

SUPPLY EQUIPMENT COMMUNICATION CONTROLLER (SECC) MODEL NO. AT-SECC-202

1 OVERVIEW

AT-SECC-202 is an ISO 15118 Compliant Charging **Communication Controller** for Electric Vehicle Supply Equipment (EVSE). It enables the charge controller to communicate with electric vehicles (EVs) that are ISO 15118 / DIN 70121 compliant. For communication between EVSE and EV, it supports CP (control pilot), PP (proximity pilot) as well as PWM signaling including HomePlug Green PHYTM communication.



Figure 1: Image of AT-SECC-202 Product

LABEL
ANNREN TECHNOLOGIES CO., LTD.
Part Name: SECC
MODEL NO.: AT-SECC-202
HW Version: 1.0.0
SW Version: ISO15118 ED1 DC + DIN70121 Combo Stack
PART NO. : bu17.at-secc-202.an
S/N: AT-SECC-202-YYMMDD-XXXX



1.1 Features

- 1. HomePlug Green PHY[™] compatible QCA7000 Chip for control pilot communication
- 2. Supported Standards: ISO 15118 / DIN 70121 / GBT 27930
- 3. IEC61851-1/23
- 4. Ethernet (IEEE 802.3)
- 5. CAN2.0B
- 6. Backend Connectivity: Fast Ethernet 100 Mbit/s

1.2 Certifications

- EN 61000-4-2
- EN 61000-4-4
- EN 62368-1:2017
- RoHS V2.0

2 INTERFACE

2.1 ETH 10/100Mbps

P	'n	Name	Description	
	1	Ethernet	Ethernet for backend, 100M	

2.2 Power Supply

Pin	Name	Description	
1	DC+	10V~30V Power Supply	
2	DC-	Ground of Power Supply	

2.3 Digital Output

Pin	Name	Description		
1	GND	Ground		
2	DO	Digital Output: Disabled as default CP/PP lost triggers Emergency shutdown, Active High while enable		

2.4 RS232

Pin	Name	Description		
1	ТХ	RS232 Transmitter;		
2	RX	RS232 Receiver;		
3	3 GND Ground			
Notes: Speed 115200bps; Data bits 8; Stop bits 1; No parity; No Flow Control				



2.5 CAN

Pin	Name	Description	
1	L	CAN2.0B Low	
2	Н	CAN2.0B High	
3	GND	CAN Isolated Ground	

2.6 Control Pilot

Pin	Name	Description	
1	PP Proximity Pilot; used in case of Socket outlet (Case B).		
2	СР	Control Pilot; Connect to CP of Socket Outlet in case of Case B, or Connector in case of C.	
3	PE	Protected Earth	

2.7 LEDs

Pin	Name	Description	
1	Power LED	Red; It will be ON when Power is supplied.	
2	HLC LED	Green; It will be ON when High level Communication is set up.	
3	PLC LED	Green; It will be ON when PLC Communication is set up.	
4	Error LED	Yellow; It will be ON when system meets error.	
Note	Notes: HLC LED Behaviors illustrated in next table.		

HLC LED operating condition definition:

Status	Flash Frequency		Description
	On	Off	
Always On	N/A	N/A	The charging management application is running.
Very Slow Flashing	3000ms	3000ms	System self-checking is passed, the SECC is ready.
Slow Flashing	1000ms	1000ms	Plugged-in is detected.
Very Fast Flashing	50ms	50ms	SLAC is ongoing.
Fast Flashing	300ms	300ms	Charging is ongoing.



3 MECHANICAL DIMENSIONS



4. ELECTRICAL CHARACTERISTICS

4.1 Maximum Parameters

MAX PARAMETER	MIN	MAX	UNIT
DC supply voltage	+10	+30	V
Control pilot voltage	-12.6	+12.6	V
CANH, CANL	-12	12	V

4.2 Recommended operating conditions

PARAMETER	MIN	ТҮР	MAX	UNIT
DC supply voltage	+11	+12/24	+26	V
Control Pilot Voltage	-12.5		+12.5	V
Isolation voltage	500			V
Max PARAMETER	AMETER Value			
Power Dissipation	8W			



4.3 Physical Feature

Feature	Description
Operation Temperature	-20°C +55 °C
Dimensions (L*W*H)	127 * 86.8 * 28mm
Protection Class	Housing IP40
Assembly	DIN-Rails (EN 50022) or Wall-Mounted

5. APPLICATION EXAMPLE

Wiring with External DC Charge Controller



Figure 5: Wiring with External DC Charge Controller

Note:

- The IEC 61851-1 Functionality is enabled in AT-SECC-202.
- The CAN interface is the main communication way between AT-SECC-202 and Charger Board. The communication protocol is now supported as:
 - <u>Enhanced GB/T 27930-2015.</u>

<u>6</u> ORDER INFORMATION

Order Code	HW	SW
AT-SECC-202	1.0.0	ISO15118 ED1 DC + DIN70121 Combo Stack



Items	Description	Specification
1	Interface to connect with EVSE	CAN 2.0 B, 250kbps: supported
2		PLC : HomePlug Green PHY TM : Supported
		PWM: Supported
	Communication	CAN/RS-232: Supported
		ISO/IEC 15118-8 : Option
		Wi-Fi: without supported
3		IEC61851: Supported
		DIN70121: Supported
		ISO/IEC 15118: Supported
	SECC Function	AC/DC EIM: Optional
		PnC: without supported, needs to be new developed. The lead time is 3 months after the approval sheet has been confirmed. Will provide quote
4	Debug Interface	CAN, RS-232: Supported
5	Operating Voltage	10V ~ 30V
6	Operating Temperature	-20°C ~ 55°C
7	OS	Linux 4.1.15
8	Security	Hardware Security Module: without supported
9	Dimension	86.6mm x 127mm x 28mm(H)

AT SECC 202 Features Table