

Next Generation 220 Series Controller

Basic Installation instructions v1.6

1. Applicable Series Controller

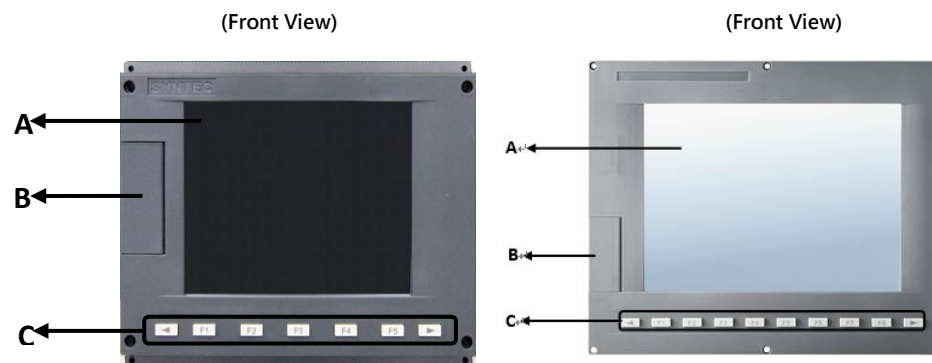
This manual is applicable for the following controllers of the series:

Serial Number	Product Name
F01-220MA-10-SEP	220MA Milling Machine Controller_10-inch Split Type
F01-220MA-10-SEP-S	220MA Milling Machine Controller_10-inch Flat Edge Split Type
F01-220MA-10-SEP-ST	220MA Milling Machine Controller_10-inch Flat Edge Touch Control Split Type
F01-220MA-10-STD	220MA Milling Machine Controller_10-inch Standard Type
F01-220MA-15E	220MA Milling Machine Controller_15-inch Frameless Split Type
F01-220MA-15-S	220MA Milling Machine Controller_15-inch Flat Edge Split Type
F01-220MA-15-S-T	220MA Milling Machine Controller_15-inch Flat Edge Touch Control Split Type
F01-220MA-5-10-T	220MA Five Axis Milling Machine Touch Panel Controller_10-inch Split Type
F01-220MA-5-SEP	220MA Five Axis Milling Machine Controller_10-inch Split Type
F01-220MA-5-SEP-S	220MA-5 Milling Machine Controller_10-inch Flat Edge Split Type
F01-220MA-5-SEP-ST	220MA-5 Milling Machine Controller_10-inch Flat Edge Touch Panel Split Type
F01-220MA-5-10-STD	220MA-5 Milling Machine Controller_10-inch Standard Type
F01-220MA-5-15E	220MA-5 Milling Machine Controller_15-inch Frameless Split Type
F01-220MA-5-15-15-S	220MA Five Axis Milling Machine Controller_15-inch Flat Edge Split Type
F01-220MA-5-15-ST	220MA Five Axis Milling Machine Controller_15-inch Flat Edge Split Type
F01-220MB-10-SEP	220MB Milling Machine Controller_10-inch Split Type
F01-220MB-10-SEP-S	220MB Milling Machine Controller_10-inch Flat Edge Split Type
F01-220MB-10-SEP-ST	220MB Milling Machine Controller_10-inch Flat Edge Touch Control Split Type
F01-220MB-10-STD	220MB Milling Machine Controller_10-inch Standard Type
F01-220MB-15-SEP-S	220MB Milling Machine Controller_15-inch Flat Edge Split Type
F01-220MB-15-SEP-ST	220MB Milling Machine Controller_15-inch Flat Edge Touch Panel Split Type
F01-220MB-15E	220MB Milling Machine Controller_15-inch Frameless Split Type
F01-220MB-5-SEP-T	220MB Five Axis Milling Machine Touch Panel Controller_10-inch Split Type
F01-220MB-5-SEP	220MB Five Axis Milling Machine Controller_10-inch Split Type
F01-220MB-5-SEP-S	220MB-5 Milling Machine Controller_10-inch Flat Edge Split Type
F01-220MB-5-SEP-ST	220MB-5 Milling Machine Controller_10-inch Flat Edge Touch Panel Split Type
F01-220MB-5-STD	220MB-5 Milling Machine Controller_10-inch Standard Type
F01-220MB-5-15-S	220MB-5 Milling Machine Controller_15-inch Frameless Split Type
F01-220MB-5-15-ST	220MB Five Axis Milling Machine Controller_15-inch Flat Edge Split Type

