

**SAMSUNG**

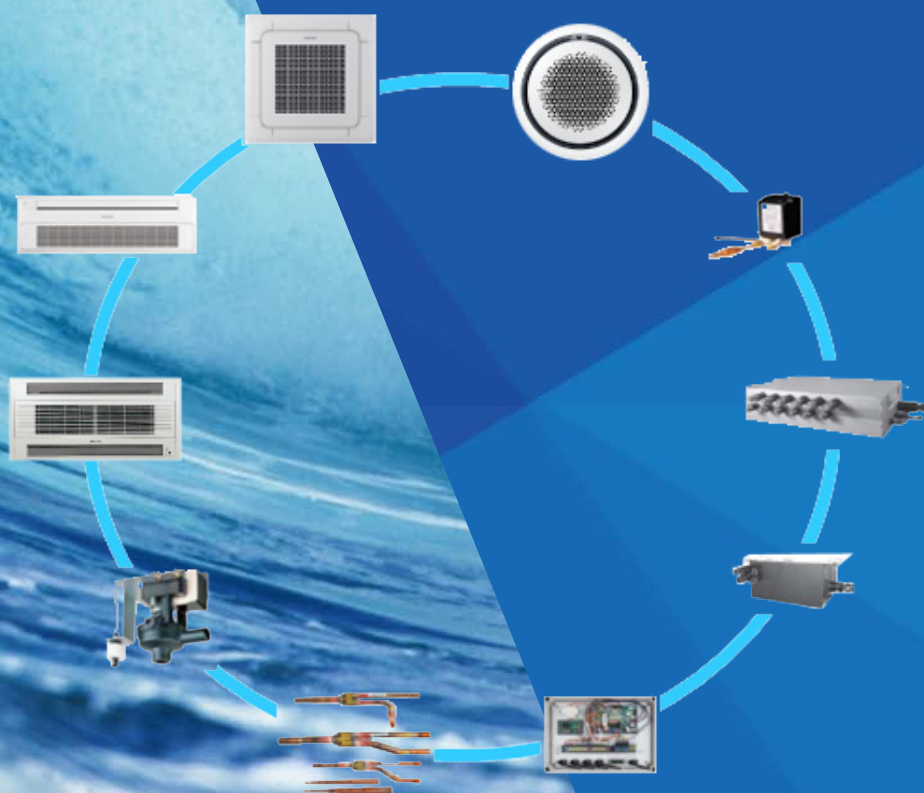
# **SAC**

# **Technical**

# **Data Book**

**Accessories Book for**  
**Global**

1. Panels
2. Drain Pumps
3. MCU (Mode Control Unit)
4. EEV (Electronic Expansion Valve ) kit
5. AHU (Air Handling Unit) kit
6. PDM (Pressure Drop Modulation) Kit
7. Branch kit
8. Low Ambient Cooling kit  
(This optional kit is sold only in North America.)
9. FCU (Fan Coil Unit) Kit
10. UCK (Universal Communication Kit)



# History

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| Version | Modification                                                                                                                                                                                                       | Date     | Remark |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------|
| Ver1.0  | Release the accessory TDB for global                                                                                                                                                                               | 16.02.23 |        |
| Ver1.1  | Modification for AHU kit<br>- Spec. separation of MXD-A64K100E from MCM-D201N (p.36)<br>- Add parts and component for MCM-D201N and MXD-A64K100E (p.38)<br>- Add electrical wiring diagram for MCM-D201N (p.40)    | 16.07.12 |        |
| Ver1.2  | Revision all description                                                                                                                                                                                           | 16.10.25 |        |
| Ver1.3  | Modification for Panel of Mini 4way Cassette<br>- Add New Panel Line-up<br>Modification for MCU (Mode Control Unit) (Add line-up)<br>Add to FCU (Fan Coil control) kit<br>Add to UCK (Universal communication kit) | 16.12.16 |        |
| Ver1.4  | Modification for VOC<br>- Add to US system of units<br>- Delete models of not available                                                                                                                            | 17.03.06 |        |

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# 1.1 1way Cassette Panel

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## 1.1.1 Feature

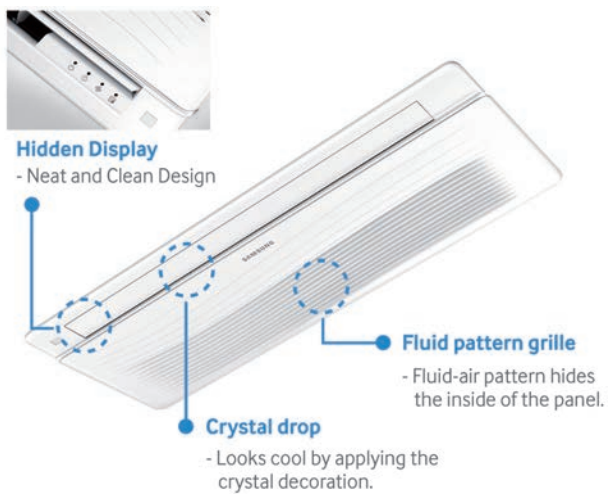
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Visually appealing panel Discreet style and performance

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Enhance any décor with refined elegance and comfort

Lines and simple display design make this a modern classic, which looks great with any interior.





# 1.1 1way Cassette Panel

## 1.1.2. Line-up & Specification

| Panel            | Parts Code  | Sales area | Movement | Grille type | Color        | Protocol     | Product |
|------------------|-------------|------------|----------|-------------|--------------|--------------|---------|
| 1way CST (JSF-0) | PC1MWSCAN   | China      | Normal   | Fluid       | DA White     | New Protocol | DVM     |
|                  | PC1MWPCAN   | China      | Normal   | Fluid       | DA White     | -            | DVM     |
|                  | PC1MWSKAN   | Global     | Normal   | Fluid       | DA White     | New Protocol | DVM     |
|                  | PC1MWSK1    | Korea      | Normal   | Fluid       | DA White     | -            | DVM     |
|                  | PC1MWSK1N   | Korea      | Normal   | Fluid       | DA White     | New Protocol | DVM     |
|                  | PC1MWPK1    | Korea      | Normal   | Fluid       | DA White     | -            | DVM     |
|                  | PC1MWPK1N   | Korea      | Normal   | Fluid       | DA White     | New Protocol | DVM     |
| 1way CST (JSF-1) | PSSCA       | China      | Normal   | Stripe      | Victory gray | -            | DVM     |
|                  | PSSMA       | Global     | Normal   | Stripe      | Victory gray | -            | CAC     |
|                  | PC1NUSMASTK | Turkey     | Normal   | Stripe      | Victory gray | -            | DVM     |
|                  | PC1NUSCAN   | China      | Normal   | Stripe      | Victory gray | New Protocol | DVM     |
|                  | PC1NUSMAN   | Global     | Normal   | Stripe      | Victory gray | New Protocol | DVM     |
|                  | AGSS1181W   | Korea      | Normal   | Stripe      | DA White     | -            | DVM     |
|                  | AGSS1421W   | Korea      | Normal   | Stripe      | DA White     | -            | DVM     |
|                  | PC1NWSK1N   | Korea      | Normal   | Stripe      | DA White     | New Protocol | DVM     |
|                  | PC1NWSK1NPP | Korea      | Normal   | Stripe      | DA White     | New Protocol | CAC     |
|                  | PC1NUSK1S   | Korea      | Normal   | Stripe      | DA White     | -            | CAC     |
|                  | AGSP1181WT  | Korea      | Z-Slide  | Tilting     | DA White     | -            | DVM     |
|                  | PC1NUPMA    | Global     | Z-Slide  | Tilting     | DA White     | -            | CAC     |
|                  | PC1NUPMAN   | Global     | Z-Slide  | Tilting     | DA White     | New Protocol | CAC     |
|                  | PC1NWAK1N   | Korea      | Z-Slide  | Tilting     | DA White     | New Protocol | DVM     |
|                  | PC1NWSK2    | Korea      | Normal   | Fluid       | DA White     | -            | DVM     |
|                  | PC1NWSK2N   | Korea      | Normal   | Fluid       | DA White     | New Protocol | DVM     |
|                  | PC1NWSCAN   | China      | Normal   | Fluid       | DA White     | New Protocol | CAC     |
|                  | PC1NWSMAN   | Global     | Normal   | Fluid       | DA White     | New Protocol | DVM     |
| 1way CST (JSF-2) | PC1BUSEA    | India      | Normal   | Stripe      | DA White     | -            | CAC     |
|                  | PC1BWSK1N   | Korea      | Normal   | Stripe      | DA White     | New Protocol | DVM     |
|                  | PC1BWSK1NPP | Korea      | Normal   | Stripe      | DA White     | New Protocol | CAC     |
|                  | PC1BUSK1S   | Korea      | Normal   | Stripe      | DA White     | -            | CAC     |
|                  | PC1BWSEAN   | India      | Normal   | Stripe      | DA White     | New Protocol | DVM     |
|                  | AGSP1421WT  | Korea      | Z-Slide  | Tilting     | DA White     | -            | DVM     |
|                  | PC1BWAK1N   | Korea      | Z-Slide  | Tilting     | DA White     | New Protocol | DVM     |
|                  | PC1BWPEAN   | India      | Z-Slide  | Tilting     | DA White     | New Protocol | DVM     |
|                  | PC1BUPMA    | India      | Z-Slide  | Tilting     | DA White     | -            | CAC     |
|                  | PC1BWSK2    | Korea      | Normal   | Fluid       | DA White     | -            | DVM     |
|                  | PC1BWSK2N   | Korea      | Normal   | Fluid       | DA White     | New Protocol | DVM     |
|                  | PC1BWSCAN   | China      | Normal   | Fluid       | DA White     | New Protocol | CAC     |
|                  | PC1BWSMAN   | Global     | Normal   | Fluid       | DA White     | New Protocol | DVM     |

# 1.1 1way Cassette Panel

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## 1.1.3. Specification

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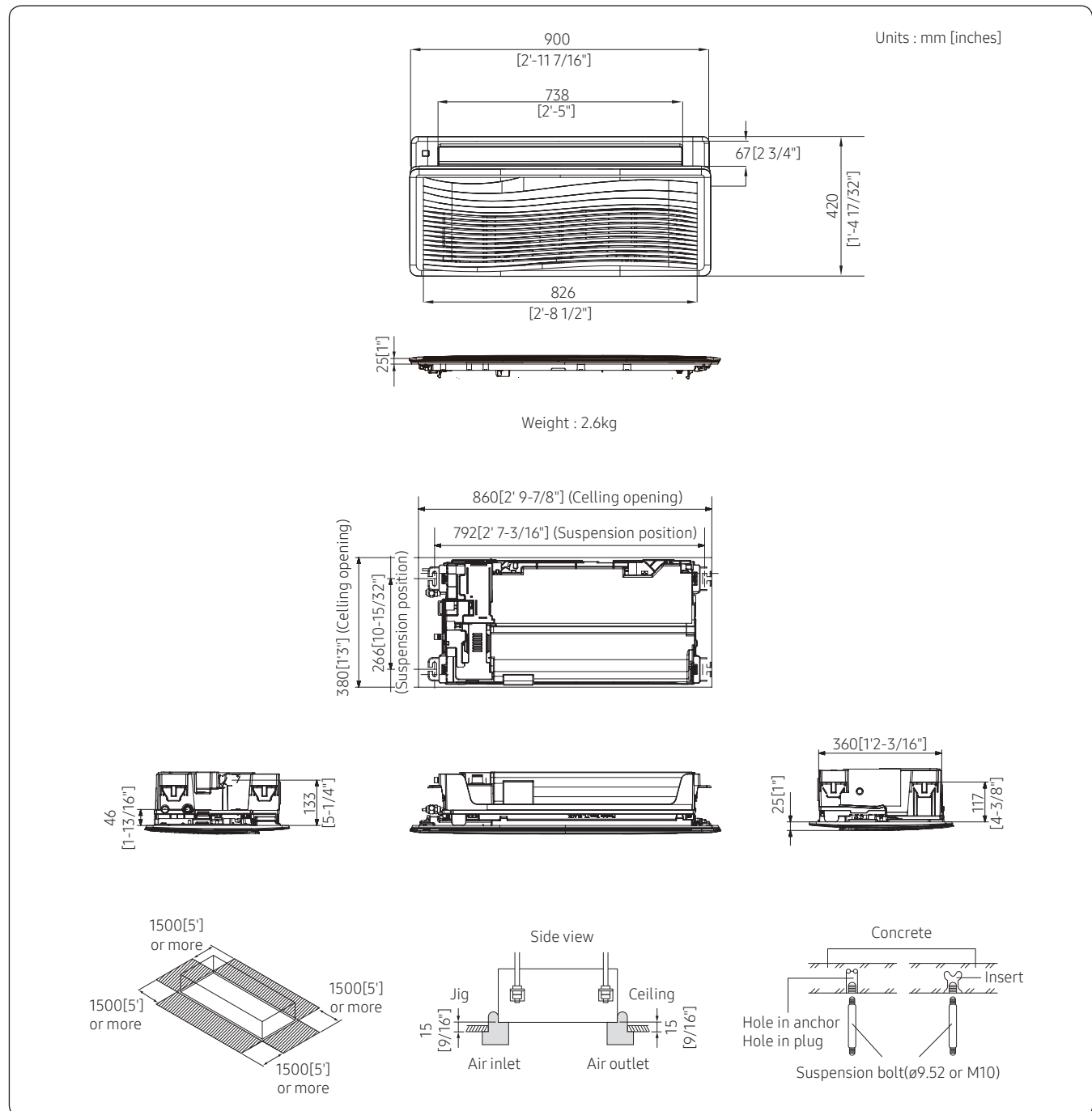
| Panel               | Size                                                               | Weight               |
|---------------------|--------------------------------------------------------------------|----------------------|
| 1way CST<br>(JSF-0) | 900 x 25 x 420 (mm)<br>[2'-11 7/16"] x [1"] x [1'-4 17/32"] (inch) | 2.6 kg<br>(5.7 lbs)  |
| 1way CST<br>(JSF-1) | 1198 x 25 x 500 (mm)<br>[3'-11 1/4"] x [1"] x [1'-7 3/4"] (inch)   | 5.5 kg<br>(12.1lbs)  |
| 1way CST<br>(JSF-2) | 1410 x 23 x 500 (mm)<br>[4'-7 1/2"] x [7/8"] x [1'-7 3/4"] (inch)  | 6.3 kg<br>(13.9 lbs) |

# 1.1 1way Cassette Panel

## 1.1.4. Technical drawings

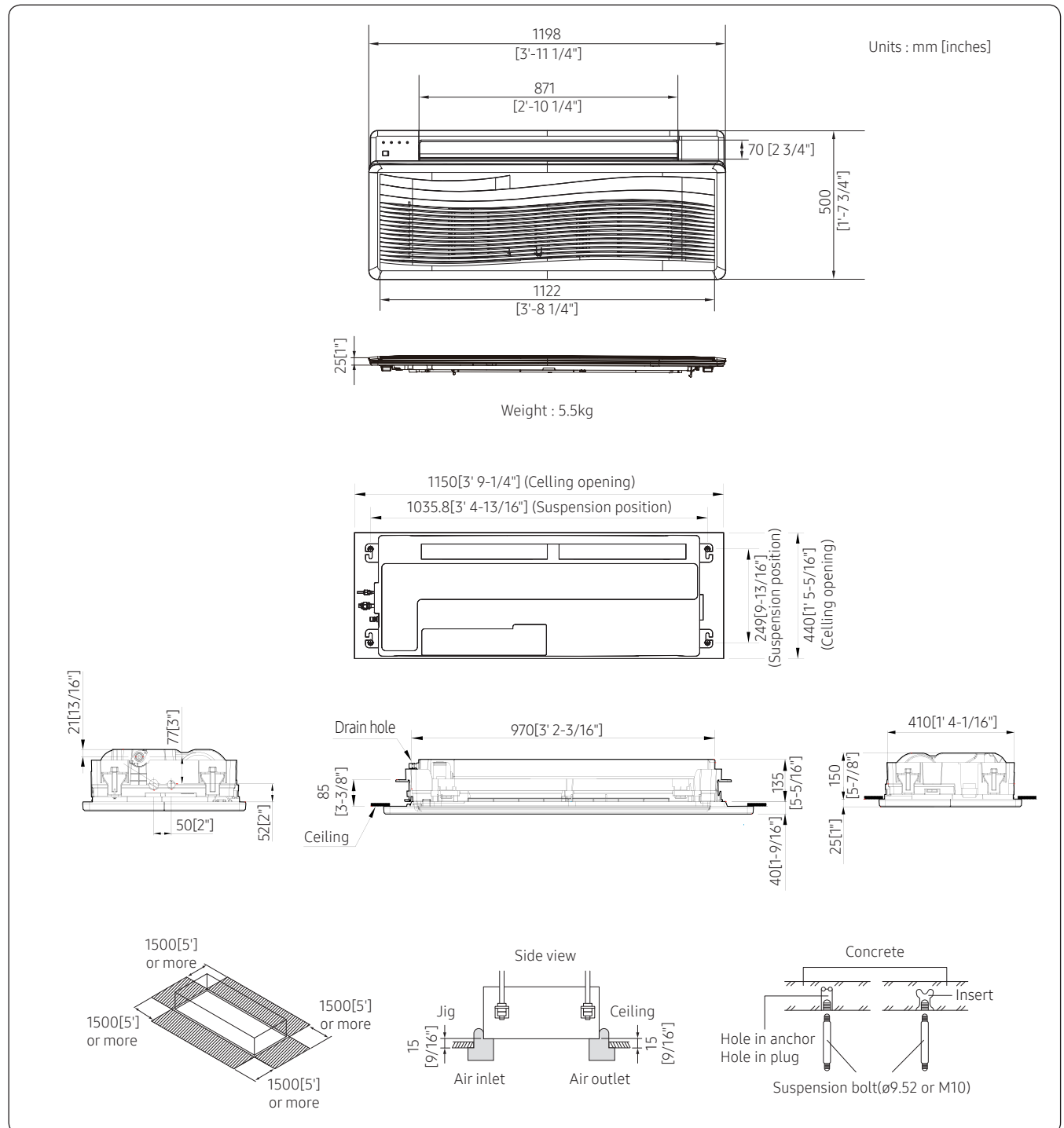
### Dimensional drawings

PC1MWSKAN, PC1MWSCAN, PC1MWPCAN, PC1MWSK1, PC1WSK1N, PC1MWPk1, PC1MWPk1N



# 1.1 1way Cassette Panel

PC1NWSMAN, PC1NWSK2, PC1NWSK2N, PC1NWSCAN





PC1BWSMAN, PC1BWSK2, PC1BWSK2N, PC1BWSCAN



## 1.2. 2way Cassette Panel

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### 1.2.1 Feature

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#### 2Way Cassette

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##### **Equip even the narrowest of spaces with high-performance cooling and heating**

Samsung 2Way Cassette is perfectly suited for long and narrow places with limited installation space, thanks to its compact, slim frame. The unit distributes airflow from two sides, providing powerful cooling and heating performance in an instant for a pleasant environment.

The 2Way Cassette indoor air conditioning unit delivers optimal airflow and efficiency with features such as:

##### **Exceptional operation and control.**

Easily maintain a calming, comfortable atmosphere with broad airflow coverage, temperature control and self-diagnosis.

##### **Easy, flexible installation.**

Reduce the time and effort of installation with a compact size that fits the ceiling space impeccably.



## 1.2. 2way Cassette Panel

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### 1.2.2. Line-up & Specification

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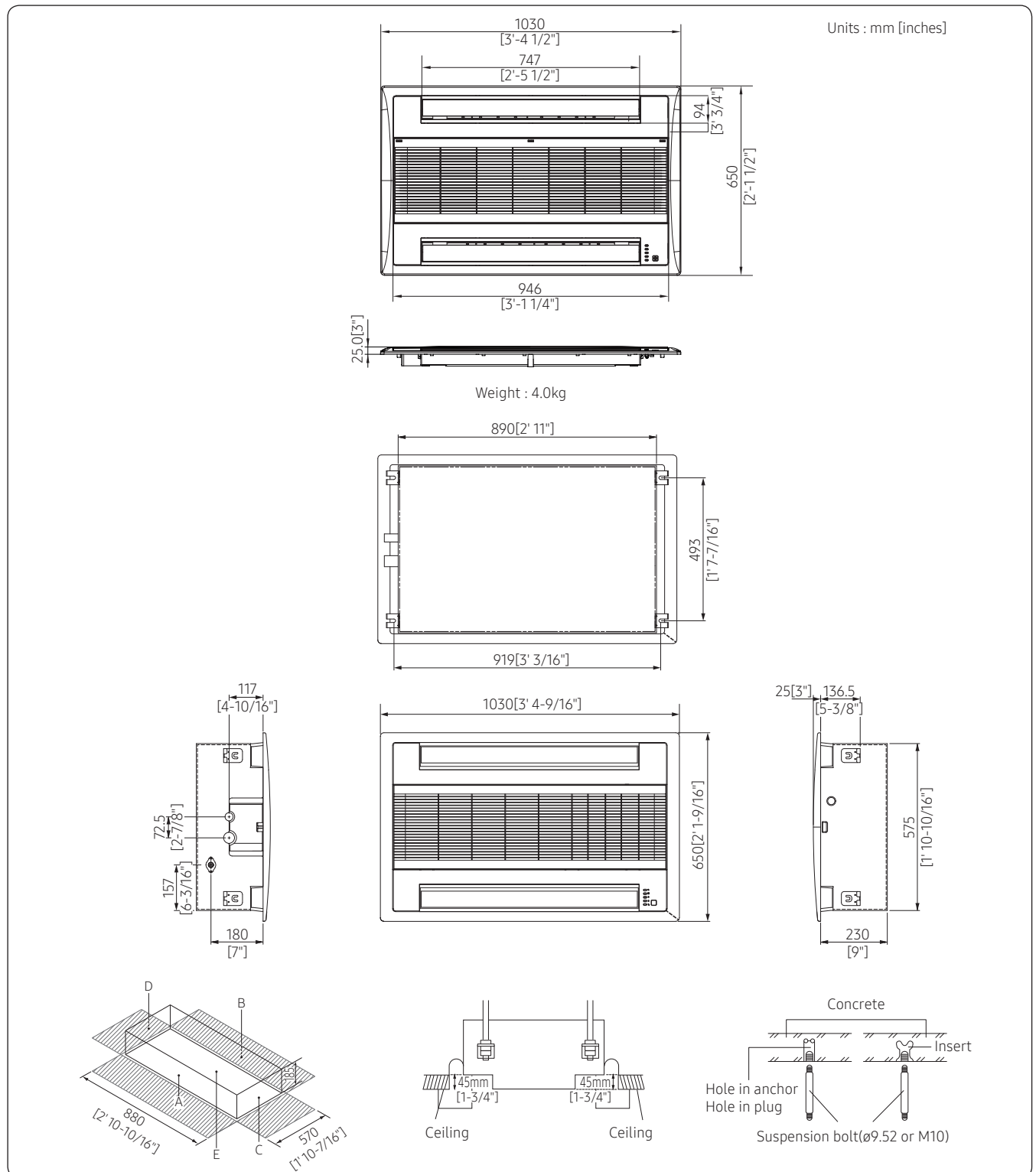
| Type | Model       | Sales area | Grille type | Color        | Comm. type   | Size                                                               | Mass                | Product |
|------|-------------|------------|-------------|--------------|--------------|--------------------------------------------------------------------|---------------------|---------|
| 2WAY | AGGH103IKAG | Korea      | Stripe      | Victory gray | -            | 1030 x 25 x 650 (mm)<br>[3'-4 1/2"] x [1"] x<br>[2'-1 1/2"] (inch) | 4.0 kg<br>(8.8 lbs) | DVM     |
|      | P2SMA       | Global     | Stripe      | Victory gray | -            |                                                                    |                     | DVM     |
|      | P2SCA       | China      | Stripe      | Victory gray | -            |                                                                    |                     | DVM     |
|      | PC2NUSMASTK | Turkey     | Stripe      | Victory gray | -            |                                                                    |                     | DVM     |
|      | PC2NUSCEN   | China      | Stripe      | Victory gray | New Protocol |                                                                    |                     | DVM     |
|      | PC2NUSK1N   | Korea      | Stripe      | Victory gray | New Protocol |                                                                    |                     | DVM     |
|      | PC2NUSMEN   | Global     | Stripe      | Victory gray | New Protocol |                                                                    |                     | DVM     |

## 1.2. 2way Cassette Panel

### 1.2.3. Technical drawings

#### Dimensional drawings

PC2NUSMEN, AGGH103IKAG, P2SMA, P2SCA, PC2NUSMASTK, PC2NUSCEN, PC2NUSK1N



## 1.3 4Way Cassette S (600 x 600) Panel

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### 1.3.1 Feature

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#### 4Way Cassette S (600 x 600)

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##### Add chic flair to your interior design with a stylish yet powerful AC system

Samsung's advanced 4Way Cassette S (600 x 600) builds on the aesthetic appeal and performance of the standard 4Way Cassette S with an enhanced design. The 4Way Cassette S (600 x 600) comes in a variety of patterns to complement any interior. The stylish cassette unit visually harmonizes with the indoor space, while efficient cooling and heating performance make it a dependable and practical air conditioning solution.

The 4Way Cassette S (600 x 600) indoor air conditioning system provides high-performance heating and cooling in an elegant design with features such as:

##### **Tasteful design and compact, lightweight build.**

Create a polished ambience with a discreetly sized design and a choice of attractive panel patterns.

##### **Enhanced comfort control.**

Optimize comfort and save energy with optional motion detection.

##### **Low maintenance and powerful airflow.**

Ease installation and maintenance and maxi



## 1.3 4Way Cassette S (600 x 600) Panel

### 1.3.2. Line-up

| Chassis             | Parts Code  | Sales area | Grille | Color        | Protocol     | Size                                                                  | Mass                 | Product |
|---------------------|-------------|------------|--------|--------------|--------------|-----------------------------------------------------------------------|----------------------|---------|
| Mini 4way           | PMSMAA      | N. America | Stripe | Victory gray | -            | 670 x 45 x 670 (mm)<br>[2'-2 1/2"] x [1 3/4"] x<br>[2'-2 1/2"] (inch) | 2.7 kg<br>(5.95 lbs) | DVM     |
|                     | PMSCA       | China      | Stripe | Victory gray | -            |                                                                       |                      | DVM     |
|                     | PMSMA       | Global     | Stripe | Victory gray | -            |                                                                       |                      | DVM     |
|                     | PC4SUSK1    | Korea      | Stripe | Victory gray | -            |                                                                       |                      | DVM     |
|                     | PC4SUTMASTK | Turkey     | Stripe | Victory gray | -            |                                                                       |                      | DVM     |
|                     | PC4SUSK1N   | Korea      | Stripe | Victory gray | New Protocol |                                                                       |                      | DVM     |
| Global<br>Mini 4way | PC4SUSMA    | Global     | Waffle | Victory gray | -            |                                                                       |                      | CAC     |
|                     | PC4SUSMB    | Global     | Waffle | Victory gray | -            |                                                                       |                      | CAC     |
|                     | PC4SUSCA    | China      | Stripe | Victory gray | -            |                                                                       |                      | DVM     |
|                     | PC4SUSME    | Global     | Stripe | Victory gray | -            |                                                                       |                      | CAC     |
|                     | PC4SUSMF    | Global     | Stripe | Victory gray | -            |                                                                       |                      | CAC     |
|                     | PC4SUSMAN   | Global     | Waffle | Victory gray | New Protocol |                                                                       |                      | CAC     |
|                     | PC4SUSMEN   | Global     | Stripe | Victory gray | New Protocol |                                                                       |                      | CAC     |
|                     | PC4SUSCAN   | China      | Stripe | Victory gray | New Protocol |                                                                       |                      | DVM     |
|                     | PC4SUSMC    | Global     | Waffle | Victory gray | -            | 620 x 45 x 620 (mm)<br>[2'- 7/16"] x [1 3/4"] x<br>[2'- 7/16"] (inch) | 2.3kg<br>(5.07 lbs)  | CAC     |
|                     | PC4SUSMBN   | Global     | Waffle | Victory gray | New Protocol |                                                                       |                      | CAC     |
|                     | PC4SUSMG    | Global     | Stripe | Victory gray | -            |                                                                       |                      | CAC     |
|                     | PC4SUSMFN   | Global     | Stripe | Victory gray | New Protocol |                                                                       |                      | CAC     |
|                     | PC4SUSCBN   | China      | Waffle | Victory gray | New Protocol |                                                                       |                      | DVM     |

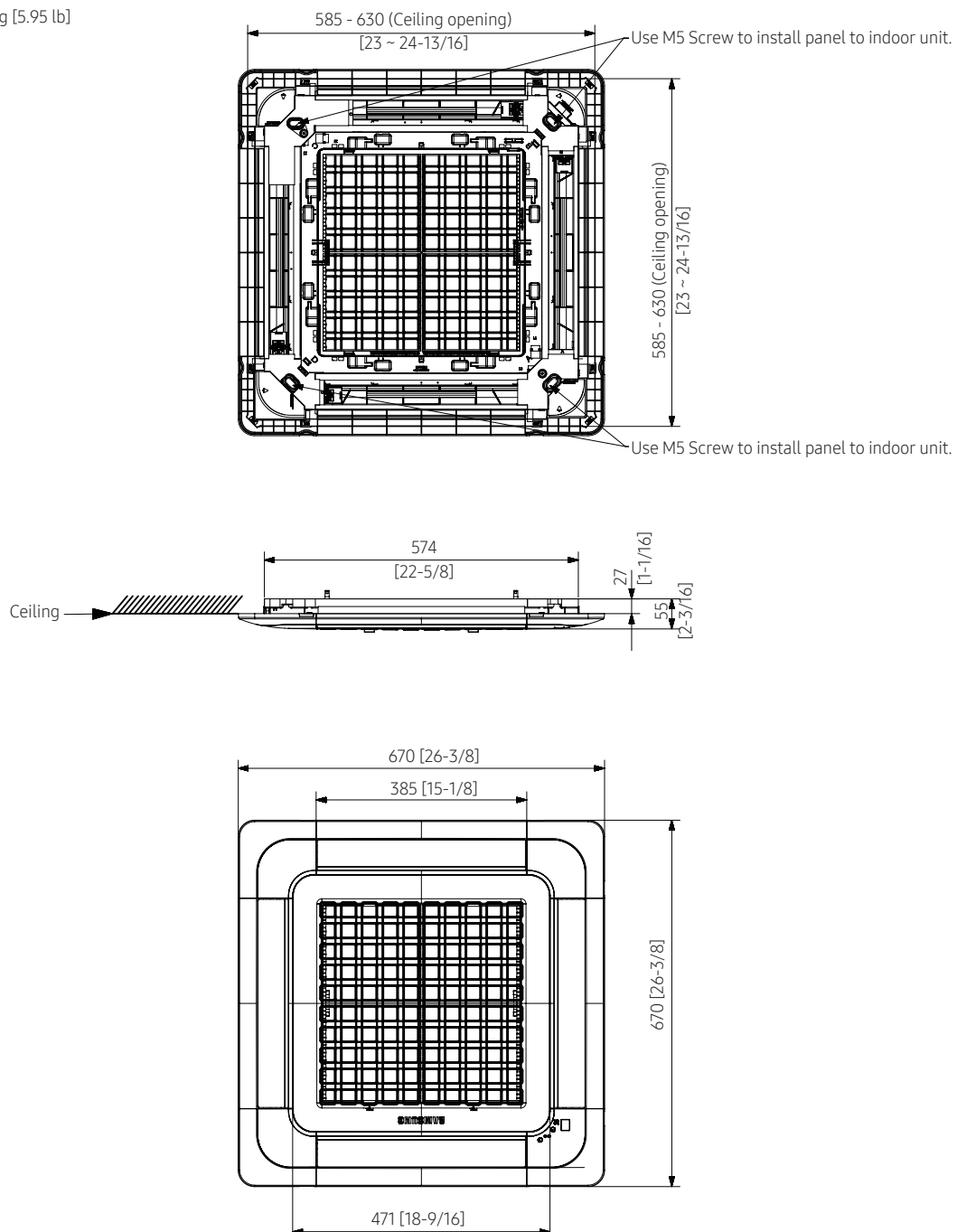
## 1.3 4Way Cassette S (600 x 600) Panel

### 1.3.3. Technical drawings

#### Dimensional drawings

PMSMAA, PMSCA, PMSMA, PC4SUSK1, PC4SUTMASTK, PC4SUSK1N, PC4SUSMA, PC4SUSMB, PC4SUSCA, PC4SUSME, PC4SUSMF, PC4SUSMAN, PC4SUSMEN EU, PC4SUSCAN

Units : mm [inches]  
Weight : 2.7kg [5.95 lb]





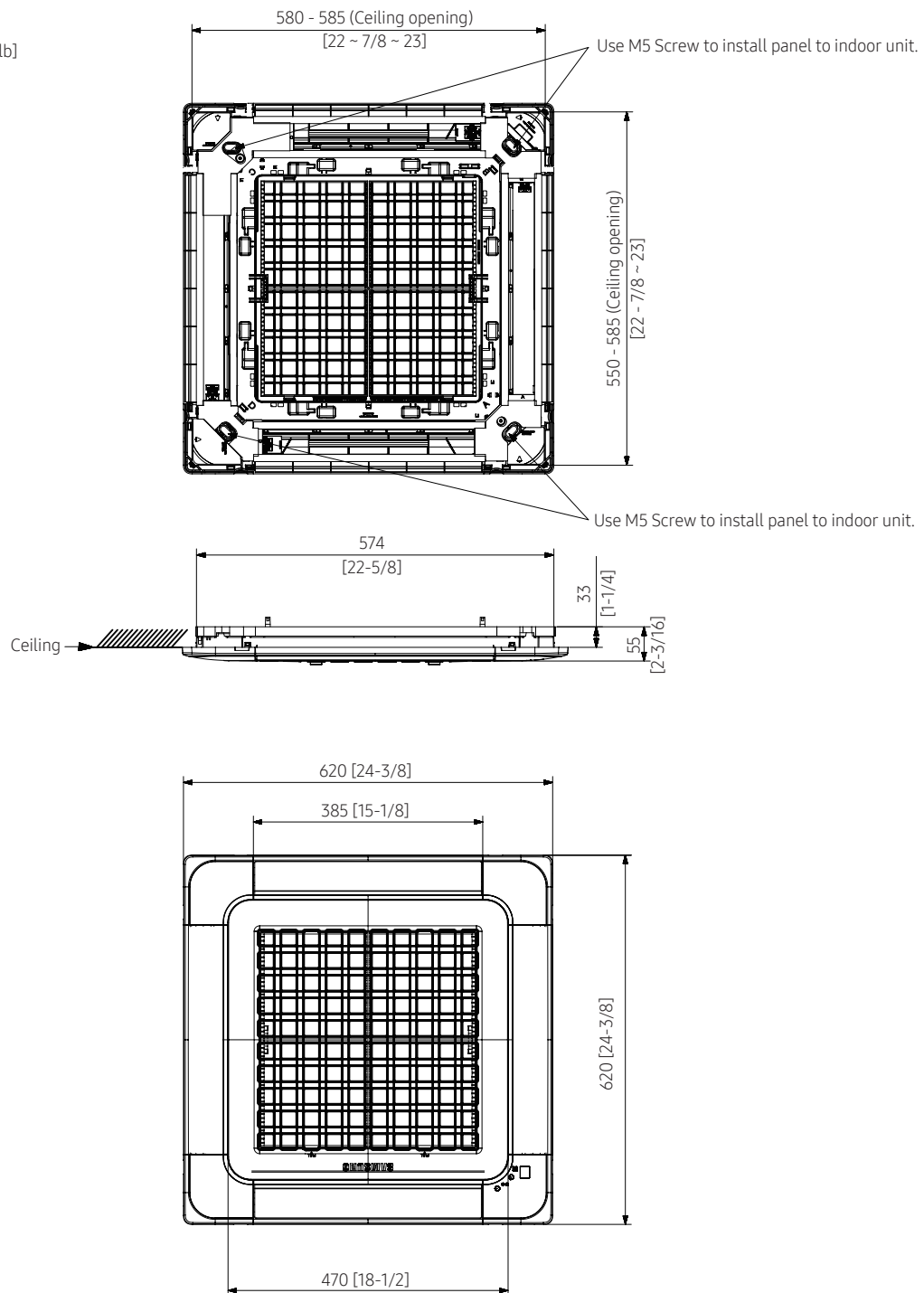
## 1.3 4Way Cassette S (600 x 600) Panel

### 1.3.3. Technical drawings

#### Dimensional drawings

PC4SUSMC, PC4SUSMBN, PC4SUSMG, PC4SUSMFN, PC4SUSCBN

Units : mm [inches]  
Weight : 2.3kg [5.07 lb]



# 1.4 4way Cassette Panel

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## 1.4.1 Feature

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### 4Way Cassette S

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#### Stage a beautiful yet comfortable environment

The Samsung 4Way Cassette S indoor air conditioning system delivers polish, comfort and efficiency with features such as:

**Stylishly clean design.**

Add panache to interior spaces with a choice of clean, streamlined panel patterns in a lightweight build.

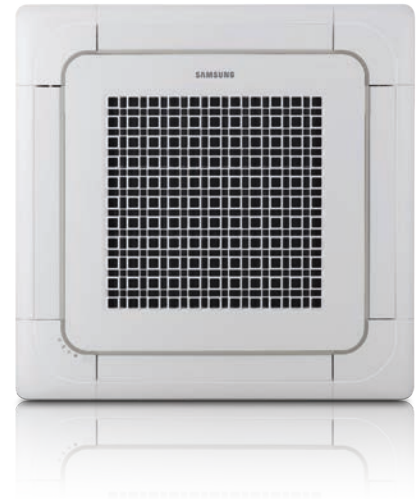
**Robust operation.**

Control the atmosphere perfectly with an advanced design for superior air flow and cooling/heating performance.

**Low maintenance and simple installation.**

Ease installation and minimize maintenance with a detachable, no-drip design.

With its newly improved design, 4Way Cassette S supports a clean, aesthetically appealing atmosphere and adds a sense of sophistication to work and living spaces. Not only is this unit attractively designed, but it also uses advanced technologies to optimize comfort in any environment.



# 1.4 4way Cassette Panel

## 1.4.2. Line-up & Specification

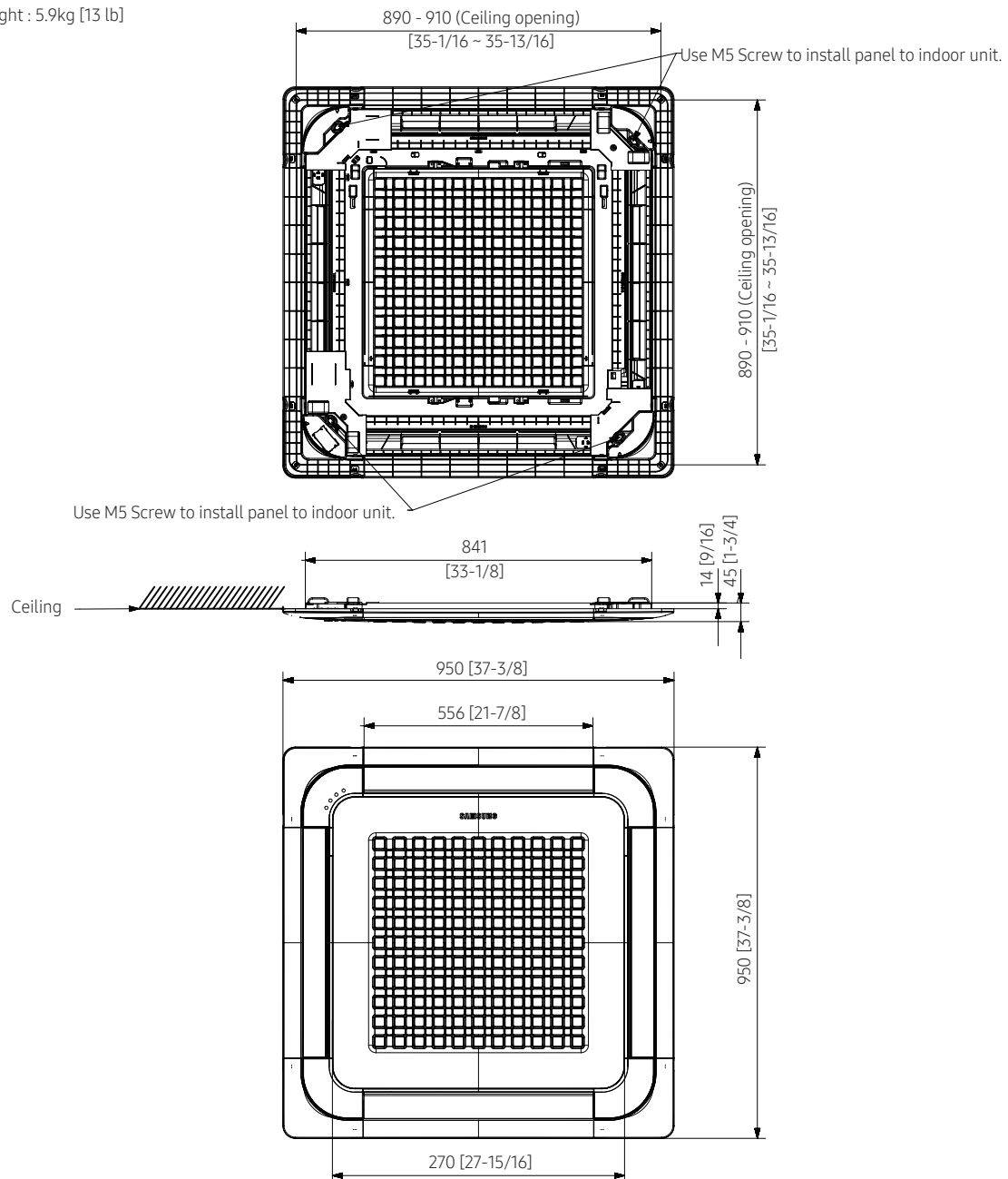
| Sales area   | Parts code | Movemnet  | Grille type | Color        | Protocol | Remarks              |
|--------------|------------|-----------|-------------|--------------|----------|----------------------|
| Korea        | PC4NUSK1   | Normal    | Waffle      | Victory gray |          |                      |
|              | PC4NUSK1N  | Normal    | Waffle      | Victory gray | NASA     |                      |
|              | PC4NUSK5   | Normal    | Stripe      | Victory gray |          |                      |
|              | PC4NUSK5N  | Normal    | Stripe      | Victory gray | NASA     |                      |
|              | PC4NBSK1   | Normal    | Waffle      | Mild Black   |          |                      |
|              | PC4NBSK1N  | Normal    | Waffle      | Mild Black   | NASA     |                      |
|              | PC4NSSK1   | Normal    | Waffle      | Metro Silver |          |                      |
|              | PC4NSSK1N  | Normal    | Waffle      | Metro Silver | NASA     |                      |
|              | PC4NUAK1   | Elevating | Stripe      | Victory gray |          |                      |
|              | PC4NUAK1N  | Elevating | Stripe      | Victory gray | NASA     |                      |
|              | PC4NUSK1S  | Normal    | Waffle      | Victory gray |          | 5 bundles per a pack |
| Europe       | PC4NUSKA   | Normal    | Waffle      | Victory gray |          |                      |
|              | PC4NUSKAN  | Normal    | Waffle      | Victory gray | NASA     |                      |
|              | PC4NUSKE   | Normal    | Stripe      | Victory gray |          |                      |
|              | PC4NUSKEN  | Normal    | Stripe      | Victory gray | NASA     |                      |
|              | PC4NBSKA   | Normal    | Waffle      | Mild Black   |          |                      |
|              | PC4NBSKAN  | Normal    | Waffle      | Mild Black   | NASA     |                      |
| N. America   | PC4NUSKFN  | Normal    | Stripe      | Victory gray | NASA     |                      |
| China        | PC4NUSCA   | Normal    | Waffle      | Victory gray |          |                      |
|              | PC4NUSCE   | Normal    | Stripe      | Victory gray |          |                      |
|              | PC4NUSCAN  | Normal    | Waffle      | Victory gray | NASA     |                      |
|              | PC4NUSCEN  | Normal    | Stripe      | Victory gray | NASA     |                      |
| CIS+S.E Asia | PC4NUSMA   | Normal    | Waffle      | Victory gray |          |                      |
|              | PC4NUSME   | Normal    | Stripe      | Victory gray |          |                      |

# 1.4 4way Cassette Panel

## 1.4.3. Technical drawings

### Dimensional drawings

Units : mm [inches]  
Weight : 5.9kg [13 lb]



## 1.5 360 Cassette Panel

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### 1.5.1 Feature

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#### 360 Cassette

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##### All round cooling and comfort

The Samsung 360 Cassette air conditioner offers a brand new way of staying comfortably cool in every corner of the room. Its innovative circular design not only means it perfectly fits in everywhere, adding a sophisticated look to many different sites, but it also blows cool air in all directions, so that the whole room is the same temperature\*. And its bladeless outlet ensures that cool air is gently dispersed, without creating a cold draft\*\*, and doesn't block the air flow, even at low angles, so it expels 25% more air\* and spreads it farther.

##### EVENLY CIRCULATES & COOLS EVERY CORNER

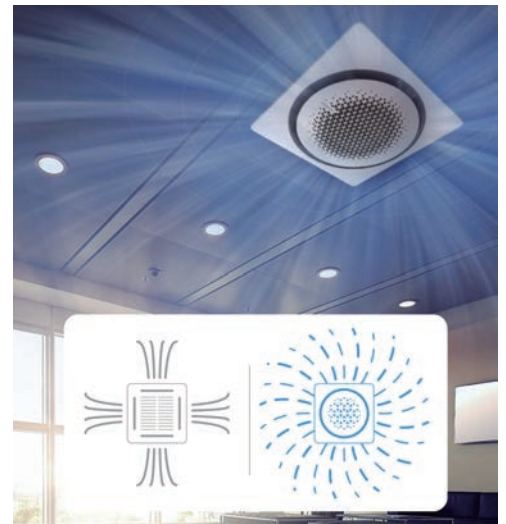
###### Conventional 360 Cassette

Unlike 4-way, cassette type air conditioners that create areas of uneven airflow where cool air can't reach\*, a circular outlet blows cool air in all directions, so every corner of a room is the same temperature\*\*.

