

INDUSTRIAL HUMAN MACHINE INTERFACES  
FOR PROCESS AUTOMATION

OIL & GAS, TANK TERMINALS  
PETROCHEMICAL, CHEMICAL,  
PHARMACEUTICAL

**SAFESTEX™**

Manufacturers Agent of Explosion-proof  
Intelligent Products



## Explosion-proof Product Manual



# CLIMB THE PEAK



## Company Profile

Established in 1996, in Shenzhen is a national high-tech enterprise and a manufacturer of explosion-proof electrical products in various industrial fields. It is the earliest high-tech enterprise in China to develop and produce explosion-proof touch screens and explosion-proof computer all-in-one machines.

We are the first enterprise in the industry to obtain the "Industrial Product Production License" and "CCC Compulsory Product Certification" for explosion-proof electrical products. All products are strictly designed and manufactured in accordance with relevant national standards, and we have obtained the "Explosion Proof Certificate issued by an authoritative certification agency; The company has successively passed certifications such as ISO9001 International Quality Management System, ISO14001 Environmental Management System, and OHSMS18001 Occupational Health and Safety Management System; Multiple products have won national patents and are widely used in industries such as petroleum, petrochemical, chemical, natural gas, new energy, pharmaceuticals, aerospace, military, and marine industries.

As a leading manufacturer of explosion-proof aircraft in China, we are committed to providing escort for all those who need safety protection. We always adhere to the core values of customer first, innovation, sustainable development, and the best user experience. We integrate and utilize the most advanced safety concepts and technological resources to develop and provide high-quality explosion-proof products and services that customers truly need.

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## 1 XY800/XY800\_D/XY900/XY900-DR/XY600 Explosion-proof HMI

### Advantages

- 0 Full metal explosion-proof housing, certification passed for whole device
- 0 Explosion-proof designed touch screen, ESD protected, can be operated directly in explosive area
- 0 Corrosion resistant touch panel to meet harsh environmental requirements
- 0 Internal wiring without any electrical exposure
- 0 Can be equipped with external explosion-proof USB sleeve, external USB data access
- 0 Explosion-proof light, Explosion-proof power switch, Reset button, Emergency stop button, USB interface
- 0 Industrial-grade design standard, highly reliability and stability.
- Ø Operating environment temperature: -40~+60℃
- 0 Explosion-proof design, suitable for use in explosive gas environment Zone 1, 2, and explosive dust environment zone 21, 22
- 0 Suitable for use in hydrogen environment



XY800/XY800\_D/XY900/XY900-DR/XY600 is an explosion-proof panel with 32-bit 800MHz RISC CPU and a LINUX kernel. It supports most PLCs in industrial control systems. Excellent processing speed and rich software functions can meet requirements of users and widely be used in petroleum, chemical, pharmaceutical and other industries in hazardous environments.

### PRODUCT PARAMETER

Model	XY800_7 XY800_7D XY900_7 XY900_7DR XY600_7	XY800_10 XY800_70D XY900_10 XY900_10DR XY600_10	XY800_12D XY800_12 XY900_12DR XY600_12	XY800_15 XY800_10D XY900_10 XY900_10DR
Type	HMI (Human-Machine Interface)			
Screen type	TFT_LCD / LED Back light			
Screen size	7"	10.4"	12.1"	15"
Resolution	800*480	960*640		1024*768
Screen color	16.77M color			
Brightness	200 cd/m <sup>2</sup>		450 Cd/m <sup>2</sup>	420 cd/m <sup>2</sup>
Backlight	50000 hours			
Operation	touch panel/key panel(XY600)			
CPU	ARM RISC 32Bit 800MHz			
Memory	128MB NAND Flash, 128MB DDR3 DRAM			
Expansion storage	1 USB Host (≤16G)			
Communication interface	1" 10M/100M ethernet RJ45 port		1" 10M/100M ethernet RJ45 port	
	1"RS232/RS485/RS422		3"RS232/RS485/RS422	
	1" USB Host: upload/download programs and store data			
	1* USB Slave: upload/download program and set HMI system parameters			
Configuration software	XYFD2000			
Program download	supports local download via U-disk/download from USB port/network port			
Operating temperature	NT: 0 - 50°C / LT: -20 - 80°C / WT: -40 - 60°C(XY900/XY600: -40 - 55°C)			
Storage temperature	-10 - 60°C / -40 - 70°C			
Humidity	10 - 90 %RH (no condensation)			
Voltage	24VDC, workable range 21 - 28V DC			
Power	4W Max BW	8W Max 10W	10W Max 12W	13W Max 15W
Electrical interface	3* M20 explosion-proof sealing joint		4* M20 explosion-proof sealing joint	
Button indicator	Max 3 (only XY800_D)		Max 4 (only XY800_D)	
Protection level	IP66/IP65(XY600)			
W	XY800: Ex db IIB+H2 T6 Gb; Ex ib tB IIC T80°C Db XY800_D: Ex db IIB T6 Gb; Ex ib tB IIC T80°C Db XY900: Ex ib nR IIC T6 Gc; Ex ib tB IIC T80°C Db XY900_DR: Ex nR IIC T6 Gc; Ex tB IIC T80°C Db XY600: Ex db IIB+H2 T6 Gb; Ex ib tB IIC T85°C Db			

## II. XY800/XYB00\_D/XY900\_DR Explosion-proof IPC

### Advantages

- Full explosion-proof housing, certification passed for whole device
- Explosion-proof designed such as seen, ESD protected, can be operated directly in explosive areas
- Corrosion resistant touch panel to meet harsh environmental requirements
- Flexible configuration of processor, memory, and hard disk
- Dual hot spare power supply for redundancy
- Unique fanless efficient heat sink designs avoid device failure caused by fans
- Industrial-grade design standard, high reliability and stability. Operating environment temperature: -40°C~+55°C
- Explosion-proof design, suitable for use in explosive gas environment Zone 1, 2, and explosive dust environment Zone 21, 22
- Suitable for use in hydrogen environment



XY800/XY800\_D/XY900/XY900-DR is an explosion-proof industrial computer. It is a specially designed operation terminal with touch panel / keyboard in information system or automation control system. Widely be used in petroleum, chemical, pharmaceutical and other industries in hazardous environments.

### PRODUCT PARAMETER

Model	XY800_12 XY800_12D XY900_12DR	XY800_15 XY800_15D XY900_15DR	XY800_17 XY800_17D XY900_17DR	XY800_19 XY800_19D XY900_19DR	XY800_15B XY800_15BD XY900_15BDR	XY800_19B XY800_19BD XY900_19BDR	XY800_22 XY800_22D XY900_22DR XY900_24DR
Type	PC (Computer)						
Screen type	TFY LUD 11D Aback (igñ)						
Screen size	12.1"	15"	17"	19"	15.6"	18.5"	21.5"/23.8"
Resolution	1024*768 (4: 3)		1280*1024 (5: 4)		1920*1080 (16: 9)		
Brightness	300 cd/m <sup>2</sup> / 600 cd/m <sup>2</sup> (customized)						
Operation	touch panel						
CPU	Intel Core i5 @ up to 3.5GHz, Intel core i7 @ up to 4.0GHz						
RAM	8GB, 16GB						
Memory	12GB, 25GB, 51GB, 1TB; SATA, SSD						
Network	2*10/100/1000 Mbps Ethernet, RJ45						
Serial port	4* RS232 & 1* RS485, RS422, RS423						
USB	4* USB Device 3.0, scalable 2* USB 2.0						
Operating system	Windows 7, Windows 10, Windows 11						
Operating temperature	NT: 0~50°C / LT: -20~60°C / WT: -40~60°C						
Storage temperature	-10~60°C / -15~70°C						
Environment humidity	10 - 90% RH (no condensation)						
Voltage level	1~12V AC or 1~24V DC / 24VDC						
Rated power	25W Max 60W						
Buozn/Irdkalo	ua»4(orilyX#øzi_D)		Nax5		Max6onyXWD0D)		
Protection level	IP66 (whólemachloe)						
Ex-proof mark	XY800: Ex db ib IIB+H2 TS Gb; Ex ib tb IIIC T80°C Db XY800_D: Ex db ib IIB T6 Gb; Ex ib tb IIIC T80°C Db XY900_DR: Ex nR IIC T6 Gc; Ex tb IIIC T80°C Db						

