

**SEC611 SERIES****ELECTRONIC  
EXPANSION VALVE  
CONTROLLER**

Electronic Expansion Valve Controller SEC60X series is the controller with enhanced features for the refrigeration applications, A/C and HP applications.

**FEATURES**

- ADVANCED PID ALGORITHM TO ENSURE ACCURATE AUTOMATIC ADJUSTMENT OF SUPERHEAT;
- QUICK-SAFE PREVENTION OF LOW AND HIGH SUPERHEAT TO ENSURE THE SYSTEM OPERATING WELL AT ANY CONDITIONS;
- SMALL SIZE, RAIL MOUNTING DESIGN, EASY TO INSTALL;
- ENERGY EFFICIENT, ACHIEVING THE MOST EFFICIENT USE OF THE EVAPORATOR.

**GENERAL SPECIFICATIONS**

- Applicable for various refrigerants
- Operating temperature: -25~60°C
- Storage temperature: -30~60°C
- Relative humidity: ≤95%RH
- Certification: UL, CE Declaration according to EMC
- Installation method: DIN railsnap-in or wall mounting with screws
- Compatible with Sanhua DPF and LPF valves

**ELECTRICAL PARAMETERS**

- Power supply: 24Vac/24Vdc (+10%/-15%, 50/60Hz)
- Requested transformer: ≥ 15VA
- Inputs: 1 Pressure sensor input  
1 Temperature sensor input  
1 Communicationinput (RS485 Modbus)
- Output: 1 Auxiliary relay output (30Vdc/5A)  
1 EEV output (12V DC±10%), rectangular wave



## MODEL DESIGNATION LEGEND

NO.				Model Designation Legend
1	2	3	4	
SEC	6	11	R4	SANHUA electronic Expansion valve Controller
SEC	<b>6</b>	11	R4	Digital means the sixth-generation product
SEC	6	<b>11</b>	R4	Odd means voltageP-sensor, even means current type
SEC	6	11	<b>R4</b>	R4 means with RS485 modbus communication

## ORDERING METHOD

All the models are compatible with the main refrigerants on the market :

R22, R404A, R410A, R134a, R407C, R507, R1234ze, R1234yf, R290, R450A, R513A, R448A, R449A, R452A, R744(CO2), R744(N2O), R32, R245fa, R23, R407A, R407F, R124, R717, R407H, R454C, R455A.

All the models get a RS485 port for communication.

NO.	Item	Model	Part Number	Details		
				Item		Qty.
1	Controller Package <sup>1)</sup>	SEC611-R4	10680001002	<b>Voltage</b> pressure sensor	°C/Bar+2m Temp. Sensor	1
		SEC613-R4	On Request		°F/Psi+2m Temp. Sensor	1
		SEC612-R4	10680001102	<b>Current</b> pressure sensor	°C/Bar+2m Temp. Sensor	1
		SEC614-R4	On Request		°F/Psi+2m Temp. Sensor	1
2	Temp. Sensor <sup>2)</sup>	TSA2-02D	20680006002	2m Temp. Sensor		
3		TSA2-05D	On Request	5m Temp. Sensor		
4		TSA2-09D	On Request	9m Temp. Sensor		
6	Pressure Sensor <sup>3)</sup>	YCQB02H01-1	10185001502	<b>Ratio</b> with <b>Solder</b> connection, <b>2m</b> cable length		
7		YCQB02L12-1	10185015502	<b>Ratio</b> with <b>Thread</b> connection, <b>2m</b> cable length		
8		YCQB02H18-1	10185015402	<b>Ratio</b> with <b>Solder</b> connection, <b>4.9m</b> cable length		
9		YCQB02L28-1	10185015602	<b>Ratio</b> with <b>Thread</b> connection, <b>4.9m</b> cable length		
10		YCQC02L18	10185017102	<b>Current</b> with <b>Thread</b> connection, <b>Packard</b> connection		
11	Packard cable	YCQB02-013054	20185016702	For YCQC02L18with <b>6m</b> cable length		
12		YCQB02-013055	20185016802	For YCQC02L18with <b>9m</b> cable length		

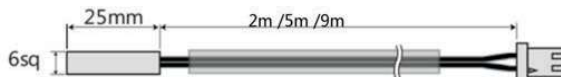
**Notes:** 1) The controller packages already contain 2m temperature sensor.

