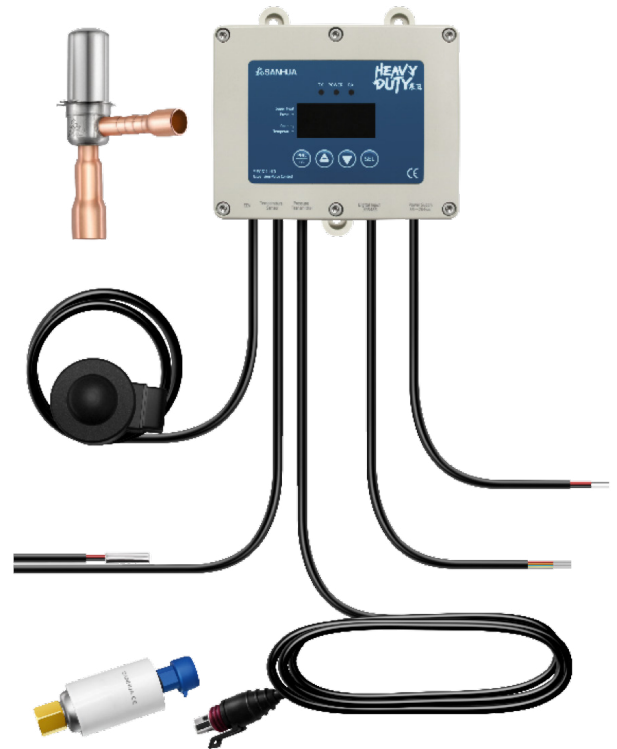


**SEC HD SERIES****ELECTRIC EXPANSION VALVE CONTROLLER**

**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.

**SEC631-HD & SEC641-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**

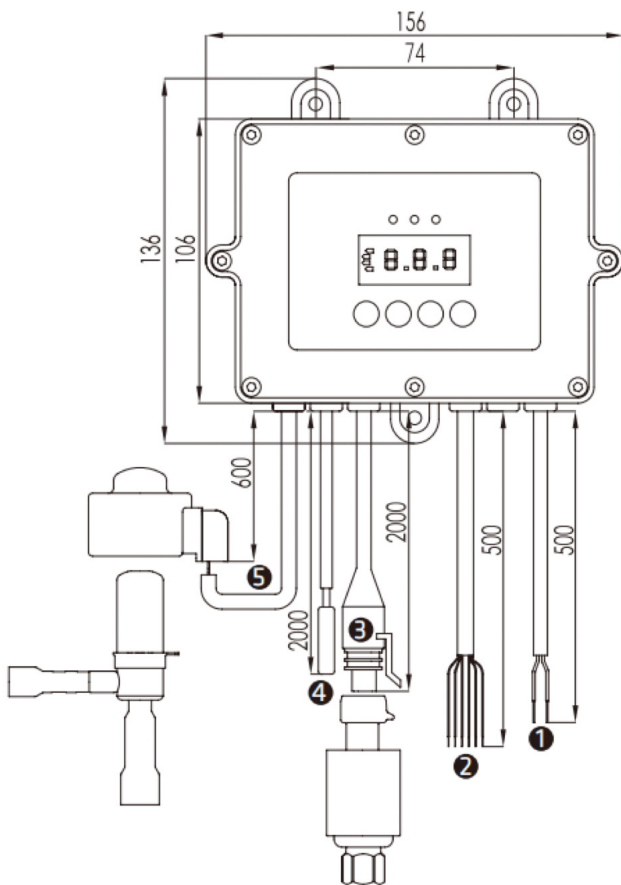
- Power supply: 220Vac(85V~264V) 50/60Hz, 25VA (220Vac)
- Communication: RS485
- Inputs: Pressure transmitter x1, Temperature sensor x1, Digital signal x2 (Run signal and defrost signal)
- Output: EEV output



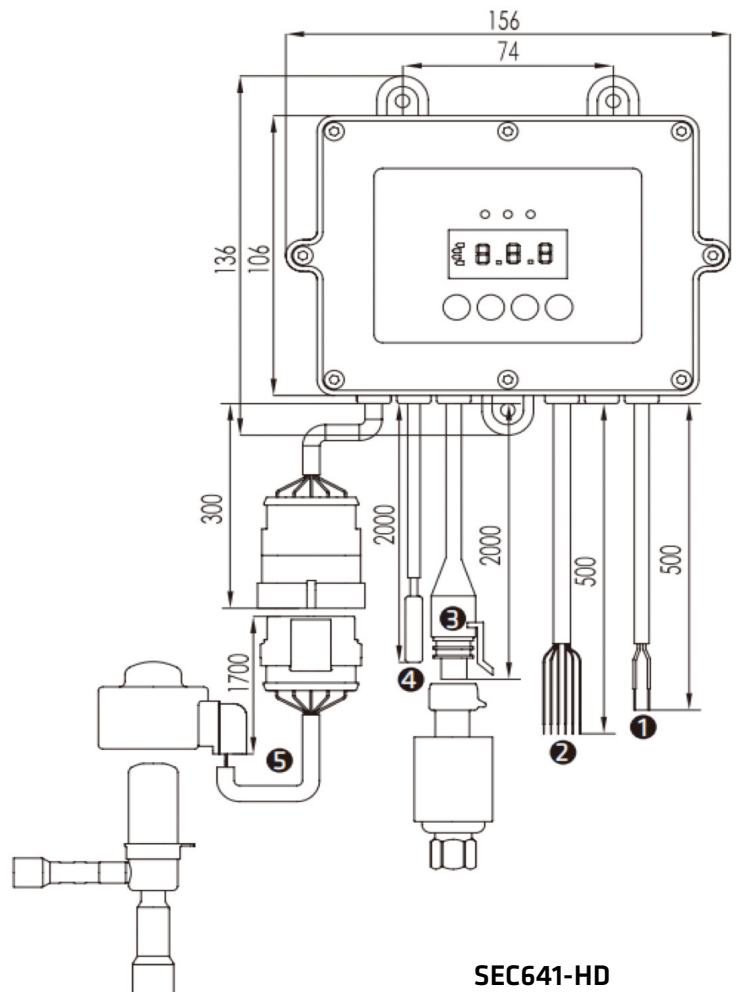
**REFRIGERANTS**

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**



**SEC631-HD**  
(integral coil)



**SEC641-HD**  
(coil w/ socket)

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



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)	Connect to GND terminal to have the function working  (1) work with RUN or DEF terminal (2) work with 12Vdc terminal to supply power to remote display
			DEF (Yellow)*	
			GND (Black)	
		RS485 Communication	B (Blue)	RS485 B- (TRX-)
			A (Orange)	RS485 A+ (TRX+)
		12Vdc (Red)	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	SEC631-HD integrated PQ-M24 coil  SEC641-HD PQ-M24 coil with waterproof connector (female and male)
			B	
			A	
			B	
			A	

\* **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

SEC631-HD with integrated coil	SEC641-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) Valve body (To be selected according to your need)	

ORDERING REFERENCES

Name	Model	U11 code	Description
<b>SEC-HD with integrated coil</b>			
EEV Controller	SEC631-HD (1)	10680004002	PQ-M24 coil included
<b>SEC-HD with remote coil</b>			
EEV Controller	SEC641-HD (1)	10680003902	PQ-M24 coil included (remote)
<b>Pressure transducer</b>			
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)

**Note:** 1) Pressure transmitter and valve body are not included in the controller package.



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 ¼" (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 connector 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

