IP65

A8
CPU

RS-485

MT8000 *iE* / *XE* Series

Professionals in Human Machine Interface

WEINTEK

Provide a variety of sizes of HMIs

*i*E-Series 4.3" / 7" / 10.1"

- Ultra-slim form factor enables MT8000iE-Series can be installed in any industrial application environment.
- Brand new look and color design with perfect aesthetic sense.
- Equipped with powerful Cortex A8 600MHz CPU.
- Built-in isolated RS-485 interface ensures the HMI reliability in any complicated grounding environment. (MT8050iE & MT6070iE excluded)
- PCB coating protection to prevent moisture corrosion in harsh environments. (MT6070iE excluded)
- Comply with IP65 rating and CE testing standards.
- Offer more than 250 drivers to connect with various controllers.

IP65

PCB coating

Isolated RS-485

CE

Improve performance in all aspects

XE-Series 12.1" / 15"

- Two large sizes of HMIs (12.1", and 15") are optimal for industrial control application in various environments.
- Aluminum enclosure shows exquisite appearance.
- High-resolution (1024 x 768 pixels) with 16.2M colors display.
- Equipped with powerful Cortex A8 1GHz CPU.
- Built-in isolated RS-485 interface ensures the HMI reliability in any complicated grounding environment.
- PCB coating protection to prevent moisture corrosion in harsh environments.
- Comply with IP65 rating and CE testing standards.
- Offer more than 250 drivers to connect with various controllers.

Built-in isolated RS-485

In industrial control environments, the ground voltage of each device may be different. When connecting multiple devices such as a PLC, Servo and Inverter to the RS-485 port of the HMI, the ground voltage difference of these devices may damage the interface components. Thus, the built-in isolated RS-485 design can effectively avoid the ground potential difference problem and ensure your HMI endurable in any complicated grounding environment.

RS-485
(Isolated)

0V
24V
DC 24V
5V 0V
USB
RS-232
EXT5V
EXT0V
Ethernet
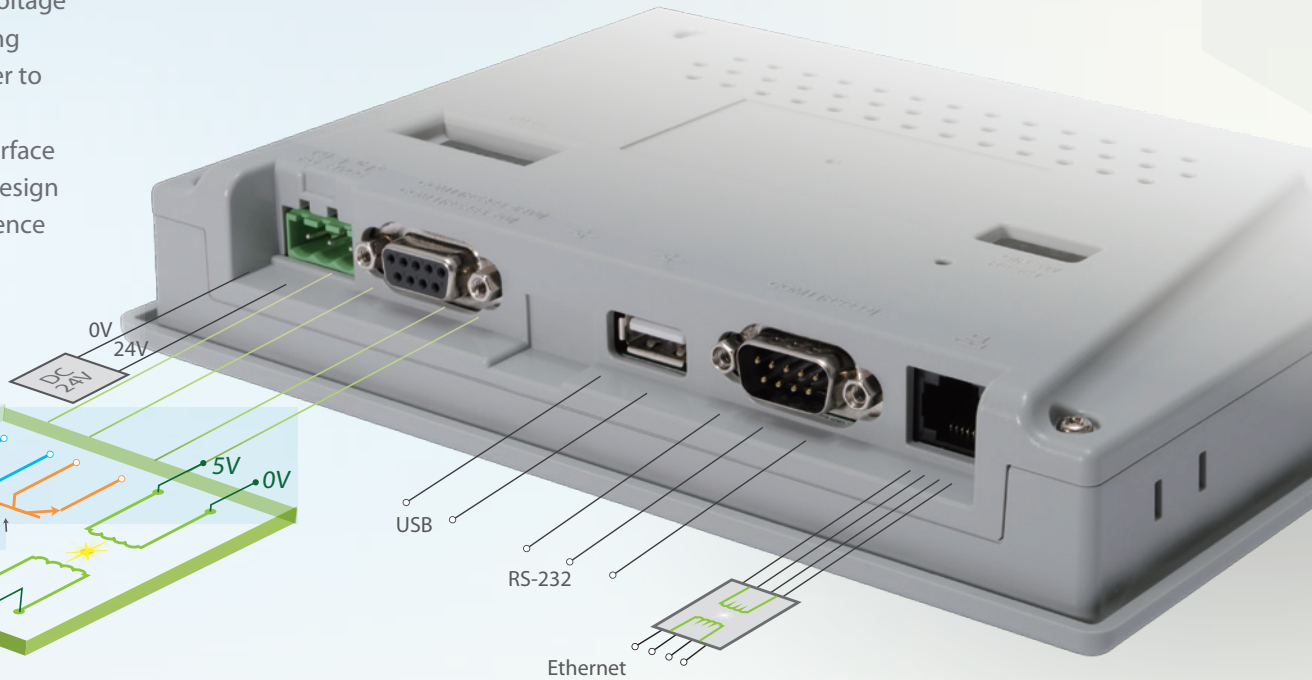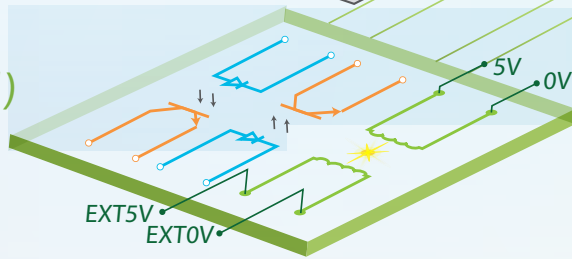
Aluminum Enclosure

Aluminum enclosure greatly improves the reliability of the XE-Series.