### III. XY800/XY900\_DR Explosion-proof Remote operation terminal

#### Advantages

- G Screen size from 15" to 24"
- G KM technology: Extended keyboard, video and mouse to remote operation
- G It can communicate with host computer in the security zone for a maximum connection distance of 20Km
- G Multiple remote terminal can be connected to one host computer
- G Industrial-grade design standard, highly reliability and stability. Operating environment temperature: -40~CAfrC
- G Explosion-proof design, suitable for use in explosive gas environment Zone 2, and explosive dust environment Zone 21, 22
- G Suitable for use in hydrogen environment



XY800

XY900\_DR

XY800/XY900\_DR series explosion-proof remote operation terminal is a special equipment designed for system monitoring and control of explosion-proof industrial sites such as DCS/PLC/SCADA/MES. It can extend video, keyboard/mouse, RS232 signals to the remote end through a single network cable or optical fiber. The computer can be used for remote control, widely used in automation and information systems such as petroleum, chemical industry, coatings, medicine, aerospace and etc.

#### PRODUCT PARAMETER

Mxlcl	XY80D_12 XY90D_17DR	XY800_15 XY900_15DR	XY80D_17 XY900_17DR	XY800_19 XY900_19DR	XY800_15B XY900_15BDR	XY800_19B XY900_19BDR	XY900_22BDR XY900_24DR
Type	RT (Remote operation)						
Screen type	TFT LCD / LED back light						
Screen size	12.1'	15'	17'	19'	15.6'	18.5'	21.5' 23.8'
Resolution	1024*768 (4:3)		1280*1024(5:4)		1920*1080(16:9)		
Brightness	300 cd/m <sup>2</sup> / 600 cd/m <sup>2</sup> (customized)						
Back light	50000 hours						
Operation	touch panel / keyboard & mouse						
Transmission distance	≤150 meters (Cat5e) ; >150 meters(optical fiber), max20Km						
Operating temperature	NT: 0- 50°C/ LT: -20 - 50°C/ wr: -40 - 50°C						
Storage temperature	-10 - 60°C/40 - 70°C						
Environment humidity	10 - 90 %RH (no condensation)						
Voltage level	]10-220VAC or ]1]0VDC / 24VDC						
Rated power	20W Max SOW						
Panel size	XY800: 4"NI20 XY900_DR: 5"PI20	XY800: 4"NI20 XY900_DR: 7/8"PI20	XY800: 6/8"NI20 XY900_DR: 6/8"NI20				
Protection level	IP66(whole machine)						
Ex-proof mark	XY800: Ex db IIB+H2 T6 Gb; Ex ib IIC T80°C Db XY900_DR: Ex nR IIC T6 Gc; Ex tb IIC T80°C Db						

PRODUCT PARAMETER

Advantages

- 0 Screen sizes from 15" to 100"
- G Wide viewing Angle, high brightness display to meet the needs of indoor and outdoor use
- 0 Full metal explosion-proof housing, ultra-thin design, wall-mounted
- 0 Flexible configuration based on application scenarios and functional requirements
- 0 Can be configured as a large screen display, supports KVM technology, supports remote operations, and maximum transmission distance 20Km
- G Can be configured as a multimedia player. Supports local or remote video, picture, and information release. Support Android APP installation
- 0 Configured as an all-in-one explosion-proof PC as an information system explosion-proof electronic signage
- G Industrial-grade design standard, highly reliability and stability. Operating ambient temperature: -40°C
- G Explosion-proof design, suitable for use in explosive gas environment Zone 2, and explosive dust environment Zone 21, 22



XYExMTP is a multi-scenario and multi-purpose explosion-proof display/control terminal. Adopted high-resolution liquid crystal display, can be used as a multimedia player, display, electronic board. Wildly used in hazardous locations, such as petroleum, chemical, pharmaceutical, and etc.



Model	XYExMTP									
	_15.6	_18.5	_21.5	_24	_27	_32	_55	_65	_75	_100
Screen	TFT LCD / LED back light									
Resolution	1s.6	1a.s	z1.s	aa:a	z7"	sz	ss"	es"	7s-	ion
Resolution	1920' 1080 (16:9)									
Brightness	300 cd/m' or >600 cd/m' (customized)									
LCD back light	50000 hours									
Operation method	Touch operation					No touch /touch (customized)				
	MP: display, support VGA, DVI, HDMI video interface									
	DP: multimedia player: Rockchip RK3399, 6core, 1.8G									
	e: >woex hut s rauch. nulos									
RAM	XYbd fTP_MP display: None									
	XYBdTP_DP multimedia player: 4G									
	XYEzNTP_CElectronic board: standard BG; i5 maximum support 10E									
Memory	=									
	XYExMTP_DP multimedia player: EMMC standard 16G (32G/64G optional)									
Operating system	XYEdTP_MP display: None									
	XYE/ETP_DP multimedia player: Android 10.0									
	XYE4WTP_PC Computer: vün7/tün10									
USB interface	XYD04TP_MP display: None									
	XYEMTP_DP multimedia player: 2*USB3.0/1 *USB 2.0-HSFS socket									
	XYExMTP_PC computer: 3*USB Device Z0&1*USB Device 3Ö									
Serial port	r'E*TP_Pfite4: hne									
	x > o POP: b>fimœia : i'ioz3281 is4as									
Electrical interface	5 or 6*M20 explosion-proof sealing joint									
Operating temperature	NT: 0~50°C / LT: -20~60°C / WT: -40~60°C									
	-40 ~ 70°C									
Relative humidity	10 ~ 90 % RH (no condensation)									
Voltage level	220V AC / 24V DC									
Explosion-proof mark	CE nRIKT6 tic; CE tb IICTBPC Db									

