

3 TG series HMI

3-1 Features

- 16.77 million color TFT-LCD, highlighted screen, fuller color and more realistic display effect
- High speed 400MHz CPU and 128MB memory, excellent data processing ability, faster download speed, greatly improve the startup and loading speed, reduce waiting time and picture jump, and make the animation effect more smooth
- The maximum size is 15.6 inches, and other sizes include 4.3 ", 7", 8 "and 10.1"
- The new thin series has a fashionable appearance, and the bayonet seal is installed to effectively prevent the entry of external dust and oil stain
- TG-NT is a special model for X-NET bus function, supports OMMS/TBN protocol, and the baud rate is up to 3M
- The communication capability is upgraded. It can communicate with multiple PLCs at the same time. RJ45 Ethernet interface supports communication with Tbox, Siemens S7-1200, S7-200 smart and other Modbus-TCP devices, breaking the traditional serial communication mode and forming an open network structure.

3-1-1 Product features

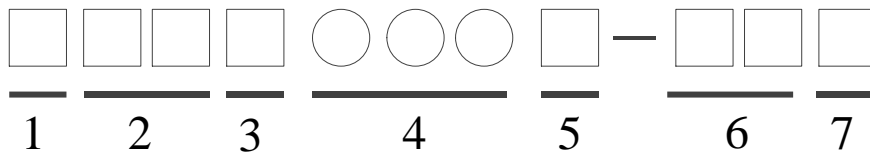
- **Display**
 - 16 million true colors TFT-LCD, support BMP and JPG format, better color and display;
 - Precise touch calibration function;
 - 128MB memory, perform high speed data download, high speed loading and high-speed operation
 - Memory capacity increase substantially;
 - Support multi-language: Chinese, English, Japanese, Korean, German, French, Arabic, etc. The fonts support any size, artistic effect, bold, italic, etc.
 - Rich images of material, screen operation
- **Control**
 - Switch control, dynamic monitor and display data, bar map, real time trend map, time trend map, XY trend map, discrete/continue column map, real time alarm, history alarm record...
 - User-defined data collection and saving function
 - Set user authority, 9 levels password protection
 - Simulate online/offline, upload/download data, configuration function
 - Powerful C function block
 - USB-A port inside, connect flash disk to copy data, speed up to 480Mbps
 - Special USB-B port for data download, make the data transfer faster
 - User-defined animation design

- Contain all function of TH series
- Multiple download modes and penetration functions. (Note: only TGM series supports penetration function, and other ordinary TG series need USB penetration through network module A-BOX-U.)

■ **Communication**

- Two ports communication independently, can connect two different devices at the same time (TG465-XT/MT/UT/ET has single port, TG765-XT-C/TG765-XT(P)-C has single RS232 port)
- ET series add Ethernet interface communication, can communicate with TBOX, Siemens S7-1200 and other Modbus-TCP devices
- Drive the panel printer directly, economical and flexible (TG465-XT/MT/UT/ET/TG765-XT/765-XT(P)/ TG765-XT-C/TG765-XT(P)-C cannot support print function)
- Support free format communication, user edits the driver program

3-1-2 Module naming rule



- | | |
|-------------------|---|
| 1: Special type | C: for CAD function
S: for vision function
Empty: normal type |
| 2: Series name | TG |
| 3: Special model | M: for penetration function |
| 4: Display size | 465: 4.3"
765: 7.0"
865: 8.0"
A62: 10.1"
A63: 10.1"
C65: 15.6" |
| 5: Product type | S: black color ultrathin model
G: gray color ultrathin model
L: highlight display model
B: embedded without border model
D: metal wide temperature model
Empty: normal model |
| 6: Interface type | ET: USB-B port, USB-A port , RJ45 port
UT: USB-B port, USB-A port
MT: USB-B port
NT: USB-B port, USB-A port , RJ45 port, support X-NET bus
XT: USB-B port, 1~2 RS232 port |

7: Type Empty: Normal type
(P): oil resistant



Special models

- (1) TG765-XT: compact type of TG765-MT, it has USB-B port, one RS232 port, without clock.
- (2) TG765-XT-C: compact type of TG765-MT, it has USB-B port, one RS232 port, with clock.
- (3) TG765S-XT: compact type of TG765S-MT, it has USB-B port, two RS232 ports, with clock.
- (4) TGMA63S-MT is the updated model of TGA63S-UT, the hardware configuration is same to TGA63S-UT.

3-1-3 Product models

Model	4.3"	7"	8"	10.1"	15.6"
Metal wide temperature				TGMA63D-MT	
Network	TGM465-MT2 TGM465-ET	TGM765S-MT TGM765S-ET	TGM865-ET	TGMA63S-MT TGMA63S-ET	TGMC65-ET
Highlight display		TGM765L-MT TGM765L-ET			
Embedded without border	TGM465B-MT	TGM765B-MT TGM765B-ET			
Black ultrathin		TG765S-MT TG765S-UT TG765S-ET		TGA63S-MT TGA63S-UT TGA63S-ET	
Gray ultrathin		TG765G-MT TG765G-UT TG765G-ET		TGA63G-MT TGA63G-UT TGA63G- ET	
General	TG465-MT TG465-UT TG465-ET TG465-MT2 TG465- UT2	TG765-MT TG765-UT TG765-ET	TG865-MT TG865-ET	TGA62-MT TGA62-ET TGA63-MT TGA63-UT TGA63-ET	TGC65-ET
Oil resistant	TG465-MT(P) TG465-UT(P)	TG765-MT(P) TG765-UT(P) TG765-ET(P) TG765-XT(P) TG765-XT(P)-C	TG865-MT(P) TG865-ET(P)	TGA62-MT(P) TGA62-ET(P) TGA62-UT(P)	

Cost-saving	TG465-XT	TG765-XT TG765-XT TG765-XT-C TG765S-XT			
X-NET bus		TG765-NT	TG865-NT	TGA63-NT	
Visual		STG765-ET	STG865-ET STG865-MT(P)		STGC65-ET
CAD		CTG765-ET	CTG865-ET	CTGA62-ET	

Note:

- (1) For the HMI of STG / CTG special model, please explain its function when ordering to avoid ordering wrong goods
- (2) The model marked in red indicates that it has been discontinued
- (3) TN765-ET was renamed TG765-NT, TN865-ET was renamed TG865-NT, and TNA63-ET was renamed TGA63-NT
- (4) TG765S-MT/UT/ET replacement mask, Logo replaced from Touchwin to XINJE
- (5) TGA63S-MT/UT/ET is black appearance, mask Logo is changed from Touchwin to XINJE.
- (6) TGA63G-MT/UT/ET is a gray appearance and the mask Logo is XINJE.

3-2 General specifications



The flash erasure life is 100000 times.

