

A-61x Series Programmable Logic Controller

Catalogue•2015.03



A-61x PLC

eAutomation Solution



Central Processing Units Programmable Logic Controller

A-61x Series

1

OVERVIEW

- ※ Creation of control programs in Function Block Diagram (FBD) or Ladder Diagram (LAD)
- ※ 4-Axis Synchronous Motion, 100 KHz PWM (Total 400KHz)
- ※ Able To Edit The Parameter Among The Controller Operation
- ※ Multiple AUTO-PI Synchronous Function
- ※ Multi-Lingual Display Menu
- ※ Enhance Password & Safety Function
- ※ Text Display Can Be Pre-Programmed in Two Languages
- ※ Built-in Standard High Frequency Counter (250KHz per Input, Total 1000KHz)
- ※ Built-in Standard Real Time Clock (RTC)
- ※ PC Program Can be Used For All A-51/52/62 Series
- ※ ATP2 Text Panel Can Plug & Play Directly
- ※ Built-in Standard RS-485 Port, Connect More Than 1000 IOs Via Remote IO Module
- ※ Memory Card Which Has Copy & Password Protection
- ※ Connect Encoder & Multi-Sensors Directly
- ※ Built-in Step Motor Driver, Connect Directly
- ※ Built-in Datalog Function, MicroSD Plug-in
- ※ Display Text Display Diversity Patterns, Scrolling Text, Bar Charts, Indicators
- ※ 104 FBD Integrated Functions, 97 LD Integrated Functions
- ※ Astronomical Clock Function
- ※ ATP2 Text Panel Built-in Function Key
- ※ Digital Oscilloscope Function, Real-Time Monitoring
- ※ High-Level Math Functions
- ※ Communication Protocol MODBUS RTU/ASCII & Multi Format
- ※ Block Name Define, Program Comment
- ※ Communication Baud Rate 921600 bps
- ※ Custom Truth Table, Without Logical Analysis
- ※ Multi Communication Parameter Function
- ※ Quick Calculation Of Nonlinear Equations
- ※ Random Generator Hardware
- ※ Free PC software "Edit" + "Utility"



- ※ Output Over Current Protection (OCP)
- ※ Output Over Thermal Protection (OTP)
- ※ Output Under Voltage Lockout (UVLO)
- ※ Independent Communication Port which can communicate with 255 units MODBUS devices synchronized

Type	6188D-D 6188-D 6188M-D	6188DT-D 6188T-D 6188MT-D	6188D-A 6188-A 6188M-A	6189D-D 6189-D 6189M-D	6189DT-D 6189T-D 6189MT-D
Operation Voltage	10-30VDC/24VAC	10-30VDC/24VAC	100/240VAC	10-30VDC/24VAC	10-30VDC/24VAC
Inputs	8DI status low:<5VDC status high:>8.5VDC	8DI status low:<5VDC status high:>8.5VDC	8DI status low:<40VAC status high:>79VAC	4DI/4AI(0-10VDC) status low:<5VDC status high:>8.5VDC	4DI/4AI(0-10VDC) status low:<5VDC status high:>8.5VDC
Outputs	4*Isolation(Relay)	4*Isolation(Transistor)	4*Isolation(Relay)	4*Isolation(Relay)	4*Isolation(Transistor)
Continuous Current	Relay:5A (with resistive load), 2 A (with inductive load) / Transistor:1.75A(OCP/OTP/UVLO)				
Output Operating Frequency	Relay:30HZ / Transistor:100KHZ				
Input Operating Frequency	250KHZ(Total 1000KHZ)				
RTC/ Hold During Power Off	Yes				
Operation Temperature	-10 to +55 °C				
Communication Ports	USB*1 & RS-485*1				
Communication Baud Rate	1200-921600bps				
Degree Of Protection	IP20				
Base Controller IOs	12 IOs, Up To 7 Extend IO Modules (128 IOs)				
Input Isolation	Yes				
Program Capacity	1024 FBD				
Dimension(W x H x D mm)	73*90*60.3 mm				

