

# 1. Outdoor Unit

## 1-1. Specifications

### Unit specifications (For Europe)

| Outdoor   |  | MODEL                | U-4LZ2E5                                 |             |                      | U-5LZ2E5                               |             |       |  |
|---|--|----------------------|--|-------------|----------------------|--|-------------|-------|--|
| Performance test condition                          |  | EN14511, EN14825     |  |             | EN14511, EN14825     |  |             |       |  |
| Power supply  |  | V, Ø, Hz             | 220-230-240 V ~ 50 Hz                    |             |                      | 220-230-240 V ~ 50 Hz                  |             |       |  |
|   |  | Wire                 | 2W                                       |             |                      | 2W                                     |             |       |  |
|   |  | V                    | 220                                      | 230         | 240                  | 220                                    | 230         | 240   |  |
| Cooling   | Capacity   | kW                   | 12.1                                     | 12.1        | 12.1                 | 14.0                                   | 14.0        | 14.0  |  |
|   |  | BTU/h                | 41300                                    | 41300       | 41300                | 47800                                  | 47800       | 47800 |  |
|   | Current  | A                    | 13.3                                     | 12.8        | 12.2                 | 16.9                                   | 16.2        | 15.5  |  |
|   | Input power  | kW                   | 2.67                                     | 2.67        | 2.67                 | 3.40                                   | 3.40        | 3.40  |  |
|   | EER  | kW / kW              | 4.53                                     | 4.53        | 4.53                 | 4.12                                   | 4.12        | 4.12  |  |
|   | Power factor   | %                    | 91                                       | 91          | 91                   | 91                                     | 91          | 91    |  |
|   | SEER   | kW / kW              | 8.50                                     |             |                      | 8.12                                   |             |       |  |
|   | $\eta_{sc}$  | %                    | 337.0                                    |             |                      | 321.8                                  |             |       |  |
|   | Noise outdoor  |                      | dB-A (Normal)                            | 52.0        |                      |  | 53.0        |       |  |
|   |  |                      | Power Level dB (Normal)                  | 69.0        |                      |  | 70.0        |       |  |
| dB-A (Silent 1)                                     |  |                      | 49.0                                     |             |                      | 50.0                                   |             |       |  |
| dB-A (Silent 2)                                     |  |                      | 47.0                                     |             |                      | 48.0                                   |             |       |  |
| dB-A (Silent 3)                                     |  |                      | 45.0                                     |             |                      | 46.0                                   |             |       |  |
| Heating   | Capacity   | kW                   | 12.5                                     | 12.5        | 12.5                 | 16.0                                   | 16.0        | 16.0  |  |
|   |  | BTU/h                | 42700                                    | 42700       | 42700                | 54600                                  | 54600       | 54600 |  |
|   | Current  | A                    | 12.0                                     | 11.4        | 11.0                 | 16.9                                   | 16.2        | 15.5  |  |
|   | Input power  | kW                   | 2.37                                     | 2.37        | 2.37                 | 3.40                                   | 3.40        | 3.40  |  |
|   | COP  | kW / kW              | 5.27                                     | 5.27        | 5.27                 | 4.71                                   | 4.71        | 4.71  |  |
|   | Power factor   | %                    | 90                                       | 90          | 90                   | 91                                     | 91          | 91    |  |
|   | SCOP   | kW / kW              | 5.05                                     |             |                      | 4.61                                   |             |       |  |
|   | $\eta_{sh}$  | %                    | 199.0                                    |             |                      | 181.4                                  |             |       |  |
|   | Noise outdoor  |                      | dB-A (Normal)                            | 54.0        |                      |  | 56.0        |       |  |
|   |  |                      | Power Level dB                           | 72.0        |                      |  | 74.0        |       |  |
| Max current(A) / Max input power(kW)                |  | 19.6 / 3.92          | 19.6 / 4.10                              | 19.6 / 4.28 | 23.7 / 4.76          | 23.7 / 4.98                            | 23.7 / 5.19 |       |  |