3-2-1 TGM(D) metal wide temperature model

Model		TGMA63D-ET
Features	Screen size	10.1"
	Resolution	1024*600
	LCD	TFT LCD, LED backlight
	Display color	16.77 million colors
	Brightness	200 cd/m ²
	Touch panel	4-wire resistor touch screen
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation
	Memory	128MB
Interface	PLC port	RS232/RS485/RS422
	Download port	RS232/RS485
	USB-A port	Flash disk port, USB2.0
	USB-B port	USB download port, USB2.0
	Ethernet port	RJ45
Electric	Input voltage	DC24V (voltage range: DC22V-DC26V)

features	Consumption current	270mA
	Allowable power loss	Below 10ms (less than 1s in fact)
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)
	Insulation resistance	Above 10MΩ, DC500V
Environment	Operation temperature	-20-70°C
	Storage temperature	-30-75°C
	Operation humidity	10%RH-90%RH (no condensation)
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute
	Air	No corrosive gas
	Cooling mode	Natural air cooling
	Protection level	Front cover IP65
Dimension	Display area (mm)	219.6*131.76
	Outline dimension (mm)	276.9*191.6*34.8
	Opening hole (mm)	260.2*178.7

3-2-2 TG(G) gray ultrathin model

Model		TGA63G-MT TGA63G-UT TGA63G-ET	TG765G-MT TG765G-UT TG765G-ET
Features	Screen size	10.1"	7"
	Resolution	1024*600	800*480
	LCD	TFT LCD, LED backlight	
	Display color	16.77 million colors	
	Brightness	200 cd/m ²	
	Touch panel	4-wire resistor touch screen	
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation	
	Memory	128MB	
Interface	PLC port	RS232/RS485/RS422	
	Download port	RS232/RS485	

	USB-A port	Flash disk port, USB2.0	
	USB-B port	USB download port, USB2.0	
	Ethernet port	RJ45, ET model supported	
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)	
	Consumption current	270mA	200mA
	Allowable power loss	Below 10ms (less than 1s in fact)	
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)	
	Insulation resistance	Above 10MΩ, DC500V	
Environment	Operation temperature	0-50°C	
	Storage temperature	-20-60°C	
	Operation humidity	10%RH-90%RH (no condensation)	
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute	
	Air	No corrosive gas	
	Cooling mode	Natural air cooling	
	Protection level	Front cover IP65	
Dimension	Display area (mm)	219.6*131.76	154.08*85.92
	Outline dimension (mm)	278.0*192.3*44.0	207.0*148.0*38.5
	Opening hole (mm)	260.2*179.2	192.0*138.5

3-2-3 TG(S) black ultrathin model

Model		TGA63S-MT TGA63S-UT TGA63S-ET	TG765S-MT TG765S-UT TG765S-ET
Features	Screen size	10.1"	7"
	Resolution	1024*600	800*480
	LCD	TFT LCD, LED backlight	
	Display color	16.77 million colors	
	Brightness	200 cd/m ²	
	Touch panel	4-wire resistor touch screen	
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation	

	Memory	128MB	
Interface	PLC port	RS232/RS485/RS422	
	Download port	RS232/RS485	
	USB-A port	Flash disk port, USB2.0, UT/ET model supported	
	USB-B port	USB download port, USB2.0	
	Ethernet port	RJ45, ET model supported	
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)	
	Consumption current	270mA	200mA
	Allowable power loss	Below 10ms (less than 1s in fact)	
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)	
	Insulation resistance	Above 10MΩ, DC500V	
Environment	Operation temperature	0-50°C	
	Storage temperature	-20-60°C	
	Operation humidity	10%RH-90%RH (no condensation)	
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute	
	Air	No corrosive gas	
	Cooling mode	Natural air cooling	
	Protection level	Front cover IP65	
Dimension	Display area (mm)	219.6*131.76	154.08*85.92
	Outline dimension (mm)	278.0*192.3*44.0	207.0*148.0*38.5
	Opening hole (mm)	260.2*179.2	192.0*138.5

3-2-4 TGM network model

Model		TGMC65-ET	TGMA63S-MT TGMA63S-ET	TGM865-ET	TGM765S-MT TGM765S-ET	TGM465-MT2 TGM465-ET
Features	Screen size	15.6"	10.1"	8"	7"	4.3"
	Resolution	1366*768	1024*600	800*600	800*480	480*272
	LCD	TFT LCD, LED backlight				
	Display color	16.77 million colors				

	Brightness	250 cd/m ²	200 cd/m ²			
	Touch panel	4-wire resistor touch screen				
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation				
	Memory	128MB				
Interface	PLC port	RS232/RS485/RS422				
	Download port	RS232/RS485 (TGM465-ET has no download port)				
	USB-A port	Flash disk port, USB2.0, UT/ET model supported				
	USB-B port	USB download port, USB2.0				
	Ethernet port	RJ45, ET model supported				
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)				
	Consumption current	730mA	270mA	250mA	200mA	140mA
	Allowable power loss	Below 10ms (less than 1s in fact)				
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)				
	Insulation resistance	Above 10MΩ, DC500V				
Environment	Operation temperature	0-50°C				
	Storage temperature	-20-60°C				
	Operation humidity	10%RH-90%RH (no condensation)				
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute				
	Air	No corrosive gas				
	Cooling mode	Natural air cooling				
	Protection level	Front cover IP65				
Dimension	Display area (mm)	344.23* 193.54	219.6*131.76	162.0*121.5	154.08*85.92	95.04*53.86
	Outline dimension (mm)	410.0*270.0* 65.0	278.0*192.3* 44.0	224.4*170.8* 45.5	207.0*148.0* 38.5	152.0*102.0* 41.8
	Opening hole (mm)	399.0*259.0	260.2*179.7	211.4*157.8	192.0*138.5	144.0*94.0

3-2-5 TG general model

Model		TGC65-ET	TGA63-MT TGA63-UT TGA63-ET	TGA62-MT TGA62-ET	TG865-MT TG865-ET	TG765-MT TG765-UT TG765-ET	TG465-MT TG465-UT TG465-ET	TG465-MT2 TG465-UT2 TG465-XT	
Features	Screen size	15.6	10.1	10.1	8	7	4.3		
	Resolution	1366*768	1024*600	800*480	800*600	800*480	480*272		
	LCD	TFT LCD, LED backlight							
	Display color	16.77 million colors							
	Brightness	250	200						
	Touch panel	4-wire resistor touch screen							
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation							
	Memory	128MB							
Interface	PLC port	RS232/RS485/RS422							
	Download port	RS232/RS485					RS232/RS485 (only MT2/UT2 model supported)		
	USB-A port	Flash disk port, USB2.0, UT/ET model supported							
	USB-B port	USB download port, USB2.0							
	Ethernet port	RJ45, ET model supported							
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)							
	Consumption current	730mA	270mA	250mA	200mA	180mA			
	Allowable power loss	Below 10ms (less than 1s in fact)							
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)							
	Insulation resistance	Above 10MΩ, DC500V							
Environment	Operation temperature	0-50°C							
	Storage temperature	-20-60°C							
	Operation humidity	10%RH-90%RH (no condensation)							
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute							
	Air	No corrosive gas							
	Cooling mode	Natural air cooling							
	Protection level	Front cover IP65							
Dimension	Display area (mm)	344.23* 193.54	219.6*131.76	162.0* 121.5	154.08* 85.92	95.04*53.86			
	Outline	410.0*	272.2*191.7*51.2	224.4*	200.4*	152.0*102.0*41.8			

	dimension (mm)	270.0* 65.0		170.8* 45.5	146.9* 48.5	
	Opening hole (mm)	399.0* 259.0	260.2*179.7	211.4* 157.8	192.0* 138.5	144.0*94.0

Note: TG465-MT/UT V3.0 and up version PLC port supported RS422.

