

## Subtype DC Inverter Air to Water Heat Pump Unit- R32- 15- C

|                     |                                                     |
|---------------------|-----------------------------------------------------|
| Certificate Holder  | Zhongshan Amitime Electric Co., Ltd                 |
| Address             | 5th Yandong Rd                                      |
| ZIP                 |                                                     |
| City                | Zhongshan City - Guangdong                          |
| Country             | CN                                                  |
| Certification Body  | BRE Global Limited                                  |
| Subtype title       | DC Inverter Air to Water Heat Pump Unit- R32- 15- C |
| Registration number | 041-K027-20                                         |
| Heat Pump Type      | Outdoor Air/Water                                   |
| Refrigerant         | R32                                                 |
| Mass of Refrigerant | 2.6 kg                                              |
| Certification Date  | 22.09.2023                                          |
| Testing basis       | Heat Pump KEYMARK certification Scheme rules v12    |

Model Indoor unit: AVH-15V4FX-250L/IX, Outdoor unit: AVH-15V4FXX

|                                     |                                                            |
|-------------------------------------|------------------------------------------------------------|
| Model name                          | Indoor unit: AVH-15V4FX-250L/IX, Outdoor unit: AVH-15V4FXX |
| Application                         | Heating + DHW + low temp                                   |
| Units                               | Indoor, Outdoor                                            |
| Climate zone (for heating)          | n/a                                                        |
| Heat Source                         | Outdoor Air                                                |
| Reversibility                       | Yes                                                        |
| Cooling mode application (optional) | n/a                                                        |
| Any additional heat sources         | n/a                                                        |

#### General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | No          |

#### Outdoor Air/Water

##### EN 16147 | Operating test

|                              |   |
|------------------------------|---|
| Temperature operating range  | 2 |
| Safety devices checking test | 2 |
| Condensate draining          | 2 |

##### EN 12102-2 | Average Climate

|                           |          |
|---------------------------|----------|
| Sound power level indoor  | 40 dB(A) |
| Sound power level outdoor | 61 dB(A) |

##### EN 16147 | Average Climate

|                                 |               |
|---------------------------------|---------------|
| Declared load profile           | XL            |
| Efficiency $\eta_{DHW}$         | 125 %         |
| COP                             | 3.00          |
| Heating up time                 | 23:8:13 h:min |
| Standby power input             | 46.0 W        |
| Reference hot water temperature | 44.7 °C       |
| Mixed water at 40°C             | 219 l         |

##### EN 14511-4 | Heating

|                                            |        |
|--------------------------------------------|--------|
| Shutting off the heat transfer medium flow | passed |
| Complete power supply failure              | passed |
| Defrost test                               | passed |
| Starting and operating test                | passed |

##### EN 14511-2 | Heating

|             | Low temperature | Medium temperature |
|-------------|-----------------|--------------------|
| Heat output | 9.58 kW         | 11.14 kW           |
| El input    | 1.85 kW         | 4.14 kW            |

|                                                     |                 |                    |
|-----------------------------------------------------|-----------------|--------------------|
| COP                                                 | 5.19            | 2.69               |
| EN 12102-1   Average Climate                        |                 |                    |
|                                                     | Low temperature | Medium temperature |
| Sound power level indoor                            | 40 dB(A)        | 35 dB(A)           |
| Sound power level outdoor                           | 57 dB(A)        | 61 dB(A)           |
| EN 14825   Average Climate                          |                 |                    |
|                                                     | Low temperature | Medium temperature |
| $\eta_s$                                            | 185 %           | 127 %              |
| Prated                                              | 11.60 kW        | 11.04 kW           |
| SCOP                                                | 4.70            | 3.24               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -25 °C          | -25 °C             |
| Pdh Tj = -7°C                                       | 10.26 kW        | 9.76 kW            |
| COP Tj = -7°C                                       | 3.38            | 1.89               |
| Cdh Tj = -7 °C                                      | 0.900           | 0.900              |
| Pdh Tj = +2°C                                       | 6.30 kW         | 6.11 kW            |
| COP Tj = +2°C                                       | 4.69            | 3.22               |
| Cdh Tj = +2 °C                                      | 0.900           | 0.900              |
| Pdh Tj = +7°C                                       | 6.13 kW         | 5.93 kW            |
| COP Tj = +7°C                                       | 6.29            | 4.76               |
| Cdh Tj = +7 °C                                      | 0.900           | 0.900              |
| Pdh Tj = 12°C                                       | 5.97 kW         | 6.92 kW            |
| COP Tj = 12°C                                       | 6.02            | 5.80               |
| Cdh Tj = +12 °C                                     | 0.900           | 0.900              |
| Pdh Tj = Tbiv                                       | 10.26 kW        | 9.76 kW            |
| COP Tj = Tbiv                                       | 3.38            | 1.89               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 11.23 kW        | 9.13 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.02            | 1.70               |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900           | 0.900              |
| WTOL                                                | 56 °C           | 56 °C              |
| Poff                                                | 13 W            | 13 W               |
| PTO                                                 | 39 W            | 39 W               |
| PSB                                                 | 13 W            | 13 W               |
| PCK                                                 | 41 W            | 41 W               |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 0.37 kW         | 1.91 kW            |
| Annual energy consumption Qhe                       | 5096 kWh        | 7039 kWh           |

Model Indoor unit: PAVH-15V4FX-250L/IX, Outdoor unit: PAVH-15V4FXX

|                                     |                                                              |
|-------------------------------------|--------------------------------------------------------------|
| Model name                          | Indoor unit: PAVH-15V4FX-250L/IX, Outdoor unit: PAVH-15V4FXX |
| Application                         | Heating + DHW + low temp                                     |
| Units                               | Indoor, Outdoor                                              |
| Climate zone (for heating)          | n/a                                                          |
| Reversibility                       | Yes                                                          |
| Cooling mode application (optional) | n/a                                                          |
| Any additional heat sources         | n/a                                                          |

#### General data

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|------------------|-------------|
| Power supply     | 3x400V 50Hz |
| Off-peak product | n/a         |

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| $\eta_s$                                            | 185 %           | 127 %              |
| Prated                                              | 11.60 kW        | 11.04 kW           |
| SCOP                                                | 4.70            | 3.24               |
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| TOL                                                 | -25 °C          | -25 °C             |
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