\* Samsung testing compared to a general 4 way cassette type air conditioner.

\*\* Within an 9.3m radius the temperature difference is less than 0.6°C.

\* Within an 9.3m radius the temperature difference is less than 0.6°C.



# 1.5 360 Cassette Panel

## 1.5.2. Line-up & Specification

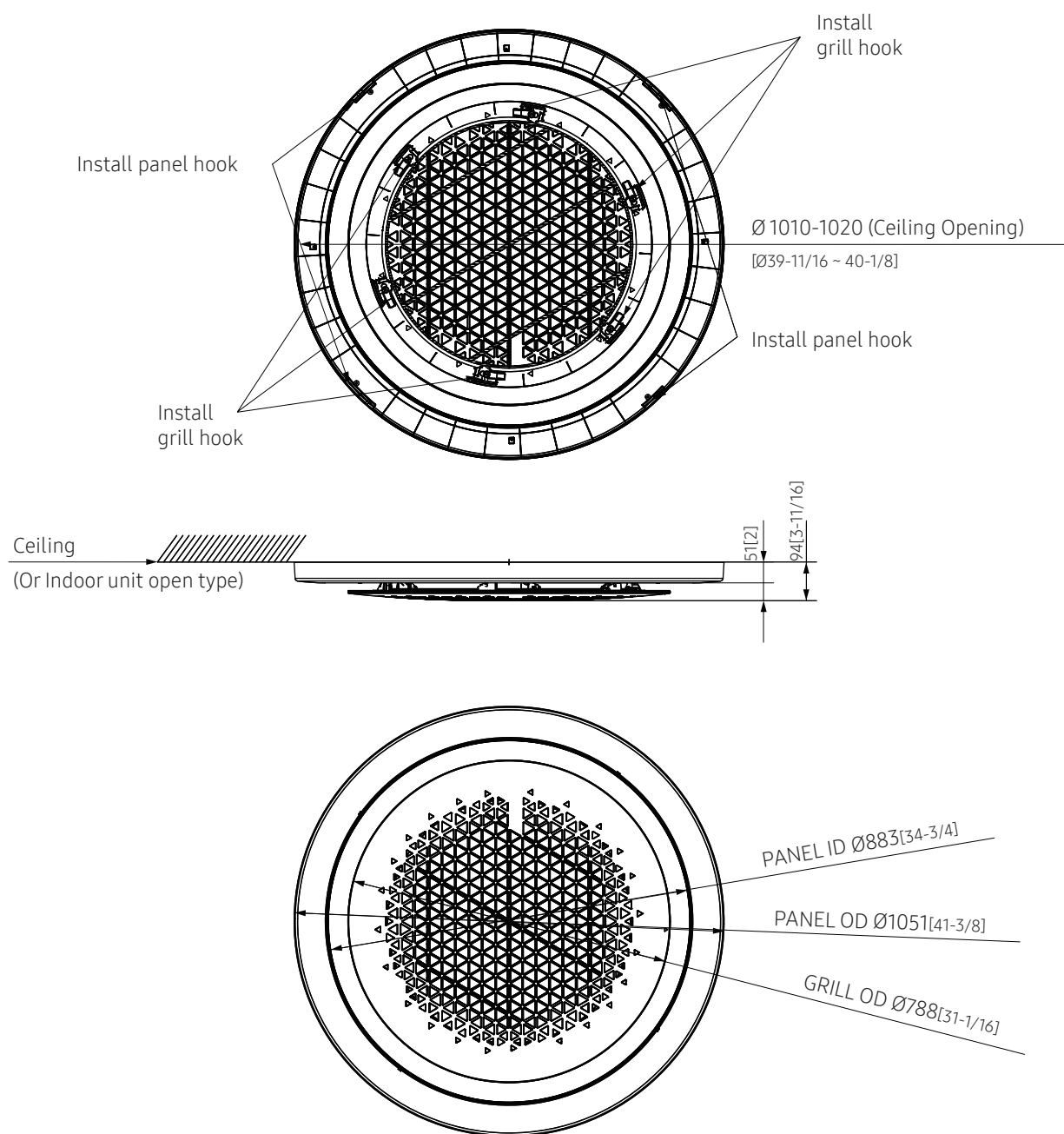
| Type   | Parts Code     | Sales area | Color | Protocol     | Size                                                                                                       | Remark      |
|--------|----------------|------------|-------|--------------|------------------------------------------------------------------------------------------------------------|-------------|
| Circle | PC4NUNK1N      | Korea      | WHITE | New Protocol | Ø1050 x 94 (mm)<br>Ø[3'-5 5/16"] x [3 11/16"] (inch)<br><br>Weight : 2.7kg<br>(5.95lbs)                    |             |
|        | PC4NUNK1NPP    |            | WHITE | New Protocol |                                                                                                            | Procurement |
|        | PC4NBNK1N      |            | BLACK | New Protocol |                                                                                                            |             |
|        | PC4NUNMAN      | GLOBAL     | WHITE | New Protocol |                                                                                                            |             |
|        | PC4NBNMAN      |            | BLACK | New Protocol |                                                                                                            |             |
|        | PC4NUNCAN      | China      | WHITE | New Protocol |                                                                                                            |             |
|        | PNLRNDCASSA01R | America    | WHITE | New Protocol |                                                                                                            |             |
|        | PNLRNDCASSAB1R | Standard   | BLACK | New Protocol |                                                                                                            |             |
| Square | PC4NUDK1N      | Korea      | WHITE | New Protocol | 1000 x 66 x 1000 (mm)<br>[3'-3 3/8"] x [2 5/8"] x<br>[3'-3 3/8"] (inch)<br><br>Weight : 3.6kg<br>(7.94lbs) |             |
|        | PC4NUDK1NPP    |            | WHITE | New Protocol |                                                                                                            | Procurement |
|        | PC4NBDK1N      |            | BLACK | New Protocol |                                                                                                            |             |
|        | PC4NUDMAN      | GLOBAL     | WHITE | New Protocol |                                                                                                            |             |
|        | PC4NBDMAN      |            | BLACK | New Protocol |                                                                                                            |             |
|        | PC4NUDCAN      | China      | BLACK | New Protocol |                                                                                                            |             |
|        | PNLRNDCASSA01S | America    | WHITE | New Protocol |                                                                                                            |             |
|        | PNLRNDCASSAB1S | Standard   | BLACK | New Protocol |                                                                                                            |             |

## 1.5 360 Cassette Panel

### 1.5.3. Technical drawings

#### Dimensional drawings

Unit : mm [inches]  
Weight : 2.7kg [5.95lb]



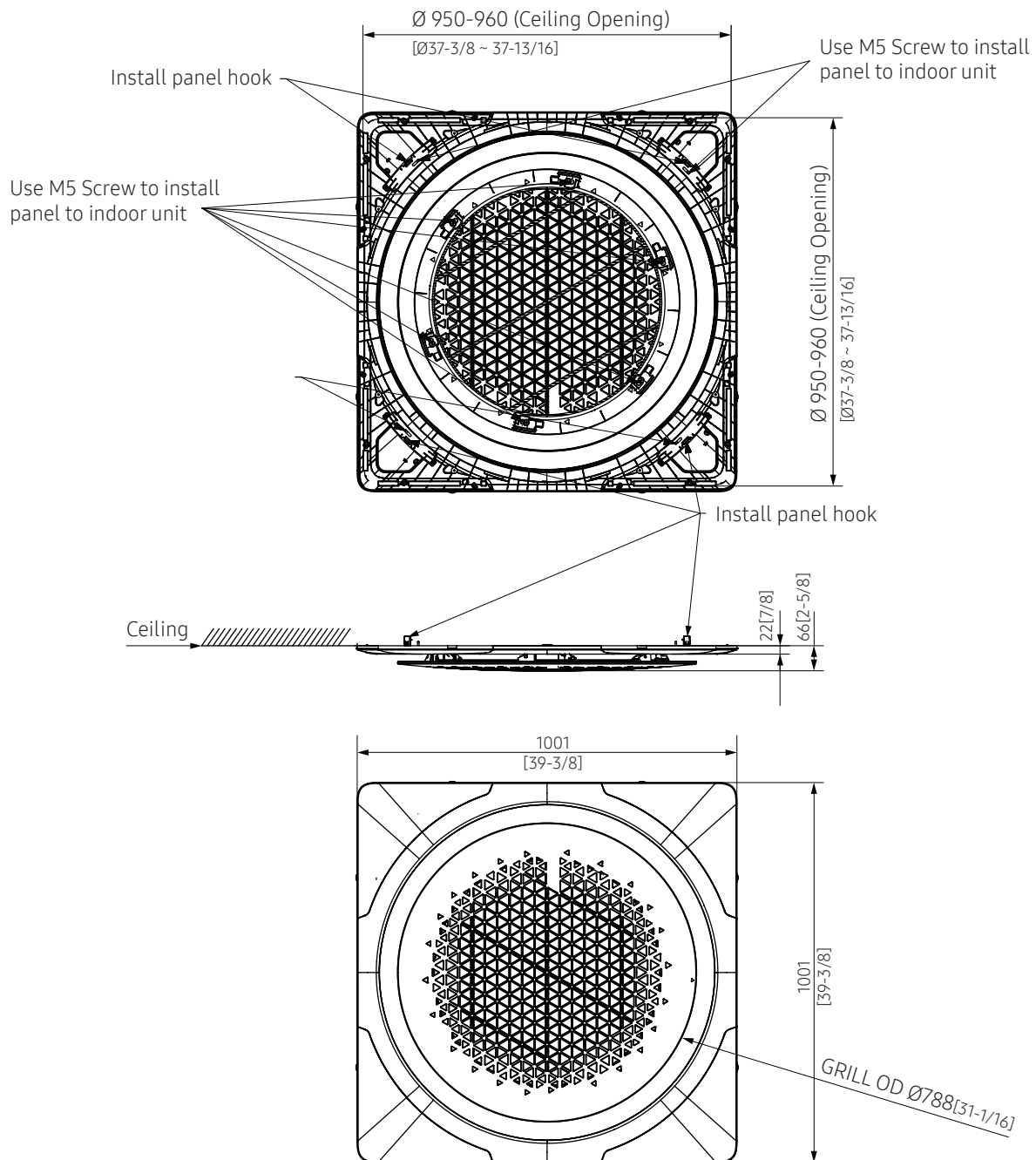


# 1.5 360 Cassette Panel

## 1.5.3. Technical drawings

### Dimensional drawings

Unit : mm [inches]  
Weight : 3.6kg [7.94lb]



## 2. Drain Pumps

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### 2.1 Feature

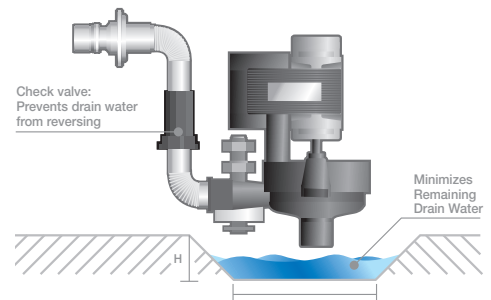
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#### Drain Pump for Indoor Unit

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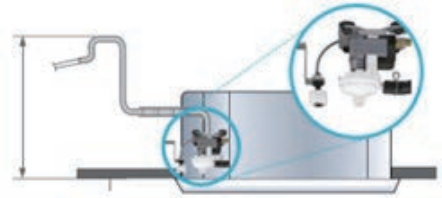
##### Drip-free operation

The check valve on the drain pump prevents drained water from flowing backward into the drain pan. This minimizes the drain pan's water level, eliminating the worry and hassle of water stagnation or overflowing drain water dripping into the interior.



##### Simple, smart drainage structure

With 750 mm of discharge head, users can install the drain themselves, saving them time and costs.



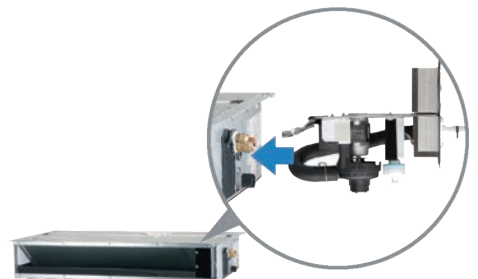
##### Advanced drain hose

Samsung's Cassette type system air conditioner uses an advanced drain hose, which is recognized in Europe for its easy installation and leak prevention.



##### Simple drain pump installation

The new drain pump in the Slim Duct unit can be installed from the side by simply removing the right side panel. Users no longer need to disassemble the top cover to install, check or repair the drain pump for maximum convenience.



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## 2.1 Feature

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### Plug-and-connect drainage

The optional Plug and Connect External Type drain pump takes the hassle out of draining the unit. Simply plug it in and connect it, and with the single drain pump, maintaining all the building's Duct S units is easier than ever.



## 2.2. Line-up

| Model         | Application Product | Mounting Type | Remark |
|---------------|---------------------|---------------|--------|
| ADP-M075SGC   | MA-0,1              | Internal Type |        |
| ADP-M075SGC1  | MA-2                | Internal Type |        |
| MDP-M075SGK1  | MA-0,1              | Internal Type |        |
| MDP-M075SGK2  | MA-2                | Internal Type |        |
| MDP-M075SGU1  | MA-0,1              | Internal Type |        |
| MDP-M075SGU2  | MA-2                | Internal Type |        |
| MDP-M075SGU3  | MA-S                | Internal Type |        |
| ADP-M075SEC0  | MA-S                | Internal Type |        |
| ADP-N047SNK1  | HSP(MA2)            | Internal Type |        |
| MDP-N047SNC1  | HSP(MA2)            | Internal Type |        |
| MDP-E075SEC3  | SLIM1,2,3           | Internal Type |        |
| MDP-E075SEE3  | SLIM1,2,3           | Internal Type |        |
| ADP-E075SEK3  | SLIM1,2,3           | Internal Type |        |
| MDP-E075SEC4A | SLIM DUCT HOME      | Internal Type |        |
| MDP-N047SNC1D | BIG DUCT            | Internal Type |        |
| MDP-M075SGU2D | MA2 DUCT            | Internal Type |        |
| MDP-M075SGU1D | MA1 DUCT            | Internal Type |        |
| MDP-M075SGU3D | MAS DUCT            | Internal Type |        |
| MDP-E075SEE3D | SLIM DUCT           | Internal Type |        |
| ADP-N047SNK1D | BIG DUCT            | Internal Type |        |
| MDP-M075SGK2D | MA2 DUCT            | Internal Type |        |
| MDP-M075SGK1D | MA1 DUCT            | Internal Type |        |
| ADP-E075SEK3D | SLIM DUCT           | Internal Type |        |
| MDP-G075SP    | GLOBAL DUCT         | External Type |        |
| MDP-G075SQ    | GLOBAL DUCT         | Internal Type |        |

## 2. Drain Pumps

### 2.3. Spec Sheet

| Model                         |                          | ADP-M075SGC                                                  | ADP-M075SGC1                                                 | MDP-M075SGK1                                                 | MDP-M075SGK2                                                 | MDP-M075SGU1                                                 |
|-------------------------------|--------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Rated Voltage                 | V, Hz                    | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         | DC 12V                                                       | AC220~240V – 50/60Hz                                         |
| Current                       | mA                       | 114/92 mA                                                    | 114/92 mA                                                    | 114/92 mA                                                    | Less than 400mA                                              | 114/92 mA                                                    |
|                               |                          | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (1200mm Head)<br>Max. empty operating                        | (AC230V-50/60)Max.<br>(on Drain)                             |
| Input                         | W                        | 12/10.8                                                      | 12/10.8                                                      | 12/10.8                                                      | Less than 4.0W                                               | 12/10.8                                                      |
|                               |                          | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (1200mm Head)<br>Max. empty operating                        | (AC230V-50/60)Max.<br>(on Drain)                             |
| Insulation Class              | -                        | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    |
| Fluide Temperature            | °C                       | 0~40°C (32~104°F)                                            | 0~40°C (32~104°F)                                            | 0~40°C (32~104°F)                                            | 0~45°C (32~113°F)                                            | 0~40°C (32~104°F)                                            |
|                               |                          | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        |
| Operating Ambient Temperature | °C                       | -10~45°C (14~113°F)                                          | -10~45°C (14~113°F)                                          | -10~45°C (14~113°F)                                          | 0~45°C (32~113°F)                                            | -10~45°C (14~113°F)                                          |
| Discharge Fluid Volume        | cm <sup>3</sup> / min(1) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) |
| Noise                         | dB(A)(2)                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 |

| Model                         |                          | MDP-M075SGU2                                                 | MDP-M075SGU3                                                 | ADP-M075SEC0                                                 | ADP-N047SNK1                                                 | MDP-N047SNC1                                                 |
|-------------------------------|--------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Rated Voltage                 | V, Hz                    | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         |
| Current                       | mA                       | 114/92 mA                                                    | 114/92 mA                                                    | 114/92 mA                                                    | 114/92 mA                                                    | 114/92 mA                                                    |
|                               |                          | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             |
| Input                         | W                        | 12/10.8                                                      | 12/10.8                                                      | 12/10.8                                                      | 12/10.8                                                      | 12/10.8                                                      |
|                               |                          | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             |
| Insulation Class              | -                        | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    |
| Fluide Temperature            | °C                       | 0~40°C (32~104°F)                                            | 0~40°C (32~104°F)                                            | 0~40°C (32~104°F)                                            | 0~40°C (32~104°F)                                            | 0~40°C (32~104°F)                                            |
|                               |                          | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        |
| Operating Ambient Temperature | °C                       | -10~45 °C (14~113°F)                                         | -10~45 °C (14~113°F)                                         | -10~45 °C (14~113°F)                                         | -10~45 °C (14~113°F)                                         | -10~45 °C (14~113°F)                                         |
| Discharge Fluid Volume        | cm <sup>3</sup> / min(1) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) |
| Noise                         | dB(A)(2)                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 |

| Model                         |                          | MDP-E075SEC3                                                 | MDP-E075SEE3                                                 | ADP-E075SEK3                                                 | MDP-E075SEC4A                                                | MDP-N047SNC1D                                                |
|-------------------------------|--------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Rated Voltage                 | V, Hz                    | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         | AC220~240V – 50/60Hz                                         | DC 12V                                                       |
| Current                       | mA                       | 114/92 mA                                                    | 114/92 mA                                                    | 114/92 mA                                                    | 114/92 mA                                                    | Less than 400mA                                              |
|                               |                          | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (1200mm Head)<br>Max. empty operating                        |
| Input                         | W                        | 12/10.8                                                      | 12/10.8                                                      | 12/10.8                                                      | 12/10.8                                                      | Less than 4.0W                                               |
|                               |                          | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (AC230V-50/60)Max.<br>(on Drain)                             | (1200mm Head)<br>Max. empty operating                        |
| Insulation Class              | -                        | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    |
| Fluide Temperature            | °C                       | 0~40 °C (32~104°F)                                           | 0~40 °C (32~104°F)                                           | 0~40 °C (32~104°F)                                           | 0~40 °C (32~104°F)                                           | 0~45 °C (32~113°F)                                           |
|                               |                          | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        |
| Operating Ambient Temperature | °C                       | -10~45 °C (14~113°F)                                         | -10~45 °C (14~113°F)                                         | -10~45 °C (14~113°F)                                         | -10~45 °C (14~113°F)                                         | 0~45 °C (32~113°F)                                           |
| Discharge Fluid Volume        | cm <sup>3</sup> / min(1) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) |
| Noise                         | dB(A)(2)                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 |

- 1 Discharge fluid volume : 1200mm lift 10mm water level rated voltage
- 2 Noise : AC Motor - 1meter distance from drive motor head empty operating, 1200mm lift 10mm water level rated voltage  
DC Motor - 1meter distance from drive motor head ( 300mm Head, 5mm water level, rated voltage

## 2. Drain Pumps

### 2.3. Spec Sheet

| Model                         |                          | MDP-M075SGU2D                                                | MDP-M075SGU1D                                                | MDP-M075SGU3D                                                | MDP-E075SEE3D                                                | ADP-N047SNK1D                                                |
|-------------------------------|--------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Rated Voltage                 | V, Hz                    | DC 12V                                                       | DC 12V                                                       | DC 12V                                                       | DC 12V                                                       | DC 12V                                                       |
| Current                       | mA                       | Less than 400mA                                              | Less than 400mA                                              | Less than 400mA                                              | Less than 400mA                                              | Less than 400mA                                              |
|                               |                          | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        |
| Input                         | W                        | Less than 4.0W                                               | Less than 4.0W                                               | Less than 4.0W                                               | Less than 4.0W                                               | Less than 4.0W                                               |
|                               |                          | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        |
| Insulation Class              | -                        | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    |
| Fluide Temperature            | °C                       | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           |
|                               |                          | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        |
| Operating Ambient Temperature | °C                       | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           |
| Discharge Fluid Volume        | cm <sup>3</sup> / min(1) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) |
| Noise                         | dB(A)(2)                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 |

| Model                         |                          | MDP-M075SGK2D                                                | MDP-M075SGK1D                                                | ADP-E075SEK3D                                                | MDP-G075SP                                                   | MDP-G075SQ                                                   |
|-------------------------------|--------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------|
| Rated Voltage                 | V, Hz                    | DC 12V                                                       | DC 12V                                                       | DC 12V                                                       | DC 12V                                                       | DC 12V                                                       |
| Current                       | mA                       | Less than 400mA                                              | Less than 400mA                                              | Less than 400mA                                              | Less than 400mA                                              | Less than 400mA                                              |
|                               |                          | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        |
| Input                         | W                        | Less than 4.0W                                               | Less than 4.0W                                               | Less than 4.0W                                               | Less than 4.0W                                               | Less than 4.0W                                               |
|                               |                          | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        | (1200mm Head)<br>Max. empty operating                        |
| Insulation Class              | -                        | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    | Class "E"                                                    |
| Fluide Temperature            | °C                       | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           |
|                               |                          | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        | (But no frozen water)                                        |
| Operating Ambient Temperature | °C                       | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           | 0~45 °C (32~113°F)                                           |
| Discharge Fluid Volume        | cm <sup>3</sup> / min(1) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) | Min. 400cm <sup>3</sup> /min<br>(0.0142ft <sup>3</sup> /min) |
| Noise                         | dB(A)(2)                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 | Max. 40dB(A)                                                 |

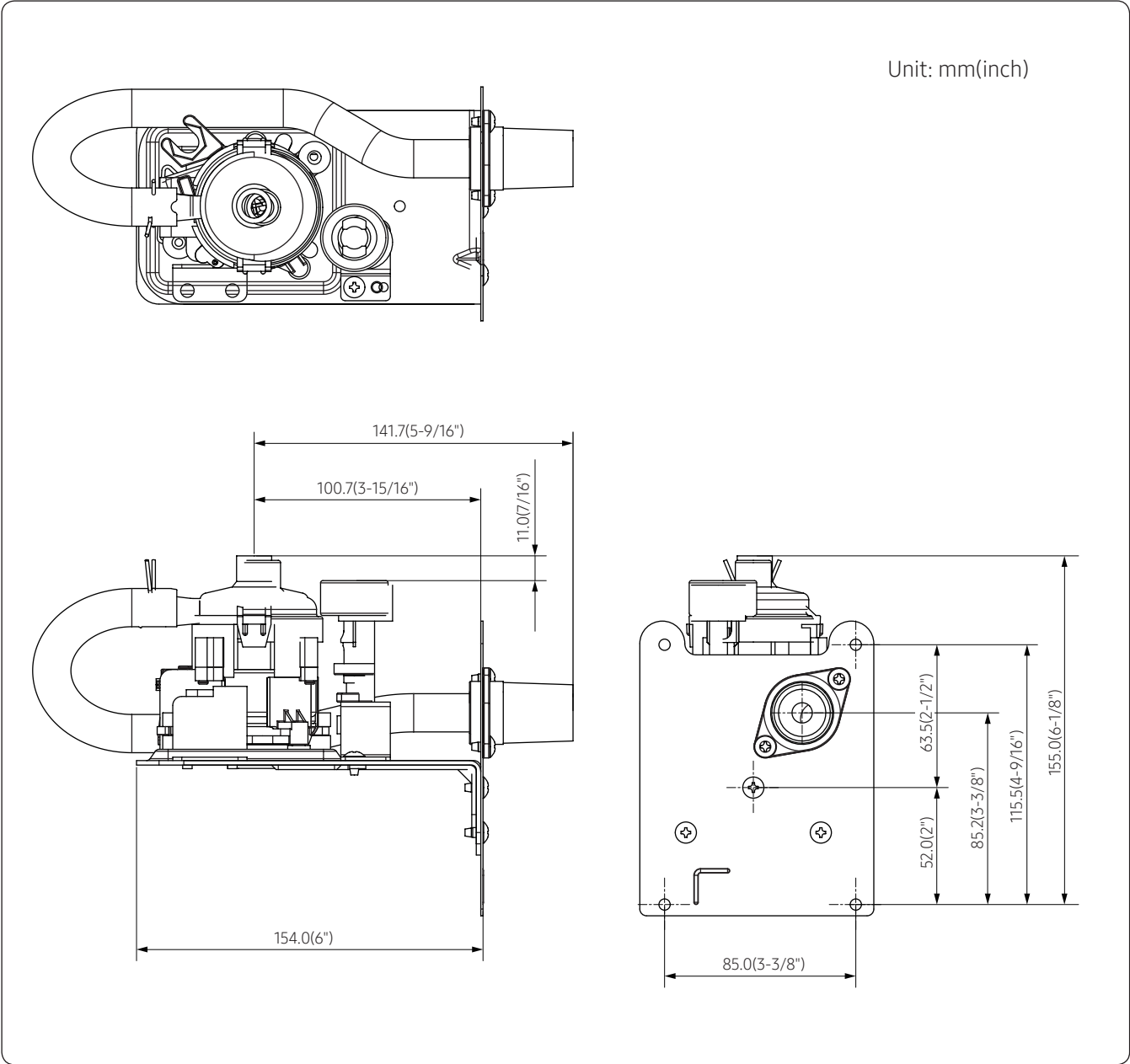
- 1 Discharge fluid volume : 1200mm lift 10mm water level rated voltage
- 2 Noise : AC Motor - 1meter distance from drive motor head empty operating, 1200mm lift 10mm water level rated voltage  
DC Motor - 1meter distance from drive motor head ( 300mm Head, 5mm water level, rated voltage)

# 2. Drain Pumps

## 2.4. Technical drawings

### Dimensional drawings

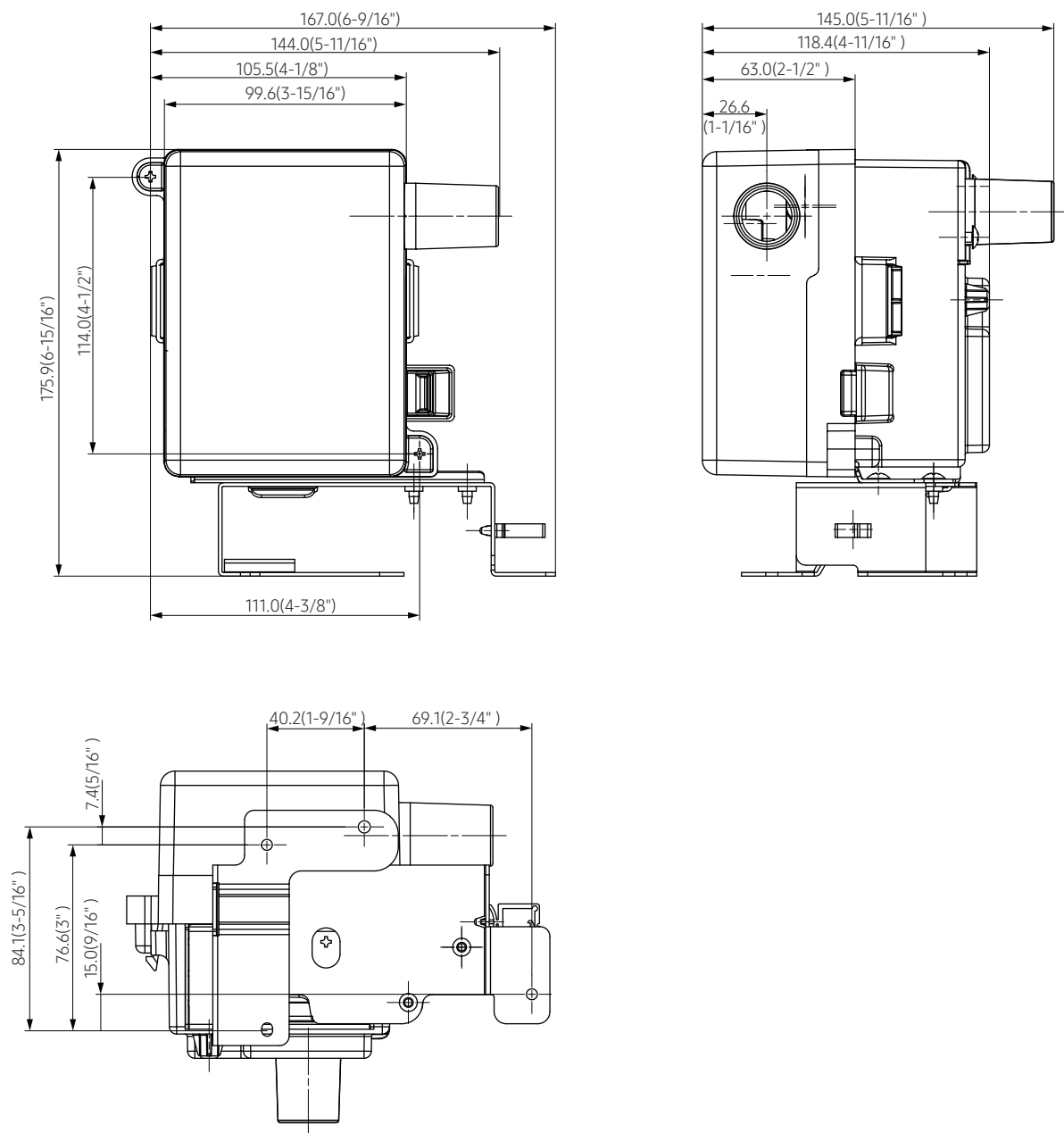
MDP-E075SEE3



## 2. Drain Pumps

### MDP-G075SP

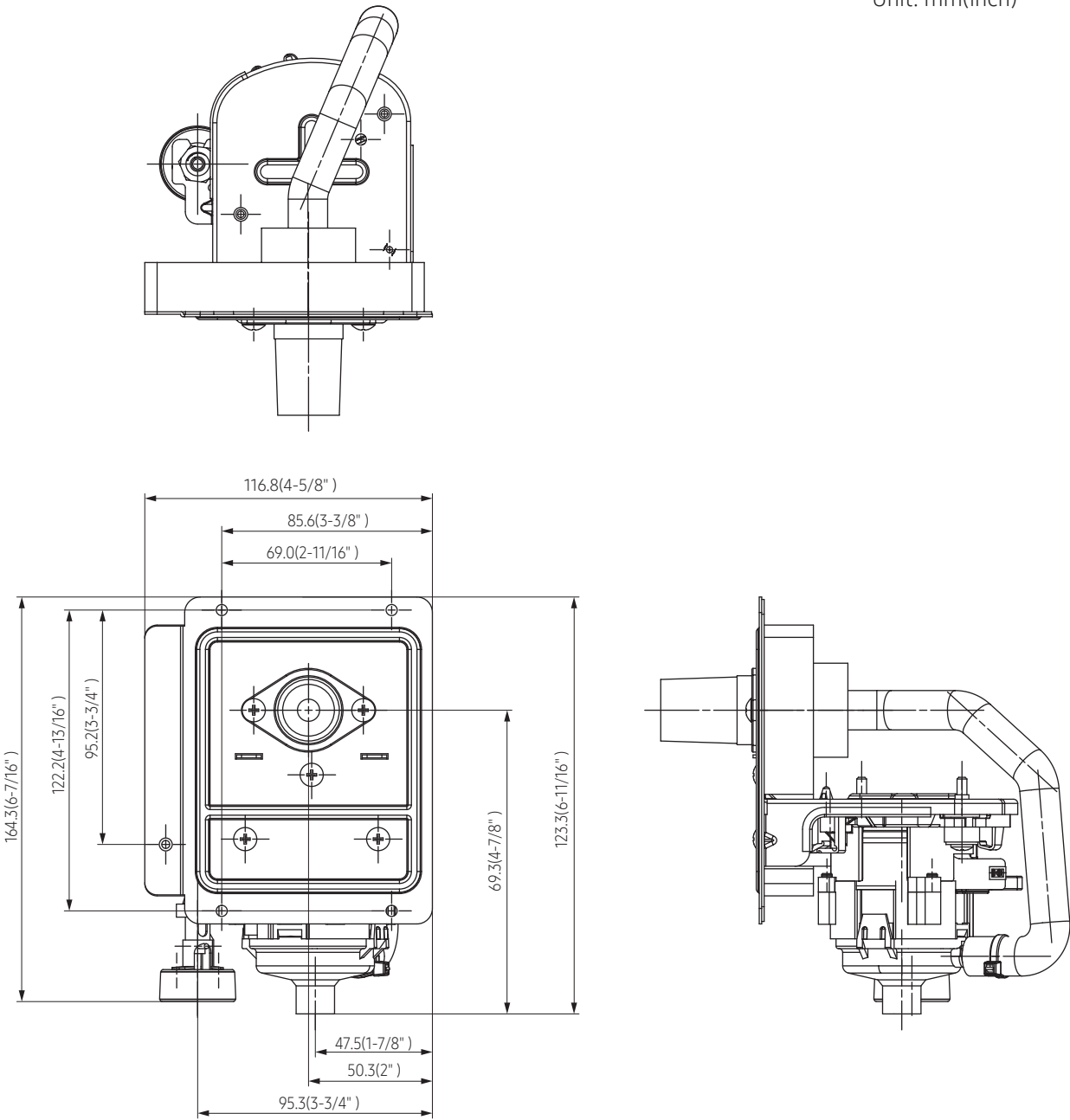
Unit: mm(inch)



# 2. Drain Pumps

MDP-G075SQ

Unit: mm(inch)

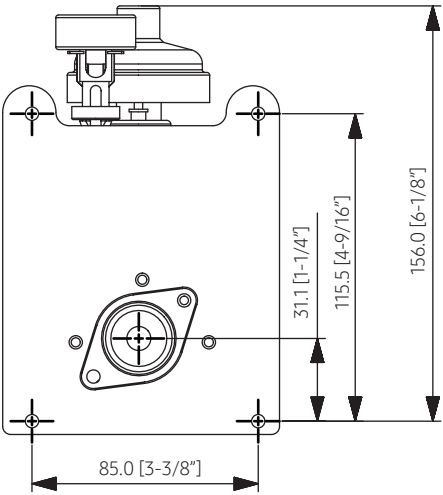
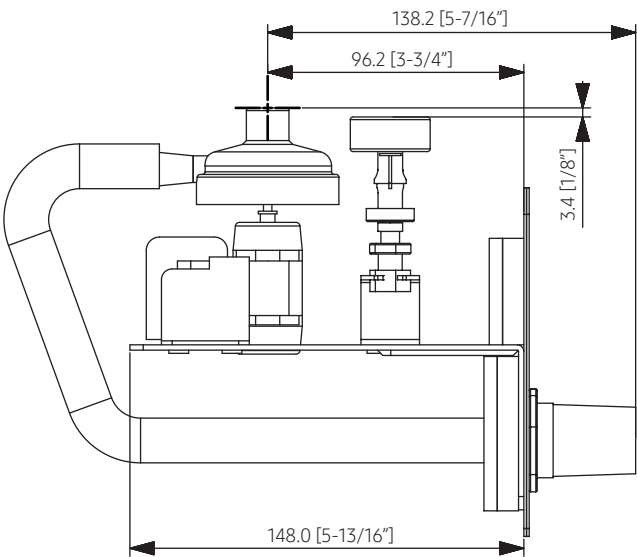
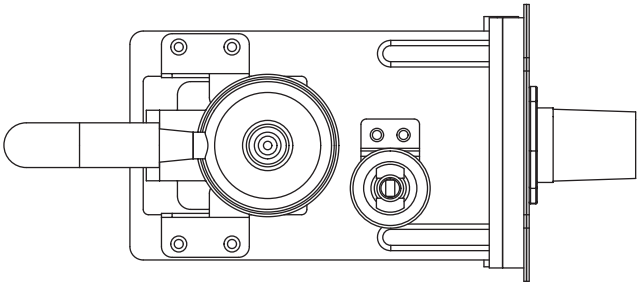




# 2. Drain Pumps

MDP-E075SEC4A

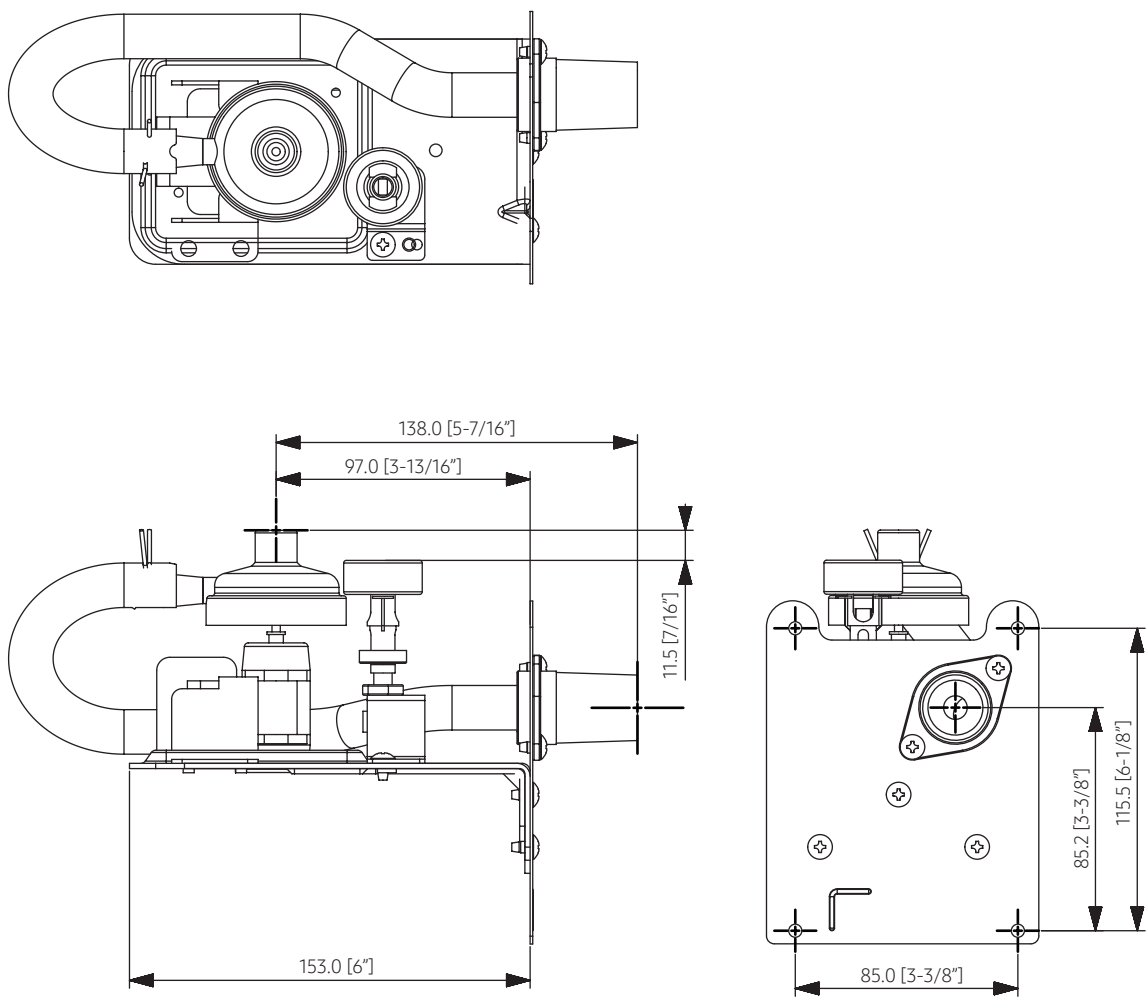
Unit: mm(inch)



# 2. Drain Pumps

MDP-E075SEE3 (MDP-E075SEE3, MDP-E075SEC3, MDP-E075SEK3)

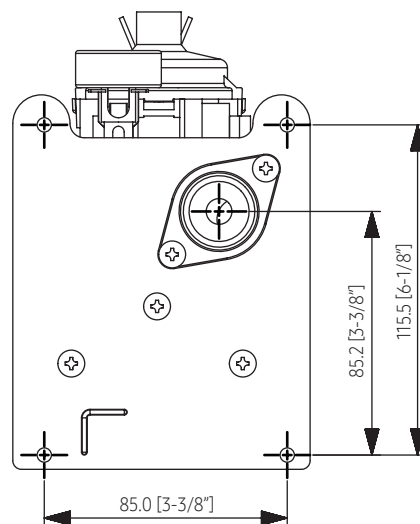
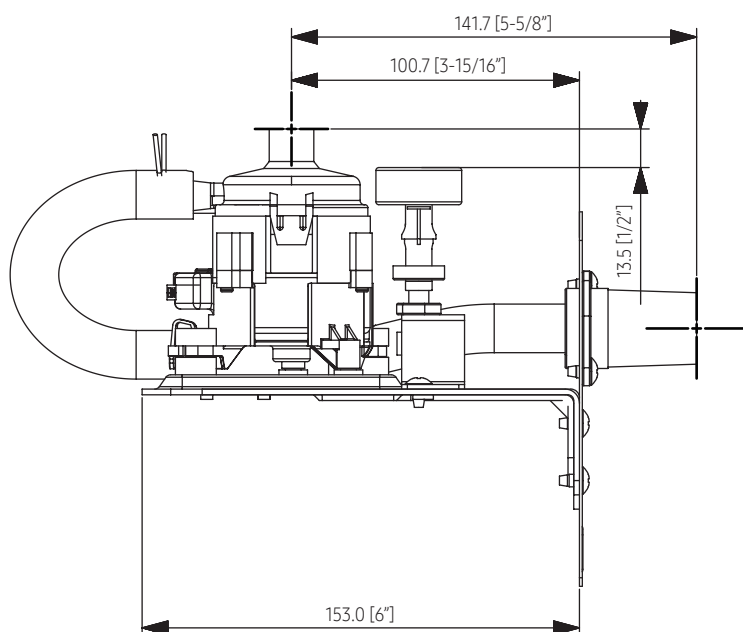
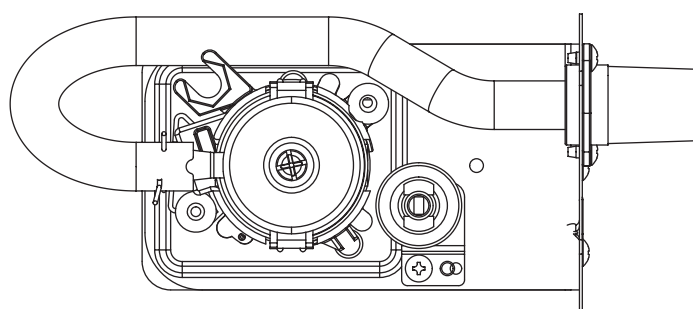
Unit: mm(inch)



## 2. Drain Pumps

MDP-E075SEE3D (MDP-E075SEE3D, MDP-E075SEK3D)

Unit: mm(inch)

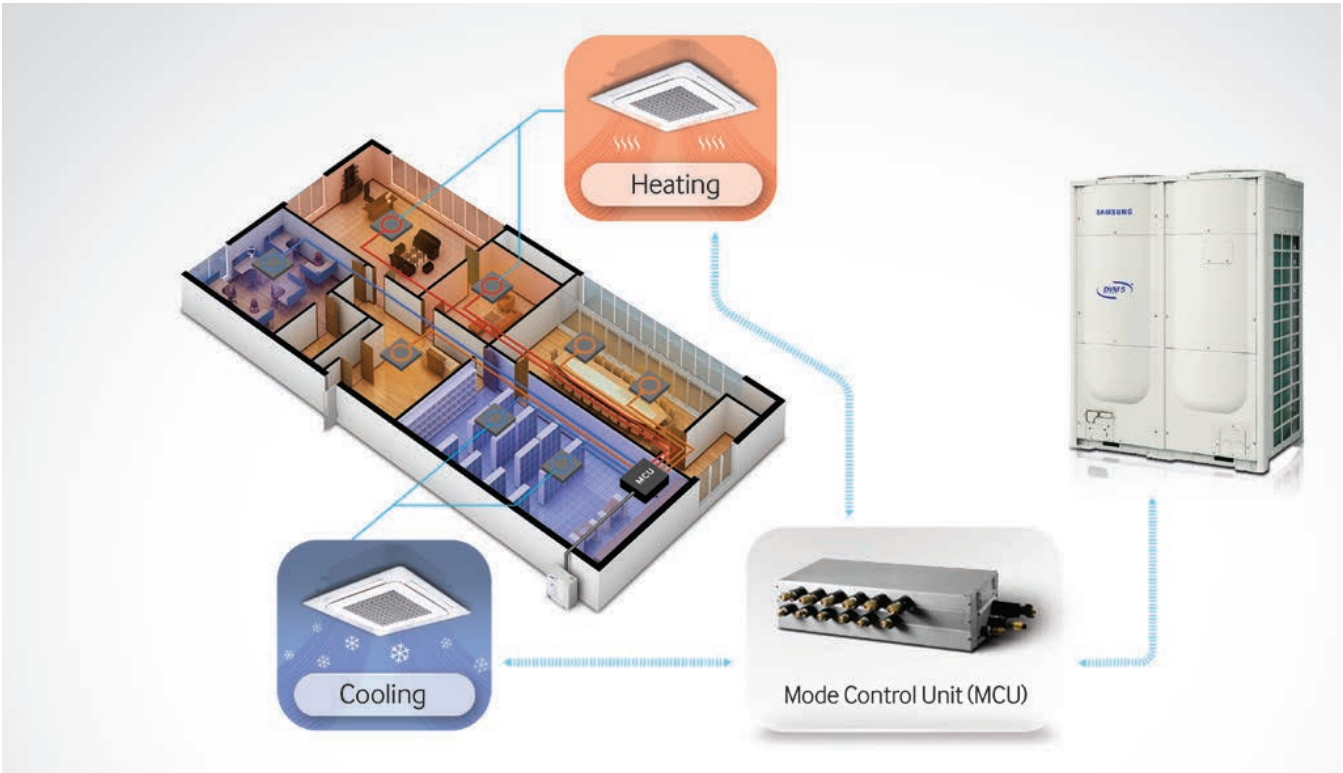


### 3. MCU (Mode Control Unit)

#### 3.1 Feature

##### Fine-tuned control

DVM S HR uses a Mode Change Unit (MCU) kit that is less than 32 percent the size of competitors' products. The MCU has an internal on/off valve that enables fine-tuned control via an electronic expansion valve (EEV) and sub-cooler. Improved performance and reduced noise create a pleasant temperature-controlled environment.