3-2-6 TG(P) oil-resistant model

Model		TGA62-MT(P) TGA62-ET(P)	TG765-MT(P) TG765-UT(P)	TG765-XT(P)-C	TG465-MT(P)
Features	Screen size	10.1"	7"	7"	4.3"
	Resolution	800*480	800*480	800*480	480*272
	LCD	TFT LCD, LED backlight			
	Display color	16.77 million colors			
	Brightness	200 cd/m ²			
	Touch panel	4-wire resistor touch screen			
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation			
	Memory	128MB			
Interface	PLC port	RS232/RS485/RS422		RS232	RS232/RS485/ RS422
	Download port	RS232/RS485		\	\
	USB-A port	Flash disk port, USB2.0, UT(P)/ET(P) model supported			
	USB-B port	USB download port, USB2.0			
	Ethernet port	RJ45 ET(P) model supported	\		\
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)			
	Consumption current	270mA	200mA	200mA	180mA
	Allowable power loss	Below 10ms (less than 1s in fact)			
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)			
	Insulation resistance	Above 10MΩ, DC500V			
Environment	Operation temperature	0-50°C			
	Storage temperature	-20-60°C			
	Operation humidity	10%RH-90%RH (no condensation)			

	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute			
	Air	No corrosive gas			
	Cooling mode	Natural air cooling			
	Protection level	Front cover IP65			
Dimension	Display area (mm)	219.6*131.76	154.08*85.92	154.08*85.92	95.04*53.86
	Outline dimension (mm)	272.2*191.7*51.2	200.4*146.9*48.5	200.4*146.9*48.5	152.0*102.0*41.8
	Opening hole (mm)	260.2*179.7	192.0*138.5	192.0*138.5	144.0*94.0

3-2-7 TG-XT cost-saving model

Model		TG765-XT-C	TG765S-XT	TG765G-XT
Features	Screen size	7"	7"	7"
	Resolution	800*480		
	LCD	TFT LCD, LED backlight		
	Display color	16.77 million colors		
	Brightness	200 cd/m ²		
	Touch panel	4-wire resistor touch screen		
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation		
	Memory	128MB		
Interface	PLC port	RS232	RS232	RS232
	Download port	\	RS232	RS232
	USB-A port	\		
	USB-B port	USB download port, USB2.0		
	Ethernet port	\		
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)		
	Consumption current	200mA		
	Allowable power loss	Below 10ms (less than 1s in fact)		
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)		
	Insulation resistance	Above 10MΩ, DC500V		
Environment	Operation temperature	0-50°C		
	Storage temperature	-20-60°C		

	Operation humidity	10%RH-90%RH (no condensation)		
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute		
	Air	No corrosive gas		
	Cooling mode	Natural air cooling		
	Protection level	Front cover IP65		
Dimension	Display area (mm)	154.08*85.92	154.08*85.92	154.08*85.92
	Outline dimension (mm)	200.4*146.9*48.5	207.4*148.0*38.5	207.0*148.0*38.5
	Opening hole (mm)	192.0*138.5	192.0*138.5	192.0*138.5

3-2-8 TG-NT X-NET bus model

Model		TGA63-NT	TG765-NT
Features	Screen size	10.1"	7"
	Resolution	1024*600	800*480
	LCD	TFT LCD, LED backlight	
	Display color	16.77 million colors	
	Brightness	200 cd/m ²	
	Touch panel	4-wire resistor touch screen	
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation	
	Memory	128MB	
Interface	PLC port	RS485	
	Download port	RS232/RS485/RS422	
	USB-A port	Flash disk port, USB2.0	
	USB-B port	USB download port, USB2.0	
	Ethernet port	RJ45	
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)	
	Consumption current	270mA	200mA
	Allowable power loss	Below 10ms (less than 1s in fact)	
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)	
	Insulation resistance	Above 10MΩ, DC500V	
Environment	Operation temperature	0-50°C	

	Storage temperature	-20-60°C	
	Operation humidity	10%RH-90%RH (no condensation)	
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute	
	Air	No corrosive gas	
	Cooling mode	Natural air cooling	
	Protection level	Front cover IP65	
Dimension	Display area (mm)	219.6*131.76	154.08*85.92
	Outline dimension (mm)	272.2*191.7*51.2	200.4*146.9*48.5
	Opening hole (mm)	260.2*179.7	192.0*138.5

3-2-9 TGM(B) embedded borderless model

Model		TGM765B-MT TGM765B-ET	TGM465B-MT
Features	Screen size	7"	4.3"
	Resolution	800*480	480*272
	LCD	TFT LCD, LED backlight	
	Display color	16.77 million colors	
	Brightness	200 cd/m ²	
	Touch panel	4-wire resistor touch screen	
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation	
	Memory	128MB	64MB
Interface	PLC port	RS232/RS485/RS422	RS485
	Download port	RS232/RS485	RS232
	USB-A port	Flash disk port, USB2.0, ET model supported	
	USB-B port	USB download port, USB2.0	
	Ethernet port	RJ45, ET model supported	\
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)	
	Consumption current	200mA	140mA
	Allowable power loss	Below 10ms (less than 1s in fact)	
	Voltage impact resistance	AC1000V, 10mA, less than 1 minute (signal and ground)	
	Insulation resistance	Above 10MΩ, DC500V	

Environment	Operation temperature	0-50°C	
	Storage temperature	-20-60°C	
	Operation humidity	10%RH-90%RH (no condensation)	
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute	
	Air	No corrosive gas	
	Cooling mode	Natural air cooling	
	Protection level	Front cover IP65	
Dimension	Display area (mm)	154.08*85.92	95.04*53.86
	Outline dimension (mm)	182.4*108.5*39.0	128.0*75.0*27.6
	Opening hole (mm)	174.4*65.1	118.0*67.0

3-2-10 TGM(L) highlight display model

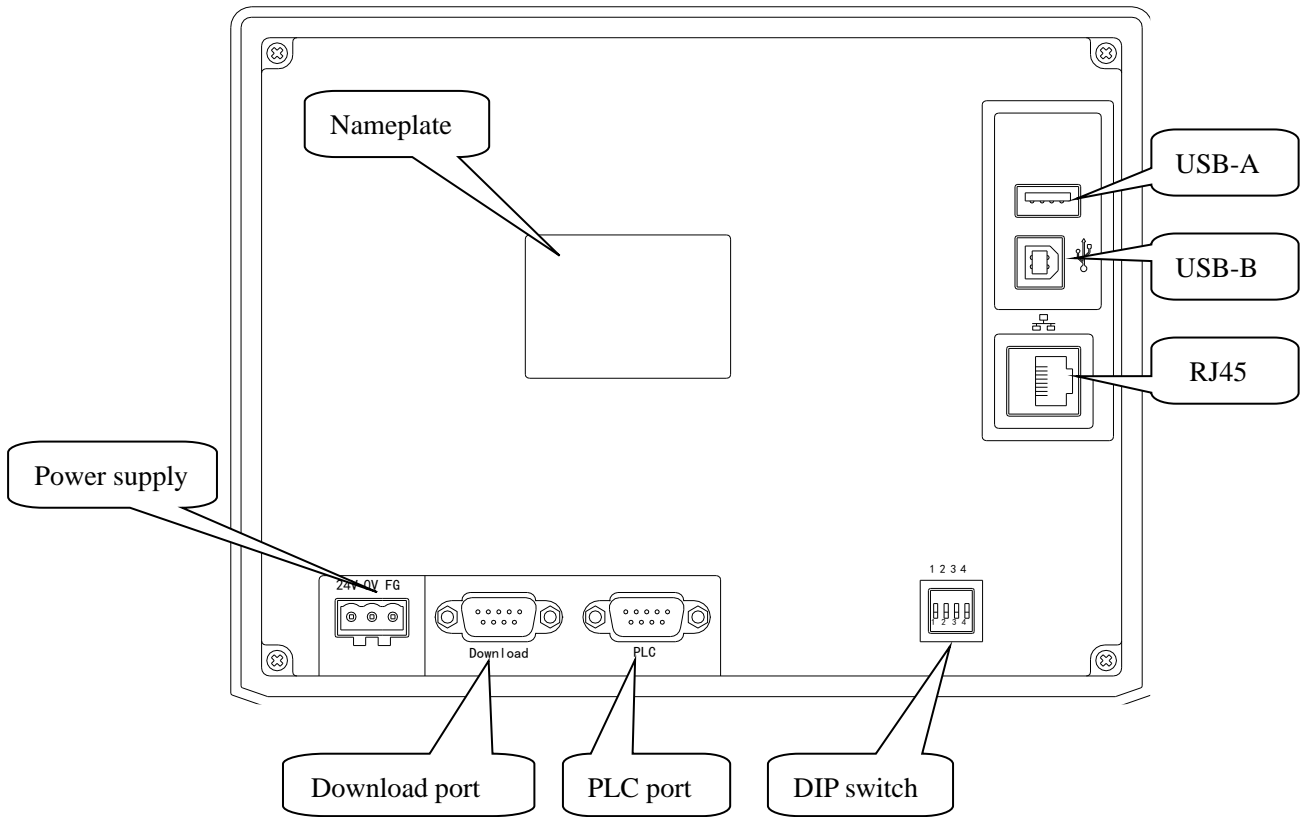
Model		TGM765L-MT	TGM765L-ET
Features	Screen size	7"	
	Resolution	800*480	
	LCD	TFT LCD, LED backlight	
	Display color	16.77 million colors	
	Brightness	530 cd/m ²	
	Touch panel	4-wire resistor touch screen	
	LCD life	Above 50000 hours, ambient temperature 25°C, 24 hours operation	
	Memory	128MB	
Interface	PLC port	RS232/RS485/RS422	
	Download port	RS232/RS485	
	USB-A port	Flash disk port, USB2.0	
	USB-B port	USB download port, USB2.0	
	Ethernet port	\	RJ45
	DIP switch	Used for time and touch calibration, as well as some parameter settings	
Electric features	Input voltage	DC24V (voltage range: DC22V-DC26V)	
	Consumption current	200mA	
	Allowable power loss	Below 10ms (less than 1s in fact)	
	Voltage impact	AC1000V, 10mA, less than 1 minute (signal and ground)	

