

HC-E Series Controller

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

Basic Installation Instructions v1.0

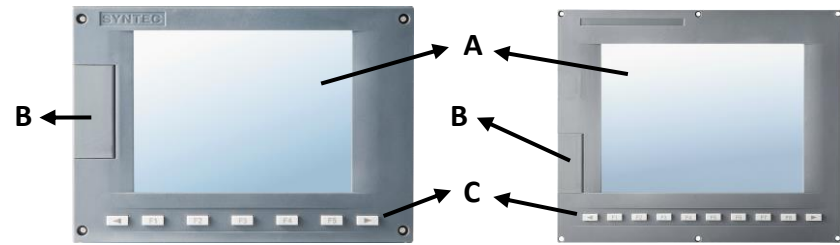
1. Applicable Controllers

	Type	Product Name
1	F11-HC8E-K	HC8E-K Touch Panel Controller
2	F11-HC10E-K	HC10E-K Touch Panel Controller
3	F11-HC8E-S	HC8E-S Touch Panel Controller
4	F11-HC10E-S	HC10E-S Touch Panel Controller
5	F11-HC15E-S	HC15E-S Touch Panel Controller

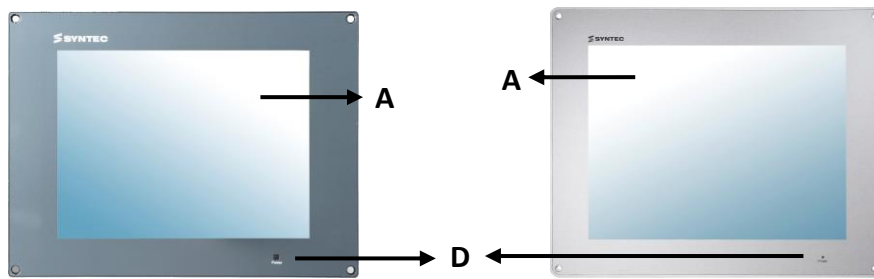
2. Interface Specifications (Front View) :

(HC8E-K Panel Controller)

(HC10E-K Panel Controller)

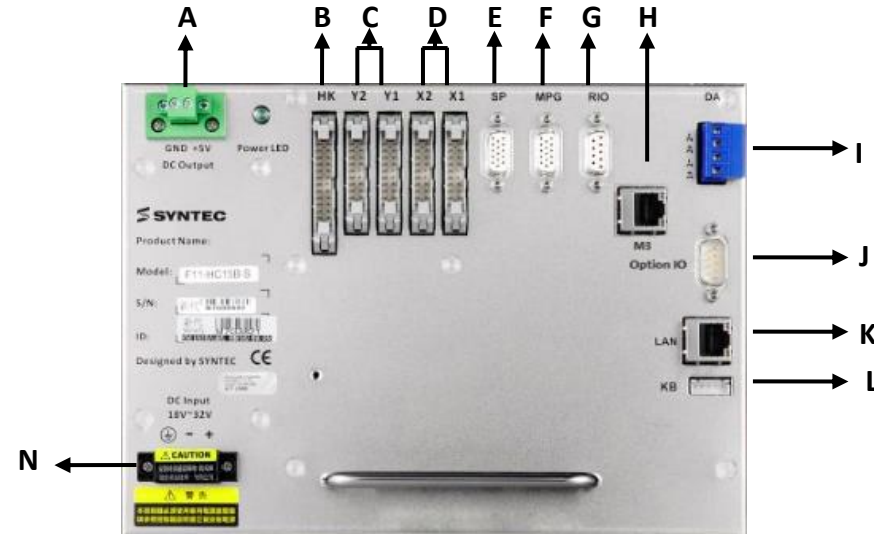


(HC8E-S Touch Panel Controller · HC10E-S Touch Panel Controller) (HC15E-S Touch Panel Controller)