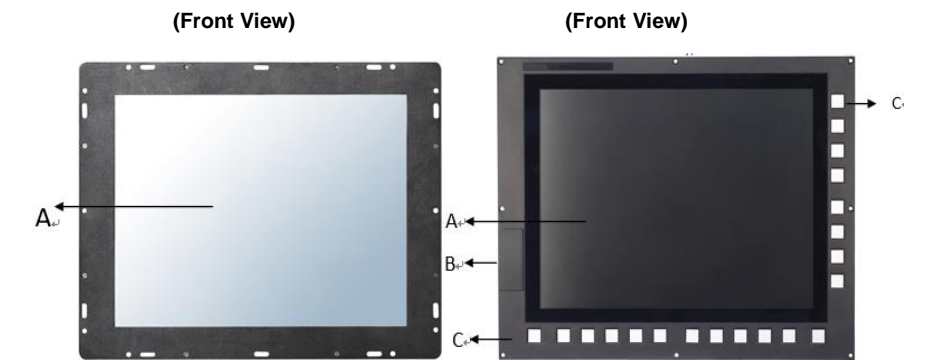
30	F01-220MB-5-15-ST	220MB Five Axis Milling Machine Controller_15-inch Flat Edge Touch Panel Split Type
31	F01-220TB-SEP	220TB Milling Machine Controller_10-inch Split Type
32	F01-220TB-10-SEP-S	220TBLathe Controller_10-inch Flat Edge Split Type
33	F01-220TB-10-SEP-ST	220TB Lathe Controller_10-inch Flat Edge Touch Panel Split Type
34	F01-220TB-10-STD	220TB Lathe Controller_10-inch Standard Type
35	F01-220TB-15E	220TB Lathe Controller_15-inch Frameless Split Type
36	F01-220TB-15-S	220TB Lathe Controller_15-inch Flat Edge Split Type
37	F01-220TB-15-ST	220TB Lathe Controller_15-inch Flat Edge Touch Panel Split Type
38	F01-220TB-5-SEP-S	220TB-5 Lathe Controller_10-inch Flat Edge Split Type
39	F01-220TB-5-10-STD	220TB-5 Lathe Controller_10-inch Split Type
40	F01-220TB-5-SEP-ST	220TB-5 Lathe Controller_10-inch Flat Edge Touch Panel Split Type
41	F01-220TB-5-15-S	220TB Five Axis Lathe Controller_15-inch Flat Edge Split Type
42	F01-220TB-5-15-S-T	220TB Five Axis Lathe Controller_15-inch Flat Edge Touch Panel Split Type
43	F01-220TB-15SE	220TB Lathe Controller_15-inch Narrow Boarder Split Type
44	F01-220MA-15SE	220MA Milling Machine Controller_15-inch Narrow Boarder Split Type
45	F01-220MA-5-15SE	220MA-5 Milling Machine Controller_15-inch Narrow Boarder Split Type
46	F01-220MB-15SE	220MB Milling Machine Controller_15-inch Narrow Boarder Split Type
47	F01-220MB-5-15SE	220MB-5 Milling Machine Controller_15-inch Narrow Boarder Split Type
48	F01-220MA-15SE-T	220MA Milling Machine Controller_15-inch Touchscreen Narrow Bezel Separate

2. Controller Interface

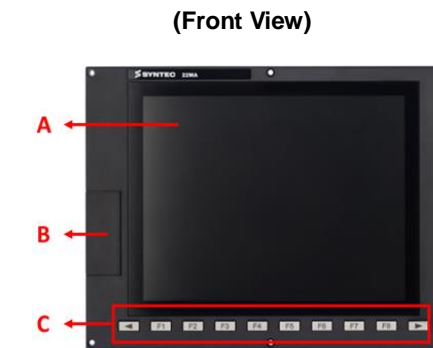
(220 Split Series 8-inch Controller) (220 Series 10-inch Controller /Touch Panel Controller)