| Starting current(A) / Comp output(kW)               |  | 1 / -                | 1 / -                                    | 1 / -       | 1 / -                | 1 / -                                  | 1 / -       |       |  |
| Time delay fuse max size(A)                         |  | 25                   |  |             | 35                   |  |             |       |  |
| Earth leakage circuit breaker max size(A)           |  | 25                   |  |             | 30                   |  |             |       |  |
| Fan motor output                                    |  | W / Pole number      | 120 / 8                                  |             |                      | 120 / 8                                |             |       |  |
| External static pressure                            |  | Pa                   | 0 ~ 35                                   |             |                      | 0 ~ 35                                 |             |       |  |
| Air flow  |  | m <sup>3</sup> / min | 69                                       |             |                      | 72                                     |             |       |  |
| Refrigerant type / amount(ship) kg / amount(max) kg |  | R32 / 2.7kg / 12.0kg |  |             | R32 / 2.7kg / 12.0kg |  |             |       |  |
| F-Gas   | GWP / CO <sub>2</sub> eq (ton) (PRECHARGED AMOUNT) / CO <sub>2</sub> eq (ton) (MAXIMUM CHARGED AMOUNT) |                      | 675 / 1.82 ton / 8.10 ton                |             |                      | 675 / 1.82 ton / 8.10 ton              |             |       |  |
|   |  |                      |  |             |                      |  |             |       |  |
| Product dimension                                   | Height   | mm                   | 996                                      |             |                      | 996                                    |             |       |  |
|   | Width  | mm                   | 980                                      |             |                      | 980                                    |             |       |  |
|   | Depth  | mm                   | 370                                      |             |                      | 370                                    |             |       |  |
| Packing dimension                                   | Height   | mm                   | 1134                                     |             |                      | 1134                                   |             |       |  |
|   | Width  | mm                   | 1095                                     |             |                      | 1095                                   |             |       |  |
|   | Depth  | mm                   | 529                                      |             |                      | 529                                    |             |       |  |
| Weight  | (NET) kg   |                      | 94                                       |             |                      | 94                                     |             |       |  |
|   | (GROSS) kg   |                      | 102                                      |             |                      | 102                                    |             |       |  |
| Layers limit  |  | 3                    |  |             | 3                    |  |             |       |  |
| Operation condition (Outdoor)                       | Cool (DBT)   | -10°C~52°C           |  |             | -10°C~52°C           |  |             |       |  |
|   | Heat (WBT)   | -20°C~18°C           |  |             | -20°C~18°C           |  |             |       |  |
| Max. working pressure                               | High side bar (MPa)  | 41.5(4.15)           |  |             | 41.5(4.15)           |  |             |       |  |
|   | Low side bar (MPa)   | 22.6(2.26)           |  |             | 22.6(2.26)           |  |             |       |  |
| Piping  | Pipe diameter mm (inch)<br>(90m below for ultimate Indoor unit)  |                      | (Liquid) 9.52 (3/8)<br>(Gas) 15.88 (5/8) |             |                      | (Liquid) 9.52(3/8)<br>(Gas) 15.88(5/8) |             |       |  |
|   | Pipe diameter mm (inch)<br>(Over 90m for ultimate Indoor unit)   |                      | -  |             |                      | -                                      |             |       |  |
|   | Balance pipe mm (inch)   |                      | -  |             |                      | -                                      |             |       |  |
|   | Connecting method  |                      | flared(Liquid) , flared(Gas)             |             |                      | flared(Liquid) , flared(Gas)           |             |       |  |
|   | Max tubing length m  |                      | 7.5                                      | ~           | 90                   | 7.5                                    | ~           | 90    |  |
|   | Total Max tubing length m  |                      | 7.5                                      | ~           | 180                  | 7.5                                    | ~           | 180   |  |
|   | Indoor unit & Outdoor unit height difference<br>(Outdoor unit upper / Outdoor unit Lower) m            |                      | 50 / 40                                  |             |                      | 50 / 40                                |             |       |  |
| Max connectable indoor units pcs.                   |  | 7 (10 *1)            |  |             | 8 (12 *1)            |  |             |       |  |
| Max allowable indoor/outdoor capacity ratio %       |  | 50~150 (130 *2)      |  |             | 50~150 (130 *2)      |  |             |       |  |

