IVC Series Programmable Controller



Enterprise introduction

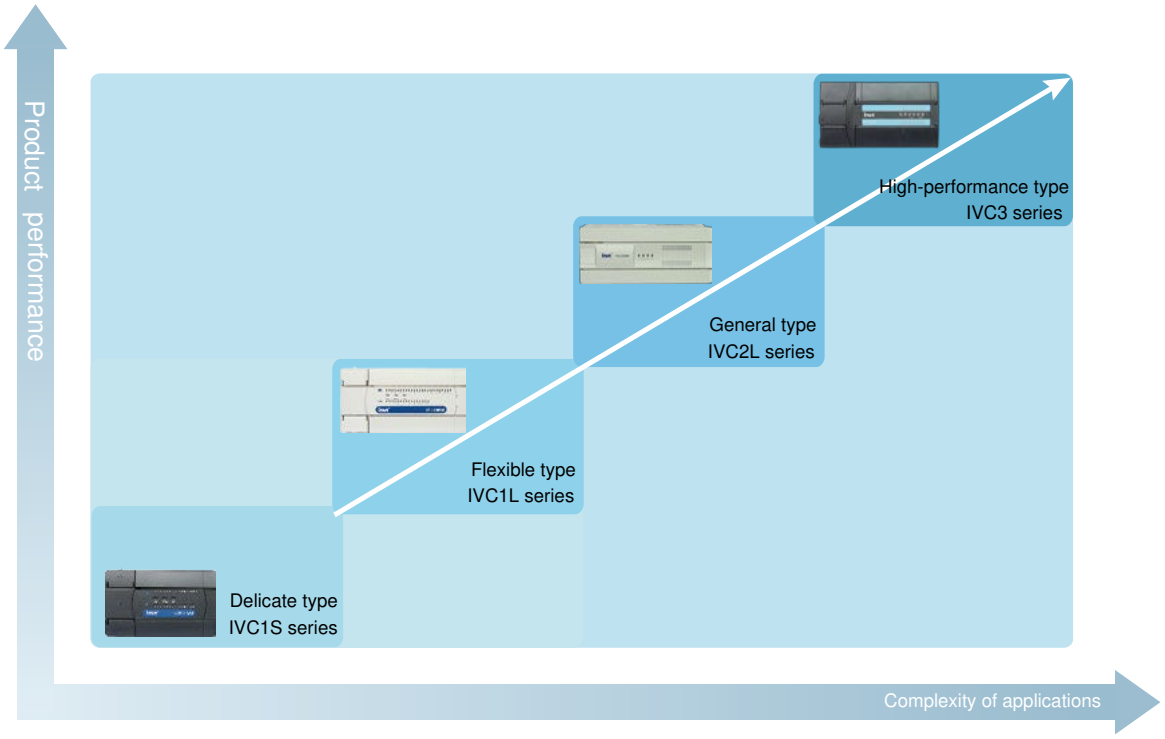
INVT (Shenzhen INVT Electric Co., Ltd.), a high-tech enterprise founded in 2002, is a key member of national torque plan. Since its foundation, INVT has been devoted to becoming the globally leading and respected provider of products and services in industrial automation and energy power fields, and providing the best products and services to allow customers more competitiveness.

Based on innovations and breakthroughs made in core areas like power electronics, auto control, IT, etc, INVT has evolved into an industry giant with business range covering industrial automation, network power, new energy vehicle and rail transit. INVT became the first A-share listed company (stock code: 002334) in Shenzhen Stock Exchange in 2010. At present, we have established 12 R&D centers (owning over 850 patents), 16 subsidiaries, over 30 domestic offices and warranty centers and 8 overseas branches, forming a sales network covering more than 60 countries and regions.

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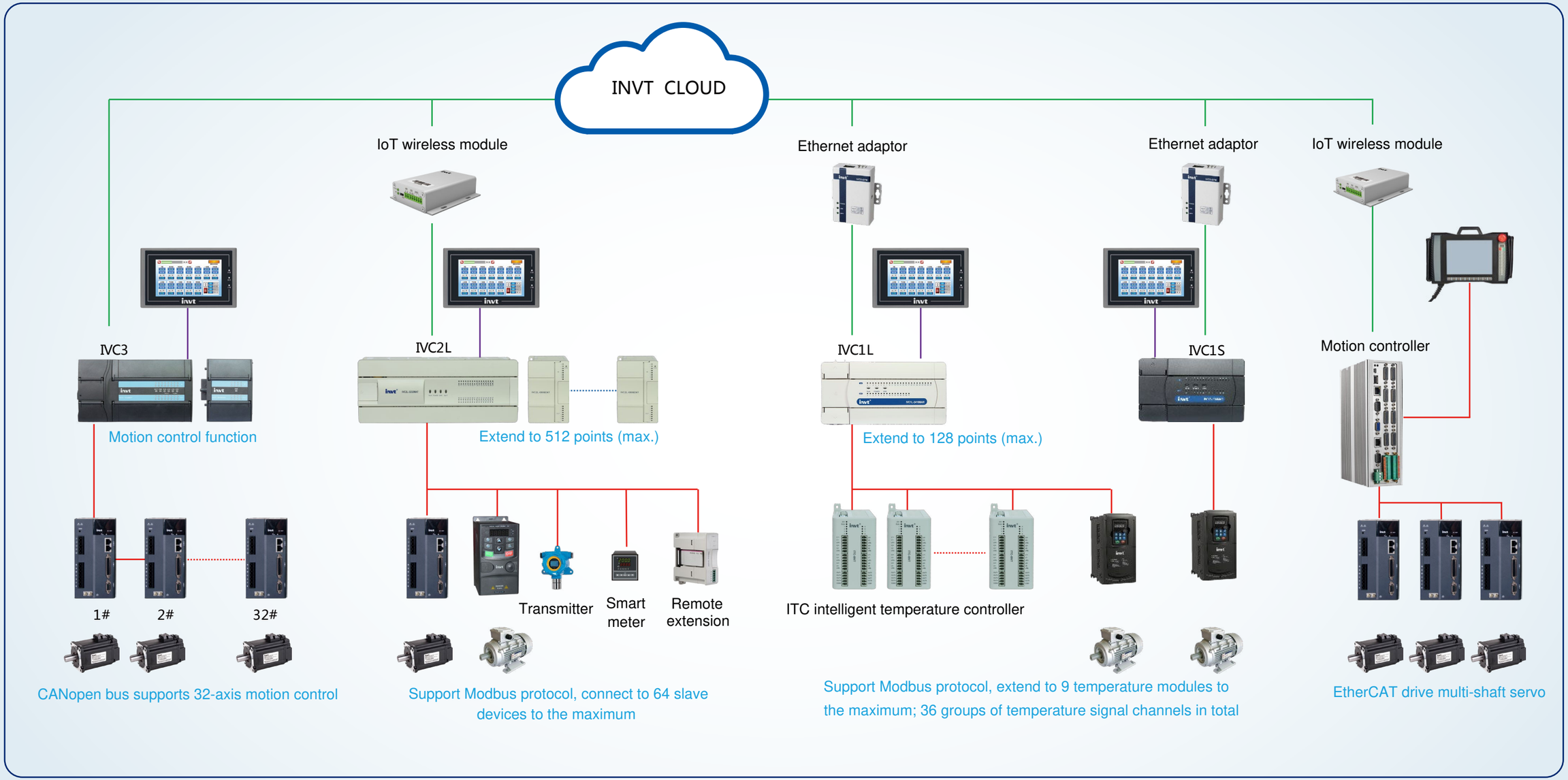
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Overview of IVC series PLC product family