(220 Series 15-inch Frameless Controller) (220 Series 15-inch Flat Edge Controller)



(220 Series 10-inch Flat Edge Split Type/ Touch Control Controller)

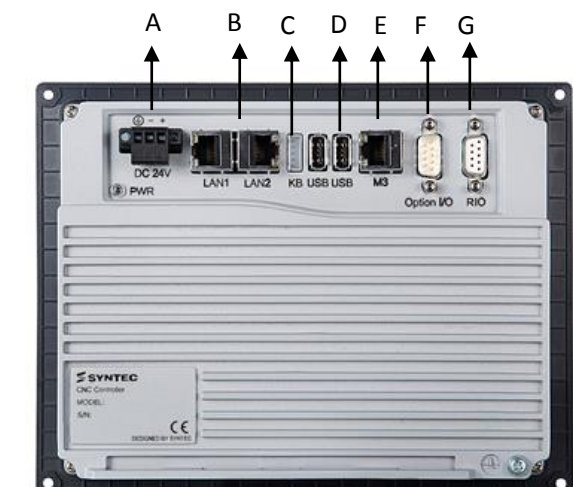


(220 Series 10-inch Flat Edge Standard Type Controller Front View)



A	8-inch Monitor	Display Window
B	Flip Cover	USB Port
C	Buttons	Functions
D	Keypad	Script Input

(Back View)

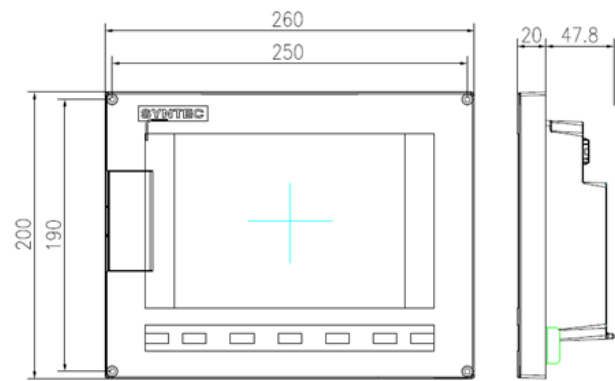


A	DC 24V INPUT	Power Input DC 24V(1A)
B	LAN1&2	2 sets of 10/100M Internet Interface
C	KeyBoard	Keyboard Interface
D	USB	2 sets of USB2.0 Host
E	Mechatrolink 3	YASKAWA Serial Servo Communication Interface
F	Option I/O	1 set of SRI & 1 set of RS485
G	RIO PORT	RIO Interface Able to connect to 1 set of HKIO and 1 set of IO module

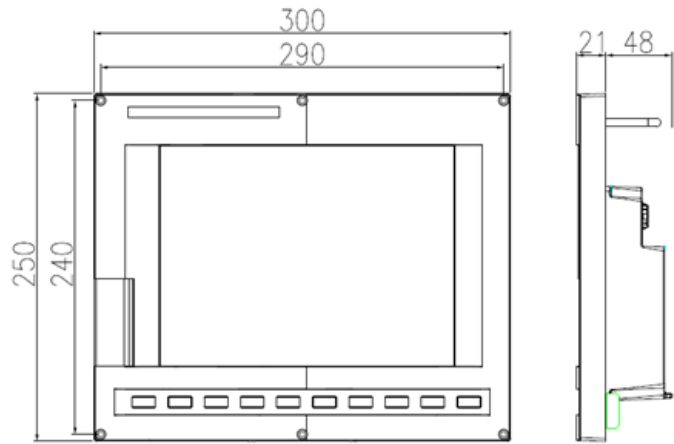
※Notice : To ensure communication quality, the length of USB extension cords in use shall not exceed five meters. Besides, do not charge or supply power via the USB port; otherwise, it may cause controller malfunction.