*D-x = LCM Type / *M = MicroSD Type

Extended Modules

PLC Extended Modules

A-20x Series

2

OVERVIEW

- ※ Use For All A-21/61/62 Series
- ※ Plug & Play
- ※ Hot Swapping
- ※ Multi-IOs 8AI/4DO/2AO



Type	A-2060-D	A-2060T-D	A-2060-A	A-2010-D	A-2012-D
Operation Voltage	10-30VDC/24VAC	10-30VDC/24VAC	100/240VAC	10-30VDC/24VAC	10-30VDC/24VAC
Inputs	8*Isolation DI status low:<5VDC status high:>8.5VDC	8*Isolation DI status low:<5VDC status high:>8.5VDC	8*Isolation DI status low:<40VAC status high:>79VAC	8*AI:0-10V(10-BIT)	2*Isolation DI 4*AI (PT-100*2+SENSOR*2)
Outputs	4*Isolation(Relay)	4*Isolation(Transistor)	4*Isolation(Relay)	4*Isolation(Transistor)	2*Isolation(Transistor)
Continuous Current	Relay:5A (with resistive load), 2 A (with inductive load) / Transistor:1A				
Analog Outputs	---			2*AO:0-10V(10-BIT)	2*AO:0/4-20mA(10-BIT)
Digital Input Isolation	Yes(5000VDC)				
Input Operating Frequency	4HZ				
Output Operating Frequency	Relay:4HZ / Transistor:4HZ				
Operation Temperature	-10 to +55 °C				
Degree Of Protection	IP20				
Installation	35 mm DIN rail or Flush mounting				
Dimension (W x H x D mm)	81*90*57.1 mm				

Text Panel

PLC Text Panel

ATP2

3

OVERVIEW

- ※ Use For All A-51/52/61/62 Series
- ※ Plug & Play
- ※ Multi-Lingual Display & Setting
- ※ Able To Edit The Parameter Among The Controller Operation
- ※ Enhance Password & Safety Function
- ※ Display Text Display Diversity Patterns, Scroll-in Text, Bar Charts, Indicators
- ※ Built-in Function Key
- ※ Digital Oscilloscope Function, Real-Time Monitoring
- ※ Support Start-Up Screen
- ※ RS-485 Interface
- ※ Resolution: 192*64 pixels
- ※ Dual Watchdog Timer
- ※ Surge, EFT & ESD Protection
- ※ IP65 Protection



Type	ATP2 (Text Panel)
Operation Voltage	10-30VDC/24VAC
LCM	4.3" STN
Contrast	Adjustable resistor
Resolution	192*64 pixels
LCM Life	>50000 hr
Brightness	60cd/m2
Color	Monochrome
Function KEY	5-KEY
Display Dimension	96*32 mm
Operation Temperature	-10 to +55 °C
Degree Of Protection	IP65(Front Panel)
Installation	35 mm DIN rail or Flush mounting
Dimension (W x H x D mm)	157.9*86.4*28.6 mm

Accessories

PLC Accessories

Accessories

4

OVERVIEW

- ※ ASPS Use For 24VDC
- ※ AMB128 Use For All
A-11x/21x/51x/52x/61x/62x Series
- ※ AMB128 Can Upload & Download Directly
- ※ AMB128 Has Copy & Password Protection
- ※ Standard Micro-SD-8GB
- ※ Micro-SD File Format *.CSV
- ※ CAB-60USB Use For All Yottacontrol
A-21x/61x/62x Series Controller
- ※ CAB-60USB Use For Communicate/Upload
/Download/Monitor



