

HEAVY DUTY SERIES

ELECTRONIC EXPANSION VALVE CONTROLLER



Heavy duty series controllers inherit the precise superheat control performance of Sanhua SEC6x series controllers, and have significantly improved low temperature resistance and protection class. The controller can be directly installed in the low temperature warehouse, and is no longer limited by the installation distance.

FEATURES

- PROTECTION CLASS UP TO IP67
- ADOPT LOW TEMPERATURE RESISTANT COMPONENTS, CAN OPERATE NORMALLY IN -35°C COLD STORAGE
- INTEGRATED TEMPERATURE SENSOR, PRESSURE TRANSDUCER WIRING HARNESS AND ELECTRONIC EXPANSION COIL, MORE CONVENIENT TO INSTALL
- ACCURATE AND EFFICIENT SUPERHEAT CONTROL, IMPROVING THE EFFICIENCY OF COLD STORAGE

GENERAL SPECIFICATIONS

- Operating temperature: -35~55°C
- Storage temperature: -40~55°C,
- Relative humidity: ≤95%RH, no condensation

- Protection Class: IP67
- Up to 29 common refrigerants are available
- Certifications: CE

ELECTRICAL PARAMETERS

- Power supply: 220VAC(85V~264V) 50/60HZ, Power: 25VA (220Vac)
- Communication mode: RS485 Modbus
- Inputs: 1 Pressure transducer input , 1 Temperature sensor input, 2 Digital signals (Start-stop signal and defrost signal)

- Output: Electronic expansion valve

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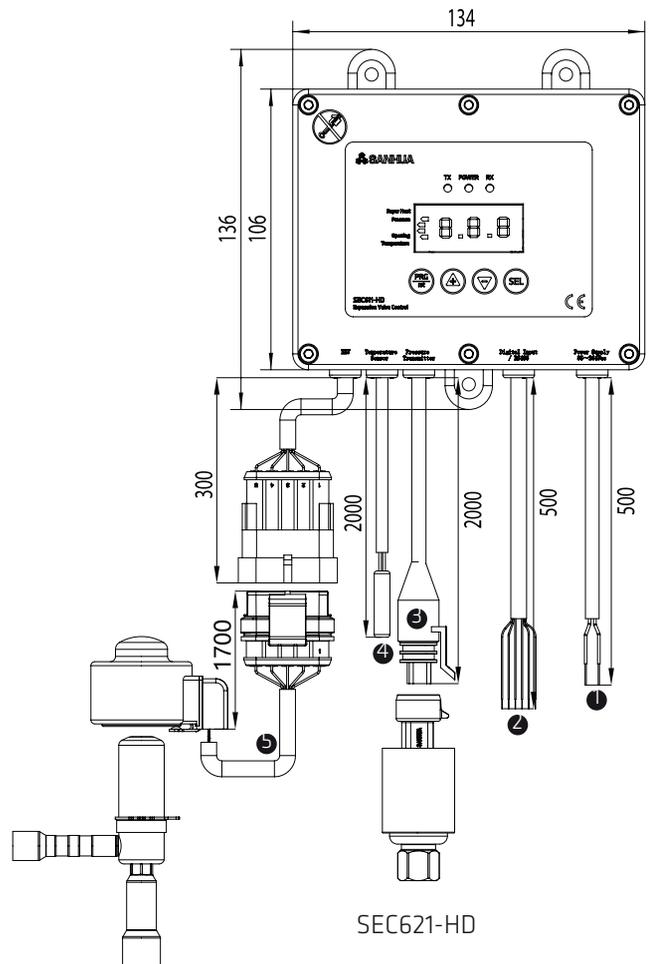
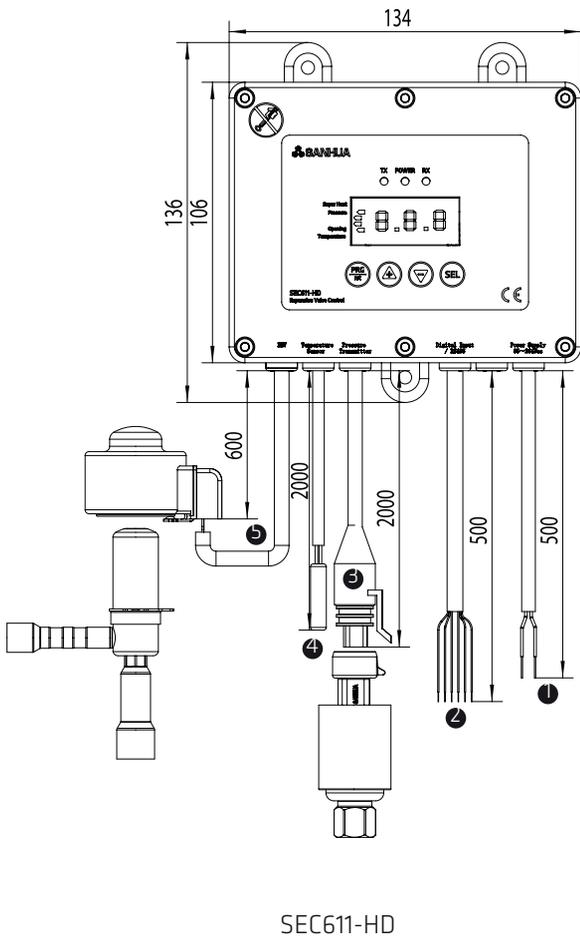
Heavy Duty Series Electronic Expansion Valve Controller