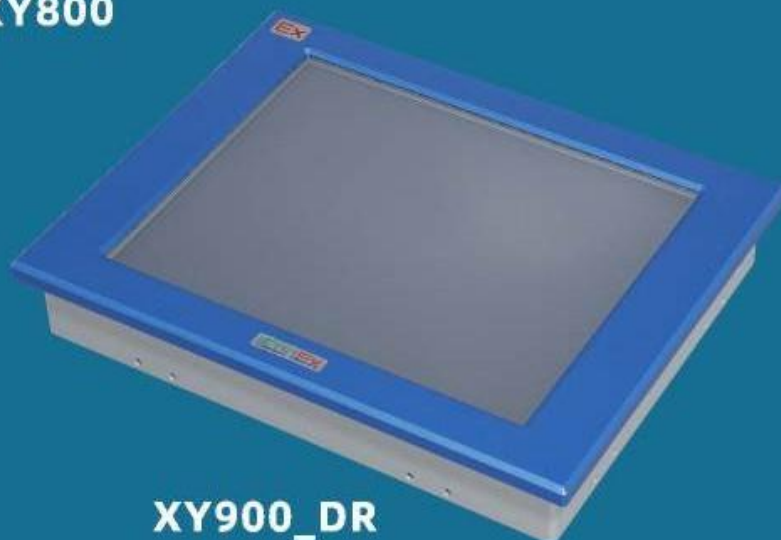
## V. XY800/XY9d0\_DR1ptlosion-proofdisplay

### Advantages

- G Screen sizes from 7" to 24"
- G Full metal explosion-proof housing, certification passed for whole device
- G Wide viewing Angle, high brightness display to meet the needs of indoor and outdoor use
- o canTouchable operation
- G Industrial-grade design standard, highly reliability and stability. Operating environment temperature: -40°C
- G Explosion-proof design, suitable for use in explosive gas environment Zone 1, 2, and explosive dust environment Zone 21, 22
- G Suitable for use in hydrogen environment



**XY800**



**XY900\_DR**

XY800/XY900\_DR is an explosion-proof display control terminal. Widely be used in hazardous locations, such as petroleum, chemical, pharmaceutical, and etc.

### PRODUCT PARAMETER

Model	XY800_7 XY900_7DR	XY800_10 XY900_10DR	XY800_12 XY900_12DR	XY800_15 XY900_15DR	XY800_17 XY900_17DR	XY800_19 XY900_19DR	XY800_15B XY900_15BDR	XY800_19B XY900_19BDR	XY800_22 XY900_22DR
Type	Mon(monitor)								
Screen type	TF-T LCD / LfiO back light								
Wmenshe	7"	10.4"	12H"	15"	17"	19"	15.6"	18.5"	11.5" 23.8"
z(eoi < x)	soo*4sxi	eo0"aoxi	for:é"7<:s	1280*1024			1%2 D80		
erlghtness	300 cd/m' / 600 cd/m'(customized)								
Back light	50000 hours								
video interface	VGA / HDMI / DVI								
Operation	touch panel								
Opera0ngtemperatziie	NT: 0 - 50&/ LT: -20 - 60&/ WT: -40 - 60&								
Storage temperature	-10 ~ 60°C / -40 ~ 70°C								
Environmenthumikfity	10 - 90&RH(nocondensation)								
Voltage level	12VDC			110~220VAC or 110VDC / 24VDC					
Rated poner	BW Max 25W			20W Max SOW					
Electrical Interface	XY800: 4*M20, XY900_DR: 5*M20 explosion-proof sealina ioint			XY800: 4*M20, XY900_DR: 7/8*M20 explosion-proof sealina ioint			XY800: 6/8*M20, XY900_DR: 6/8*M20 explosion-proof sealina ioint		
Protection level	IP66(whole machine)								
Ex-proof mark	XY80g: Exdb lb liB+fi2 YSGb; Exlb tb IIIC,T60'EDb XY900_De• EXnR 11sT6 ec> .Extb III Crao Db								

## VI. XYExKBPC Explosion-proof keyboard and mouse

### Advantages

- 0 Explosion-proof design with certificated safety grid
- 0 Mouse with anti-interference capacitive touch pad
- G Acrylic film keyboard with surface resistance less than 109Ei
- G Industrial-grade design standard, highly reliability and stability.
- Operating environment temperature: -40°C-+60°C
- G Explosion-proof design, suitable for use in explosive gas environment Zone 2, and explosive dust environment Zone 21, 22



XYExKBPC\_II/III series intrinsic safety explosion-proof computer keyboard/mouse is a computer input device with intrinsically safe explosion-proof type. It has strong and durable structure, beautiful appearance, good airtightness, waterproof, dustproof, and long service life. It is widely used in safety monitoring systems and automatic control systems in petroleum, chemical, textile, medicine and other dangerous places with explosive gas and dust.



### PRODUCT PARAMETER

Model	XYExKBPC_II
Panel material	brushed stainless steel panel or antistatic film
Button pressure	2-3N
key stroke	0.45mm
Button life	»2000000 times
Power supply	5VDC*10%
Resistance	button resistance <10D, insulation resistance »100 MD
Operating temperature	-20 - 55 C(others need to be specified)
Storage temperature	-30 - 70°C
Environment humidity	0 - 95% RH (non-condensing)
Protection level	IP65
Explosion-proof mark	Ex ib IIC T6Gb, Ex ib IIIC T85°C Db



## VII-I. XY100\_I / XY100\_II handheld Bar Code Scanner

### Advantages

- Wired handheld, wireless handheld
- Explosion-proof design, gas and dust certification, matching certificated safety grid
- Can be used in various harsh environments, including withstanding 3 meter drops, 7000 1-meter rolls, operating temperatures ranging from -30 °C to 50 °C, which can reduce maintenance costs and extend equipment normal operation time
- Provide ultimate performance scanning, even for damaged and low-quality barcodes. The scanning and transmission speed of high-quality barcodes is faster than before
- It is very suitable for far-field scanning operations on one-dimensional and two-dimensional barcodes. Can scan UPC at a distance of 2 meters and 100 mil barcode at a distance of 24 meters
- Communication interface and protocol: RS232, RS485, Modbus RTU, Modbus TCP, Profinet
- Industrial grade design, protection level IP66/65
- Intrinsically safe explosion-proof, zone 1,21



XY100 the handheld explosion-proof Bar Code Scanner is designed for various scanning work in an extremely harsh and hazardous environment. It uses advanced imaging technology and decoding architecture, provides users with excellent bar code interpretation performance. Its excellent lighting ability, clear laser aiming and extended depth of field, to ensure maximum operational efficiency.

### PRODUCT PARAMETER

Model	XY100_I (wired) / XY100_II (wireless)	
Type	explosion-proof barcode scanner	
Scanning method	Two-dimensional image scanning (830*640 pixels)	
Decoding ability	automatically recognize standard one-dimensional barcodes and GS1, PDF417, MICROPDF, MaxiCode, DataMatrix, QRCode, UCC, EAN Composites, Postnet, Aztec	
Reading distance	200mm / 500mm optional	
Scanning angle	ER focus: horizontal 31.6°; vertical 24.4°	
Scan speed		
Wireless scanning	100m range, one-to-one communication base station port 7 scanner switches	
Host interface	RS485	As per AGC standard (American standard code for information interchange)
	RJ45	industrial Ethernet MODBUS_TCP (network cable, optical fiber)
	RJ45	industrial Ethernet PROFINET (network cable, optical fiber)
Power	RS232: 5VDC, RS485: 24VDC, RJ45: 24VDC	
Operating temperature	XY100_I: -30 ~ 55°C; XY100_II: -40 ~ 60°C	
Storage temperature	-40~70°C	
Environment humidity	0 ~ 95% RH (no condensation)	
Protection level	IP65/IP66	
Explosion-proof	XY100_I: Ex ib IIB T6 Gb / Ex ibD 21 TBS*°C	
	XY100_II: Ex ib IIB T4 Gb / Ex ibD 21 T130°C	

## VII-II. XYExScanner fixed Bar Code Scanner

### Advantages

- G Device robust design in IP65 standard, fixed installation
- G Can read 1D and 2D barcodes
- G Can read multiple barcodes simultaneously
- G Design to prevent electrical surge interference
- G Operating environment temperature: -40°C~+60°C
- G Explosion-proof: Zone 1, Zone 21



XYExScanner the fixed explosion-proof Bar Code Scanner is designed to meet various scanning tasks in an explosion-proof and harsh working environment. Special customized metal enclosure for explosion-proof requirements and redefines the reliability standard of the code scanner. Easily read almost all types of bar codes, advanced lighting design, with extraordinary sensitivity and movement tolerance when collecting image information for bar code interpretation; suitable for production equipment in hazardous areas or data collection on fast-moving production lines And other applications.