Before installing MCU, refer to the compatible table below and find the model before installation.

| Outdoor Unit |   | MCU                                                                                                                  |   | Indoor Unit |
|--------------|---|----------------------------------------------------------------------------------------------------------------------|---|-------------|
| AMXXXXXXXX   | ↔ | MCU-S6NEE1N<br>MCU-S4NEE1N<br>MCU-S4NEE2N<br>MCU-S2NEK1N<br>MCU-S6NEK2N<br>MCU-S4NEK3N<br>MCU-S2NEK2N<br>MCU-S1NEK1N | ↔ | AMXXXXNXXXX |

# 3. MCU (Mode Control Unit)

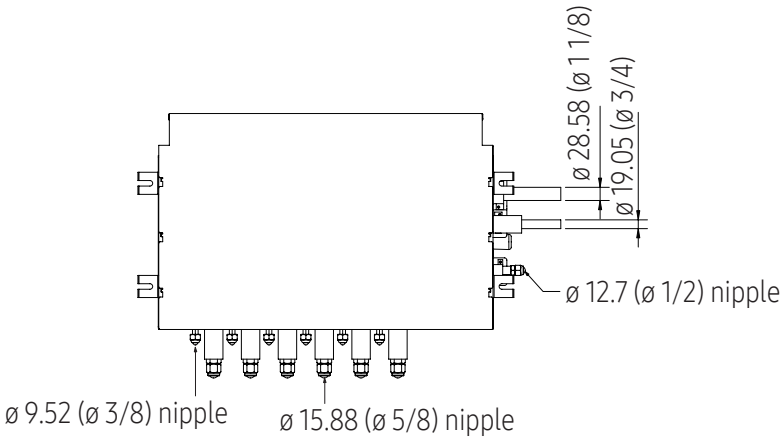
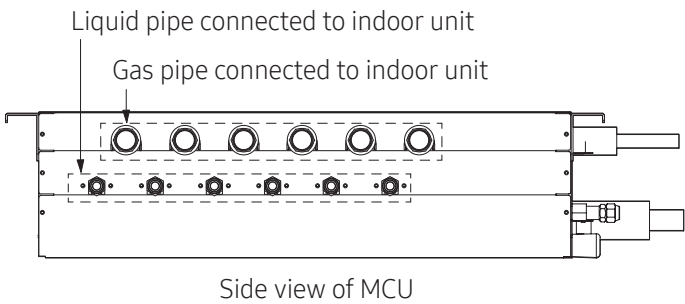
## 3.2. MCU indoor/outdoor unit compatible table

Before installing MCU, refer to the compatible table below and find the model before installation.

| Outdoor Unit |   | MCU                                                      |   | Indoor Unit |
|--------------|---|----------------------------------------------------------|---|-------------|
| AM*****      | ↔ | MCU-S6NEE1N<br>MCU-S4NEE1N<br>MCU-S4NEE2N<br>MCU-S2NEK1N | ↔ | AM*****     |

| Product | Model       | Product size                                             | Remark |
|---------|-------------|----------------------------------------------------------|--------|
| MCU kit | MCU-S6NEE1N | Below 6 indoor units, below 56 kW (192MBH)               |        |
|         | MCU-S4NEE1N | Below 4 indoor units, below 56 kW (192MBH)               |        |
|         | MCU-S4NEE2N | Below 2 large capacity indoor unit, below 56 kW (192MBH) |        |
|         | MCU-S2NEK1N | Below 2 indoor units, below 28 kW (96MBH)                |        |

Unit: mm(inch)



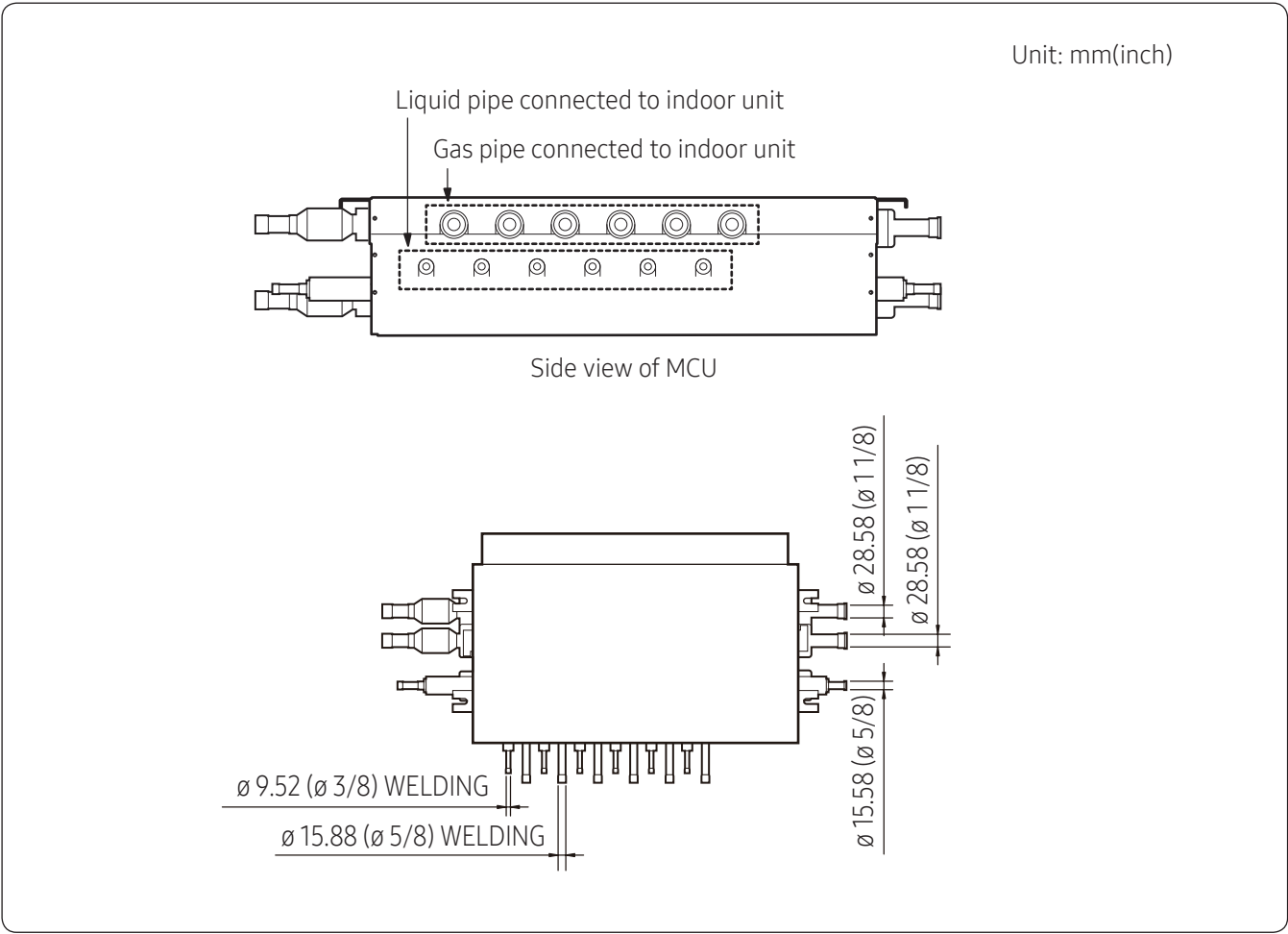
### 3. MCU (Mode Control Unit)

#### 3.2. MCU indoor/outdoor unit compatible table

Before installing MCU, refer to the compatible table below and find the model before installation.

| Outdoor Unit  |   | MCU                                                      |   | Indoor Unit   |
|---------------|---|----------------------------------------------------------|---|---------------|
| AM*****X***** | ↔ | MCU-S6NEK2N<br>MCU-S4NEK3N<br>MCU-S2NEK2N<br>MCU-S1NEK1N | ↔ | AM*****N***** |

| Product | Model       | Description            |
|---------|-------------|------------------------|
| MCU kit | MCU-S6NEK2N | Below 61.6 kW (216MBH) |
|         | MCU-S4NEK3N | Below 61.6 kW (216MBH) |
|         | MCU-S2NEK2N | Below 32 kW (108MBH)   |
|         | MCU-S1NEK1N | Below 16 kW (54MBH)    |



## 3. MCU (Mode Control Unit)

### 3.3. Spec Sheet

| Type                                         |                                                                            |               | MCU                              |                                                      |                   |                                   |                                  |
|----------------------------------------------|----------------------------------------------------------------------------|---------------|----------------------------------|------------------------------------------------------|-------------------|-----------------------------------|----------------------------------|
| Model                                        |                                                                            |               | MCU-S6NEE1N                      | MCU-S4NEE1N                                          | MCU-S4NEE2N       | MCU-S2NEK1N                       |                                  |
| Maximum number of connectable indoor units   |                                                                            | EA            | 6                                | 4                                                    | 2                 | 2                                 |                                  |
| Maximum capacity of connectable indoor units |                                                                            | KW            | 56                               | 56                                                   | 56                | 28                                |                                  |
|                                              |                                                                            | MBH           | 192                              | 192                                                  | 192               | 96                                |                                  |
| Power Supply                                 |                                                                            | Ø, #, V, Hz   | 1/2/220-240/50                   |                                                      |                   |                                   |                                  |
|                                              |                                                                            |               | 1/2/208-230/60                   |                                                      |                   |                                   |                                  |
| Mode                                         |                                                                            | -             | heat Recovery                    |                                                      |                   |                                   |                                  |
| Power                                        | Power Input (Nominal)                                                      | Cooling       | W                                | 55                                                   | 55                | 55                                | 55                               |
|                                              |                                                                            | Heating       |                                  | 55                                                   | 55                | 55                                | 55                               |
|                                              | Current Input (Nominal)                                                    | Cooling       | A                                | 0.5                                                  | 0.5               | 0.5                               | 0.5                              |
|                                              |                                                                            | Heating       |                                  | 0.5                                                  | 0.5               | 0.5                               | 0.5                              |
|                                              | MCA                                                                        |               | A                                | 0.63                                                 | 0.63              | 0.63                              | 0.63                             |
|                                              | MFA(MOP)                                                                   |               | A                                | 15                                                   | 15                | 15                                | 15                               |
| Field Wiring                                 | Power Source Wire                                                          |               | mm2                              | 2.5                                                  | 2.5               | 2.5                               | 2.5                              |
|                                              | Transmission Cable                                                         |               | mm2                              | Min 0.75                                             | Min 0.75          | Min 0.75                          | Min 0.75                         |
| Sound level                                  | Sound pressure                                                             |               | dB(A)                            | 34                                                   | 34                | 34                                | 34                               |
| Piping Connections                           | Outdoor unit                                                               | Liquid Pipe   | Ø, mm                            | 12.7                                                 | 12.7              | 12.7                              | 12.7                             |
|                                              |                                                                            |               | Ø, inch                          | 1/2                                                  | 1/2               | 1/2                               | 1/2                              |
|                                              |                                                                            | Gas Pipe      | Ø, mm                            | 28.58                                                | 28.58             | 28.58                             | 28.58                            |
|                                              |                                                                            |               | Ø, inch                          | 1 1/8                                                | 1 1/8             | 1 1/8                             | 1 1/8                            |
|                                              |                                                                            | Discharge gas | Ø, mm                            | 19.05                                                | 19.05             | 19.05                             | 19.05                            |
|                                              |                                                                            |               | Ø, inch                          | 3/4                                                  | 3/4               | 3/4                               | 3/4                              |
|                                              | Indoor unit                                                                | Liquid Pipe   | Ø, mm                            | 9.52                                                 | 9.52              | 9.52                              | 9.52                             |
|                                              |                                                                            |               | Ø, inch                          | 3/8                                                  | 3/8               | 3/8                               | 3/8                              |
|                                              |                                                                            | Gas Pipe      | Ø, mm                            | 15.88                                                | 15.88             | 19.05                             | 19.05                            |
|                                              |                                                                            |               | Ø, inch                          | 5/8                                                  | 5/8               | 3/4                               | 3/4                              |
| External Dimension                           | Net Weight                                                                 |               | kg (lbs)                         | 27 (59.5)                                            | 24 (52.9)         | 24 (52.9)                         | 21 (46.3)                        |
|                                              | Shipping Weight                                                            |               | kg (lbs)                         | 33.5 (73.9)                                          | 29 (63.9)         | 29 (63.9)                         | 25 (55.1)                        |
|                                              | Net Dimensions (WxHxD)                                                     |               | mm                               | 728 x 469 x 199 [2'-4 3/4"] x [1'-6 1/2"] x [7 3/4"] |                   |                                   |                                  |
|                                              | Shipping Dimensions (WxHxD)                                                |               | mm                               | 973 x 250 x 631 [3'-2 1/4"] x [9 3/4"] x [2'-0 3/4"] |                   |                                   |                                  |
| Operation Limit                              | Cooling                                                                    |               | °C (°F)                          | -15~48 (5~118.4)                                     | -15~48 (5~118.4)  | -15~48 (5~118.4)                  | -15~48 (5~118.4)                 |
|                                              | Heating                                                                    |               | °C (°F)                          | -25~24 (-13~75.2)                                    | -25~24 (-13~75.2) | -25~24 (-13~75.2)                 | -25~24 (-13~75.2)                |
| Installation                                 | Indoor unit's Capacity                                                     |               | 1 port: Below 10kW (30MBH)       |                                                      |                   | 2 ports: 11.2 ~ 28kW (36 ~ 96MBH) | 1 port: Below 14kW (48MBH)       |
|                                              |                                                                            |               | 2 port: 11.2 ~ 14kW (36 ~ 48MBH) |                                                      |                   |                                   | 2 port: 14 ~ 28kW (48 ~ 96MBH)   |
|                                              | -15 °C operation                                                           |               | 1 port: Below 5kW (18MBH)        |                                                      |                   |                                   | * 1 port: Below 5kW (18MBH)      |
|                                              |                                                                            |               | 2 ports: 5 ~ 14kW (18 ~ 48MBH)   |                                                      |                   |                                   | * 2 ports: 5 ~ 28kW (18 ~ 96MBH) |
|                                              | * The outdoor unit's PCB should be set for -15 °C (5°F) cooling operation. |               |                                  |                                                      |                   |                                   |                                  |
|                                              | * When joining two ports in the MCU, use Y-connector(liquid, gas) offered. |               |                                  |                                                      |                   |                                   |                                  |
|                                              | * 2 ports MCU don't have Y-joint.                                          |               |                                  |                                                      |                   |                                   |                                  |

## 3. MCU (Mode Control Unit)

### 3.3. Spec Sheet

| Type                                                    |                                                                         |               | MCU (GLOBAL)                               |                                                     |                                                          |                               |                               |
|---------------------------------------------------------|-------------------------------------------------------------------------|---------------|--------------------------------------------|-----------------------------------------------------|----------------------------------------------------------|-------------------------------|-------------------------------|
| Model Name                                              |                                                                         |               | MCU-S1NEK1N                                | MCU-S2NEK2N                                         | MCU-S4NEK3N                                              | MCU-S6NEK2N                   |                               |
| Power Supply                                            |                                                                         | Φ, #, V, Hz   | 1 / 2 / 220~240 / 50, 1 / 2 / 208~230 / 60 |                                                     |                                                          |                               |                               |
| Mode                                                    |                                                                         | -             | Heat Recovery                              | Heat Recovery                                       | Heat Recovery                                            | Heat Recovery                 |                               |
| Power                                                   | Power Input (Nominal)                                                   | Cooling       | W                                          | 19.0                                                | 25.0                                                     | 40.0                          | 55.0                          |
|                                                         |                                                                         | Heating       |                                            | 19.0                                                | 25.0                                                     | 40.0                          | 55.0                          |
|                                                         | Current Input (Nominal)                                                 | Cooling       | A                                          | 0.2A                                                | 0.2A                                                     | 0.2A                          | 0.3A                          |
|                                                         |                                                                         | Heating       |                                            | 0.2A                                                | 0.2A                                                     | 0.2A                          | 0.3A                          |
|                                                         | MCA                                                                     |               | A                                          | 2A                                                  | 2A                                                       | 2A                            | 2A                            |
|                                                         | MFA (MOP)                                                               |               | A                                          | 15A                                                 | 15A                                                      | 15A                           | 15A                           |
| Maximum number of connectable indoor units              |                                                                         | EA            | 8                                          | 16                                                  | 32                                                       | 32                            |                               |
| Maximum number of connectable indoor unit per branch    |                                                                         | EA            | 8                                          | 8                                                   | 8                                                        | 8                             |                               |
| Number of branches                                      |                                                                         | EA            | 1                                          | 2                                                   | 4                                                        | 6                             |                               |
| Maximum capacity of connectable indoor units            |                                                                         | Btu/h / kW    | 54,000 / 16.0                              | 108,000 / 32.0                                      | 216,000 / 61.6                                           | 216,000 / 61.6                |                               |
| Maximum capacity of connectable indoor units per branch |                                                                         | -             | Btu/h / kW                                 | 54,000 / 16.0                                       | 54,000 / 16.0                                            | 54,000 / 16.0                 | 54,000 / 16.0                 |
|                                                         |                                                                         | Y-Joint       | Btu/h / kW                                 | -                                                   | 108,000 / 32.0                                           | 108,000 / 32.0                | 108,000 / 32.0                |
| Field Wiring                                            | Power Source Wire                                                       |               | mm2                                        | 2.5                                                 | 2.5                                                      | 2.5                           | 2.5                           |
|                                                         | Transmission Cable                                                      |               | mm2                                        | 0.75~1.5                                            | 0.75~1.5                                                 | 0.75~1.5                      | 0.75~1.5                      |
| Sound Pressure                                          | Stable cooling Operation                                                |               | dB(A)                                      | 33                                                  | 34                                                       | 36                            | 36                            |
|                                                         | Heating-to-Cooling Change over                                          |               |                                            | 50                                                  | 50                                                       | 50                            | 50                            |
| Additional refrigerant charging                         |                                                                         | kg/unit       | 0.5                                        | 0.5                                                 | 0.5                                                      | 0.5                           |                               |
| Piping Connections                                      | Outdoor unit                                                            | Liquid Pipe   | Φ, mm                                      | 9.52                                                | 15.88                                                    | 15.88                         | 15.88                         |
|                                                         |                                                                         |               | Φ, inch                                    | 3/8                                                 | 5/8                                                      | 5/8                           | 5/8                           |
|                                                         |                                                                         | Gas Pipe      | Φ, mm                                      | 22.22                                               | 28.58                                                    | 28.58                         | 28.58                         |
|                                                         |                                                                         |               | Φ, inch                                    | 7/8                                                 | 11/8                                                     | 11/8                          | 11/8                          |
|                                                         |                                                                         | Discharge gas | Φ, mm                                      | 19.05                                               | 28.58                                                    | 28.58                         | 28.58                         |
|                                                         |                                                                         |               | Φ, inch                                    | 3/4                                                 | 11/8                                                     | 11/8                          | 11/8                          |
|                                                         | Indoor unit                                                             | Liquid Pipe   | Φ, mm                                      | 9.52                                                | 9.52                                                     | 9.52                          | 9.52                          |
|                                                         |                                                                         |               | Φ, inch                                    | 3/8                                                 | 3/8                                                      | 3/8                           | 3/8                           |
|                                                         |                                                                         | Gas Pipe      | Φ, mm                                      | 15.88                                               | 15.88                                                    | 15.88                         | 15.88                         |
|                                                         |                                                                         |               | Φ, inch                                    | 5/8                                                 | 5/8                                                      | 5/8                           | 5/8                           |
| External Dimension                                      | Net Weight                                                              |               | kg (lbs)                                   | 11 (24.3)                                           | 21 (46.3)                                                | 24.5 (54.0)                   | 28.5 (62.8)                   |
|                                                         | Shipping Weight                                                         |               | kg (lbs)                                   | 13.3 (29.3)                                         | 24.3 (53.6)                                              | 28.5 (62.8)                   | 32.5 (71.7)                   |
|                                                         | Net Dimensions (WxHxD)                                                  |               | mm                                         | 338 x 409 x 199<br>[1'-1 1/4"] x [7 7/8"] x [1'-4"] | 728 x 469 x 199<br>[2'-4 5/8"] x [1'-6 4/16"] x [7 7/8"] |                               |                               |
|                                                         | Shipping Dimensions (WxHxD)                                             |               | mm                                         | 628 x 586 x 252<br>[2'] x [1'-11"] x [9 3/4"]       | 1140 x 628 x 252<br>[3'-7 1/2"] x [2-3/4"] x [9 3/4"]    |                               |                               |
| Operation Limit                                         | Cooling                                                                 |               | °C (°F)                                    | -15~48 (5~118.4)                                    | -15~48 (5~118.4)                                         | -15~48 (5~118.4)              | -15~48 (5~118.4)              |
|                                                         | Heating                                                                 |               | °C (°F)                                    | -25~24(-13~75.2)                                    | -25~24(-13~75.2)                                         | -25~24(-13~75.2)              | -25~24(-13~75.2)              |
| Installation                                            | -15 °C operation                                                        |               |                                            | 1port :Below 5 kW<br>(17MBH)                        | 1port :Below 5 kW<br>(17MBH)                             | 1port :Below 5 kW<br>(17MBH)  | 1port :Below 5 kW<br>(17MBH)  |
|                                                         |                                                                         |               |                                            | 2port : 5~16 kW<br>(17~54MBH)                       | 2port : 5~16 kW<br>(17~54MBH)                            | 2port : 5~16 kW<br>(17~54MBH) | 2port : 5~16 kW<br>(17~54MBH) |
|                                                         | The outdoor unit's PCB should be set for -15°C (5°F) cooling operation. |               |                                            |                                                     |                                                          |                               |                               |
|                                                         | When joining 2 ports in the MCU, use Y-joint (Liquid, Gas) offered.     |               |                                            |                                                     |                                                          |                               |                               |
|                                                         | 1&2 ports MCU don't have Y-joint                                        |               |                                            |                                                     |                                                          |                               |                               |



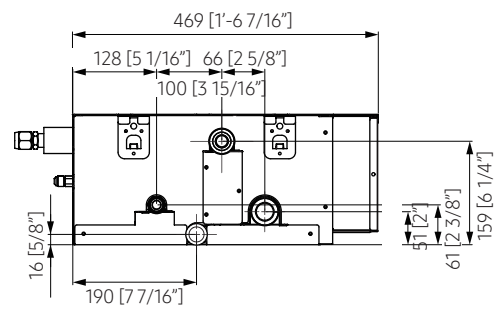
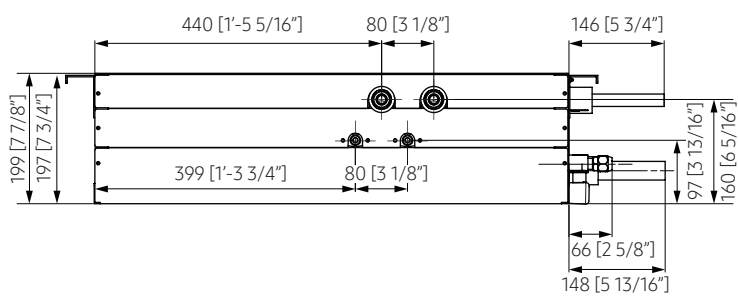
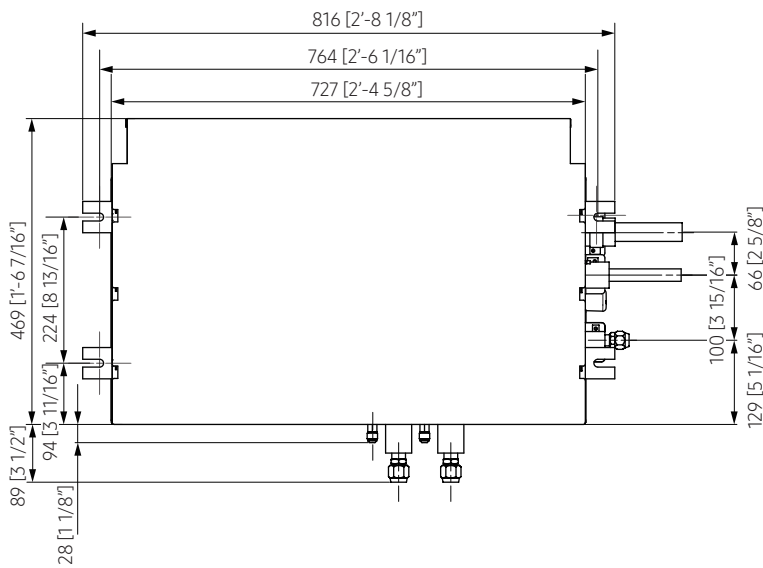
# 3. MCU (Mode Control Unit)

## 3.4. Technical drawings

### Dimensional drawings

#### MCU-S2NEK1N

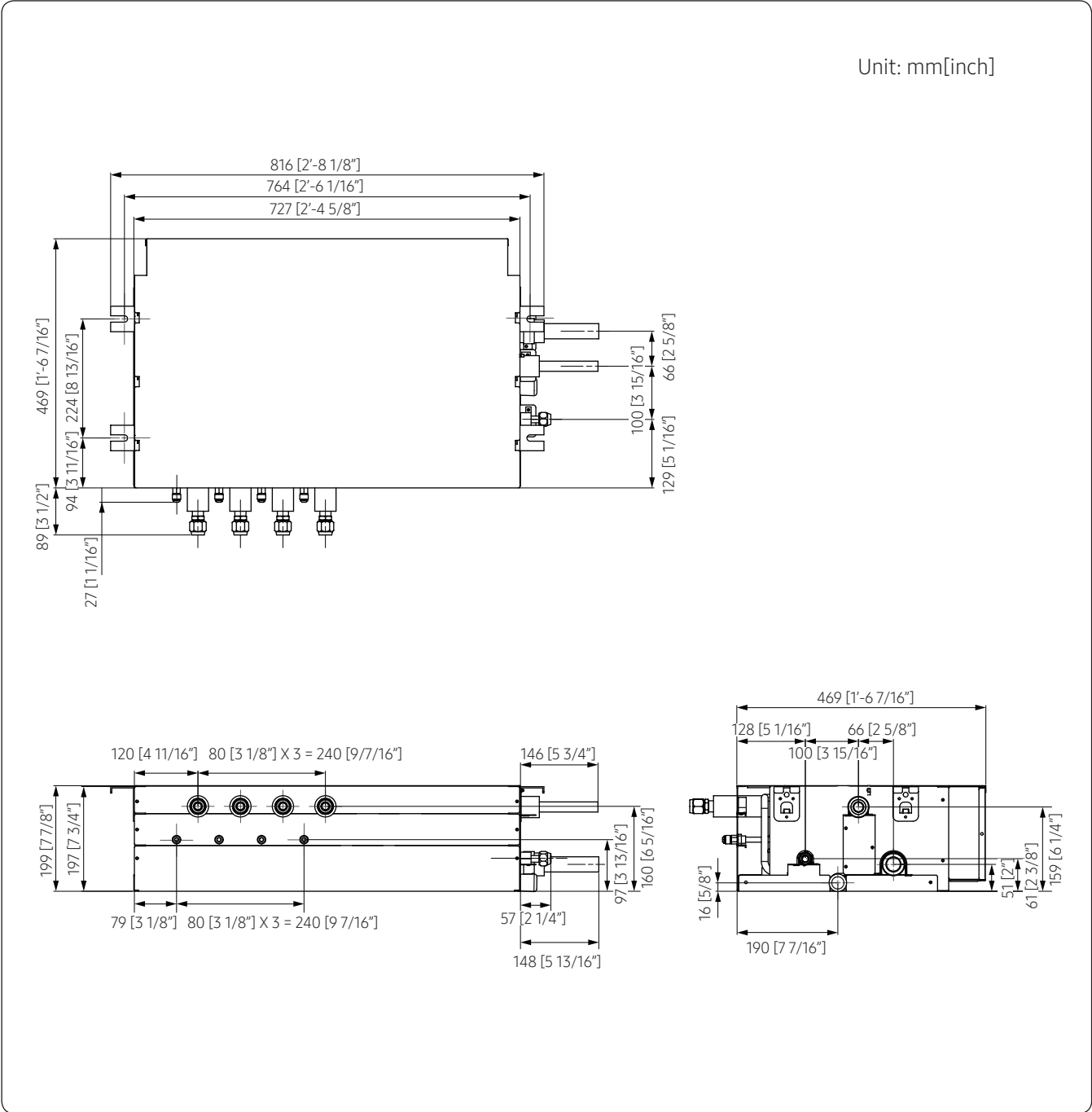
Unit: mm[inch]



# 3. MCU (Mode Control Unit)

## 3.4. Technical drawings

MCU-S4NEE1N / MCU-S4NEE2N

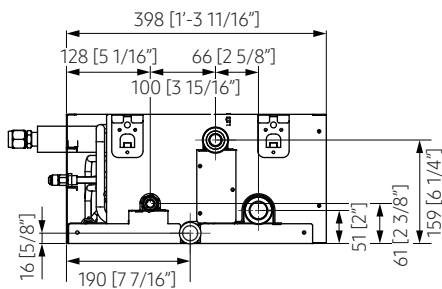
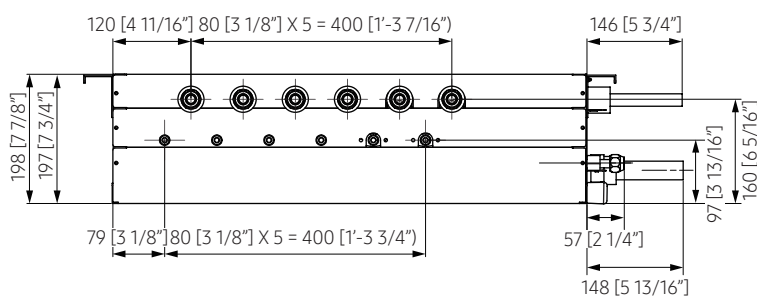
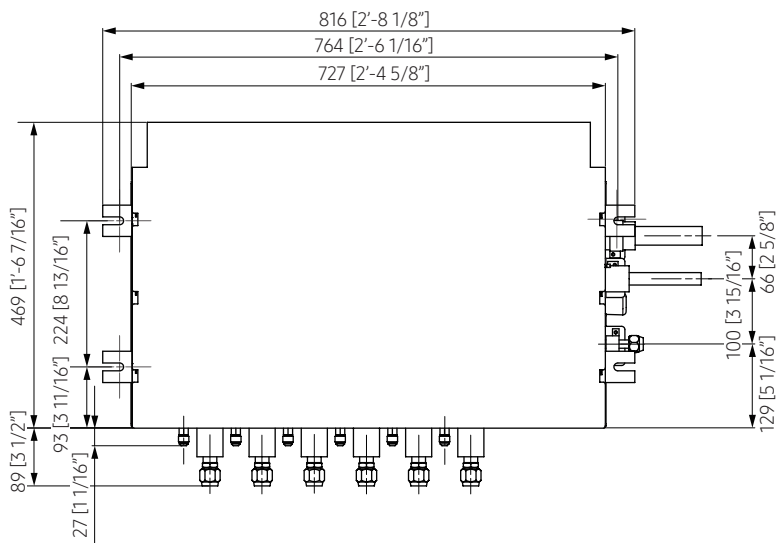


# 3. MCU (Mode Control Unit)

## 3.4. Technical drawings

MCU-S6NEE1N

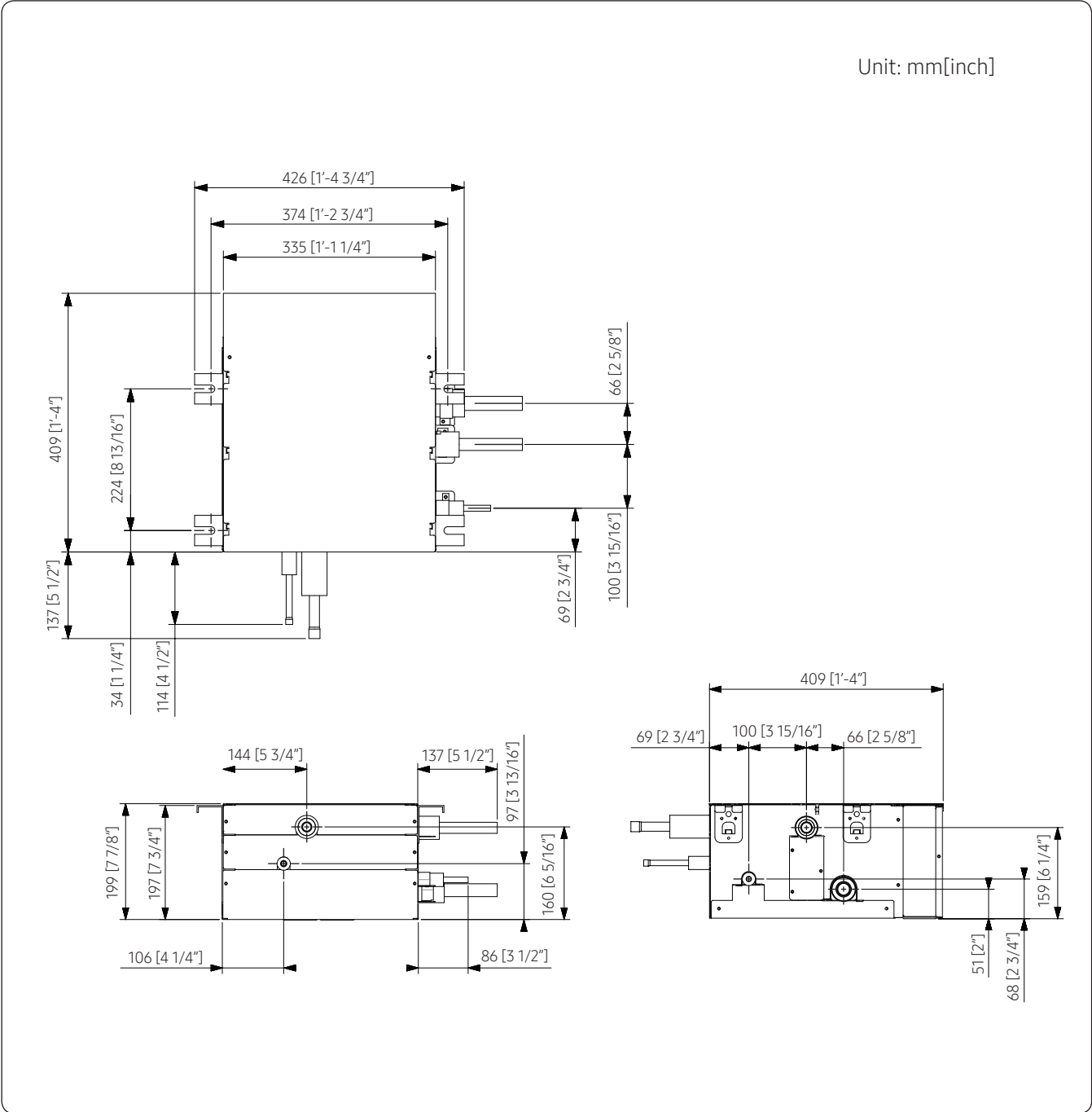
Unit: mm[inch]



# 3. MCU (Mode Control Unit)

## 3.4. Technical drawings

MCU-S1NEK1N

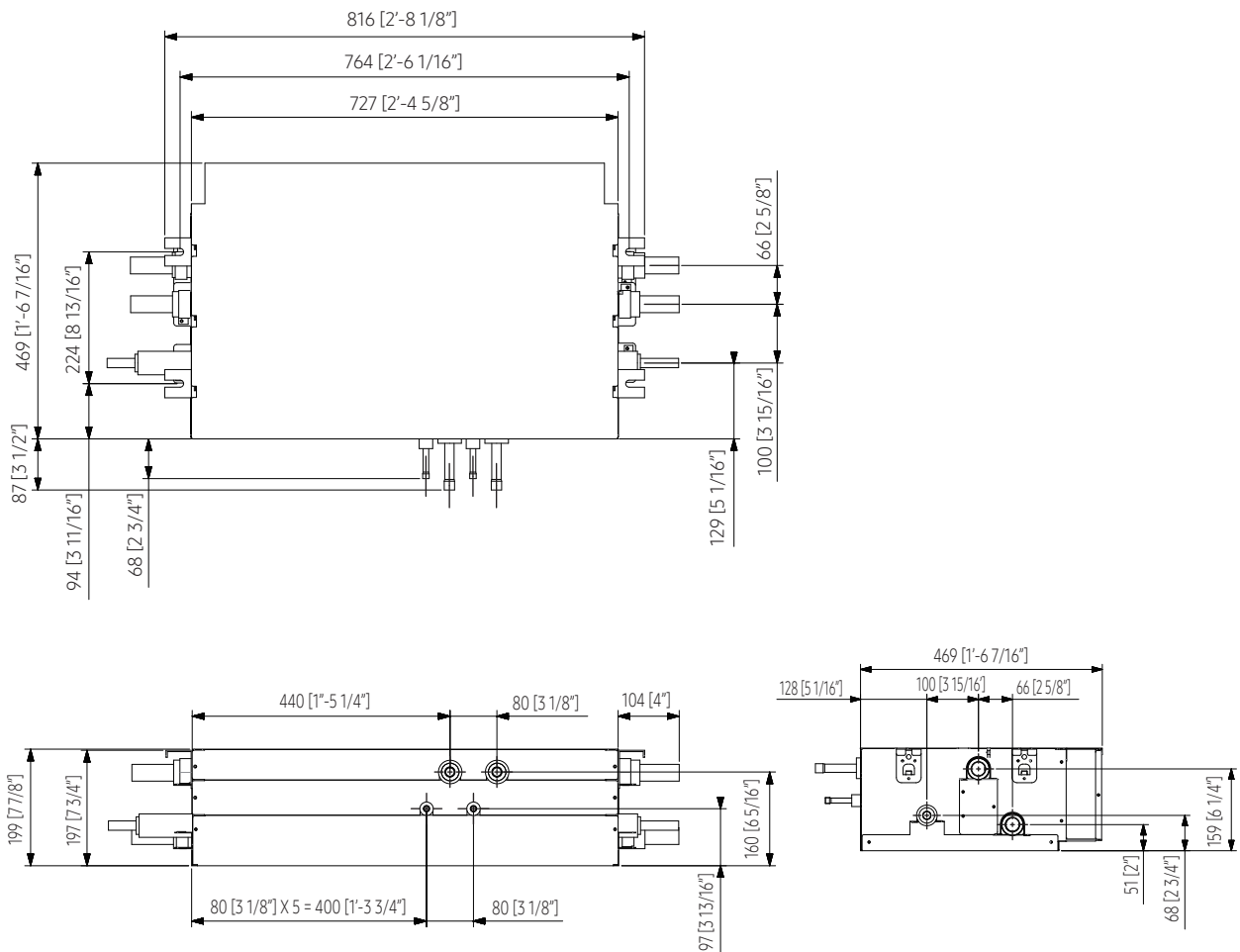


### 3. MCU (Mode Control Unit)

#### 3.4. Technical drawings

MCU-S2NEK2N

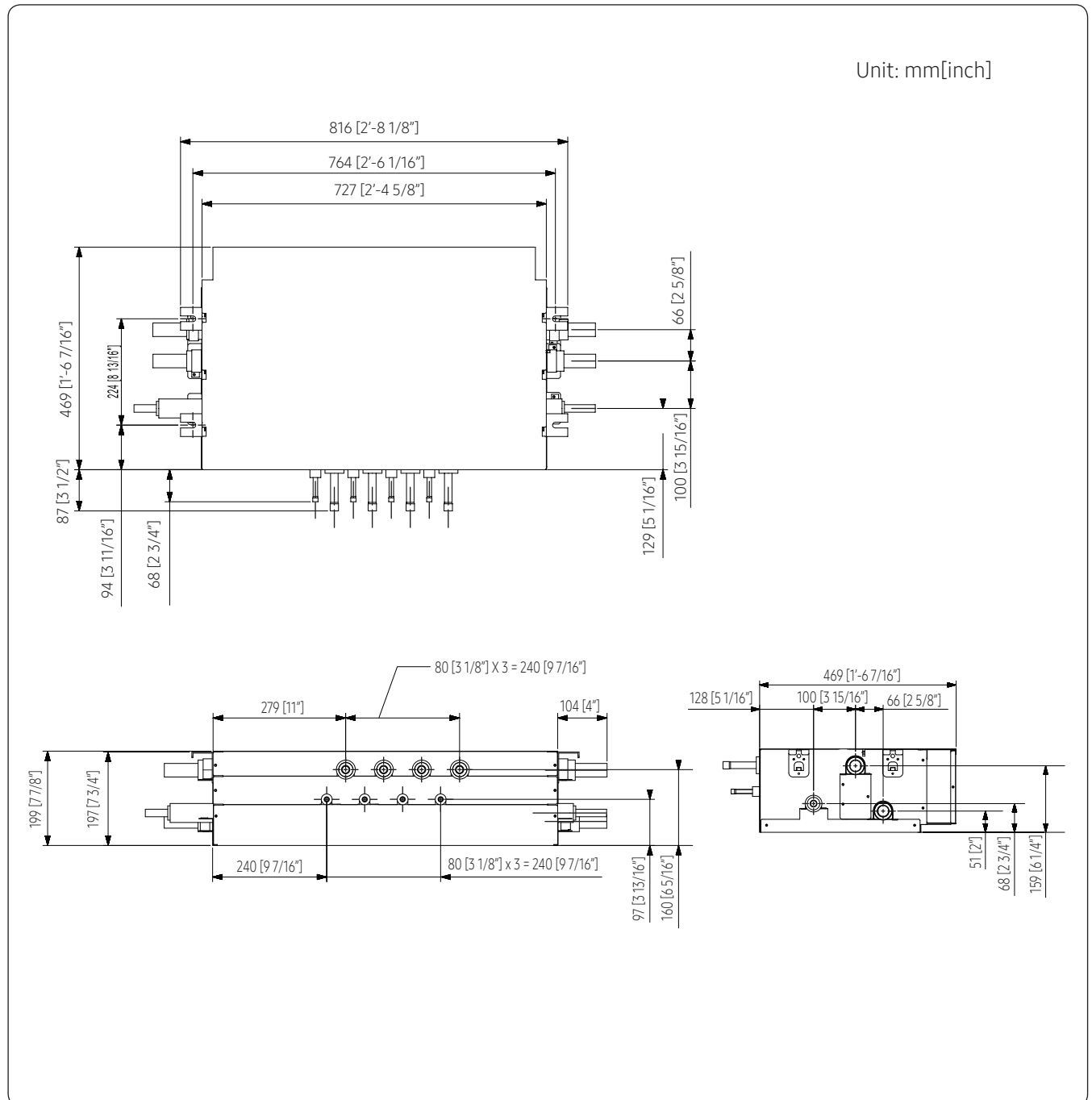
Unit: mm[inch]