Max total refrigerant amount of outdoor unit is 12.0kg

\*1 The numbers in parenthesis indicates maximum number of connectable indoor unit in case of 1.5kW indoor unit's connection.

\*2 Max allowable indoor/outdoor capacity ratio in case of 1.5kW indoor unit's connection.

# 1. Outdoor Unit

## 1-1. Specifications

### Unit specifications (For Europe)

|   |  |                           |  |             |       |  |  |  |
|---|--|---------------------------|--|-------------|-------|--|--|--|
| Outdoor   | MODEL  | U-6LZ2E5                  |  |             |       |  |  |  |
| Performance test condition                          |  | EN14511, EN14825          |  |             |       |  |  |  |
| Power supply  | V, Ø, Hz   | 220-230-240 V ~ 50 Hz     |  |             |       |  |  |  |
|   | Wire   | 2W                        |  |             |       |  |  |  |
|   | V  | 220                       | 230                                      | 240         |       |  |  |  |
| Cooling   | Capacity   | kW                        | 15.5                                     | 15.5        | 15.5  |  |  |  |
|   |  | BTU/h                     | 52900                                    | 52900       | 52900 |  |  |  |
|   | Current  | A                         | 19.6                                     | 18.7        | 18.0  |  |  |  |
|   | Input power  | kW                        | 4.00                                     | 4.00        | 4.00  |  |  |  |
|   | EER  | kW / kW                   | 3.88                                     | 3.88        | 3.88  |  |  |  |
|   | Power factor   | %                         | 93                                       | 93          | 93    |  |  |  |
|   | SEER   | kW / kW                   | 7.71                                     |             |       |  |  |  |
|   | $\eta_{sc}$  | %                         | 305.4                                    |             |       |  |  |  |
|   | Noise outdoor  |                           | dB-A (Normal)                            | 54.0        |       |  |  |  |
|   |  |                           | Power Level dB (Normal)                  | 72.0        |       |  |  |  |
| dB-A (Silent 1)                                     |  |                           | 51.0                                     |             |       |  |  |  |
| dB-A (Silent 2)                                     |  |                           | 49.0                                     |             |       |  |  |  |
| dB-A (Silent 3)                                     |  |                           | 47.0                                     |             |       |  |  |  |
| Heating   | Capacity   | kW                        | 16.5                                     | 16.5        | 16.5  |  |  |  |
|   |  | BTU/h                     | 56300                                    | 56300       | 56300 |  |  |  |
|   | Current  | A                         | 18.5                                     | 17.7        | 17.0  |  |  |  |
|   | Input power  | kW                        | 3.73                                     | 3.73        | 3.73  |  |  |  |
|   | COP  | kW / kW                   | 4.42                                     | 4.42        | 4.42  |  |  |  |
|   | Power factor   | %                         | 91                                       | 91          | 91    |  |  |  |
|   | SCOP   | kW / kW                   | 4.59                                     |             |       |  |  |  |
|   | $\eta_{sh}$  | %                         | 180.6                                    |             |       |  |  |  |
|   | Noise outdoor  |                           | dB-A (Normal)                            | 56.0        |       |  |  |  |
|   |  |                           | Power Level dB                           | 75.0        |       |  |  |  |
| Max current(A) / Max input power(kW)                |  | 26.5 / 5.41               | 26.5 / 5.66                              | 26.5 / 5.90 |       |  |  |  |
| Starting current(A) / Comp output(kW)               |  | 1 / -                     | 1 / -                                    | 1 / -       |       |  |  |  |
| Time delay fuse max size(A)                         |  | 35                        |  |             |       |  |  |  |
| Earth leakage circuit breaker max size(A)           |  | 35                        |  |             |       |  |  |  |
| Fan motor output                                    | W / Pole number  | 120                       | /  | 8           |       |  |  |  |
| External static pressure                            | Pa   | 0~35                      |  |             |       |  |  |  |
| Air flow  | m <sup>3</sup> / min   | 74                        |  |             |       |  |  |  |
| Refrigerant type / amount(ship) kg / amount(max) kg |  | R32 / 2.7kg / 12.0kg      |  |             |       |  |  |  |
| F-Gas   | GWP /  | 675 / 1.82 ton / 8.10 ton |  |             |       |  |  |  |
|   | CO <sub>2</sub> eq (ton) (PRECHARGED AMOUNT) / CO <sub>2</sub> eq (ton) (MAXIMUM CHARGED AMOUNT) |                           |  |             |       |  |  |  |
| Product dimension                                   | Height   | mm                        | 996                                      |             |       |  |  |  |
|   | Width  | mm                        | 980                                      |             |       |  |  |  |
|   | Depth  | mm                        | 370                                      |             |       |  |  |  |
| Packing dimension                                   | Height   | mm                        | 1134                                     |             |       |  |  |  |
|   | Width  | mm                        | 1095                                     |             |       |  |  |  |
|   | Depth  | mm                        | 529                                      |             |       |  |  |  |
| Weight  | (NET) kg   |                           | 94                                       |             |       |  |  |  |
|   | (GROSS) kg   |                           | 102                                      |             |       |  |  |  |
| Layers limit  |  | 3                         |  |             |       |  |  |  |
| Operation condition (Outdoor)                       | Cool (DBT)   | -10°C~52°C                |  |             |       |  |  |  |
|   | Heat (WBT)   | -20°C~18°C                |  |             |       |  |  |  |
| Max. working pressure                               | High side bar (MPa)  | 41.5(4.15)                |  |             |       |  |  |  |
|   | Low side bar (MPa)   | 22.6(2.26)                |  |             |       |  |  |  |
| Piping  | Pipe diameter mm (inch)<br>(90m below for ultimate Indoor unit)                                  |                           | (Liquid) 9.52 (3/8)<br>(Gas) 15.88 (5/8) |             |       |  |  |  |
|   | Pipe diameter mm (inch)<br>(Over 90m for ultimate Indoor unit)                                   |                           | -  |             |       |  |  |  |
|   | Balance pipe mm (inch)   |                           | -  |             |       |  |  |  |
|   | Connecting method  |                           | flared(Liquid) , flared(Gas)             |             |       |  |  |  |
|   | Max tubing length m  |                           | 7.5                                      | ~           | 90    |  |  |  |
|   | Total Max tubing length m  |                           | 7.5                                      | ~           | 180   |  |  |  |
|   | Indoor unit & Outdoor unit height difference<br>(Outdoor unit upper / Outdoor unit Lower) m      |                           | 50 / 40                                  |             |       |  |  |  |
| Max connectable indoor units pcs.                   |  | 9 (12 *1)                 |  |             |       |  |  |  |
| Max allowable indoor/outdoor capacity ratio %       |  | 50~150 (130 *2)           |  |             |       |  |  |  |

Max total refrigerant amount of outdoor unit is 12.0kg

\*1 The numbers in parenthesis indicates maximum number of connectable indoor unit in case of 1.5kW indoor unit's connection.

\*2 Max allowable indoor/outdoor capacity ratio in case of 1.5kW indoor unit's connection.