### PRODUCT PARAMETER

Model	XYExScanner_C	XYExScanner_M1	XYExScanner-M2	XYExScanner_M3
Interface	RS232/RS485/USB	RJ45		
Communication protocol	ASCII (customizable: Modbus RTU)	Modbus TCP/Ethernet IP/Profinet/MELSEC/FTP/HTTP		
Scanning Methods	2D image (960*640 pixels)		2DImage (140g*1024 pixels)	2DImage (3D72*3048 pixels)
Barcode	Code39, Code93, Code128, ITF14, ITF25, CodeBar, EAN, UPCA, UPCE, QR, DM			
Scanning distance	≤100mm	40-120mm	300-800 mm	300--2000 mm
Barcode	1D and 2D		1D and 2D (Can read multiple barcodes at one time)	
Scanning speed	60 frames/s.		84 frames/s.	90 frames/s.
Trigger Mode	Automatic	Instructions/I/O		
Digital I/O	no	4 bidirectional I/O, non isolated (Default: 2 input, 2 output)		
Operation temperature	-40-60°C			
Storage temperature	-40-70°C			
Ambient humidity	0-95% relative humidity, no condensation at 50°C			
Rated voltage	5VDC ±10%	24VDC ±10%		
Rated current	Max 500mA		Max 1000mA	
Electrical interface	1* M20*1.5			2* M20*1.5
Signal transmission	USB/RS232 ≤10M RS485 ≤500M	≤50M		
Cable Length	3m	3m (customizable: 3-50m)		
Protective	IP66			
Explosion-proof mark	Ex db IIC T6 Gb; Ex tb IIIC T80°C Db			

## VIII. XY200 Explosion-proof LED Display

### Advantages

- 0 Explosion-proof certification : gas and dust
- Ø support single line , double line display
- Ø Support Modbus RTU protocol display, support text character display
- 0 customizable continuous transmission protocol dedicated to weighbridge display
- Ø Can be used for floor scale display and vehicle loading system display
- Ø Operating environment temperature: -40°C+60°C
- 0 Explosion-proof: Zone 1, Zone 21



XY200 series explosion-proof led-screen display is a high-brightness, single colors explosion-proof display with the latest LED technology. It can directly communicate with PC, PLC main controller or intelligent controller, and carry out uninterrupted safety instructions, operating notification or status in English or numbers or others characters. It widely used in security surveillance system, machinery and equipment automatic control system and other systems at dangerous places in petroleum, chemical, textile, pharmaceutical, metallurgy, electric power and other industries.

## PRODUCT PARAMETER

Model	<b>XY200_3A</b>	KY200_3 B
Display window	304*76	608*152mm
Display	single line	two lines
Character	8 characters/line	16 characters//line
Visible distance	20 - 30M	20 - 30M
Communication Interface	RS485/Rj45 network port	
Communication protocol	Modbus RTU . custom text. TCP/IP	
display method	synchronous asynchronous	
power supply	110-220VAC/24VDC*10X	
Electrical interface	2*M20x1.5 explosion-proof sealing joint	
Power consumption	4 W	15W
Operating temperature	NT: 0-50°C/LT: -20-60°C/WT: -40-60°C	
Storage temperature	-40 - 70°C	
Environment humidity	0 - 95% RH	
Protection level	IP66	
Explosion-proof mark	Ex db IIB T6 Gb: Ex tb IIIC T80V Db	

## IX. XYExPAD Explosion-proof mobile terminal

### Advantages

- Explosion-proof certification of the whole machine
- Support Android, Win10 system, fast running speed, stable performance, convenient operation
- Integrated 4G/3G/2G Netcom, WIFI, Bluetooth, wireless and other communications
- Support mobile phone call, video call function, powerful communication functions
- High-energy polymer lithium-ion battery, using dual protection technology meeting intrinsic safety requirements
- Super battery endurance, excellent adaptation
- IP65 high protection level, industrial grade three-proof quality
- Support free selection of functional modules such as 1D/2D, NFC, fingerprint, etc. to meet the application needs of multiple industries
- Explosion-proof : Zone 1, 21 Zone 2, 22



Intrinsically safe  
smartphone and Bar Code  
Scanner : The XYExPAD for



### PRODUCT PARAMETER

Model	XYExPAD_6A	XYExPAD_10A	XYEKPAD_10X	XYExPAD_10K
Screen size	5.99" IPS	10.1" IPS		
Screen type	1B: 9	CE6: 10		
Resolution	720*1440	800*1280		1200*1920
Touch panel	5-point capacitive screen, hardness above 7H, scratch-resistant	10-point capacitive screen, hardness above 7H, scratch-resistant		
	uTl/sG-Cj8ære zaGrIz	usf ¥es3 (mrs) zCEHz	zætsaiiZ83s01.92GrIz	•• ••
RAM	4t&/LPDiXt3	4C&/LCEIDR3	4GB/LPDDR3	
Memory	64GB	64GB	64/128GB	128GB/256GB
Camera	Ftzzt5CEWæar13CEIW	Frcrt20M ræz13£DfI/	Frçzt ZXMFæar SCBW	Frcrt2CEW rearBXM/
Internet connection	WiFi/Bluetooth/4G			
IC card reader				
Positioning navigation	GPS, CE+ass	GPS	t+,	GPS
Fingerprint sensor	N<xsipt<xtœl	optional		
Barcode recognition	One-dimensional & two-dimensional code scanning (optional)			
Host interface				
	SIM	SIM/HDMI/USB2.0		
Battery capacity	3.7V/5000mAh	3.7V/10000mAh		
Power	11A/220V C/5V/2A	11A/220V C/5V/0CM		
Operating system	Android 12	Android 9.0	standard: Win10 IoT/32bit/64bit optional: Win10 IoT/64bit	
Weight	380g	1014g		
Operating temperature	-40°C ~ +60°C			
Storage temperature	-40°C ~ +70°C			
Environment humidity	10%~95% (no condensation)			
Explosion-proof mark	Ex ib IIB T4 Gb, Ex ibD 21 IP66 T130 °C	Ex ic IIC T4 Gr, Ex ic IIB T130°C DC		
Appendix (Optional)	charging base, handle, bracket, strap charging		base, bracket, strap/strap, leather case, stylus	

## X. XYExAP Explosion-proof wireless base station

### Advantages

- Supports Fat (Fat) and Fit(Slim) working modes, and can be flexibly switched through the interface according to networking requirements
- can work in 2.4G&5.8GHz frequency band, providing a 1300Mbps wireless rate, dual-band concurrent, and priority connection to 5G
- Strong anti-interference, can flexibly adjust AP transmit power, improve wireless stability
- Built-in hardware watchdog, automatic recovery of equipment abnormalities, to ensure the reliability of the system
- Support user restriction based on SSID and flexibly allocate network resources
- Support seamless roaming, can achieve zero handover, no packet loss, and users can't feel the handover work between APs when they are moving
- Support WEP/WPA/WPA2 authentication function
- Support access to AC controller for wireless user management and traffic monitoring
- Support POE power supply, convenient for flexible equipment layout and simple construction
- Industrial-grade design, support power supply and interface isolation protection
- Explosion-proof: Zone 1, Zone 21



XYExAP type explosion-proof wireless base station is a product developed for the application of wireless local area network in explosive and hazardous environments. It is especially suitable for petroleum, chemical, pharmaceutical, hazardous chemical storage, and civilian applications. The production, logistics, and storage links of dangerous goods production sites in industries such as explosives, as well as applications such as oil and gas mining platforms.

