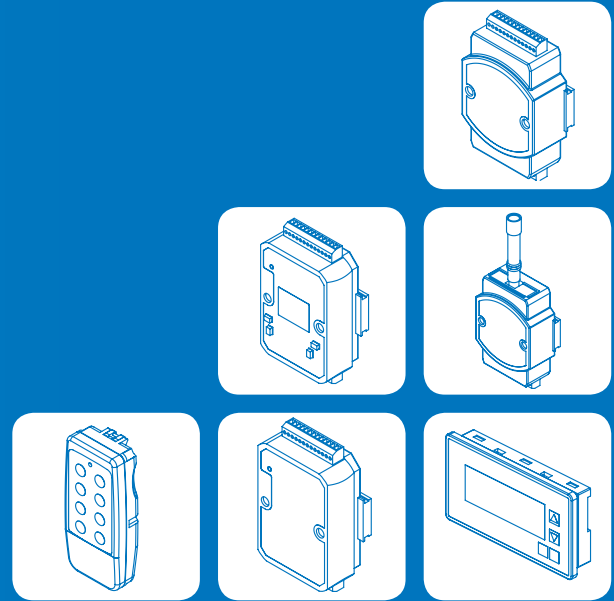
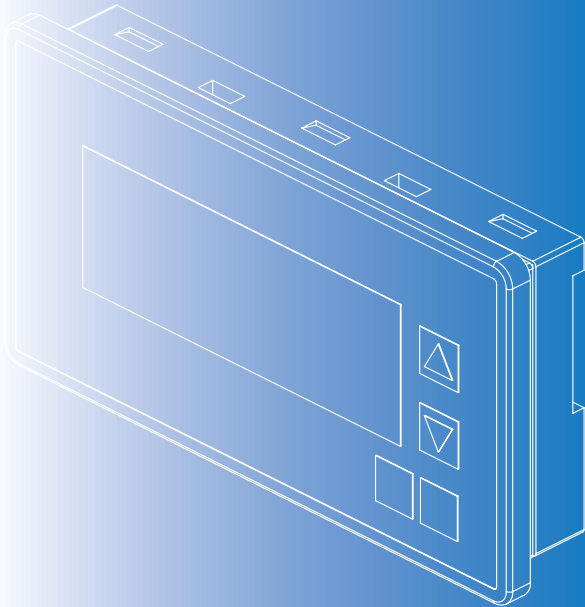


PLC CONTROL SYSTEM



DISTRIBUTED CONTROL SYSTEM

MA-118* 9-2

COMMUNICATION CONVERTER

MA-15** 9-3

I/O MODULES

MA-10** 9-4

MA-3016 Radio remote modules 9-5

TEXT PANEL

MATP 9-6

Software & Accessories 9-7

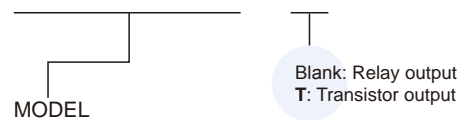


Features

- FBD + LD System.
- Support start-up screen (108×64 pixels)
- Multiple communication port.
- Password protection, copy protection.
- 104 FBD integrated functions, 97 LD integrated functions, pre-tested functions.
- Linking of 1024 function block is possible.
- Display of message texts, adjust program parameter.
- Integrated data latch.
- Flexibly expandable up to 10000 points.
- Support full modbus protocol.
- Free PC software Mindman Editor + Mindman Utility.

Order example

MA – 1188 – T



Model	Type instruction	
MA-1188	Digital Inputs	LED indicator
MA-1188D		LCD monitor
MA-1189	Digital & Analog Inputs	LED indicator
MA-1189D		LCD monitor