	resistance	
	Insulation resistance	Above 10MΩ, DC500V
Environment	Operation temperature	0-50°C
	Storage temperature	-20-60°C
	Operation humidity	10%RH-90%RH (no condensation)
	Anti-interference ability	Voltage noise: 1500Vp-p, pulse width 1us, 1 minute
	Air	No corrosive gas
	Cooling mode	Natural air cooling
	Protection level	Front cover IP65
Dimension	Display area (mm)	154.08*85.92
	Outline dimension (mm)	207.0*148.0*38.5
	Opening hole (mm)	192.0*138.5

3-3 Hardware

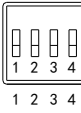

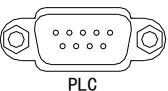


3-3-1 Hardware structure


The back side of TG series HMI:



3-3-2 Ports introduction

TG series HMI port:

Outline	Name	Function
	DIP switch	Force-download, touch area adjustment
	Download port	RS232/RS485 (TG465 except MT2/UT2, TG765-XT/TG765-XT(P)/TG765-XT-C/TG765-XT(P)-C/TGM765B-M T/ET no this port, NT model supported RS232/RS485/RS422, TG765S-XT supported RS232)
	PLC port	RS232/RS485/RS422 (TG465-XT and this series V3.0 and below version only supported RS232/RS485, TG765-XT/TG765-XT(P)/TG765-XT-C/TG765-XT(P)-C/TG765S-XT only supported RS232, NT models supported RS485 and X-NET bus)
	USB-A	Connect to flash disk to store data, flash disk to import project (HMI hardware version V2.D3C and above)
	USB-B	Connect USB cable to download/upload program

	Ethernet port	Support TBOX, Siemens S7-1200, S7-200 Smart and other devices which support Modbus-TCP protocol
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1. DIP switch

TG series has 4-bit DIP switch at the back side; they can set the function of COM1 port.

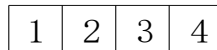
Switch	DIP1	DIP2	DIP3	DIP4	Function
State	ON	OFF	OFF	OFF	Undefined
	OFF	ON	OFF	OFF	Force-download mode
	OFF	OFF	ON	OFF	System menu: Adjust clock and touch panel, Import program of flash disk
	OFF	OFF	OFF	ON	Undefined



If the screen cannot show normally after downloading the program, please use force-download.

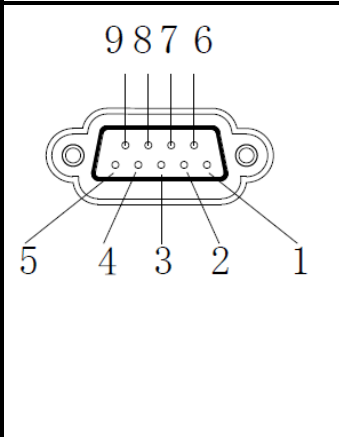
Step:

- (1) Cut off the power of TG, turn ON DIP switch 2;
- (2) Power on TG, connect the download cable to PC to download the program;
- (3) Turn OFF DIP switch 2 after finishing the download, repower on the TG.



2. Communication interface

The Pins definition of download port:

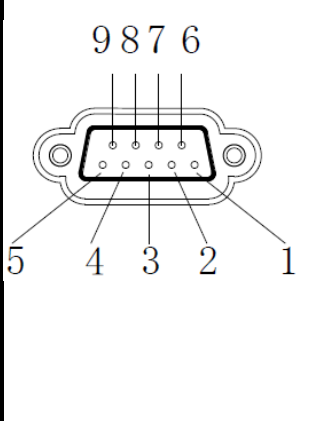
	Pin	Name	Description
	1	NC	Unused terminal
	2	RXD	RS232 receive
	3	TXD	RS232 send
	4	A	RS485 + signal
	5	GND	Signal ground
	6	NC	Unused terminal
	7	B	RS485 - signal
	8	NC	Unused terminal
	9	NC	Unused terminal

Note:

- (1) TG765-NT/TG865-NT/TGA63-NT has no this port.
- (2) TG465-XT/MT/UT/ET, TG765-XT, TG765-XT(P), TG765-XT-C, TG765-XT(P)-C, TGM765B-MT/ET don't have this port.

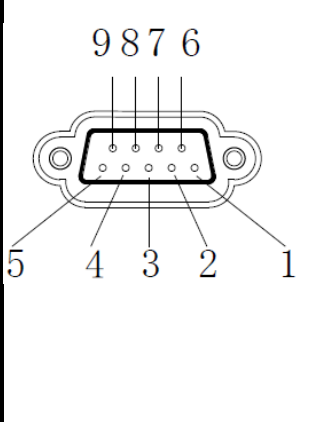
- (3) If the interface mode is not supported by this communication port of a specific model, the corresponding pin is an empty signal.

The Pins definition of PLC port:

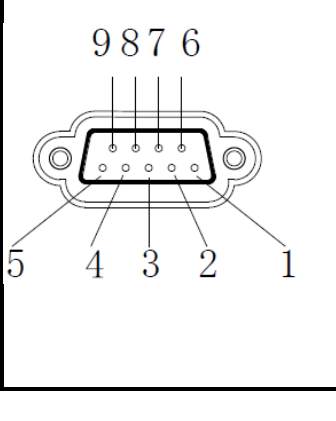
	Pin	Name	Description
	1	TD+	RS422 send +
	2	RXD	RS232 receive
	3	TXD	RS232 send
	4	A	RS485 + signal
	5	GND	Signal ground
	6	TD-	RS422 send -
	7	B	RS485 - signal
	8	RDD-	RS422 receive -
	9	RDD+	RS422 receive +

Note: except TG765-NT/TG865-NT/TGA63-NT. If the interface mode is not supported by this communication port of a specific model, the corresponding pin is an empty signal.