### PRODUCT PARAMETER

yoJel	XYExAP
Sandaidsand agreements	10ease-T, compty with IEEE802.3
	100Base-Tx complies with IEEE802.3u
	1000Base-T, compty with IEEE 802.3ab
	Wireless LAN, compty with IEEE802.11b/g/n/a/ac
	Wireless security, compty with IEEE802.11i
	Fast roaming, compty with IEEE802.11r
safety regulations	PoE, compty with IEEE802.3af/at
	GB4943. UL/CSA 60950, ENIEC 60950-1 ENIEC 60950-22
ENC	GB9254-2008, EN301 489. EN55022. FCCPart 15 RSS-210
FF-certificadon	FCCPart 15. Ehl300 328. EN301893
operæng mode	fat/slim AP mode >250000H
TotalPower	<:24W
E>aematantenna	4 8dBi detachable antennas
	2.4GHz: 2.412GHz - 2.472GHz
Wireless rate	5.8GHz: 5.18- 5.825GHz
	2.4GHz: 450plbps
Maximum transmitpo er	5.8GHz: 867Mbps
	500mW (27dBm)
Coverage	80meters(outdoor open space), 40meters(indoor coverage distance ls related to site environment and obstructions)
Ethernet port	2*10/100/1000M
WLANfunction	Recommended number of users to access the 2.4GHz frequency band of the whole machine: 64
	Recommended number of access users in the 5.8GHz frequency band of the whote machine: 136
Enaypfion	WPA (TKI > was-use. who. tAES)
Power supply	POEpower supply: 802.3af/802.3at standard(up to 100 meters)
	Localpower supply: 110-220VAC
Fat/Fit mode switch	The default fatAP mode, supports four modes of routing, AP, bridge, and relay
	In the thin AP mode, both network ports are LAN, so there is no need to distinguish the network cable sockets
Operatingtemperabire	-40°C- 55°C
storagetemperabire	-40°C- 70°C
Ewironnenthumidity	10%-Q5%RHnocondensa fon
Electricallriferface	2*M20x1.5 explosion-proof sealingjoint
Prnxeaion level	IP66
Explosion-proof mark	Ex d IIB+H2 T6Gb, ExtDA21 IP66 T80°C

## XI. XYExLRRFID Explosion-proof long range card reader

### Advantages

- G Support intensive multi-label reading, can correctly and quickly read its matching electronic labels
- G Standard interface: support RS232, RS485, TCP/IP, Wiegand
- G Security encryption: Encrypted calculation and authentication to ensure data security and prevent data cracking
- G Support automatic induction card reading, external trigger control card reading  
and software sending command to read card
- G Output power is adjustable, and read-write distance can be adjusted by transmission power
- G Customized protocol, support serial communication with PLC and DCS
- G Explosion-proof: Zone 1, Zone 21



XYExLRRFID is a high-performance explosion-proof long-range UHF RFID card reader. It fully supports ISO 18000-6C (EPC C1) Gen2), ISO 18000-6B electronic tags, stably read multiple electronic tags within 10m (related to tags and the environment), and transmit all read-write data to information management system real-time by standard interfaces (RS232/485/RJ45). It can be used in logistics access control, asset control and other information systems in petroleum, chemical, pharmaceutical and other industries with dangerous gas and dust places.

## PRODUCT PARAMETER

Model	XYExLRRFID
Antenna gain polarization direction	6dBi/9dBi, circular polarization
Read-write area	orientation recognition
Read-write distance	optional: 0- 2m / 0- 5m / 0- 10m
Working frequency	USA: 902-925MHz. EUR: 865- 868MHz. CHN: 920 - 925MHz
Operating mode	fixed frequency or frequency hopping mode
Supporting agreement	ISO18000-6C(EPC C1) Gen2), ISO18000-6B
Transmit power	0-30dBm
Communication Interface	RS232/RS485, WIEGAND, RJ45 (optional)
Input and output interface	1 relay output; 2 digital input controlled by LED, 1 digital input controlled by buzzer
Development kit	provide DEMO software, SDK and API documentation
Electronic label	support tag label, AB5 label, ceramic label, anti-metal label, self-adhesive label, cable tie label, PP package label
Operating Voltage	12V • 24VDC
Operating temperature	NT: 0- 50 °C / LT: -20 - 60 °C / WT: -40 - 60 °C (optional)
Storage temperature	-40 °C ~ 70 °C
Environment humidity	5%-95%RH no condensation
Electrical Interface	2" M20 X 1.5 explosion-proof sealing joint
Protection level	IP66
Explosion-proof mark	Exd IIB+H2 T6 Gb; Ext DA21 IP66 TB0-C

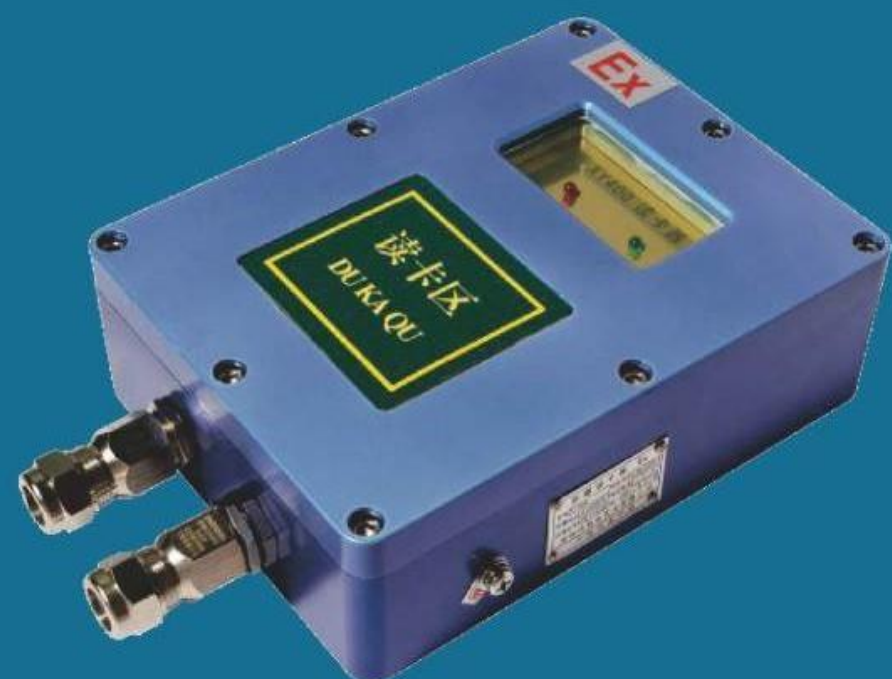
## XII. XY400 Explosion-proof Card Reader

