

Remote Modules

A Series Remote Analog Modules

USER GUIDE

OVERVIEW



- ▲ RS-485 Interface
- ▲ Baud Rate : 1200 ~ 921600 bps
- ▲ Supports Modbus RTU / ASCII
- ▲ LED Indicators
- ▲ Voltage / Current /Pt-100 Input
- ▲ Voltage / Current Output
- ▲ Dual watchdog timer
- ▲ Surge , EFT and ESD protection
- ▲ Free PC software “Yotta Utility”

Technical specifications

Type	A-1010	A-1011
Communication		
Interface	RS-485	
Baud Rate	1200 ~ 921600 bps	
Protocol	Modbus RTU / ASCII	
Dual Watchdog	Yes, Module (1.5 Seconds), Communication (Programmable)	
Common Voltage Protection	+/-15 VDC	
LED Indicator/Display		
System LED Indicator	Yes, 1 LED as Power/Communication Indicator	
I/O LED Indicators	Yes, 4 LED	-
EMS Protection		
ESD (IEC 61000-4-2)	+/- 4 kV Contact for each Terminal	
EFT (IEC 61000-4-4)	+/- 4 kV for Power	
Power		
Reverse Polarity Protection	Yes	
Input Range	10~30 VDC	
Consumption	1.3 W	
Mechanical		
Dimensions (W x L x H)	77 mm x 121 mm x 35 mm	
Installation	DIN-Rail or Wall Mounting	

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

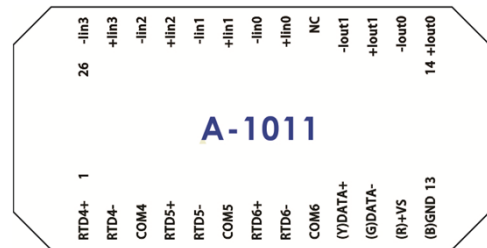
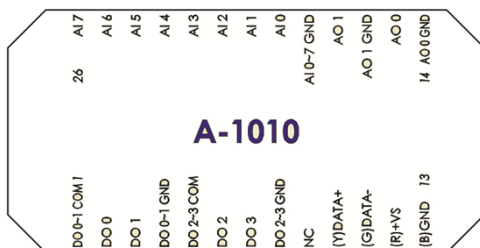
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Technical specifications

Type	A-1010	A-1011
Analog Input		
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
Analog Output		
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	
Digital Output		
Channels	4, Sink	-
Output Voltage	40VDC/200mA	-
Environment		
Operating Temperature	-20°C to +75 °C	
Storage temperature	-25 °C to +80 °C	
Humidity	10 ~ 95% RH, Non-condensing	

Pin Assignments



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Address Mapping

Supported Modbus Code: 01/02/05/15 (Readable & writable in normal & initial mode)

Address	Description	NOR	INIT*	NOTE
00001~00008	0~7 DI Input Signal	R	R	(0/1)
00017~00020	0~3 Digital Output Value	R/W	R/W	(0/1)
00033~00036	0~3 Power On Digital Output Value	R	R/W	(0/1)
00049~00052	0~3 Communication Fail Safe Value	R	R/W	(0/1)
00069~00071	4~6analog Input Burn-out Signal	R	R	0: Non 1:Burn-out
04097~06144	0~2047 Auxiliary Memory (M Flag)	R/W	R/W	(0/1)
06145~06400	0~255 Retentivity Auxiliary Memory (KM Flag)	R/W	R/W	(0/1)

Supported Modbus Code: 03/04/06/16(Readable & writable in normal & initial mode)

Address	Description	NOR	INIT*	NOTE
40001~40008	Analog Input Value	R	R	0~1000
40017~40018	Analog Output Value	R/W	R/W	0~1000
40033~40034	Power On Analog Output Value	R	R/W	0~1000
40049~40050	Communication Fail Safe Analog Output Value	R	R/W	0~1000
40065	Communication Fail Safe Time Setting Value(0.0~6553.5 sec)	R	R/W	0~65535
40211	Module Name 1	R	R	
40212	Module Name 2	R	R	
40213	Soft Version 1	R	R	
40214	Soft Version 2	R	R	
40215	Communication Safety Enabled	R	R	
40216	Communication Safety Flag	R	R	
40217~40222	Mac Serial Number 1~6	R	R	
40223	Mac internal temperature (°C)	R	R	
40224	History Temperature_min (°C)	R	R	
40225	History Temperature_max (°C)	R	R	
40300	Module's ID in normal mode	R	R/W	1~255
40301	Protocol in normal mode	R	R/W	0 : RTU 1 : ASCII
40302	Baud rate in normal mode	R	R/W	0 : 1200 bps 8 : 57600 bps 1 : 2400 bps 9 : 115200 bps 2 : 4800 bps 10 : 230400 bps 3 : 9600 bps 11 : 460800 bps 4 : 14400 bps 12 : 921600 bps 5 : 19200 bps 6 : 28800 bps 7 : 38400 bps