Type	ASPS	AMB128	CAB-60USB	Micro-SD-8GB
	48W Power Supply	Program Memory Cards	Communication lines	Data Storage Card
Operation Voltage	1-phase 100/240 V AC	USB/PLC	USB	PLC
PC Driver	---	Windows98/ME/2000/XP/Vista/7/8/ Server 2008/WinCE/Linux/MacDC	Windows98/ME/2000/XP/Vista/7/8/ Server 2008/WinCE/Linux/MacDC	--- *.CSV
Support Models	A-1x/A-2x/A-3x/A-5x /A-6x/A-7x/TS/TC	A-11x/A-21x/A-51x/A-52x/A-61x/A-62x	A-21x/A-61x/A-62x	Micro-SD Type
Operation Temperature	-10 to +55 °C	-10 to +55 °C	-10 to +55 °C	-10 to +55 °C
Degree Of Protection	IP20	IP20	IP20	---
Installation	35 mm DIN rail or Flush mounting	PC or PLC	PC or PLC	PC or PLC
Dimension(W x H x D)	73*90*60.3 mm	25.7*39.7*16.8 mm	60cm	---
Input Frequency	50 / 60 Hz	---	---	---
Fuse	YES	---	---	---
OVP	YES	---	---	---
OCP	YES	---	---	---
24VDC(MAX)	2.0A	---	---	---
Output Voltage Stability	+8%	---	---	---
Ripple	100mV	---	---	---
Efficiency	>75%	---	---	---
Power LED	YES	---	---	---

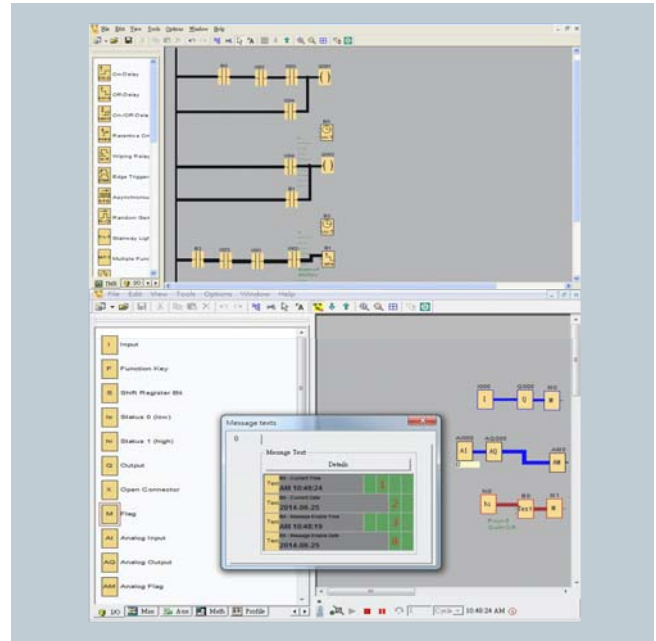
Software PLC Edit Software

Editor

5

OVERVIEW

- ※ Creation of control programs in Function Block Diagram (FBD) or Ladder Diagram (LAD)
- ※ Use For All A-11/21/51/52/61/62 Series
- ※ Support Windows98/ME/2000/XP/Vista/7/8
- ※ Offline Simulation Can Edit Parameters
- ※ Online Simulation Can Monitor Parameters
- ※ Message Text Can Edit Multi-Lingual
- ※ Built-in Datalog Function, Use Standard MicroSD
- ※ Display Text Display Diversity Patterns, Scrollin Text, Bar Charts, Indicators ...
- ※ 104 FBD Integrated Functions, 97 LD Integrated Functions
- ※ Astronomical Clock Function
- ※ ATP2 Text Panel Built-in Function Key
- ※ Digital Oscilloscope Function, Real-Time Monitoring
- ※ High-Level Math Functions
- ※ Communit Protocol MODBUS RTU/ASCII & Multi Format
- ※ Block Name Define, Program Comment
- ※ Custom Truth Table, Without Logical Analysis
- ※ Ladder Diagram Can Compile To Function Block Diagram