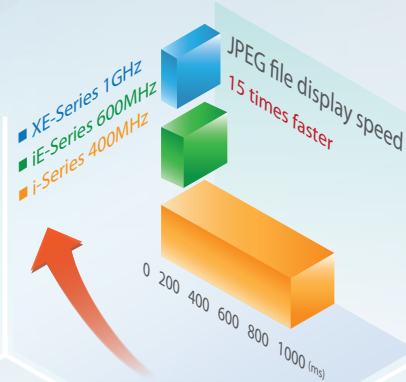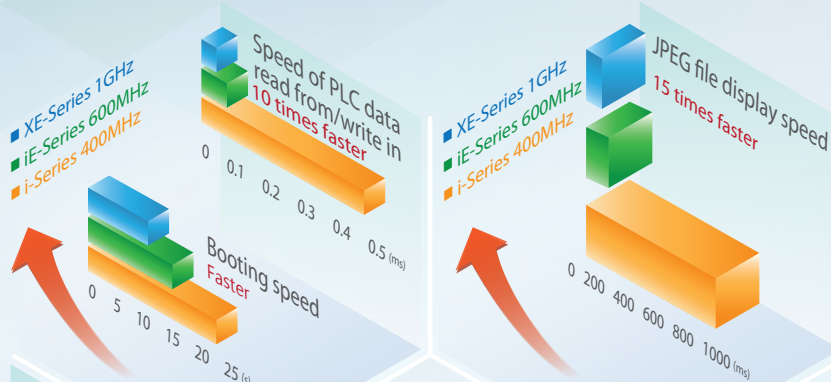|	iE-Series				XE-Series	
	MT8050iE	MT6070iE	MT8070iE	MT8100iE	MT8121XE	MT8150XE
Isolated RS-485			•	•	•	•
Aluminum Enclosure					•	•

PCB Coating Protection

As the electronic component gets smaller, the copper wires of the PCB are getting thinner. The thin cooper wires result in corrosion of PCB easily, especially in harsh environments with high humility, corrosive air, etc. Thus, to prevent the PCB corrosion, using the PCB coating can enhance the strength of the damp-proof, dust-proof and corrosion resistance in any harsh environments.
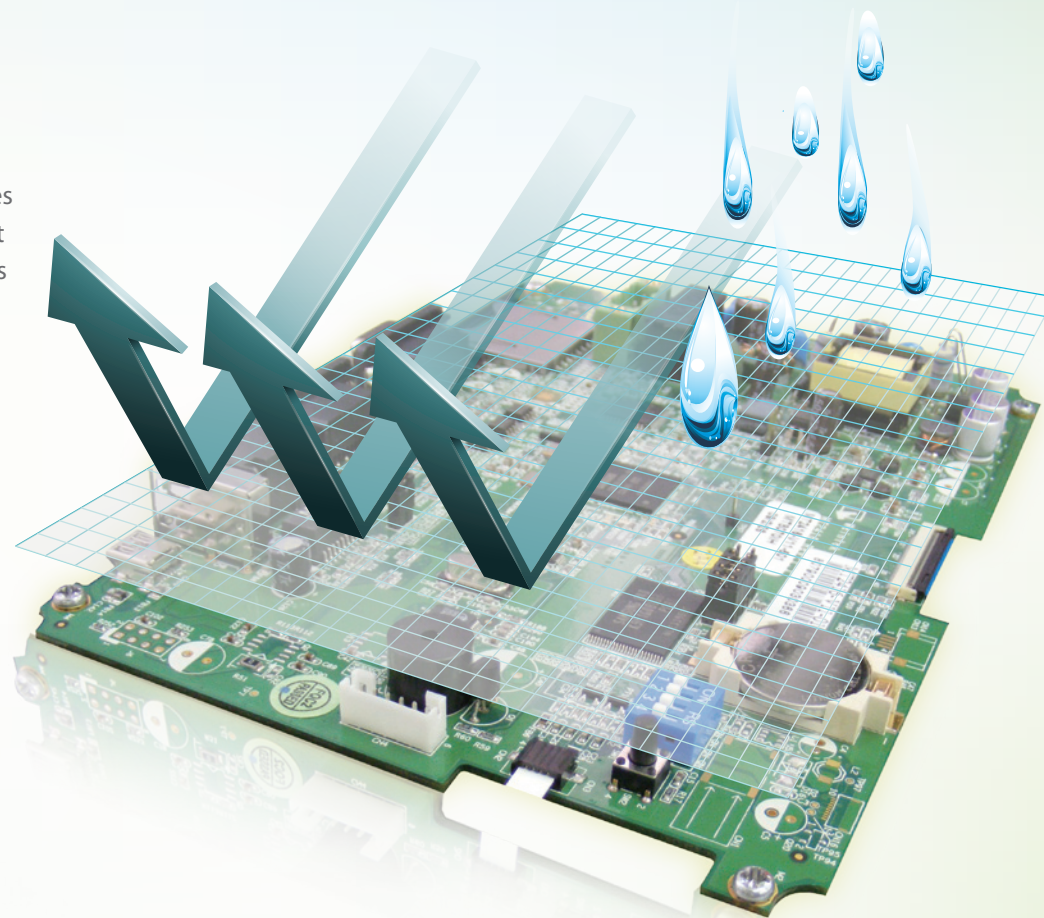
Comply with IP65 rating and CE testing standards

WEINTEK iE-Series and XE-Series are all rated to IP65 and in compliance with CE testing standards to ensure long life and durability for optimum performance.

	iE-Series				XE-Series	
	MT8050iE	MT6070iE	MT8070iE	MT8100iE	MT8121XE	MT8150XE
PCB Coating	●		●	●	●	●
IP65、CE	●	●	●	●	●	●

XE-Series 1GHz / iE-Series 600MHz / i-Series 400MHz

Speed of PLC data read from/write in 10 times faster

0 0.1 0.2 0.3 0.4 0.5 (ms)

Booting speed Faster

0 5 10 15 20 25 (s)

Advanced Operation

XE-Series 1GHz / iE-Series 600MHz / i-Series 400MHz

JPEG file display speed 15 times faster

0 200 400 600 800 1000 (ms)

Fast Display

Cortex A8

1GHz

600MHz

Fast Window Change

16.2M 1024 X 768

Rich Color Display

Industry Boiler Control System 2012/10/12 13:14:29
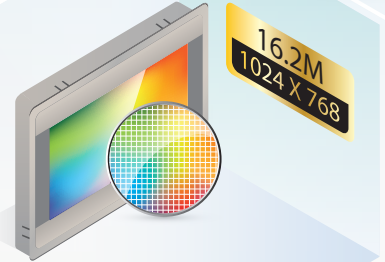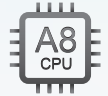
Equipped with powerful Cortex A8 CPU