TG765-NT, TG865-NT, TGA63-NT download port:

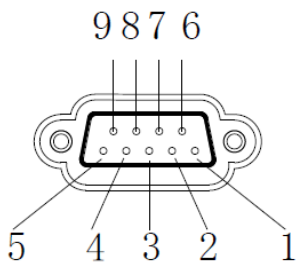
	Pin	Name	Description
	1	TD+	RS422 send +
	2	RXD	RS232 receive
	3	TXD	RS232 send
	4	A	RS485 +
	5	GND	Signal ground
	6	TD-	RS422 send -
	7	B	RS485 -
	8	RD-	RS422 receive -
	9	RD+	RS422 receive +

TG765-NT, TG865-NT, TGA63-NT PLC port:

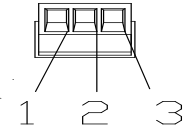
	Pin	Name	Description
	1	NC	Unused terminal
	2	A	RS485+
	3	B	RS485-
	4	A	RS485+
	5	B	RS485-
	6	NC	Unused terminal
	7	NC	Unused terminal
	8	NC	Unused terminal

	9	NC	Unused terminal
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TGM465B-MT download port:

	Pin	Name	Description
	1	NC	Unused terminal
	2	RXD	RS232 receive
	3	TXD	RS232 send
	4	NC	Unused terminal
	5	GND	Signal ground
	6	NC	Unused terminal
	7	NC	Unused terminal
	8	NC	Unused terminal
	9	NC	Unused terminal

TGM465B-MT PLC port:

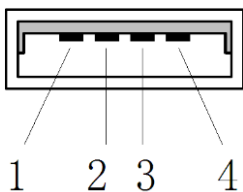
	Pin	Name	Explanation
	1	A	RS485+
	2	B	RS485-
	3	GND	Signal ground

3. USB-A port

USB-A (accord with USB2.0) of TG series HMI has below function:

- Backup management, data export/import, the speed can up to 480 Mbps.

USB-A port definition



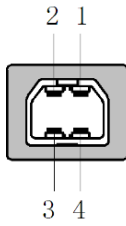
Pin	Name	Description
1	+5V	+5V voltage signal
2	DATA+	Data signal +
3	DATA-	Data signal -
4	-5V	-5V voltage signal

4. USB-B port

TG has one USB-B port (accord with USB2.0), located at the back side of TG, the functions are shown as below:

- To download the data, the speed can up to 480Mbps.

USB-B port definition





Pin	Name	Description
1	+5V	+5V voltage signal
2	DATA-	Data signal -
3	DATA+	Data signal +
4	GND	Ground signal

(1) Please use shielded USB cables.



(2) Please install USB driver before using. Download the driver from www.xinje.com.

(3) Connect TG with PC, open Touchwin software, click “ or ” to download the program.

5. RJ45 port

The pins definition of RJ45 port

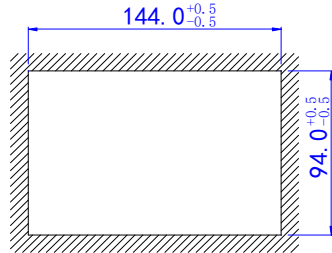
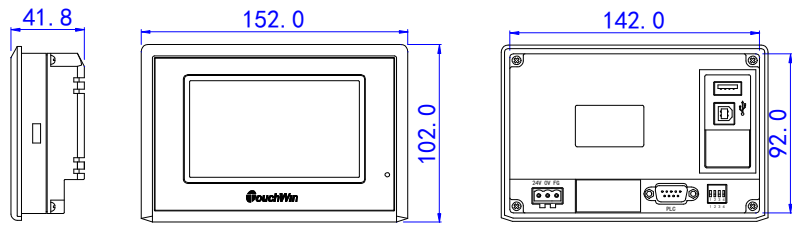
Pin	Color	Name	Explanation
1	Orange white	TXD+	Send +
2	Orange	TXD-	Send -
3	Green white	RXD+	Receive +
4	Blue	-	-
5	Blue white	-	-
6	Green	RXD-	Receive -
7	Brown white	-	-
8	Brown	-	-

3-4 Dimensions and installation

3-4-1 Product dimensions

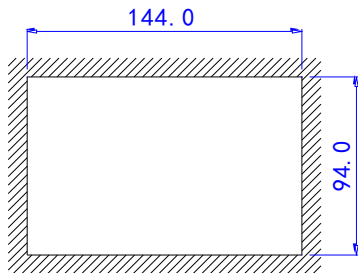
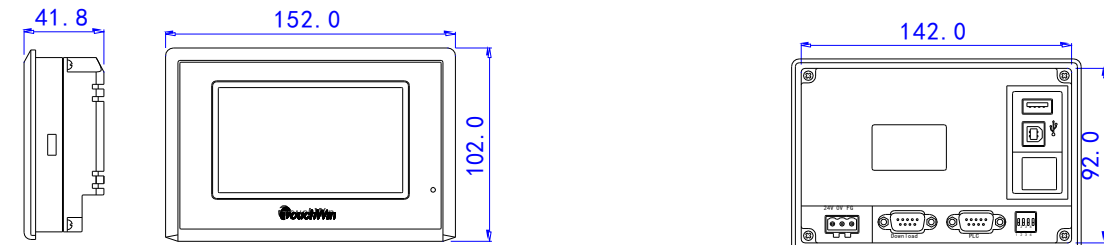
■ TG465-XT/MT/UT/ET

Unit: mm



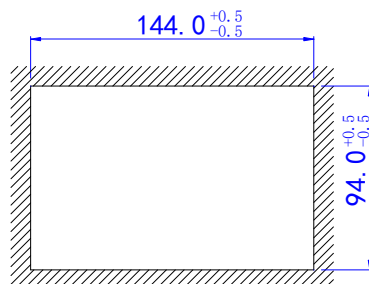
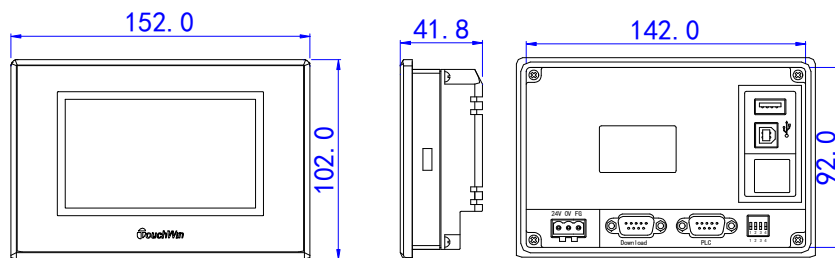
■ TG465-MT2/UT2, TGM465-MT2

Unit: mm



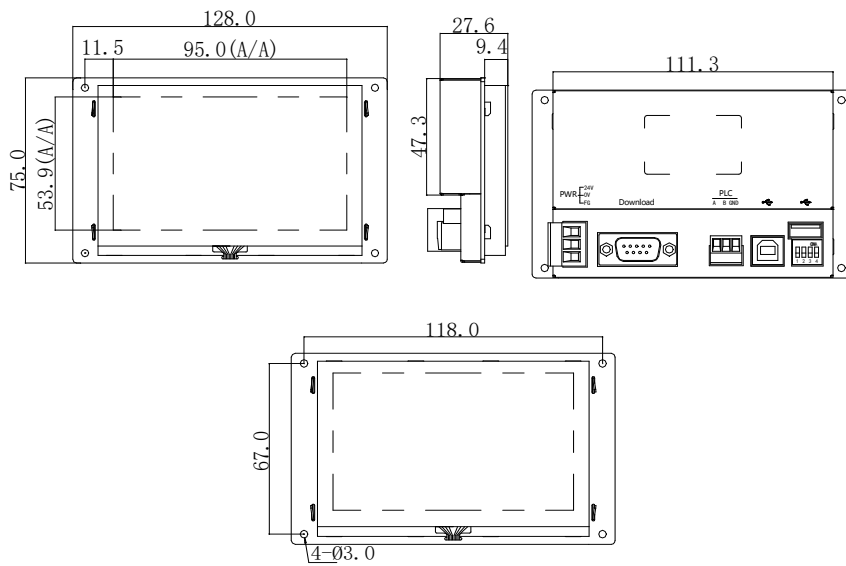
■ TG465-MT(P)/UT(P)