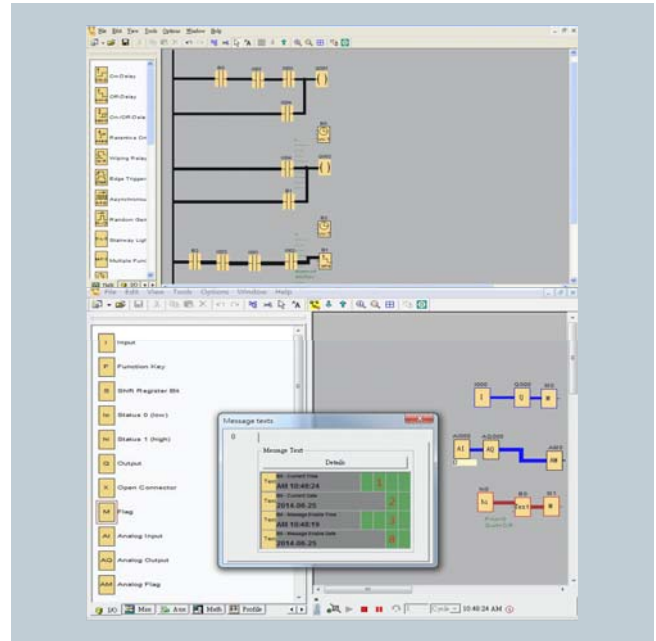
	AND		Input		PI controller		NOT Mask		Square root
	AND		Function Key		PWM		NAND Mask		Absolute value
	NAND		Sift Register Bit		Analog Filter		NOR Mask		GCD
	NAND		Status 0 (low)		MaxMin		XOR Mask		LCM
	OR		Status 1 (high)		Average Value		Data array Max/Min/Avg		2' s nth power
	NOR		Output		Latching Relay		Data Max/Min/Avg		e' s nth power
	XOR		Open Connector		Pulse Relay		RAND		Fixed-point arithmetic
	NOT		Flag		Message Texts		MEM		Round-off
F	On-Delay		Analog Inut		Shift Register		Encoder		Sine function
	Off-Delay		Analog Output		Mathematical instruction error detection		Stepping Motor Control		Cosine function
B	On-/Off-Delay		Analog Flag		Modbus Read		Stepping Motor Control (Edge)		Tangent function
	Retentive On-Delay		Up/Down Counter		Modbus Write		Pulse train output		Cotangent function
u	Wiping Relay (pulse output)		Hours Counter		Boolean function		Pulse train output (Edge)		Secant function
	Edge Triggered Wiping Relay		Threshold Trigger		Trigger date time		Segment display		Cosecant function
i	Asynchronous Pulse Generator		Mathematical instruction		Binary-Coded Decimal		Word to Bit		Quadratic equation
	Random Generator		Analog Comparator		Binary Code		UDC Communication		Data Log
O	Stairway Lighting Switch		Analog Threshold Trigger		Left Rotation		CRC16		
	Multiple Function Switch		Analog Amplifier		Right Rotation		Odd Number		
n	Weekly Timer		Analog Watchdog		Left Shift		Even Number		
	Yearly Timer		Analog Differential Trigger		Right Shift		Modulo		
	Astronomical clock		Analog MUX		AND Mask		Remainder		
	StopWatch		Analog Ramp		OR Mask		Logarithm		

Software PLC Edit Software

Yotta Editor

OVERVIEW

- ※ Program Comment
- ※ Project-Oriented Application Development
- ※ Ladder Diagram & Function Block Diagram Editing
Comparison Function
- ※ Program Memory Code Auxiliary Display
- ※ Component Comment