- The HMIs that are equipped with the A8 CPU have set a benchmark record such as booting speed, JPEG file display speed, and speed of PLC data read/write.
- High speed of communication improves the efficiency of database operations.
- Fast change a window which contains many complex objects.
- With 16.2M colors display, the HMI shows realistic graphics and operating objects that enable plant personnel can quickly control the on-site status.

	iE-Series				XE-Series	
	MT8050iE	MT6070iE	MT8070iE	MT8100iE	MT8121XE	MT8150XE
CPU 600MHz	●	●	●	●		
CPU 1GHz					●	●

EasyBuilder Pro
Powerful, Easy to Use

- Continually update and improve the user interface and functions based on diverse usage behaviors.
- Fully-compatible with EasyBuilder 8000, thus it reduces the software switching cost.
- Off-line simulation to preview the result without connecting an HMI and a PLC.
- All the graphics are embedded when uploading/downloading the project file.
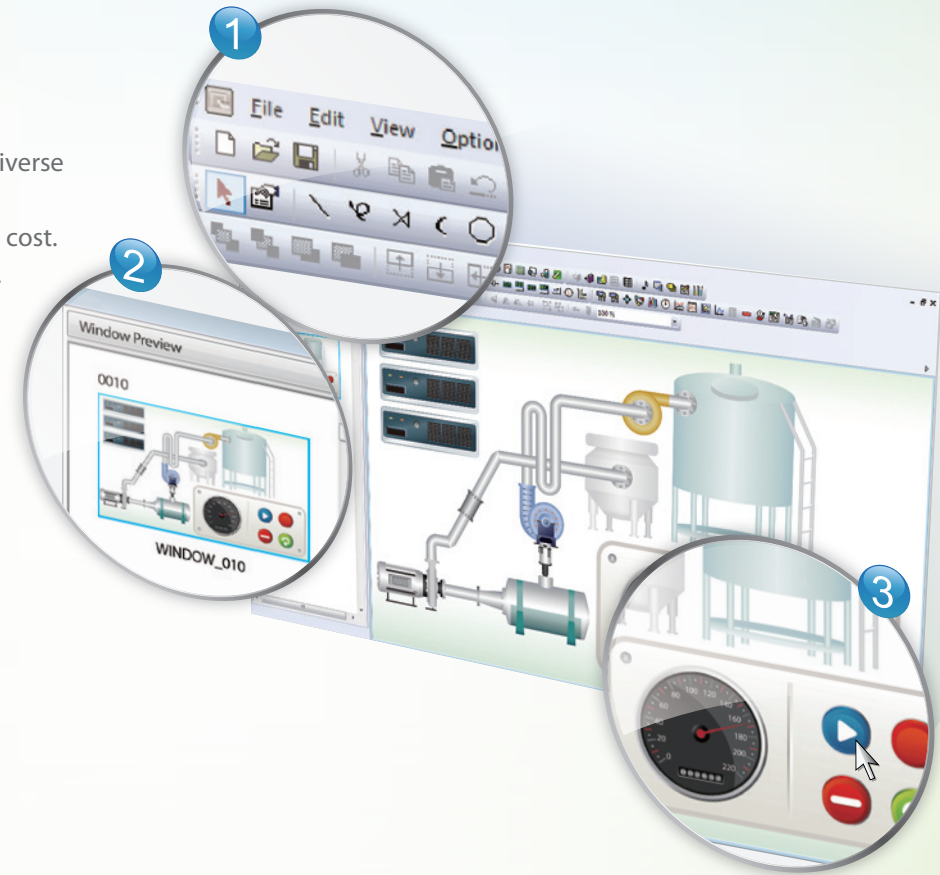
① Function Bar
- Grouped by different functions and shown in simple icons to facilitate the usage.

② Window Bar
- Show the number of windows and their names.
- Show all the object names and addresses that a window contains.
- **Window Preview** can preview all the display of windows.

③ Main Window
- Easy to create any functional objects and design the user interface.

Extensive Graphic Libraries

- Built-in sufficient high-quality graphics to fulfill your need.
- Support to import different graphic types included gif, bmp, jpg, png, and svg.

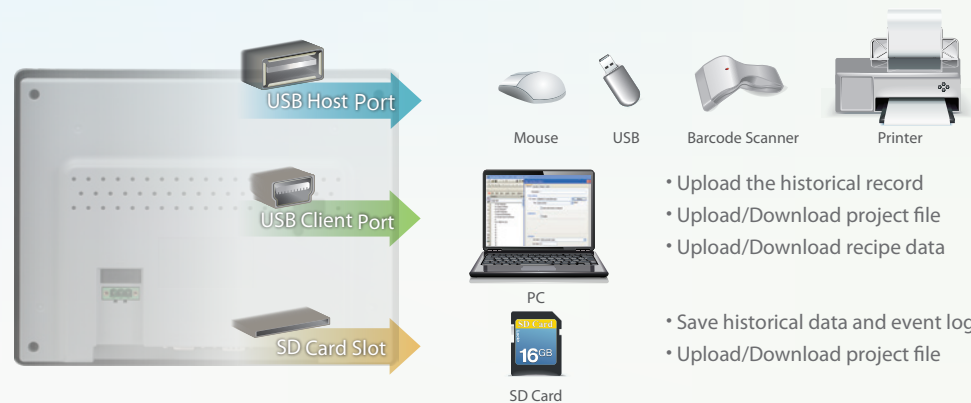|	iE-Series				XE-Series	
	MT8050iE	MT6070iE	MT8070iE	MT8100iE	MT8121XE	MT8150XE
EasyBuilder Pro	●	●	●	●	●	●
Extensive Graphic Library	●	●	●	●	●	●
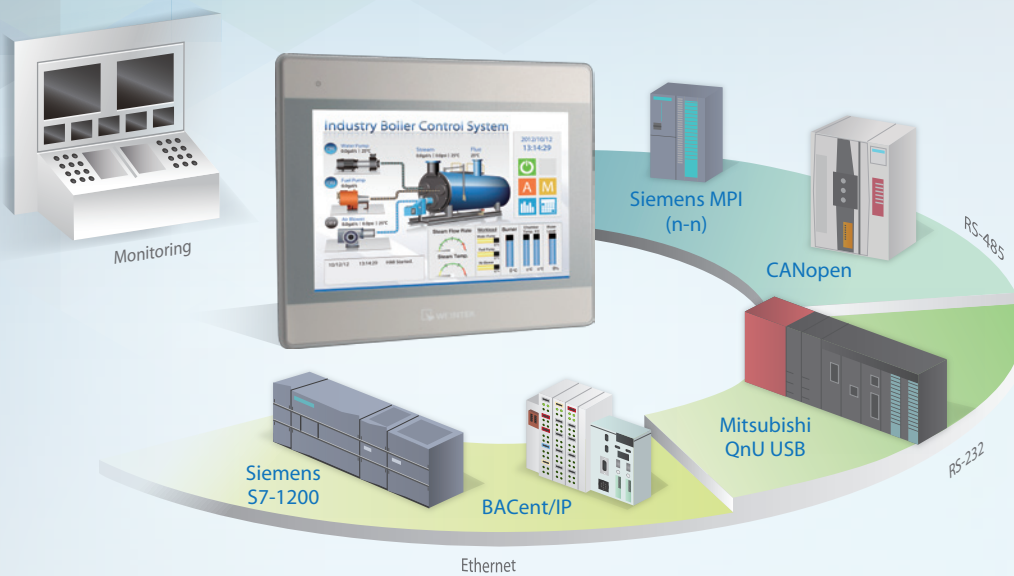
Support more than 250 Communication Drivers