In order to satisfy customized needs of different industries, we provide customer with four kinds of IVC series PLC, which are delicate, flexible, general and high performance. The new design theory and abundant product portfolio of IVC series products contribute to the improvement on production efficiency, reduction of product cost and enhancing of product competitiveness.

INVT industrial automation system solution

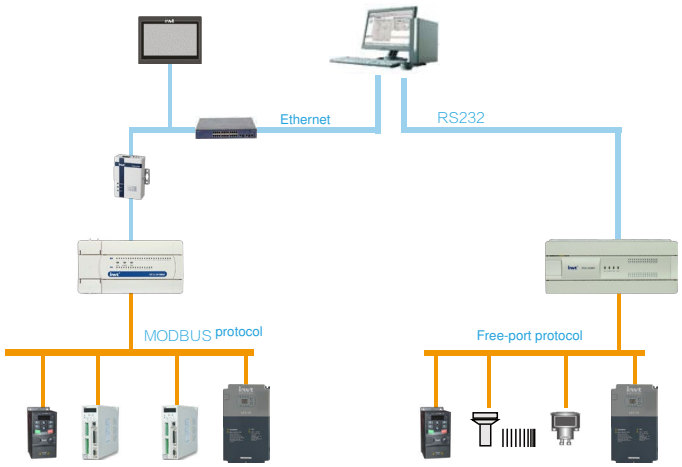


INVT strives to provide customers with comprehensive and integrated system solution in industry automation industry. Currently, our products cover the control layer, drive layer and field execution layer of industrical applications, including IoT cloud platform, HMI, PLC, motion controller, inverter, servo system, highly efficient motor, etc. We aim to help customers realize intelligent upgrade on traditional factories and products through offering extensive products and exceptional technical service.

Excellent communication performance

Multiple communication modes

Multiple communication ports and built-in communication protocols, including Modbus, free-port, N:N, programming port protocols, are provided, implementing the flexible device control networking.



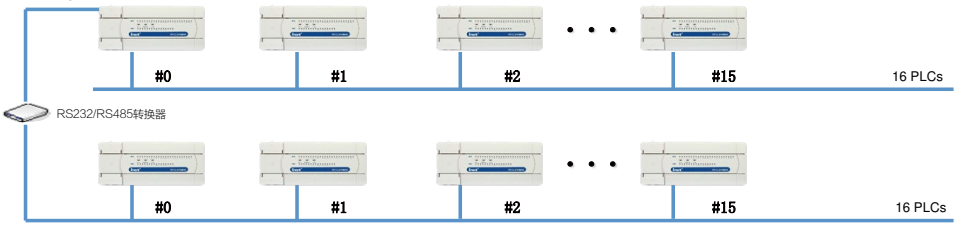
Special N:N networking mode

This mode implements the networking of multiple PLCs, and thus allows them to gain peer access to specific M and D component information. This mode is applicable to control the interlocking of correlated devices in the system. It adopts the N:N protocol and requires no extra programming.

Single-layer network structure: A maximum of 32 PLCs, with the fastest communication speed of 115.2 kbps



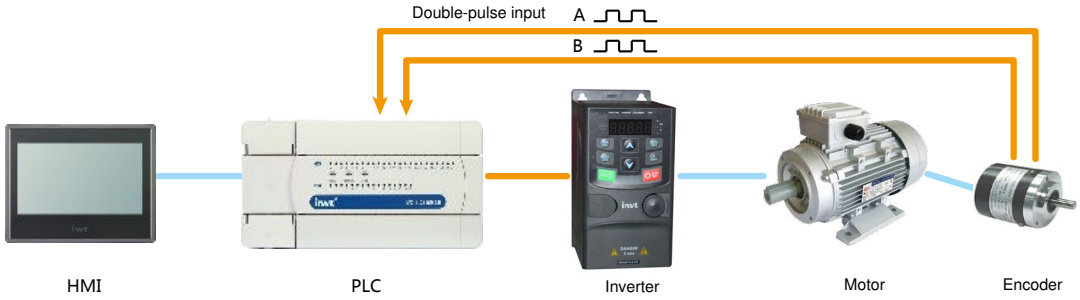
Two-layer network structure: A maximum of 16 PLCs on each layer, implementing the communication between PLCs on different layers.



High-speed input and output

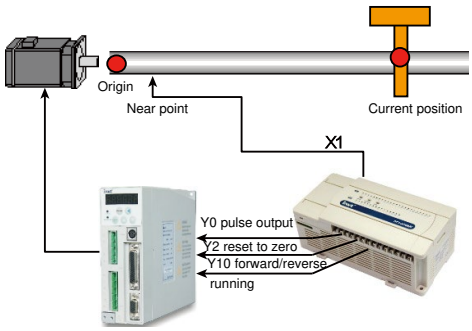
High-speed input

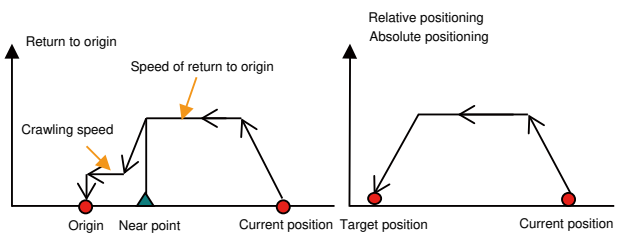
- High-speed input ports of X0 to X7, supporting functions including counting, pulse capture, external interruption, and frequency detection
- Supporting single-phase counting, single-phase increment and decrement counting, and two-phase counting
- Supporting the digital filtering function