Specification

Model	MA-1188 MA-1188D	MA-1188-T MA-1188D-T	MA-1189 MA-1189D	MA-1189-T MA-1189D-T
Operation Voltage	10~30VDC/24VDC			
Inputs	8*DI(Isolation) status low: <2VDC status high: >4VDC		4*DI(Isolation) status low:<2V DC status high:>4V DC 4*AI(0~10VDC)	
Outputs	4*Isolation (Relay)	4*Isolation (Transistor)	4*Isolation (Relay)	4*Isolation (Transistor)
Continuous Current	Relay: 5A (with resistive load), 2A (with inductive load)	Transistor: 1.75A (OCP/OTP/UVLO)	Relay: 5A (with resistive load), 2A (with inductive load)	Transistor: 1.75A (OCP/OTP/UVLO)
	Relay: 30HZ	Transistor: 100KHZ	Relay: 30HZ	Transistor: 100KHZ
Input Operating Frequency	250KHZ (Total 1000KHZ)			
RTC/ Hold During Power Off	Yes			
Operation Temperature	-20 ~ +75 °C			
Communication Ports	USB*1 & RS-485*2 & RS-232*1			
Communication Baud Rate	2400~921600 bps			
Degree Of Protection	IP20			
Base Controller IOs	12 IOS			
Installation	35 mm DIN rail or Flush mounting			
Dimension (WxHxD mm)	76.4x118.2x40.7 mm			
Communication Cable	CAB-MINIUSB60 or RS-485 or RS-232			



Features

- Auto tuner baud rate, 300~115200bps.
- 3000 VDC isolation protection.
- ESD protection.
- Power Inputs +10~+30VDC (RS-232 type).
- No external power supply (USB type).
- Fully compliant with USB 1.1 / 2.0.
- DIN-Rail or wall mounting.
- Driver support Windows 98/ ME/ 2000/ XP/ Window7/ WinCE/ Mac/ Vista/ Linux/ Android/ Windows Server 2008 R2.

Order example

MA – 1520U

MODEL

Model	Interface
MA-1520	RS-232 to RS-485
MA-1521	RS-232 to RS-485 / 422 / 232
MA-1520U	USB to RS-485
MA-1521U	USB to RS-485 / 422 / 232
MA-1571U	USB to RS-485 / 422 / 232

Specification

Model	MA-1520	MA-1521	MA-1520U	MA-1521U	MA-1571U
Interface	RS-232 to RS-485	RS-232 to RS-485/422/232	USB to RS-485	USB to RS-485/422/232	USB to RS-485/422/232
Speed	Auto Tuner baud rate, 300~115200 bps				
Transfer distance	Max. 1,200 m for speed 9.6 K bps; max. 400m for speed 115.2 K bps				
Supports max device	Maximum of 256 devices (Without repeater)				
ESD protection	Yes				
Supply voltage	10~ 30 VDC		—		
Power consumption	Nearly 24V/0.5W		Nearly USB Port/0.5W		
OS driver	—		Windows 98 / ME / 2000 / XP / Window7(32/64 bit)/ WinCE / Vista (32/64 bit) / Linux / Mac		Windows 98 / ME / 2000 / XP/Window7(32/64bit) / WinCE/Vista (32/64 bit) / Linux /Mac / Windows Server 2008 R2/ Android
Operation temperature	-20~+75°C (No freezing)				
Storage temperature	-25~+80°C (No freezing)				
Installation	DIN-Rail or wall mounting				
Connection	DB9(Female to RS-232)/USB(Type B); Removable 13-pin Terminal Block (For RS-422 / 485 / 232)				
Size (LxWxH)	120×77×40 mm (with bracket)				

MA-10** series Remote modules

I/O MODULES



Features

- RS-485 Interface.
- Supports Modbus RTU / ASCII.
- LED Indicators.
- Isolation voltage: 5000 VDC.
- Dual watchdog timer.
- Surge, EFT and ESD protection.
- Free PC software Mindman Utility.

Order example

MA – 1055S

- MODEL
- MA-1057
 - MA-1058
 - MA-1068
 - MA-1069
 - MA-1051
 - MA-1055
 - MA-1055S
 - MA-1060

Specification

Model	MA-1057	MA-1058	MA-1068	MA-1069	MA-1051	MA-1055	MA-1055S	MA-1060
Output	12	12	8	8	—	8	8	4
Input	—				16	8	8	8
Power consumption	Nearly 24 VDC 0.96W	Nearly 24 VDC 0.96W	Nearly 24 VDC 1.68W	Nearly 24 VDC 2.88W	Nearly 24 VDC 1.66W	Nearly 24 VDC 1.28W	Nearly 24 VDC 1.28W	Nearly 24 VDC 2.26W
Input power	10 ~ 30VDC							
Output type	Source	Sink	Signal Relay	Power Relay	—	Sink	Source	Power Relay
Input type	—				Isolated Digital			
Input rating (Isolation)	10 ~ 35 VDC/1A	40VDC /200mA	120VAC /0.5A 30V/1A	250VAC /5A 30VDC/5A	—	40VDC /200mA	10 ~ 35 VDC/1A	250VAC /5A 30VDC/5A
Output rating (max.)	—				Logic level 0: +1 V max. Logic level 1: +3.5 ~ 30 V			
Operation temperature	-20~+75°C (No freezing)							
Isolation voltage	5000 VDC							
LED	YES							
Modbus support	Modbus RTU + Modbus ASCII							
Watchdog timer	System m & Comm.							
Size (LxWxH)	120 ×77×40 mm (with bracket)							