### 3. MCU (Mode Control Unit)

#### 3.4. Technical drawings

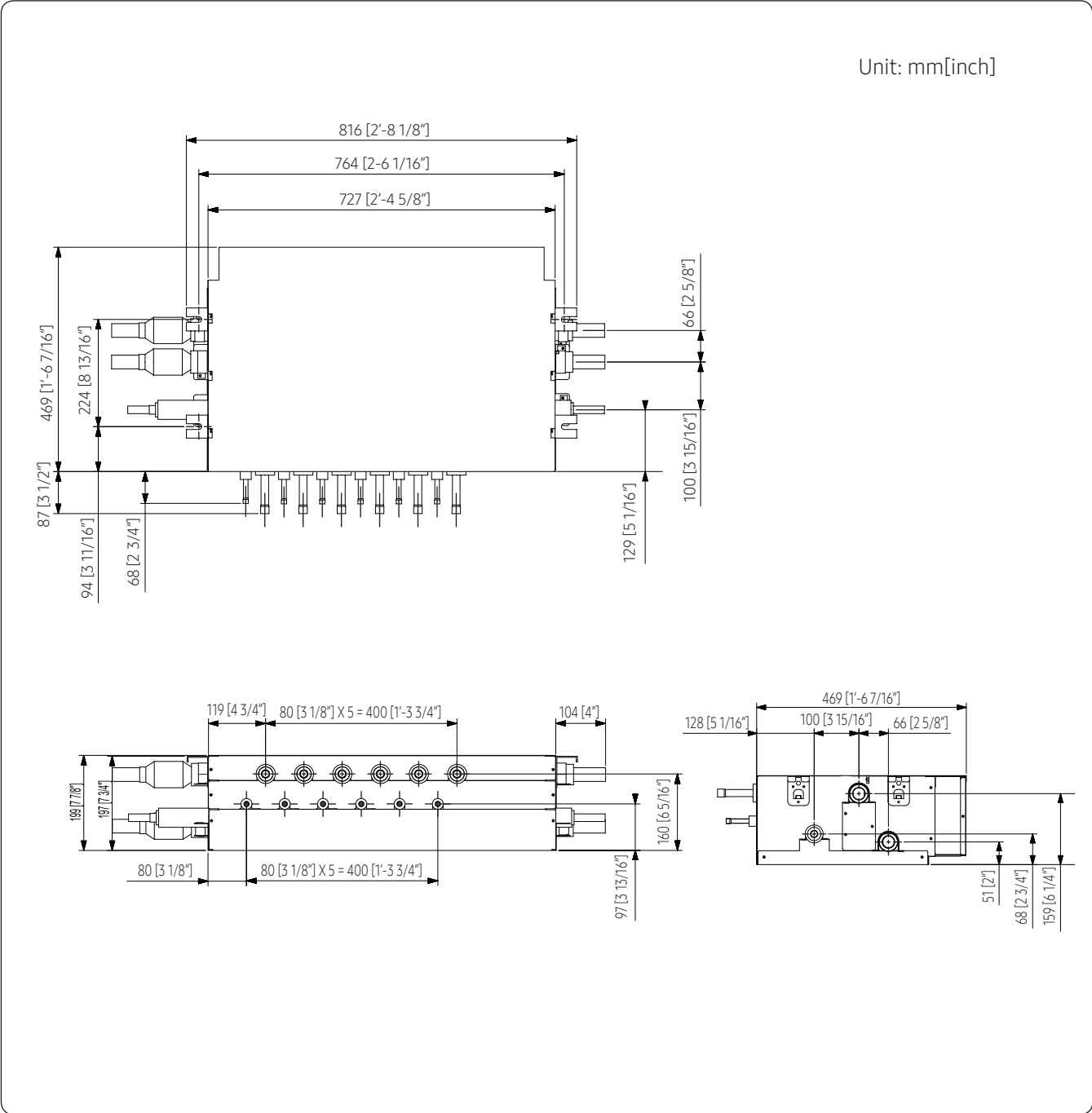
MCU-S4NEK3N

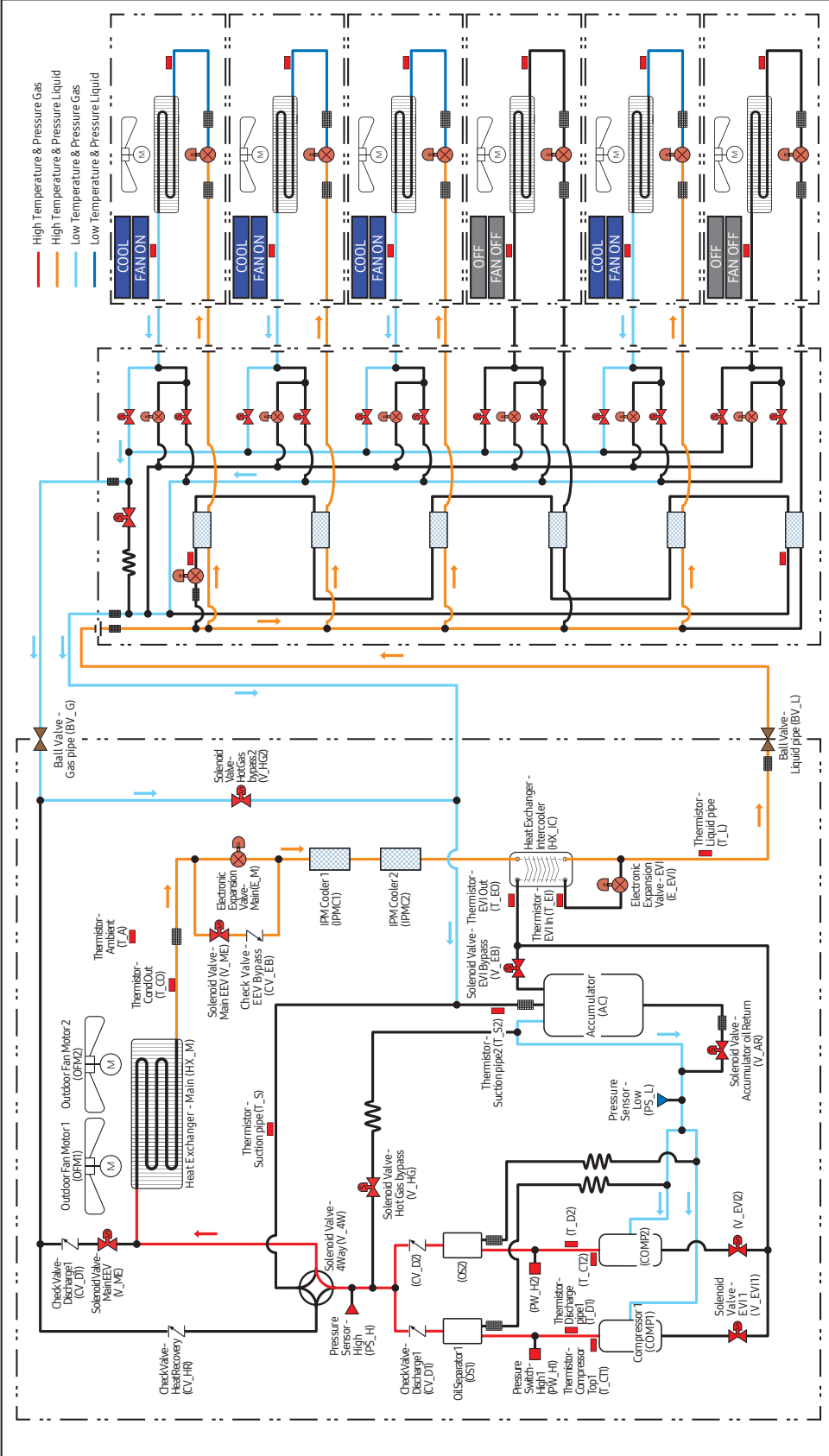


# 3. MCU (Mode Control Unit)

## 3.4. Technical drawings

MCU-S6NEK2N

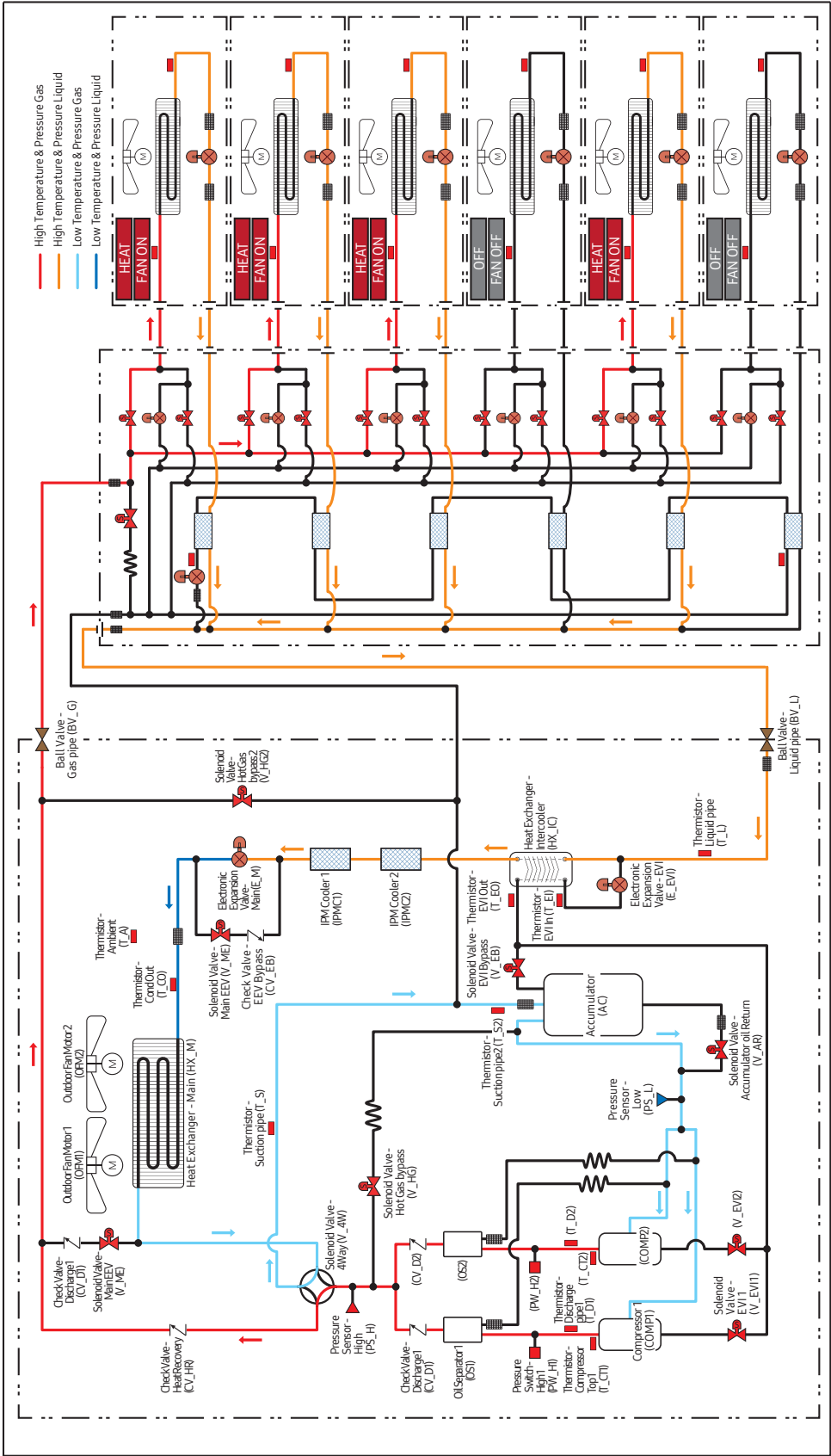


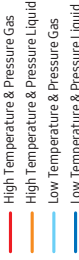




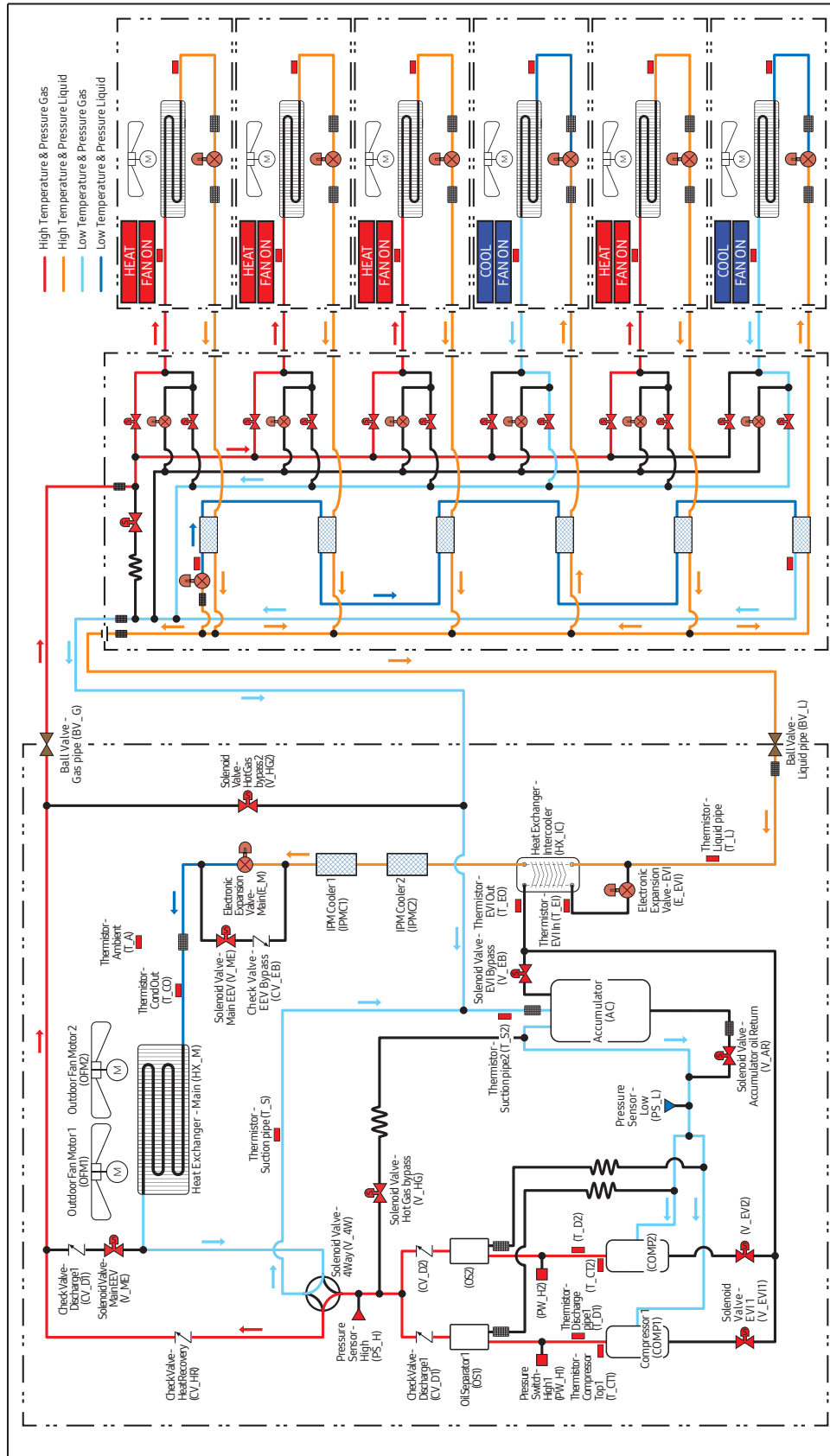
# 3. MCU (Mode Control Unit)

## Piping drawings Heating mode





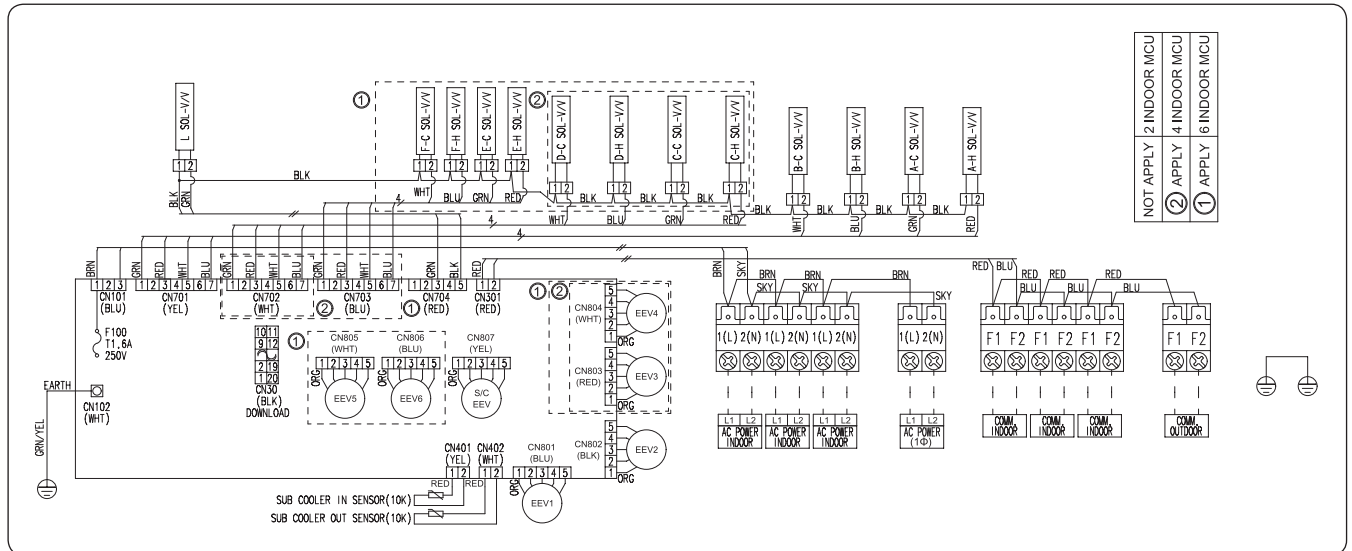
## Piping drawings Main Heating mode



### 3. MCU (Mode Control Unit)

#### Wiring drawings

#### MCU-S6NEE1N, MCU-S4NEE1N, MCU-S4NEE2N, MCU-S2NEK1N



|         |                                         |      |                            |      |                            |
|---------|-----------------------------------------|------|----------------------------|------|----------------------------|
| EEV1    | electronic expansion valve              | EEV2 | electronic expansion valve | EEV3 | electronic expansion valve |
| EEV4    | electronic expansion valve              | EEV5 | electronic expansion valve | EEV6 | electronic expansion valve |
| S/C EEV | electronic expansion valve (Sub cooler) | F100 | FUSE                       |      |                            |

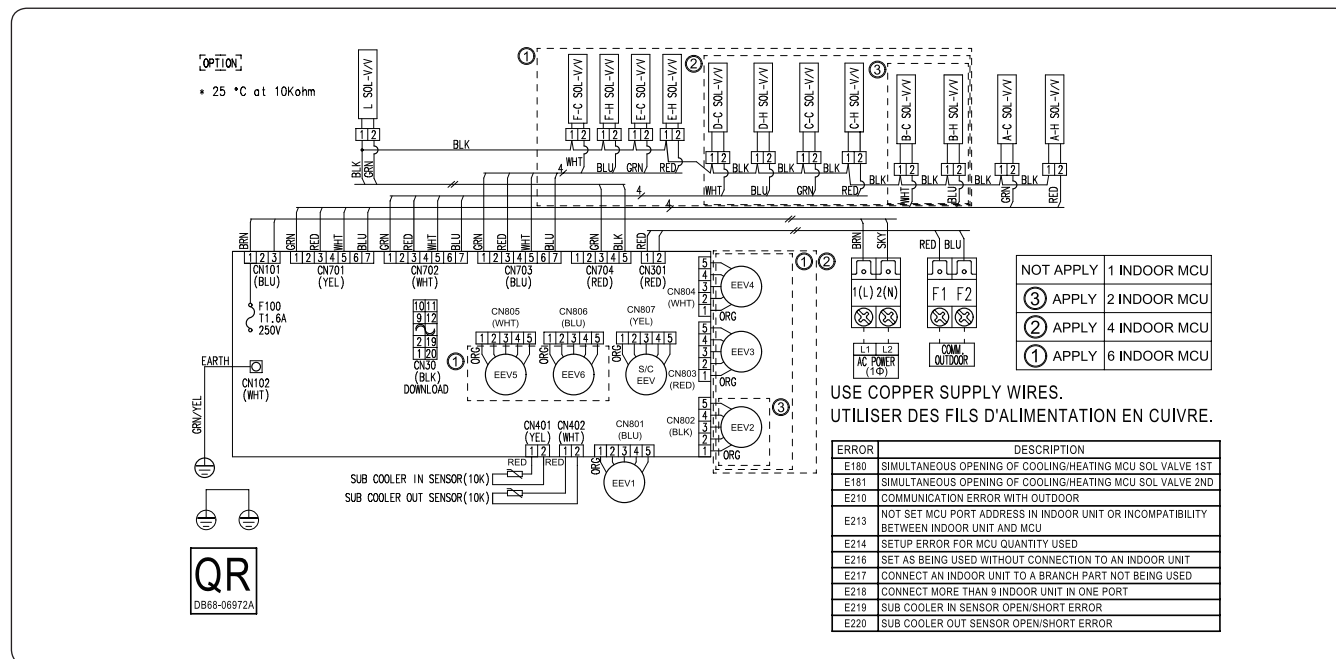
#### NOTE

- This wiring diagram applies only to the MCU kits.
- Symbols show as follow : BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue: GRN: green
- For connection wiring indoor-outdoor transmission F1-F2
-  Protective earth(SCREW) ), CN \*: connector, : The quantity

### 3. MCU (Mode Control Unit)

#### Wiring drawings

#### MCU-S1NEK1N, MCU-S6NEK2N, MCU-S4NEK3N, MCU-S2NEK2N



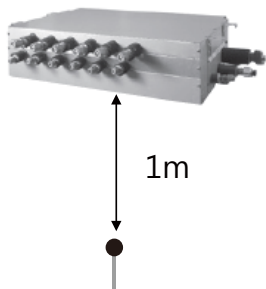
|         |                                         |      |                            |      |                            |
|---------|-----------------------------------------|------|----------------------------|------|----------------------------|
| EEV1    | electronic expansion valve              | EEV2 | electronic expansion valve | EEV3 | electronic expansion valve |
| EEV4    | electronic expansion valve              | EEV5 | electronic expansion valve | EEV6 | electronic expansion valve |
| S/C EEV | electronic expansion valve (Sub cooler) | F100 | FUSE                       |      |                            |

#### NOTE

- This wiring diagram applies only to the MCU kits.
- Symbols show as follow : BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue: GRN: green
- For connection wiring indoor-outdoor transmission F1-F2
- ⚡ Protective earth(SCREW) , CN \*: connector,  $\frac{1}{N}$ : The quantity

# 3. MCU (Mode Control Unit)

## 3.5. Sound pressure level

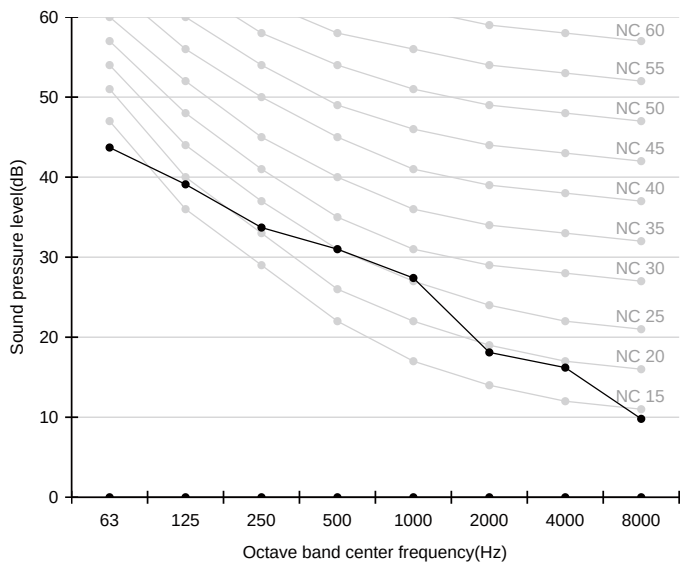


| Model       | Sound Level (dBA) |
|-------------|-------------------|
| MCU-S6NEE1N | 34                |
| MCU-S4NEE1N |                   |
| MCU-S4NEE2N |                   |
| MCU-S2NEK1N |                   |
| MCU-S6NEK2N | 36                |
| MCU-S4NEK3N | 36                |
| MCU-S2NEK2N | 34                |
| MCU-S1NEK1N | 33                |

- This value was measured at steady state in anechoic chamber and may vary depending on operating condtion.
- Sound pressure level will vary depending on a range of factors such as the construction of the particular room where the equipment is installed.

### NC curve

MCU-S6NEE1N, MCU-S4NEE1N, MCU-S4NEE2N, MCU-S2NEK1N



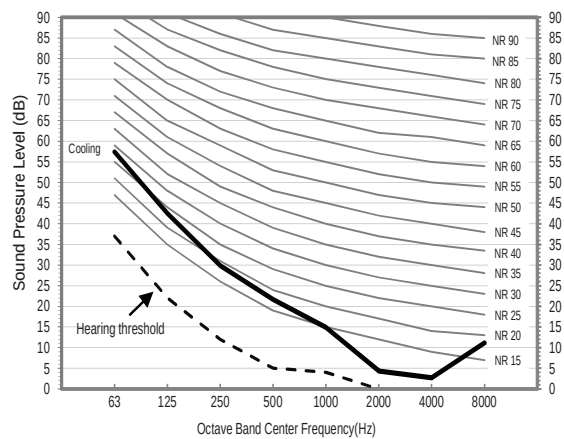
# 3. MCU (Mode Control Unit)

## 3.5. Sound pressure level

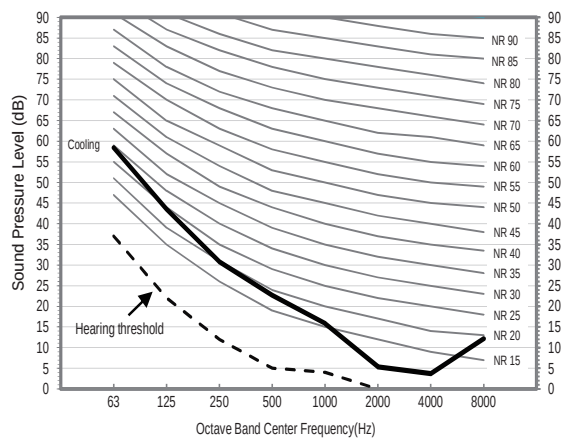
### NC curve

MCU-S1NEK1N, MCU-S2NEK2N, MCU-S4NEK3N, MCU-S6NEK2N

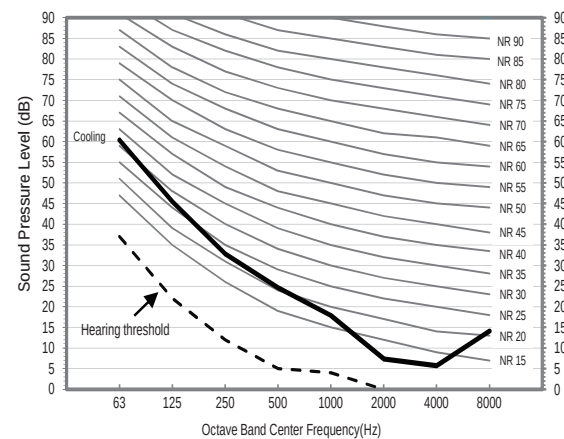
MCU-S1NEK1N



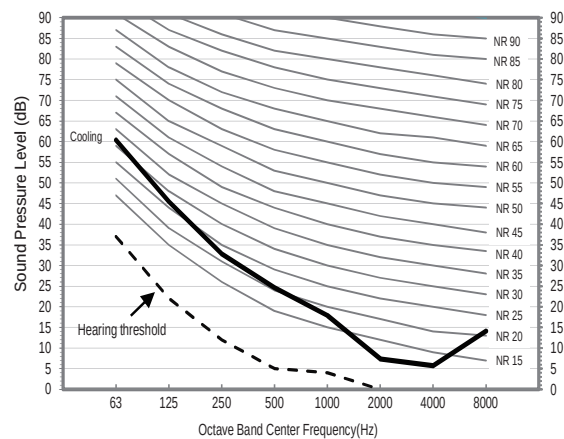
MCU-S2NEK2N



MCU-S4NEK3N

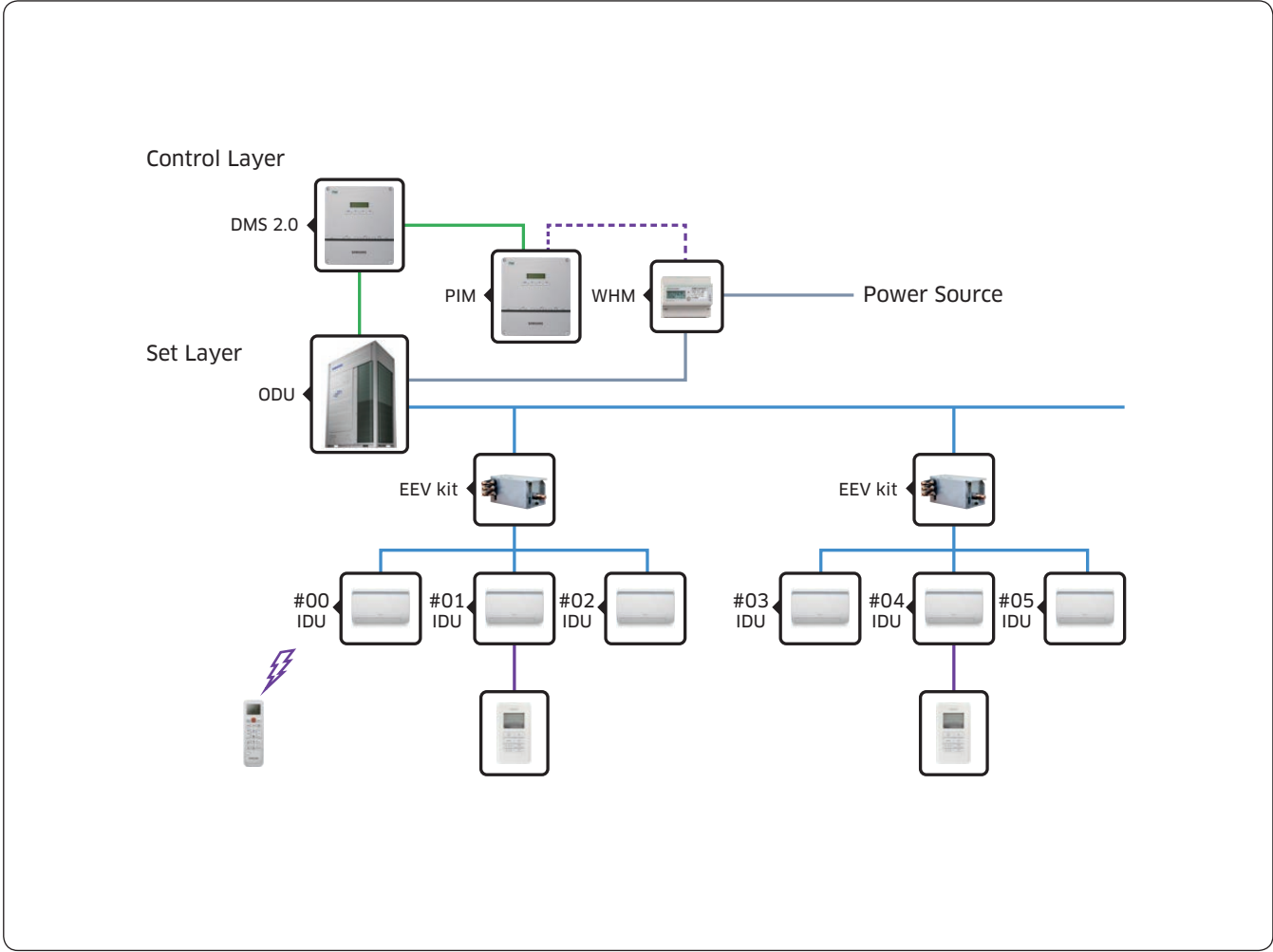


MCU-S6NEK2N



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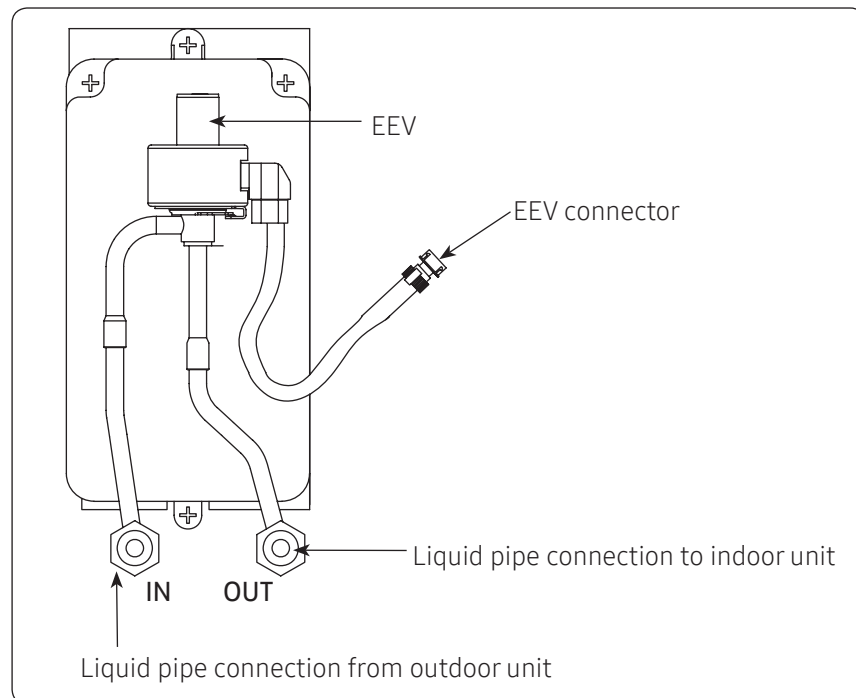
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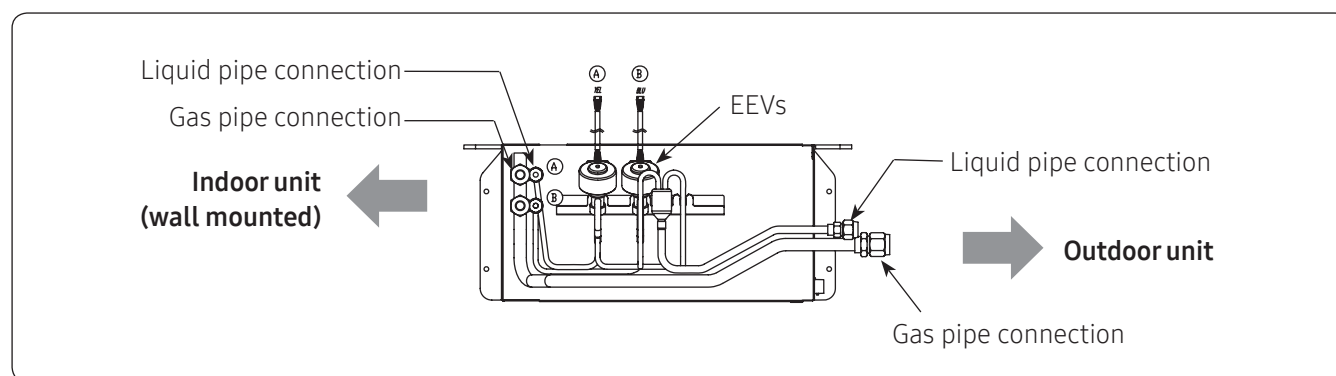


## 4. EEV (Electronic Expansion Valve ) kit

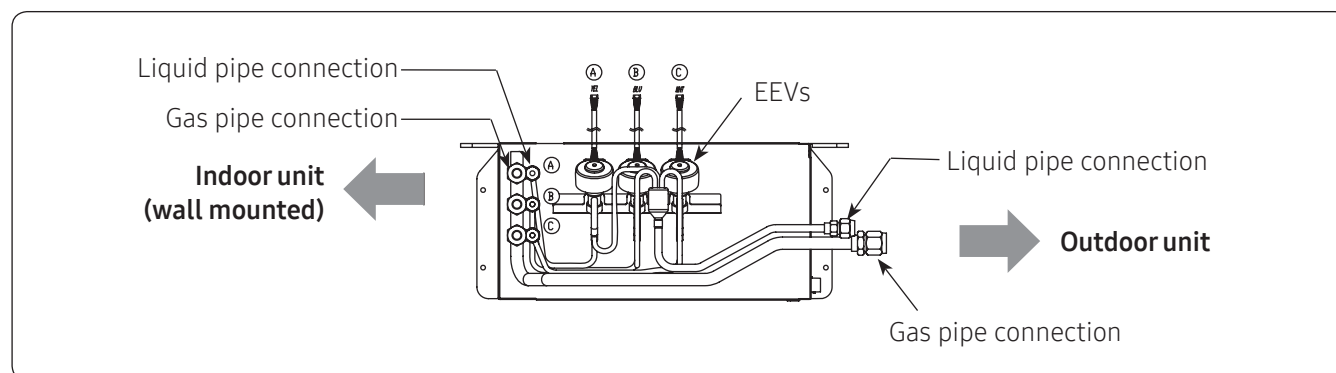
### Single EEV kits



### Two rooms EEV kits



### Three rooms EEV kits



## 4. EEV (Electronic Expansion Valve ) kit

### 4.2. Line-up

#### 4.2.1 Single EEV kit

| Model      | Description                          |                                      |                 |                                     |                         |
|------------|--------------------------------------|--------------------------------------|-----------------|-------------------------------------|-------------------------|
|            | Connectable capacity of indoor units | Quantity of connectable indoor units | Weight (Net)    | Indoor units                        | Remarks                 |
| MEV- E24SA | Up to 3.6kW (12.0MBH)                | 1                                    | 1.1kg (2.2 lbs) | Wall mounted units<br>Ceiling units | Extension wire included |
| MEV- E32SA | 4.5 ~ 9kW (15.5 ~ 31MBH)             | 1                                    | 1.1kg (2.2 lbs) |                                     |                         |

#### 4.2.2 2/3 Room EEV kit

| Model        | Connectable capacity of indoor units |                                     |                                     | Refrigerant |
|--------------|--------------------------------------|-------------------------------------|-------------------------------------|-------------|
|              | A                                    | B                                   | C                                   |             |
| MXD-E24K132✱ | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)   | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h) | -                                   | R-410A      |
| MXD-E24K200✱ | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)   | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)  | -                                   |             |
| MXD-E24K232✱ | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)   | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)  | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h) |             |
| MXD-E24K300✱ | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)   | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)  | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)  |             |
| MXD-E32K200✱ | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h)  | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h) | -                                   |             |
| MXD-E32K224✱ | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h)  | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h) | 2 ~ 3.6 kW<br>(7000 ~ 12000 Btu/h)  |             |
| MXD-E32K300✱ | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h)  | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h) | 4.5 ~ 9 kW<br>(15500 ~ 31000 Btu/h) |             |

## 4. EEV (Electronic Expansion Valve ) kit

### 4.3. Spec Sheet

| Type                                       |                             |             |             | EEV kit                             |                                     |                                     |                                     |                                     |
|--------------------------------------------|-----------------------------|-------------|-------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Model                                      |                             |             |             | MEV- E24SA                          | MEV- E32SA                          | MXD-E24K132✱                        | MXD-E24K200✱                        | MXD-E24K232✱                        |
| Maximum number of connectable indoor units |                             |             | EA          | 1                                   | 1                                   | 2                                   | 2                                   | 3                                   |
| Power Supply                               |                             |             | Ø, #, V, Hz | DC12V                               | DC12V                               | 220-240V~ 50Hz                      | 220-240V~ 50Hz                      | 220-240V~ 50Hz                      |
|                                            |                             |             |             |                                     |                                     | 208-230V~ 60Hz                      | 208-230V~ 60Hz                      | 208-230V~ 60Hz                      |
| Piping Connections                         | Inlet Pipe                  | Liquid Pipe | Ø, mm       | 6.35                                | 6.35                                | 9.52                                | 9.52                                | 9.52                                |
|                                            |                             |             | Ø, inch     | ¼"                                  | ¼"                                  | 3/8"                                | 3/8"                                | 3/8"                                |
|                                            |                             | Gas Pipe    | Ø, mm       | -                                   | -                                   | 15.88                               | 15.88                               | 15.88                               |
|                                            |                             |             | Ø, inch     | -                                   | -                                   | 5/8"                                | 5/8"                                | 5/8"                                |
|                                            | Outlet Pipe 1               | Liquid Pipe | Ø, mm       | 6.35                                | 6.35                                | 6.35                                | 6.35                                | 6.35                                |
|                                            |                             |             | Ø, inch     | ¼"                                  | ¼"                                  | ¼"                                  | ¼"                                  | ¼"                                  |
|                                            |                             | Gas Pipe    | Ø, mm       | -                                   | -                                   | 12.7                                | 12.7                                | 12.7                                |
|                                            |                             |             | Ø, inch     | -                                   | -                                   | ½"                                  | ½"                                  | ½"                                  |
|                                            | Outlet Pipe 2               | Liquid Pipe | Ø, mm       | -                                   | -                                   | 9.52                                | 6.35                                | 6.35                                |
|                                            |                             |             | Ø, inch     | -                                   | -                                   | 3/8"                                | ¼"                                  | ¼"                                  |
|                                            |                             | Gas Pipe    | Ø, mm       | -                                   | -                                   | 15.88                               | 12.7                                | 12.7                                |
|                                            |                             |             | Ø, inch     | -                                   | -                                   | 5/8"                                | ½"                                  | ½"                                  |
|                                            | Outlet Pipe 3               | Liquid Pipe | Ø, mm       | -                                   | -                                   | -                                   | -                                   | 9.52                                |
|                                            |                             |             | Ø, inch     | -                                   | -                                   | -                                   | -                                   | 3/8"                                |
|                                            |                             | Gas Pipe    | Ø, mm       | -                                   | -                                   | -                                   | -                                   | 15.88                               |
|                                            |                             |             | Ø, inch     | -                                   | -                                   | -                                   | -                                   | 5/8"                                |
| External Dimension                         | Net Weight                  |             | kg (lbs)    | 1.1 (2.4)                           | 1.1 (2.4)                           | 7 (15.4)                            | 7 (15.4)                            | 7.6 (16.8)                          |
|                                            | Shipping Weight             |             | kg (lbs)    | 1.4 (3.1)                           | 1.6 (3.5)                           | 8.8 (19.4)                          | 8.8 (19.4)                          | 9.4 (20.7)                          |
|                                            | Net Dimensions (WxHxD)      |             | mm (inch)   | 86X201X118<br>(3 3/8x7 15/16x4 5/8) | 86X201X118<br>(3 3/8x7 15/16x4 5/8) | 450X333X204<br>(17 3/4 x13 1/8 x8)  | 450X333X204<br>(17 3/4 x13 1/8 x8)  | 500X333X204<br>(17 3/4 x13 1/8 x8)  |
|                                            | Shipping Dimensions (WxHxD) |             | mm (inch)   | 226X306X134<br>(8 7/8 x12 x5 1/4)   | 226X306X134<br>(8 7/8 x12 x5 1/4)   | 596X382X276<br>(23 1/2 x15 x10 7/8) | 596X382X276<br>(23 1/2 x15 x10 7/8) | 596X382X276<br>(23 1/2 x15 x10 7/8) |
| Installation                               | Indoor unit's Capacity      | 1 port      | kW          | Up to 3.6                           | 4.5 ~ 9.0                           | 2.0~3.6                             | 2.0~3.6                             | 2.0~3.6                             |
|                                            |                             | 2 port      | kW          | -                                   | -                                   | 4.5~9.0                             | 2.0~3.6                             | 2.0~3.6                             |
|                                            |                             | 3 port      | kW          | -                                   | -                                   | -                                   | -                                   | 4.5~9.0                             |

## 4. EEV (Electronic Expansion Valve ) kit

| Type                                       |                             |             |             | EEV kit                                     |                                             |                                             |                                             |
|--------------------------------------------|-----------------------------|-------------|-------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| Model                                      |                             |             |             | MXD-E24K300✱                                | MXD-E32K200✱                                | MXD-E32K224✱                                | MXD-E32K300✱                                |
| Maximum number of connectable indoor units |                             |             | EA          | 3                                           | 2                                           | 3                                           | 3                                           |
| Power Supply                               |                             |             | Ø, #, V, Hz | 220-240V~ 50Hz                              | 220-240V~ 50Hz                              | 220-240V~ 50Hz                              | 220-240V~ 50Hz                              |
|                                            |                             |             |             | 208-230V~ 60Hz                              | 208-230V~ 60Hz                              | 208-230V~ 60Hz                              | 208-230V~ 60Hz                              |
| Piping Connections                         | Inlet Pipe                  | Liquid Pipe | Ø, mm       | 9.52                                        | 9.52                                        | 9.52                                        | 9.52                                        |
|                                            |                             |             | Ø, inch     | 3/8"                                        | 3/8"                                        | 3/8"                                        | 3/8"                                        |
|                                            |                             | Gas Pipe    | Ø, mm       | 15.88                                       | 15.88                                       | 15.88                                       | 15.88                                       |
|                                            |                             |             | Ø, inch     | 5/8"                                        | 5/8"                                        | 5/8"                                        | 5/8"                                        |
|                                            | Outlet Pipe 1               | Liquid Pipe | Ø, mm       | 6.35                                        | 9.52                                        | 9.52                                        | 9.52                                        |
|                                            |                             |             | Ø, inch     | ¼"                                          | 3/8"                                        | 3/8"                                        | 3/8"                                        |
|                                            |                             | Gas Pipe    | Ø, mm       | 12.7                                        | 15.88                                       | 15.88                                       | 15.88                                       |
|                                            |                             |             | Ø, inch     | ½"                                          | 5/8"                                        | 5/8"                                        | 5/8"                                        |
|                                            | Outlet Pipe 2               | Liquid Pipe | Ø, mm       | 6.35                                        | 9.52                                        | 9.52                                        | 9.52                                        |
|                                            |                             |             | Ø, inch     | ¼"                                          | 3/8"                                        | 3/8"                                        | 3/8"                                        |
|                                            |                             | Gas Pipe    | Ø, mm       | 12.7                                        | 15.88                                       | 15.88                                       | 15.88                                       |
|                                            |                             |             | Ø, inch     | ½"                                          | 5/8"                                        | 5/8"                                        | 5/8"                                        |
|                                            | Outlet Pipe 3               | Liquid Pipe | Ø, mm       | 6.35                                        | -                                           | 6.35                                        | 9.52                                        |
|                                            |                             |             | Ø, inch     | ¼"                                          | -                                           | ¼"                                          | 3/8"                                        |
|                                            |                             | Gas Pipe    | Ø, mm       | 12.7                                        | -                                           | 12.7                                        | 15.88                                       |
|                                            |                             |             | Ø, inch     | ½"                                          | -                                           | ½"                                          | 5/8"                                        |
| External Dimension                         | Net Weight                  |             | kg (lbs)    | 7.6 (16.8)                                  | 7 (15.4)                                    | 7.6 (16.8)                                  | 7.6 (16.8)                                  |
|                                            | Shipping Weight             |             | kg (lbs)    | 9.4 (20.7)                                  | 8.8 (19.4)                                  | 9.4 (20.7)                                  | 9.6 (20.7)                                  |
|                                            | Net Dimensions (WxHxD)      |             | mm (inch)   | 500X333X204<br>(19 11/16 x 13 1/8 x 8 1/16) | 450X333X204<br>(17 11/16 x 13 1/8 x 8 1/16) | 500X333X204<br>(19 11/16 x 13 1/8 x 8 1/16) | 500X333X204<br>(19 11/16 x 13 1/8 x 8 1/16) |
|                                            | Shipping Dimensions (WxHxD) |             | mm (inch)   | 596X382X276<br>(23 7/16 x 15 3/8 x 10 7/8)  | 596X382X276<br>(23 7/16 x 15 3/8 x 10 7/8)  | 596X382X276<br>(23 7/16 x 15 3/8 x 10 7/8)  | 596X382X276<br>(23 7/16 x 15 3/8 x 10 7/8)  |
| Installation                               | Indoor unit's Capacity      | 1 port      | kW          | 2.0~3.6                                     | 4.5~9.0                                     | 4.5~9.0                                     | 4.5~9.0                                     |
|                                            |                             | 2 port      | kW          | 2.0~3.6                                     | 4.5~9.0                                     | 4.5~9.0                                     | 4.5~9.0                                     |
|                                            |                             | 3 port      | kW          | 2.0~3.6                                     | -                                           | 2.0~3.6                                     | 4.5~9.0                                     |