3. Controller Appearance (Unit : mm)

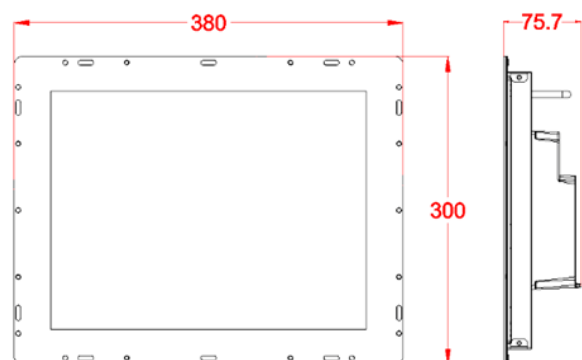
(220 Split Type Series 8-inch Controller)



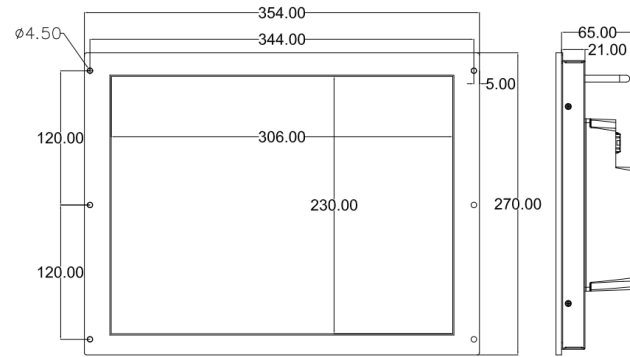
(220 Series 10-inch Controller / Touch Panel Controller)



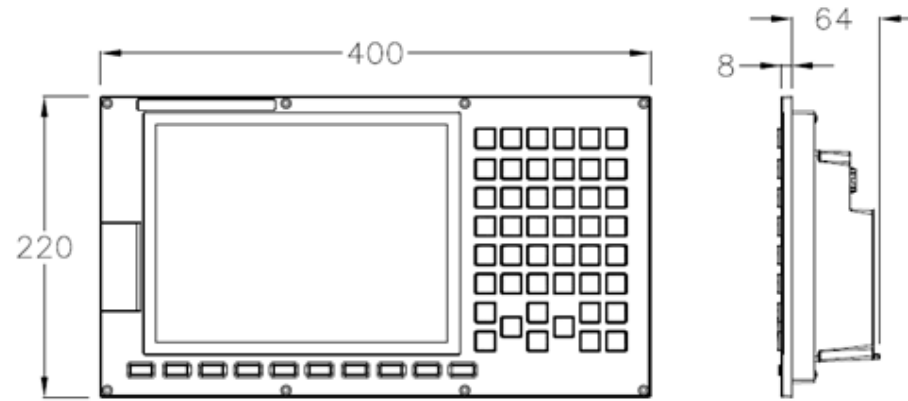
(220 Series 15-inch Frameless Controller)



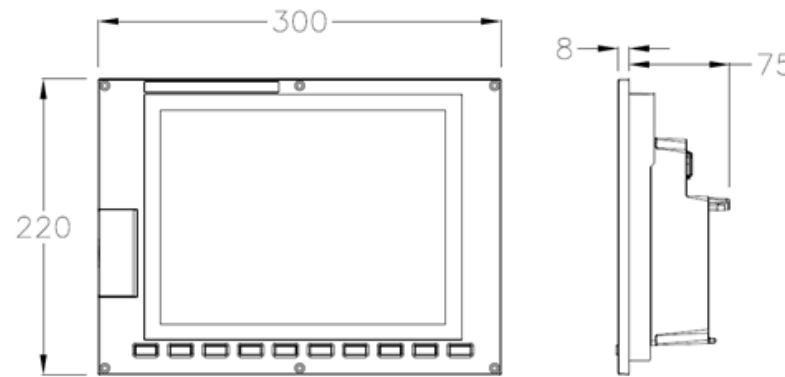
(220 Series 15-inch Narrow Boarder Split Type/
Touch Panel Narrow Boarder Split Type Controller)



