

# HC-A Series Controller

High speed, High accuracy. The most trustworthy electrical control partner in the machine tool industry.

## Basic Installation Instructions v1.0

### 1. Applicable Controllers

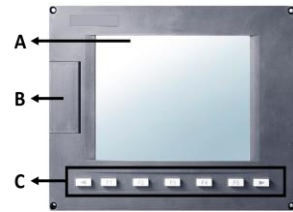
Type	Product Name
1 F11-HC8A-K	HC8A-K Touch Panel Controller
2 F11-HC10A-K	HC10A-K Touch Panel Controller
3 F11-HC8A-S	HC8A-S Touch Panel Controller
4 F11-HC10A-S	HC10A-S Touch Panel Controller
5 F11-HC15A-S	HC15A-S Touch Panel Controller

### 2. Interface Specifications

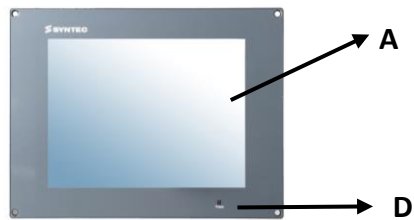
#### (Front View)

(HC8A-K Touch Panel Controller)

(HC10A-K Touch Panel Controller)



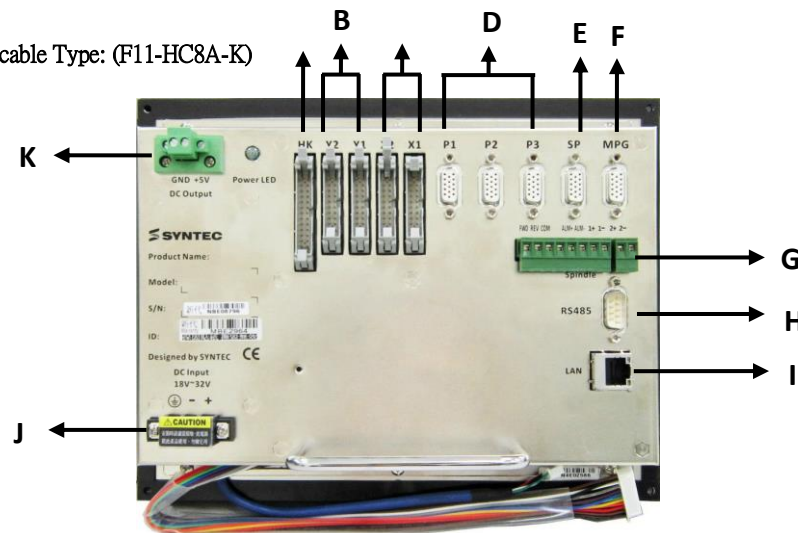
(HC8A-S · HC10A-S · HC15A-S Touch Panel Controller)



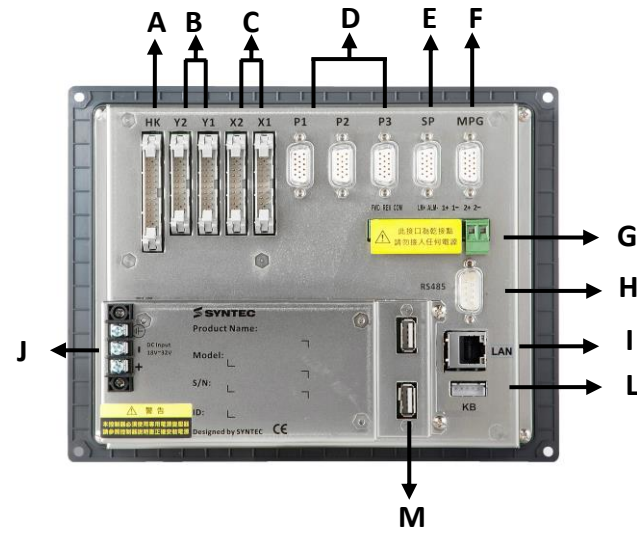
A	Touch Screen	Touch Control Area	C	Buttons	F1~F8 Functions
B	Flip Cover	1 USB Port	D	Indicator Light	Power Indicator Lights