The HMIs are not only equipped with RS-232/RS-485(2W and 4W) and the Ethernet(10/100M Base-T), but also support more than 250 communication drivers to connect to most of PLC, Servo, Inverter, temperature controller, barcode scanner, etc. on the market. Those features are well-suited for industrial environments and can be a perfect solution to monitor and control your system.

Monitoring

Industry Boiler Control System

Siemens MPI (n-n)

CANopen

RS-485

Mitsubishi QnU USB

Siemens S7-1200

BACent/IP

RS-232

Ethernet

Built-in various Communication Interfaces

- USB Host Port
  - Download a project to the HMI or Upload it from USB drive to PC.
  - Save historical data and event log to your USB drive.
  - Connect to a mouse, printer, barcode scanner, etc.

- USB Client Port
  - Download a project to the HMI or Upload it to your PC.
  - Upload the historical record.
  - Upload/Download recipe data.

- SD Card Slot
  - Download a project to the HMI or Upload it from SD card to PC.
 - Save historical data and event log.

USB Host Port

USB Client Port

SD Card Slot

Mouse   USB   Barcode Scanner   Printer

- Upload the historical record
- Upload/Download project file
- Upload/Download recipe data

PC

SD Card

16GB

- Save historical data and event log
- Upload/Download project file

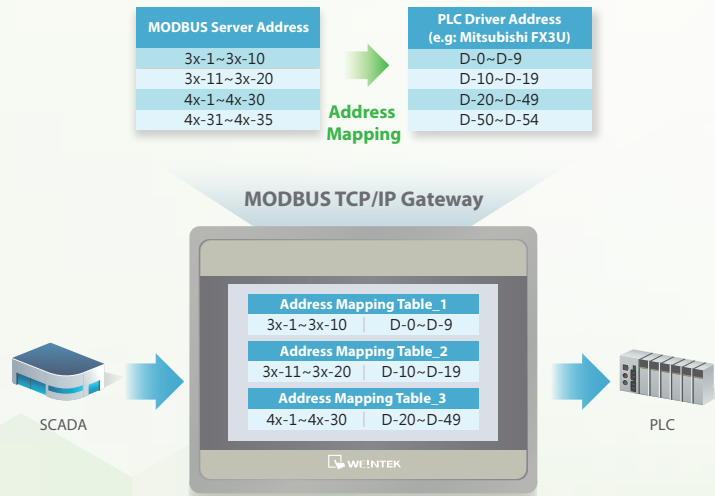|	iE-Series				XE-Series	
	MT8050iE	MT6070iE	MT8070iE	MT8100iE	MT8121XE	MT8150XE
Offer more than 250 Drivers	●	●	●	●	●	●
Upload/Download project file via USB cable		●			●	●
USB Host Port	●	●	●	●	●	●
USB Client Port		●			●	●
SD Card Slot					●	●

Redundant Network

- When multiple HMIs connect to corresponding PLCs, if one of HMIs is out of service, the PLC will be controlled by the other HMI instantly. Thus, this feature greatly improves the availability and the reliability of HMIs.

Ethernet

Take Control

PLC

PLC
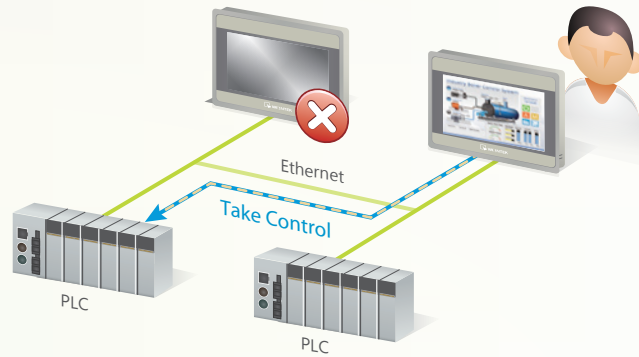
Modbus TCP/IP Gateway

- Since the MODBUS is the most widely used protocol in industrial control, most SCADA software supports the Ethernet Modbus TCP/IP.
- After mapping the address of MODBUS TCP/IP and PLC in EasyBuilder Pro, the SCADA software can directly read or modify PLC data via MODBUS TCP/IP protocol.