### Advantages

- 0 Communication mode: RS485/ Wiegand 2s, Wiegand 34 optional
- G RS485 communication adopts MODBUS RTU protocol
- 6 Relay output: 2 pieces of 24V/0.5A (optional)
- G support MJ (MifareS50/570), CPU card, access control IC card/BID card
- 0 Support customer card reader built-in customization
- G Industrial-grade design standard, highly reliable and stability.
- N Operating environment temperature: -40°C~+60°C
- 6 Explosion-proof : Zone 1, Zone 21

### PRODUCT PARAMETER

Model	XY400
Display window	red light: power indicator, green light: card reading indicator
Communication Interface	1 RS485 interface
Communication protocol	Modbus RTU (IC card only) or Wiegand protocol (Wiegand 26, Wiegand 34)
Card type	M1 (MifareS50/570), CPU card, access control IC card/ID card
Relay output	two 24VDC/0.5A (optional)
Working frequency	13.56MHz (IC) or 125KHz (ID)
Operating temperature	NT: 0- 50°C / LT: -20- 60°C / WT: -40- 60°C
Storage temperature	-40 - 70°C
Environment humidity	0 - 90% RH (non-condensing)
Operating Voltage	24VDC ±10% or 12VDC ±10% (Wiegand)
Working current	<120mA
Electrical Interface	2*M20x1.5 explosion-proof sealed joint
Protection level	IP65
Explosion-proof mark	Ex db IIB T6 Gb; Ex tb IIIC T80°C Gb



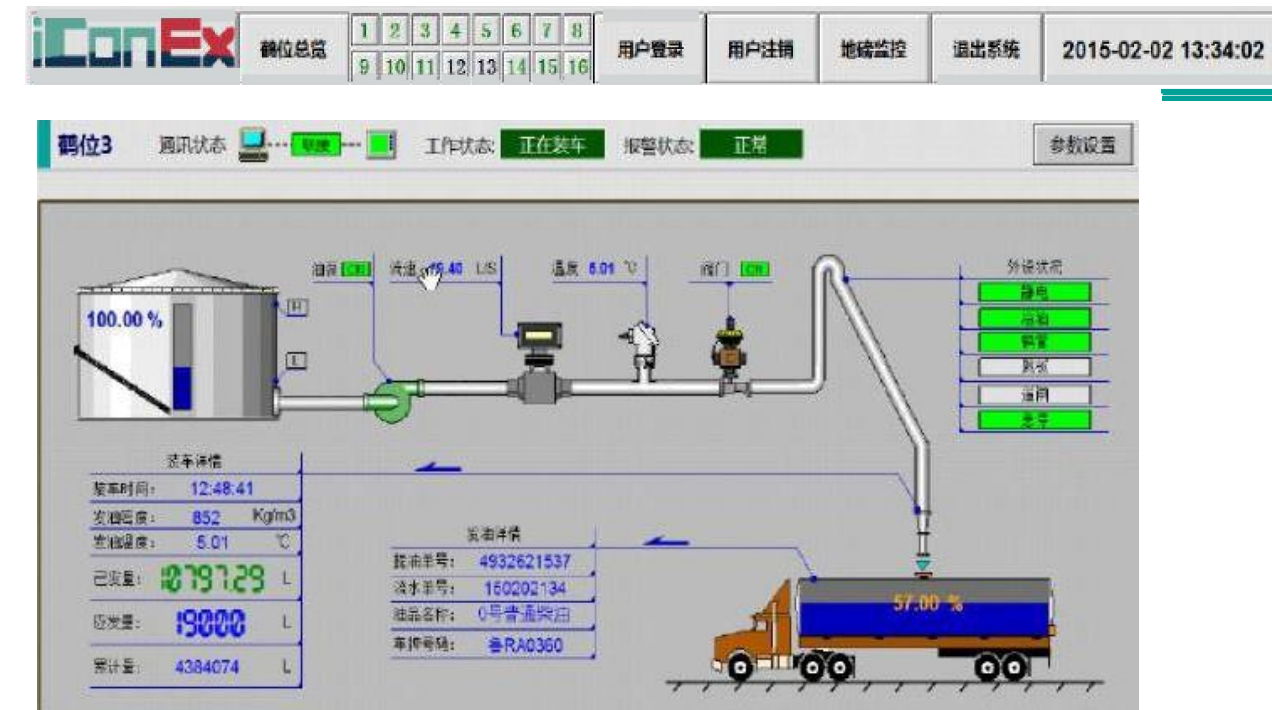
XY400 explosion-proof non-contact IC card reader is a product integrated with the electronics, network, explosion-proof, radio frequency identification technology. For a wide variety of explosive dangerous sites (petrochemical refinery, oil depot, dangerous goods warehouse, etc.), It is used in an "all-in-one-card" way information network and safety management field, such as oil/cargo delivery system, entrance guard system or online patrol system and etc.

