

Industrial Automation

Catalog 12 • 2013

eAutomation Solution



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Catalog 12 • 2013

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**For the latest updates of this catalog, please
visit our Industry Web:**

www.yottacontrol.com

**The products contained in this catalog can also
be found in the interactive catalog .**

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Introduction

The members of the Yottacontrol Product family

Timer/Counter/Tachometer

TC-PRO2400/TC-PRO48x Series



Digital Time Switch

TS-4848x Series



Programmable Logic Controller

A2 Series / AL Series/AM Series



Distributed Control System

A Series Distributed Control System



Industrial Communication

A Series Communication Convert



Remote Modules

A Series Modules



Text Panel

A Series Text Panel



Software

AL Edit/AM Edit/Yotta Edit/Tc-Soft/Yotta Utility/A-152xU driver/AMB64 driver
/A-1571U driver

Accessories

AL Series/AM Series/TC Series/TS Series/A Series



Timer/Counter/Tachometer

TC-Pro2400

OVERVIEW



- ▲ 8-digit high resolution LCD(8mm high)
- ▲ Manual reset & external reset
- ▲ 25 functions(15 timer functions,8 counter functions, frequency meter & tachometer)
- ▲ Programmable reset button to prevent wrong-button push

Technical specifications

Type	TC-Pro2400
Size	48x24x45.7(Unit : mm)
Timer range	0-99999999
Counter range	0-99999999
Response frequency	0.6Hz~10000Hz
RPM range	36~60000(unit: Round per minute)
Functions	25Functions (15 Timer + 8 Counter + Frequency Meter + Tachometer)
Power supply	DC3V Batteries
Batteries Life	>2 years
Operation temperature	-10°C ~55°C
Display Type	LCD
Screw Type	M3
Front panel waterproof protection	IP66
Rear panel waterproof protection	IP20
Vibration	IEC60068-2-6
Static discharge	IEC1000-4-2(4KV Air/2KV contact)
Electromagnetic field	IEC1000-4-3(field strength 10V/m, frequency 80MHz~1GMHz)
Shock pulse	IEC1000-4-4(1KV input)
Weight	about 33g
Opening size	45x22(unit : MM)

For further information, please visit: www.yottacontrol.com/tcp2400.html

Timer/Counter/Tachometer

TC-Pro48 Series

OVERVIEW



- ▲ Highly visible display with backlit LCD
- ▲ Conform to the key design of ergonomics
- ▲ Five key protection modes:KP-1~5
- ▲ EEPROM(overwrites:100,000 times min.)
- ▲ 12VDC external supply power
- ▲ Applied to connect PC/HMI/PLC/DCS
- ▲ Free PC software “TC-SOFT”
- ▲ Support Modbus Protocol
- ▲ Support RS-232/485/422
- ▲ Twin counter/Multi mode(483 Only)

Technical specifications

Type	TC-Pro482x TC-Pro482x-D	TC-Pro483x TC-Pro483x-D
Classification	Digital Timer/Counter /Tachometer	Digital Timer/Counter /Tachometer
Supported configurations	Timer, Dual Timer, 2-Stage Timer, 1-stage counter, 2-stage counter, total counter, batch counter, dual counter, and tachometer	Timer, Dual Timer, 2-Stage Timer, 1-stage counter, 2-stage counter, total counter, batch counter, dual counter, Twin counter/Multi mode and tachometer
Operating voltage range	100~240VAC(50/60HZ), 24VDC	
Installation	DIN rail or Flush mounting	
Max. counter speed	30HZ or 5KHZ (10KHZ for Tachometer)	30HZ/1KHZ/5KHZ (10KHZ for Tachometer)
Timer mode	Elapsed time (UP), Remaining time (down) (selectable)	Elapsed time (UP), Remaining time (down) (selectable)
Input method	No-voltage input : ON impedance : 1kΩ max. Voltage Input : High(logic) level : 4.5~30 VDC Low(logic) level :0~2 VDC(Input resistance: approx. 4.7 kΩ)	
Interface	RS-232/485/422	
Control output	Relay contact output: 5A at 250 VAC Transistor output: NPN open collector, max. 100mA at 30 VDC	