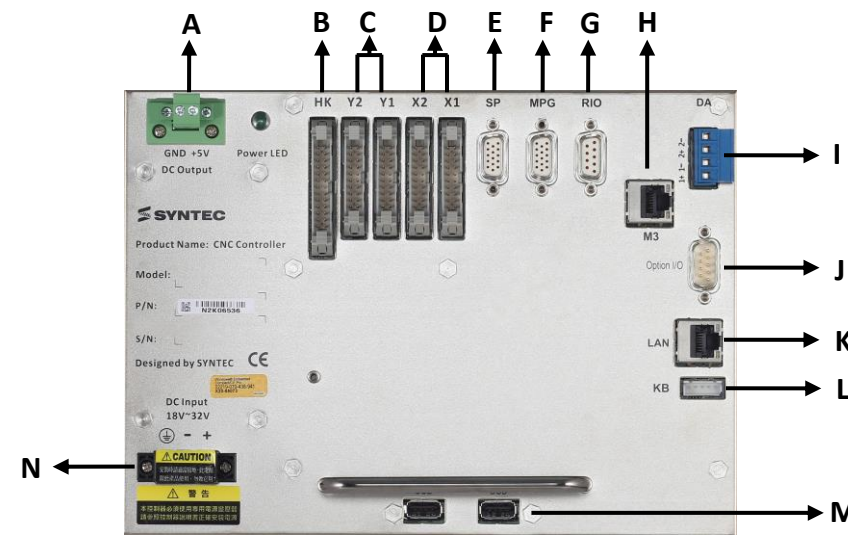


A	Touch Screen	Display Window	C	Function Buttons	Correspond to what appears on the screen.
B	Flip Cover	1 USB Port	D	Baffle	Monitor baffle