2) The temperature sensor can be ordered separately.

3) The pressure sensor is not included in the packages and should be ordered separately.



## TEMPERATURE SENSOR

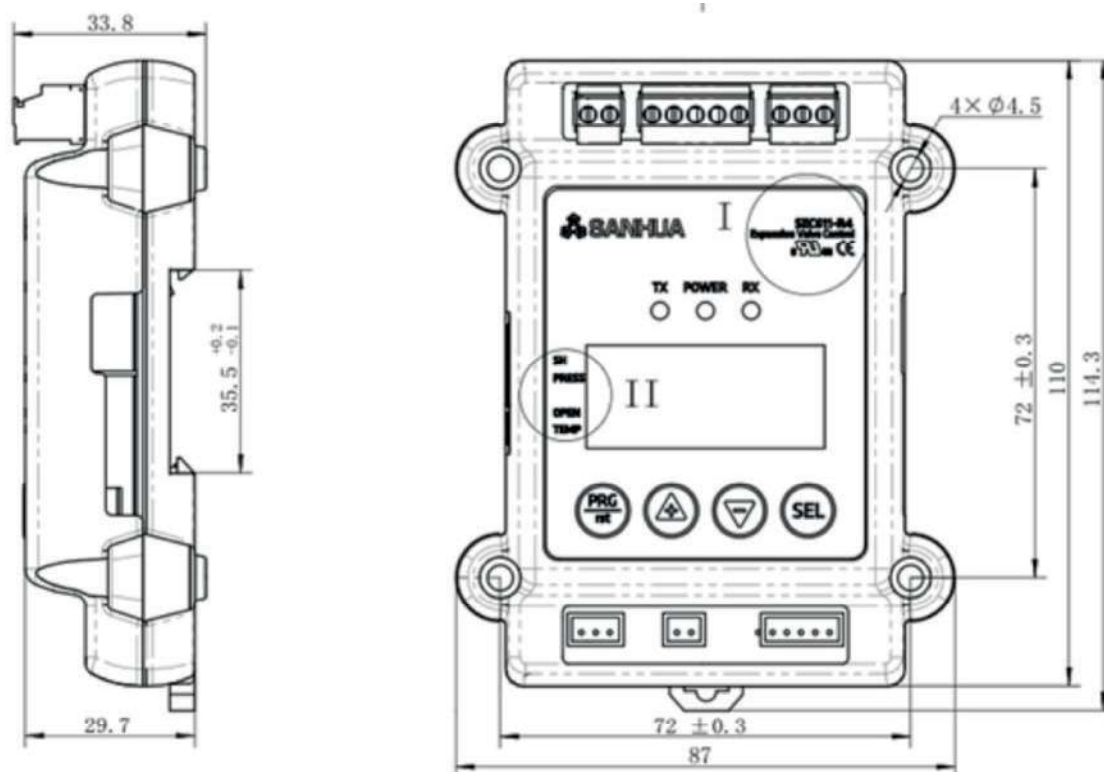
Item	Description	
Temperature Sensor	Type	NTC 5KΩ
	Wire	2C×0.5mm²
	Protection class	IP 67
	Accuracy	±0.3℃ (below25℃)
	Temperature Range	-50 ~50℃
		

## PRESSURE SENSORS

Item	Description	
Pressure sensor	Voltage supply	YCQB: 5±0.25 Vdc YCQC: 10-30 Vdc
	Output	YCQB: 0.5~3.5 Vdc YCQC: 4-20mA
	Pressure range	0~20 Bar -1~12 Bar
	Test Pressure	52.5Bar
	Accuracy	±0.8% F.S.(-40~40℃)
	Protection class	IP 67
	Connection Type	Solder 1/4" Thread SAE - 1/4" 7/16-20UNF
	Wire	black, white, red
Electrical connector		JST-XHP connector Packard connector



## DIMENSIONS AND INSTALLATION



## INSTALLATION DIAGRAM