For further information, please visit : www.yottacontrol.com/tcp48x.html

Digital Time Switch

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TS-4848 Series

OVERVIEW



- ▲ BSC and ADV for selection
- ▲ Two independent output circuits
- ▲ 20 banks (groups) of operation times
- ▲ Cyclic operation and pulse operation
- ▲ Temporary holiday settings
- ▲ Summer time adjustment
- ▲ Manual operation to control output ON/OFF
- ▲ Override and automatic return function
- ▲ Key protection function
- ▲ Data information reserved > five years
- ▲ Support Modbus Protocol
- ▲ Free PC software “Yotta Utility”

Technical specifications

Type	TS-4848SRAC	TS-4848CRAC-D	TS-4848SRDC	TS-4848CRDC-D
supply voltage	100~240VAC(50/60HZ)		24VDC	
voltage range	85%~110% rated supply voltage		85%~120% rated supply voltage	
control outputs	Relay contact output: 5A at 250VAC Transistor output: NPN, max.100mA at 30VDC			
Storage temperature	-25 ~ 65°C (with no icing or condensation)			
Operation temperature	-10 ~ 55°C (with no icing or condensation)			
Ambient operation humidity	25% ~ 85%			
Case color	Black			
Installation	DIN rail or Flush mounting			
Interface	--	RS-232/485/422	--	RS-232/485/422
Modbus Support	--	RTU + ASCII	--	RTU + ASCII
Power consumption	Nearly 2.4W		Nearly 0.96W	

For further information, please visit : www.yottacontrol.com/ts48.html

Programmable Logic Controller

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A2 Series

OVERVIEW



- ▲ FBD + LD System
- ▲ Support Start-up Screen (108*64)
- ▲ Multiple communication port
- ▲ Password protection, copy protection
- ▲ 36 integrated function, pre-tested functions
- ▲ Linking of 1024 function block is possible
- ▲ Display of message texts, adjust program parameter
- ▲ Integrated data latch
- ▲ Flexibly expandable up to 4000 points
- ▲ Support full Modbus protocol
- ▲ Free PC software“Yotta Edit”+“Yotta Utility”

Technical specifications

Type	Main			Extension		Text Panel
	A-2188-D	A-2188-A	A-2189-D	A-2060-D	A-2060-A	ATP
Inputs	8	8	4	8	8	Yes
Analog inputs	--		4(10-bit)	--		
Supply Voltage	10~30VDC	100/240VAC	10~30VDC	10~30VDC	100/240VAC	
Outputs	4					
Continuous current	Relay : 5 A for resistive load, 2 A for inductive load					
Real-time Clock/reserve power	Yes / > 2 years					
Operation temperature	-10°C to +55 °C					
Storage temperature	-20 °C to +70 °C					
Linking of functions	1024(Max)					
Input Operating frequency	20000HZ(Total 80000HZ)				4HZ	
Communication Port	USB*1 & RS-485*1					
Display/LED	Yes					
Degree of protection	IP 20					
Main I/O Points	12 points,support 7 units AIO/DIO extension modules					
Password Protection	Multiple password protection					
Communication Protocol	Master:MODBUS ASCII/RTU\Slave:MODBUS ASCII/RTU					
Communication Baud Rate	1200~115200bps					
Digital Input signal status	AC Supply TYPE status low: < 40VAC ; status high: >79VAC DC Supply TYPE status low: < 5VDC ; status high: > 8.5VDC					
Digital Isolation	Yes					
Analog Input Type	--			0~10VDC	--	

For further information, please visit : www.yottacontrol.com/a2.html

Programmable Logic Controller

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AL Series

OVERVIEW



- ▲ FBD System
- ▲ Reduces maintenance overhead
- ▲ Password protection
- ▲ 34 integrated function, pre-tested functions
- ▲ Linking of 160 function block is possible
- ▲ Eight digital inputs , Four digital outputs
- ▲ Display of message texts
- ▲ Integrated data latch
- ▲ Up to 32 DIs, 24 DOs and 2 AIs
- ▲ Free PC software “AL Edit”