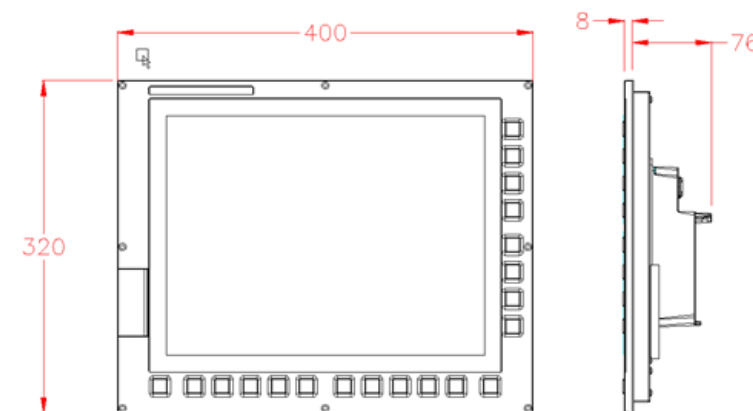
(220 Series 10-inch Flat Edge Standard Type Controller Front View)



(220 Series 10-inch Flat Edge Split Type/ Touch Panel Controller)

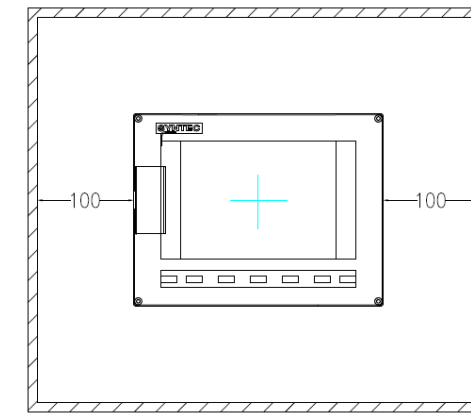


(220 Series 15-inch Flat Edge Controller)

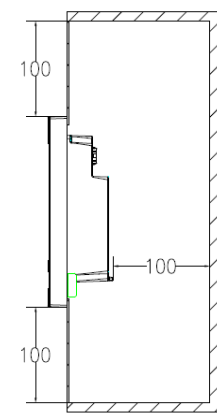


4. Suggested Installation Specifications (Unit : mm)

(Front View)



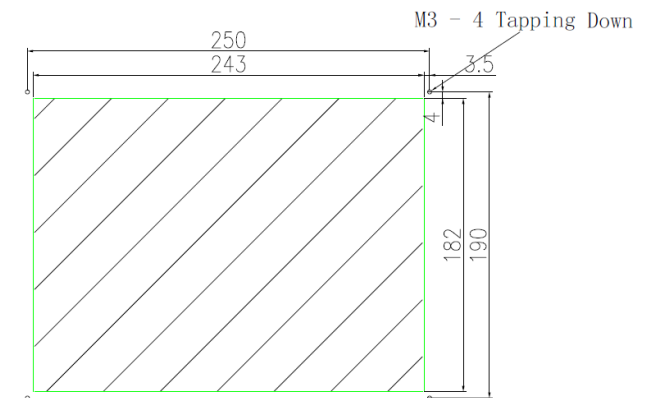
(Side View)



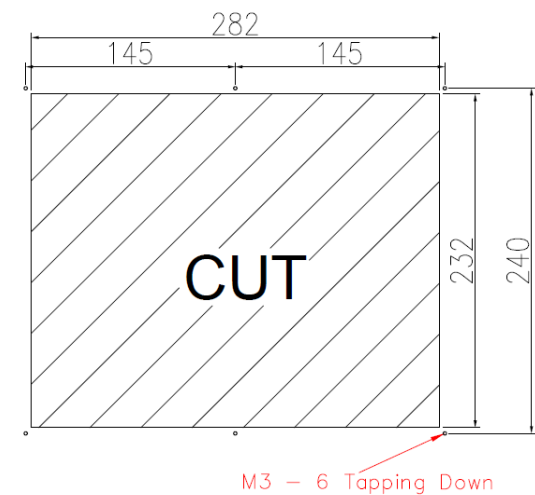
5. Mounting Hole Specifications (Unit : mm)