Unit: mm



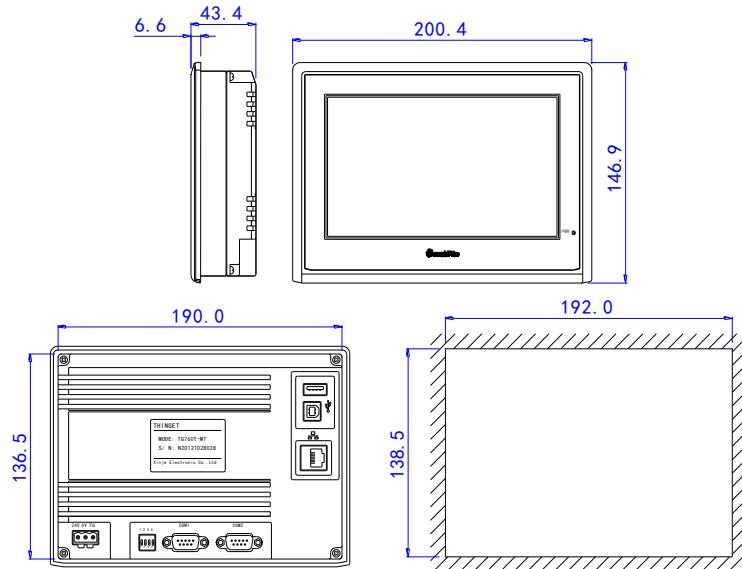
■ TGM465B-MT

Unit: mm



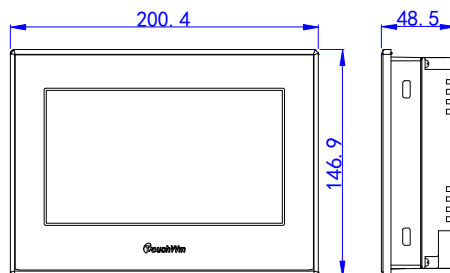
■ TG765-MT/UT/ET/NT, CTG765-ET, STG765-ET

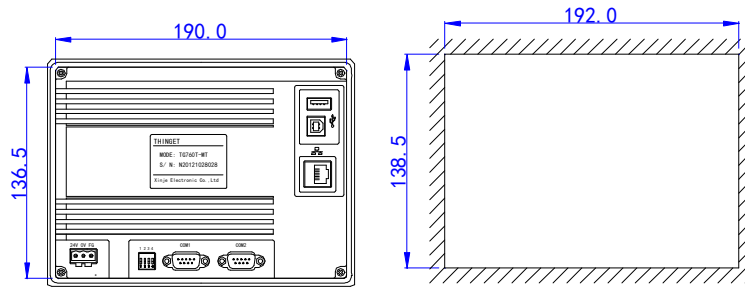
Unit: mm



■ TG765-MT(P)/UT(P)/ET(P)

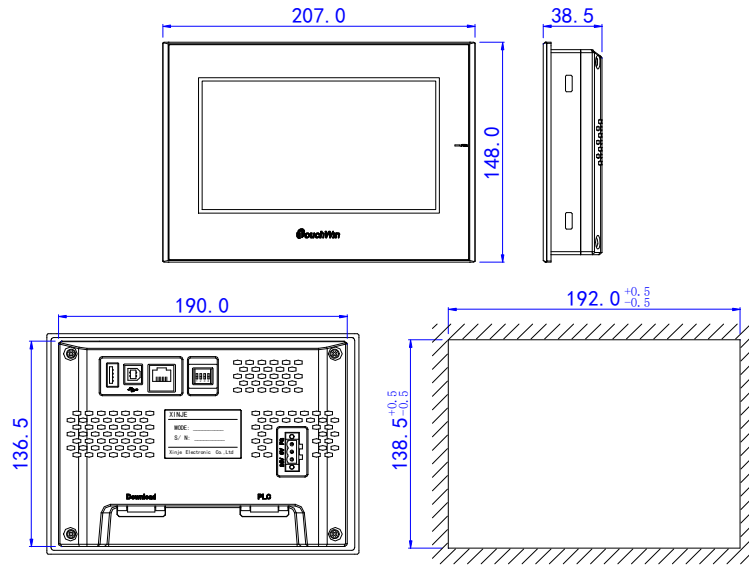
Unit: mm





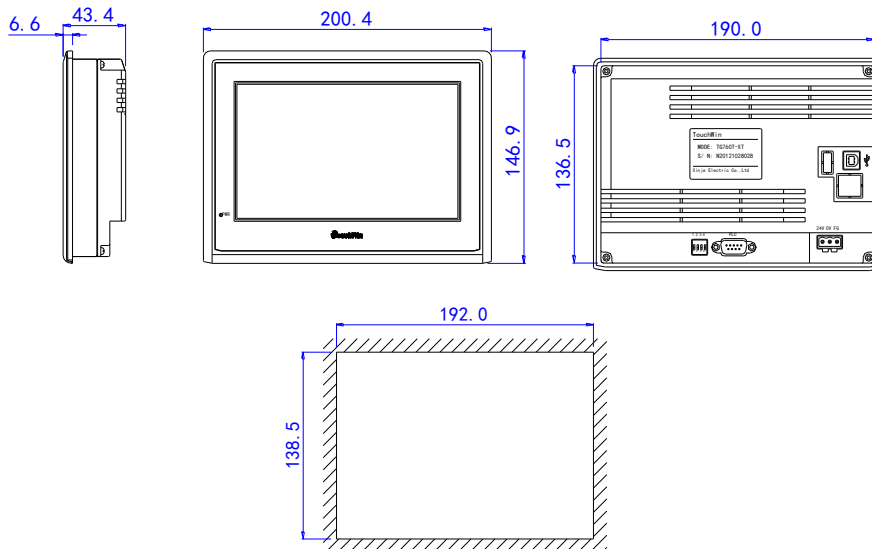
■ TG765S-XT/MT/UT/ET, TGM765S-MT/ET

Unit: mm



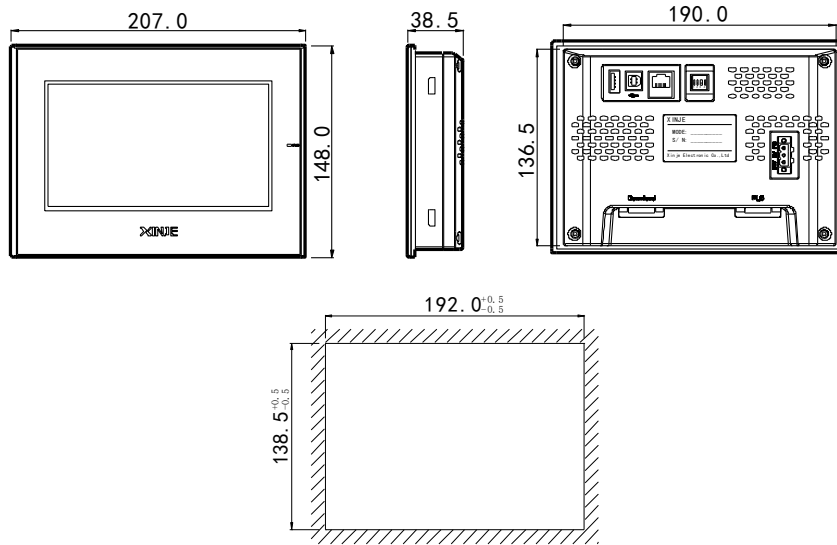
■ TG765-XT, TG765-XT(P), TG765-XT-C, TG765-XT(P)-C

