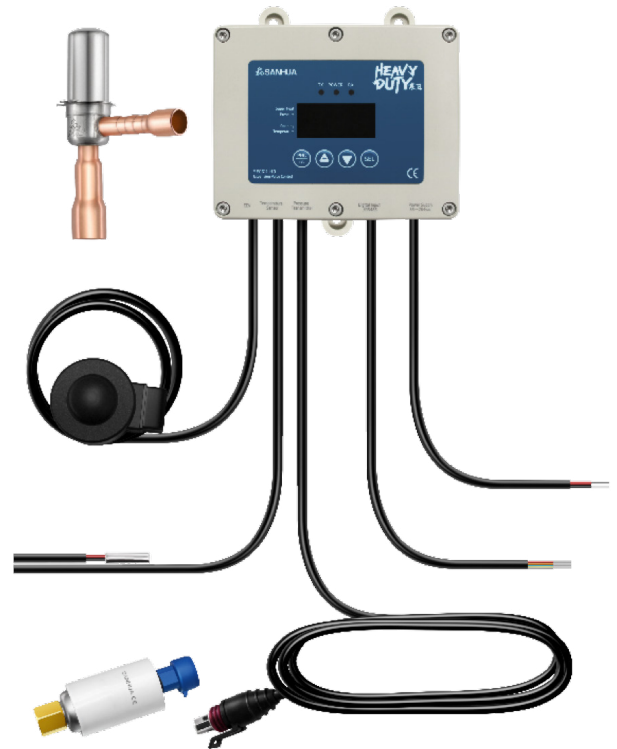


**SEC HD SERIES****ELECTRIC EXPANSION VALVE CONTROLLER**

**Heavy Duty** controller carries out the same world-class superheat control performance of SEC6x family but with significant improved low temperature resistance and water protection class.

It can be installed inside of the cold storage room.

**SEC611-HD & SEC 621-HD for all refrigerant applications including CO2 (R744) and HC/HFO.**

**FEATURES**

- HIGH WATER RESISTANCE
- LOW TEMPERATURE RESISTANT PARTS TO BE INSTALLED DOWN TO -35 °C ENVIRONMENT
- INTEGRATED TEMPERATURE SENSOR, PRESSURE TRANSMITTER SOCKET AND EEV COIL
- ACCURATE AND EFFICIENT SUPERHEAT CONTROL PERFORMANCE TO IMPROVE THE SYSTEM EFFICIENCY OF REFRIGERATION.

**GENERAL SPECIFICATION**

- Operating temperature: -35~55 °C
- Storage temperature:  
-40~60 °C, Humidity: ≤95%RH, Non-condensing
- Enclosure: IP67
- 29 commonly used refrigerants are available (see table below)
- Certification: CE

**ELECTRICAL PARAMETERS**

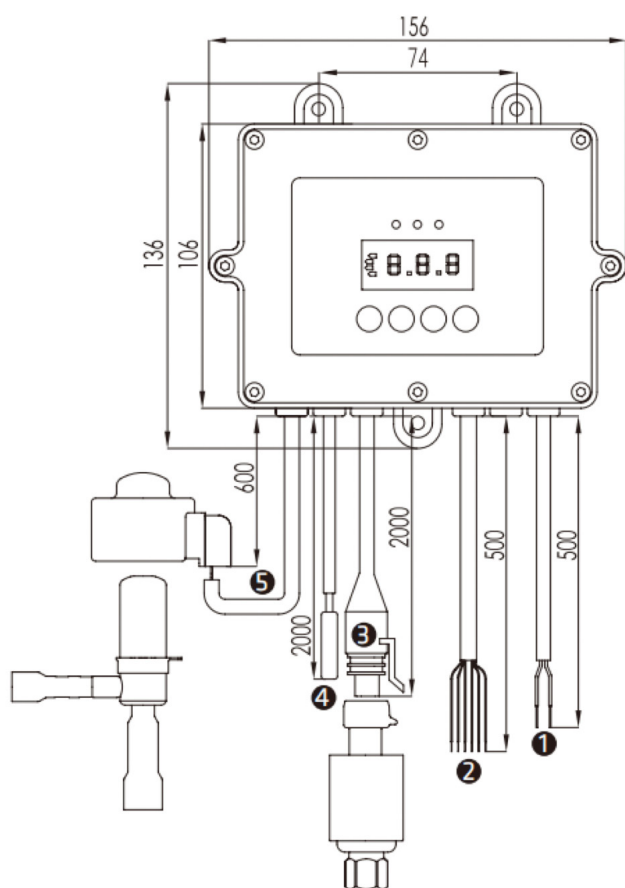
- Power supply: 220Vac(85V~264V) 50/60Hz, 25VA (220Vac)
- Communication: RS485
- Inputs: Pressure transmitter x1, Temperature sensor x1, Digital signal x2 (Run signal and defrost signal)
- Output: EEV output