Technical specifications

Type	AL-SD0R	AL-XD1R	E24-0R	E24-1R	E4-0R	E4-1R
Inputs	8	8	16	16	--	--
Analog inputs	--	2	--	--	--	--
Input/ supply Voltage	100/240 VAC	24 VDC	100/240V AC	24 VDC	100/240 VAC	24 VDC
Outputs(relays)	4	4	8	8	4	4
Continuous current	10 A for resistive load, 3 A for inductive load					
Integrated time switches/reserve power	Yes/typ. 128 h		--			
Operation temperature	-10°C to +55°C					
Storage temperature	-20°C to +70°C					
Degree of protection	IP 20					
LCM	YES		--			
Linking of functions	160		--			
Input Operating frequency	2000HZ		50HZ			
Interface	RS-232/485/422		--			
Installation	DIN rail or wall mounting					

For further information, please visit : www.yottacontrol.com/al.html

Programmable Logic Controller

AM Series

OVERVIEW



- ▲ LD System
- ▲ Reduces maintenance overhead
- ▲ Password protection
- ▲ 153 integrated function
- ▲ Linking of 8000 steps is possible
- ▲ Eight digital inputs , Eight digital outputs
- ▲ Include Display
- ▲ Integrated data latch
- ▲ Up to 64 DI, 64 DO and 4 AI
- ▲ Four 10-bit analog inputs
- ▲ Free PC software “AM Edit”

Technical specifications

Type	AM-XD0R	AM-XD1R	E24-0R	E24-1R	E4-0R	E4-1R
Inputs	8	8	16	16	--	
Analog inputs	4(10-bit)	4(10-bit)	--			
Input/ supply Voltage	100/240 VAC	24 VDC	100/240 VAC	24 VDC	100/240 VAC	24 VDC
Outputs(relays)	8	8	8	8	4	4
Continuous current	10 A for resistive load, 3 A for inductive load					
Integrated time switches/reserve power	Yes/typ. 128 h		--			
Operation temperature	-10 °C to +55°C					
Storage temperature	-20°C to +70°C					
Degree of protection	IP 20					
Linking of Step	8000		--			
LCM	YES		--			
Input Operating frequency	5000HZ		1HZ			
Interface	RS-232/485/422		--			
Installation	DIN rail or wall mounting					

For further information, please visit : www.yottacontrol.com/am.html

Distributed Control System

A series Distributed Control System

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OVERVIEW



- ▲ FBD + LD System
- ▲ Support Start-up Screen (108*64)
- ▲ Multiple communication port
- ▲ Password protection, copy protection
- ▲ 36 integrated function, 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“Yotta Edit”+“Yotta Utility”

Technical specifications

Type	A-1188S	A-1188	A-1188D	A-1189S	A-1189	A-1189D
	A-1188S-T	A-1188-T	A-1188D-T	A-1189S-T	A-1189-T	A-1189D-T
Digital Inputs	8			8		
Analog Inputs	--			4 (able to use in digital specification)		
Digital Outputs	4			4		
Input voltage range	Digital ON: 4~30VDC OFF:2VDC(max)			Digital ON: 4~30VDC OFF:2VDC(max) Analog: 0~10VDC		
Continuous Current	Relay: 5 A for resistive load, 2 A for inductive load Transistor: NPN open collector, max. 100mA at 30 VDC					
Incoming Power	10~30 VDC					
reserve power	> 10 years					
Operation temperature	-20°C to +75 °C					
Storage temperature	-25 °C to +80 °C					
Linking of functions	1024(Max)					
Real time clock	Yes/>2 years					
Protocols	Modbus ASCII + Modbus RTU					
Incorporate operator interface	Yes- with Modbus interface					
Expansion maximum I/O	More than 10000					
Input Operating frequency	15000HZ(DI0~DI3)/50HZ(DI4~DI7)					
Message text/ display	4 lines of 12 characters					
Communication Port	RS232*1	RS485*2 +RS232*1	RS485*2 +RS232*1	RS232*1	RS485*2 +RS232*1	RS485*2 +RS232*1
Type Instruction	A-118XS: Without LED indicator and LCD monitor, Relay output A-118XS-T: Without LED indicator and LCD monitor, Transistor output A-118X: LED indicator, Relay output A-118X-T: LED indicator, Transistor output A-118XD: LCD monitor, Relay output A-118XD-T: LCD monitor, Transistor output					