	Make Contact		Threshold Trigger		Modbus Write		Pulse train output		Cotangent function	
	Break Contact		Mathematical instruction		Boolean function		Pulse train output (Edge)		Secant function	
	Analog Contact		Analog Comparator		Trigger date time		Segment display		Cosecant function	
	Relay Coil		Analog Threshold Trigger		Binary-Coded Decimal		Word to Bit		Quadratic equation	
	Inverted Output		Analog Amplifier		Binary Code		UDC Communication		Data Log	
	Analog Output		Analog Watchdog		Left Rotation		CRC16		Serial connect with an A contact	YES
	On-Delay		Analog Differential Trigger		Right Rotation		Odd Number		Parallel connect with an A contact	YES
	Off-Delay		Analog MUX		Left Shift		Even Number		Concatenate two blocks in series	YES
L	On-/Off-Delay		Analog Ramp		Right Shift		Modulo		Merge two blocks in parallel	YES
D	Retentive On-Delay		PI controller		AND Mask		Remainder			
F	Wiping Relay (pulse output)		PWM		OR Mask		Logarithm			
u	Edge Triggered Wiping Relay		Analog Filter		NOT Mask		Square root			
C	Asynchronous Pulse Generator		MaxMin		NAND Mask		Absolute value			
t	Random Generator		Average Value		NOR Mask		GCD			
i	Stairway Lighting Switch		AND		XOR Mask		LCM			
O	Multiple Function Switch		NAND		Data array Max/Min/Avg		2' s nth power			
n	Weekly Timer		Latching Relay		Data Max/Min/Avg		e' s nth power			
	Yearly Timer		Pulse Relay		RAND		Fixed-point arithmetic			
	Astronomical clock		Message Texts		MEM		Round-off			
	StopWatch		Shift Register		Encoder		Sine function			
	Up/Down Counter		Mathematical instruction error detection		Stepping Motor Control		Cosine function			
	Hours Counter		Modbus Read		Stepping Motor Control (Edge)		Tangent function			

Monitoring and Database Software

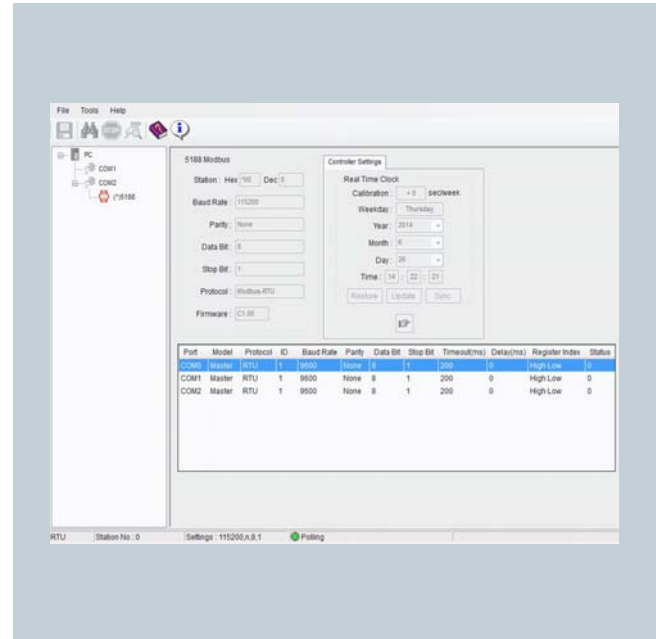
PLC Monitoring and Database Software

Utility

7

OVERVIEW

- ※ Monitor & Database Function
- ※ Use For All A-1/2/3/5/6/7 Series Controller & Time Switch Series
- ※ Windows98/ME/2000/XP/Vista/7/8
- ※ Quick Setup Distributed Device Parameter & Monitoring
- ※ Can Monitor DCS Program & Parameters
- ※ Can Monitor PLC Program & Parameters
- ※ Monitor & Database Can Use For SCADA
- ※ Real-Time Monitoring, Warning Setup
- ※ Monitor Hundreds Controllers & Distributed Devices
- ※ Component Name Comment
- ※ Easy Logical Program Function
- ※ Time Switch Series Edit
- ※ Multi Communicate Parameter Function
- ※ Support MODBUS RTU/ASCII
- ※ Quick Setup Controller RTC Parameter



APPLICATIONS

ELECTRONIC EQUIPMENT

- SORTING MACHINE
- LOADER & UNLOADER
- PACKAGING MACHINE
- DETECTOR
- CUTTING MACHINE
- LAMINATOR
- COATING MACHINE
- LAPPING MACHINE
- FEEDING SYSTEM
- PRECISION MACHINERY