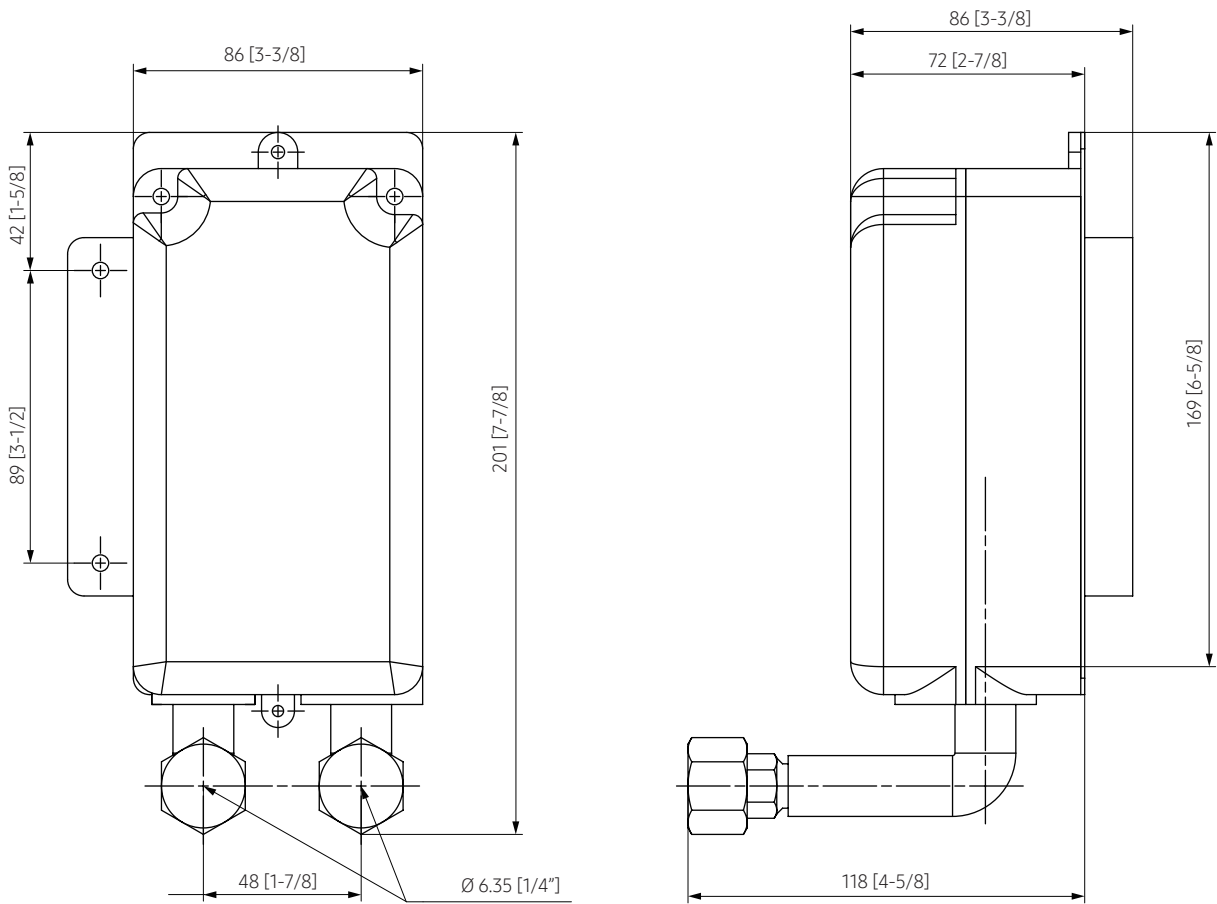
# 4. EEV (Electronic Expansion Valve ) kit

## 4.4. Dimensional drawings

### Dimensional drawings

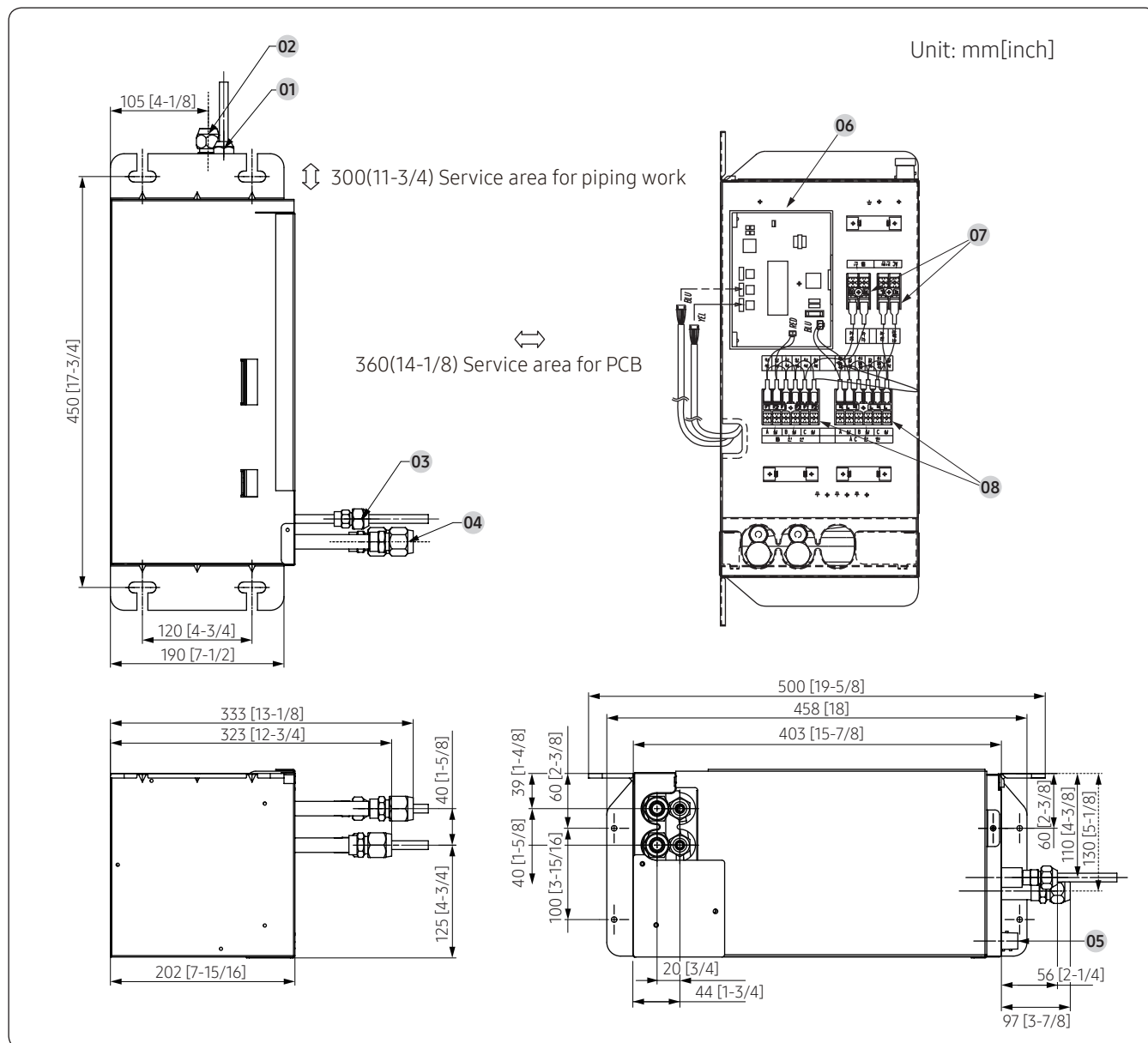
#### Single EEV kit

Unit: mm[inch]



## 4. EEV (Electronic Expansion Valve ) kit

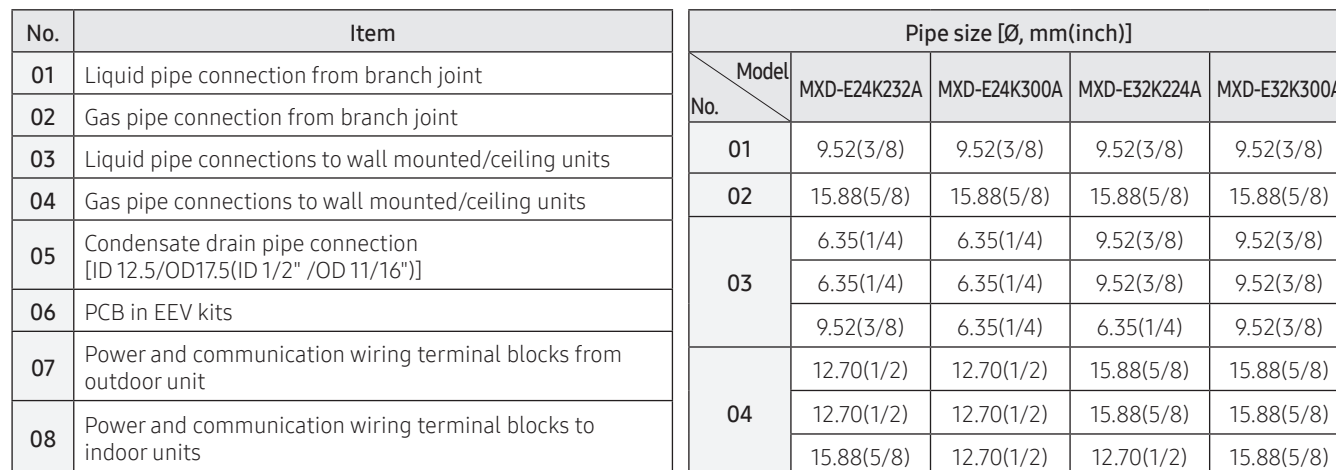
### Two rooms EEV kits



| No. | Item                                                                     |
|-----|--------------------------------------------------------------------------|
| 01  | Liquid pipe connection from branch joint                                 |
| 02  | Gas pipe connection from branch joint                                    |
| 03  | Liquid pipe connections to wall mounted/ceiling units                    |
| 04  | Gas pipe connections to wall mounted/ceiling units                       |
| 05  | Condensate drain pipe connection<br>[ID 12.5/OD17.5(ID 1/2" /OD 11/16")] |
| 06  | PCB in EEV kits                                                          |
| 07  | Power and communication wiring terminal blocks from outdoor unit         |
| 08  | Power and communication wiring terminal blocks to indoor units           |

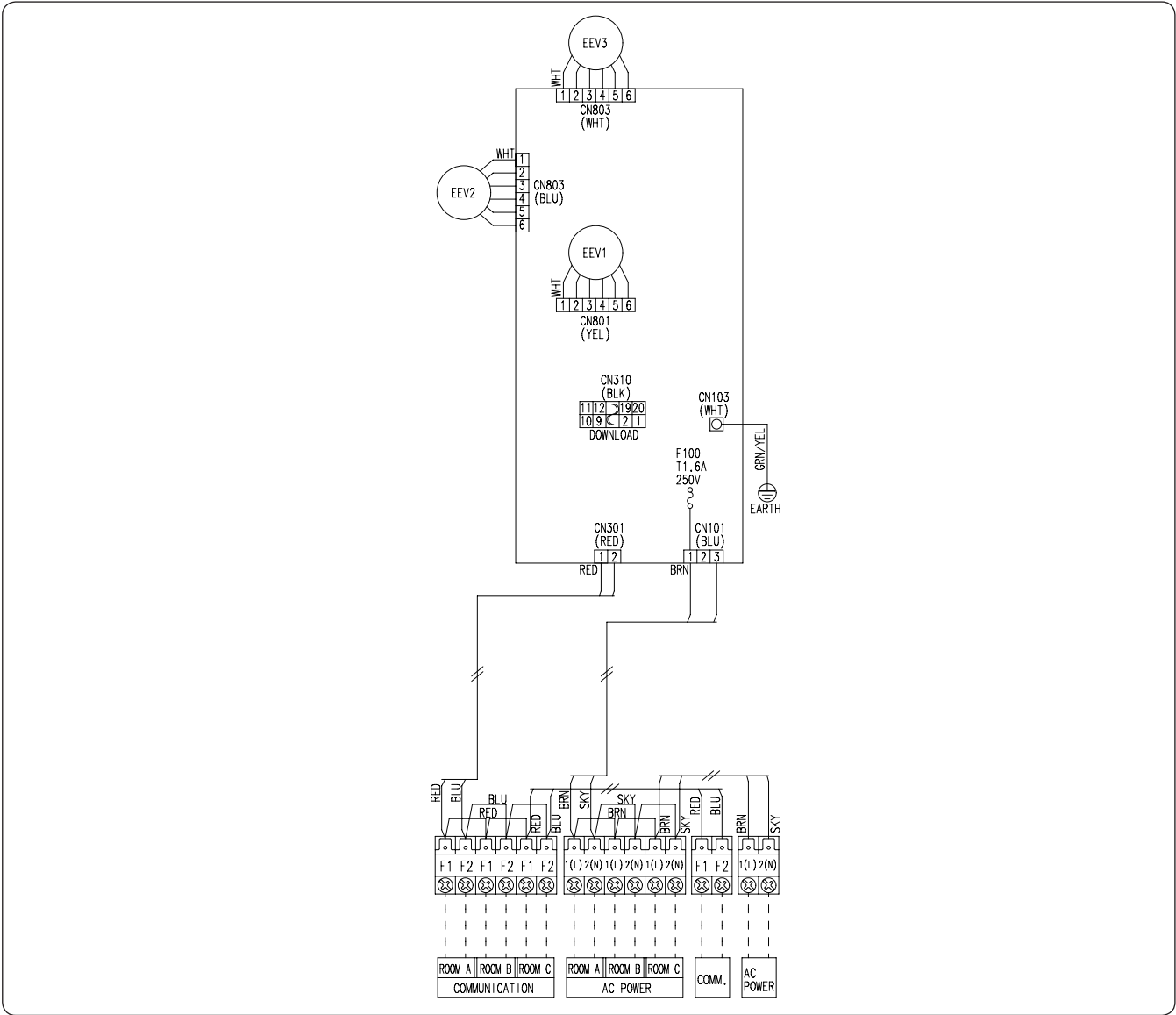
| Pipe size Ø, mm(inch) |              |              |              |
|-----------------------|--------------|--------------|--------------|
| Model                 | MXD-E24K132A | MXD-E24K200A | MXD-E32K200A |
| No.                   |              |              |              |
| 01                    | 9.52(3/8)    | 9.52(3/8)    | 9.52(3/8)    |
| 02                    | 15.88(5/8)   | 15.88(5/8)   | 15.88(5/8)   |
| 03                    | 6.35(1/4)    | 6.35(1/4)    | 9.52(3/8)    |
|                       | 9.52(3/8)    | 6.35(1/4)    | 9.52(3/8)    |
| 04                    | 12.70(1/2)   | 12.70(1/2)   | 15.88(5/8)   |
|                       | 15.88(5/8)   | 12.70(1/2)   | 15.88(5/8)   |

### Three rooms EEV kits



# 4. EEV (Electronic Expansion Valve ) kit

## Wiring drawings



|      |                            |      |                            |      |                            |
|------|----------------------------|------|----------------------------|------|----------------------------|
| EEV1 | electronic expansion valve | EEV2 | electronic expansion valve | EEV3 | electronic expansion valve |
|------|----------------------------|------|----------------------------|------|----------------------------|

### NOTE

- This wiring diagram applies only to the Three rooms EEV kits.
- Symbols show as follow : BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue: GRN: green
- For connection wiring indoor-outdoor transmission F1-F2
-  Protective earth(SCREW) ), CN \*: connector, : The quantity



## 5. AHU (Air Handling Unit) kit

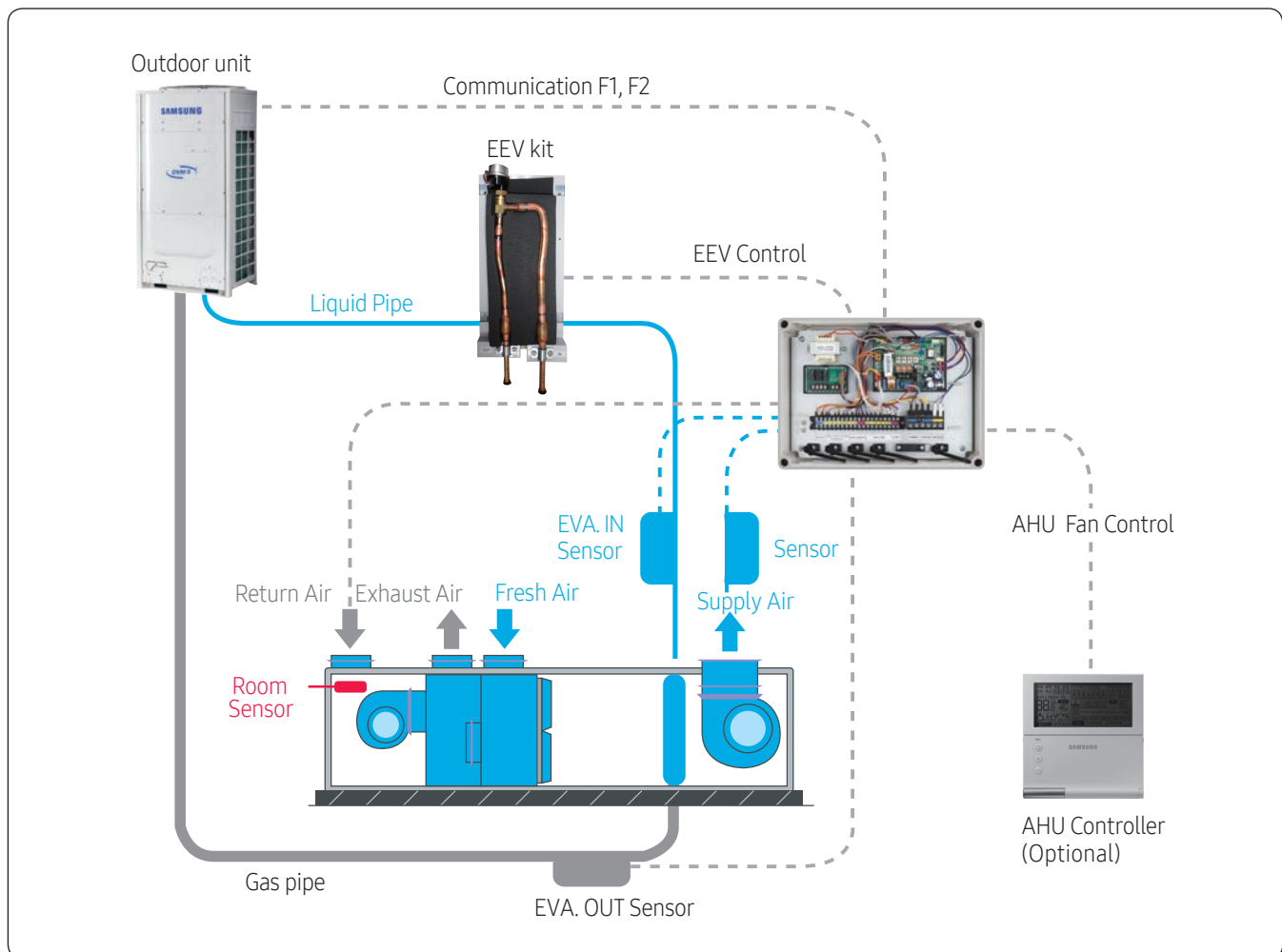
### 5.1 Feature

#### Optimize performance and energy savings with seamless AHU connectivity

Samsung AHU kit allows DVM S outdoor units to connect to air handling units (AHUs), which results in energy savings and improved performance and efficiency.

Features includes:

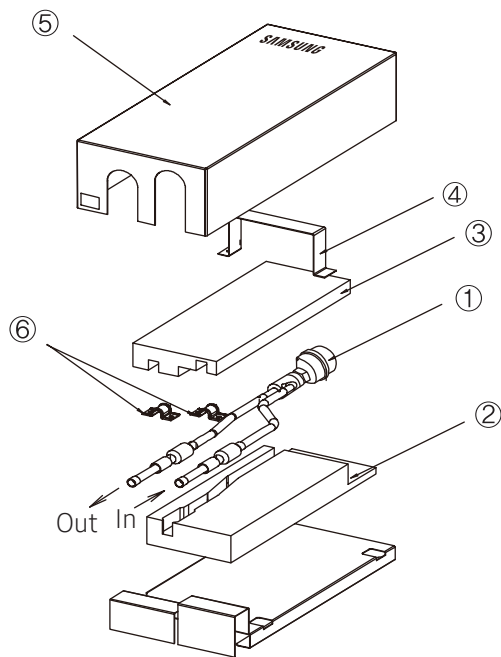
- IP54 waterproof certification
- Variable capacity
- 2.5 HP - 40 HP
- Simple BMS application(0~10V, MXD-K/X Series)
- Discharge air temperature control



# 5. AHU (Air Handling Unit) kit

MXD-K\*\*\*AN / MXD-X000AN

## EEV kit

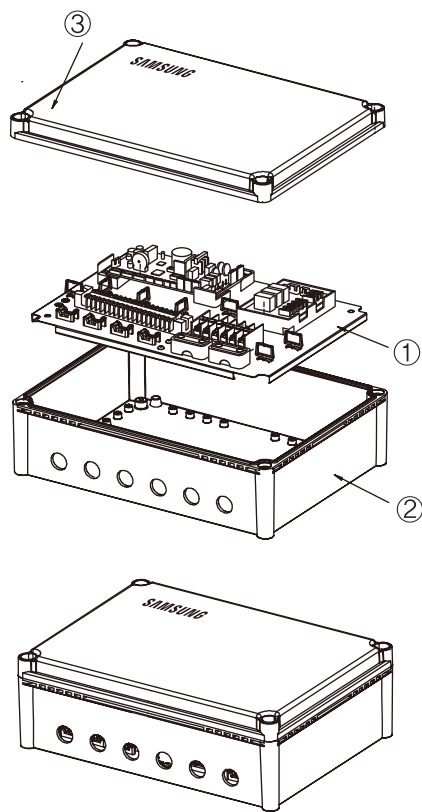


| No. | Parts and components                                           |
|-----|----------------------------------------------------------------|
| ①   | EEV body<br>(Coil wire: 2.5/5.0 HP = 2 m<br>7.5/10.0 HP = 7 m) |
| ②   | Lower insulation                                               |
| ③   | Upper insulation                                               |
| ④   | Holder                                                         |
| ⑤   | Cover                                                          |
| ⑥   | Clamp                                                          |

- Out (to AHU heat exchanger)
- In (from outdoor unit)

\* EEV kit is not included in the Model "MXD-X000AN, MCM-D201N".

## Control kit



| No. | Parts and components |
|-----|----------------------|
| ①   | Controller board     |
| ②   | Case                 |
| ③   | Cover                |

# 5. AHU (Air Handling Unit) kit

## 5.3. Spec Sheet

### AHU kit

| Type                               |                                                       |                     | AHU kit                              |                                      |                                      |                                      |                       | Control kit                         | EEV kit (Option)                                                       |
|------------------------------------|-------------------------------------------------------|---------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|-----------------------|-------------------------------------|------------------------------------------------------------------------|
| Model                              |                                                       |                     | MXD-K025AN                           | MXD-K050AN                           | MXD-K075AN                           | MXD-K100AN                           | MXD-X000AN            | MCM-D201N<br>(10/20/30/40HP)        | MXD-A64K100E<br>(10HP)                                                 |
| Power Supply                       |                                                       | Ø, #,<br>V, Hz      | 1,2,220-<br>240,50/60                | 1,2,220-<br>240,50/60                | 1,2,220-<br>240,50/60                | 1,2,220-<br>240,50/60                | 1,2,220-<br>240,50/60 | 1,2,220-<br>240,50/60               | -                                                                      |
| Connectable Outdoor                |                                                       | -                   | HP/HR                                | HP/HR                                | HP/HR                                | HP/HR                                | HP/HR                 | HP                                  | HP                                                                     |
| Design<br>Recommendation           | AHU Capacity<br>Allowance                             | Max.                | kW                                   | 8.8                                  | 17.5                                 | 24.9                                 | 35                    | -                                   | 35                                                                     |
|                                    |                                                       |                     | MBH                                  | 30                                   | 60                                   | 85                                   | 120                   | -                                   | 119                                                                    |
|                                    |                                                       | Min.                | kW                                   | 6.3                                  | 12.6                                 | 18.9                                 | 25.2                  | -                                   | 25.2                                                                   |
|                                    |                                                       |                     | MBH                                  | 21.6                                 | 43.2                                 | 64.8                                 | 86.4                  | -                                   | 86.4                                                                   |
|                                    | AHU Internal<br>Heat Exchanger<br>Volume<br>Allowance | Max.                | cm <sup>3</sup>                      | 2,000                                | 4,000                                | 6,000                                | 8,000                 | -                                   | 8,000                                                                  |
|                                    |                                                       | Min.                | cm <sup>3</sup>                      | 1,200                                | 2,400                                | 4,100                                | 6,100                 | -                                   | 6,100                                                                  |
| Piping<br>Connections<br>(EEV kit) | High pressure pipe<br>from outdoor unit               | Ø, mm               | 9.52                                 | 9.52                                 | 9.52                                 | 9.52                                 | -                     | -                                   | 12.7                                                                   |
|                                    |                                                       | Ø, inch             | 3/8"                                 | 3/8"                                 | 3/8"                                 | 3/8"                                 | -                     | -                                   | 1/2"                                                                   |
|                                    | High pressure pipe<br>to AHU                          | Ø, mm               | 9.52                                 | 9.52                                 | 9.52                                 | 9.52                                 | -                     | -                                   | 12.7                                                                   |
|                                    |                                                       | Ø, inch             | 3/8"                                 | 3/8"                                 | 3/8"                                 | 3/8"                                 | -                     | -                                   | 1/2"                                                                   |
| Sensor                             | EVA. IN                                               | Type / Ø            | 103HW / 6Ø                           | 103HW / 6Ø                           | 103HW / 6Ø                           | 103HW / 6Ø                           | -                     | 103HW / 6Ø                          | -                                                                      |
|                                    |                                                       | m / mm <sup>2</sup> | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | -                     | 7m / 2*0.75mm <sup>2</sup>          | -                                                                      |
|                                    | EVA. OUT                                              | Type / Ø            | 103HW / 7Ø                           | 103HW / 7Ø                           | 103HW / 7Ø                           | 103HW / 7Ø                           | -                     | 103HW / 7Ø                          | -                                                                      |
|                                    |                                                       | m / mm <sup>2</sup> | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | -                     | 7m / 2*0.75mm <sup>2</sup>          | -                                                                      |
|                                    | Room                                                  | Type / Ø            | 103HW /<br>Molding                   | 103HW /<br>Molding                   | 103HW /<br>Molding                   | 103HW /<br>Molding                   | -                     | PT1000Ω /<br>4~20mA<br>Field Supply | -                                                                      |
|                                    |                                                       | m / mm <sup>2</sup> | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | -                     |                                     | -                                                                      |
|                                    | Discharge                                             | Type / Ø            | 103HW / 7Ø                           | 103HW / 7Ø                           | 103HW / 7Ø                           | 103HW / 7Ø                           | -                     | PT1000Ω /<br>4~20mA<br>Field Supply | -                                                                      |
|                                    |                                                       | m / mm <sup>2</sup> | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | 10m /<br>2*0.75mm <sup>2</sup>       | -                     |                                     | -                                                                      |
| Refrigerant                        | Type                                                  | -                   | R410A                                | R410A                                | R410A                                | R410A                                | R410A                 | R410A                               | R410A                                                                  |
| EEV kit                            | Type                                                  | -                   | INCLUDED                             | INCLUDED                             | INCLUDED                             | INCLUDED                             | NOT INCLUDED          | NOT INCLUDED                        | -                                                                      |
|                                    | EEV Wire length                                       | m                   | 2                                    | 2                                    | 7                                    | 7                                    | -                     | -                                   | 7                                                                      |
| Dimensions                         | EEV kit (W×HxD)                                       | mm                  | 415 x102 x170                        | 415 x102 x170                        | 415 x102 x170                        | 415 x102 x170                        | -                     | -                                   | Accessory for<br>MCM-D201N,<br>Ordering<br>Separately<br>(1EA per10HP) |
|                                    |                                                       | inch                | [1'-3 1/4"] x [3<br>1/2"] x [6 3/4"] | [1'-3 1/4"] x [3<br>1/2"] x [6 3/4"] | [1'-3 1/4"] x [3<br>1/2"] x [6 3/4"] | [1'-3 1/4"] x [3<br>1/2"] x [6 3/4"] |                       |                                     |                                                                        |
|                                    |                                                       | inch                | 6.7 x16.3 x 4                        | 6.7 x16.3 x 4                        | 6.7 x16.3 x 4                        | 6.7 x16.3 x 4                        |                       |                                     |                                                                        |
|                                    | Control Box (W×HxD)                                   | mm                  | 380 x130 x280                        | 380 x130 x280                        | 380 x130 x280                        | 380 x130 x280                        | 380 x130 x280         | 385 x53 x275                        | -                                                                      |
|                                    |                                                       | inch                | 15.0 x5.1 x11.0                      | 15.0 x5.1 x11.0                      | 15.0 x5.1 x11.0                      | 15.0 x5.1 x11.0                      | 15.0 x5.1 x11.0       | 15.2 x2.1 x10.8                     | -                                                                      |

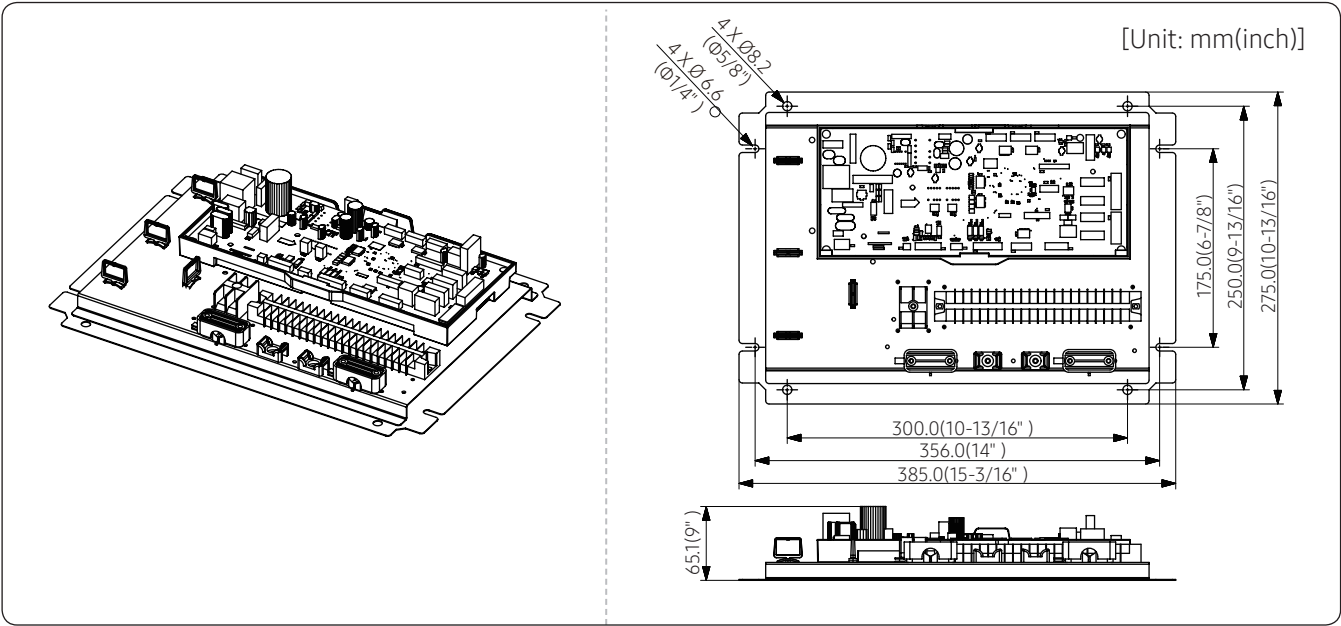
- Specifications may be subject to change without prior notice for product improvement.
- The AHU design SPEC are base on 10HP test result under Evaporating Temperature: 7°C, Superheat: 1°C, Air temperature: 27°CDB/19°CWB
- The EEV kit, Room/EVA. IN/EVA. OUT/Discharge sensors and Cable-nuts are not included in the Control kit Model "MCM-D201N, MXD-X000AN".  
(Pipe inlet/outlet sensor is included in "MCM-D201N, MXD-X000AN").
- In case of MCM-D201N, EEV kit(Model name : MXD-A64K100E) is need to order 1ea per 10HP separately.
- In terms of AHU, there is a no limitation in capacity.

# 5. AHU (Air Handling Unit) kit

## 5.4. Dimensional drawings

### Dimensional drawings

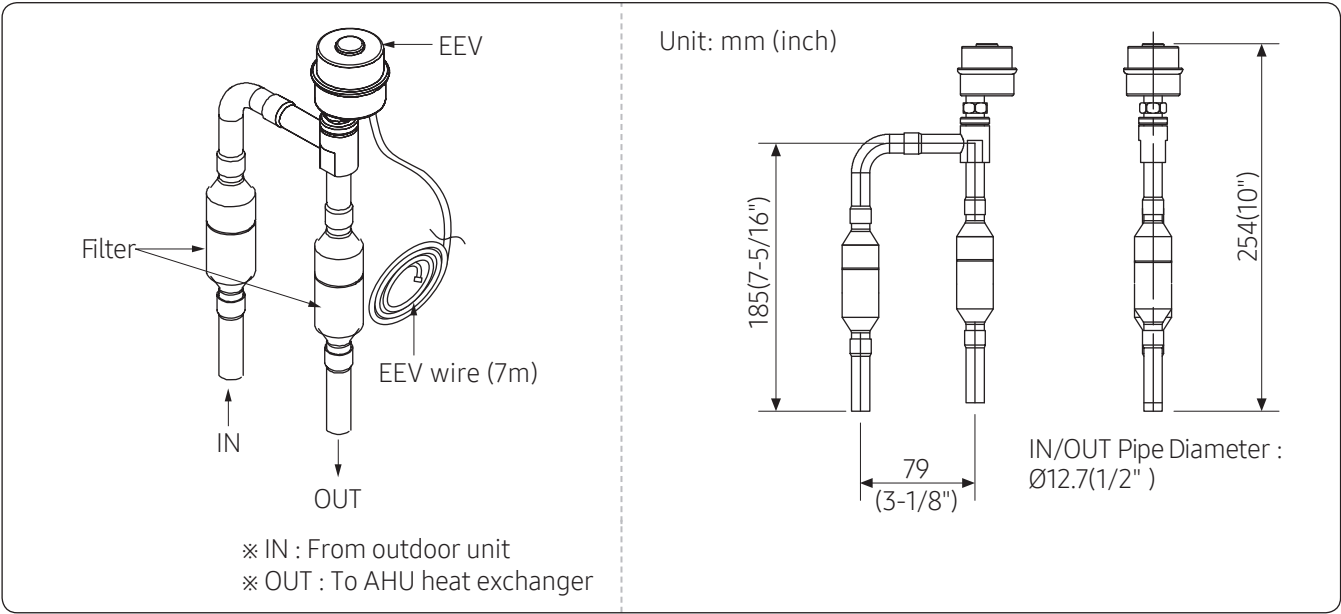
MCM-D201N



### EEV kit : Accessory (Ordered separately)

For detailed information of EEV installation, refer to the installation manual of ASS'Y EEV (MXD-A64K100E) which you need to purchase additionally.

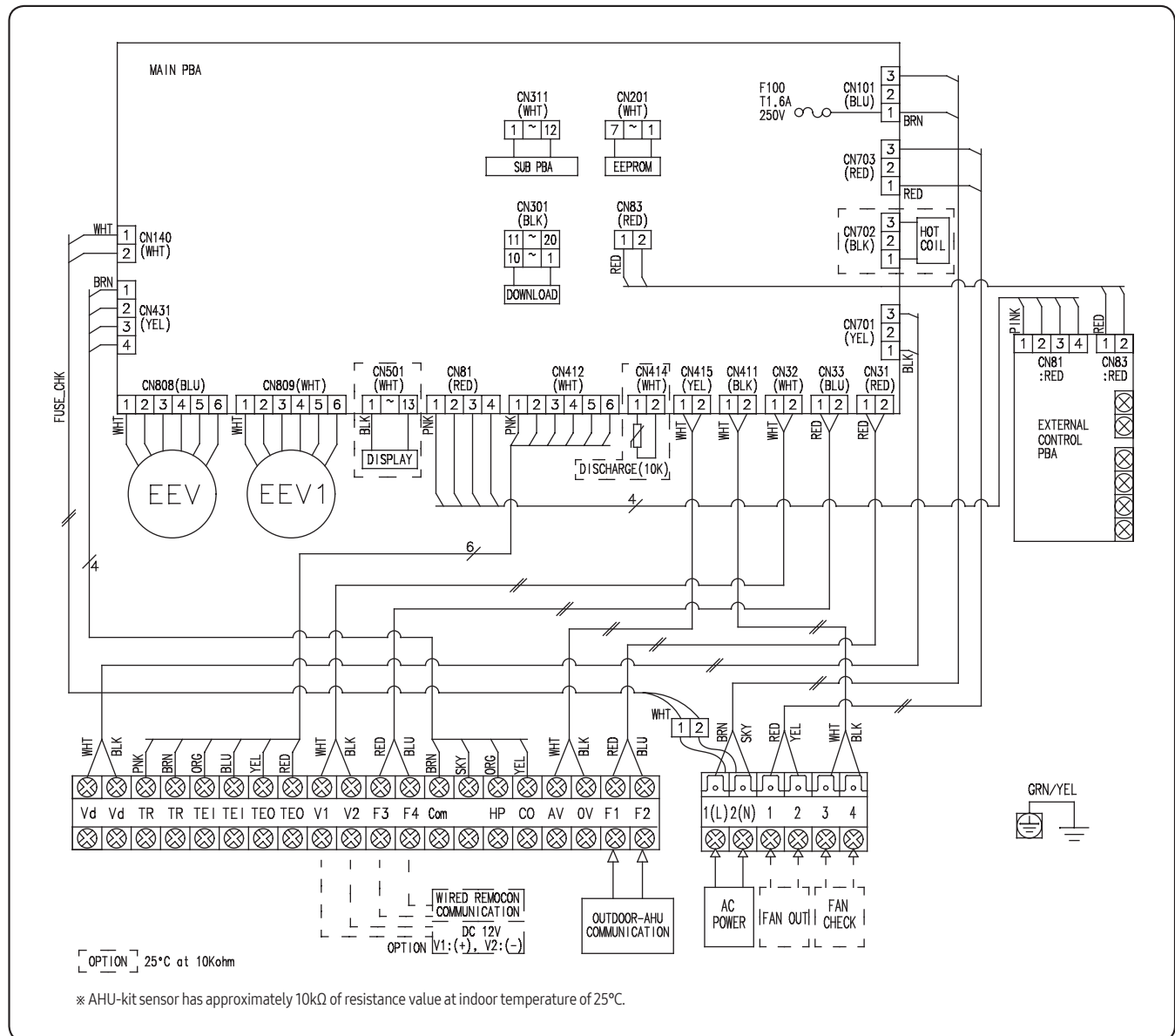
MXD-A64K100E



# 5. AHU (Air Handling Unit) kit

## Wiring drawings

MXD-K\*\*\*AN / MXD-X000AN



|                 |                            |      |                            |     |                       |
|-----------------|----------------------------|------|----------------------------|-----|-----------------------|
| EEV             | Electronic expansion valve | EEV1 | Electronic expansion valve | Vd  | Defrost Signal(AC)    |
| TR              | Room Temperature           | TEI  | EVAP. IN Temperature       | TEO | EVAP. OUT Temperature |
| Com/HP/CO/AV/OV | Simple BMS                 |      |                            |     |                       |

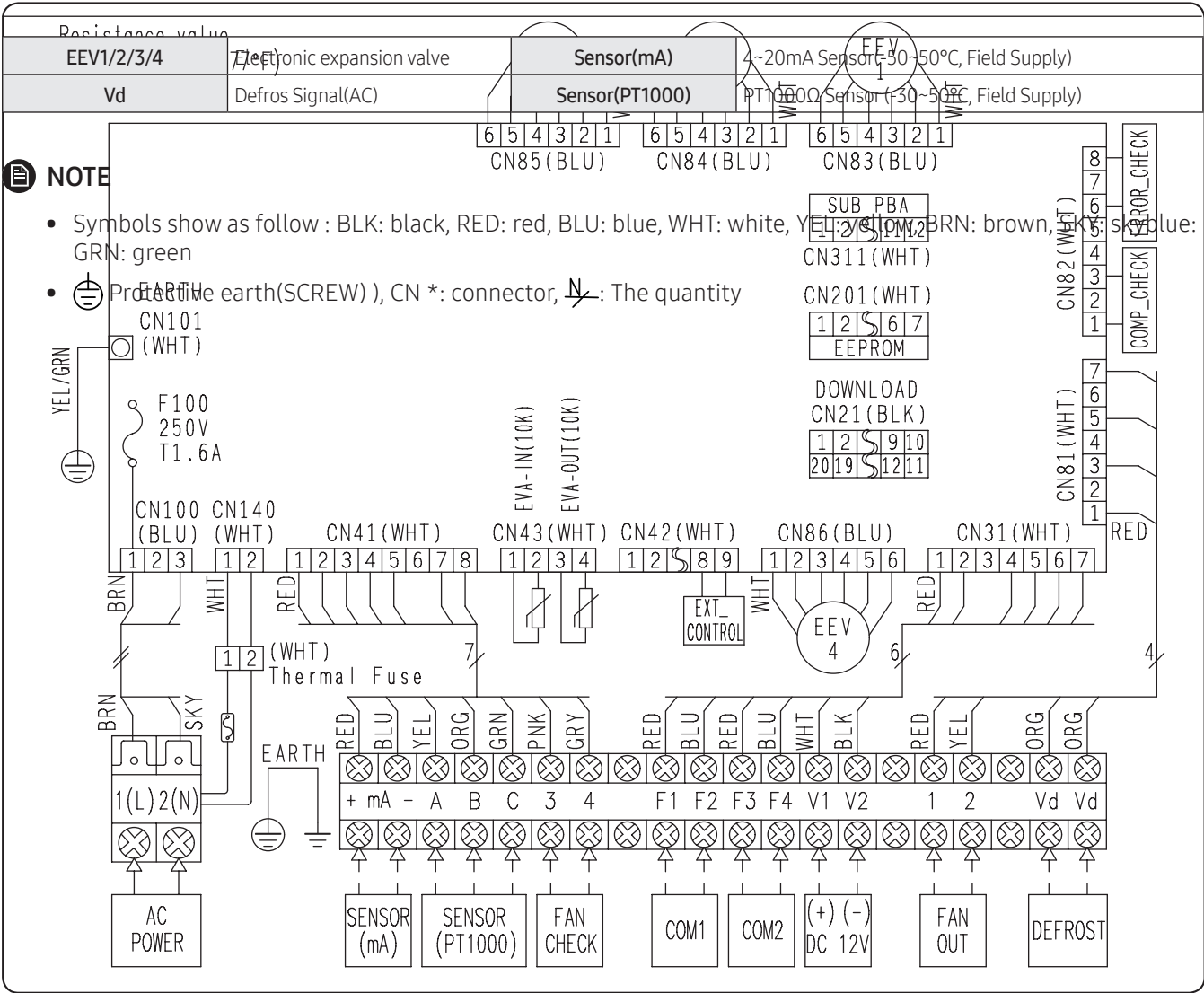
## NOTE

- Symbols show as follow : BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue: GRN: green
- ⊕ Protective earth(SCREW) , CN \*: connector,  $\frac{N}{\text{quantity}}$ : The quantity

# 5. AHU (Air Handling Unit) kit

## Wiring drawings

MCM-D201N



# 5. AHU (Air Handling Unit) kit

## Technical drawings

### Dimensional drawings

| KIT model name             | MXD-A38K2A                                                                  | MXD-A12K2A                                                  | MXD-A58K2A                                                                  |
|----------------------------|-----------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------|
| SET application model name | ADX080**~120**<br>AM080**~120**<br>AM072**/AA~120**/AA<br>4TV*0072**~0120** | ADX140**~160**<br>AM140**~160**<br>AM144**/AA<br>4TV*0144** | ADX180**~200**<br>AM180**~300**<br>AM168**/AA~216**/AA<br>4TV*0168**~0216** |
| Image                      |                                                                             |                                                             |                                                                             |

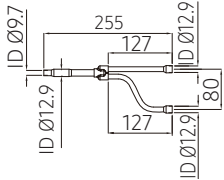
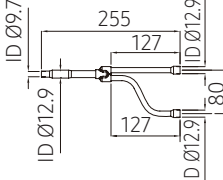
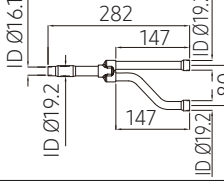
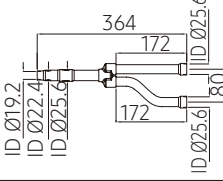
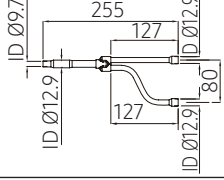
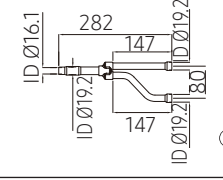
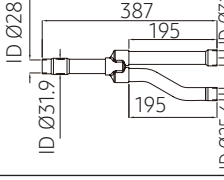
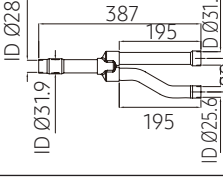
| MXD-A38K2A | MXD-A12K2A | MXD-A58K2A |
|------------|------------|------------|
|            |            |            |

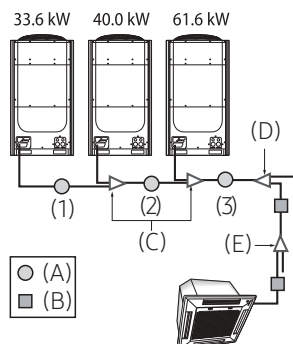
## 7. Branch kit

### 7.1. Y-joint

| Model       | Total indoor unit's capacities             |
|-------------|--------------------------------------------|
| MXJ-YA1509M | 15.0 kW (51 MBH) and below                 |
| MXJ-YA2512M | Over 15.0~40.0 kW (51~136 MBH) and below   |
| MXJ-YA2812M | Over 40.0~45.0 kW (136~154 MBH) and below  |
| MXJ-YA2815M | Over 45.0~70.3 kW (154~240 MBH) and below  |
| MXJ-YA3419M | Over 70.3~98.4 kW (240~336 MBH) and below  |
| MXJ-YA4119M | Over 98.4~135.2 kW (336~461 MBH) and below |
| MXJ-YA4422M | Over 135.2 kW (461 MBH)                    |

### Dimensional drawing

|             |       | (Unit : mm)                                                                         |                                                                                       |
|-------------|-------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Port        | Model | MXJ-YA1509M                                                                         | MXJ-YA2512M                                                                           |
| Liquid side |       |   |   |
| Gas side    |       |  |  |
| Port        | Model | MXJ-YA2812M                                                                         | MXJ-YA2815M                                                                           |
| Liquid side |       |  |  |
| Gas side    |       |  |  |



- First branch joint (D)  
Make a selection according to outdoor unit capacity.
- Branch joint (E)  
Select a branch joint according to the sum of indoor unit capacity which will be connected after the branch. However, if the size of the pipe between branch joints (E) is bigger than the size of the pipe connected to the outdoor unit (D), apply the pipe size (D).