For further information, please visit : www.yottacontrol.com/dcs.html

A Series Communication Convert

OVERVIEW



- ▲ Auto Tuner baud rate,300~115200bps
- ▲ 3000VDC 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 /Windows Server 2008 R2/Android

Technical specifications

Type	A-1520	A-1521	A-1520U	A-1521U	A-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. 400 m for speed 115.2 K bps				
Supports Max device	Maximum of 256 devices (Without repeater)				
ESD Protection	Yes				
Supply Voltage	10~30VDC		--		
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°C to +75 °C				
Storage temperature	-25 °C to +80 °C				
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)				

For further information, please visit : www.yottacontrol.com/comm.html

Remote Modules

A Series Remote Modules

OVERVIEW



- ▲ RS-485 Interface
- ▲ Supports Modbus RTU / ASCII
- ▲ LED Indicators
- ▲ Isolation voltage: 5000 V DC
- ▲ Wide operation temperature : -20 ~ +75 °C
- ▲ Dual watchdog timer
- ▲ Surge , EFT and ESD protection
- ▲ Free PC software “Yotta Utility”

Technical specifications

Type	A-1057	A-1058	A-1068	A-1069	A-1051	A-1055	A-1055S	A-1060
Output	12	12	8	8	--	8	8	4
Input	--				16	8	8	8
Power Consumption	Nearly 24VDC 0.96W	Nearly 24VDC 0.96W	Nearly 24VDC 1.68W	Nearly 24VDC 2.88W	Nearly 24VDC 1.66W	Nearly 24VDC 1.28W	Nearly 24VDC 1.28W	Nearly 24VDC 2.26W
Input Power	+10 ~ +30 VDC							
Output Type	Source	Sink	Signal Relay	Power Relay	--	Sink	Source	Power Relay
Input Type	--				Isolated Digital			
Output Rating(max)	10 – 35 VDC/1A	40VDC /200mA	120VAC /0.5A 30VDC/1A	250VAC /5A 30VDC/1A	--	40VDC /200mA	10- 35VDC/1A	250VAC /5A 30VDC/1A
Input Rating (Isolation)	--				- Logic level 0: +1 V max. - Logic level 1: +3.5 ~ 30 V			
Isolation Voltage	5000 V DC							
LED	Yes							
Modbus Support	Modbus RTU + Modbus ASCII							
Watchdog Timer	System m & Comm.							

For further information, please visit : www.yottacontrol.com/rm.html

Remote Modules

A Series Remote Modules

OVERVIEW



- ▲ RS-485 Interface
- ▲ Baud Rate : 1200 ~ 4500000 bps
- ▲ Supports Modbus RTU / ASCII
- ▲ LED Indicators
- ▲ Voltage / Current /Pt-100 Input
- ▲ Voltage / Current / Sink Output
- ▲ Dual watchdog timer
- ▲ Surge , EFT and ESD protection
- ▲ Free PC software “Yotta Utility”

Technical specifications

Type	A-1010	A-1011
<i>Analog Input</i>		
Channels	8	7
Wiring	8-channel Single-ended	7-channel Differential(2-wire/3-wire Pt-100)
Input Range	0~10V	0~20mA/Pt-100(-50 ~ +200 °C)
Resolution	10-bit, normalized to 0 ... 1000	
Accuracy	±1.0 %	
Sampling Rate	>10 Hz	
Open Wire Detection	-	Yes
<i>Analog Output</i>		
Channels	2	
Range	0 ~ 10 V	0 ~ 20 mA / 4 ~ 20 mA
Resolution	10-bit, normalized to 0 ... 1000	
load	≥5 kΩ	≤250 Ω
Accuracy	±1.0 %	
DA Output Response Time	10 ms	
Power-on Value	Yes	
Safe Value	Yes	
<i>Digital Output</i>		
Channels	4, Sink	-
Output Voltage	40VDC/200mA	-
<i>Environment</i>		
Operating Temperature	-20°C to +75 °C	
Storage temperature	-25 °C to +80 °C	
Humidity	10 ~ 95% RH, Non-condensing	