(Controller)

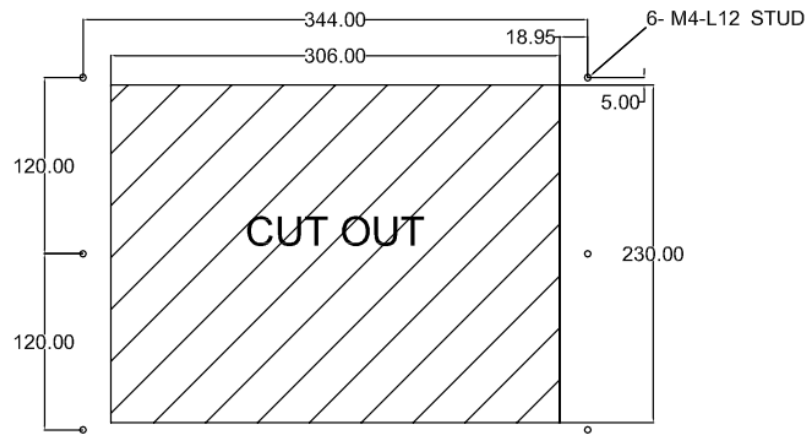
220 Split Series 8-inch Controller



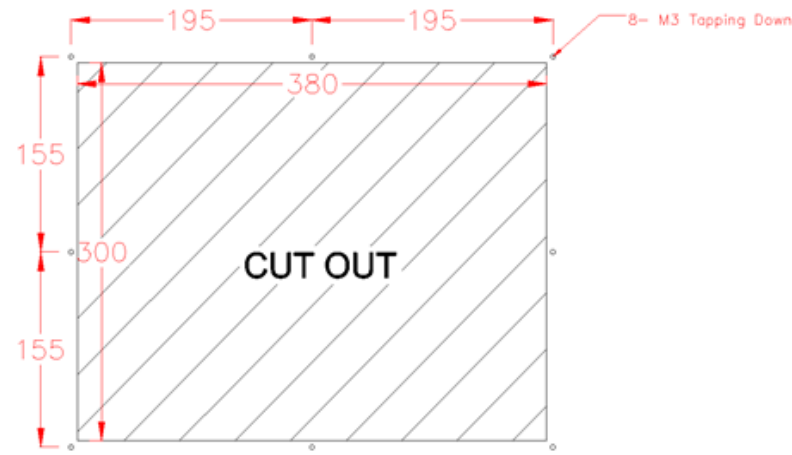
220 Series 10-inch Controller/Touch Panel Controller



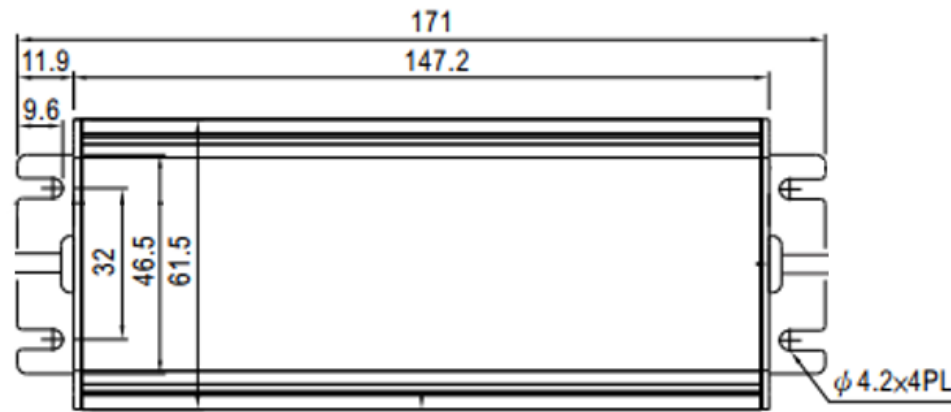
220 Series 15-inch Narrow Boarder Split Type / Touch Panel Split Type Controller)