### xIII. xY242 Exptoslon-proofBnuh Contro&r

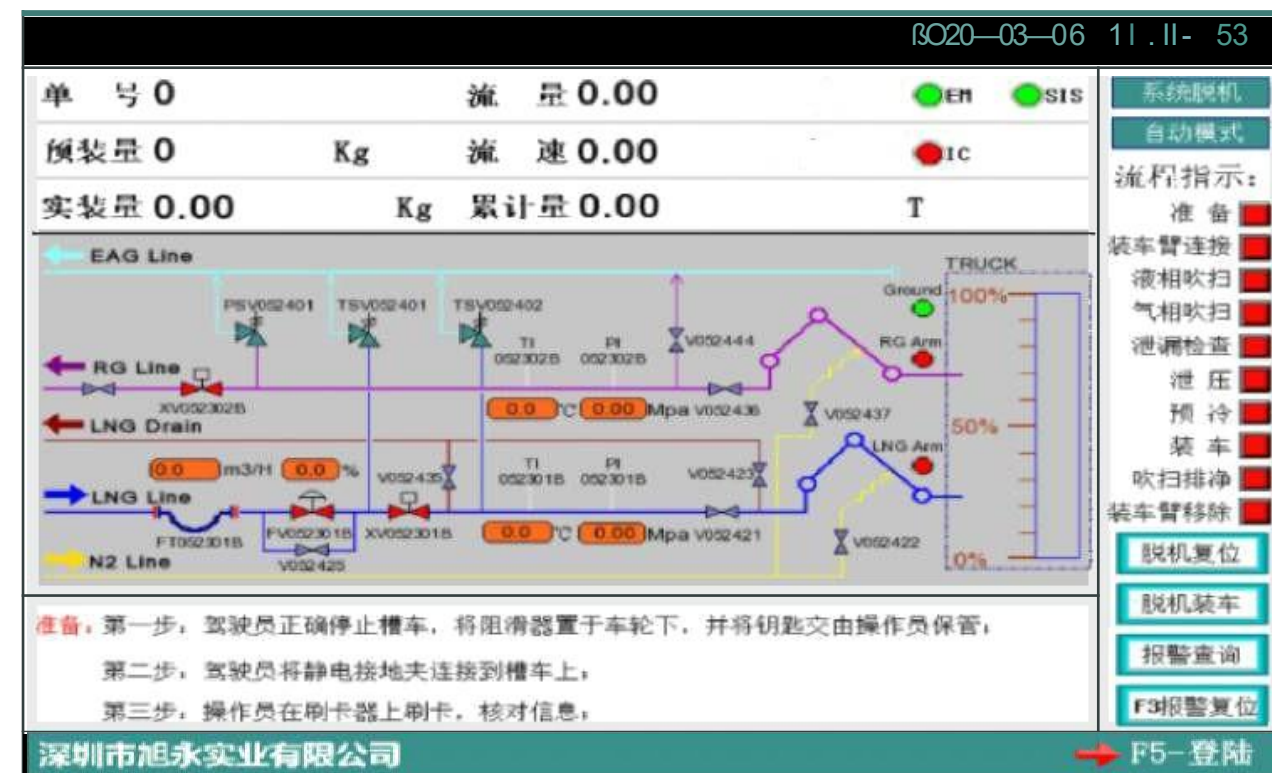
#### Advantages

- G Explosion praof: Exdb IIB+H2 T6 Gb
- G Protection grade: IP66
- S Supply voltage: AC220V/50HZ
- S Ambient temperature: normaftemperature: @+60C/low temperature: -20+60C/wide temperature: -40 COC
- 6 2\*channef pulse signal input(maximum 4 channels): Vp-pMV, Frequencys30KHz,
- 0 12"channel switch input(extensible): used for valve pump feedback, anti-overfbw and anti-static switch signals
- G B're!ayoutputs(expandable): for pump conVol, valve control, and otherpurposes
- G 2"analogsignalinputs{extensible): 4-20rriAsignakfortemperature, pressure, densiy, etc.
- C 1"analog signal output(extensible): used for frequency converter andregulating vah/e control
- 0 1\*RS4B5/45 communication bus(expandable to 1"R5485): used for PCcommunication/DCSconnection

### PROD CT PARAMET R



The XY242 explosion proof batch controller with PIC as the main controller is a preset precision control device used in petroleum, chemical, food, and other industries. This controller is suitable for controlling systems such as pulse output flowmeters/RS485 communication weighbridges, 4-20mA analog output temperature and liquid level sensors. Using advanced PIC technology, it provides easy-to-master flexible programming methods, allowing users to select options from a programming menu that suits their needs, and build various functions to achieve precise control of materials.



### Basic Model

- XY242-A Batch controller: used for automatic control of loading/filling at a single crane position
- XY242-B Batch controller: used for automatic control or fo yd1 nq/fl [flngat double crane positions
- XY242-D Batch controller: used for up to 2-way online proportional blending and foading/fitting. control automatic control
- XY242-L Batch controller: used for automatic control of ING or products with liquid/gas phase loading/filling

## XIV. XY300 Explosion

lock



### Overview

XY300 is an encapsulated explosion-proof magnetic lock. It has characteristics of simple structure, no wear and tear, and high reliability. It is easy to escape when power is turned off and unlocked when danger occurs. It is suitable for explosive dangerous gas and dust environment sites such as petroleum, chemical, and etc.

### Advantages

- o Explosion-proof design with certificated safety grid
- β Opening method: power off to open door, with high safety
- ∅ Suitable for: fire doors, wooden doors., glass doors, metal doors, etc
- ∅ Status detection: with door sensor function, feedback door switch signal
- ∅ Industrial-grade design, operated under the lowest -40°C and highest +55°C environment
- β Explosion-proof: Zone 1, Zone 21

Model	XY300_60 / XY300_280 / XY300_500
Maximum linear tension	XY300_60: 60kg / XY300_280(280kg) / XY300_500(kg)
Opening method	DC
Maximum current	16DmA
Control signal	12VDC (switching signal)
Connect cable	SM( >5M customized)
Power supply	POE or 12VDC
Operating temperature	-20~+55°C
Storage temperature	-40~+70°C
Protection level	IP66
Explosion-proof mark	Ex ib IIC T6 Gb; Ex ib IIIC T85°C Db

## XV. XY400\_PIB Explosion-proof card reader



### Overview

XY400\_MB explosion-proof card reader adopts encapsulated explosion-proof type, widely used in petroleum, chemical industry and other dangerous places with explosive gas and dust as a part of explosion-proof access control system.

### Advantages

- o Standard 86 box installation, simple and convenient
- o Communication : wiegand 26/Wiegand.34 optional
- o Support M1 (MifareS50/5.70), CPU card, access control IC card/ID card
- ∅ Industrial-grade design, operating temperature -40~+60°C
- ∅ Explosion-proof: Zone 1, zone 21

Model	XY400_MB CARD READER
Card type	MIFARE 1K, MIFARE 70, FN11RF08 compatible cards; EM4100, EM4102, SMC4001, NT8803, NTBBE access ID cards
Working frequency	13.56MHz (IC card) or 125KHz (ID card), support Mifare standard
Communication protocol	wiegand Protocol (WEIGEND26 or WEIGEND34)
Indicator light	two-color light, red light: power indicator, green light: card reading indicator
Operating Voltage	12VDC±10%
Working current	< 120mA
Operating temperature	NT: 0~50°C / LT: -20~+60°C / WT: -40~+60°C
Storage temperature	-40~70°C
Environment humidity	0~95% RH (non-condensing)
Dimensions	168*110*22mm
Explosion-proof mark	Ex mb IIC T6 Gb, Ex mb A21 IP66 T80°C

## XVI. XYExFingerID Explosion-proof Fingerprint Reader



### Overview

XYEx Finger ID Explosion-proof fingerprint reader is an access control device, widely be used in petroleum, Chemical industry and other dangerous places with explosive gas and dust as a part of explosion-proof access control system.

### Advantages

- G Multi-function: fingerprint reader + access controller.
- G Verification mode: fingerprint, IC card, password, or fingerprint + IC card, fingerprint + password, IC card + password and other multiple verification
- G Opening definition: can be set to pass the verification at the same time by max 4 times confirm
- G Fingerprint collection: The local fingerprint can be collected when a single machine is used, and the fingerprint can be downloaded when the network is used
- G Networking: can be multi-machine joint, administration management
- G Industrial-grade design standard, highly reliability and stability. Operating environment temperature: -40°C~+60°C
- G Explosion-proof: zone 2, zone 21

Model	XYExFingerID
	i8/WTLEDsoeen
	capacitive
Fingerprint module	optical fingerprint module
Fingerprint Storage	3000 pieces
Capacity	3CEK sheets
Port	RS485, RJ45, USB, 1: Wiegand Input; 1: Wiegand Output
Relay output	one open, one closed
Power supply	12VDC
Working current	500mA
Electrical Interface	2*M20x1.5 Explosion-proof sealed joint
Operating temperature	NT: 0 ~ 50°C / LT: -20 ~ 60°C / WT: -40 ~ 60°C
Storage temperature	-40 ~ 70°C
Humidity	10% ~ 90% RH (non-condensing)
Protection level	IP66
Explosion-proof mark	CE R II BT6 Ge; CE A21 IP66 T80°C

## XVII. XYExFaceID Explosion-proof Face Recognizer



### Overview

XYExFaceID is a high-performance, high-reliability explosion-proof face recognizer with fast recognition and high accuracy. widely be used in petroleum, Chemical industry and other dangerous places with explosive gas and dust as a part of explosion-proof access control system.