High-speed output

- Supporting a maximum of 3 100 kHz pulse output
- Supporting two modes, namely pulse train output (PTO) and pulse width modulation (PWM)
- Implementing the positioning control functions including the origin return (DSZR), pulse output with acceleration/deceleration (PLSR), and relative/absolute positioning (DRVI/DRVA)

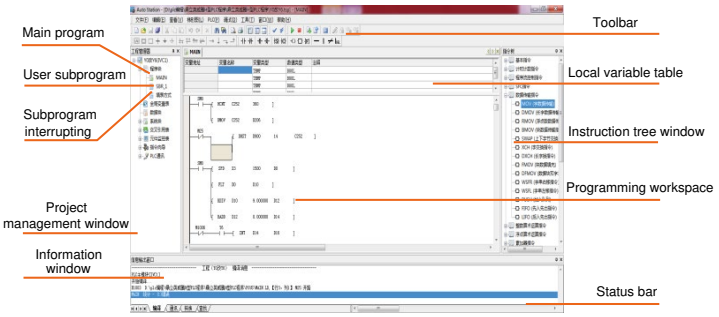




Simplified program development

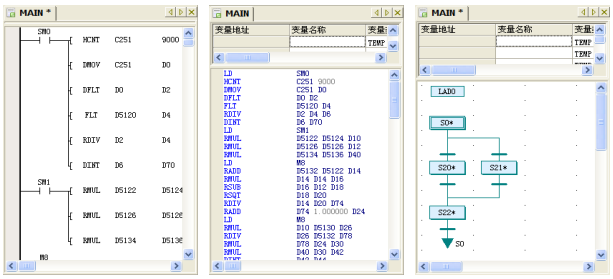
User-friendly programming interfaces

- Providing a project management window to faciliate the quick switching of the main program and subprograms
- Providing an information window to implementing the quick locating of program compiling errors
- Providing an instruction tree window to allow quick queries on the instruction library



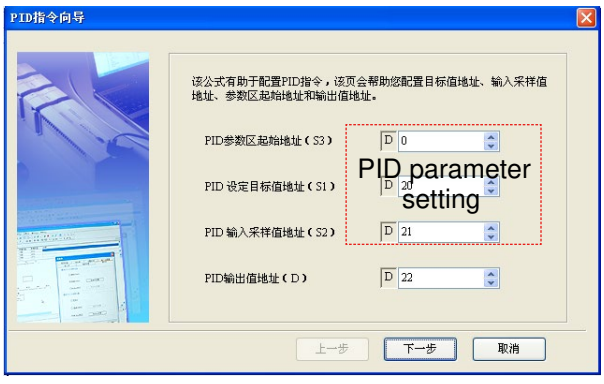
Supporting multiple programming languages

Programming languages, including the ladder diagram (LAD), instruction language (IL), and sequential function chart (SFC), are interchangeable.



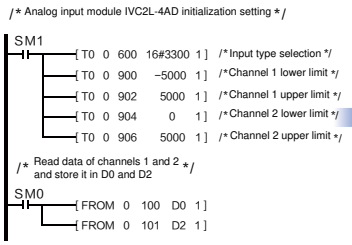
Practical instruction wizard

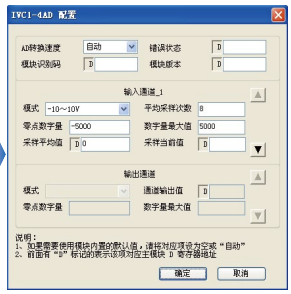
- Helping you quickly set the parameters including the complicated instruction addresses and input and output parameters
- Automatically generating execution subprogr ams to ensure the conciseness and accuracy of the program



Configuration function for extension modules

The AD, DA, TC, and PT extension modules of PLCs can be initialized by using the configuration function for special modules, which simplifies the initialization of function modules, and thus avoids the compiling of the complicated initialization instruction program.

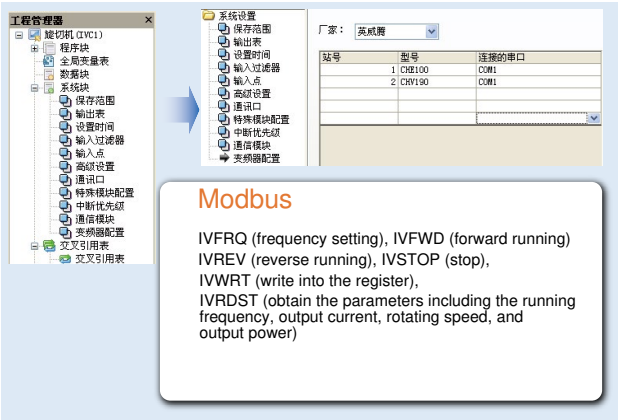




Function configuration of the special module

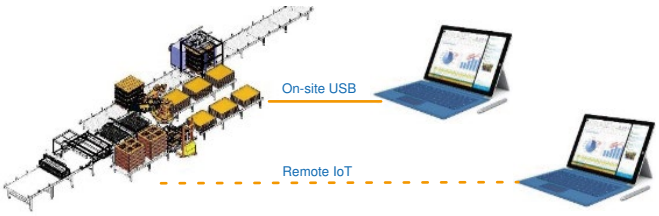
Simple communication instruction

No complicated instruction is required.
The communication function of the inverter can be implemented by using one instruction.