#### (Back View)

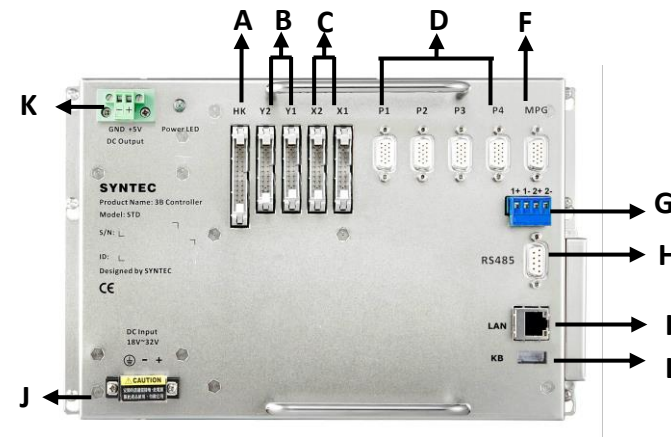
Applicable Type: (F11-HC8A-K)



Applicable Type: F11-HC8A-S



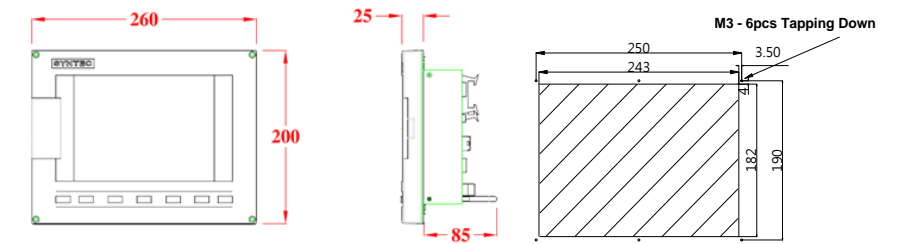
Applicable Type: F11-HC10A-K · F11-HC10A-S · F11-HC15A-S



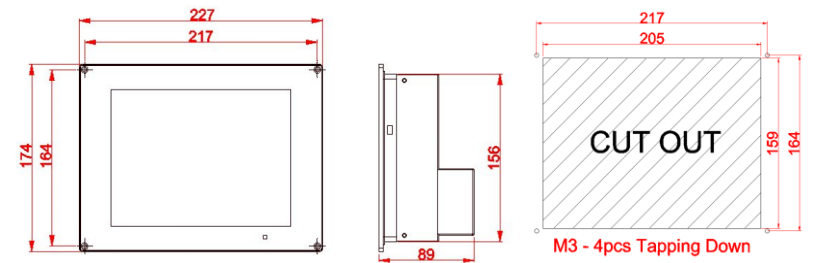
A	HK PORT	HK Panel Interface
B	Y1 ~Y2PORT	Output Interface, able to connect to external output terminal strips
C	X1 ~X2PORT	Input Interface, able to connect to external input terminal strips
D	P1~P3(P4)	Servo Orientation Control Interface
E	SP PORT	Spindle DA Output (include Encoder Feedback)
F	MPG PORT	MPG Interface (7 sets of I point)
G	SPINDLE	2 sets of Spindle D/A Output Interface
H	RS485	One set of RS485
I	LAN	10/100M Internet Interface
J	DC 24V INPUT	Power Input DC 24V · 1A
K	5V 2PIN 接頭	5V Power Output for Syntec HK Panel VGA
L	KB	Keyboard Interface
M	USB PORT	Two sets of USB2.0 Host

