

# AMB300 Infrared Temperature Measurement Management System Touch Screen

Installation instruction V1.2

Acrel Co., Ltd.

## Declaration

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### **1** Interface structure



### 2 Network description

A touch screen can centrally collect data from four collectors, each theoretically having access to 160 temperature acquisition points.

(Note: Each collection port shall not exceed 80 temperature points, the total length of the line shall not exceed 250 meters, and over five types of network wire connection shall be used)

The collector and sensors communicate and supply power via the secondary bus, the touch screen and collector via RS485, while the collector also has an RS485 port to upload data to the background.

The AMB300 infrared sensor is communicated via two bus and connected to the AMB collector. An AMB collector has access to up to 160 AMB300 sensors.

The AMB collector uploads the data to the background system or the touch screen through two RS485 ports, respectively (the default device address is 1, and the baud rate is 57,600). A touch screen can centrally monitor the data from the four A M B collectors, that is, to monitor the 640 AMB300 temperature measurement point data.



### AMB300 wiring attention point



The red arrow in the above figure represents the direction of 24V signal output, the RJ45 interface in the blue box above is the signal incoming port, and the RJ45 port in the green box above is the signal outgoing port to connect the incoming port of the next module.

### **3 Interface description**

### 3.1 Principal sheet



#### 3.2 Maximum temperature

Use to view the maximum temperature and alarm status; click each point to view detailed data at the point.

← Max t	emp						20 Cu	21-11-01 1 r user: ad	0:15:20
1-matrix	normal	2-matrix	normal	3-matrix	normal	4-matrix	normal	5-matrix	normal
0.0	°C	0.0	°C	0.0	°C	0.0	°C	0.0	°C
6-matrix	normal	7-matrix	normal	8-matrix	normal	9-matrix	normal	10-matrix	normal
0.0	°C	0.0	°C	0.0	°C	0.0	°C	0.0	°C
11-matrix	normal	12-matrix	normal	13-matrix	normal	14-matrix	normal	15-matrix	normal
0.0	°C	0.0	°C	0.0	°C	0.0	°C	0.0	°C
16-matrix	normal	17-matrix	normal	18-matrix	normal	19-matrix	normal	20-matrix	normal
0.0	°C	0.0	°C	0.0	°C	0.0	°C	0.0	°C
Collector 1	Colle	ector 2 Co	llector 3	Collector	4	Today's max T		< 1 / 8	3 >

Detailed data interface of the matrix sensor

1 1				2021-1	1-01 10:15:29
21				Cur use	er: admin
Ту	pe: matrix		Address: 0	3usbar temperat	ure monitorinç
		•		01	1.0 ℃
				02	0.0 ℃
	-			03	3.0 ℃
				04	0.0 ℃
Maxim	um A-way tem	paratura	Asvimum temperatur, pormal	05	0.0 ℃
WidAith	uni 4-way tem	perature		06	<mark>0.0 ℃</mark>
T1	0.0	normal		07	0.0 ℃
T2	0.0	normal	0.0	• 08	0.0 ℃
T3	0.0	normal	0.0	09	0.0 °C
T4	0.0	normal		• 10	0.0 ℃
1.4	0.0	normar		11 🔹	11.0 ℃
				12	<mark>0.0 °</mark> ⊂
				13	0.0 ℃
ΞN	0.0			14	0.0 ℃
Ó	Shel	T	Humidity	• 15	0.0 ℃
				16 💻	16.0 ℃

### Detailed data interface for the 4-point sensor

1				2021-11-01 14:13: Cur user: admin
Тур	e: 4-way o	ne point Add	dress: 0	
	0 0 0 0			
imu	ım 4-way temp	pera	4aximum temperatur normal	
imu T1	ım 4-way temp 0.0	normal	4aximum temperatur normal	≡ſ
imu T1 T2	um 4-way temp 0.0 0.0	normal	4aximum temperatur normal	Ē
imu T1 T2 T3	um 4-way temp 0.0 0.0 0.0	normal normal	4aximum temperatur normal	- <b>B</b> 0.0

Detailed data interface for the 1-point sensor

← 2		2021-11-01 14:13:29 Cur user: <sup>admin</sup>
Type: 1-way one pc Address	x 0	
	1aximum temperatur normal	
()	0.0	0.0
Humidity		Shell T

### 3.3 Tendency chart

### Temperature trend diagram

Ten	np record									202 Cur	1-11-0 user:	01 10:1 admin
												1
150.0	Content	Coordinate	range	Curren	t value U	nit	1	1				
	Absolute clock	1Hour		2021-11-0	1 09:52							
112.5	001	0.0~150	0.0									
	002	0.0~150	0.0									
	003	0.0~150	0.0					1				
75.0	004	0.0~150	0.0					PRO.				
	005	0.0~150	0.0			-						
37.5	006	0.0~150	0.0									
	007	0.0~150	0.0					1 3				
	008	0.0~150	0.0									
0.0 20	21-11-01 09:17		-11	<b>N</b>	1	2021-11-	01 09:47			Ω	202	1-11-01 10:
	Begi	in of curve	Ť	×		*	M	H	).	Q		
	En	d of curve	Ŧ	V		*	K	H	€.	Q		
					Move	1 page	Move	1 grid				
		0.11	-		1	1 11	~ h		Colle			11.2.2.2.2.1

### 3.4 data list

Display the corresponding number and name of each sensor, and all the detection data.