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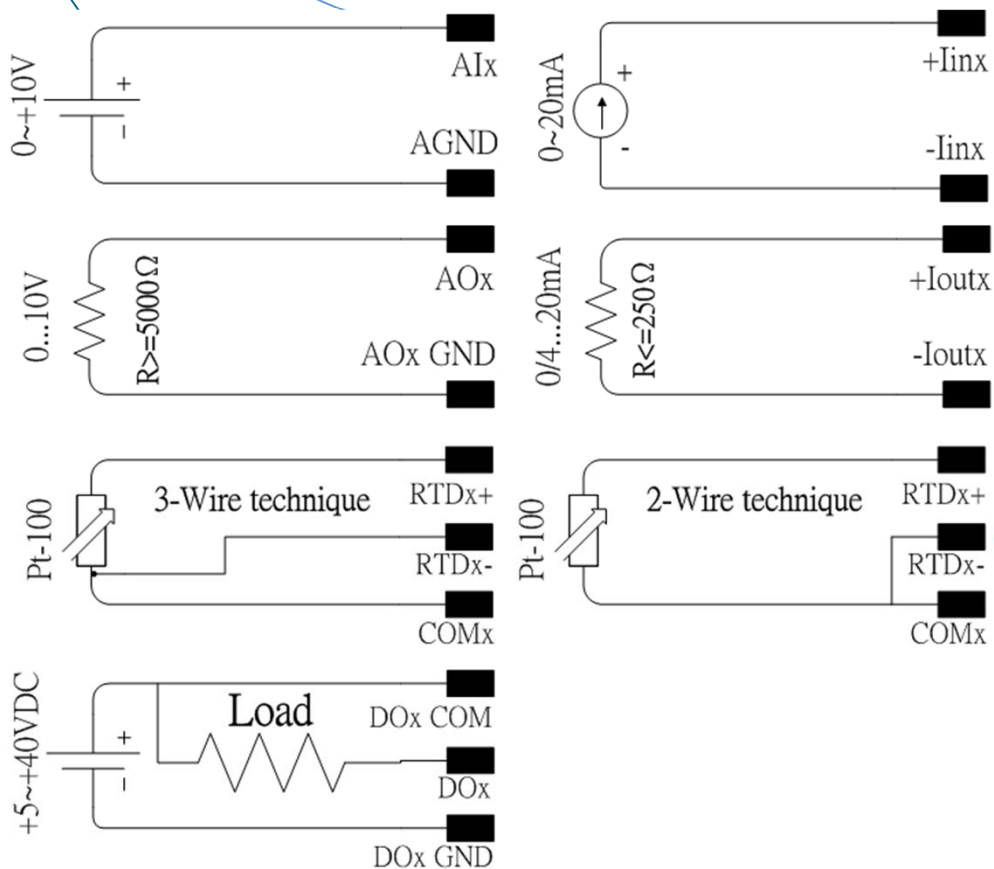
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Address Mapping

Supported Modbus Code: 03/04/06/16(Readable & writable in normal & initial mode)

Address	Description	NOR	INIT*	NOTE
40303	Parity option in normal mode	R	R/W	0: None 1: Odd 2: Even
40304	Stop bits in normal mode	R	R/W	0: 1 bit 1: 2 bit
40305	Normal Mode Time Out Setting (0 ~ 65535 msec)	R	R/W	0~65535
40409~40416	0~7 Input Signal Count Value (16-BIT)	R/W	R/W	0~0xFFFF
40425~40439	0~7 Input Signal Count Value (32-BIT)	R/W	R/W	0~0xFFFFFFFF
40457~40485	0~7 Input Signal Count Value (64-BIT)	R/W	R/W	0~0xFFFFFFFFFFFFFFFF
40521~40528	0~7 Analog Input hi-lo level Value	R	R/W	0~1000 (ex:350 = 3.5V), default =350
40553~40554	0~1 Analog output type	R	R/W	0: 0~20mA 1: 4~20mA
44001~46048	0~2047 Analog Auxiliary Memory (AM Flag)	R/W	R/W	0~65535
46049~46112	0~63 Retentivity Analog Auxiliary Memory (KAM Flag)	R/W	R/W	0~65535

Wire Connections



Appendix



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