Quick program download, commissioning, and monitoring

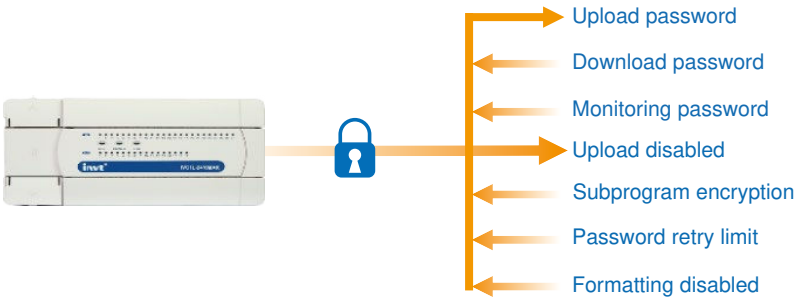
- Can be connected to a PC through the serial port to implement quick program commissioning and bug handling on the production site
- Can be connected to the Internet of Things (IoT) to perform remote device monitoring, program download, and start/stop operations



Safe and convenient use

Program encryption

Adopting a brand new password mechanism to provide multi-password protection, which improves the safety of the user program



Power failure protection

Using a FLASH storage device to store the user program and data, which prevents data loss due to power failure



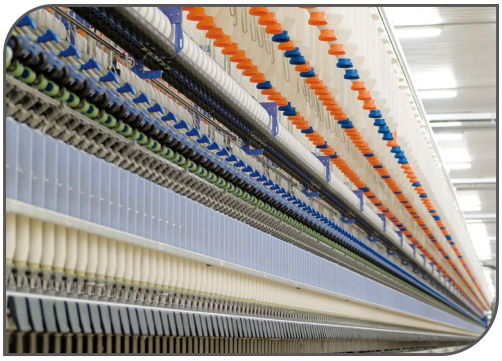
Design of rugged components

Using rugged input and output electronic components to ensure the long service life

Mean time between failures (MTBF)	Relay output	200,000 hours, fixed on the ground, with mechanical stress approximating zero and temperature and humidity control
		100,000 hours, fixed on the ground, with mechanical stress approximating zero and temperature and humidity control
	Transistor output	300,000 hours, fixed on the ground, with mechanical stress approximating zero and temperature and humidity control
		150,000 hours, with mechanical stress approximating zero and temperature and humidity control
Service life of the output relay contacts	220VAC/15VA/sensitive	1s ON/1s OFF, 3,200,000 times
	220VAC/30VA/ sensitive	1s ON/1s OFF, 1,200,000 times
	220VAC/72VA/ sensitive	1s ON/1s OFF, 300,000 times

Typical industrial application

IVC products are widely used in the manufacturing of mechanical equipment, including the textile machinery, machine tools, metal processing machinery, food machinery, packaging machinery, construction machinery, and printing machinery.



Textile machinery



Machine tools



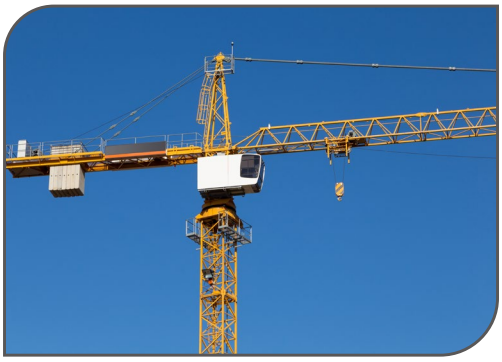
Metal processing machinery



Food machinery



Packaging machinery



Construction machinery

Product technical specifications

Specification name		IVC2L	IVC1L	IVC1S
I/O	Max. number of logical IO points	512	128	60
	Max. number of special extension modules	8	7	None
	High-speed pulse output	Two 100 kHz outputs (transistor output)	Three 100 kHz outputs (transistor output)	Two 100 kHz outputs (transistor output)
	Single-phase counting channel	Two 50 kHz channels + four 10 kHz channels	Two 50 kHz channels + four 10 kHz channels	Six 10 kHz channels
	Two-phase counting channel	One 30 kHz channel + one 5 kHz channel	One 30 kHz channel + one 5 kHz channel	Two 5 kHz channels
	Digital filtering	Applying digital filtering for X0 to X7, input filtering Constant range: 0–60 ms	Applying digital filtering for X0 to X7, input filtering Constant options: 0, 2, 4, 8, 16, 32, 64 ms	Applying digital filtering for X0 to X7, input filtering Constant options: 0, 2, 4, 8, 16, 32, 64 ms
Storage device	Program capacity	12k steps	16k steps	6k steps
	Permanent storage after program power outage	Yes	Yes	Yes
	Soft component for uninterrupted output at power outage	User-defined	Bit component: all range; word component: 1700	Bit component: all range; word component: 1700
	Hardware support	Backup battery for storage of 3 years	Flash for permanent storage	Flash for permanent storage
Soft components	Timer	100 ms precision: T0–T209	100 ms precision: T0–T209	100 ms precision: T0–T209
		100 ms precision: T210–T251	100 ms precision: T210–T251	100 ms precision: T210–T251
		1 ms precision: T252–T256	1 ms precision: T252–T256	1 ms precision: T252–T256
	Counter	16-bit increment counter: C0–C199	16-bit increment counter: C0–C199	16-bit increment counter: C0–C199
		32-bit increment and decrement counter: C200–C235	32-bit increment/decrement counter: C200–C235	32-bit increment/decrement counter: C200–C235
		32-bit high-speed counter: C236–C255	32-bit high-speed counter: C236–C255	32-bit high-speed counter: C236–C255
	Data register	D0–D7999	D0–D7999	D0–D7999
	Local data register	V0–V63	V0–V63	V0–V63
	Indexed addressing register	Z0–Z15	Z0–Z15	Z0–Z15
	Special data register	SD0–SD511	SD0–SD511	SD0–SD511
	Auxiliary relay	M0–M1999	M0～M2047	M0～M2047
	Local auxiliary relay	LM0–LM63	LM0–LM63	LM0–LM63
	Special auxiliary relay	SM0–SM511	SM0–SM511	SM0–SM511
	Status relay	S0–S991	S0–S1023	S0–S1023
Interruption resources	Internal timed interruption	3	3	3
	External interruption	16	16	16
	High-speed countering interruption	6	6	6
	Serial port interruption	8	12	8
	Interruption after PTO output	2	3	2
	Interruption after interpolation	/	/	/
	Interruption when passing a position	/	/	/
	Interruption at power outage	1	1	1
General	Running time of basic instructions	0.09μS	0.2μS	0.2μS
	Real-time clock	Supporting uninterrupted output of 3 years after power outage	Supporting a minimum of uninterrupted output of 45 days after power outage	None
	Analog potentiometer	2, 8-bit precision	None	None
Communication	Communication interface	PORT0:RS232	PORT0：RS232	PORT0：RS232
		PORT1:RS232\RS485	PORT1：RS485	PORT1：RS485
		/	PORT2：RS485	/
	Communication protocol	Supporting Modbus, free-port, N:N, and programming port protocols	Supporting Modbus, free-port, N:N, and programming port protocols	Supporting Modbus, free-port, N:N, and programming port protocols
Encryption measures	Password type	Upload password, download password, monitoring password, subprogram password		
	Upload disabled	Supported		
	Formattting disabled	Supported		
Application instructions	Basic instruction	Available	Available	Available
	Complicated instruction	Available	Available	Available
	Clock instruction	Available	Available	None
	Date and clock comparison instruction	Available	Available	None
	Floating-point number operation instruction	Available	Available	Available
	Positioning instruction	Available	Available	Available
	High-speed IO instruction	Available	Available	Available
	Modbus and inverter instruction	Available	Available	Available
	Read/write EEPROM instruction	Available	None	None
	Control and calculation instruction	Available	Available	Available
	Character string instruction	None	None	None
	Batch data processing instruction	None	None	None
	Datasheet instruction	None	None	None