¢	Data list							2021- Cur us	-11-01 1 ser: ad	0:17:33 <sup>min</sup>
		Max temp	Temp 1	Temp 2	Temp 3	Temp 4	Shell T	Inner T	Humidity	Inner V
1	1-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
2	2-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
3	3-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
4	4-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
5	5-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
6	6-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
7	7-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
8	8-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
9	9-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0		999.0
10	10-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0		999.0
11	11-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
12	12-matrix	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	999.0
	Collector 1	Collector 2	2	< 1	/ 14 >>		Collector	3	Collector 4	4

### 3.5 Alarm inquiry

Current alarm: display the current alarm, click the alarm silence to pause the buzzer on the touch screen.

Current	alarm	2021-11-01 10:19 Cur user: admin	
Date	Time	Alarm description	Response time
021/11/01	10:16:01	Collector 4 Comm failure	
021/11/01	10:15:58	Collector 3 Comm failure	
021/11/01	10:15:55	Collector 2 Comm failure	
021/11/01	10:14:39	Collector 1 Comm failure	
			~

Historical alarm: displays the historical occurrence and the current alarm information.

🔶 Historic	2021-11-01 10:19 Cur user: admin	9:12		
Date	Time	Alarm description	Response time	^
2021/11/01	10:16:01	Collector 4 Comm failure		
2021/11/01	10:15:58	Collector 3 Comm failure		
2021/11/01	10:15:55	Collector 2 Comm failure		
2021/11/01	10:14:39	Collector 1 Comm failure		
		Inner message	Current alarm	×

### 3.6 Loop configuration

Entering the configuration or setting page requires the user to log in person, password 1.

🙍 admin	User password:
advanced user	Logout way: 🖲 Online timeout 🔿 Idle timeout
	Online time: 0 Minute
	Vser description:
	Belongs to the administrator group, which can manage permission assignment

Circuit Configuration page function:

Set the total number of access sensors for the centralized collectors 1 and 2.

Point name: Set the name of each sensor to facilitate data viewing on site. The default is 001-400.

1-11-01 10:2 user: <sup>admin</sup>	op config
adr	
160	ber of collectors 1
160	ber of collectors 2
160	ber of collectors 3
160	ber of collectors 4
nitialization	name

### 3.7 The alarm setting

Temperature warning value: used for infrared detection temperature warning Temperature alarm value: used for infrared detection temperature alarm Housing temperature warning value: used for external detection of temperature warning Housing temperature alarm value: used for external detection of temperature alarm Humidity alarm value: used for air humidity alarm

After modifying the parameters, click the Save Settings " button to save the parameters to the touch screen

¢	- Alarm settings	2021-11-01 10:20:5 Cur user: admin	8
G	General alarm		
	Temperature warning value	90	
	Temperature alarm value	110 >	
	Shell temperature warning value	90	
	Shell temperature alarm value	110 >	
	Humidity alarm value	80	
		Inner parameters Save settings	

Internal parameters require the user to log in to the advanced user, password 8 Internal temperature alarm value: used for the internal temperature of the sensor module Module voltage alarm value: used to prompt the upper limit of centralized collector access sensors Click the "Issue Settings" button to send the alarm parameters set on the touch screen to the instrument

Alarm setting	S	2021- Cur us	11-01 10:2	21:1 ed use
neral alarm				
Temperature warning	value		90	$\geq$
Temperature alarm va	ue		110	$\geq$
Shell temperature war	ning value		90	$\geq$
Shell temperature alar	m value		110	$\geq$
Humidity alarm value			80	

### 3.8 Instrument communication settings

Click the automatic address, when the collector starts to find the sensors linked below, and when the search ends, return the number of sensors found.

- Meter comn	n set		2021-11-01 10:21:20 Cur user: advanced user
	Number of circuits 1	0	Automatic addressing Close the circuit
Collector 1	Number of circuits 2	0	Automatic addressing Close the circuit
Collector 2	Number of circuits 1	0	Automatic addressing Close the circuit
Collector 2	Number of circuits 2	0	Automatic addressing Close the circuit
Collector 2	Number of circuits 1	0	Automatic addressing Close the circuit
Collector 3	Number of circuits 2	0	Automatic addressing Close the circuit
Collector 4	Number of circuits 1	0	Automatic addressing Close the circuit
Collector 4	Number of circuits 2	0	Automatic addressing Close the circuit

After clicking on the automatic preparation address, jump out of the prompt box and display the current time count (seconds). When the search is over, prompt: the automatic preparation has been completed.

¢	Meter comn	1 set		2021-11-01 10:21:4 Cur user: advanced user
		Number of circuits 1	0	Automatic addressing Close the circuit
	Collector 1	Number of circuits 2	0	Automatic addressing Close the circuit
		Number of		X dressing Close the circuit
	Collector 2	Number of Auto addressi	ing, please wait	dressing Close the circuit
		Number of	0	dressing Close the circuit
	Collector 3	Number of circuits 2	0	Automatic addressing Close the circuit
		Number of circuits 1	0	Automatic addressing Close the circuit
	Collector 4	Number of circuits 2	0	Automatic addressing Close the circuit

### 3.9 Background communication Settings

Network port forwarding: set the touch screen network card IP address (the port number is 502, the device address is 1), set the IP geology needs to save the settings, and restart the touch screen.

Network port forwarding (Port 502, device address 1)									
P address	192	1	68		1		123		set up
Serial port forward	ding 232 (	baud ra	ite 960	0, data	a bit 8, r	no che	ec <mark>k, 1 s</mark> t	op bit)	
Fouch screen address				1					set up
Serial port forward	ding 485 (	baud ra	te 960	0, <mark>dat</mark> a	a bit 8, r	no che	eck, 1 st	op bit)	
Fouch screen address				1					set up

### 4 Data forwarding

Use the protocol for the MODBUS-TCP, attachment is the register address table.



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