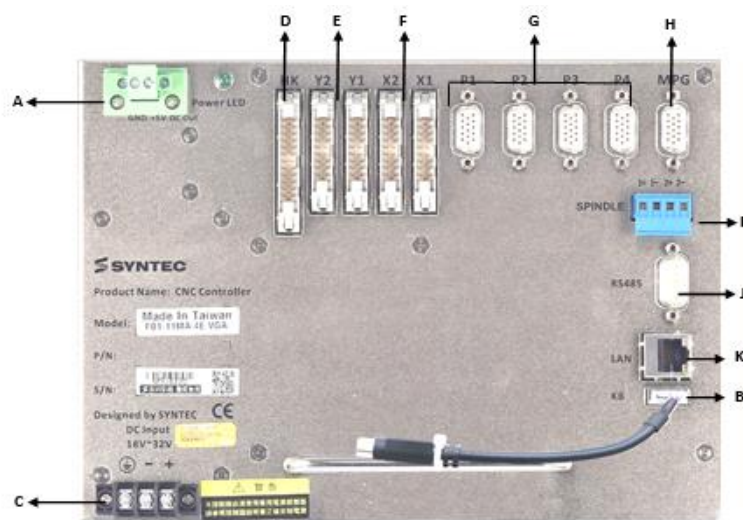
| A	DC5V Power Output PORT	DC5V Power Output Provide power supply for Syntec HK panels.
B	KB PORT	Keyboard interface. Able to connect Syntec keyboards.
C	DC 24V, 1.67A Power Input PORT	Controller working power input
D	HK PORT	Connect to Syntec HK panel dedicated interface.
E	Y1、Y2 PORT	Output Interface Able to connect to external output terminal strips

F	X1、X2 PORT	Input Interface Able to connect to external input terminal strips
G	P1~P4 PORT	Pulse servo axial control output (Encoder feedback included)
H	MPG PORT	MPG interface（includes 7 sets of I point）
I	DA Output PORT	2 sets of D/A output interface
J	RS485 PORT	Provide a set of RS485 interface Able to connect to RS485 peripheral devices
K	LAN PORT	10/100M Internet Interface