Signal channel technical specifications

Electrical specifications of digital input channels

Specification name	IVC2L / IVC1L / IVC1S	
	High-speed input	Common input
Signal input mode	Both the source and sink types are applicable, but the input types must be the same.	
Input impedance	IVC2L: 3.3k IVC1L: 1k IVC1S: 4k	IVC2L: 4.3k IVC1L: 4k IVC1S: 4k
Input current	IVC2L: 6.5 mA TYP IVC1L: 29 mA TYP IVC1S: 5.3 mA TYP	5.3 mA TYP
ON voltage/current	18V DC Min/4.5 mA Min	18V DC Min/3 mA Min
OFF voltage/current	4V DC Max/1 mA Max	4V DC Max/1 mA Max
Digital filtering time	IVC2L: X0 to X7 can be adjusted within the range of 0 to 60 ms IVC1L/IVC1S: X0 to X7 can be adjusted by level within the range of 0 to 64 ms	IVC2L: Hardware filtering, 10 ms IVC1L/IVC1S: Hardware filtering, 10 ms

Electrical specifications of digital output channels

Specification name	IVC2L / IVC1L / IVC1S	
	Relay output	Transistor output
External power supply	250V AC, 30V DC or lower	5–24V DC
Circuit insulation	Mechanical insulation of relay	Optocoupler insulation
Action instruction	The indicator is on when the relay output contact is closed.	The indicator is on when the optocoupler is drived.
Open-circuit leakage current	/	Lower than 0.1 mA/3V DC
Min. load	2 mA/5V DC	5 mA/5–24V DC
Max. current of resistor load	2A/1-point 8A/4-point common terminal 8A/8-point common terminal	0.3A/1-point, 0.8A/4-point, 1.2A/6-point, 1.6A/8-point (For current larger than 8 points, the total current increases 0.1A for each increased point.)
Max. current of sensitive load	220V AC, 80W	IVC2L/IVC1S: Y0, Y1: 7.2W/24V DC; others: 12W/24V DC IVC1L: Y0, Y1, Y2: 7.2W/24V DC; others: 12W/24V DC
Max. current of lamp load	220V AC, 100W	IVC2L/IVC1S: Y0, Y1: 0.9W/24V DC; others: 1.5W/24V DC
ON response time	Max.time: 20 ms	IVC2L/IVC1S: Y0, Y1: 10μs; others: 0.5 ms IVC1L: Y0, Y1, Y2: 10μs; others: 0.5 ms
OFF response time		

Electrical specifications of analog input channels

Specification name	IVC2L / IVC1L
Conversion precision	12 bits
Analog circuit power supply	24V DC, Max. allowable ripple voltage: 5%; 50 mA (external power supply or source of the main module)
Digital circuit power supply	IVC2L: 5V DC, 50 mA (internal power supply or active extension unit of the main module) IVC1L: 5V DC, 72 mA (internal power supply of the main module)
Number of used IO points	None
Conversion speed	2 ms/channel
Voltage input range	-10–10V DC, -5–5V DC (input impedance of 1MΩ)
Current input range	-20–20 mA (input impedance of 250Ω)
Digital input	Default setting: -2000–2000; Allowable range: -10000–10000
Voltage resolution	5 mV
Current resolution	10μA
Overall precision	Full-scale range ± 1%
Isolation	Analog circuits are isolated from digital circuits by using optocouplers; analog circuits are isolated from the external power supply through DC\DC isolation; and analog channels are not isolated from each other.

Electrical specifications of thermistor input channels

Specification name	IVC2L / IVC1L	
Analog circuit power supply	24V DC, Max. allowable ripple voltage: 5%; 50 mA (external power supply or source of the main module)	
Digital circuit power supply	IVC2L: 5V DC, 50 mA (internal power supply or active extension unit of the main module) IVC1L: 5V DC, 72 mA (internal power supply of the main module)	
Number of used IO points	None	
Input signal	Thermistor of the Pt100, Cu100, or Cu50 type	
Conversion speed	15 ms/channel	
Conversion precision	12-bit A/D conversion	
Digital output	Pt100: -1500–6000 (0.1°C)	Pt100ÿ -2380–11120 (0.1°F)
	Cu100: -300–1200 (0.1°C)	Cu100: -220–+2480 (0.1°F)
	Cu50: -300–1200 (0.1°C)	Cu50: -220–+2480 (0.1°F)
Overall precision	Full-scale range ± 1%	
Isolation	Analog circuits are isolated from digital circuits by using optocouplers; analog circuits are isolated from the internal module input power supply of 24V DC; and analog channels are not isolated from each other.	

Electrical specifications of analog output channels

Specification name	IVC2L / IVC1L
Conversion precision	12 bits
Digital circuit power supply	24V DC, Max. allowable ripple voltage: 5%; input current of 120 mA (external power supply or source of the main module)
Digital circuit power supply	IVC2L: 5V DC, 72 mA (internal power supply or active extension unit of the main module) IVC1L: 5V DC, 72 mA (internal power supply of the main module)
Number of used IO points	None
Conversion speed	15 ms/channel
Voltage output range	-10–10V DC (impedance of the external load ⩾2 kΩ)
Current output range	0–20 mA, 4–20 mA (impedance of the external load ⩽520Ω)
Voltage resolution	5 mV
Current resolution	10 uA
Overall precision	Full-scale range ± 1%
Isolation	Analog circuits are isolated from digital circuits by using optocouplers; analog circuits are isolated from the external power supply through DC\DC isolation; and analog channels are not isolated from each other.