MODBUS Server Address	PLC Driver Address (e.g: Mitsubishi FX3U)
3x-1~3x-10	D-0~D-9
3x-11~3x-20	D-10~D-19
4x-1~4x-30	D-20~D-49
4x-31~4x-35	D-50~D-54

Address Mapping

MODBUS TCP/IP Gateway

Address Mapping Table_1	
3x-1~3x-10	D-0~D-9

Address Mapping Table_2	
3x-11~3x-20	D-10~D-19

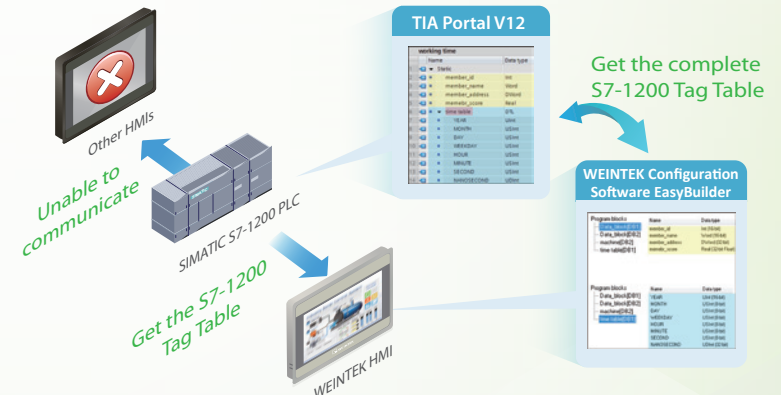| Address Mapping Table_3	
4x-1~4x-30	D-20~D-49

SCADA

PLC

Pass-Through Communication

- Do HMI programming by connecting your computer.
- Do project on-line simulation by connecting the HMI to the PLC.
- Program the PLC without disconnecting the PLC from the HMI.
- Download the revised PLC program through the HMI to the PLC.
- Implement in either COM Port or Ethernet mode.
- Supported PLCs included：DELTA DVP, FATEK FB Series, LS XEC/XGI CPU DIRECT, Mitsubishi FX0s/FX0n/FX1s/FX1n/FX2, Mitsubishi FX3u/FX3G, Mitsubishi Q00U/Q01U/Q02U/QnUD/QnUDH, OMRON CJ/CS/CP, Panasonic FP, etc.

COM

Ethernet

Pass-Through

COM

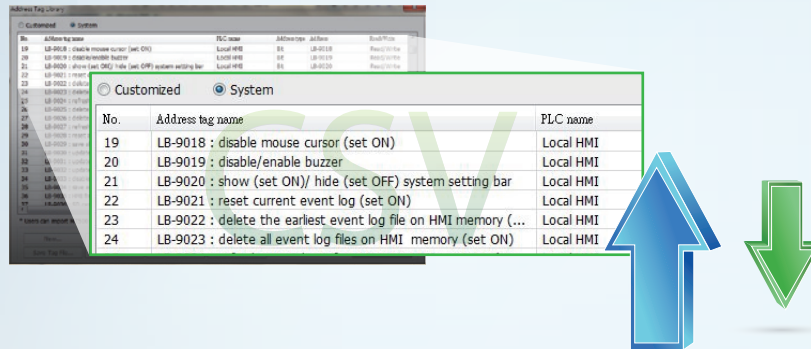EasyBuilder Pro

PLC

Get the complete PLC Tag Table

- Support the Tag-table of PLCs included SIMATIC S7-1200, OMRON NJ-Series, and Allen-Bradley. This feature greatly reduces the project development period and improves your programming efficiency.

TIA Portal V12

Get the complete S7-1200 Tag Table

WEINTEK Configuration Software EasyBuilder

Other HMIs

Unable to communicate

SIMATIC S7-1200 PLC

Get the S7-1200 Tag Table

WEINTEK HMI

|	iE-Series				XE-Series	
	MT8050iE	MT6070iE	MT8070iE	MT8100iE	MT8121XE	MT8150XE
Redundant Network	●		●	●	●	●
Pass-Through	●	●	●	●	●	●
Modbus TCP/IP Gateway	●		●	●	●	●
Support PLC Tag Table	●		●	●	●	●

Address Tag Library

- Create a list of tag names assigned to corresponding PLC addresses in order to make those PLC addresses more readable.
- Tags can be easily imported and exported as CSV files.

No.	Address tag name	PLC name
19	LB-9018 : disable mouse cursor (set ON)	Local HMI
20	LB-9019 : disable/enable buzzer	Local HMI
21	LB-9020 : show (set ON)/ hide (set OFF) system setting bar	Local HMI
22	LB-9021 : reset current event log (set ON)	Local HMI
23	LB-9022 : delete the earliest event log file on HMI memory (...	Local HMI
24	LB-9023 : delete all event log files on HMI memory (set ON)	Local HMI

Label Tag Library

- Enable a multi-language environment, included：Traditional Chinese, Simplified Chinese, Japanese, Korean, German, French, Spanish, Portuguese, Italian, Arabic, etc.
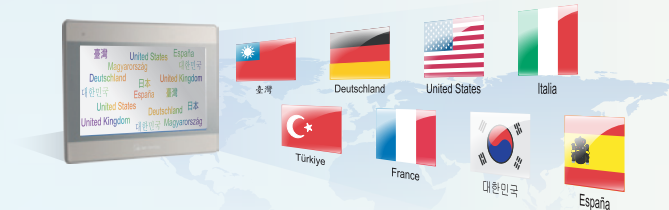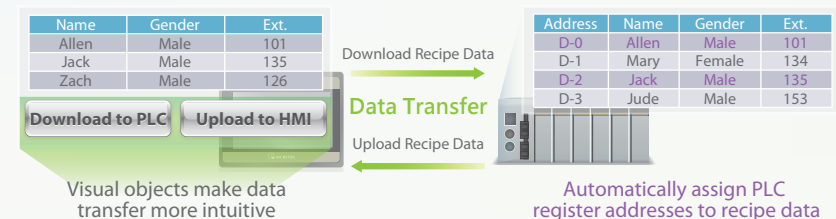- Support up to eight different languages at the same time.

Macros

- Similar to VB-Script, you can design a desired feature.
- Support the user-defined protocol to connect with other communication devices.
- Perform arithmetic operations, logical operations, and string manipulations.
- Execute regular or repeated commands to reduce program loading time.
- The user-defined function improves the flexibility of Macro Library.