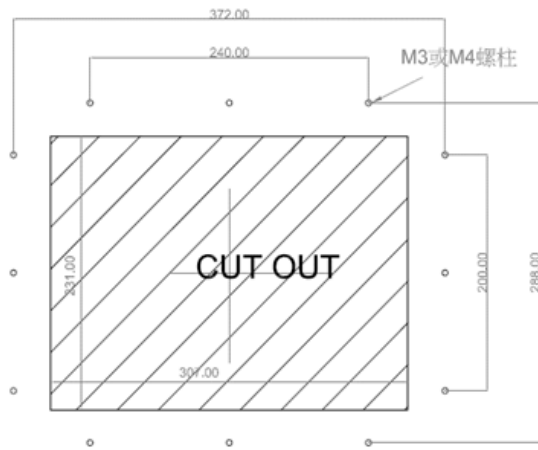
220 Series 15-inch Flat Edge Controller



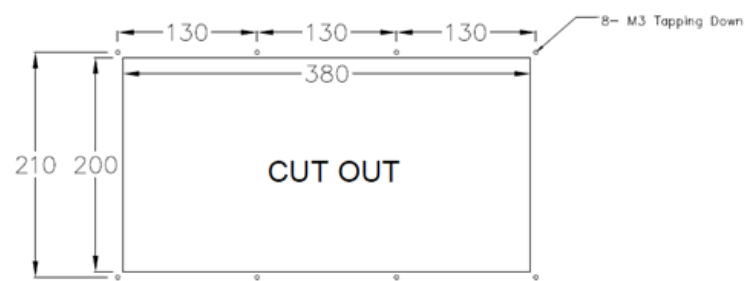
(Adapter)



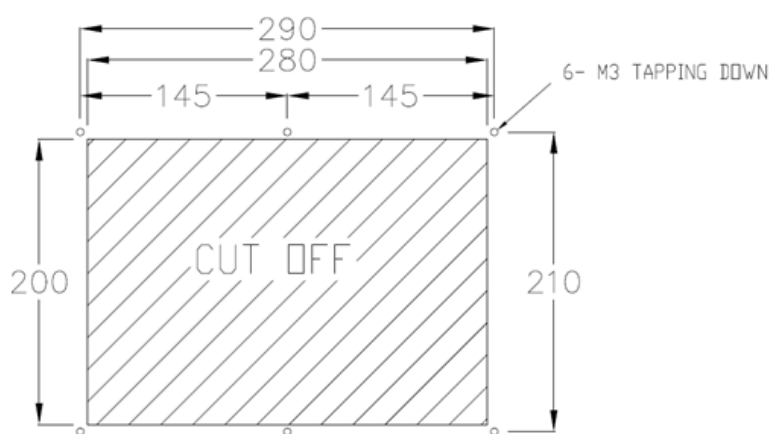
220 Series 15-inch Frameless Controller



220 Series 10-inch Flat Edge Standard Type Controller



220 Series 10-inch Flat Edge Split Type/ Touch Panel Controller

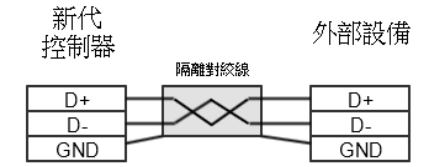


7. Interface Definition

Please be careful with the voltage value and the polarities.

● Option I/O & SRI Terminal Definition

SRI/Option I/O	PIN	SIGNAL	PIN	SIGNAL
	1	SRI5_D+	6	RS485_D-
	2	SRI5_D-	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.

● RIO Terminal Definition

RIO	PIN	SIGNAL	PIN	SIGNAL
	1	RIO1-TX+	6	RIO2-TX+
	2	RIO1-TX-	7	RIO2-TX-
	3	RIO1-RX+	8	RIO2-RX+
	4	RIO1-RX-	9	RIO2-RX-
	5	--	10	--

● M3 Terminal Definition

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

● LAN Terminal Definition

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

6. Basic Wiring Diagram