## 7. Branch kit

(Unit : mm)

| Port        | Model | MXJ-YA3419M | MXJ-YA4119M | MXJ-YA4422M |
|-------------|-------|-------------|-------------|-------------|
| Liquid side |       |             |             |             |
| Gas side    |       |             |             |             |

## Reducer

(Unit : mm)

|   |   |   |   |
|---|---|---|---|
| ① | ② | ③ | ④ |
|   |   |   |   |
| ⑤ | ⑥ | ⑦ | ⑧ |
|   |   |   |   |
| ⑨ | ⑩ | ⑪ | ⑫ |
|   |   |   |   |

## 7. Branch kit

## 7.2. Y-joint for HR (High pressure gas)

| Model       | Total indoor unit's capacities                 |
|-------------|------------------------------------------------|
| MXJ-YA1500M | 22.4 kW (76 MBH) and below                     |
| MXJ-YA2500M | Over 22.4~70.3 kW<br>(76~240 MBH) and below    |
| MXJ-YA3100M | Over 70.3~ 135.2 kW<br>(240~461 MBH) and below |
| MXJ-YA3800M | Over 135.2 kW (461 MBH)                        |

## Dimensional drawing

| MXJ-YA1500M                                                                                |                              | MXJ-YA2500M                                                                                 |                              |
|--------------------------------------------------------------------------------------------|------------------------------|---------------------------------------------------------------------------------------------|------------------------------|
| <p>ID Ø16.1<br/>ID Ø19.2<br/>284<br/>149<br/>80<br/>ID Ø16.1</p>                           |                              | <p>ID Ø19.2<br/>ID Ø22.4<br/>ID Ø25.6<br/>ID Ø22.4<br/>365<br/>173<br/>80<br/>ID Ø22.4</p>  | <p>① x 2 EA<br/>② x 1 EA</p> |
| MXJ-YA3100M                                                                                |                              | MXJ-YA3800M                                                                                 |                              |
| <p>ID Ø22.4<br/>ID Ø28.8<br/>ID Ø35.1<br/>ID Ø35.1<br/>407<br/>194<br/>80<br/>ID Ø28.7</p> | <p>③ x 1 EA<br/>④ x 1 EA</p> | <p>ID Ø35.1<br/>ID Ø41.4<br/>ID Ø44.6<br/>ID Ø35.1<br/>472<br/>241<br/>110<br/>ID Ø35.1</p> | <p>③ x 2 EA</p>              |

## Reducer

(Unit : mm)

①

②

③

④

## 7. Branch kit

### 7.3. Header joint

| Model       | Total indoor unit's capacities | The maximum quantity of connection |
|-------------|--------------------------------|------------------------------------|
| MXJ-HA2512M | 45.0 kW(154 MBH) and below     | 4                                  |
| MXJ-HA3115M | 70.3 kW(240 MBH) and below     | 8                                  |
| MXJ-HA3819M | Over 70.3 kW (240 MBH)         | 8                                  |

### Dimensional drawing

(Unit : mm)

| Port        | Model | MXJ-HA2512M                                | MXJ-HA3115M                                |
|-------------|-------|--------------------------------------------|--------------------------------------------|
| Liquid side |       | <p>① x 4 EA ② x 1 EA ⑦ <b>a</b> x 1 EA</p> | <p>① x 8 EA ④ x 1 EA ⑦ <b>b</b> x 1 EA</p> |
| Gas side    |       | <p>③ x 4 EA ⑤ x 1 EA ⑧ x 1 EA</p>          | <p>③ x 8 EA ⑥ x 1 EA ⑧ x 2 EA</p>          |
| Port        | Model | MXJ-HA3819M                                |                                            |
| Liquid side |       | <p>① x 8 EA ⑦ <b>c</b> x 1 EA</p>          |                                            |
| Gas side    |       | <p>③ x 8 EA ⑧ x 2 EA</p>                   |                                            |

### Reducer

(Unit : mm)

|   |   |   |   |
|---|---|---|---|
| ① | ② | ③ | ④ |
|   |   |   |   |
| ⑤ | ⑥ | ⑦ | ⑧ |
|   |   |   |   |

## 7. Branch kit

### 7.4. Out door joint

| Model       | Total indoor unit's capacities      |
|-------------|-------------------------------------|
| MXJ-TA3819M | Below 135.2 kW<br>(48HP, 461.3 MBH) |
| MXJ-TA3419M |                                     |
| MXJ-TA4422M | Above 140.2 kW<br>(50HP, 478.4 MBH) |
| MXJ-TA4122M |                                     |

### Dimensional drawing

(Unit : mm)

| Port        | Model | MXJ-TA3819M | MXJ-TA3419M |
|-------------|-------|-------------|-------------|
| Liquid side |       |             |             |
| Gas side    |       |             |             |
| Port        | Model | MXJ-TA4422M | MXJ-TA4122M |
| Liquid side |       |             |             |
| Gas side    |       |             |             |

### Reducer

(Unit : mm)

|   |  |   |  |   |  |
|---|--|---|--|---|--|
| ① |  | ② |  | ③ |  |
| ④ |  | ⑤ |  | ⑥ |  |

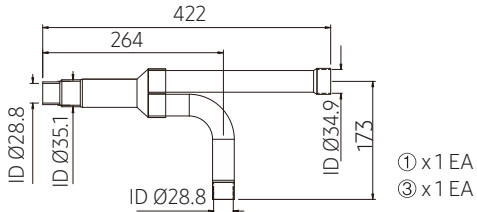
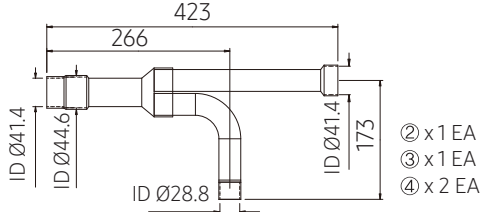
# 7. Branch kit

## 7.5. Out door joint for HR (High pressure gas)

| Model       | Total indoor unit's capacities  |
|-------------|---------------------------------|
| MXJ-TA3100M | Below 135.2 kW(48HP, 461.3MBH)  |
| MXJ-TA3800M | Above 140.2 kW(50HP, 478.4 MBH) |

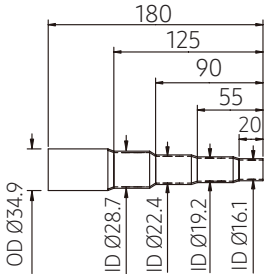
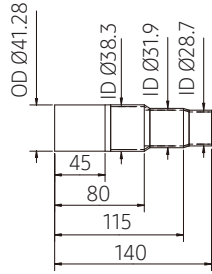
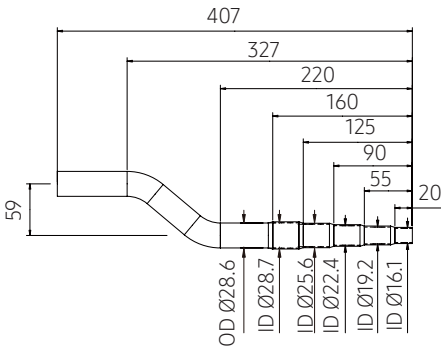
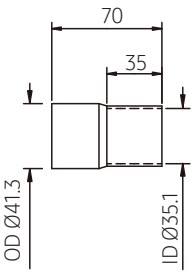
### Dimensional drawing

(Unit : mm)

| MXJ-TA3100M                                                                       | MXJ-TA3800M                                                                        |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |

### Reducer

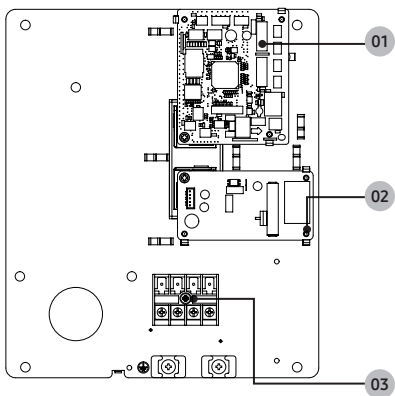
(Unit : mm)

|                                                                                     |                                                                                     |                                                                                      |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|

## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

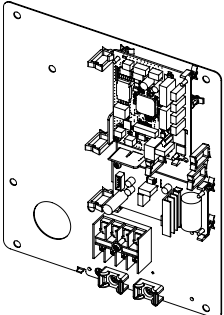
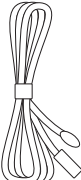
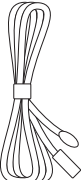
### Part Names and Components

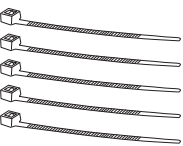
#### Low Ambient Control kit (Assy Control kit)



- 01 MAIN PBA
- 02 SMPS PBA
- 03 TERMINAL BLOCK

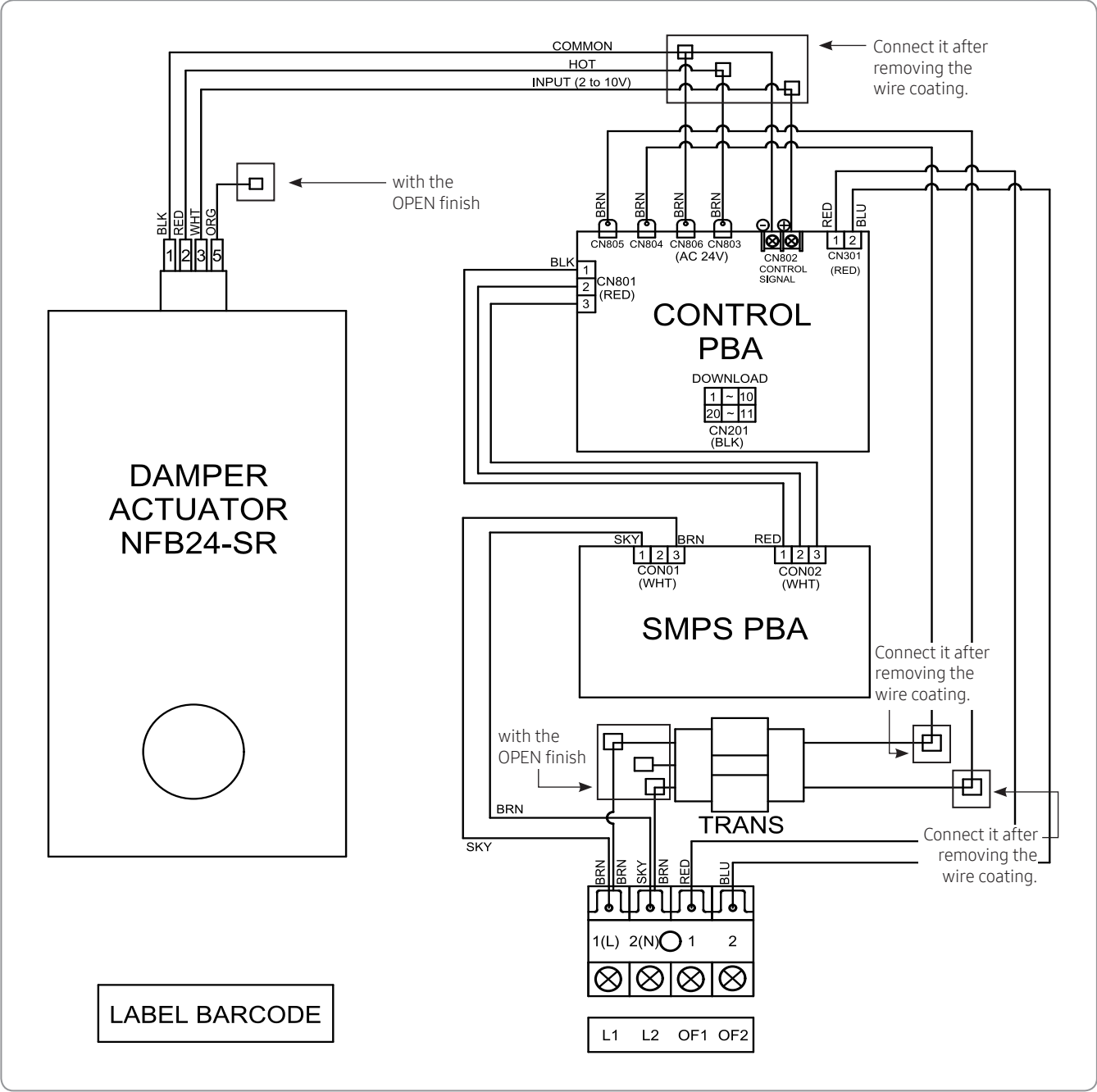
### Components

| Name   | Body                                                                                | Communication Cable                                                                 | Power Cable                                                                           |
|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Amount | 1                                                                                   | 1                                                                                   | 1                                                                                     |
| Shape  |  |  |  |
|        |                                                                                     | *SPEC : 300V/500V<br>H05RN-F 0.75 <sup>2</sup>                                      | *SPEC : 300V/500V<br>H05RN-F 0.75 <sup>2</sup>                                        |

| Name   | Cable Tie                                                                           | Installation Manual                                                                 | Grounding Screw                                                                      | Connection Cable                                                                      |
|--------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Amount | 5                                                                                   | 1                                                                                   | 1                                                                                    | 2                                                                                     |
| Shape  |  |  |  |  |
|        |                                                                                     |                                                                                     |                                                                                      | *SPEC : UL1015 AWG#18                                                                 |

# 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

1 Connect the actuator to TRANS.

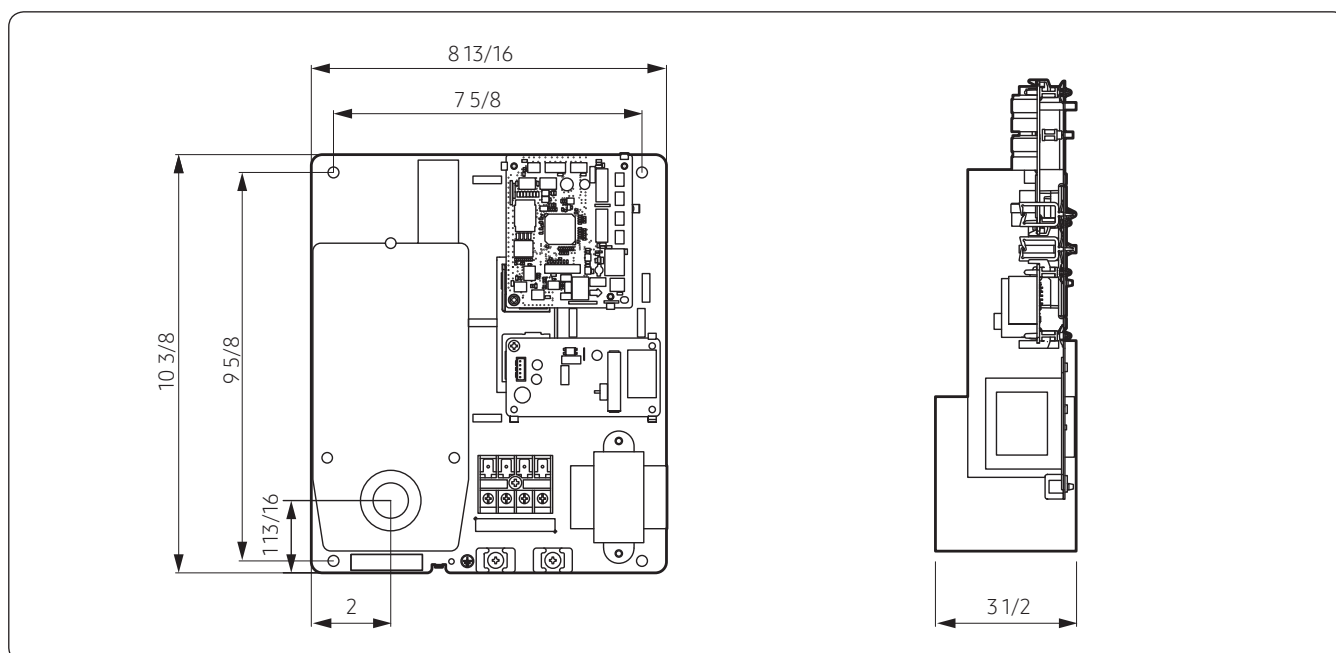
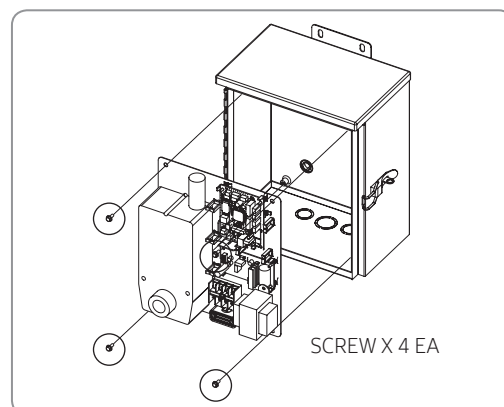


## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

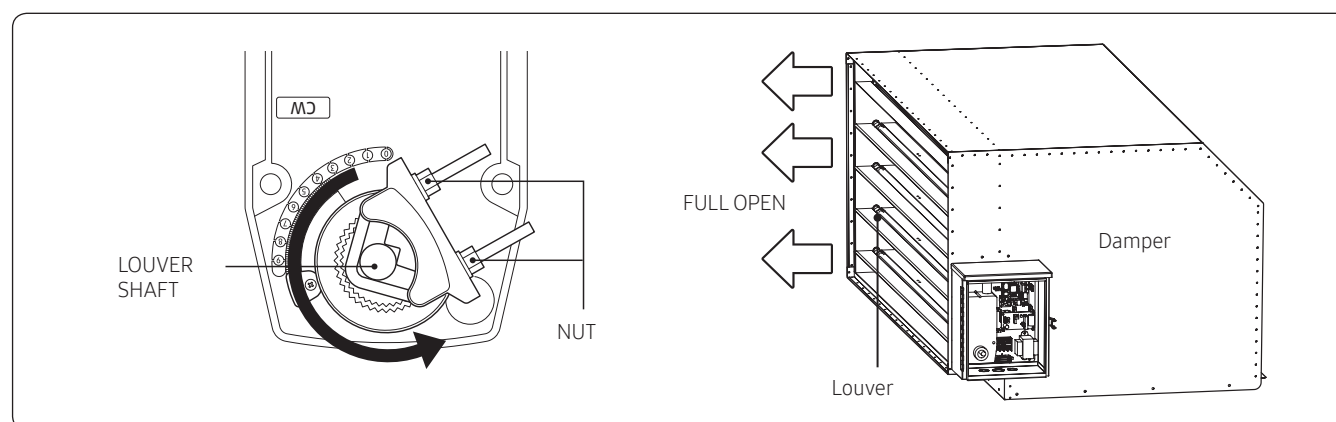
2 Assemble the control box and the control kit.

### <Control box specification determinants>

- The control kit must be taken into the control box. (Check the fitting holes.)
- The UL certification must be acquired.
- When the louver actuator shaft enters into the box, prevent water penetration. (Use a bushing and such.)
- When assembling the control kit, use the boss with 12 mm or above in size.  
(The heat transfer distance between the control kit and control box must be 12 mm or above.)



3 Assemble the damper and Assy control box.



### ⚠ WARNING

- When assembling the damper and Assy control box, be sure to fix the shaft and actuator (Nut x2) in the louver in fully open state.



## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

### Construction of outdoor unit and low ambient cooling kit

#### Components of Low Ambient Cooling kit for the Outdoor Unit

| Model Number          | Position Type                                                                                                      |
|-----------------------|--------------------------------------------------------------------------------------------------------------------|
| LACH-SL               | Low Ambient Cooling Hood - Small (chassis) Left                                                                    |
| LACH-SR               | Low Ambient Cooling Hood - Small (chassis) Right                                                                   |
| LACH-R1               | Low Ambient Cooling Hood - Rear 1 (Small chassis)                                                                  |
| LACH-R2               | Low Ambient Cooling Hood - Rear 2 (Large A type chassis)                                                           |
| LACH-SLR              | Low Ambient Cooling Hood - Left/Right (Large B type chassis)                                                       |
| LACH-R3               | Low Ambient Cooling Hood - Rear 3 (Large B type chassis)                                                           |
| LACH-F1               | Low Ambient Cooling Hood - Front 1 (Large A type chassis)                                                          |
| LACKD-1<br>(= LACH-1) | Low Ambient Cooling kit Damper-1(Small chassis)<br>(Low Ambient Cooling Hood-1 (Small chassis))                    |
| LACKD-2<br>(= LACH-2) | Low Ambient Cooling kit Damper-2 (Large A,B type chassis)<br>(Low Ambient Cooling Hood-2 (Large A,B type chassis)) |

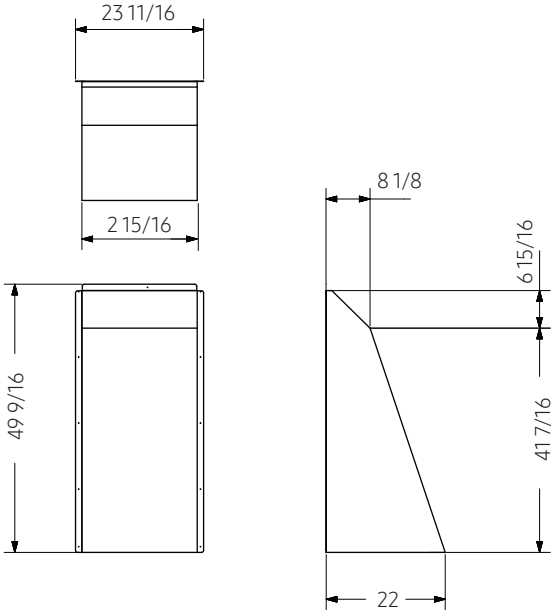
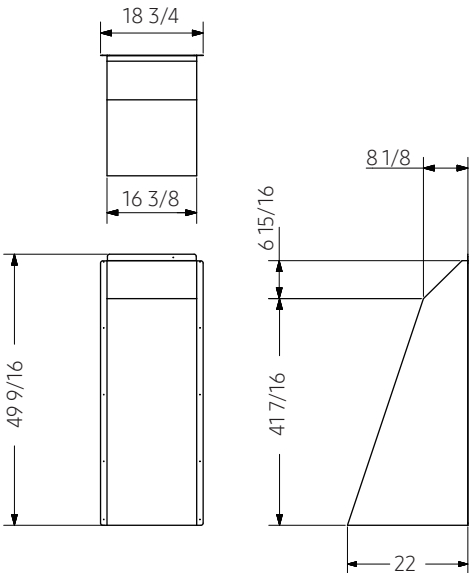
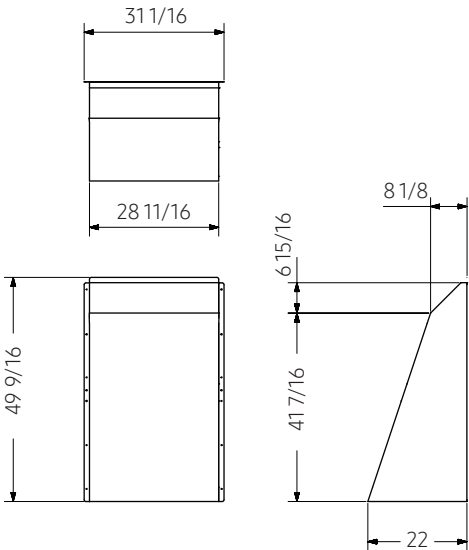
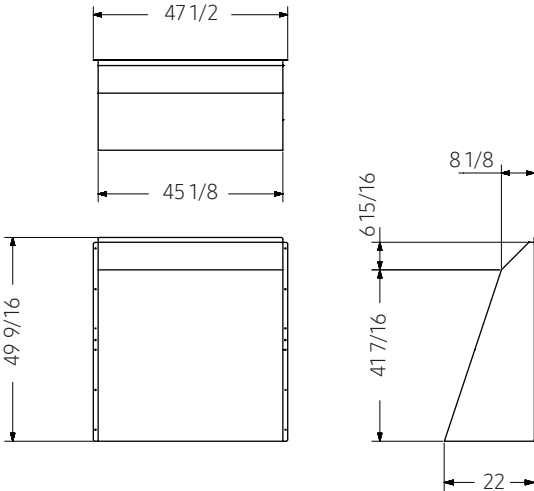
| Required Model Number per chassis | Model Number |          |         |         |                       |
|-----------------------------------|--------------|----------|---------|---------|-----------------------|
|                                   | Left         | Right    | Back    | Front   | Top                   |
| DVM S Small chassis               | LACH-SL      | LACH-SR  | LACH-R1 | -       | LACKD-1<br>(= LACH-1) |
| DVM Large A type chassis          | LACH-SL      | LACH-SR  | LACH-R2 | -       | LACKD-2<br>(= LACH-2) |
| DVM Large B type chassis          | LACH-SLR     | LACH-SLR | LACH-R3 | LACH-F1 | LACKD-2<br>(= LACH-2) |

#### CAUTION

- When installing the components in the outdoor unit, be careful for screws not to touch the heat exchanger pin.

# 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

UNIT : inch

| LACH-SR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | LACH-SL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>Technical drawings for the LACH-SR unit. The front view shows a unit with a top width of <math>23\frac{11}{16}</math> inches and a base width of <math>2\frac{15}{16}</math> inches. The total height is <math>49\frac{9}{16}</math> inches. The side view shows a base width of 22 inches, a top width of <math>8\frac{1}{8}</math> inches, a height of <math>6\frac{15}{16}</math> inches for the top section, and a total height of <math>41\frac{7}{16}</math> inches for the main body.</p>  |  <p>Technical drawings for the LACH-SL unit. The front view shows a unit with a top width of <math>18\frac{3}{4}</math> inches and a base width of <math>16\frac{3}{8}</math> inches. The total height is <math>49\frac{9}{16}</math> inches. The side view shows a base width of 22 inches, a top width of <math>8\frac{1}{8}</math> inches, a height of <math>6\frac{15}{16}</math> inches for the top section, and a total height of <math>41\frac{7}{16}</math> inches for the main body.</p>  |
| LACH-R1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | LACH-R2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  <p>Technical drawings for the LACH-R1 unit. The front view shows a unit with a top width of <math>31\frac{1}{16}</math> inches and a base width of <math>28\frac{11}{16}</math> inches. The total height is <math>49\frac{9}{16}</math> inches. The side view shows a base width of 22 inches, a top width of <math>8\frac{1}{8}</math> inches, a height of <math>6\frac{15}{16}</math> inches for the top section, and a total height of <math>41\frac{7}{16}</math> inches for the main body.</p> |  <p>Technical drawings for the LACH-R2 unit. The front view shows a unit with a top width of <math>47\frac{1}{2}</math> inches and a base width of <math>45\frac{1}{8}</math> inches. The total height is <math>49\frac{9}{16}</math> inches. The side view shows a base width of 22 inches, a top width of <math>8\frac{1}{8}</math> inches, a height of <math>6\frac{15}{16}</math> inches for the top section, and a total height of <math>41\frac{7}{16}</math> inches for the main body.</p> |

# 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

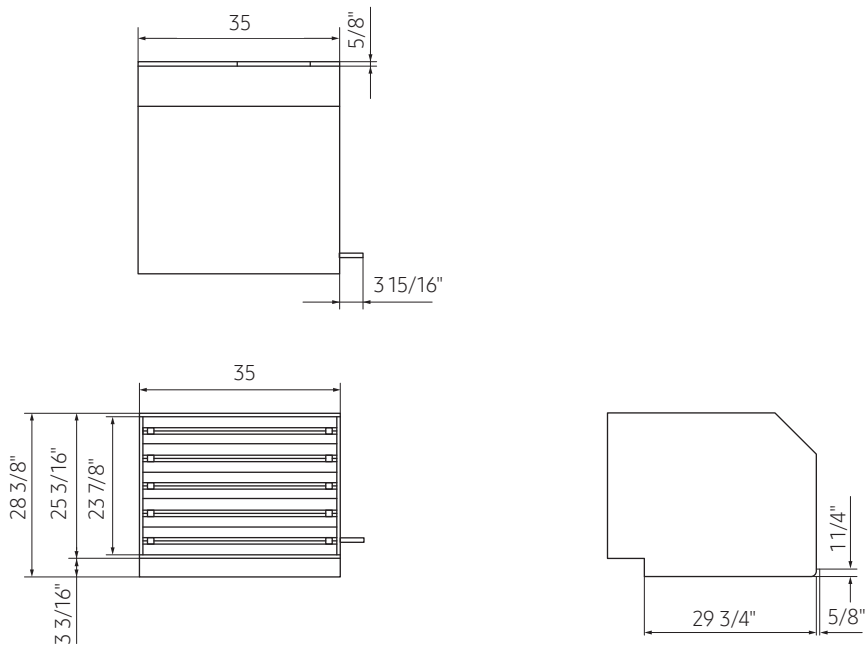
UNIT : inch

| LACH-SLR                                                                                                                                                                                                                                                                                                                                                                                                                              | LACH-R3                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Technical drawings for LACH-SLR unit showing front, side, and top views with dimensions:</p> <ul style="list-style-type: none"> <li>Top view: <math>27\frac{11}{16}</math></li> <li>Front view: <math>53\frac{5}{16}</math>, <math>25\frac{5}{16}</math></li> <li>Side view: <math>46\frac{11}{16}</math>, <math>6\frac{11}{16}</math>, <math>13\frac{3}{8}</math>, <math>22</math></li> </ul>                                     | <p>Technical drawings for LACH-R3 unit showing front, side, and top views with dimensions:</p> <ul style="list-style-type: none"> <li>Top view: <math>49\frac{3}{8}</math></li> <li>Front view: <math>53\frac{5}{16}</math>, <math>47</math></li> <li>Side view: <math>46\frac{11}{16}</math>, <math>6\frac{11}{16}</math>, <math>13\frac{3}{8}</math>, <math>22</math></li> </ul> |
| LACH-F1                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                    |
| <p>Technical drawings for LACH-F1 unit showing front, side, and top views with dimensions:</p> <ul style="list-style-type: none"> <li>Top view: <math>16\frac{7}{8}</math>, <math>9\frac{1}{16}</math></li> <li>Front view: <math>15\frac{1}{16}</math>, <math>15\frac{7}{8}</math></li> <li>Side view: <math>46\frac{11}{16}</math>, <math>6\frac{11}{16}</math>, <math>11\frac{5}{16}</math>, <math>22\frac{5}{8}</math></li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                    |

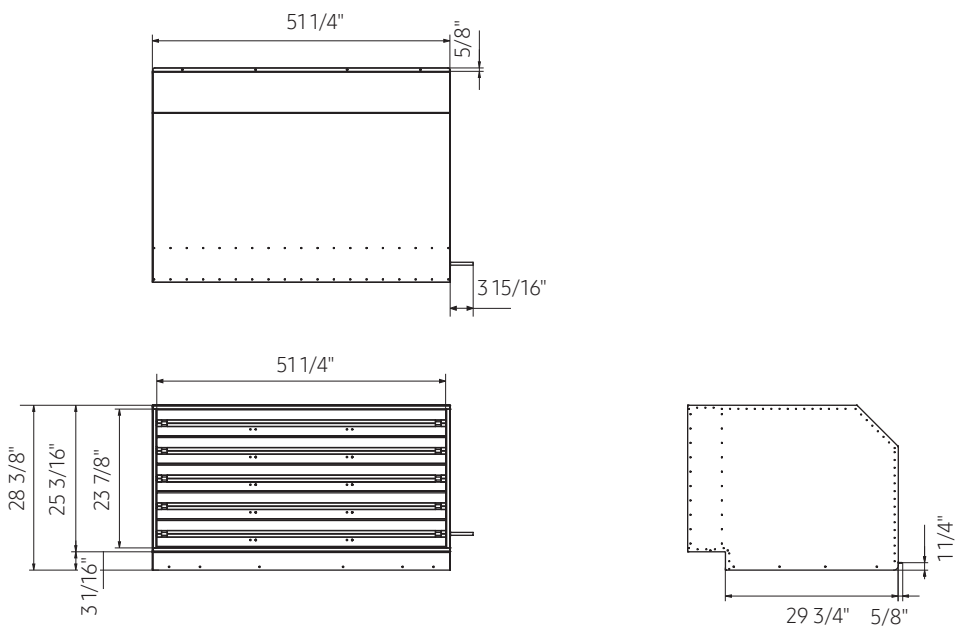
## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

UNIT : inch

Low Ambient Cooling kit Damper-1 (Small chassis)  
(Low Ambient Cooling Hood-1 (Small chassis))



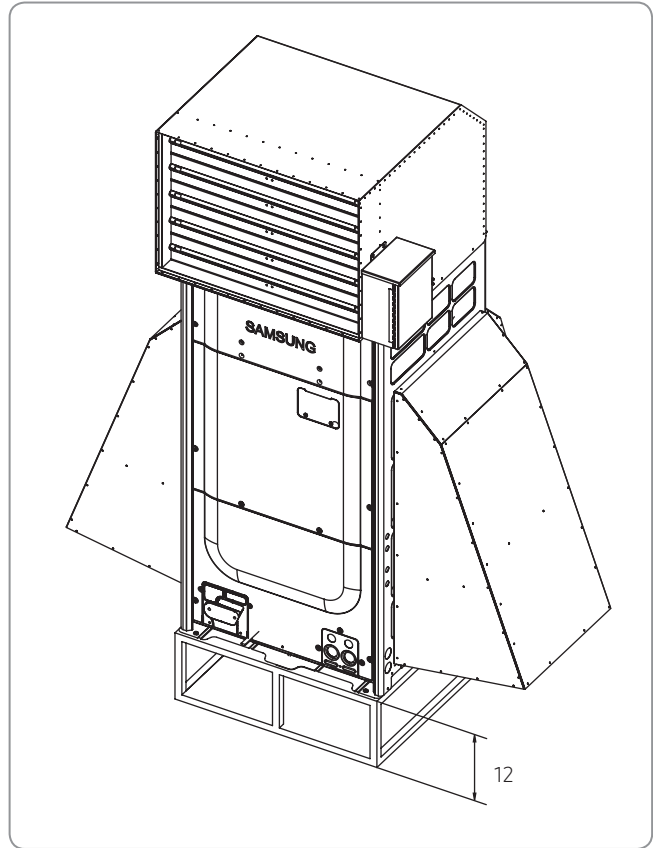
Low Ambient Cooling kit Damper-2 (Large A,B type chassis)  
(Low Ambient Cooling Hood-2 (Large A,B type chassis))



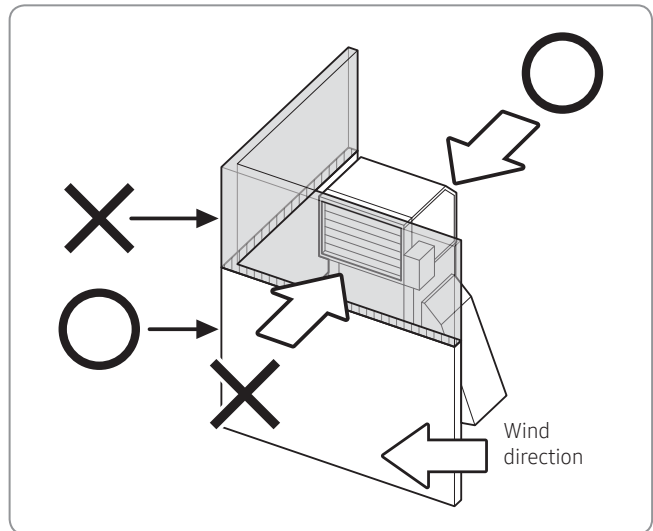
## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

### Installation Environment for Low Ambient Cooling kit

- 1 Keep the height of the frame and foundation 12" or above.



- 2 Remove any obstacles that screen the damper outlet.
- 3 Align the damper outlet with the main wind direction. (In case of head wind, the performance can be lowered.)



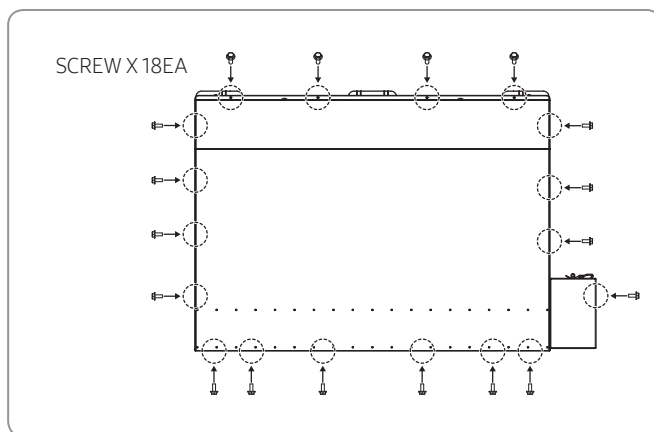
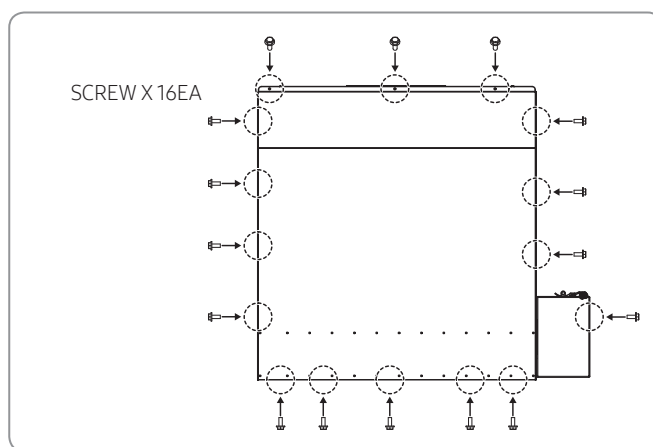
## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

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### How to Install the Low Ambient Cooling kit Damper

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- 1 In order to install the damper, use the lift or crane. Otherwise, at least 2 people are required for installation.
- 2 Before installation, remove the guard fan from the outdoor unit.
- 3 When connecting the damper to the outdoor unit, **TOP VIEW** fasten screws in all marked places (34 sites).

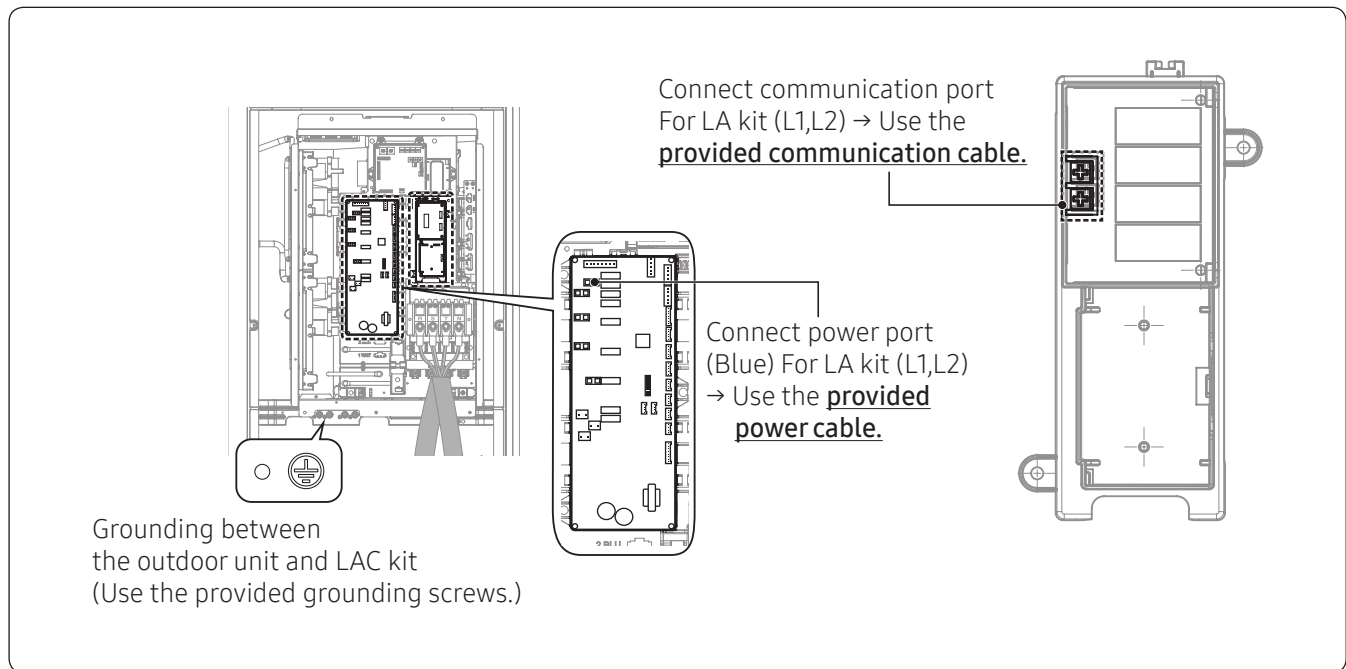


## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

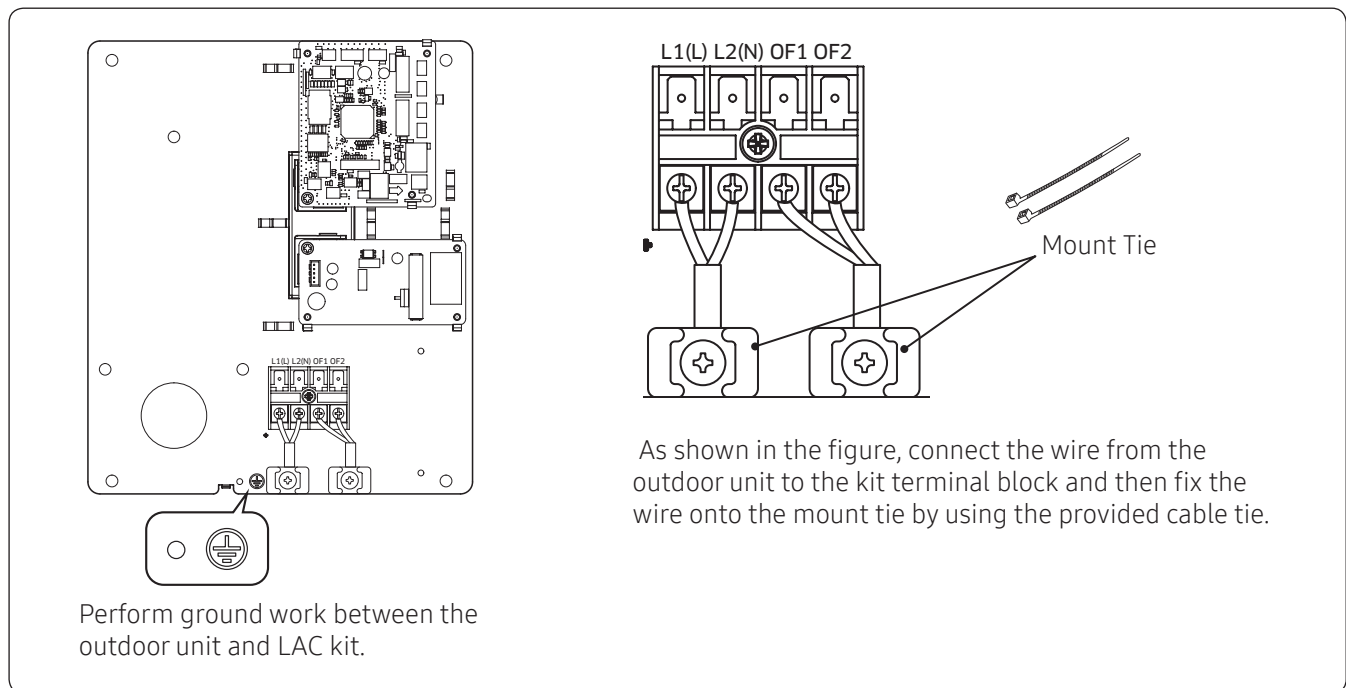
### Connecting the Low Ambient Cooling kit to the Outdoor Unit

#### Connecting the outdoor unit

Connect the hub PBA to power supplies (L1, L2) and then connect the communication cable through OF1 and OF2.