MA-3016 series Radio remote modules

I/O MODULES



Features

- Frequency control: Crystal.
- Low power indicator.
- Operation range: up to 100 meters.
- Supports Modbus RTU / ASCII.
- Free PC software Mindman Utility.
- Logic gate diagram function.
- LED indicators.
- Dual watchdog timer.

Order example

MA — 3016 U

MODEL

Blank: VHF
U: UHF

Specification

Model	MA-3016 / MA-3016U
Receiver output type	Sink (40VDC / 200mA / Isolation 3000VDC)
Receiver interface	RS-485
Receiver input power	10 ~ 30 VDC
Receiver speed	1200~115200 bps
Receiver output LED	Yes
Transmitter input power	2 AA size batteries
Operation temperature	-20~+75°C (No freezing)
Operation distance	Up to 100 Meters
Watchdog timer	System m & Comm
Logic gate diagram function type	11
Logic gate diagram function rule	128
Size (LxWxH)	200x77x40 mm (Receiver), 120x55x25 mm (Transmitter)
Weight	142 g (Receiver), 155 g (Transmitter)



Features

- Full support MA-1188/1189 series controller.
- Plug-and-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 and ESD protection.
- Brightness : 60cd/m².

Order example

MATP

MODEL

Specification

Model	MATP
Operation voltage	10~30V DC
LCM	4.3" STN
Contrast	Adjustable resistor
Resolution	192×64 pixels
LCM life	>50000 hr
Brightness	60 cd/m ²
Color	Monochrome
Function key	5 key
Display dimension	96×32 mm
Operation temperature	-10~+55°C
Degree of protection	IP65 (Front panel)
Installation	35 mm DIN rail or flush mounting
Dimension (L×W×H)	157.9×86.4×28.6 mm

Application software



Mindman editor

- Support Model: MA series distributed control system
- Support OS: Windows 98 / ME / 2000 / XP / Vista / Window7



Mindman utility

- Support Model: MA series distributed control system / MA series remote modules
- Support OS: Window98 / ME / 2000 / XP / Vista / Window 7



MA-152*U driver / AMB128 driver

- Support Model: MA series industrial communication/ MA series memory card
- Support OS: Window98 / ME / 2000 / XP / Vista (32/64 bit) / Window 7(32/64 bit) / WinCE / Linux / Mac



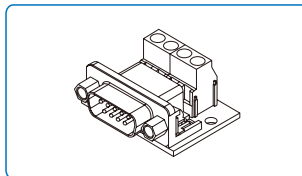
MA-1571U driver

- Support Model: MA series industrial communication
- Support OS: Window98 / ME / 2000 / XP / Vista (32/64 bit) / Window 7(32/64 bit) / WinCE / Linux / Mac / Window Server 2008 R2 / Android

Accessories

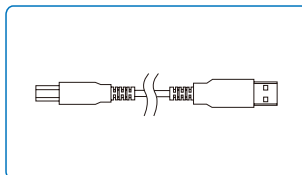
ADP090401

- All type
- Adapter board



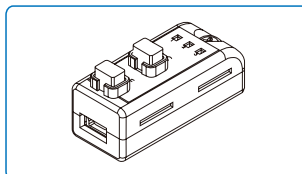
USB1800

- MA series converter
- USB cable



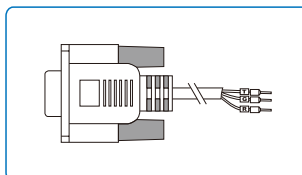
AMB128

- MA series DCS series
- Memory card



DSCAB

- MA series DCS series
- Adapter cable



Applicable model

MA-1188*, MA-1189*
MA-1520, MA-1521,
MA-10**,
MA-3016

MA-1520U, MA-1521U,
MA-1571U

MA-1188*, MA-1189*

MA-1188*, MA-1189*
MA-1520, MA-1521,
MA-10**,
MA-3016