For further information, please visit : www.yottacontrol.com/rm.html

Remote Modules

A Series Radio Remote Remote Modules

OVERVIEW



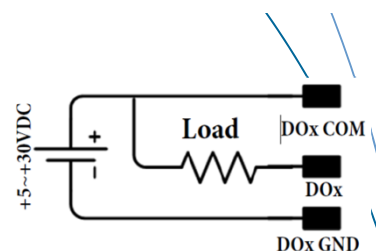
- ▲ Frequency Control: Crystal
- ▲ Low power indicator
- ▲ Operation Range: Up to 100 Meters
- ▲ Supports Modbus RTU / ASCII
- ▲ Free PC software “Yotta Utility”
- ▲ Logic Gate Diagram Function
- ▲ LED Indicators
- ▲ Wide operation temperature : -20 ~ +75 °C
- ▲ Dual watchdog timer

Technical specifications

Type	A-3016
Transmitter Size	LxWxH: 120x55x25(Unit : mm)
Transmitter Weight	155g
Transmitter Input Power	2 AA size batteries
Receiver Size	LxWxH: 200x77x39(Unit : mm)
Receiver Weight	142g
Receiver Input Power	+10 ~ +30 VDC
Receiver Output LED	YES
Receiver Speed	1200~115200 bps
Receiver Interface	RS-485
Operation Distance	Up to 100 Meters
Receiver Output Type	Sink (40VDC/200mA/Isolation 3000VDC)
Operation temperature	-20 ~ +75 °C
Watchdog Timer	System m & Comm
Logic Gate Diagram Function Type	11
Logic Gate Diagram Function Rule	128

Pin Assignments

Item	Pin Assignment	Item	Pin Assignment	Item	Pin Assignment
1	DO 0-6 COM	6	DO 4	11	DATA -
2	DO 0	7	DO 5	12	(R) +VS
3	DO 1	8	DO 6	13	(B) GND
4	DO 2	9	DO 0-6 GND		
5	DO 3	10	DATA +		



For further information, please visit : www.yottacontrol.com/rm.html

Text Panel

A Series Text Panel

OVERVIEW



- ▲ Plug-and-Play
- ▲ Support Start-up Screen
- ▲ RS-485 Interface
- ▲ Full Support A-1x Series Control
- ▲ Resolution : 192 x 64 pixels
- ▲ Wide Operation Temperature : -10 ~ +60 °C
- ▲ Dual Watchdog Timer
- ▲ Surge , EFT and ESD Protection
- ▲ Brightness : 60cd/m2
- ▲ Input Power : +10 ~ +30 VDC

Technical specifications

Type	ATP
Screen Type	4.3" STN-LCD
Display Color	Monochromatic
Backlight	The back-light automatic turn off time is 5 sec (On = do not turn off)
Resolution	192 x 64 pixels
Display Range	96x32mm
Start-up Screen Size	108*64 Bmp(1-bit)
Interface	RS-485
Input Power	10 ~ 30 VDC
LCM life	With 25±2°C , 65±10% RH over 50000 hours
Brightness	60cd/m2
Contrast	Adjustable resistor
Cooling Method	Natural air cooling
Operation temperature	-10°C to +60 °C
Storage temperature	-20 °C to +70 °C

For further information, please visit : www.yottacontrol.com/atp.html

Software

Application Software



AL Edit

- Support Model: AL series
- Support OS: Windows 98 / ME / 2000 / XP / Vista / Window7



AM Edit

- Support Model: AM series
- Support OS: Windows 98 / ME / 2000 / XP / Vista / Window7



Yotta Edit

- Support Model: A series Distributed Control System
- Support OS: Windows 98 / ME / 2000 / XP / Vista / Window7



TC-Soft

- Support Model: TC-Pro48 series
- Support OS: Windows 98 / ME / 2000 / XP / Vista / Window7



Yotta Utility

- Support Model: TS-4848 series/A series Distributed Control System/A Series Remote Modules
- Support OS: Windows 98 / ME / 2000 / XP / Vista / Window7



