***SEK** SERIES*

# ELECTRONIC EXPANSION VALVE KIT

## FEATURES

- COMPLETE AND SIMPLE SOLUTION FOR REFRIGERATION SYSTEM
- QUICK AND ACCURATE SUPERHEAT CONTROL TO ENSURE THE SYSTEM OPERATING WELL
- KIT CONTAINS SEC SERIES CONTROLLER: EEV COIL, PRESSURE TRANSDUCER CABLE WITH PACKARD CONNECTOR, TEMPERATURE SENSOR
- LPF-T SERIES, EEV WITH VERY LOW INTERNAL LEAKAGE <1ML/MIN
- THE EEV AND THE PRESSURE TRANSDUCER SHOULD BE SELECTED SEPARATELY ACCORDING TO THE COOLING CAPACITY AND THE REFRIGERANT TYPE.

### ORDERING METHOD

| Controller | Model | Part Number | Pressure transmitter type | Common products |
|---|---|---|---|---|
| SEC611-R6 | SEK01-01-RK | SEKX0000102 | YCQB (Voltage) | YCQB02-013251 –> Packard Cable (2m)<br>NTC2A1 -> Temperature Probe (2m)<br>PQ-M24012-000008 –> EEV coil (3m) |
| SEC612-R6 | SEK01-02-RK | SEKX0000202 | YCQC (Current) | |

# ELECTRONIC EXPANSION VALVE KIT

## PRESSURE TRANSMITTER

*YCQB (Voltage type) pressure transmitter for SEC611-R6 controller*

| | Model Name | Part Number | Connection type | Pressure range [bar] | Max Working pressure [bar] | Electrical connection | Accuracy | Medium Temp (°C) |
|---|---|---|---|---|---|---|---|---|
| 0,5-3,5V | YCQB02H165 | 10185087602 | Solder ¼" | -1-20 | 52,5 | Packard | ±0.8% FS | -40 / 120 |
| | YCQB02H166 | 10185087002 | Solder 6mm | -1-20 | 52,5 | Packard | ±0.8% FS | -40 / 120 |
| | YCQB06L01 | 10185067202 | Flare 7/16-20UNF-2B | 0-60 | 90 | Packard | ±1.5% FS | -40 / 120 |
| 0,5-4,5V | YCQB04H50 | 10185004602 | Solder ¼" | 0-34.5 | 75 | Packard | ±2% FS | -30 / 120 |
| | YCQB01L50 | 10185015702 | Flare | -1-9.3 | 52,5 | Packard | ±2% FS | -30 / 130 |
| | YCQB02L154 | 10185028102 | Flare | 0-20 | 52,5 | Packard | ±2% FS | -30 / 120 |
| | YCQB03L157 | 10185046202 | Flare | 0-30 | 75 | Packard | ±0.8% FS | -40 / 120 |

*YCQC (Current type) pressure transmitter for SEC612-R6 controller*

| Model Name | Part Number | Connection type | Pressure range [bar] | Max Working pressure [bar] | Electrical connection | Accuracy | Medium Temp (°C) |
|---|---|---|---|---|---|---|---|
| YCQC02L18 | 10185017102 | Flare 7/16-20UNF-2B | -1-12 | 52,5 | Packard | ±0.8% FS | -40 / 80 |
| YCQC02L107 | 10185056402 | | -1-20 | 52,5 | Packard | ±0.8% FS | -40 / 80 |
| YCQC03L05 | 10185009302 | | 0-30 | 75 | Packard | ±0.5% FS | -40 / 80 |
| YCQC01H101 | 10185035902 | Solder ¼ | 0-10 | 52,5 | Packard | ±0.8% FS | -40 / 80 |
| **High pressure models** | | | | | | | |
| YCQC06L102 | 10185088302 | Flare-Male | 0-60 | 90 | Packard | | -40 / 80 |

Please note that the default pressure range are -1-12bar on SEC612-R6 and 0-20 bar for SEC611-R6.

## ELECTRONIC EXPANSION VALVE

The electronic expansion selection must be done with the LPF-T datasheet.