Edit Macros
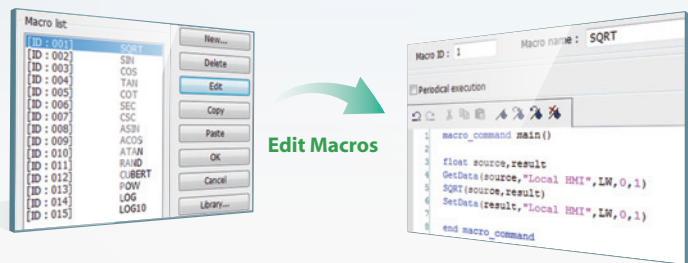
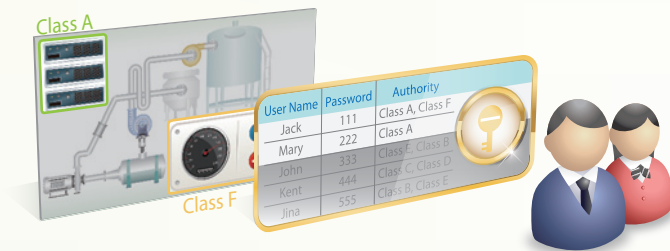|	
• *Operators*	Arithmetic, Comparison Logic, Bitwise & shift
• *Variable Types*	Boolean, 8-bit char, 32-bit float, 32-bit integer, 16-bit integer
• *Math Functions*	ASIN, ATAN, COS, COT, CSC, SEC, SORT…
• *Data Conversion Functions*	ASCII2DEC, ASCII2FLOAT, ASCII2HEX, BCD2BIN, BIN2BCD, DELAY, RAND
• *Communications Functions*	INPORT, GetData, SetData, OUTPORT
• *Data Manipulation Functions*	FILL, GETBIT, HIBYTE, HIWORD, LOBYTE, LOWORD, SETBITOFF
• *Other Functions*	DELAY, RAND

Recipe Database

- A Recipe is a collection of data of the same attributes records that are stored in a non-volatile memory
- Provide sufficient and secure recipe data storage to ensure that those data are intact and secure under any circumstances.
- Provided visual objects enable you to transfer recipe data by pressing buttons intuitively.
- Recipe Database can be created, edited, and deleted by Macros.
- All the recipe records can be on-line updated and monitored to ensure the accuracy and consistency of data.

Visual objects make data transfer more intuitive

Automatically assign PLC register addresses to recipe data

	iE-Series				XE-Series	
	MT8050iE	MT6070iE	MT8070iE	MT8100iE	MT8121XE	MT8150XE
Address Tag Library	●	●	●	●	●	●
Label Tag Library	●	●	●	●	●	●
Macro	●	●	●	●	●	●
Recipe Database	●	●	●	●	●	●

Enhanced Account Management

- Up to 127 user accounts can be added. The user passwords must be alphanumeric.
- Each object or function can be set a security class (Class A to Class L) and each user can be assigned one or more security classes to control the object. Administrator has privileges to operate all objects and functions.
- The features of adding temporary account, setting the account priority, and importing user accounts from SD card or USB greatly improve the flexibility of account management.

Class A
Class F

User Name	Password	Authority
Jack	111	Class A, Class F
Mary	222	Class A
John	333	Class E, Class B
Kent	444	Class C, Class D
Jina	555	Class B, Class E

USB Security Key

- Automatically log in the HMI after inserting your USB which is stored a default account and its password.
- The default password will expire in a specified number of days.

Enter the password:
****

Project Security

- Decompiling Limitation：Either prevent decompiling of a project, or set a password when compiling your project to prevent unauthorized decompiling.
- Project Password：Secure your project and prevent it from being modified without the correct password.
- Project Key：The project is restricted to run on a specific HMI. It is identified by the project unique password (Project Key) and its HMI matching password (HMI Key).

Project Key   HMI Key

* * * * * *

Operation Log

- Each operation will be logged in operator historical records and saved in CSV files in order to track changes.
- Save to a CSV file and help the review and investigation of important events.
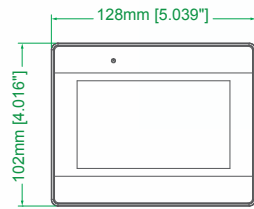- Print to hard copy for the signed agreement.

Operation Log

Data	Time	Class	Action
08/24/13	08:49:30	A	Log In
08/24/13	09:01:00	A	Change Window
08/24/13	10:19:47	A	Change Window
08/24/13	13:12:22	F	Set ON
08/24/13	13:33:12	A	Set OFF
08/24/13	16:30:21	F	Change Window
08/24/13	16:40:34	A	Log Out

	iE-Series				XE-Series	
	MT8050iE	MT6070iE	MT8070iE	MT8100iE	MT8121XE	MT8150XE
Enhanced Account Management	●	●	●	●	●	●
Project Security	●	●	●	●	●	●
USB Security Key	●	●	●	●	●	●
Operation Log					●	●