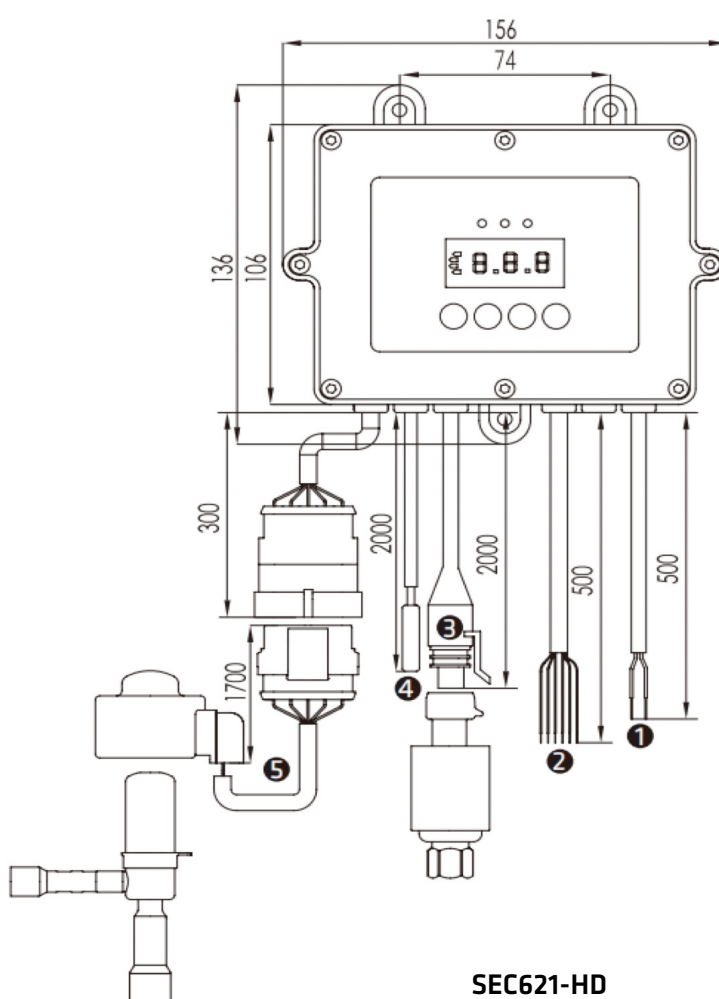
**OPTIONAL REFRIGERANTS**

Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.	Code	Ref.
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**