As example: The LPF-32T (90 bar) can reach 42 kW for Co2 (Tc/Te/Sc/SH: 0°C/-20°C/2K/6K)

Or 25 kW with R449A (Tc/Te/Sc/SH: 45°C/-10°C/2K/6K)

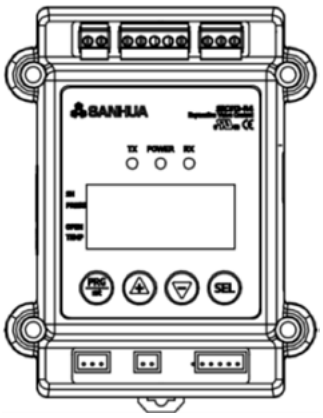
Or 27 kW with R290 (Tc/Te/Sc/SH: 45°C/-10°C/2K/6K)

# ELECTRONIC EXPANSION VALVE KIT

## GENERAL SPECIFICATIONS

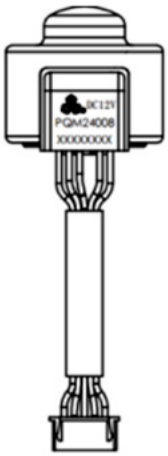
*Controller:*

| Items | Description |
|---|---|
| Dimension | 87(W)mm x 114.3(H)mm x 31.8(D)mm |
| Power supply | 24Vdc+10%/-15%<br>Class II |
| Power consumption | 9W with LPF at 24VDC |
| Operation | -30~55°C, Humidity≤95%RH |
| Storage | -30~55°C, Humidity≤95%RH |
| Protection level | IP20 |



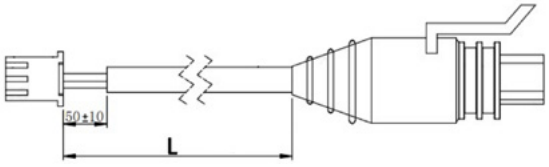

*LPF-T coil with 3m cable length:*

| Items | Description |
|---|---|
| Rated voltage | 12V DC (± 10%) |
| Excitation mode | 1-2 phase excitation, uni-polar–500stps |
| Excitation rate | 30 - 90pps |
| Current and resistance | 260mA, 46 ± 3.7 Ω/phase(20°C) |
| Medium temp. | -40°C / +70°C (duty cycle≤40%) |
| Ambient temp. | -40°C / +60°C |
| Relative humidity | 0 to 95% RH |



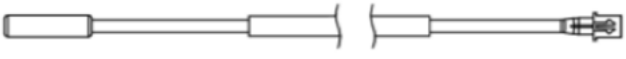
*Packard cable with 2m length:*

| Items | Description |
|---|---|
| Protection class | IP 67 |
| Electrical connector | Packard connector |




*Temperature sensor with 2m length:*

| Items | Description |
|---|---|
| Type | NTC 5KΩ at 25°C |
| Wire | 2×0.5mm²-2m length |
| Protection class | IP 67 |
| Accuracy | ±0.3°C (below25°C) |
| Temperature Range | -50 ~50°C |

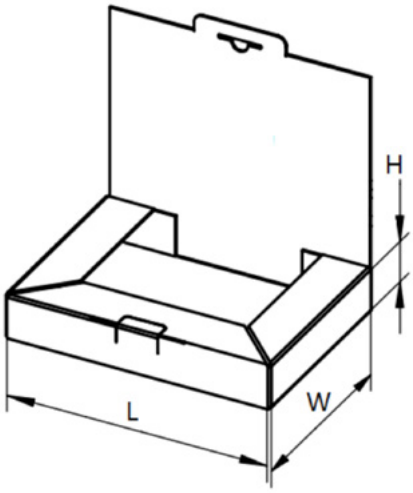


# ELECTRONIC EXPANSION VALVE KIT

## SPARE PARTS

| Name | Model | U11 code | Description |
|---|---|---|---|
| Controller | SEC611-R6 | 10680005102 | For YCQB (0.5-3.5 or 4.5V) |
| Controller | SEC612-R6 | 10680005002 | For YCQC (4-20mA) |
| Temperature Sensor | NTC2A1 | 10665000102 | Cable length 2m |
| LPF-T Coil | PQ-M24012-000008 | 10810129502 | Coil with 3m cable |
| Packard cable | YCQB02-013251 | 20185108201 | To connect the YCQ (2m) |

## PACKAGE DIMENSIONS




| Name | Dimensions (mm) | | | Weight (kg) |
|---|---|---|---|---|
| | L | W | H | |
| SEK kit | 590 | 480 | 230 | 0.45 |