Model	MT8050iE	MT6070iE	MT8070iE	MT8100iE
Display				
Display	4.3″ TFT	7″ TFT	7″ TFT	10.1″ TFT
Resolution	480 x 272	800 x 480	800 x 480	800 x 480
Brightness (cd/m²)	500	350	350	300
Contrast Ratio	500:1	500:1	500:1	500:1
Backlight Type	LED	LED	LED	LED
Backlight Life Time	>30,000 hrs.	>30,000 hrs.	>30,000 hrs.	>30,000 hrs.
Colors	16M	16M	16M	262K
Touch Panel				
Type	4-wire Resistive Type	4-wire Resistive Type	4-wire Resistive Type	4-wire Resistive Type
Accuracy	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%
Memory				
Storage (MB)	128 MB	128 MB	128 MB	128 MB
RAM (MB)	128 MB	128 MB	128 MB	128 MB
Processor	32 bits RISC Cortex-A8 600MHz	32 bits RISC Cortex-A8 600MHz	32 bits RISC Cortex-A8 600MHz	32 bits RISC Cortex-A8 600MHz
I/O Port				
USB Host	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1
USB Client	N/A	USB 2.0 x 1	N/A	N/A
Ethernet	1 RJ45 port (10/100 Base-T)	N/A	1 RJ45 port (10/100 Base-T)	1 RJ45 port (10/100 Base-T)
COM Port	Com1:RS-232/RS-485 2W/4W, Com3:RS-485 2W	Com1:RS-232/RS-485 2W/4W, Com3:RS-485 2W	Com1:RS-232/RS-485 2W/4W Com3:RS-485 2W	Com1:RS-232/RS-485 2W/4W Com3:RS-485 2W
RTC	Built-in	Built-in	Built-in	Built-in
Power				
Input Power	24±20%VDC	24±20%VDC	24±20%VDC	24±20%VDC
Power Consumption	300mA@24VDC	350mA@24VDC	350mA@24VDC	400mA@24VDC
Voltage Resistance	500VAC (1 min)	500VAC (1 min)	500VAC (1 min)	500VAC (1 min)
Isolation Resistance	Exceed 50MΩ at 500VDC	Exceed 50MΩ at 500VDC	Exceed 50MΩ at 500VDC	Exceed 50MΩ at 500VDC
Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)
Specification				
Enclosure	Plastic	Plastic	Plastic	Plastic
Dimensions WxHxD	128 x 102 x 32mm	200.3 x 146.3 x 34mm	200.3 x 146.3 x 34mm	271 x 213 x 40mm
Panel Cutout (mm)	119 x 93 mm	192 x 138mm	192 x 138mm	260 x 202mm
Weight (kg)	Approx. 0.25 kg	Approx. 0.6 kg	Approx. 0.6 kg	Approx. 1.3 kg
Environment				
Protection Structure	NEMA4 / IP65	NEMA4 / IP65	NEMA4 / UL Type 4X (Indoor) / IP65	NEMA4 / UL Type 4X (Indoor) / IP65
Storage Temperature	-20°~60°C (-4° ~ 140°F)	-20°~60°C (-4° ~ 140°F)	-20°~60°C (-4° ~ 140°F)	-20°~60°C (-4° ~ 140°F)
Operating Temperature	0° ~ 50°C (32° ~ 122°F)	0° ~ 50°C (32° ~ 122°F)	0° ~ 50°C (32° ~ 122°F)	0° ~ 50°C (32° ~ 122°F)
Relative Humidity	10% ~ 90% @ 40°C (non-condensing)	10% ~ 90% @ 40°C (non-condensing)	10% ~ 90% @ 40°C (non-condensing)	10% ~ 90% @ 40°C (non-condensing)
Certificate CE	CE marked	CE marked	CE marked	CE marked
UL	Pending	N/A	cULus Listed	cULus Listed
Software	EasyBuilder Pro	EasyBuilder Pro	EasyBuilder Pro	EasyBuilder Pro

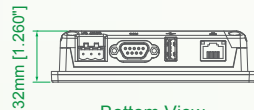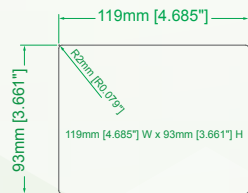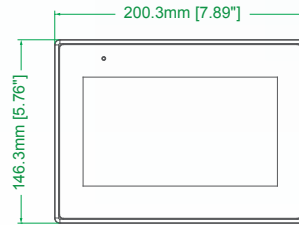* Specifications subject to change without notice.

MT8050iE

128mm [5.039"]

102mm [4.016"]

Front View

118mm [4.646"]

92mm [3.622"]

Rear View

32mm [1.260"]

Bottom View

119mm [4.685"]

93mm [3.661"]

R2mm [R0.079"]

119mm [4.685"] W x 93mm [3.661"] H
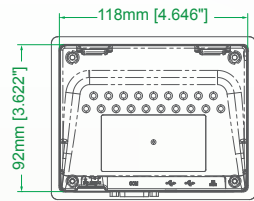
Cutout Dimensions

MT6070iE
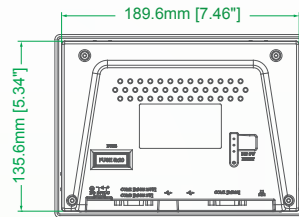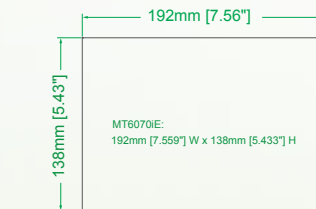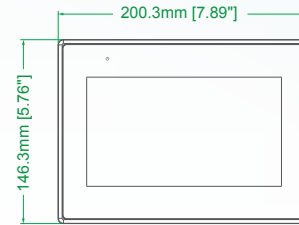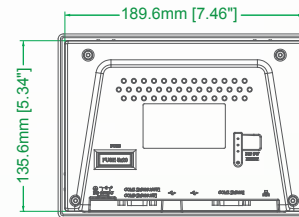
200.3mm [7.89"]

146.3mm [5.76"]

Front View

189.6mm [7.46"]

135.6mm [5.34"]

Rear View

34mm [1.34"]

Bottom View

192mm [7.56"]

138mm [5.43"]

MT6070iE：
192mm [7.559"] W x 138mm [5.433"] H

Cutout Dimensions

MT8070iE

200.3mm [7.89"]

146.3mm [5.76"]

Front View

189.6mm [7.46"]

135.6mm [5.34"]

Rear View

34mm [1.34"]

Bottom View

192mm [7.56"]

138mm [5.43"]

MT8070iE：
192mm [7.559"] W x 138mm [5.433"] H

Cutout Dimensions

MT8100iE

271mm [10.67"]

213mm [8.39"]

Front View

258.6mm [10.18"]

200.6mm [7.90"]

Rear View

40mm [1.57"]

Bottom View

260mm [10.24"]

202mm [7.95"]

R2mm [R0.08"]
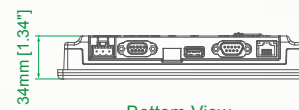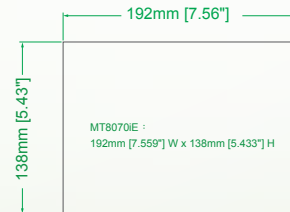
MT8100iE：
260mm [10.24"] W x 202mm[7.95"] H
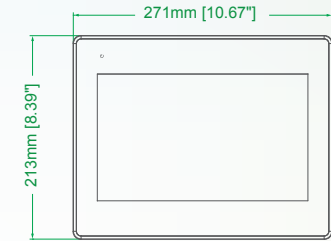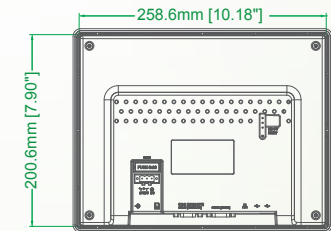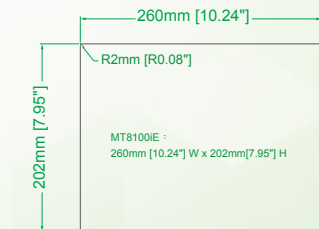
Cutout Dimensions