ELECTROMECHANICAL EQUIPMENT

- SPRAYING MACHINE
- EVAPORATION
- MACERATOR
- CALENDER MACHINE
- FLUSHING MACHINE
- ELECTROPLATING MACHINE
- WELDING MACHINE
- PRESS MACHINE
- CUTTING MACHINE
- BENDING MACHINE
- BOBBIN MACHINE
- BURN-IN EQUIPMENT
- DIE CASTER
- HEATING PROCESSING

FOOD & BEVERAGE

- PACKAGING MACHINE
- SEAL-CAPPING MACHINE
- LABELLING MACHINE
- FORMING MACHINE
- BLENDER EQUIPMENT
- CASING MACHINE
- FILLING MACHINE
- DRYER EQUIPMENT
- WEIGHT SEPARATOR
- CAPPING MACHINE
- INJECTION MACHINE
- TEMPERATURE-CONTROL

Ordering Information

A-61x

8

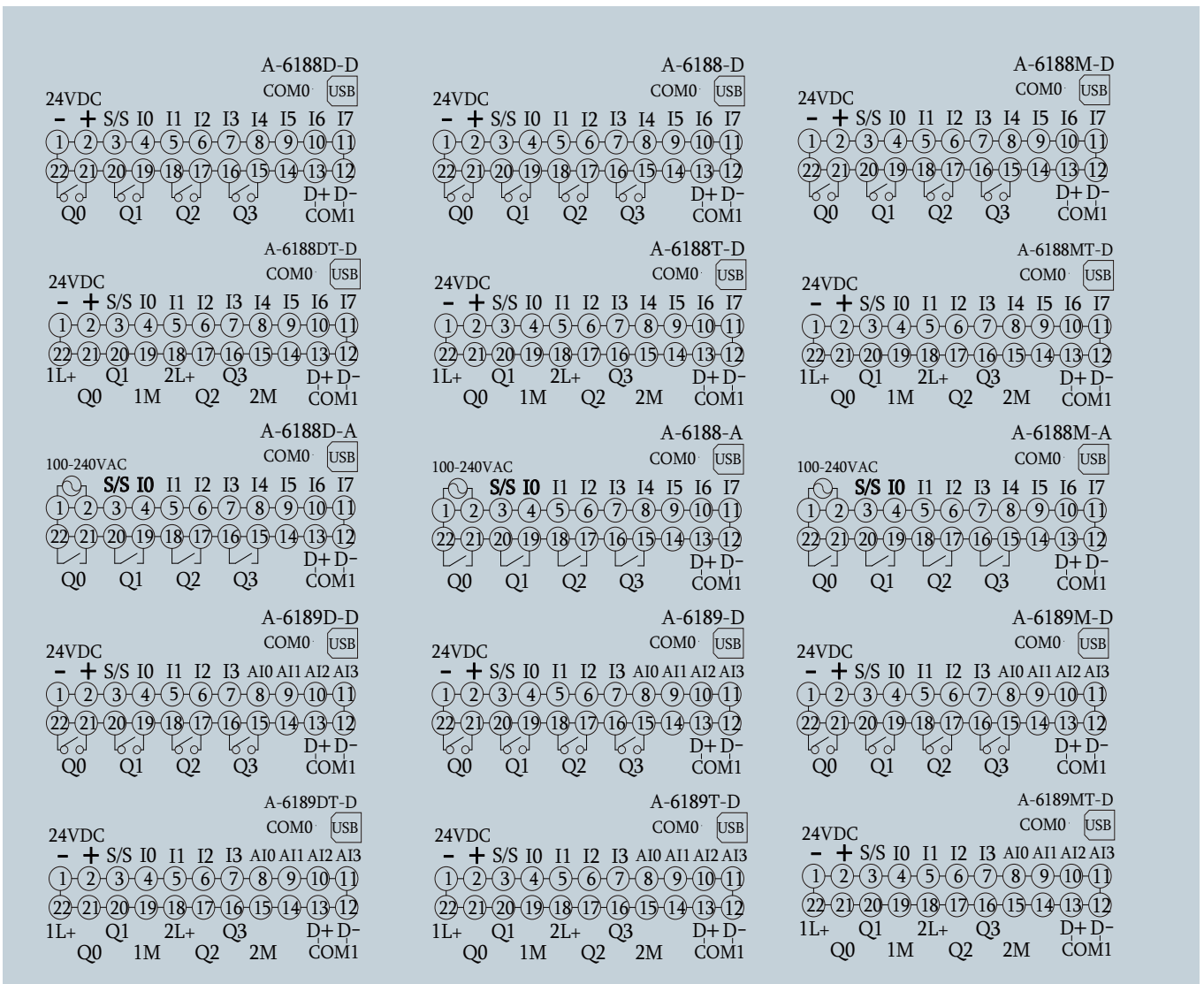
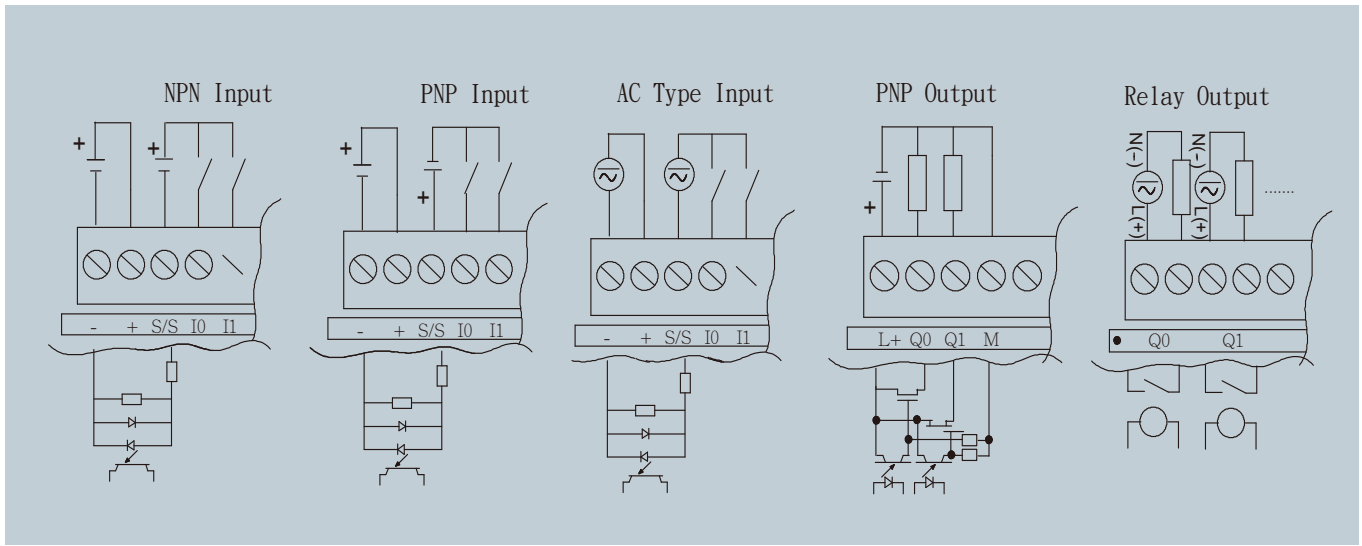
CPU		Code
6188D-D	Display CPU , LCM , DC Power Supply , 8DI/4DO , RELAY Output , RS-485*1 , USB2. 0*1	A-6188D-D
6188-D	Standard CPU , LED indicator , DC Power Supply , 8DI/4DO , RELAY Output , RS-485*1 , USB2. 0*1	A-6188-D
6188M-D	Micro-SD CPU , LED indicator , DC Power Supply , 8DI/4DO , RELAY Output , RS-485*1 , USB2. 0*1 , Micro-SD *1	A-6188M-D
6188DT-D	Display CPU , LCM , DC Power Supply , 8DI/4DO , Ttansistors Output , RS-485*1 , USB2. 0*1	A-6188DT-D
6188T-D	Standard CPU , LED indicator , DC Power Supply , 8DI/4DO , Ttansistors Output , RS-485*1 , USB2. 0*1	A-6188T-D