### 3. Appearance Dimension and Mounting Holes Specification(Unit:mm)

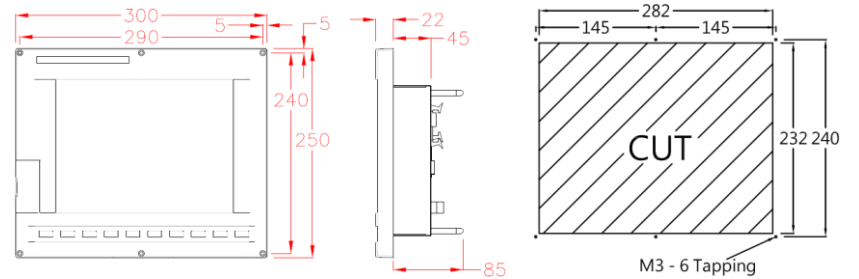
Applicable Type: F11-HC8A-K



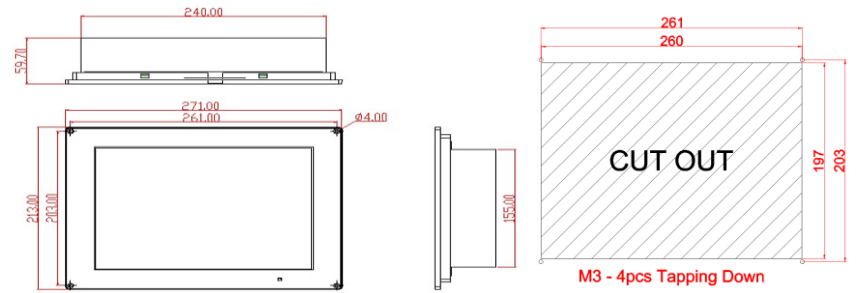
Applicable Type: F11-HC8A-S



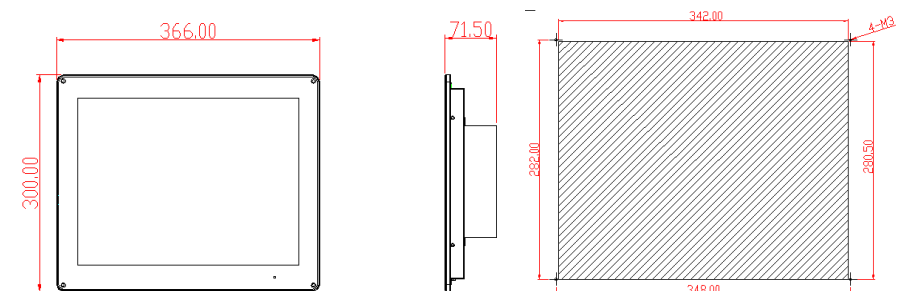
Applicable Type: F11-HC10A-K



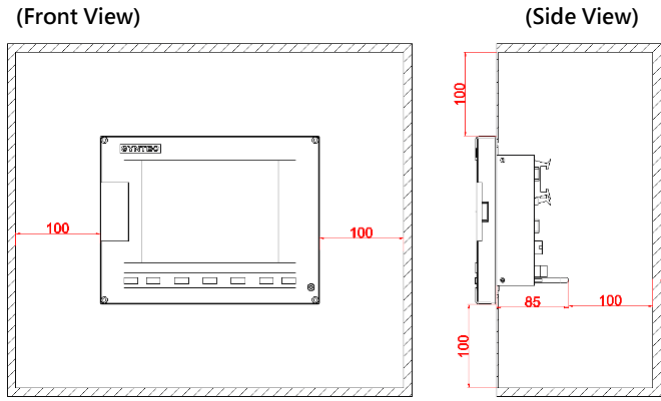
Applicable Type: F11-HC10A-S



Applicable Type: F11-HC15A-S

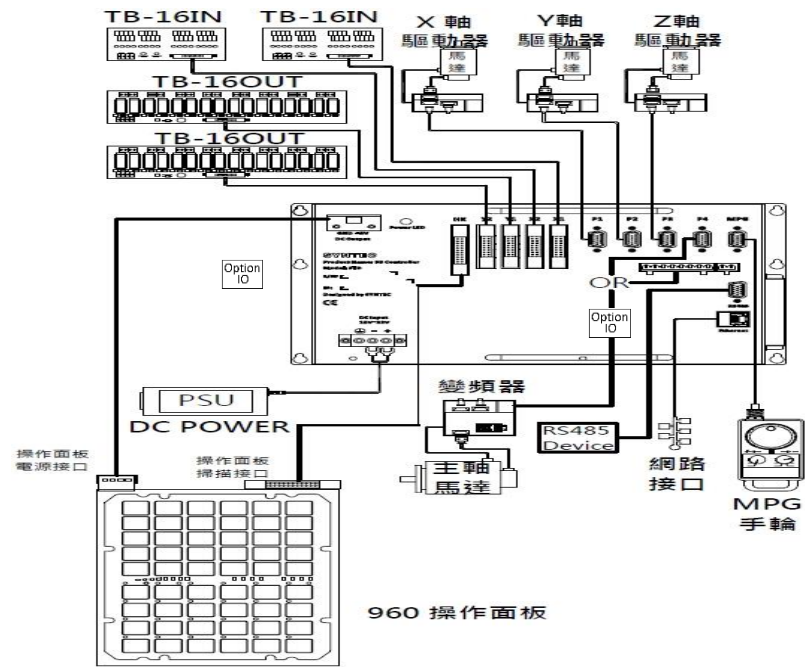


#### 4. Installation Specifications (Unit: mm)

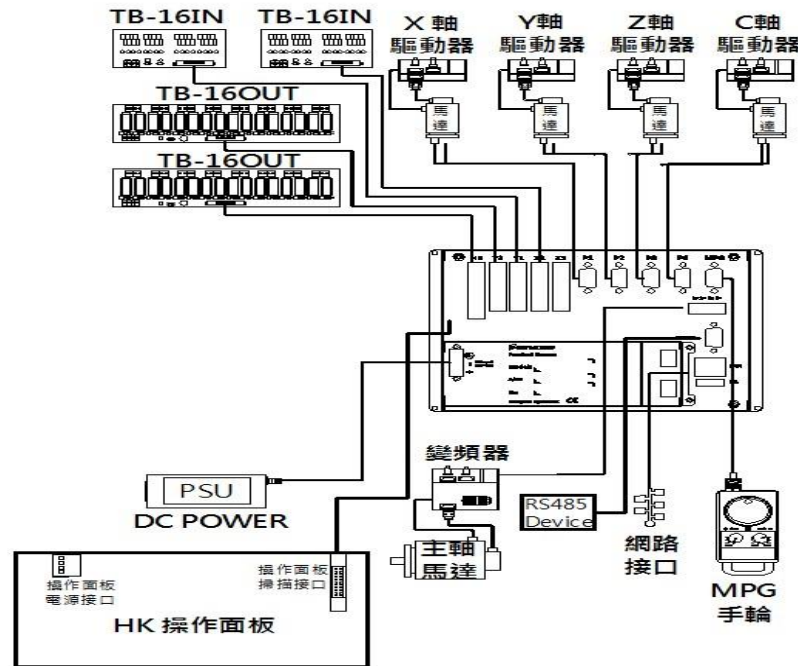


#### 5. Basic Wiring Diagram

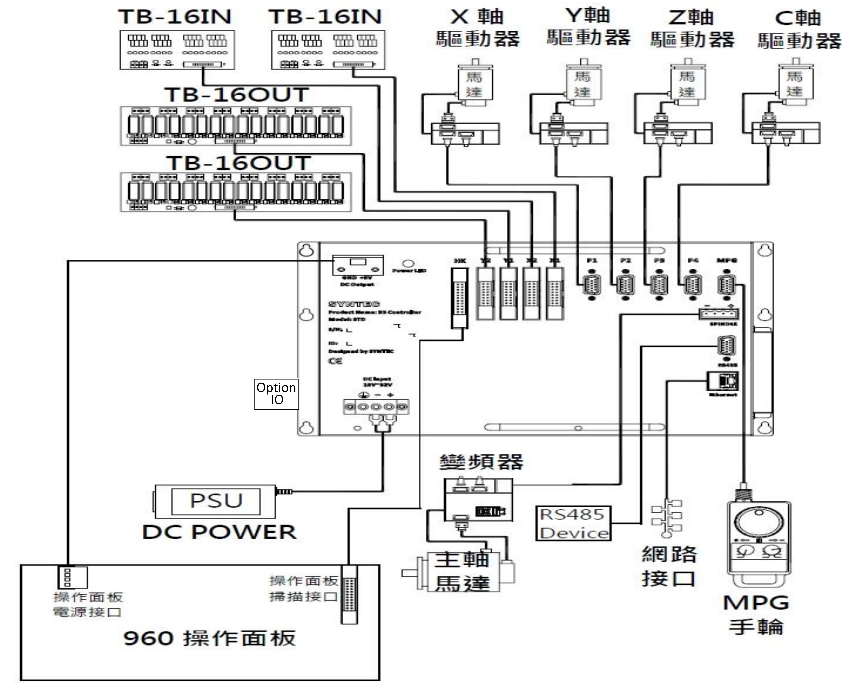
Applicable Type: F11-HC8A-K



Applicable Type: F11-HC8A-S



Applicable Type: F11-HC10A-K、F11-HC10A-S、F11-HC15A-S



#### 6. Interface Configurations

Please notice the value and polarities of voltages.

● HK Connector Arrangement ● X1 Connector Arrangement ● X2 Connector Arrangement

