

## Subtype FDCW100VNX-A

|                     |                                                     |
|---------------------|-----------------------------------------------------|
| Certificate Holder  | Mitsubishi Heavy Industries Air Conditioning Europe |
| Address             | 5 The Square                                        |
| ZIP                 | UB11 1ET                                            |
| City                | Uxbridge, Middlesex                                 |
| Country             | GB                                                  |
| Certification Body  | RISE CERT                                           |
| Subtype title       | FDCW100VNX-A                                        |
| Registration number | 012-SC0826-18                                       |
| Heat Pump Type      | Outdoor Air/Water                                   |
| Refrigerant         | R410A                                               |
| Mass of Refrigerant | 2.9 kg                                              |
| Certification Date  | 21.01.2019                                          |

## Model FDCW100VNX-A + HSB100

|                                     |                       |
|-------------------------------------|-----------------------|
| Model name                          | FDCW100VNX-A + HSB100 |
| Application                         | Heating (medium temp) |
| Units                               | Indoor, Outdoor       |
| Climate zone (for heating)          | n/a                   |
| Cooling mode application (optional) | n/a                   |
| Any additional heat sources         | n/a                   |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

### 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 | 9.20 kW         | 9.00 kW            |
| El input    | 2.15 kW         | 3.39 kW            |
| COP         | 4.28            | 2.65               |

### EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 33 dB(A)        | 33 dB(A)           |
| Sound power level outdoor | 58 dB(A)        | 58 dB(A)           |

### EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 165 %           | 126 %              |
| Prated         | 8.50 kW         | 10.00 kW           |
| SCOP           | 4.13            | 3.15               |
| Tbiv           | -8 °C           | -4 °C              |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 7.50 kW         | 8.80 kW            |
| COP Tj = -7°C  | 2.93            | 1.96               |
| Cdh Tj = -7 °C | 0.970           | 0.980              |
| Pdh Tj = +2°C  | 4.60 kW         | 5.40 kW            |
| COP Tj = +2°C  | 4.11            | 3.22               |
| Cdh Tj = +2 °C | 0.970           | 0.980              |
| Pdh Tj = +7°C  | 3.60 kW         | 3.50 kW            |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| COP Tj = +7°C                                       | 5.17        | 4.47        |
| Cdh Tj = +7 °C                                      | 0.970       | 0.980       |
| Pdh Tj = 12°C                                       | 4.10 kW     | 3.80 kW     |
| COP Tj = 12°C                                       | 6.13        | 5.45        |
| Cdh Tj = +12 °C                                     | 0.970       | 0.980       |
| Pdh Tj = Tbiv                                       | 7.80 kW     | 7.70 kW     |
| COP Tj = Tbiv                                       | 2.93        | 2.31        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.50 kW     | 6.70 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.69        | 1.94        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.97        | 0.98        |
| WTOL                                                | 58 °C       | 58 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 20 W        | 14 W        |
| PSB                                                 | 15 W        | 15 W        |
| PCK                                                 | 35 W        | 35 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 1.00 kW     | 3.30 kW     |
| Annual energy consumption Qhe                       | 4181 kWh    | 6391 kWh    |

## Model FDCW100VNX-A + HMA100-S

|                                     |                          |
|-------------------------------------|--------------------------|
| Model name                          | FDCW100VNX-A + HMA100-S  |
| Application                         | Heating + DHW + low temp |
| Units                               | Indoor, Outdoor          |
| Climate zone (for heating)          | n/a                      |
| Cooling mode application (optional) | n/a                      |
| Any additional heat sources         | n/a                      |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 1x230V 50Hz |
| Off-peak product | n/a         |

## Outdoor Air/Water

### EN 16147 | Average Climate

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | XL         |
| Efficiency $\eta_{DHW}$         | 98 %       |
| COP                             | 2.32       |
| Heating up time                 | 1:00 h:min |
| Standby power input             | 85.0 W     |
| Reference hot water temperature | 51.0 °C    |
| Mixed water at 40°C             | 230 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 | 9.20 kW         | 9.00 kW            |
| El input    | 2.15 kW         | 3.39 kW            |
| COP         | 4.28            | 2.65               |

### EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 33 dB(A)        | 33 dB(A)           |
| Sound power level outdoor | 58 dB(A)        | 58 dB(A)           |

### EN 14825 | Average Climate

|          | Low temperature | Medium temperature |
|----------|-----------------|--------------------|
| $\eta_s$ | 165 %           | 126 %              |
| Prated   | 8.50 kW         | 10.00 kW           |
| SCOP     | 4.13            | 3.15               |

|                                                     |             |             |
|-----------------------------------------------------|-------------|-------------|
| Tbiv                                                | -8 °C       | -4 °C       |
| TOL                                                 | -10 °C      | -10 °C      |
| Pdh Tj = -7°C                                       | 7.50 kW     | 8.80 kW     |
| COP Tj = -7°C                                       | 2.93        | 1.96        |
| Cdh Tj = -7 °C                                      | 0.970       | 0.980       |
| Pdh Tj = +2°C                                       | 4.60 kW     | 5.40 kW     |
| COP Tj = +2°C                                       | 4.11        | 3.22        |
| Cdh Tj = +2 °C                                      | 0.970       | 0.980       |
| Pdh Tj = +7°C                                       | 3.60 kW     | 3.50 kW     |
| COP Tj = +7°C                                       | 5.17        | 4.47        |
| Cdh Tj = +7 °C                                      | 0.970       | 0.980       |
| Pdh Tj = 12°C                                       | 4.10 kW     | 3.80 kW     |
| COP Tj = 12°C                                       | 6.13        | 5.45        |
| Cdh Tj = +12 °C                                     | 0.970       | 0.980       |
| Pdh Tj = Tbiv                                       | 7.80 kW     | 7.70 kW     |
| COP Tj = Tbiv                                       | 2.93        | 2.31        |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.50 kW     | 6.70 kW     |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.69        | 1.94        |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.97        | 0.98        |
| WTOL                                                | 58 °C       | 58 °C       |
| Poff                                                | 2 W         | 2 W         |
| PTO                                                 | 20 W        | 14 W        |
| PSB                                                 | 15 W        | 15 W        |
| PCK                                                 | 35 W        | 35 W        |
| Supplementary Heater: Type of energy input          | Electricity | Electricity |
| Supplementary Heater: PSUP                          | 1.00 kW     | 3.30 kW     |
| Annual energy consumption Qhe                       | 4181 kWh    | 6391 kWh    |