6188MT-D	Micro-SD CPU , LED indicator , DC Power Supply , 8DI/4DO , Ttansistors Output , RS-485*1 , USB2. 0*1 , Micro-SD *1	A-6188MT-D
6188D-A	Display CPU , LCM , AC Power Supply , 8DI/4DO , RELAY Output , RS-485*1 , USB2. 0*1	A-6188D-A
6188-A	Standard CPU , LED indicator , AC Power Supply , 8DI/4DO , RELAY Output , RS-485*1 , USB2. 0*1	A-6188-A
6188M-A	Micro-SD CPU , LED indicator , AC Power Supply , 8DI/4DO , RELAY Output , RS-485*1 , USB2. 0*1 , Micro-SD *1	A-6188M-A
6189D-D	Display CPU , LCM , DC Power Supply , 4DI/4AI/4DO , RELAY Output , RS-485*1 , USB2. 0*1	A-6189D-D
6189-D	Standard CPU , LED indicator , DC Power Supply , 4DI/4AI/4DO , RELAY Output , RS-485*1 , USB2. 0*1	A-6189-D
6189M-D	Micro-SD CPU , LED indicator , DC Power Supply , 4DI/4AI/4DO , RELAY Output , RS-485*1 , USB2. 0*1 , Micro-SD *1	A-6189M-D
6189DT-D	Display CPU , LCM , DC Power Supply , 4DI/4AI/4DO , Ttansistors Output , RS-485*1 , USB2. 0*1	A-6189DT-D
6189T-D	Standard CPU , LED indicator , DC Power Supply , 4DI/4AI/4DO , Ttansistors Output , RS-485*1 , USB2. 0*1	A-6189T-D
6189MT-D	Micro-SD CPU , LED indicator , DC Power Supply , 4DI/4AI/4DO , Ttansistors Output , RS-485*1 , USB2. 0*1 , Micro-SD *1	A-6189MT-D