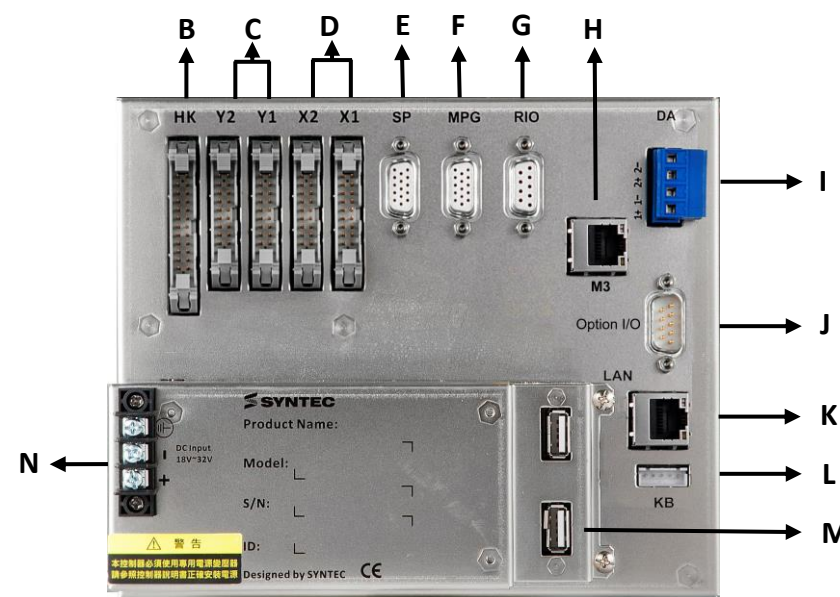
(Back View) : F11-HC8E-K · F11-HC10E-K



Applicable Types: F11-HC10E-S · F11-HC15E-S



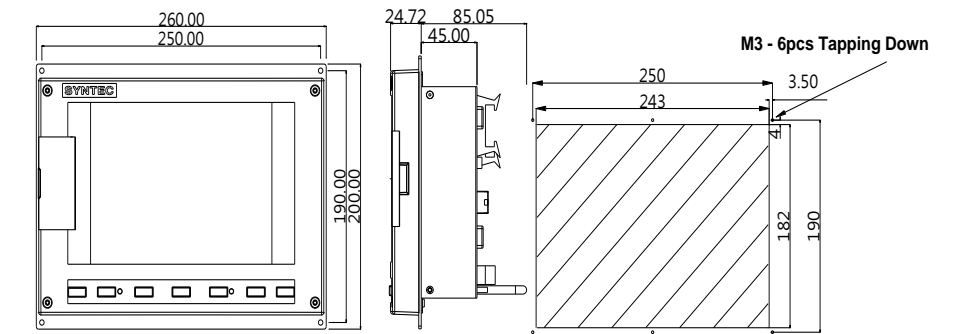
Applicable Types: F11-HC8E-S



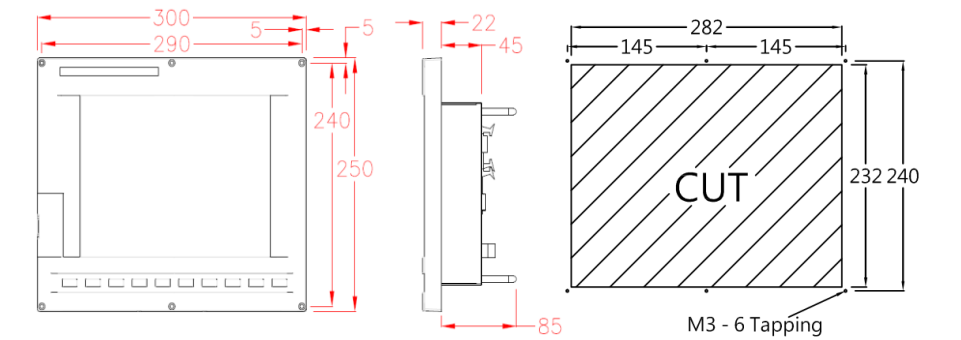
A	5V 2PIN Port	5V Power Output for Syntec HK Panel VGA
B	HK PORT	HK Panel Interface
C	Y1 ~Y2PORT	Output Interface, able to connect to external output terminal strips
D	X1 ~X2PORT	Input Interface, able to connect to external input terminal strips
E	SP PORT	Spindle DA Output (include Encoder Feedback)
F	MPG PORT	MPG Interface (7 sets of I point)
G	RIO PORT	RIO Interface. Connect to one set of RIO module.
H	M3 Port	YASKAWA Σ -V Serial Servo Interface
I	DA	2 sets of Spindle D/A Output Interface
J	Option I/O	One set of RS485+ one set of SRI communication
K	LAN	10/100M Internet Interface
L	KB	Keyboard Interface
M	USB PORT	Two sets of USB2.0 Host
N	DC 24V INPUT	Power Input DC 24V · 1A