**SEC611-HD**  
(integral coil)



**SEC621-HD**  
(coil w/ socket)

**Note:** the thickness of the controller is 31mm.

## ELECTRIC EXPANSION VALVE CONTROLLER



## FUNCTIONS

No.	Laser Printed	Name	Function	Description
1	Power Supply	Power Supply	L (Red) N (Black)	220Vac (85V~264V) 50/60Hz
2	Digital Input /RS485	Digital Input	RUN (Grey) DEF (Yellow)*	Connect to GND terminal to have the function working
		RS485 Communication	GND (Black) B (Blue) A (Orange) 12Vdc (Red)	(1) work with RUN or DEF terminal (2) work with 12Vdc terminal to supply power to remote display RS485 B- (TRX-) RS485 A+ (TRX+) DC 12Vdc output
3	Pressure Transmitter	Pressure Transmitter 0.5-3.5V	5Vdc (Red) S1 (White) GND (Black)	Power Supply Signal output GND
4	Temperature Sensor	Temperature Sensor	GND (Red) T (Black)	NTC 5K $\Omega$ , -50oC~+50oC
5	EEV Coil	Electronic Expansion valve Coil	12Vdc B A B A	SEC611-HD integrated PQ-M24 coil SEC621-HD PQ-M24 coil with TE waterproof plug (female and male)

**\* Note:** Defrost DEF (Yellow) signal is only used when the hot gas defrosting requires reversed operating of the electronic expansion valve (the fixed opening% of the EEV can be set up in the controller)

## ORDERING METHOD

SEC611-HD with integrated coil	SEC621-HD with remote coil
<b>Included in the controller:</b> Temperature sensor (NTC2A1) EEV Coil integrated	
<b>Not included in the controller:</b> Pressure transducer (To be selected according to the refrigerant and application)	

## ORDERING REFERENCES

Name	Model	U11 code	Description
<b>SEC-HD with integrated coil</b>			
EEV Controller	SEC611-HD (1)	10680002802	PQ-M24 coil included
<b>SEC-HD with remote coil</b>			
EEV Controller	SEC621-HD (1)	10680003202	PQ-M24 coil included (remote)
<b>Pressure transducer</b>			
Pressure Transducer (CO <sub>2</sub> )	YCQB06L01	10185067202	Input: 0~60bar, Output: 0.5-3.5V Packard connector, Flare 7/16-20UNF-2B (Female)
Pressure Transducer (HC) - (inch)	YCQB02H165	10185087602	Input: ~1~20bar, Output: 0.5-3.5V Packard connector, Solder 1/4" (ODM)
Pressure Transducer (HC) - (mm)	YCQB02H166	10185087002	Input: ~1~20bar, Output: 0.5-3.5V Packard connector, Solder 6mm (ODM)
Pressure Transducer (HFC)	YCQB02L171	10185060402	Input: ~1~20bar, Output: 0.5-3.5V Packard connector, Flare 7/16-20UNF-2B (Female)

**Note:** 1) Temperature sensor and EEV coil are included in the controller package and don't need to be ordered separately unless for service purpose.  
2) Approved EEV models: LPF, LPF-T.



### SPARE PARTS AND ACCESSORIES

Name	Model	U11 code	Description
Pressure Transducer (CO2)	YCQB06L01	10185067202	Input: 0~60bar, Output: 0.5-3.5V Packard connector, Flare 7/16-20UNF-2B (Female)
Pressure Transducer (HC) (inch)	YCQB02H165	10185087602	Input: -1~20bar, Output: 0.5-3.5V Packard connector, Solder 1/4" (ODM)
Pressure Transducer (HC) (mm)	YCQB02H166	10185087002	Input: -1~20bar, Output: 0.5-3.5V Packard connector, Solder 6mm (ODM)
Pressure Transducer (HFC)	YCQB02L171	10185060402	Input: -1~20bar, Output: 0.5-3.5V Packard connector, Flare 7/16-20UNF-2B (Female)
Temperature Sensor	NTC2A1	10665000102	Cable length 2000mm
EEV Coil	PQ-M24012-000071 (1)	10810212002	PQ-M24 coil with waterproof plug, 1700mm length
Remote Display	MD03-R4	10680002502	For displaying and parameter setting
Manual Operator	MD04-R4	10680002402	For quickly copying parameters

**Note:** 1) Approved EEV models: LPF, LPF-T.

### PHOTOS OF ACCESSORIES

Pressure Transducer (CO2/HFC)	Pressure Transducer (HC)	Temperature Sensor	EEV Coil (TE Plug)

Remote Display (Through panel mounting)	Manual Operator