Extended Modules		
2060-D	DIO Extended Modules , LED indicator , DC Power Supply , 8DI/4DO , RELAY Output	A-2060-D
2060T-D	DIO Extended Modules , LED indicator , DC Power Supply , 8DI/4DO , Ttansistors Output	A-2060T-D
2060-A	DIO Extended Modules , LED indicator , AC Power Supply , 8DI/4DO , RELAY Output	A-2060-A
2010-D	ADIO Extended Modules , DC Power Supply , 8AI(0-10V)/4DO/2AO(0-10V) , Ttansistors Output	A-2010-D
2012-D	ADIO Extended Modules , DC Power Supply , 4AI(PT-100*2 + SENSOR*2)/2DO/2AO(0-20mA) , Ttansistors Output	A-2012-D
Text Panel		
ATP2	4.3" STN LCM , DC Power Supply , RS-485*1	ATP2
Accessories		
ASPS	Power Supply , 24V/2A	ASPS
AMB128	Program Memory Cards	AMB128
CAB-60USB	Communication lines	CAB-60USB
Micro-SD-8GB	Data Storage Card	Micro-SD-8GB
Software		
Editor	Edit Software	Editor
Utility	Monitoring and Database Software	Utility
AMB128 Driver	AMB128 PC Driver	DR-AMB128
CAB-60USB Driver	CAB-60USB PC Driver	DR-CAB-60USB

Wiring Diagrams & Pin Out

Programmable Logic Controller & Extension Modules

A-61x/A-20x Series

Wiring Diagrams



Dimension Programmable Logic Controller & Extension Modules

Programmable Logic Controller

Dimension