HK	PIN	SIGNAL	PIN	SIGNAL	X1	PIN	SIGNAL	PIN	SIGNAL	X2	PIN	SIGNAL	PIN	SIGNAL
	26	---	25	XDI55		20	INPUT8	19	INPUT0		20	INPUT24	19	INPUT16
	24	XDI54	23	XDI53		18	INPUT9	17	INPUT1		18	INPUT25	17	INPUT17
	22	XDI52	21	XDI51		16	INPUT10	15	INPUT2		16	INPUT26	15	INPUT18
	20	XDI50	19	XDI49		14	INPUT11	13	INPUT3		14	INPUT27	13	INPUT19
	18	XDI48	17	5V		12	INPUT12	11	INPUT4		12	INPUT28	11	INPUT20
	16	GND	15	XDO62		10	INPUT13	09	INPUT5		10	INPUT29	09	INPUT21
	14	XDO61	13	XDO60		08	INPUT14	07	INPUT6		08	INPUT30	07	INPUT22
	12	XDO59	11	XDO58		06	INPUT15	05	INPUT7		06	INPUT31	05	INPUT23
	10	XDO57	09	XDO56		04	GND	03	GND		04	GND	03	GND
	08	XDO55	07	XDO57		02	---	01	---		02	---	01	---
	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~P3(P4)

P1~P3	PIN	SIGNAL
	1	A+
	2	A-
	3	B+
	4	B-
	5	Z+
	6	Z-
	7	ALM+(+24V)
	8	ALM-(GND)
	9	SERVO-ON
	10	SERVO-CLR
	11	CW+
	12	CW-
	13	CCW+
	14	CCW-