3. External Dimension and Mounting Hole Specifications（Unit：mm）
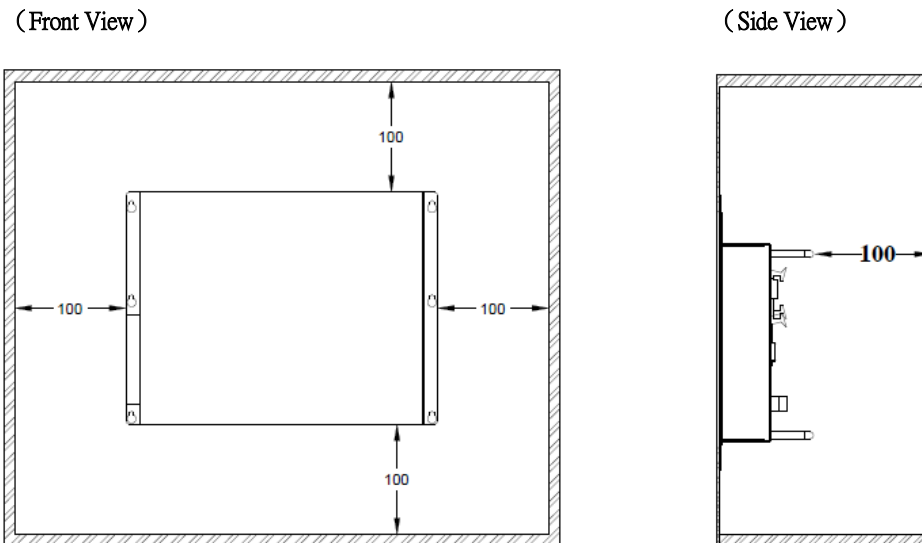
(Second-Half Split Type Series)
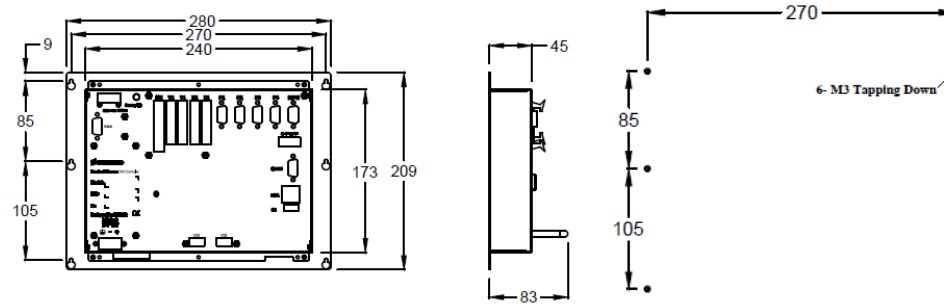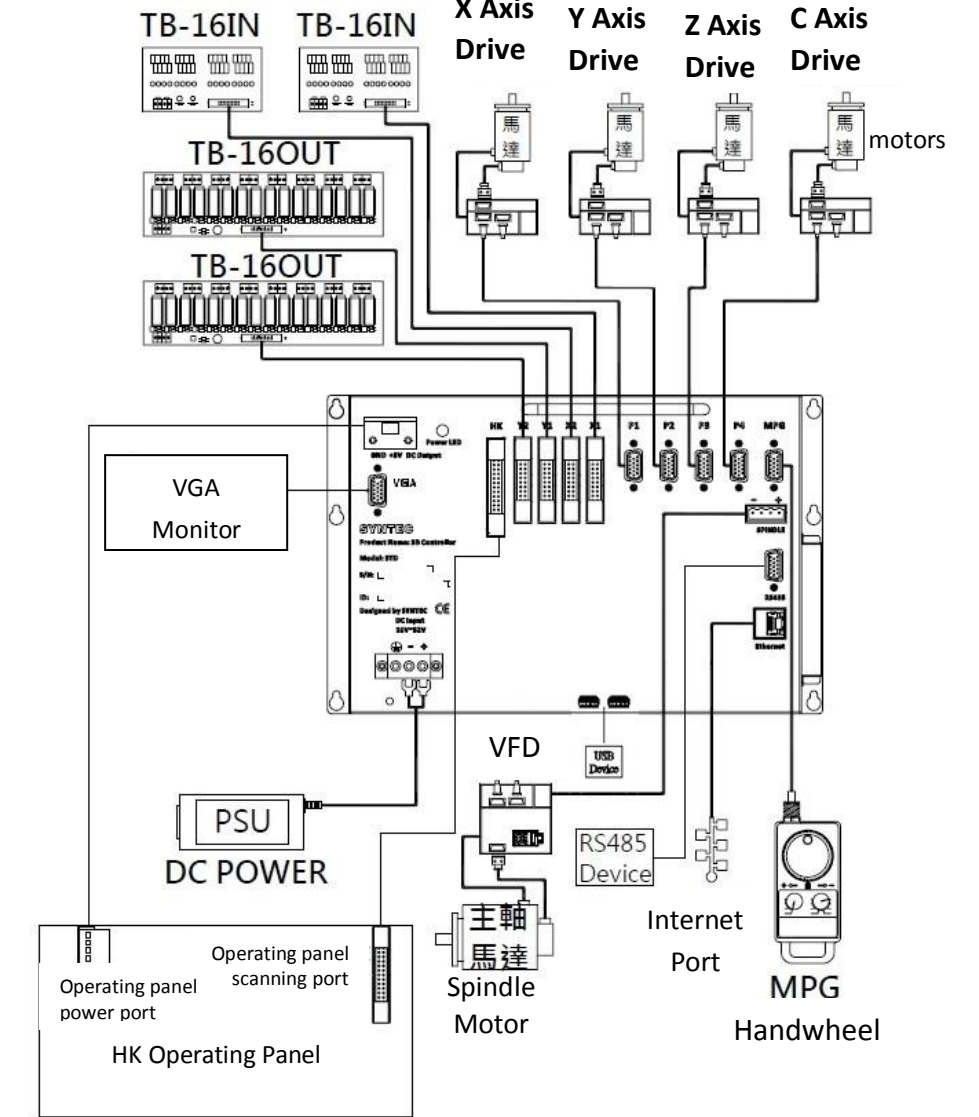

(10.4-inch Split Type Series)
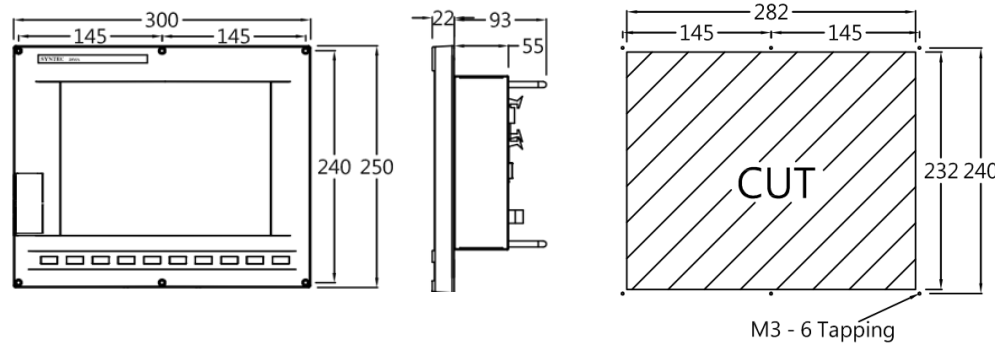
4. Suggested Installation Specifications（Unit：mm）

※The measuring point is based on the second half measuring point marked in the graph.