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

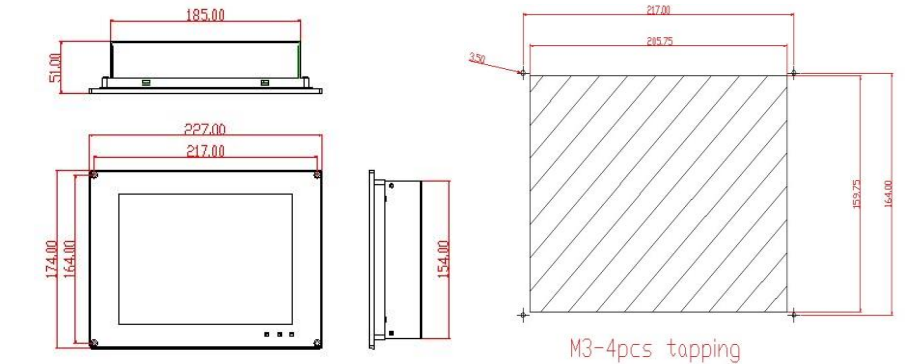
Applicable Type: F11-HC8E-K



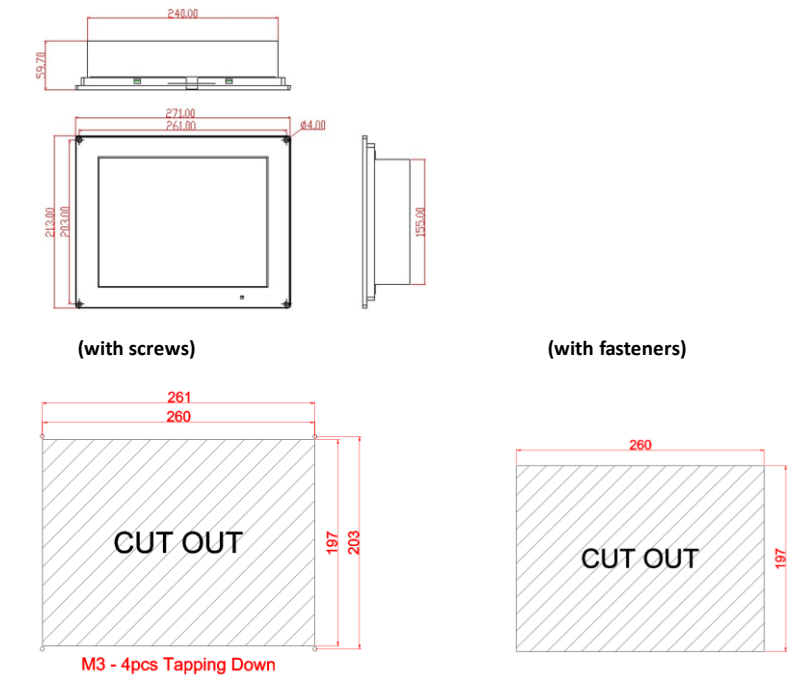
Applicable Type: F11-HC10E-K

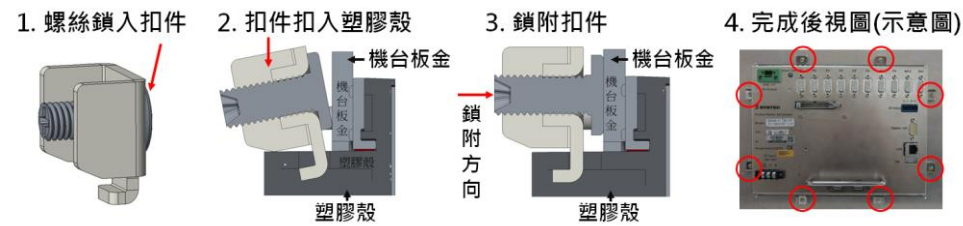


Applicable Type: F11-HC8E-S

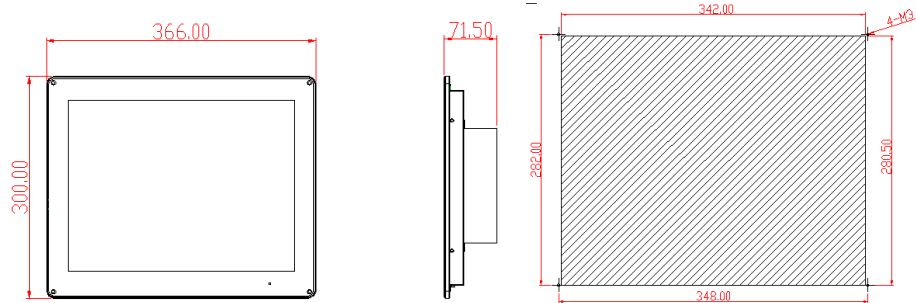


Applicable Type: F11-HC10E-S

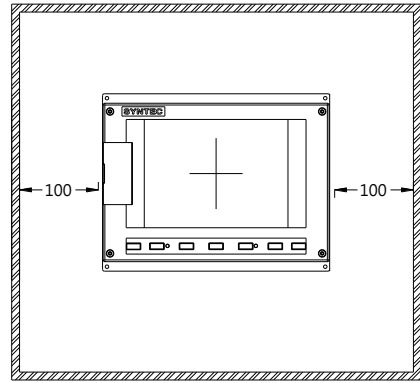




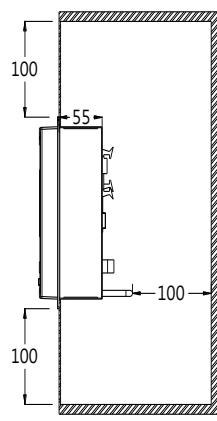
Applicable Type: F11-HC15E-S



4. Installation Specifications (Unit: mm)
(Front View)

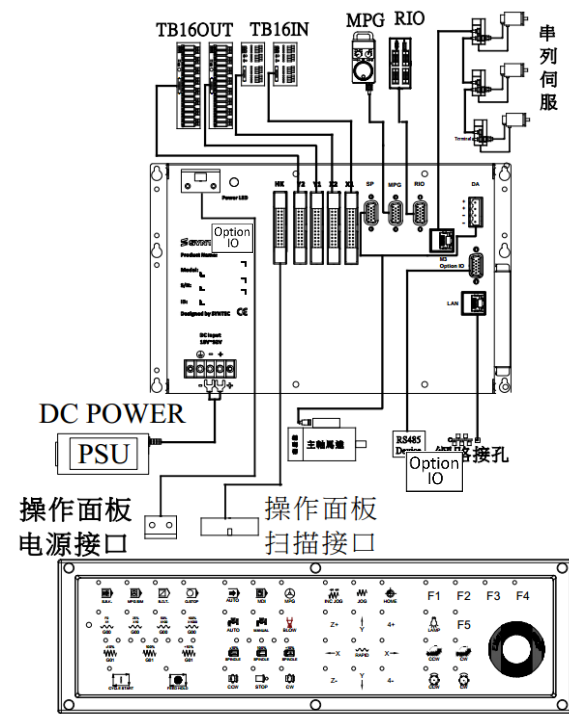


(Side View)



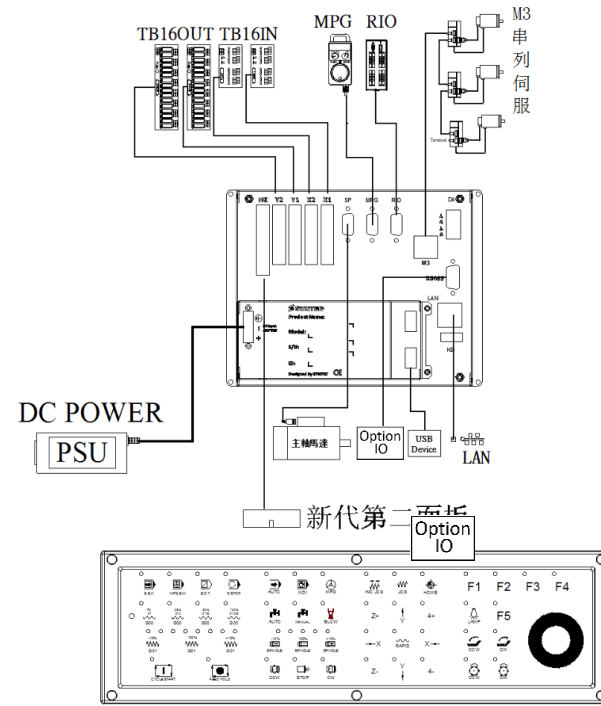
5. Basic Wiring Diagram

Applicable Type: F11-HC8E-K、F11-HC10E-K、F11-HC10E-S、F11-HC15E-S



新代 4012、4018第二面板

Applicable Type: F11-HC8E-S



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	XI ^{Option I/O}		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

● SP 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

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

● RIO Connector Arrangement

RIO	PIN	SIGNAL	PIN	SIGNAL
	1	RIO_1_Tx+	6	
	2	RIO_1_Tx-	7	
	3	RIO_1_Rx+	8	
	4	RIO_1_Rx-	9	
	5			

● M3 Communication Connector Arrangement

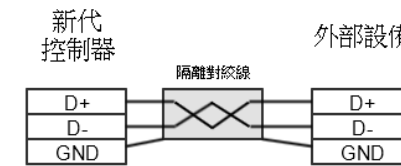
M3	PIN	SIGNAL
	1	TX+
	2	TX-
	3	RX+
	4	--
	5	--
	6	RX-
	7	--
	8	--

● Option I/O Connector Arrangement

Option I/O	PIN	SIGNAL	PIN	SIGNAL
	1	SRI_D+	6	RS485_D-
	2	SRI_D-	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: 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.

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