Unit: mm



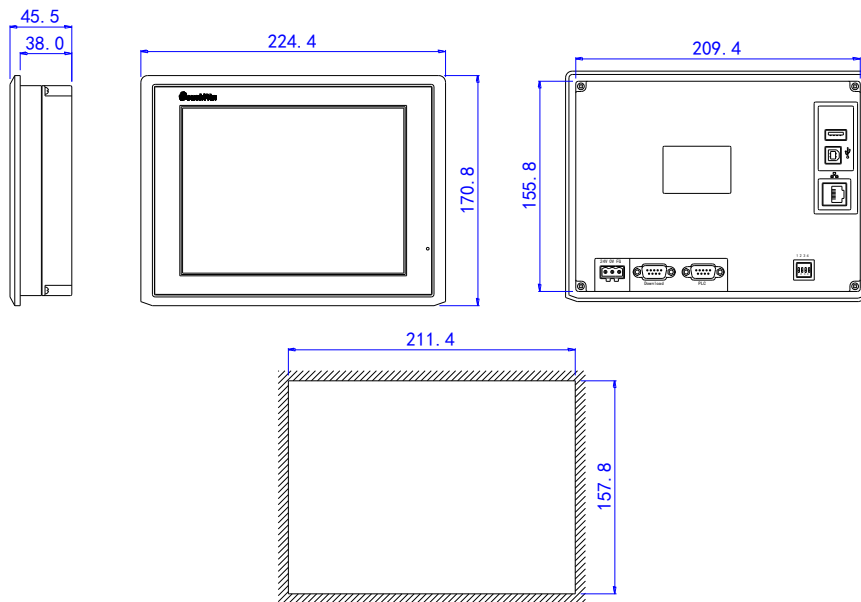
■ TGM765L-MT/ET

Unit: mm



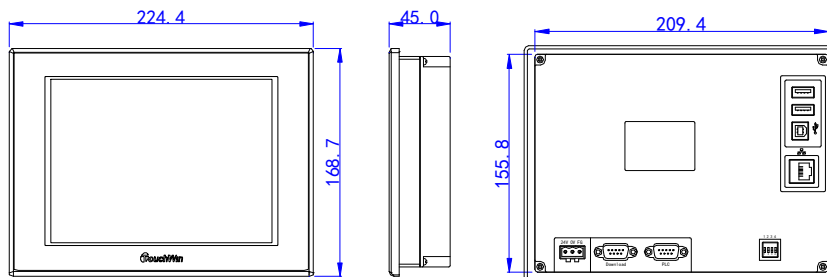
■ TG865-MT/ET/NT, TGM865-ET, CTG865-ET, STG865-ET

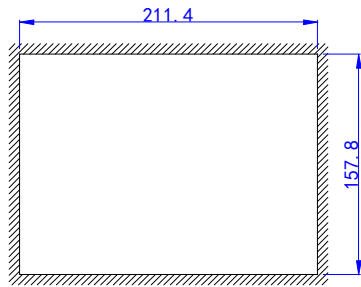
Unit: mm



■ TG865-MT(P)/ET(P)

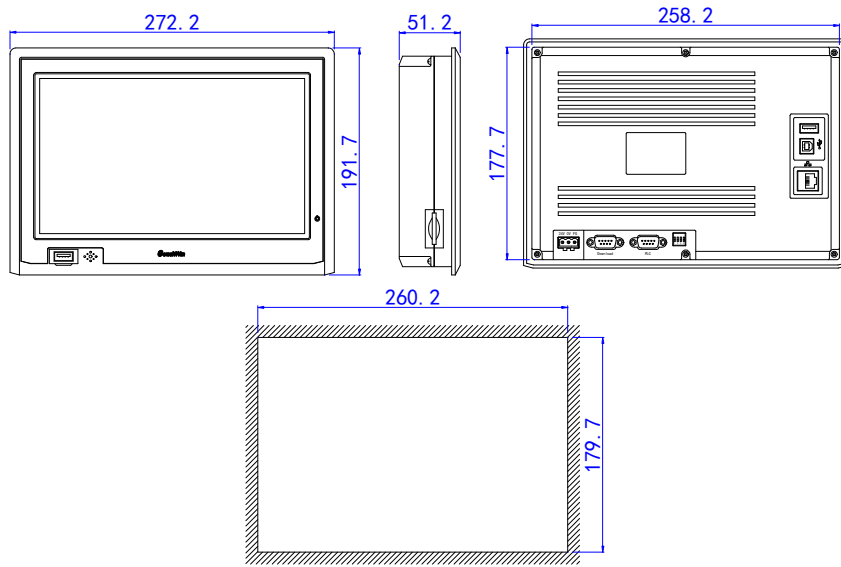
Unit: mm





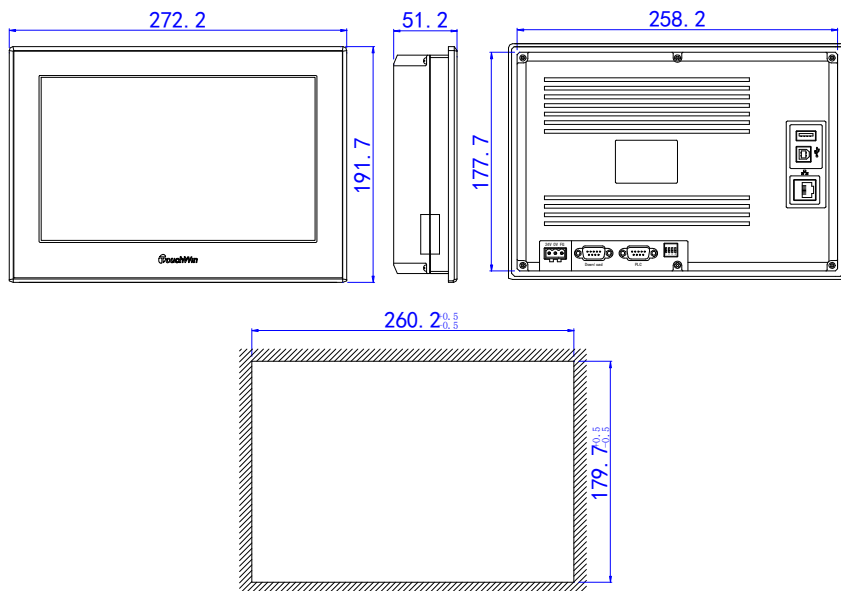
■ TGA62-MT/ET, CTGA62-ET

Unit: mm



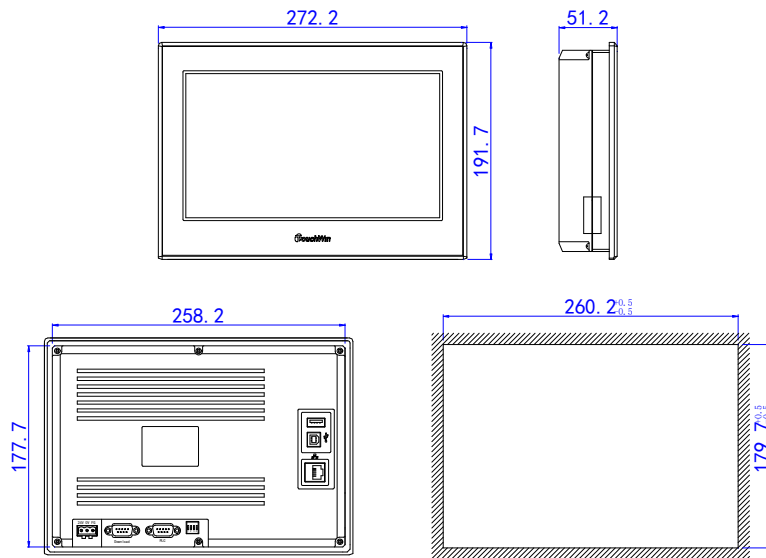
■ TGA62-MT(P)/ET(P)