Electrical specifications of thermocouple input channels

Specification name	IVC2L / IVC1L	
Analog circuit power supply	24V DC, Max. allowable ripple voltage: 5%; 50 mA (external power supply or source of the main module)	
Digital circuit power supply	IVC2L: 5V DC, 50 mA (internal power supply or active extension unit of the main module) IVC1L: 5V DC, 72 mA (internal power supply of the main module)	
Number of used IO points	None	
Input signal	Thermistor of the K, J, E, N, T, R, or S type	
Conversion speed	240 ms/channel	
Conversion precision	12-bit A/D conversion	
Digital output	K\N type: -1000–12000 (0.1°C)	K\N type: -1480–+21902 (0.1°F)
	J\E type: -1000–10000 (0.1°C)	J\E type: -1480–+18320 (0.1°F)
	T type: -2000–4000 (0.1°C)	T type: -3280–+7520 (0.1°F)
	R\S type: 0–16000 (0.1°C)	R\S type: 320–29120 (0.1°F)
Overall precision	Full-scale range ± 1%	
Isolation	Analog circuits are isolated from digital circuits by using optocouplers; analog circuits are isolated from the internal module input power supply of 24V DC; and analog channels are not isolated from each other.	

Note: IVC1S series controllers are compact products. They do not support extension modules.



IVC2L series programmable controller

Product introduction

IVC2L series products are general-purpose small-sized PLCs, which can be flexibly extended, provide quick communication, and are applicable to various complicated application scenarios.



- Supporting a maximum of 512-point I/O extension
- Supporting 6 high-speed pulse inputs and 2 high-speed pulse outputs
- Supporting extension of modules including the analog and temperature modules, and extension of RS485 communication
- Certified by EU Rosh

Main module models

Model	Description	Dimensions (W×H×D)
IVC2L-2012MAR	20-point 24V DC input, 12-point relay output, 220V AC power supply	158×90×82 mm
IVC2L-2012MAT	20-point 24V DC input, 12-point transistor output, 220V AC power supply	158×90×82 mm
IVC2L-3232MAR	32-point 24V DC input, 32-point relay output, 220V AC power supply	228×90×82 mm
IVC2L-3232MAT	32-point 24V DC input, 32-point transistor output, 220V AC power supply	228×90×82 mm

Extension module models

Model	Description	Dimensions (W×H×D)
IVC2L-0808ENR	IVC2L series extension module, 8-point input, 8-point relay output	58×90×82 mm
IVC2L-0808ENT	IVC2L series extension module, 8-point input, 8-point relay output	58×90×82 mm
IVC2L-1600ENN	IVC2L series extension module, 16-point input	58×90×82 mm
IVC2L-0016ENR	IVC2L series extension module, 16-point relay output	58×90×82 mm
IVC2L-0016ENT	IVC2L series extension module, 16-point transistor output	58×90×82 mm
IVC2L-1616EAR	IVC2L series extension module, 16-point input, 16-point relay output, 220V AC power supply	158×90×82 mm
IVC2L-1616EAT	IVC2L series extension module, 16-point input, 16-point transistor output, 220V AC power supply	158×90×82 mm

Special function module models

Model	Description	Dimensions (W×H×D)
IVC2L-4AD	IVC2L series extension module, 4 analog inputs	58×90×82 mm
IVC2L-4DA	IVC2L series extension module, 4 analog outputs	58×90×82 mm
IVC2L-4TC	IVC2L series extension module, 4 thermocouple modules	58×90×82 mm
IVC2L-4PT	IVC2L series extension module, 4 thermistor modules	58×90×82 mm
IVCS-EPM	Ethernet adapter	56×82×26 mm
IVC2L-RS485	RS485 extension module (isolation)	32×90×82 mm

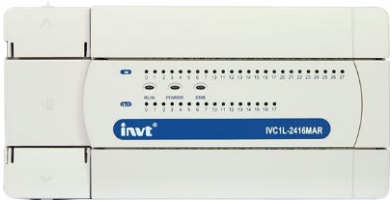
Optional accessory models

Model	Description	Dimensions (W×H×D)
IVC-SL1	PLC-VS series HMI communication cable	3m
IVC-SL2	PLC download cable (USB)	2m
IVC-SL3	PLC-VT/VK series HMI communication cable	3m
IVC-SL4	HMI download cable (USB)	1.5m
IVC-SL5	PLC-VT/VK series HMI communication cable	7m
IVC-SL8	Download cable (serial port)/PLC-VS series HMI communication cable	7m

IVC1L series programmable controller

Product introduction

IVC1L series products are smart small-sized PLCs, which are designed in a compact structure, provide strong functions, and support flexible I/O configuration.



- Supporting a maximum of 128-point I/O extension
- Supporting 2 AB phase inputs, 6 single-phase high-speed pulse inputs, and 3 high-speed pulse outputs
- Providing multiple main modules with different I/O configurations, different input power supplies, and integrated analog channels
- Providing three standard independent serial communication ports: Port0 to Port2
- Certified by EU Rosh

Main module models

Model	Description	Dimensions (W×H×D)
IVC1L-0806MAR	8-point 24V DC input, 6-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1L-0806MAT	8-point 24V DC input, 6-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1L-1208MAR	12-point 24V DC input, 8-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1L-1208MAT	12-point 24V DC input, 8-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1L-1410MAR	14-point 24V DC input, 10-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1L-1410MAT	14-point 24V DC input, 10-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1L-1614MAR	16-point 24V DC input, 14-point relay output, 220V AC power supply	150×90×81.2 mm
IVC1L-1614MAT	16-point 24V DC input, 14-point transistor output, 220V AC power supply	150×90×81.2 mm
IVC1L-1614MAR1	16-point 24V DC input, 14-point relay output, 2 integrated analog inputs, 1 analog output, 220V AC power supply	182×90×81.2 mm
IVC1L-1614MAT1	16-point 24V DC input, 14-point transistor output, 2 integrated analog inputs, 1 analog output, 220V AC power supply	182×90×81.2 mm
IVC1L-2416MAR	24-point 24V DC input, 16-point relay output, 220V AC power supply	182×90×81.2 mm
IVC1L-2416MAT	24-point 24V DC input, 16-point transistor output, 220V AC power supply	182×90×81.2 mm
IVC1L-3624MAR	36-point 24V DC input, 24-point relay output, 220V AC power supply	224.5×90×81.2 mm
IVC1L-3624MAT	36-point 24V DC input, 24-point transistor output, 220V AC power supply	224.5×90×81.2 mm