OPTIONAL REFRIGERANT

| Code | Refrigerants |
|------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|
| 0 | R22 | 7 | R1234yf | 14 | R744(CO2) | 21 | R124 | 28 | R600a |
| 1 | R404A | 8 | R290 | 15 | R744A(N2O) | 22 | R717 | | |
| 2 | R410A | 9 | R450A | 16 | R32 | 23 | R407H | | |
| 3 | R134a | 10 | R513A | 17 | R245fa | 24 | R454C | | |
| 4 | R407C | 11 | R448A | 18 | R23 | 25 | R455A | | |
| 5 | R507 | 12 | R449A | 19 | R407A | 26 | R454B | | |
| 6 | R1234ze | 13 | R452A | 20 | R407F | 27 | R452B | | |

DIMENSIONS



Note:

The thickness of the controller is 31mm

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FUNCTION INTRODUCTION

| No. | Label | Name | Function | Remarks |
|-----|----------------------|---|------------------------|--|
| 1 | Power Supply | Power Supply | L (Red) N (Black) | Alternating current 220VAC (85V ~ 264V) 50/60Hz |
| 2 | Digital Input /RS485 | Digital Switch Input | Start/Stop RUN (Gray) | Connection with GND |
| | | | Defrost DEF (Yellow) | Connection with GND |
| | | | GND (Black) | ① Connect with RUN ,defrost signal to be a switch. ② Connect with 12Vdc to power the remote display. |
| | | RS485 Modbus | B (Blue) | RS485 B-(TRX-) |
| | | | A (Orange) | RS485 A+(TRX+) |
| | | 12VDC (Red) | 12V output | |
| 3 | Pressure Transmitter | Pressure Transmitter 0-20bar 0.5-3.5V | 5VDC (Red) | Power Supply |
| | | | S1 (White) | Signal input |
| | | | GND (Black) | GND |
| 4 | Temperature Sensor | Temperature Sensor | GND (Red) T (Black) | NTC 5KΩ, -50°C ~ +50°C |
| 5 | EEV | Electronic Expansion Valve Coil | 12VDC (Gray) | The unipolar electronic expansion valve coil is 5-wire SEC611-HD: The coil is integrated with the controller; SEC621-HD: Coil and controller connected by waterproof connector, with coil PQ- M24012-000071. |
| | | | B (Black) | |
| | | | A (Yellow) | |
| | | | B (Red) | |
| | | | A (Orange) | |

ORDERING METHOD

| No. | Item | Valve Model | Details |
|-----|---------------------------------|------------------|--|
| 1 | Heavy Duty Controller | SEC611-HD | Electronic Expansion Valve Controller (Coil and controller are integrated) |
| | Heavy Duty Controller | SEC621-HD | Electronic Expansion Valve Controller (The coil is connected by a waterproof connector) |
| 2 | Pressure Transmitter | YCQB02L171 | Input -1~20bar, Output 0.5~3.5V -packard electrical connector 1/4 thread pressure interface |
| 3 | Temperature Sensor | NTC2A1 | NTC 5KΩ, -50°C ~ +50°C, Cable Length 2m |
| 4 | Electronic Expansion Valve Coil | PQ-M24012-000071 | With TE waterproof joint, cable length 1700mm |
| 5 | Remote Display | MD03-R4 | For display and parameter setting |
| 6 | Manual Operator | MD04-R4 | For one-click copying of parameters |

Note:

- 1) The Heavy Duty controller package contains pressure transmitter, temperature sensor and coil, no need to order separately; Remote display and manual operator need be ordered separately;
- 2) Pressure transmitters, temperature sensors and electronic expansion valve coils can be ordered separately for after-sale needs
- 3) The valve body of the electronic expansion valve needs to be matched according to the actual demand, optional SANHUA DPF(T01), DPF(TS1) and LPF(recommended), not matching DPF(S03)

ATTACHMENTS AND ACCESSORIES

| Pressure Transmitter | Temperature Sensor | Coil (waterproof connector) | Remote DisplayMD03 | Manual OperatorMD04 |
|----------------------|--------------------|-----------------------------|--------------------|---------------------|
| | | | | |