	15	OUT_COM

● MPG

MPG	PIN	SIGNAL
	1	MPG_A+
	2	MPG_A-
	3	MPG_B+
	4	MPG_B-
	5	
	6	
	7	IN56-
	8	IN57-
	9	IN58-
	10	IN59-
	11	IN60-
	12	IN61-
	13	IN62-
	14	GND-
	15	VCC(+5V)

● SPINDLE

SPINDLE	PIN	SIGNAL
	1	2DA-
	2	2DA+
	3	1DA-
	4	1DA+
	5	ALM+
	6	ALM-
	7	NC
	8	DCM
	9	REV
	10	FWD

● SP Connector Arrangement

SP	PIN	SIGNAL	PIN	SIGNAL	PIN	SIGNAL
	1	A+	6	Z-	11	SP_FWD(O46)
	2	A-	7	ALM+(+24V)	12	SP_REV(O47)
	3	B+	8	ALM-(GND)	13	SP_COM
	4	B-	9	DA+	14	GND
	5	Z+	10	DA-	15	+5V

● RS485 Connector Arrangement

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

● LAN Connector Arrangement

LAN	PIN	SIGNAL
	1	TX+
	2	TX-
	3	RX+
	4	---
	5	---
	6	RX-
	7	---
	8	---

Note:

The series supports "pulse + direction" output format.

When connected to the step motor, the connection of each axis direction is as follows:

Function	PIN
Dir +	Pin 11
Dir -	Pin 12
Pulse +	Pin 13
Pulse -	Pin 14