Terminal-removable model	Description	Dimensions (W×H×D)
IVC1L-0806MAR2	8-point 24V DC input, 6-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1L-0806MAT2	8-point 24V DC input, 6-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1L-1208MAR2	12-point 24V DC input, 8-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1L-1208MAT2	12-point 24V DC input, 8-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1L-1410MAR2	14-point 24V DC input, 10-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1L-1410MAT2	14-point 24V DC input, 10-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1L-1614MAR2	16-point 24V DC input, 14-point relay output, 220V AC power supply	150×90×81.2 mm
IVC1L-1614MAT2	16-point 24V DC input, 14-point transistor output, 220V AC power supply	150×90×81.2 mm
IVC1L-1614MAR6	16-point 24V DC input, 14-point relay output, 2 integrated analog inputs, 1 analog output, 220V AC power supply	182×90×81.2 mm
IVC1L-1614MAT6	16-point 24V DC input, 14-point transistor output, 2 integrated analog inputs, 1 analog output, 220V AC power supply	182×90×81.2 mm
IVC1L-2416MAR2	24-point 24V DC input, 16-point relay output, 220V AC power supply	182×90×81.2 mm
IVC1L-2416MAT2	24-point 24V DC input, 16-point transistor output, 220V AC power supply	182×90×81.2 mm
IVC1L-3624MAR2	36-point 24V DC input, 24-point relay output, 220V AC power supply	224.5×90×81.2 mm
IVC1L-3624MAT2	36-point 24V DC input, 24-point transistor output, 220V AC power supply	224.5×90×81.2 mm

DC power supply model	Description	Dimensions (W×H×D)
IVC1L-0806MDR	8-point 24V DC input, 6-point relay output, 24V DC power supply	135×90×81.2 mm
IVC1L-0806MDT	8-point 24V DC input, 6-point transistor output, 24V DC power supply	135×90×81.2 mm
IVC1L-1208MDR	12-point 24V DC input, 8-point relay output, 24V DC power supply	135×90×81.2 mm
IVC1L-1208MDT	12-point 24V DC input, 8-point transistor output, 24V DC power supply	135×90×81.2 mm
IVC1L-1410MDR	14-point 24V DC input, 10-point relay output, 24V DC power supply	135×90×81.2 mm
IVC1L-1410MDT	14-point 24V DC input, 10-point transistor output, 24V DC power supply	135×90×81.2 mm
IVC1L-1614MDR	16-point 24V DC input, 14-point relay output, 24V DC power supply	150×90×81.2 mm
IVC1L-1614MDT	16-point 24V DC input, 14-point transistor output, 24V DC power supply	150×90×81.2 mm
IVC1L-2416MDR	24-point 24V DC input, 16-point relay output, 24V DC power supply	182×90×81.2 mm
IVC1L-2416MDT	24-point 24V DC input, 16-point transistor output, 24V DC power supply	182×90×81.2 mm
IVC1L-3624MDR	36-point 24V DC input, 24-point relay output, 24V DC power supply	224.5×90×81.2 mm
IVC1L-3624MDT	36-point 24V DC input, 24-point transistor output, 24V DC power supply	224.5×90×81.2 mm

Extension module models

Model	Description	Dimensions (W×H×D)
IVC1L-0808ENR	IVC1L series extension module, 8-point input, 8-point relay output	61×90×81.2 mm
IVC1L-0808ENT	IVC1L series extension module, 8-point input, 8-point transistor output	61×90×81.2 mm
IVC1L-1600ENN	IVC1L series extension module, 16-point input	61×90×81.2 mm
IVC1L-0016ENT	IVC1L series extension module, 16-point transistor output	61×90×81.2 mm
IVC1L-0016ENR	IVC1L series extension module, 16-point relay output	61×90×81.2 mm

Integrated PT models

Model	Description	Dimensions (W×H×D)
IVC1L-1010MAR-T	10-point 24V DC input, 10-point relay output, 3 thermistor inputs, 220V AC power supply	150×90×81.2
IVC1L-1616MAR-T	16-point 24V DC input, 16-point relay output, 2 thermistor inputs, 220V AC power supply	182×90×81.2
IVC1L-2424MAR-T	24-point 24V DC input, 24-point relay output, 3 thermistor inputs, 220V AC power supply	224.5×90×81.2

Special function module models

Model	Description	Dimensions (W×H×D)
IVC1L-2AD	IVC1L series extension module, 2 analog inputs	61×90×81.2 mm
IVC1L-2DA	IVC1L series extension module, 2 analog outputs	61×90×81.2 mm
IVC1L-2TC	IVC1L series extension module, 2 thermocouple modules	61×90×81.2 mm
IVC1L-2PT	IVC1L series extension module, 2 thermistor modules	61×90×81.2 mm
IVC1L-4AD	IVC1L series extension module, 4 analog inputs	61×90×81.2 mm
IVC1L-4DA	IVC1L series extension module, 2 analog outputs	61×90×81.2 mm
IVC1L-4TC	IVC1L series extension module, 4 thermocouple modules	61×90×81.2 mm
IVC1L-4PT	IVC1L series extension module, 4 thermistor modules	61×90×81.2 mm
IVC1L-5AM	IVC1L series extension module, 4 analog inputs, 1 analog output	61×90×81.2 mm
IVCS-EPM	Ethernet adapter	56×82×26 mm

Optional accessory models

Model	Description	Dimensions (W×H×D)
IVC-SL1	PLC-VS series HMI communication cable	3m
IVC-SL2	PLC download cable (USB)	2m
IVC-SL3	PLC-VT/VK series HMI communication cable	3m
IVC-SL4	HMI download cable (USB)	1.5m
IVC-SL5	PLC-VT/VK series HMI communication cable	7m
IVC-SL8	Download cable (serial port)/PLC-VS series HMI communication cable	7m

IVC1S series programmable controller

Product introduction

IVC1S series products are compact micro PLCs on which functions are highly integrated. They are highly cost-effective in scenarios where a small number of points are applied.