A-152xU driver/AMB64 driver

- Support Model: A series Industrial Communication/A series Memory card
- Support OS: Windows 98 / ME / 2000 / XP / Window7(32/64 bit)/WinCE /Vista (32/64 bit) /Linux /Mac



A-1571U driver

- Support Model: A series Industrial Communication
- Support OS: Windows 98 / ME / 2000 / XP / Window7(32/64 bit)/WinCE /Vista (32/64 bit) /Linux /Mac /Windows Server 2008 R2/Android

For further information, please visit : www.yottacontrol.com/download.html

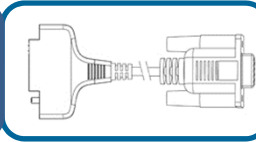
Accessories

All Type

OVERVIEW

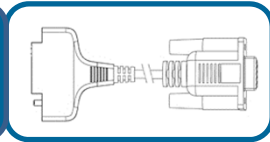
CAB-090A232

TC-Pro48x
RS-232 cable



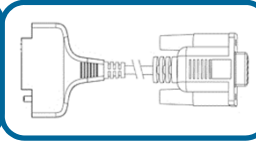
CAB-090A485

TC-Pro48x
RS-485 cable



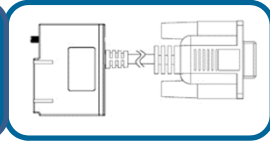
CAB-090A422

TC-Pro48x
RS-422 cable



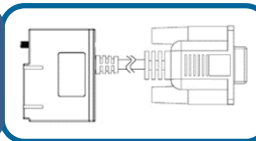
CAB-090B232

TC-Pro48x-D/TS-48x-D
RS-232 cable



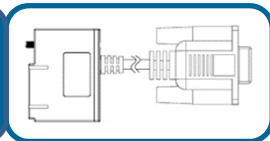
CAB-090B485

TC-Pro48x-D/TS-48x-D
RS-485 cable



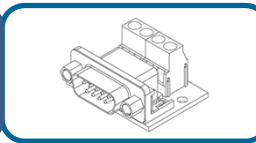
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TC-Pro48x-D/TS-48x-D
RS-422 cable



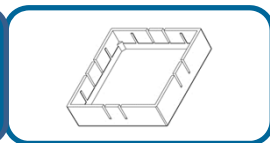
ADP090401

All type
Adapter board



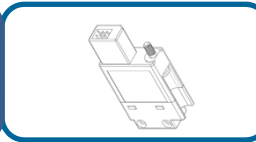
SVF-A

TC-Pro48x/TS-48x
Panel protective cover



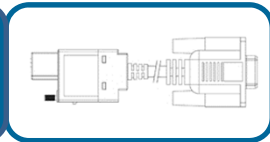
MCD-256

AL Series/AM Series
Memory card



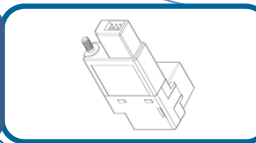
CAB-090C232

AL Series/AM Series
RS-232 cable



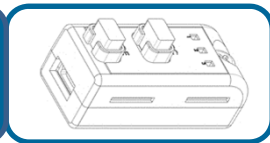
CAB-090C485

AL Series/AM Series
RS-485 cable



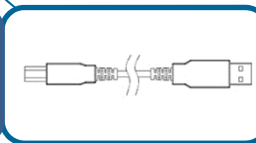
AMB64

A Series DCS Series
Memory card



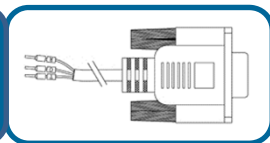
USB1800

A Series Convert
USB cable



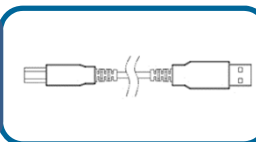
DSCAB

A Series DCS Series
Adapter cable



CAB-60USB

A2/A6/A7 Series
Communication cable



For further information, please visit : www.yottacontrol.com/acc.html



Yottacontrol Co. 2013

Tel: 886-7-821-6370 Ext:810/811

Fax: 886-7-812-6559

E-mail: service@yottacontrol.com

Web: www.yottacontrol.com