MT8121XE   MT8150XE

Specification

Model		MT8121XE	MT8150XE
Display	Display	12.1" TFT	15" TFT
	Resolution	1024 x 768	1024 x 768
	Brightness (cd/m²)	500	400
	Contrast Ratio	700:1	700:1
	Backlight Type	LED	LED
	Backlight Life Time	>50,000 hrs.	>50,000 hrs.
	Colors	16.2M	16.2M
Touch Panel	Type	4-wire Resistive Type	4-wire Resistive Type
	Accuracy	Active Area Length(X)±2%, Width(Y)±2%	Active Area Length(X)±2%, Width(Y)±2%
Memory	Storage (MB)	256 MB	256 MB
	RAM (MB)	256 MB	256 MB
Processor		32 bits RISC Cortex-A8 1GHz	32 bits RISC Cortex-A8 1GHz
I/O Port	SD Card Slot	SD/SDHC	SD/SDHC
	USB Host	USB 2.0 x 1	USB 2.0 x 1
	USB Client	USB 2.0 x 1	USB 2.0 x 1
	Ethernet	1 RJ45 port (10/100 Base-T)	1 RJ45 port (10/100 Base-T)
	COM Port	Com1:RS-232/RS-485 2W/4W Com3:RS-485 2W	Com1:RS-232/RS-485 2W/4W Com3:RS-485 2W
RTC		Built-in	Built-in
Power	Input Power	24±20%VDC	24±20%VDC
	Power Consumption	800mA@24VDC	1000mA@24VDC
	Voltage Resistance	500VAC (1 min)	500VAC (1 min)
	Isolation Resistance	Exceed 50MΩ at 500VDC	Exceed 50MΩ at 500VDC
	Vibration Endurance	10 to 25Hz (X, Y, Z direction 2G 30 minutes)	10 to 25Hz (X, Y, Z direction 2G 30 minutes)
Specification	Enclosure	Aluminum	Aluminum
	Dimensions WxHxD	317 x 244 x 46mm	366 x 293 x 57mm
	Panel Cutout (mm)	305 x 231mm	352 x 279mm
	Weight (kg)	Approx. 2.1 kg	Approx. 2.75 kg
	Protection Structure	NEMA4 / IP66	NEMA4 / IP65
Environment	Storage Temperature	-20° ~ 60°C (-4° ~ 140°F)	-20° ~ 60°C (-4° ~ 140°F)
	Operating Temperature	0° ~ 50°C (32° ~ 122°F)	0° ~ 50°C (32° ~ 122°F)
	Relative Humidity	10% ~ 90% @ 40°C (non-condensing)	10% ~ 90% @ 40°C (non-condensing)
Certificate	CE	CE marked	CE marked
	UL	N/A	N/A
Software		EasyBuilder Pro	EasyBuilder Pro

* Specifications subject to change without notice.

MT8121XE
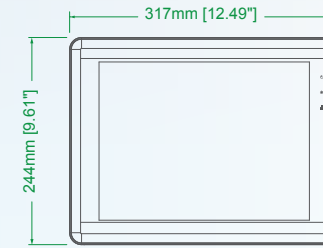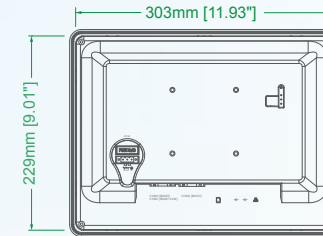
317mm [12.49"]
244mm [9.61"]
Front View

303mm [11.93"]
229mm [9.01"]
Rear View

46mm [1.82"]
Bottom View

305mm [12.01"]
231mm [9.09"]
MT8121XE :
305mm [12.01"] W x 231mm [9.09"] H
Cutout Dimensions

MT8150XE

366mm [14.41"]
293mm [11.54"]
Front View

350mm [13.78"]
277mm [10.91"]
75mm [2.95"]
75mm [2.95"]
Rear View

57mm [2.24"]
Bottom View
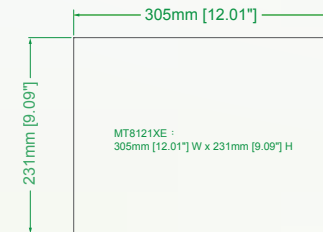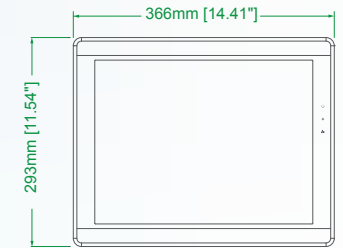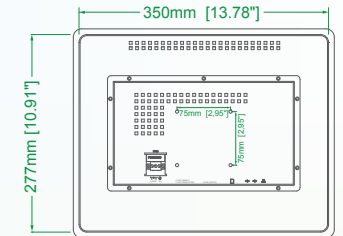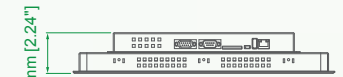
352mm [13.86"]
279mm [10.98"]
MT8150XE :
352mm [13.86"] W x 279mm [10.98"] H
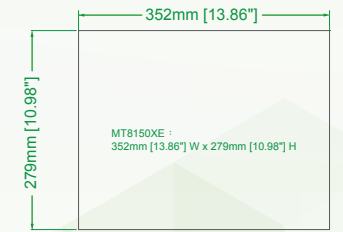**Cutout Dimensions**

WEINTEK, founded in October, 1995, is a global leading designer and manufacturer of touch-panel Human Machine Interface (HMI). Based on our professional expertise and rich experiences with HMI, we have set the industry standard by integrating leading technology with high-efficiency manufacturing. Not only do we deliver outstanding support to our worldwide customers, but all our products undergo rigorous testing to guarantee consistency and reliability.

We aim to build a more sustainable business by offering high quality products with great service and sharing our developments and achievements among our employees, being a consistent leader in industrial automation.

WEINTEK

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ISO 9000：2008