- Supporting a maximum of 60 I/O points; do not support module extension
- Supporting 2 AB phase inputs, 6 single-phase high-speed pulse inputs, and 2 high-speed pulse outputs
- Certified by EU Rosh



Main module models

Model	Description	Dimensions (W×H×D)
IVC1S-0806MAR	8-point 24V DC input, 6-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1S-0806MAT	8-point 24V DC input, 6-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1S-1208MAR	12-point 24V DC input, 8-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1S-1208MAT	12-point 24V DC input, 8-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1S-1410MAR	14-point 24V DC input, 10-point relay output, 220V AC power supply	135×90×81.2 mm
IVC1S-1410MAT	14-point 24V DC input, 10-point transistor output, 220V AC power supply	135×90×81.2 mm
IVC1S-1614MAR	16-point 24V DC input, 14-point relay output, 220V AC power supply	150×90×81.2 mm
IVC1S-1614MAT	16-point 24V DC input, 14-point transistor output, 220V AC power supply	150×90×81.2 mm
IVC1S-2416MAR	24-point 24V DC input, 16-point relay output, 220V AC power supply	182×90×81.2 mm
IVC1S-2416MAT	24-point 24V DC input, 16-point transistor output, 220V AC power supply	182×90×81.2 mm
IVC1S-2424MAR	24-point 24V DC input, 24-point relay output, 220V AC power supply	224.5×90×81.2 mm
IVC1S-2424MAT	24-point 24V DC input, 24-point transistor output, 220V AC power supply	224.5×90×81.2 mm
IVC1S-3624MAR	36-point 24V DC input, 24-point relay output, 220V AC power supply	224.5×90×81.2 mm
IVC1S-3624MAT	36-point 24V DC input, 24-point transistor output, 220V AC power supply	224.5×90×81.2 mm

Optional accessory models

Model	Description	Dimensions (W×H×D)
IVC-SL1	PLC-VS series HMI communication cable	3m
IVC-SL2	PLC download cable (USB)	2m
IVC-SL3	PLC-VT/VK series HMI communication cable	3m
IVC-SL4	HMI download cable (USB)	1.5m
IVC-SL5	PLC-VT/VK series HMI communication cable	7m
IVC-SL8	Download cable (serial port)/PLC-VS series HMI communication cable	7m

INVT industrial automation products



HMI

- Reliable performance, providing multiple series of products, such as the VS and VK series
- Abundant industrial Vector gallery, facilitating the configuration



Motion controller

- Various motion control cards
- Whole series of motion controller
- Robot control system
- Customized numerical control system



Servo system

- General-purpose servo control systems
- Specilized servo systems, such as the electro-hydraulic and spinning machine system



Inverter

- Most complete inverter production line in the industry, covering the low, medium, and high voltage classes
- Capable of providing customized industrial products based on customer needs

Domestic sales service network

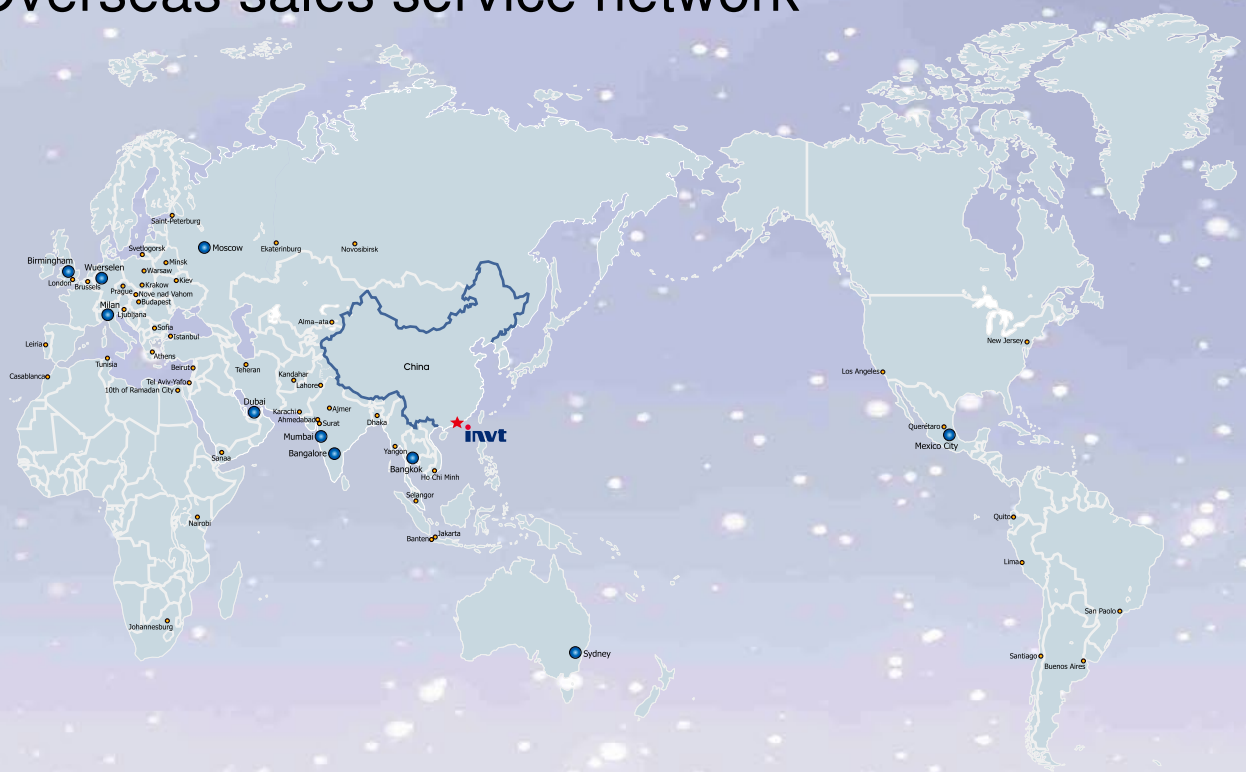


National service hotline:

400-700-9997

30 domestic offices, together with a growing number of warranty centers and after-sale service centers, form a comprehensive sales service network to provide fast response.

Overseas sales service network



- INVT Sales & Service in 9 countries: Russia, India, Thailand, UAE, Italy, UK, Germany, Australia, Mexico
- Sales and Service Partners in 57 countries

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INVT Auto-control Technology (Shenzhen) Co., Ltd.

West Side, Floor 6, Building B, INVT Guangming Technology Building, Songbai Road, Matian, Guangming District, Shenzhen, China

Tel: 0755-86553062
Fax: 0755-86553030

Industrial automation: ■Inverter ■Servo system ■Motor, electric spindle ■Electronic control system ■HMI ■PLC ■Traction system of rail transit ■Intelligent elevator control system

Energy power : ■SVG ■PV inverter ■UPS ■Online management system for energy reduction ■Electronic control system for new energy vehicle

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