#### Connecting the kit

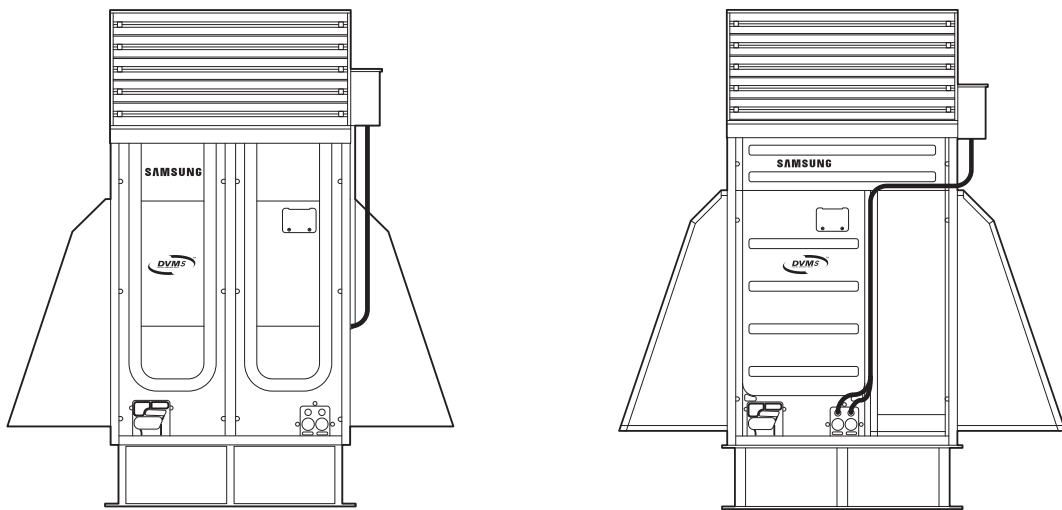


## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

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### Extracting the power and communication cables

- Be sure to extract the power and communication cables through the cover (knockout) at the lower right of the front panel or through the knockout hole on the right of the cabinet.
- Extract the communication cable through the outlet (knockout) at the lower right of the side or front panel.
- Install the power and communication cables separately by securing with cable protection conduit.
- Fix the cable protection conduit onto the outdoor knockout tubes by using the CD connector and bushing. At this time, use the insulation bushing.





## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

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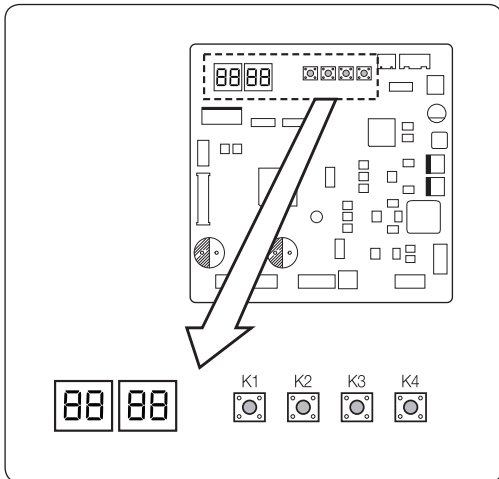
### Configuring the options of the outdoor unit for installation of LAC kit

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When installing LAC kit, be sure to enable the LAC kit function for the outdoor unit.

When installing the modules, enable the function on the main outdoor unit.

### Configuring key functions of the outdoor unit



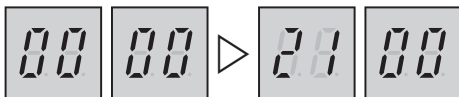
### Installation with an aid of tact switch and configuration of options

- Configuring the options

- 1 Press and hold K2 to enter the setup. (Available in operation stop status)
  - The following appears. (In case of compressor cut-off setting, 1 or 2 appears in Seg4.)



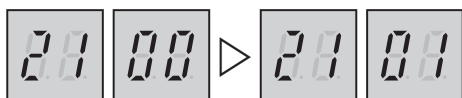
- In Seg1 and Seg2, the number of the selected option appears.
  - In Seg3 and Seg4, the setting value of the selected option appears.
- 2 In the option setup menu, when you shortly press the K1 switch, the values for Seg1 and Seg2 change. You can select the desired option.  
(e.g. The value for Seg1 is 2 and the value for Seg2 is 1.)



## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

- 3 In the desired option, if you shortly press the K2 switch, the values for Seg3 and Seg4 change. You can select the desired option.

(e.g. The value for Seg3 is 0 and the value for Seg4 is 1.)



- 4 After selecting an option, if you press the K2 switch for 2 seconds, all 7-segment displays blink. If you enter the tracking mode, the option setting is saved.

### **⚠ CAUTION**

- If not normally processed as mentioned above, the option setting is not saved.
- Before entry of the mode, if you want to return to the setting, press and hold the K1 switch to cancel the setting.
- If you want to reset to the factory defaults, in the option setting mode, press and hold the K4 switch.
  - If you press and hold the K4 switch, all the settings are reset to the factory defaults but the values are not saved yet. Only when the 7-segment display goes to the tracking mode by pressing and holding the K2 switch, the setting is saved.

| Option        | Entry Unit | SEG1 | SEG2 | SEG3 | SEG4 | Function                                 | Remarks                                                 |
|---------------|------------|------|------|------|------|------------------------------------------|---------------------------------------------------------|
| LAC kit Setup | Main       | 2    | 1    | 0    | 0    | Not applied<br>(Factor default settings) | In case of installation of LAC kit<br>(Low ambient kit) |
|               |            |      |      | 0    | 1    | Applied                                  |                                                         |

### **Cautions for LAC kit (Low ambient cooling kit)**

- If the main software version of the Outdoor unit is prior to June 2016, the LAC kit setup is unavailable. Update the firmware for your Main PBA(DB92-03752A)
- In the combination of modules, if the main software version of any Outdoor unit is prior to June 2016, upon LAC kit option setup, the E573 error occurs.
- If the option is not set, an error occurs so normal operation may not be possible.
- When the cooling operation is stopped due to E428 error, check for LAC kit failure or communication error between the outdoor unit and LAC kit.

## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

### Features of LAC kit (Low ambient cooling kit)

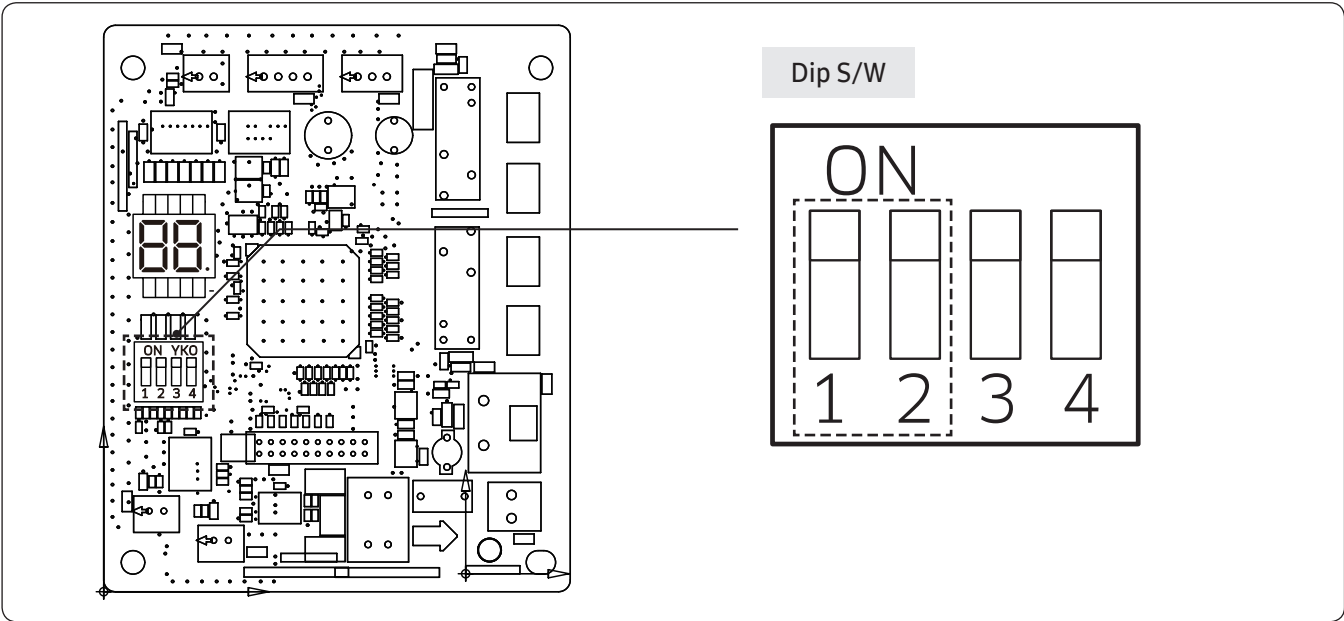
- If LAC kit is installed, the cooling operation is possible up to -13°F.
- For more information about cooling performance of LAC kit, see the following table:

| Performance Correction | Outdoor Temperature (°F, DB) |              |               |                  |
|------------------------|------------------------------|--------------|---------------|------------------|
|                        | Less than 23                 | Less than 99 | Less than 107 | Greater than 107 |
| Correction Factor      | 1.00                         | 1.00         | 0.95          | 0.90             |

- Capacity Correction = Cooling Capacity x Correction Factor

### Setting the address

Upon installation of LAC kit, set the address for the connected outdoor.



- Prior to power supply to the outdoor unit, set the switches. When address recognition is impossible after power supply, press the Reset button (K3 switch) on the outdoor unit.

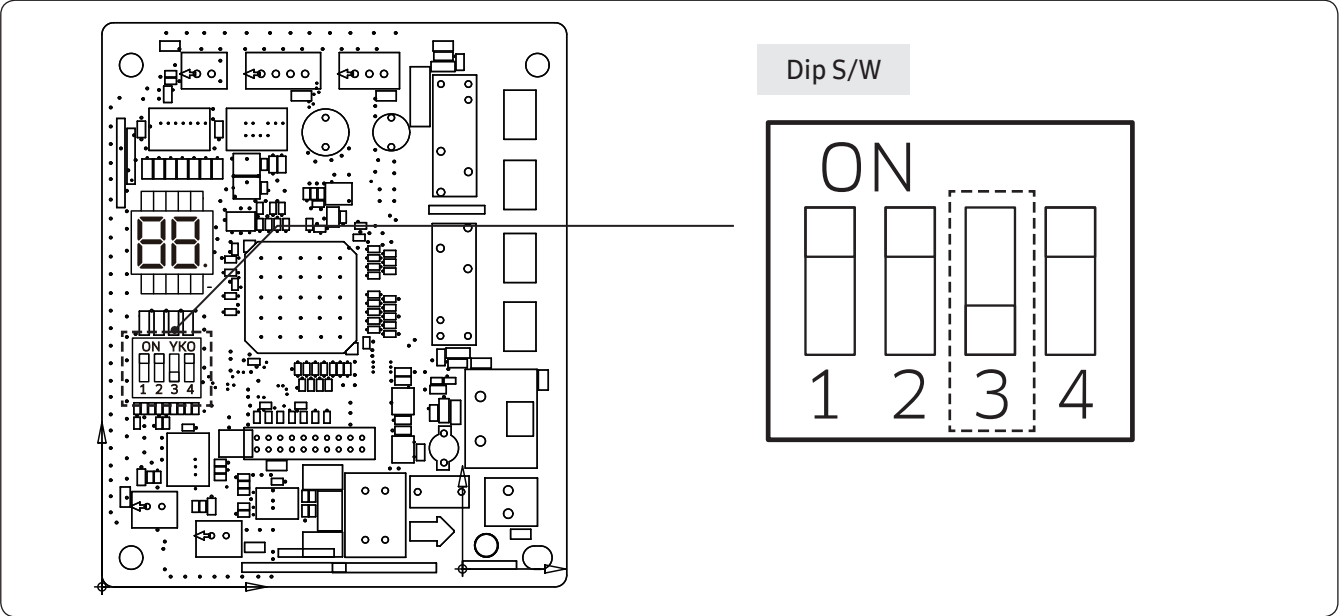
| Dip S/W      |              | Function                   | Remarks                         | 7-Segment |
|--------------|--------------|----------------------------|---------------------------------|-----------|
| #1           | #2           |                            |                                 |           |
| ON (Default) | ON (Default) | Outdoor unit address: No.1 | Connection to Main outdoor unit | Ⓛ 8       |
| ON           | OFF          | Outdoor unit address: No.2 | Connection to Sub1 outdoor unit | Ⓛ 9       |
| OFF          | ON           | Outdoor unit address: No.3 | Connection to Sub2 outdoor unit | Ⓛ R       |
| OFF          | OFF          | Outdoor unit address: No.4 | Connection to Sub3 outdoor unit | Ⓛ b       |

- After setup, check the LAC kit 7-segment display for normal address setup.

## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

### Inspection after installation of LAC kit

Check for normal operation.



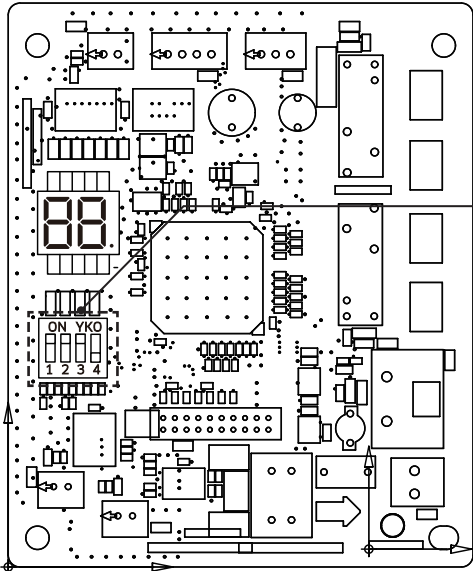
- Before power supply to the outdoor unit, set the dip switches. (Dip S/W #3 OFF)

| Dip S/W      | Function    | Remarks                |
|--------------|-------------|------------------------|
| #3           |             |                        |
| ON (Default) | Not applied | Inspection not applied |
| OFF          | Applied     | Inspection applied     |

- Inspection activity
  - Upon power supply to LAC kit, the louver is automatically moved to Full Close and then Full Open (original status). (1 cycle for 3 minutes)
- Checks
  - LAC kit operation
  - Clearance in Full Close
  - Outdoor unit's address on the 7-segment display and LAC kit address matching
- Louver clearance in Full Close
  - In Full Close, if the clearance is over 1/4 inch, performance degradation may occur.
  - In case of over 1/4 inch, unfasten nuts and then reinstall the product

## 8. Low Ambient Cooling kit (This optional kit is sold only in North America.)

### Checking the version of LAC kit



Dip S/W

ON

1

2

3

4

- To see the version of LAC kit, change to the dip switch #4.

| Dip S/W  | Function                       | Remarks                                                                                     |
|----------|--------------------------------|---------------------------------------------------------------------------------------------|
| #4       |                                |                                                                                             |
| ON → OFF | Display of the LAC kit version | The version is displayed 5 times in the order of year, month, and date.<br>ex) 16 / 08 / 01 |
| OFF → ON |                                |                                                                                             |

- Error code

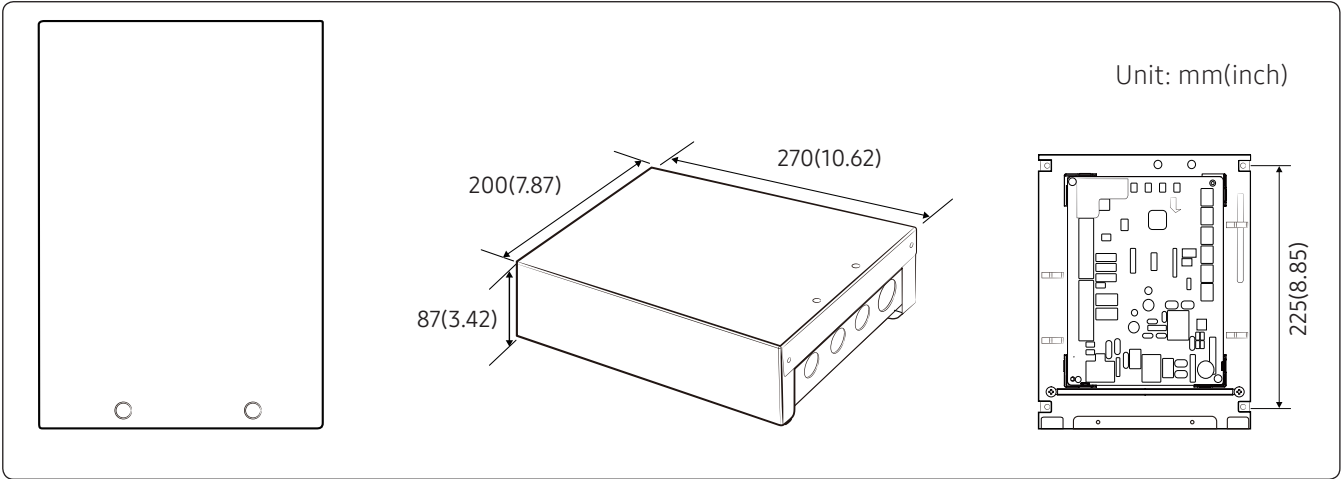
| Error code | Description                                          | Error Handling                                                                         | 7-Segment                                             |
|------------|------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------|
| E203       | Communication error between LAC kit and outdoor unit | Upon LAC kit 7-Segment Error Display Error, the state is changed to LCA KIT Full Open. | <div> <div>E2</div> <div>↔</div> <div>03</div> </div> |

- In case of E203 Error
  - Check the communication cable connection status between the outdoor unit and LAC kit.

# 9. FCU kit

## MIM-F00N

### Features



- Communication and control interfacing kit between 3rd party FCU and Samsung control system.
- Possible to use wired remote controller
- Possible to use DMS2.5, Touch centralized controller
- Provides external contact input
- Outputs control signal for FCU fan.
- Outputs control signal for Water valve .

### Product specification

|                           |                                                |
|---------------------------|------------------------------------------------|
| Communication             | RS485 x 1 (F1/F2) 2-wire PLC x 1 (F3/F4)       |
| Max. length of connection | RS485 – 1000m(3280ft) 2-wire PLC - 100m(328ft) |

### Power & cable specification

#### Europe

| Power Supply            | Power cable                 | Ground wire                 | Communication cable         | ELCB |
|-------------------------|-----------------------------|-----------------------------|-----------------------------|------|
| AC220 - 240V~ 50Hz, 1Ph | Min. 2.5 mm2 (0.0039 inch2) | Min. 2.5 mm2 (0.0039 inch2) | Min. 0.75 mm2(0.0012 inch2) | 15A  |

| Part                 | Rated Capacity                |
|----------------------|-------------------------------|
| Fan (High, Mid, Low) | AC220 - 240V~ 50Hz, 1Ph, 1A   |
| Water Valve          | AC220 - 240V~ 50Hz, 1Ph, 0.5A |

#### USA

| Power Supply                | MCA  | MOP |
|-----------------------------|------|-----|
| AC 208 - 230 V~ 60 Hz, 1 Ph | 2.75 | 15A |

| Part                 | Rated Capacity                |
|----------------------|-------------------------------|
| Fan (High, Mid, Low) | AC208 - 230V~ 60Hz, 1Ph, 1A   |
| Water Valve          | AC208 - 230V~ 60Hz, 1Ph, 0.5A |

# 9. FCU kit

## Product specification

### Power & cable specification

DC Wire

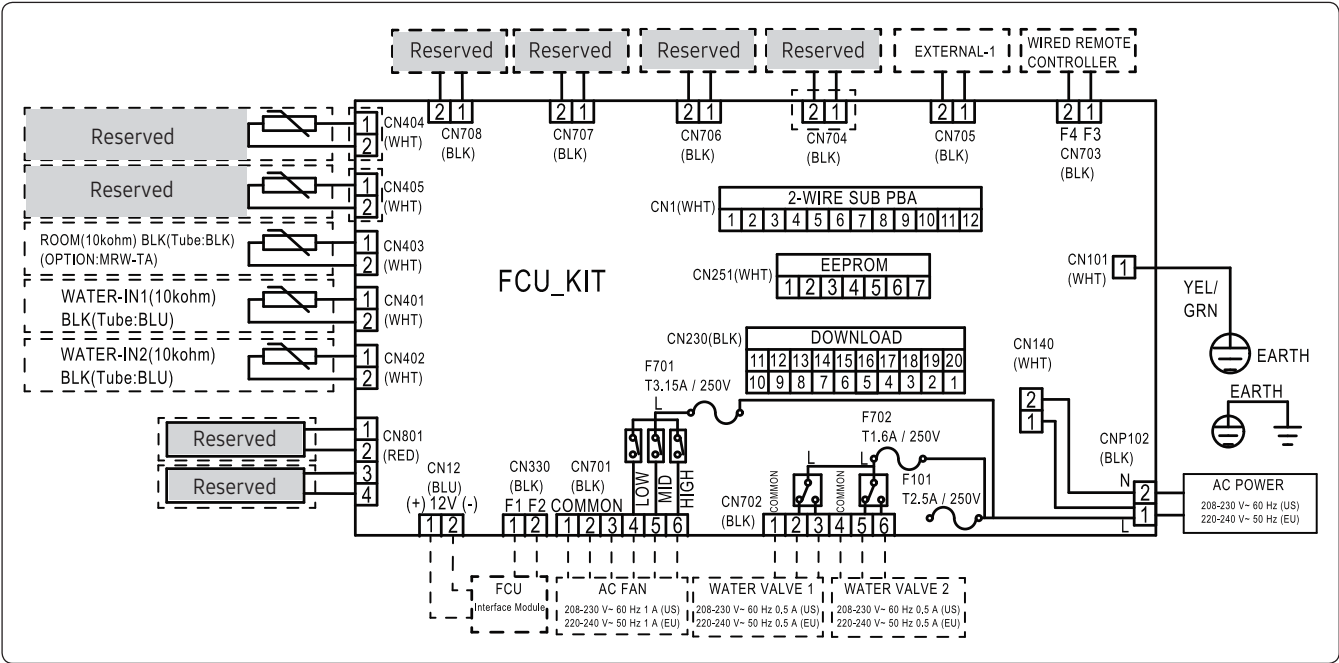
| Part              | Rated Capacity             |
|-------------------|----------------------------|
| Remote controller | DC 12V                     |
| External contact  | Zero voltage contact input |
| Sensor cable      | NTC./10 kΩ 25°C            |

### Compatible controller

|                         |                      |
|-------------------------|----------------------|
| Wired remote controller | MWR-WE11N, MWR-SH10N |
| Interface module        | MIM-F10N             |
| DMS2.5                  | MIM-D01AN            |
| BACnet GW               | MIM-B17BN            |
| LonWorks GW             | MIM-B18BN            |

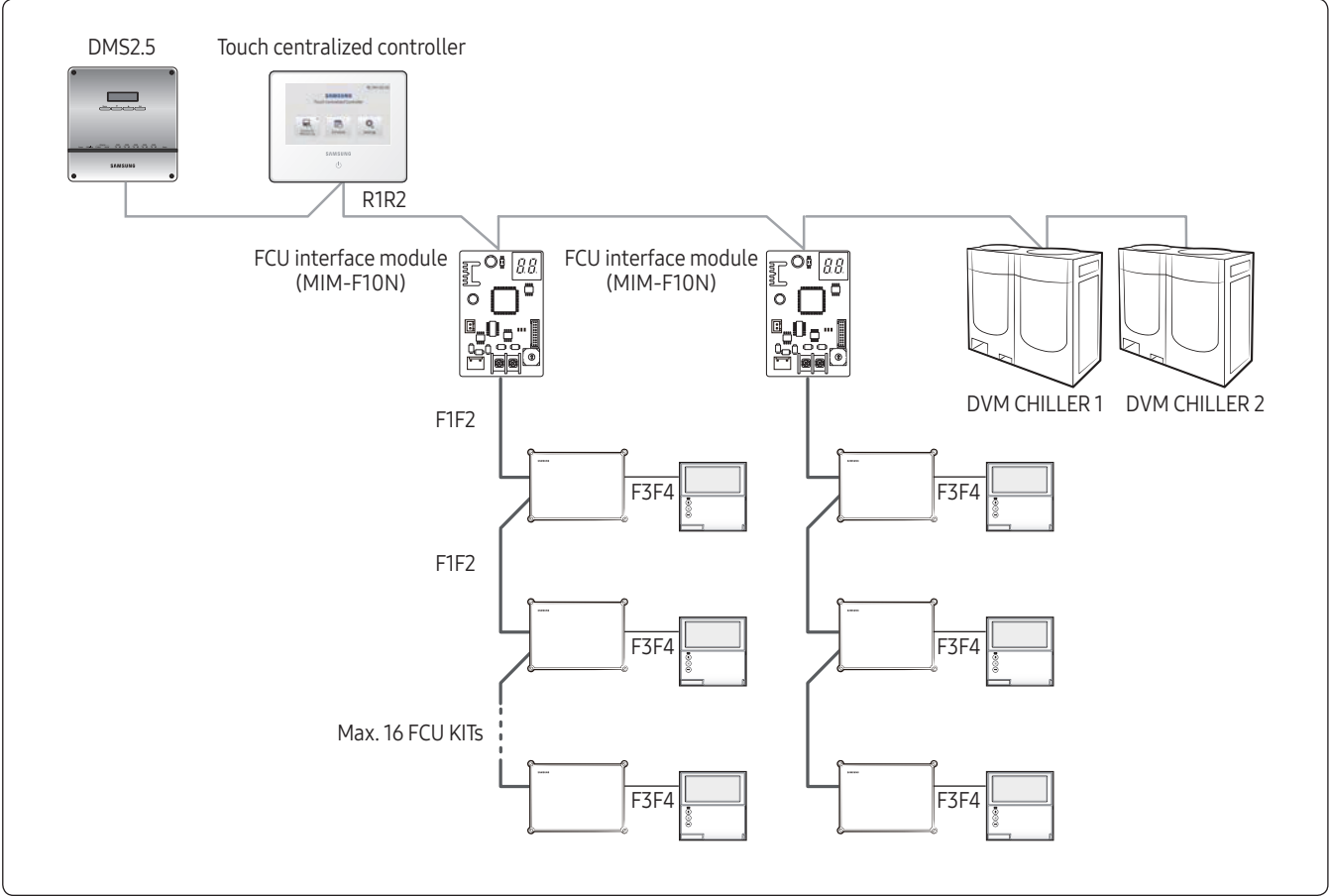
## Description of parts

### Electrical wiring diagram



# 9. FCU kit

Connection diagram

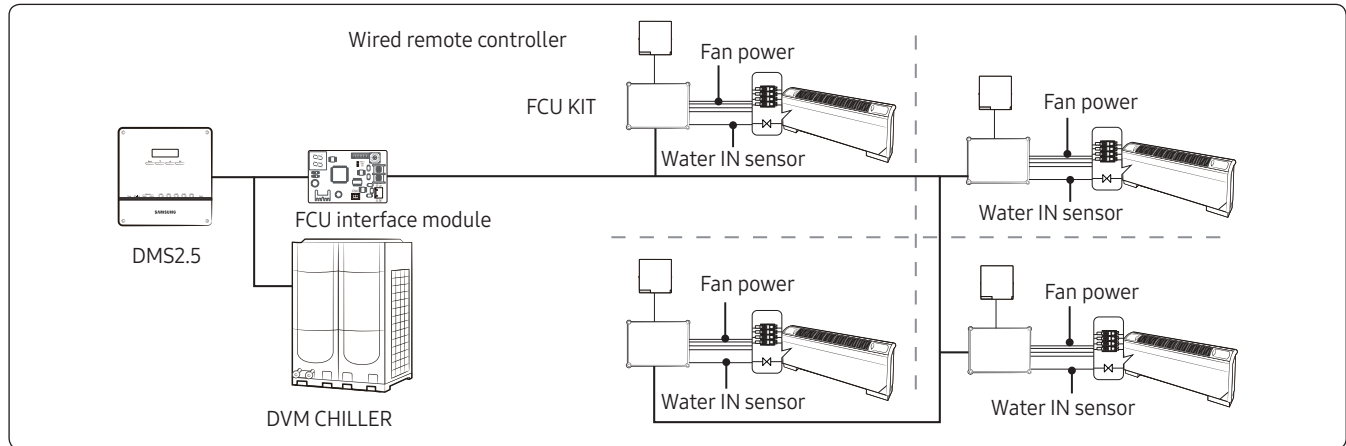




## 9. FCU kit

### Individual control of FCU

- Install FCU and FCU KIT by 1 to 1.
- Maximum number of FCU KITs that can be installed to a FCU interface module is 16.

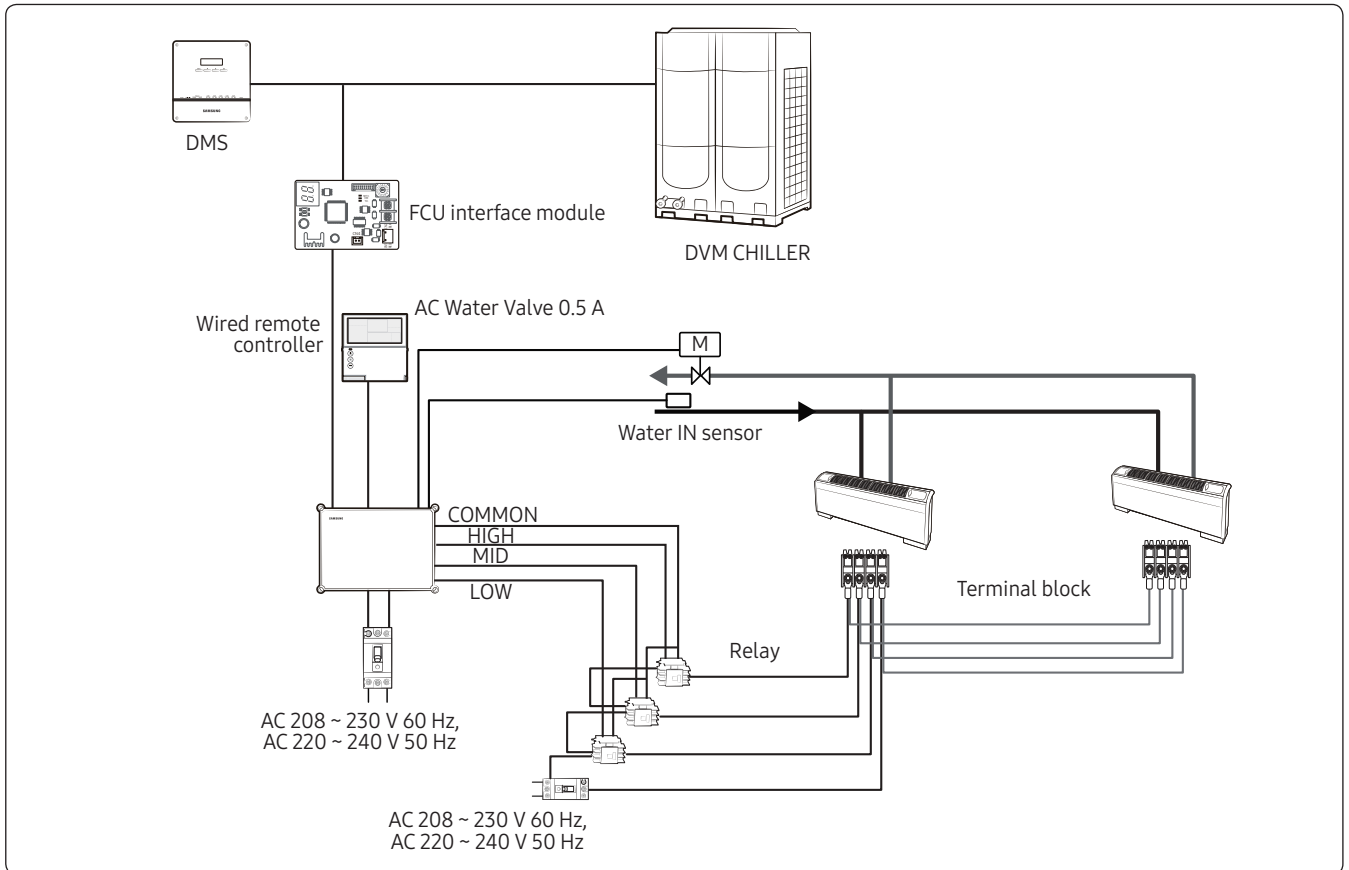


- Indoor temperature sensor must be installed to control FCU. Use either wired remote controller built-in sensor or external room sensor (MRW-TA).
  - Option setting value should be changed in service setting mode of wired remote controller after installing the remote controller. (Main menu 1, Sub menu 1, SEG 1, value 1)
  - In case of using external temperature sensor (optional), value of SEG24 (FCU KIT external indoor temperature sensor) of 05 series installation option should be set as 1.
- Water sensor should be attached to inlet pipe (1) for 2 pipe system (Water In), and each inlet pipe (2) for 4 pipe system (Cooling pipe in Heating pipe in.)
- Maximum number of FCU KITs that can be installed and controlled simultaneously by a wired remote controller is 16.

## 9. FCU kit

### Integrated control of FCU

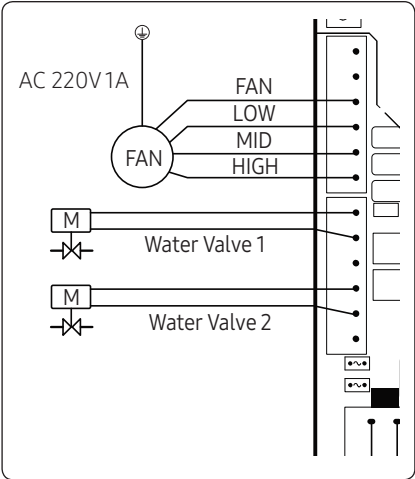
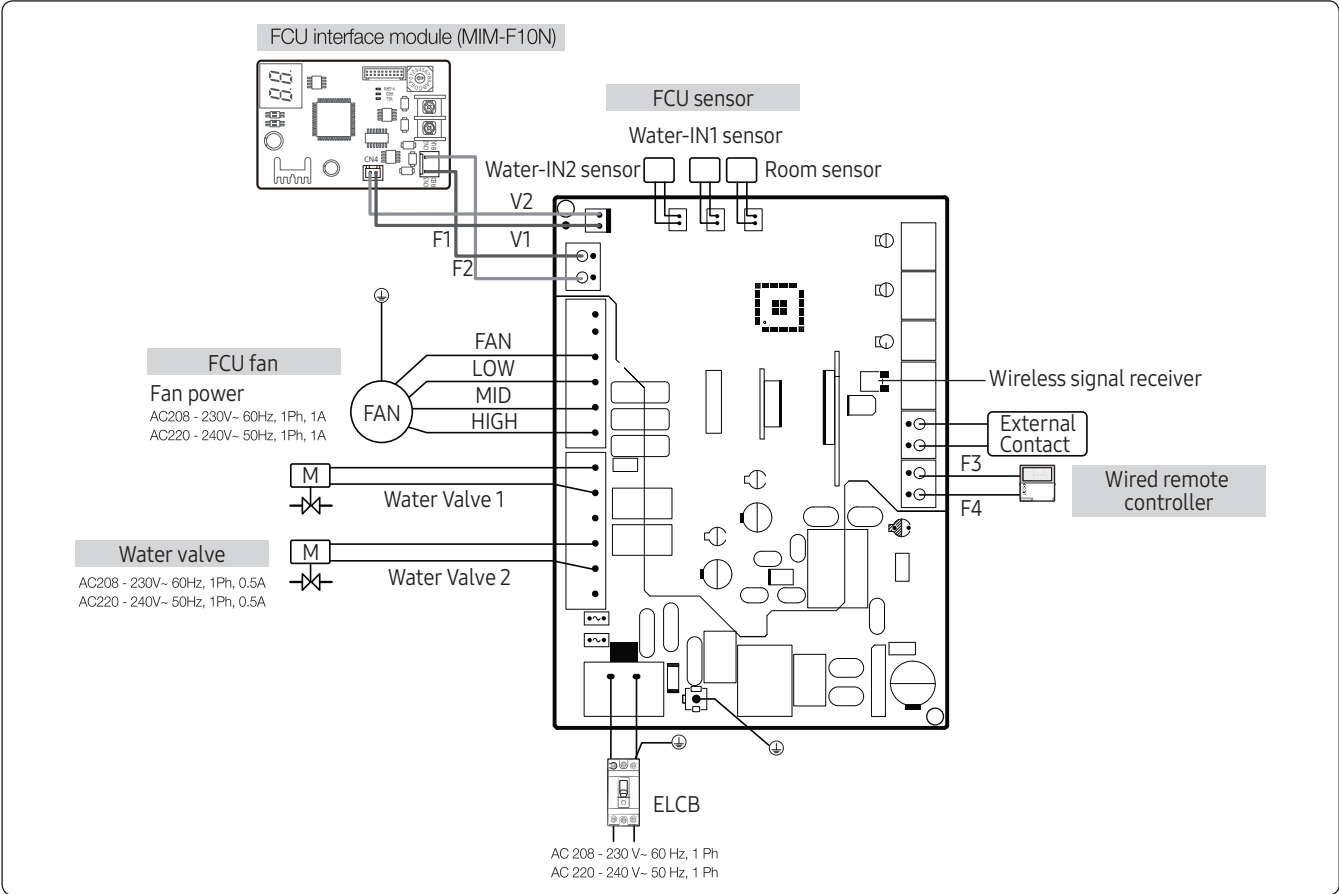
- Install FCUs and FCU KIT by multiple FCUs to 1 FCU KIT.



- National electric appliance safety standard should be applied for relay installation and capacity and power cable connection of FCU terminal block.

# 9. FCU kit

## Wiring



### Fan: Must use below specification fan.

- For direct power supply from FCU KIT, fan motor must work at AC 208 - 230V ~ 60 Hz, AC 220 - 240V ~ 50Hz and 1 A or low. Otherwise, install relay for external power supply to the fan motor.

### Water Valve: 2 Way or 3 Way solenoid valve

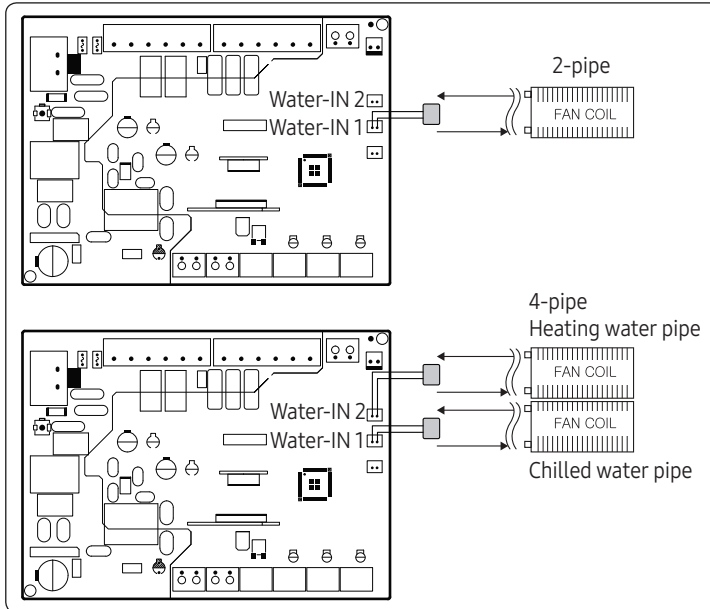
- 2/3 way solenoid value is a type that works at AC 208 - 230V ~ 60Hz, AC 220 - 240V ~ 50Hz and supports product with 0.5 A or low.

| Pipe type | Power output according to operation mode |            | AC 220 V output (Max 0.5 A) | Note              |
|-----------|------------------------------------------|------------|-----------------------------|-------------------|
| 2-pipe    | Cooling/ Heating                         | Thermo ON  | 1-2                         | Normal Close Type |
|           |                                          | Thermo OFF | 1-3                         | Normal Open Type  |
| 4-pipe    | Cooling                                  | Thermo ON  | 1-2                         | Normal Close Type |
|           |                                          | Thermo OFF | 1-3                         | Normal Open Type  |
|           | Heating                                  | Thermo ON  | 4-5                         | Normal Close Type |
|           |                                          | Thermo OFF | 4-6                         | Normal Open Type  |

- Connect 3 Way valve power cable according to value of operation mode power output.
- Select each valve that is below 0.5 A of operation current.
- Installation option setting(05series, SEG 14) is required to define 2 pipe or 4 pipe system.

## 9. FCU kit

### Water IN sensor



- When using 4-pipe system, set SEG14, of 05 series installation option as 1.
- In case of opposite installation of water pipe 1, 2 sensor in 4 pipe system, error(pipe block) will be occurred in 30 minutes of operation (E992 or E993).

| Pipe type | Sensor connection in PBA (FCU KIT) | Sensor location (Pipe)   |
|-----------|------------------------------------|--------------------------|
| 2-pipe    | Water-IN 1                         | Water pipe inlet         |
| 4-pipe    | Water-IN 1                         | Chilled water pipe inlet |
|           | Water-IN 2                         | Heating water pipe inlet |

### Wired remote controller

- 1 FCU KIT can connect 1 wired remote controller.
- 1 wired remote controller can connect Max.16 FCU KITs.
  - ※ Wired remote controller can control below function of FCU KIT.
- On/Off
- Operation mode
- Temperature setting
- Fans speed. (High, Mid, Low)
- Schedule

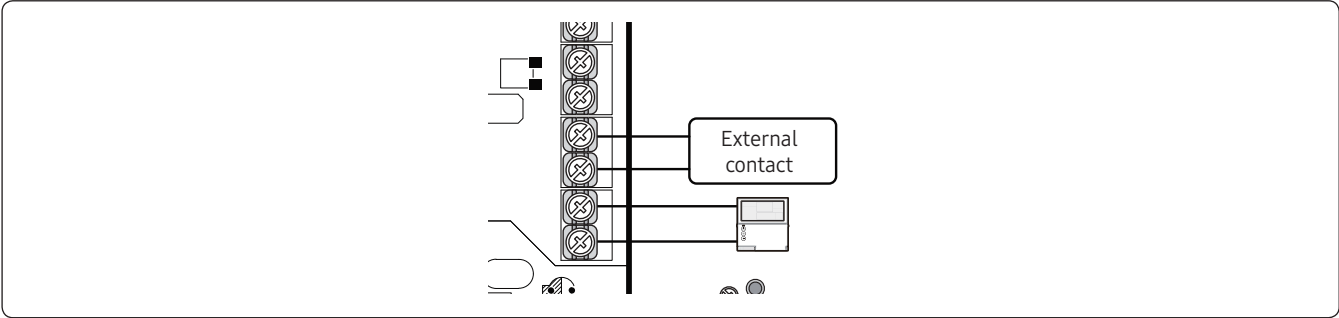
### FCU interface module

- 1 FCU interface module can connect Max.16 FCU KITs.

# 9. FCU kit

## External contact connection

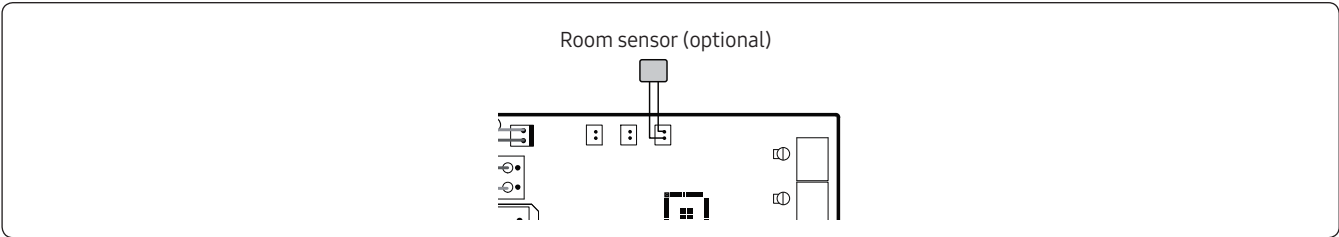
- In case of connecting external contact, set SEG14 of installation option according to the table.



| Installation option SEG14 | External contact status            |                                                                                                                                                                                                                                                                               |
|---------------------------|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                           | Open                               | Close                                                                                                                                                                                                                                                                         |
| 0                         | Disuse                             | Disuse                                                                                                                                                                                                                                                                        |
| 1                         | FCU OFF, remote control possible   | ON, remote control possible                                                                                                                                                                                                                                                   |
| 2                         | FCU OFF, remote control impossible | Remain OFF, remote control possible                                                                                                                                                                                                                                           |
| 3                         | FCU OFF, remote control impossible | Remain operation status of FCU before external contact open <ul style="list-style-type: none"><li>• Operation ON of FCU before external contact open: FCU ON</li><li>• Operation OFF of FCU before external contact open: FCU OFF</li><li>• Remote control possible</li></ul> |

## Option room sensor (Model: MRW-TA)

- In case of installing room sensor as option, set installation option according to the table. (05series, SEG24 = 1)



## ⚠ CAUTION

- Use either wired remote controller with built-in room sensor or external room sensor (MRW-TA) must be installed.