### Advantages

- G Support face recognition and face access control dual functions, can be on working under a LAN network.
- G Supports photo and video anti-fake function
- G Support group management, staff managements Support search whitelist, visitor, and blacklist information. Support manual capture and network capture photos
- G Supports access control event warning, including surveillance center alarm, event alarm, card ID and staff alarm
- G Support RS-485, Wiegand Interface, Support IC card entry, Magnetic lock; Magnetic gate, and exit button
- G Wall-mounted industrial grade design, highly reliability and stability. Operating environment temperature: -40°C~+60°C
- G Explosion-proof: Zone 1, Zone 21, Zone 22

Operating system	Linux
Memory	
Camera	2 million pixel binocular camera, Medium dynamic, support outdoor backlight environment
Face comparison time	1: N, comparison time < 1.3 s/person
Face recognition distance	0.3~2 meters
Card Storage	6000 pieces
Card reader type	M1 card, CPU card serial number
Swipe time	< 1 s
Event Storage	50000 items
USB	2*USB Device 2.0
Interface	Relay output/Wiegand interface: support Wiegand 26/ network interface: RJ45 gigabit network
Operating Voltage	12VDC
Maximum current	3A
Operating temperature	M: 0 ~ 50°C / LT: -20 ~ 60°C / WT: -40 ~ 60°C
Storage temperature	-40 ~ 70°C
Material	con
Electrical Interface	explosion-proof sealed joint
Protection level	IP66
Explosion-proof mark	Ex db IIB+H2 T6 Gb, Ex tb IIIC T80°C Db

## XVIII. XYExFFID Explosion-proof face fingerprint reader



### Overview

xyExFFiD explosion-proof face fingerprint recognizer is a high-performance, high-reliability face and fingerprint recognition product with fast recognition and high accuracy. Widely be used in petroleum, Chemical industry and other dangerous places with explosive gas and dust as a part of explosion-proof access control system.

### Advantages

Support face 8 fingerprint recognition, IC card reader, and access control multiple functions, can be on working under network

Unlocking combination definition: up to 4 people can be set to pass the verification at the same time to unlock

Support group management, staff management: Support search whitelist, visitor, and blacklist information.

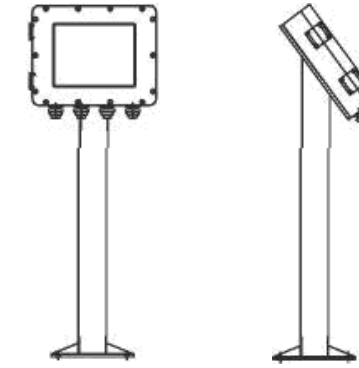
Support manual capture and network capture photos, saving it

Supports access control event warning, including surveillance center alarm, event alarm, card io and staff

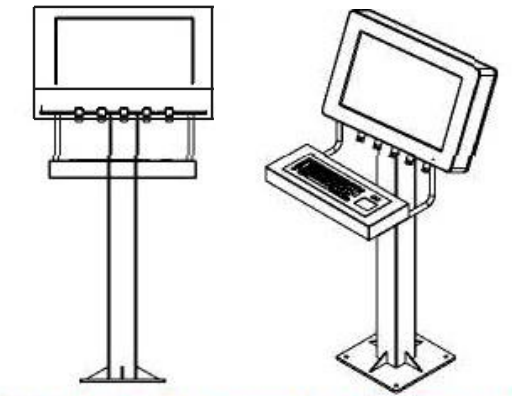
Support RS-485, Wiegand Interface, support the card entry, Magnetic lock, Magnetic gate, and exit button  
Industrial grade design, highly reliability and stability.  
Operating environment temperature: -40°C~+60°C  
Explosion-proof: Zone 2, Zone 21

Model	XYExFFID
Display size	4.3 inch TFT color screen
Resolution	
Touch operation	Capacitive
Fingerprint module	optical fingerprint module
Face storage	1000 pieces
Fingerprint storage	5000 pieces
Card storage	500 pieces
Communication face	RS485, RJ45, USB, Wiegand input, Wiegand output
Relay output	one normally open, one normally closed
USB	USB type 2.0
Operating Voltage	12VDC
Maximum current	3A
Operating temperature	NT: 0 ~ 50°C / LT: -20 ~ 60°C / WT: -40 ~ 60°C
Storage temperature	-40 ~ 70°C
Environment humidity	10-90% RH (no condensation)
Electrical Interface	2*M20X1.5 Explosion-proof sealed joint
Protection level	IP66
Explosion-proof mark	ExnRUG T6 CC; ExI OA21 IP66 T1KPC

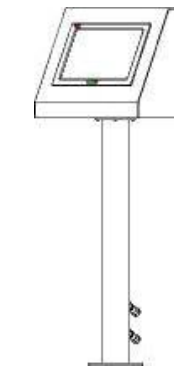
## XIX. Installation Accessories



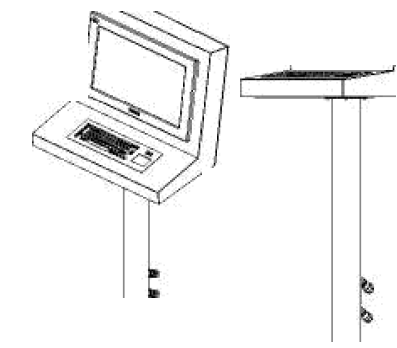
XY800 series/column type mounting bracket/ stainless steel material



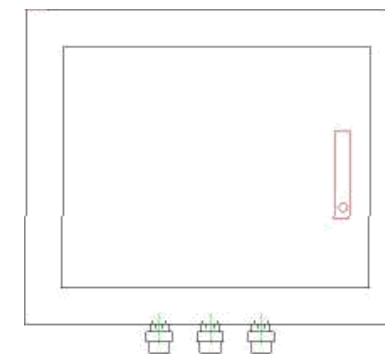
XY800 Series/Post mounting bracket/Stainless steel material/With keyboard



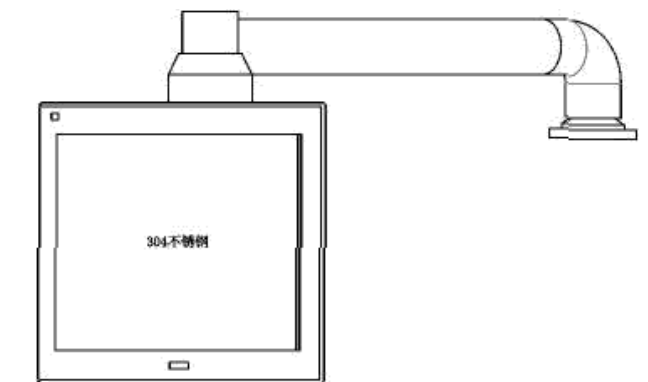
XY900 Series/Wall Mounting Bracket/ Stainless Steel Material



XY900 Series/ Post mounting bracket/ Stainless steel material/ With keyboard



XY900 series/wall-mounted / stainless steel material



XY900 Series/ Cantilever type/ Stainless steel material

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