（Front View）　　　　　　　　　（Side View）

5. Basic Wiring Diagram

6. Interface Configurations

Please be careful with the voltage value and the polarities.

● X1 Connector Arrangement

X1	PIN	SIGNAL	PIN	SIGNAL
	20	INPUT8	19	INPUT0
	18	INPUT9	17	INPUT1
	16	INPUT10	15	INPUT2
	14	INPUT11	13	INPUT3
	12	INPUT12	11	INPUT4
	10	INPUT13	09	INPUT5
	08	INPUT14	07	INPUT6
	06	INPUT15	05	INPUT7
	04	GND	03	GND
	02	---	01	---

● X2 Connector Arrangement

X2	PIN	SIGNAL	PIN	SIGNAL
	20	INPUT24	19	INPUT16
	18	INPUT25	17	INPUT17
	16	INPUT26	15	INPUT18
	14	INPUT27	13	INPUT19
	12	INPUT28	11	INPUT20
	10	INPUT29	09	INPUT21
	08	INPUT30	07	INPUT22
	06	INPUT31	05	INPUT23
	04	GND	03	GND
	02	---	01	---

● HK Connector Arrangement

HK	PIN	SIGNAL	PIN	SIGNAL
	26	---	25	XDI55
	24	XDI54	23	XDI53
	22	XDI52	21	XDI51
	20	XDI50	19	XDI49
	18	XDI48	17	5V
	16	GND	15	XDO62
	14	XDO61	13	XDO60
	12	XDO59	11	XDO58
	10	XDO57	09	XDO56
	08	XDO55	07	XDO57
	06	XDO53	05	XDO52
	04	XDO51	03	XDO50
	02	XDO49	01	XDO48

● Y1 Connector Arrangement

Y1	PIN	SIGNAL	PIN	SIGNAL
	20	OUTPUT8	19	OUTPUT0
	18	OUTPUT9	17	OUTPUT1
	16	OUTPUT10	15	OUTPUT2
	14	OUTPUT11	13	OUTPUT3
	12	OUTPUT12	11	OUTPUT4
	10	OUTPUT13	09	OUTPUT5
	08	OUTPUT14	07	OUTPUT6
	06	OUTPUT15	05	OUTPUT7
	04	GND	03	GND
	02	24V	01	24V

● Y2 Connector Arrangement

Y2	PIN	SIGNAL	PIN	SIGNAL
	20	OUTPUT24	19	OUTPUT16
	18	OUTPUT25	17	OUTPUT17
	16	OUTPUT26	15	OUTPUT18
	14	OUTPUT27	13	OUTPUT19
	12	OUTPUT28	11	OUTPUT20
	10	OUTPUT29	09	OUTPUT21
	08	OUTPUT30	07	OUTPUT22
	06	OUTPUT31	05	OUTPUT23
	04	GND	03	GND
	02	24V	01	24V

● P1~P4 Connector Arrangement

SP	PIN	SIGNAL	PIN	SIGNAL	PIN	SIGNAL
	1	A+	6	Z-	11	CW+
	2	A-	7	ALM+	12	CW-
	3	B+	8	ALM-	13	CCW+
	4	B-	9	SERVO-ON	14	CCW-
	5	Z+	10	SERVO-CLR	15	OUT_COM

● MPG Connector Arrangement

MPG	PIN	SIGNAL	PIN	SIGNAL	PIN	SIGNAL
	1	MPG_A+	6		11	XDI 60
	2	MPG_A-	7	XDI56	12	XDI 61
	3	MPG_B+	8	XDI 57	13	XDI 62
	4	MPG_B-	9	XDI 58	14	GND
	5		10	XDI 59	15	+5V

● DA Connector Arrangement   ● RS485 Connector Arrangement

DA	PIN	SIGNAL
	1	1DA+
	2	1DA-
	3	2DA+
	4	2DA-

RS485	PIN	SIGNAL	PIN	SIGNAL
	1	--	6	RS485_D-
	2	--	7	RS485_D+
	3	--	8	--
	4	--	9	5V
	5	GND	10	--

※Notice：Please apply shielded twisted pair when using the RS485 interface. Besides the D+ and D- signal cable, please make sure the air gap is connected to GND on both sides to prevent the RS485 interface from burning down.

● the products by following the local law.