# 10. Universal comm. kit

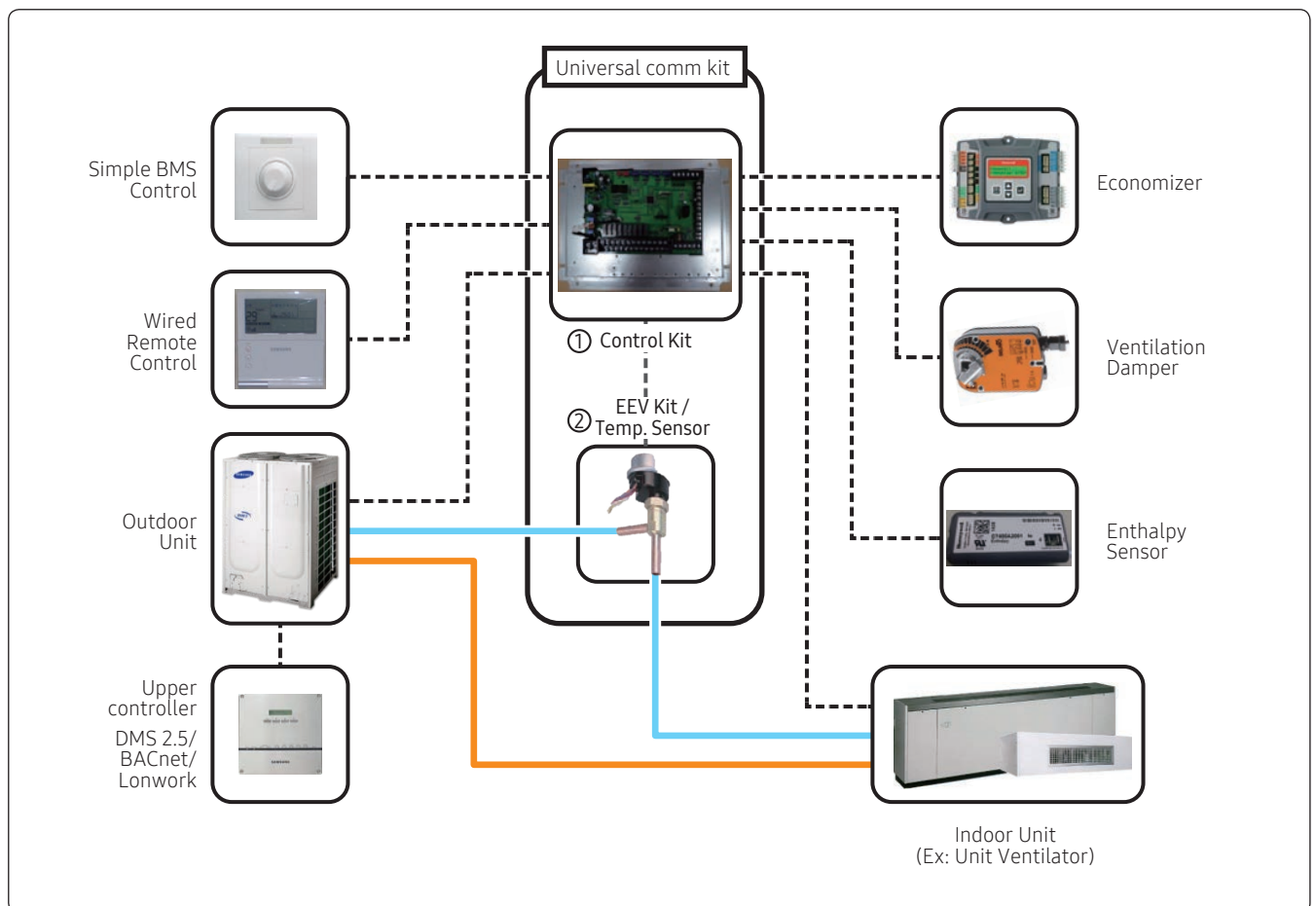
## 10.1. Feature

- 1 Provides a communication kit that enables normal operation when connecting an outdoor unit (VRF) to a 3rd party indoor unit.  
Components: ① Control kit + ② EEV kit
- 2 Enhances the compatibility with a 3rd party indoor unit and provides advanced functions.

Optimized to perform the following functions:

- ① : Control the Fan (H/M/L)
- ② : Connect to an economizer.
- ③ : Control the variable outputs of a ventilation damper.
- ④ : Control an enthalpy sensor.
- ⑤ : Provide an applicability to any additional loads.
- ⑥ : Use 24 VAC power supply.

### 3 System Diagram



# 10. Universal comm. kit

## 10.2. Combination & Line-up Table

- 1 Setting of the indoor unit capacity and EEV model selection  
(SEG 20 of the installation option 05 series)

| Display | Reated Capacity | Capacity Range | Heat Exchanger | Control kit | Number of   | EEV kit      | Number of |
|---------|-----------------|----------------|----------------|-------------|-------------|--------------|-----------|
|         | (Btu/h)         | (Btu/h)        | Volume(in3)    |             | Control kit |              | EEV kit   |
| 0       | 12k             | 7k to 18k      | 28 to 71       | MCM-D211UN  | 1           | MXD-A24K100E | 1         |
| 1       | 12k             | 7k to 18k      | 28 to 71       |             | 1           |              | 1         |
| 2       | 24k             | 7k to 30k      | 71 to 118      |             | 1           | MXD-A32K100E | 1         |
| 3       | 36k             | 30k to 42k     | 118 to 165     |             | 1           | MXD-A40K100E | 1         |
| 4       | 48k             | 42k to 60k     | 165 to 236     |             | 1           |              | 1         |
| 5       | 60k             | 60k to 72k     | 236 to 283     |             | 1           |              | 1         |
| 6       | 72k             | 72k to 96k     | 283 to 378     |             | 1           |              | 1         |
| 7       | 96k             | 96k to 144k    | 378 to 566     |             | 1           |              | 1         |
| 8       | 144k            | 144k to 192k   | 566 to 755     |             | 1           |              | 2         |
| 9       | 192k            | 192k to 240k   | 755 to 944     |             | 1           | MXD-A64K100E | 2         |
| A       | 240k            | 240k to 288k   | 944 to 1133    |             | 1           |              | 3         |
| B       | 288k            | 288k to 336k   | 1133 to 1322   |             | 1           |              | 3         |
| C       | 336k            | 336k to 384k   | 1322 to 1510   |             | 1           |              | 4         |
| D       | 384k            | 384k           | 1510 to 1725   |             | 1           |              | 4         |

- 2 Outdoor unit combination

|             | Universal Comm. kit |    |
|-------------|---------------------|----|
|             | HP                  | HR |
| DVM S       | ○                   | ○  |
| DVM S water | ○                   | ○  |
| DVM S Eco   | ○                   | ○  |

- 3 Part combination

|                              | Part combination of the universal Comm. Kit |            |           |           |            |        |          |            |        |        |         |
|------------------------------|---------------------------------------------|------------|-----------|-----------|------------|--------|----------|------------|--------|--------|---------|
|                              | EEV                                         | Thermister | Fan Motor | Fan check | Economizer | Damper | Enthalpy | Simple BMS | Heater | PT1000 | Defrost |
| Mandatory (Product supplied) | ○                                           | ○          |           |           |            |        |          |            |        |        |         |
| Mandatory (Field supplied)   |                                             |            | ○         |           |            |        |          |            |        |        |         |
| Optional (Field supplied)    |                                             |            |           | ○         | ○          | ○      | ○        | ○          | ○      | ○      | ○       |

# 10. Universal comm. kit

## 10.3. Product Specification

1 Composed of a single Control kit and 4 EEV kits

| Type                                         |                             |                | Control Kit               | EEV Kit                   | EEV Kit                   | EEV Kit                   | EEV Kit                   |                 |
|----------------------------------------------|-----------------------------|----------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-----------------|
| Model Name                                   |                             |                | MCM-D211UN                | MXD-A24K100E              | MXD-A32K100E              | MXD-A40K100E              | MXD-A64K100E              |                 |
| Power Supply                                 |                             | Φ, #,<br>V, Hz | 24VAC                     | -                         | -                         | -                         | -                         |                 |
| Applied outdoor unit Type                    |                             | -              | Heat Pump / Heat Recovery | Heat Pump / Heat Recovery | Heat Pump / Heat Recovery | Heat Pump / Heat Recovery | Heat Pump / Heat Recovery |                 |
| Performance                                  | EEV(EDM)                    |                | -                         | -                         | Φ 2.4mm                   | Φ 3.2mm                   | Φ 4.0mm                   | Φ 6.4mm         |
|                                              | Refrigeration Ton           |                | TON                       | 1/2/4/8/17/25/34          | 1                         | 2                         | 4                         | 8               |
|                                              | Capacity                    | Cooling (Min)  | kW                        | -                         | -                         | -                         | -                         | -               |
|                                              |                             |                | Btu/h                     | 7000                      | 7000                      | 18000                     | 30000                     | 60000           |
|                                              |                             | Cooling (Max)  | kW                        | -                         | -                         | -                         | -                         | -               |
|                                              |                             |                | Btu/h                     | 384000                    | 18000                     | 30000                     | 60000                     | 144000          |
|                                              |                             | Heating (Min)  | kW                        | -                         | -                         | -                         | -                         | -               |
|                                              |                             |                | Btu/h                     | 8500                      | 8500                      | 22000                     | 34000                     | 64000           |
|                                              |                             | Heating (Max)  | kW                        | -                         | -                         | -                         | -                         | -               |
|                                              |                             |                | Btu/h                     | 432000                    | 22000                     | 34000                     | 64000                     | 108000          |
| AHU Internal Heat Exchanger Volume Allowance |                             | Min            | in3                       | 28                        | 28                        | 71                        | 118                       | 236             |
|                                              |                             | Max            | in3                       | 1725                      | 71                        | 118                       | 236                       | 566             |
| EEV in/out Connection                        | Liquid Pipe                 |                | Φ, inch                   | -                         | 3/8                       | 1/2                       | 3/8                       | 1/2             |
|                                              | Gas Pipe                    |                | Φ, inch                   | -                         | 3/8                       | 1/2                       | 3/8                       | 1/2             |
| Field Wiring                                 | Power Source Wire           |                | mm2                       | -                         | -                         | -                         | -                         | -               |
|                                              | Transmission Cable          |                | mm2                       | -                         | -                         | -                         | -                         | -               |
| External Dimension                           | Net Weight                  |                | kg                        | 1.7                       | 0.29                      | 0.46                      | 0.36                      | 0.66            |
|                                              |                             |                | lb                        | 3.75                      | 0.64                      | 1.01                      | 0.79                      | 1.46            |
|                                              | Shipping Weight             |                | kg                        | 3.54                      | 0.48                      | 0.64                      | 0.56                      | 0.85            |
|                                              |                             |                | lb                        | 7.8                       | 1.06                      | 1.41                      | 1.23                      | 1.87            |
|                                              | Net Dimensions (WxHxD)      |                | mm                        | 385*275*56                | 243*70*42                 | 250*70*42                 | 250*70*42                 | 259*117*42      |
|                                              |                             |                | in                        | 15.16*10.83*2.2           | 9.57*2.76*1.65            | 9.84*2.76*1.65            | 9.84*2.76*1.65            | 10.20*4.61*1.65 |
|                                              | Shipping Dimensions (WxHxD) |                | mm                        | 399*289*138               | 276*121*69                | 276*121*69                | 276*121*69                | 276*121*69      |
|                                              |                             |                | in                        | 15.71*11.38*5.43          | 10.87*4.76*2.72           | 10.87*4.76*2.72           | 10.87*4.76*2.72           | 10.87*4.76*2.72 |

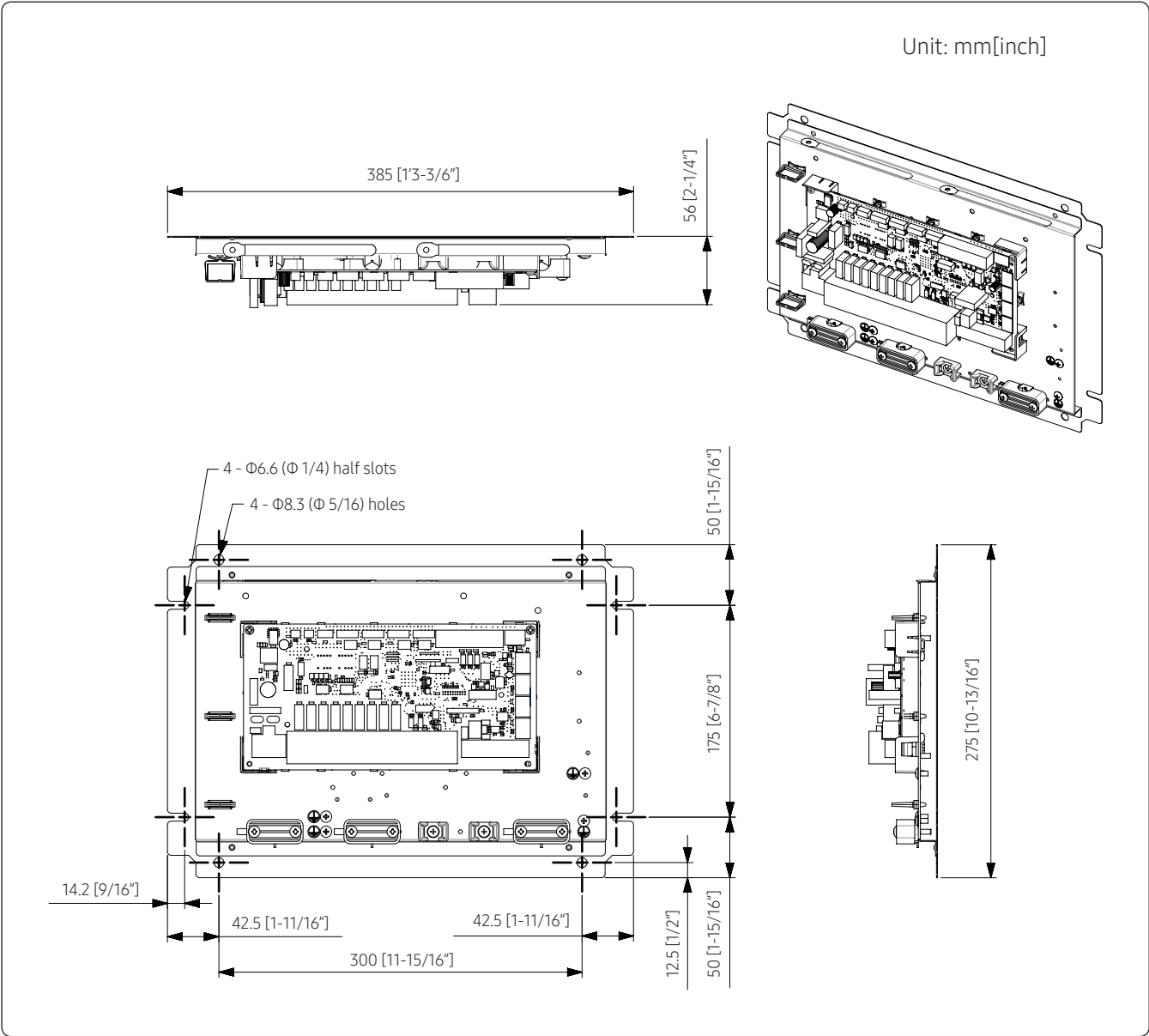


# 10. Universal comm. kit

## 10.4. Technical drawings

### Dimensional Drawings

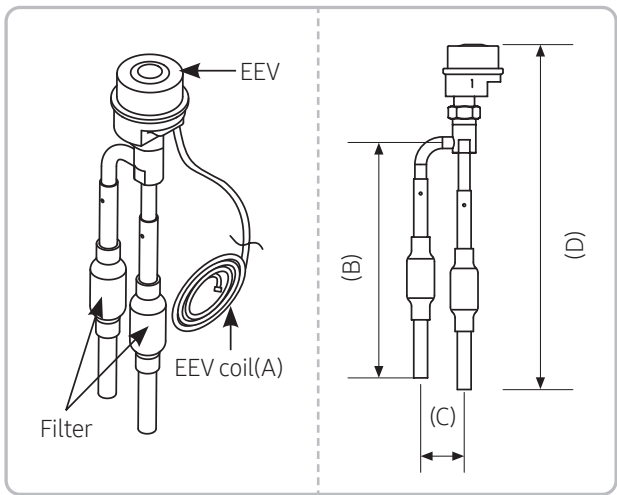
#### 1 Control Kit



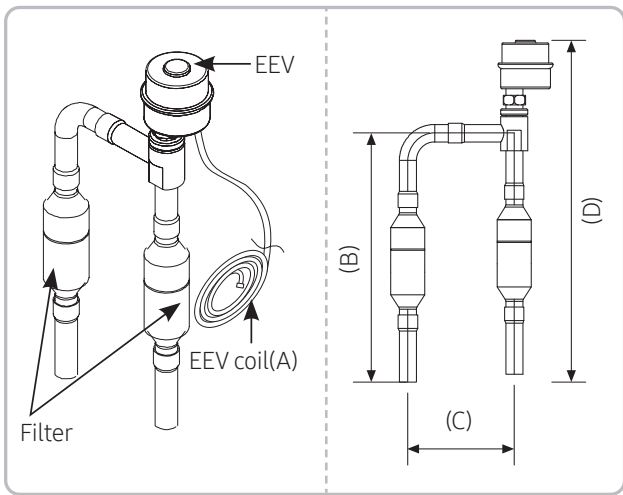
# 10. Universal comm. kit

## 2 EEV Kit (Electronic Expansion Valve)

MXD-A64K100E  
MXD-A32K100E



MXD-A40K100E  
MXD-A24K100E



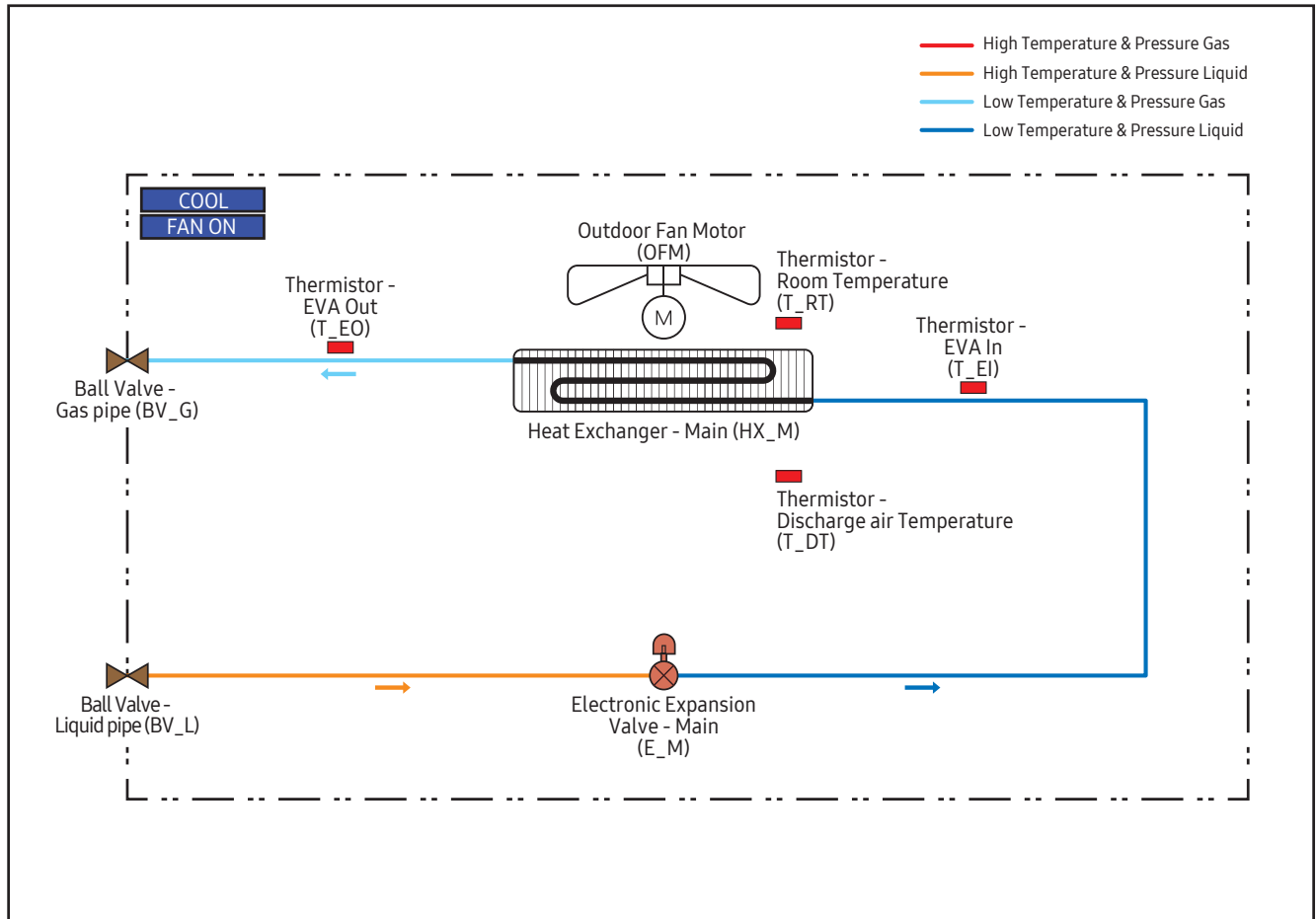
| MODEL        | A (ft(m))  | B (inch(mm)) | C (inch(mm)) | D (inch(mm))  |
|--------------|------------|--------------|--------------|---------------|
| MXD-A64K100E | 22.97' (7) | 72.83" (185) | 30.31" (77)  | 100.39" (255) |
| MXD-A40K100E | 6.56' (2)  | 65.75" (167) | 13.39" (34)  | 96.46" (245)  |
| MXD-A32K100E | 6.56' (2)  | 72.83" (185) | 29.13" (74)  | 99.61" (253)  |
| MXD-A24K100E | 3.28' (1)  | 63.78" (162) | 11.81" (30)  | 93.31" (237)  |

# 10. Universal comm. kit

## 10.4. Technical drawings

### Piping Drawings

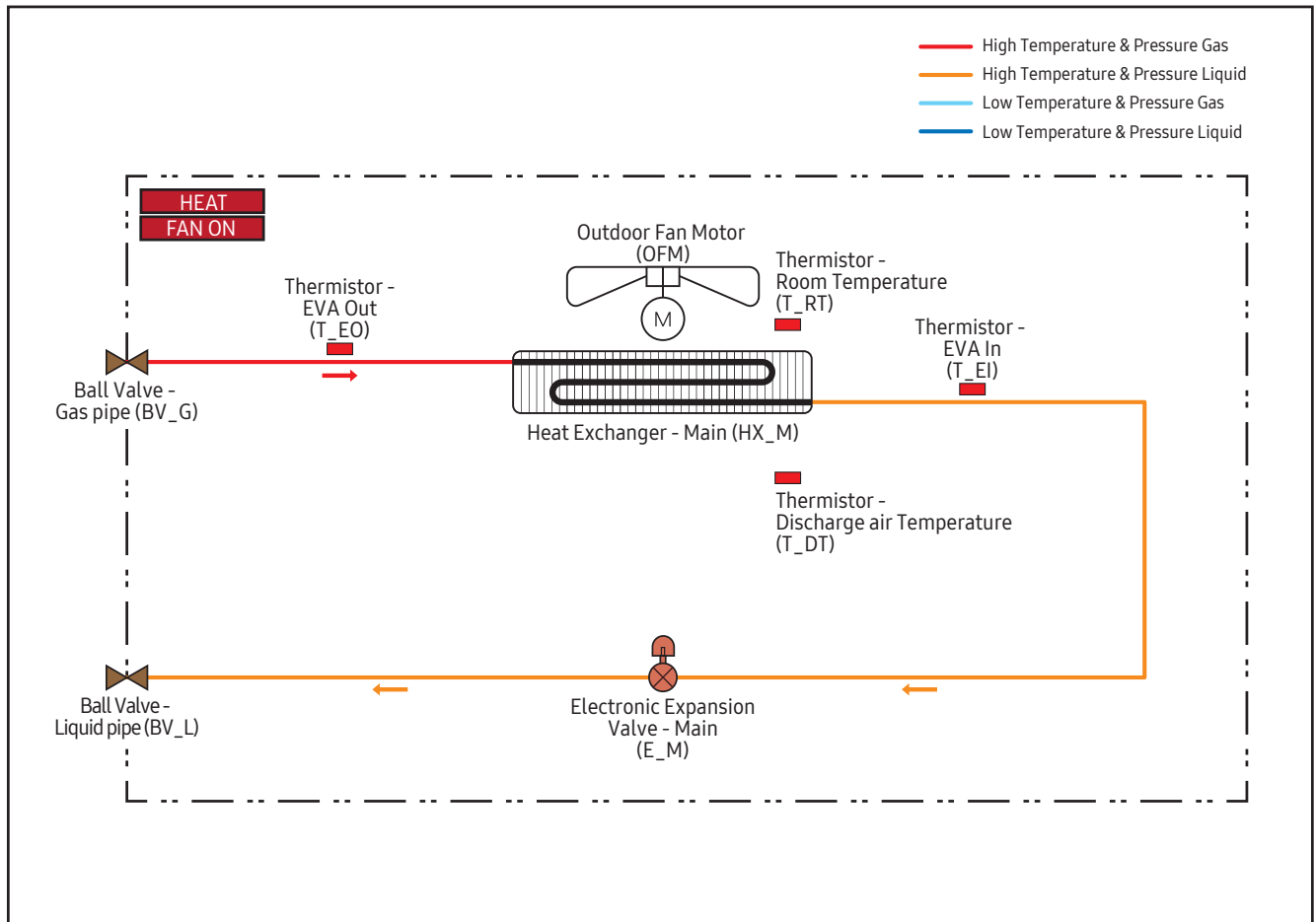
#### 1 Cooling operation



# 10. Universal comm. kit

## Piping Drawings

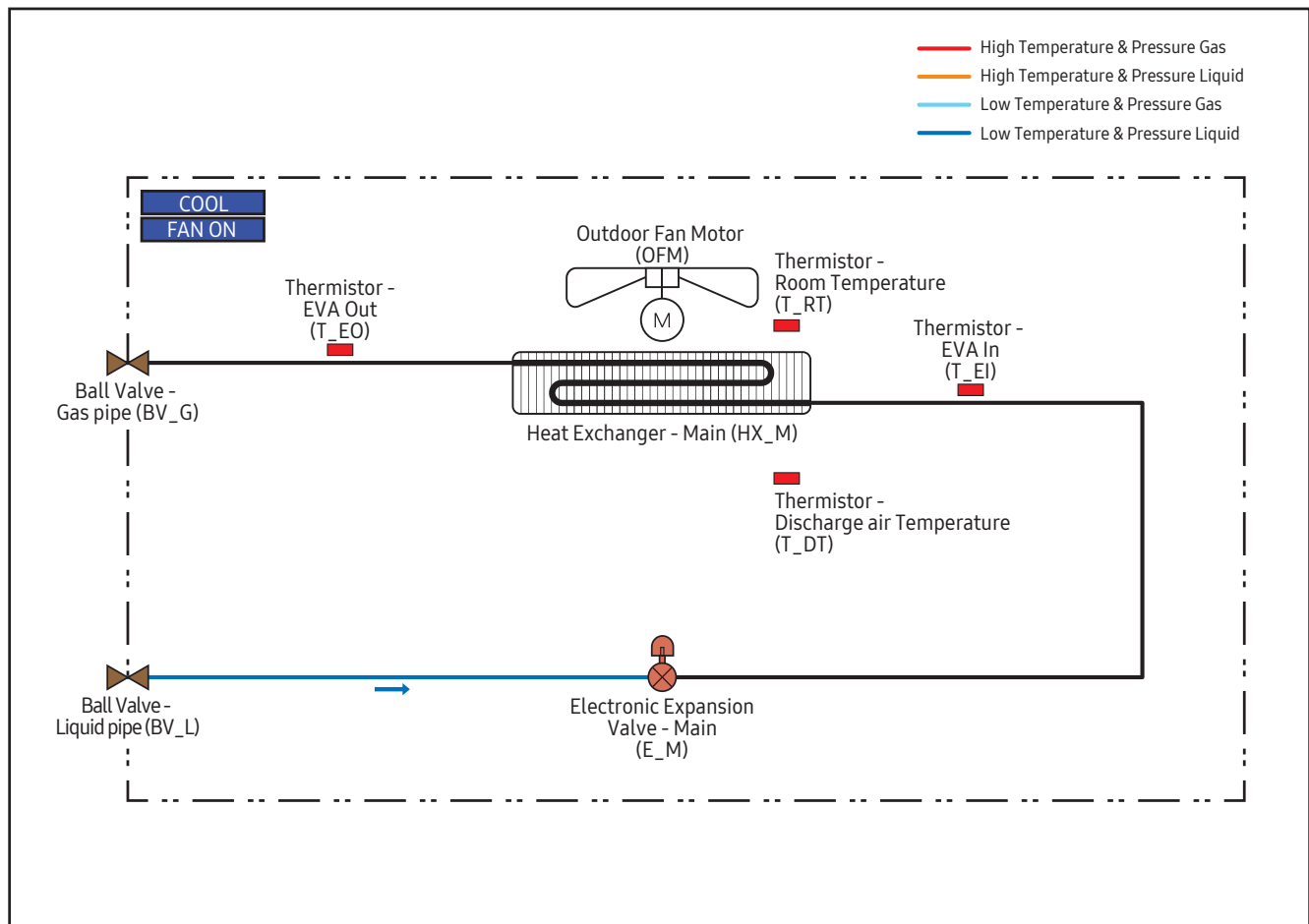
### 2 Heating operation



# 10. Universal comm. kit

## Piping Drawings

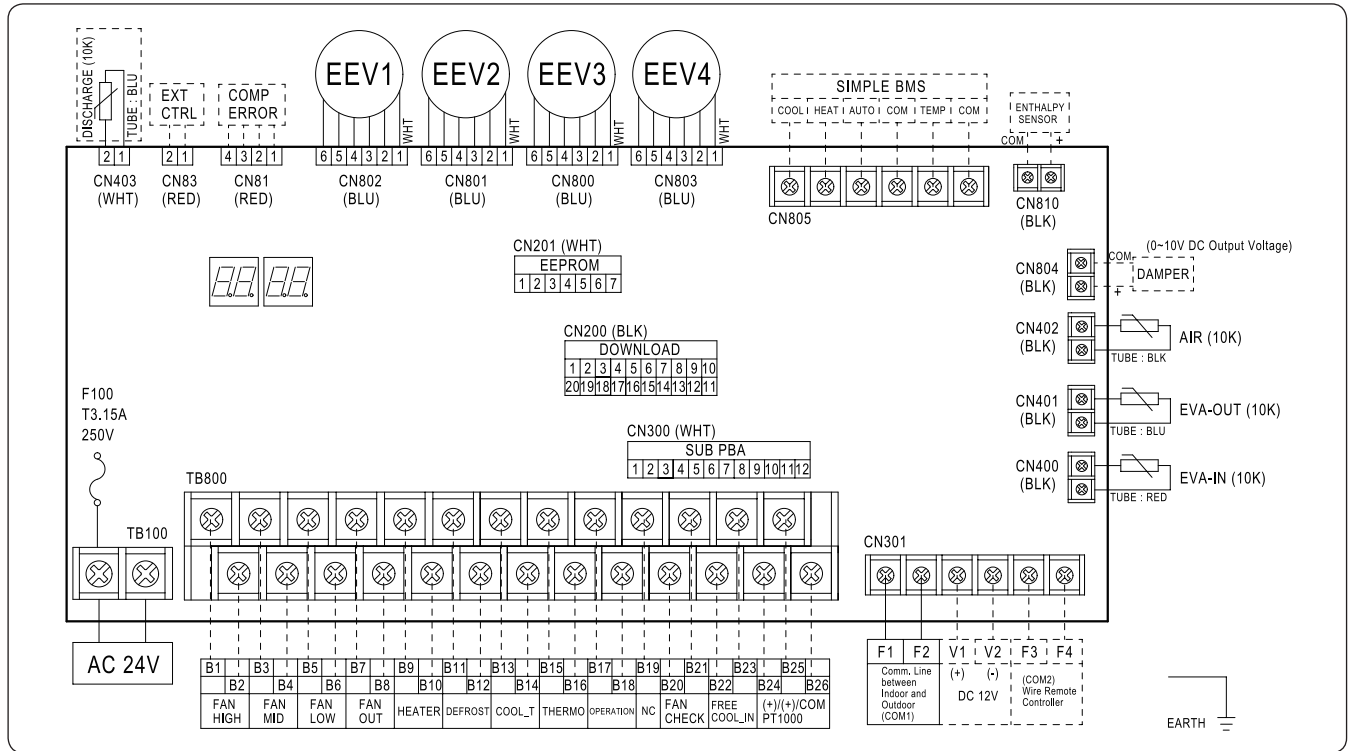
### 3 Free cooling operation



# 10. Universal comm. kit

## 10.4. Technical drawings

### Wiring Drawings



|                 |                            |           |                               |              |                                               |
|-----------------|----------------------------|-----------|-------------------------------|--------------|-----------------------------------------------|
| EEV             | Electric expansion valve   | FAN MID   | FAN Output(Step Mid ON)       | NC           | NO CONNECTION                                 |
| AIR (10K)       | Thermistor ( )             | FAN LOW   | FAN-Output(Step Low ON)       | FAN CHECK    | Checking fan operation status of input signal |
| EVA-OUT (10K)   | Thermistor (EVA.-OUT_10K)  | FAN OUT   | FAN-Output(ON/OFF)            | FREE COOL_IN | Blowing wind from outside(Input)              |
| EVA-IN (10K)    | Thermistor (EVA.-IN_10K)   | HEATER    | Heater-Output(ON/OFF)         | PT1000       | PT1000Ω sensor(Input)                         |
| DISCHARGE (10K) | Thermistor (Discharge_10K) | DEFROST   | Defrost-Output(ON/OFF)        | TB100        | Terminal Block100(Power)                      |
| EXT CTRL        | EXTERNAL CONTROL           | COOL_T    | Cooling Thermo-Output(ON/OFF) | TB800        | Terminal Block800(control/Dry Contact)        |
| COMP ERROR      | Error check output         | THERMO    | Thermo-Output(ON/OFF)         | F100         | Fuse                                          |
| FAN HIGH        | FAN-Output (Step High ON)  | OPERATION | O(ON/OFF)                     |              |                                               |

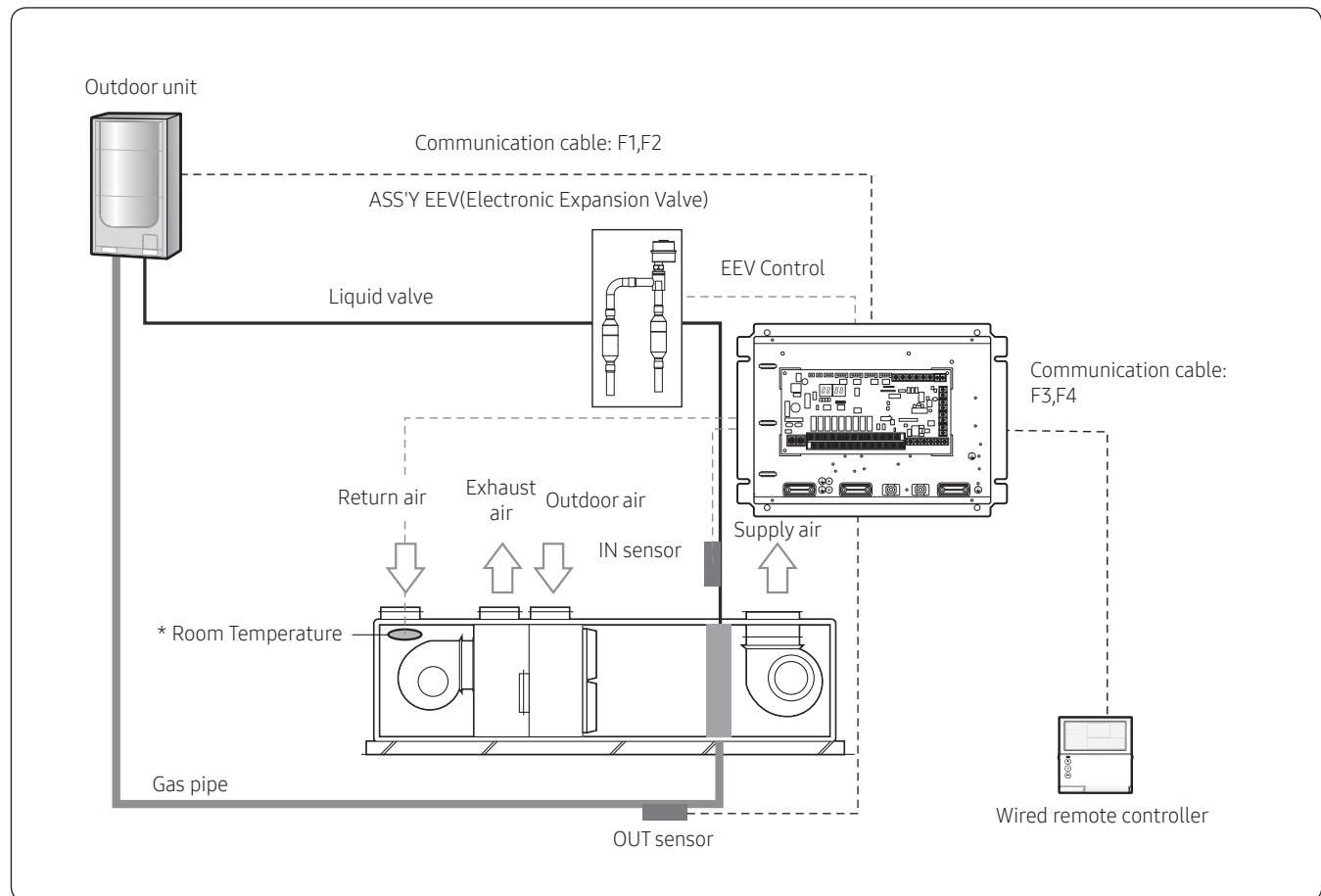
### NOTE

- This wiring diagram applies only to Universal Comm. Kit
- Colors BLK: black, RED: red, BLU: blue, WHT: white, YEL: yellow, BRN: brown, SKY: skyblue, ORG: orange, GRN: green
- When operating, don't short circuit the protection device (High Pressure switch)
- Protective earth(screw), : connector, : The wire quantity

# 10. Universal comm. kit

## 10.5. Installation

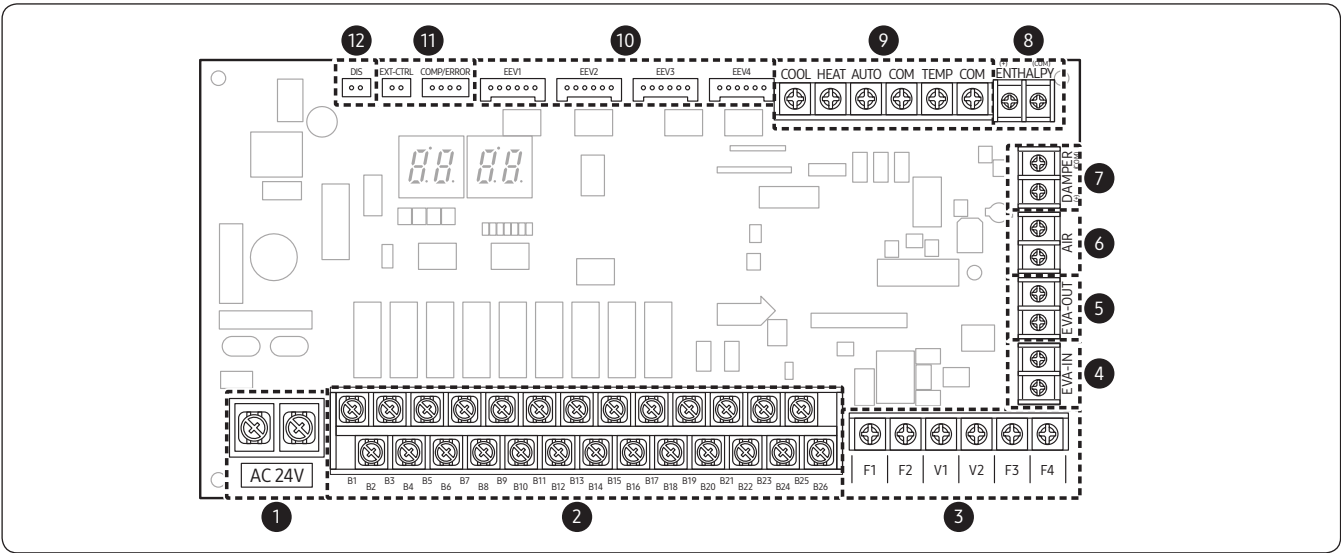
### Structure diagram of an Universal Comm. Kit



# 10. Universal comm. kit

## 10.5. Installation

PBA



| No. | CONNECTOR |     | SIGNAL               | FUNCTION     | CONTACT SHORT    | CONTACT OPEN    | *SCREW |
|-----|-----------|-----|----------------------|--------------|------------------|-----------------|--------|
| 1   | TB100     |     | -                    | AC24V/60Hz   | -                | -               | M4     |
| 2   | TB800     | B1  | *DRY CONTACT         | FAN HIGH     | FAN STEP HIGH ON | FAN OFF         | M3.5   |
|     |           | B2  |                      |              |                  |                 |        |
|     |           | B3  | *DRY CONTACT         | FAN MID      | FAN STEP MID ON  | FAN OFF         | M3.5   |
|     |           | B4  |                      |              |                  |                 |        |
|     |           | B5  | *DRY CONTACT         | FAN LOW      | FAN STEP LOW ON  | FAN OFF         | M3.5   |
|     |           | B6  |                      |              |                  |                 |        |
|     |           | B7  | *DRY CONTACT         | FAN OUT      | FAN ON           | FAN OFF         | M3.5   |
|     |           | B8  |                      |              |                  |                 |        |
|     |           | B9  | *DRY CONTACT         | HEATER       | HEATER ON        | HEATER OFF      | M3.5   |
|     |           | B10 |                      |              |                  |                 |        |
|     |           | B11 | *DRY CONTACT         | DEFROST      | DEFROST ON       | DEFROST OFF     | M3.5   |
|     |           | B12 |                      |              |                  |                 |        |
|     |           | B13 | *DRY CONTACT         | COOL_T       | COOL THERMO ON   | COOL THERMO OFF | M3.5   |
|     |           | B14 |                      |              |                  |                 |        |
|     |           | B15 | *DRY CONTACT         | THERMO       | THERMO ON        | THERMO OFF      | M3.5   |
|     |           | B16 |                      |              |                  |                 |        |
|     |           | B17 | *DRY CONTACT         | OPERATION    | OPERATION ON     | OPERATION OFF   | M3.5   |
|     |           | B18 |                      |              |                  |                 |        |
|     |           | B19 | -                    | -            | -                | -               | -      |
|     |           | B20 | ZERO Voltage CONTACT | FAN CHECK    | FAN CHECK ON     | FAN CHECK OFF   | M3.5   |
|     |           | B21 |                      |              |                  |                 |        |
|     |           | B22 | ZERO Voltage CONTACT | FREE COOL_IN | FREE COOL ON     | FREE COOL OFF   | M3.5   |
|     |           | B23 |                      |              |                  |                 |        |
|     |           | B24 | INPUT                | PT1000       | -                | -               | M3.5   |
|     |           | B25 | INPUT                |              |                  |                 |        |
|     |           | B26 | COM                  |              |                  |                 |        |



## 10. Universal comm. kit

| No. | CONNECTOR | SIGNAL | FUNCTION             | CONTACT SHORT              | CONTACT OPEN | *SCREW |
|-----|-----------|--------|----------------------|----------------------------|--------------|--------|
| 3   | CN301     | F1     | -                    | IN-OUT COMMUNICATION       | -            | M3.5   |
|     |           | F2     | -                    |                            | -            |        |
|     |           | F3     | DC                   | DC 12V                     | -            |        |
|     |           | F4     |                      |                            | -            |        |
|     |           | F5     | -                    | WIRED REMOTE COMMUNICATION | -            |        |
|     |           | F6     | -                    |                            | -            |        |
| 4   | CN400     | -      | EVA IN SENSOR        | -                          | -            | M3     |
| 5   | CN401     | -      | EVA OUT SENSOR       | -                          | -            | M3     |
| 6   | CN402     | -      | AIR SENSOR           | -                          | -            | M3     |
| 7   | CN804     | (+)    | LEVEL OUT            | DAMPER ALNALOG LEVEL       | -            | M3     |
|     |           | COM    | COM                  |                            |              |        |
| 8   | CN810     | (+)    | LEVEL IN             | ENTHALPY IN                | -            | M3     |
|     |           | COM    | COM                  |                            |              |        |
| 9   | CN305     | COOL   | ZERO Voltage CONTACT | SIMPLE BMS MODE IN         | -            | M3.5   |
|     |           | HEAT   |                      |                            | -            |        |
|     |           | AUTO   |                      |                            | -            |        |
|     |           | COM    |                      |                            | -            |        |
|     |           | TEMP   | LEVEL IN             | SIMPLE BMS TEMP IN         | -            |        |
|     |           | COM    | -                    |                            | -            |        |
| 10  | CN800~803 | -      | EEV                  | -                          | -            |        |
| 11  | CN81,CN83 | -      | EXTERNAL CONTROL     | -                          | -            |        |
| 12  | CN403     | -      | DISCHARGE SENSOR     | -                          | -            |        |

\* Use the rated current capacity for the dry contact within AC 250 V/1 A.

\* Use the ring terminal that fits the screw.



2017. 03  
Ver.1.4

**Samsung Electronics Co., LTD.**  
**B2B PM / SE**

Head Office (Suwon Korea) 129, Samsung-Ro, Yeongtong-Gu, Suwon City, Gyeonggi-Do, Korea 16677  
Website : [www.samsung.com](http://www.samsung.com), <http://btsp.samsungsbn.com> Email : [airconditioner@samsung.com](mailto:airconditioner@samsung.com)  
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