Unit: mm



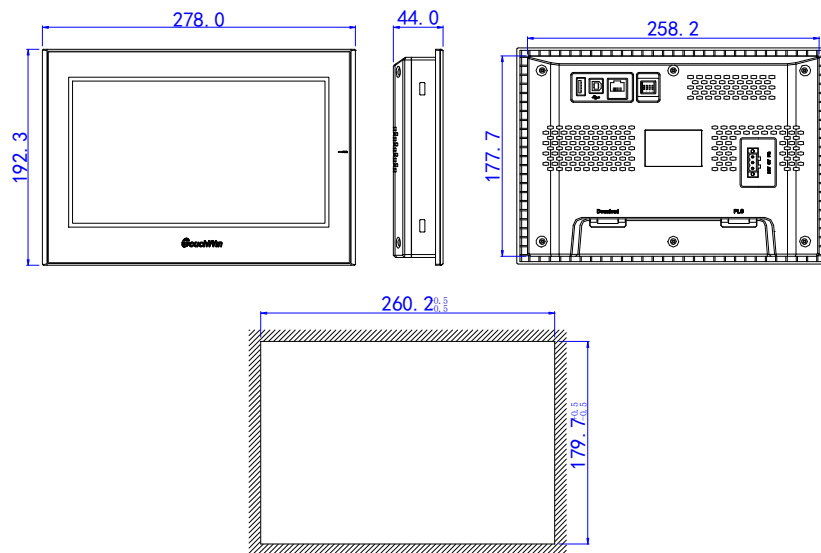
■ TGA63-MT/ET/UT/NT

Unit: mm



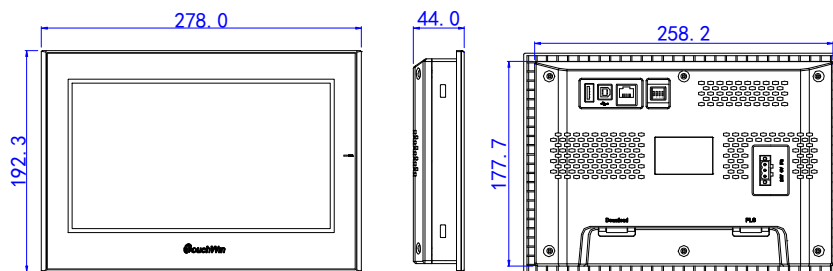
■ TGA63S/G-MT/ET/UT

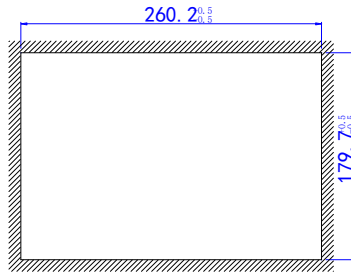
Unit: mm



■ TGMA63S-MT/ET

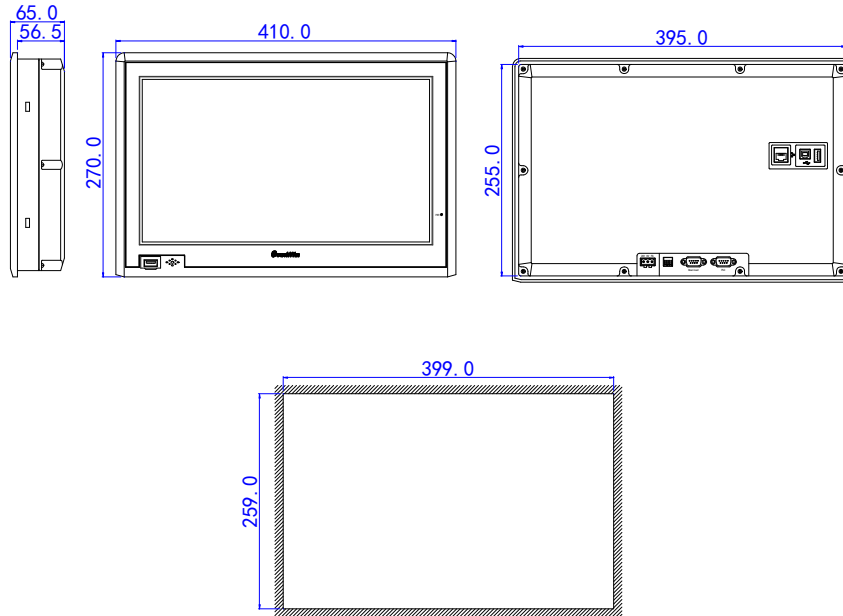
Unit: mm





■ TG(M)C65-ET

Unit: mm

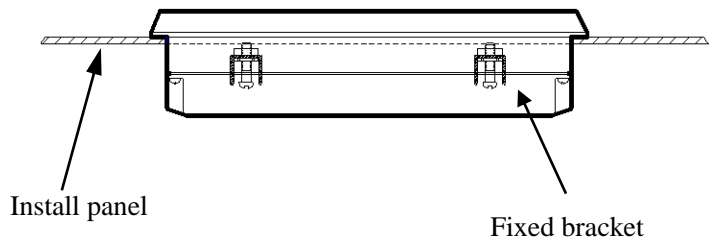
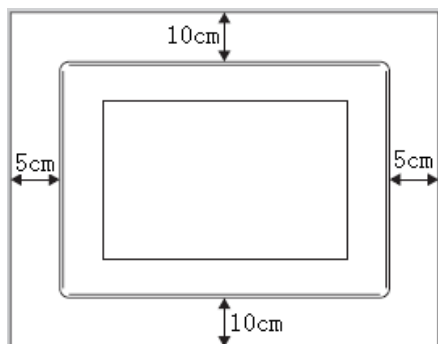


3-4-2 Installation and using environment

Install requirements:

TG has four ferric mounting racks when out of factory, there are two square holes on the up, down side of TG, use mounting rack to fix the TG with control cabinet.

In order to avoid TG temperature too high after long time working, please keep 10cm space on the up/down and 5cm on the left/right side of the TG when installing.



Install steps:

1. Refer to the dimension in the former chapter to open a rectangle mounting hole in the control cabinet;
2. Add airproof circles in the airproof slot when installing;
3. Insert the bottom of TH into the mounting hole of control cabinet;
4. Insert the install rack into the fix hole of TG then tighten the screw;
5. Connect TG and PLC with communication cable.

Notice: The communication cable can be offered by the supplier or made by user according to the connection diagram, input +24V DC power to start working

Environment:

Please use TG series touch screen indoor.

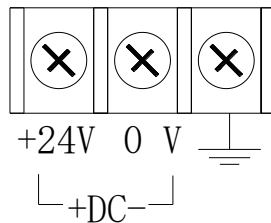


Do not use TG in below environment:

Inflammable gas, steam, dust, fast vary temperature, high humidity (it may cause moisture inside TG).

Power supply requirements:

TG series touch screen use DC +24V power supply only. The permitted voltage range is 20V~26V. The connection is as below:



Besides, if connect high voltage or AC power supply with TG, the TG may be damaged and cause electric shock to human body.



If use the DC +24V output of PLC, make sure the PLC has enough current to drive the TG.