

## Subtype LIA 0911HWCF

|                     |                                       |
|---------------------|---------------------------------------|
| Certificate Holder  | Glen Dimplex Deutschland GmbH         |
| Address             | Am Goldenen Feld 18                   |
| ZIP                 | D-95326                               |
| City                | Kulmbach                              |
| Country             | DE                                    |
| Certification Body  | BRE Global Limited                    |
| Subtype title       | LIA 0911HWCF                          |
| Registration number | 041-K029-02                           |
| Heat Pump Type      | Outdoor Air/Water                     |
| Refrigerant         | R32                                   |
| Mass of Refrigerant | 1.65 kg                               |
| Certification Date  | 20.07.2022                            |
| Testing basis       | Heat Pump Keymark Scheme Rules Rev 08 |

|                                            |                                |
|--------------------------------------------|--------------------------------|
| Model LIA 0911HWCF M                       |                                |
| Model name                                 | LIA 0911HWCF M                 |
| Application                                | Heating + DHW + low temp       |
| Units                                      | Indoor, Outdoor                |
| Climate zone (for heating)                 | Warmer Climate, Colder Climate |
| Reversibility                              | Yes                            |
| 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                      | L                              |
| Efficiency $\eta_{DHW}$                    | 117 %                          |
| COP                                        | 2.83                           |
| Heating up time                            | 1:38 h:min                     |
| Standby power input                        | 23.0 W                         |
| Reference hot water temperature            | 47.0 °C                        |
| Mixed water at 40°C                        | 200 l                          |
| EN 16147   Colder Climate                  |                                |
| Declared load profile                      | L                              |
| Efficiency $\eta_{DHW}$                    | 100 %                          |
| COP                                        | 2.44                           |
| Heating up time                            | 1:31 h:min                     |
| Standby power input                        | 25.0 W                         |
| Reference hot water temperature            | 47.0 °C                        |
| Mixed water at 40°C                        | 200 l                          |
| EN 16147   Warmer Climate                  |                                |
| Declared load profile                      | L                              |
| Efficiency $\eta_{DHW}$                    | 141 %                          |
| COP                                        | 3.42                           |
| Heating up time                            | 1:30 h:min                     |
| Standby power input                        | 21.0 W                         |
| Reference hot water temperature            | 47.0 °C                        |
| Mixed water at 40°C                        | 200 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 | 10.00 kW        | 9.50 kW            |
| El input    | 2.00 kW         | 3.06 kW            |
| COP         | 5.00            | 3.10               |

#### EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 42 dB(A)        | 42 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 205 %           | 137 %              |
| Prated                                              | 9.17 kW         | 7.67 kW            |
| SCOP                                                | 5.19            | 3.49               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -10 °C          | -10 °C             |
| Pdh Tj = -7°C                                       | 8.11 kW         | 6.78 kW            |
| COP Tj = -7°C                                       | 3.23            | 2.24               |
| Cdh Tj = -7 °C                                      | 0.90            | 0.90               |
| Pdh Tj = +2°C                                       | 5.18 kW         | 4.29 kW            |
| COP Tj = +2°C                                       | 5.01            | 3.42               |
| Cdh Tj = +2 °C                                      | 0.90            | 0.90               |
| Pdh Tj = +7°C                                       | 3.32 kW         | 2.77 kW            |
| COP Tj = +7°C                                       | 7.08            | 4.52               |
| Cdh Tj = +7 °C                                      | 0.90            | 0.90               |
| Pdh Tj = 12°C                                       | 1.65 kW         | 1.58 kW            |
| COP Tj = 12°C                                       | 8.58            | 5.68               |
| Cdh Tj = +12 °C                                     | 0.90            | 0.90               |
| Pdh Tj = Tbiv                                       | 8.11 kW         | 6.78 kW            |
| COP Tj = Tbiv                                       | 3.23            | 2.24               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.40 kW         | 5.39 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.96            | 1.83               |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 14 W            | 14 W               |
| PTO                                                 | 24 W            | 24 W               |
| PSB                                                 | 14 W            | 14 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |

|                                           |          |          |
|-------------------------------------------|----------|----------|
| Supplementary Heater: PSUP                | 1.76 kW  | 2.28 kW  |
| Annual energy consumption Q <sub>he</sub> | 3647 kWh | 4539 kWh |

#### EN 12102-1 | Colder Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 42 dB(A)        | 42 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Colder Climate

|                                                                                                                             | Low temperature | Medium temperature |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                                                                                                    | 170 %           | 116 %              |
| Prated                                                                                                                      | 7.75 kW         | 6.71 kW            |
| SCOP                                                                                                                        | 4.32            | 2.99               |
| T <sub>biv</sub>                                                                                                            | -15 °C          | -15 °C             |
| TOL                                                                                                                         | -22 °C          | -22 °C             |
| P <sub>dh</sub> T <sub>j</sub> = -7°C                                                                                       | 4.83 kW         | 4.27 kW            |
| COP T <sub>j</sub> = -7°C                                                                                                   | 3.60            | 2.54               |
| C <sub>dh</sub> T <sub>j</sub> = -7 °C                                                                                      | 0.90            | 0.90               |
| P <sub>dh</sub> T <sub>j</sub> = +2°C                                                                                       | 2.94 kW         | 2.57 kW            |
| COP T <sub>j</sub> = +2°C                                                                                                   | 5.26            | 3.51               |
| C <sub>dh</sub> T <sub>j</sub> = +2 °C                                                                                      | 0.90            | 0.90               |
| P <sub>dh</sub> T <sub>j</sub> = +7°C                                                                                       | 1.92 kW         | 1.66 kW            |
| COP T <sub>j</sub> = +7°C                                                                                                   | 7.08            | 4.37               |
| C <sub>dh</sub> T <sub>j</sub> = +7 °C                                                                                      | 0.90            | 0.90               |
| P <sub>dh</sub> T <sub>j</sub> = 12°C                                                                                       | 1.66 kW         | 1.48 kW            |
| COP T <sub>j</sub> = 12°C                                                                                                   | 7.96            | 5.96               |
| C <sub>dh</sub> T <sub>j</sub> = +12 °C                                                                                     | 0.90            | 0.90               |
| P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>                                                                           | 6.32 kW         | 5.48 kW            |
| COP T <sub>j</sub> = T <sub>biv</sub>                                                                                       | 2.64            | 2.00               |
| P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub> | 4.63 kW         | 2.80 kW            |
| COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>                         | 1.97            | 1.22               |
| WTOL                                                                                                                        | 65 °C           | 65 °C              |
| P <sub>off</sub>                                                                                                            | 14 W            | 14 W               |
| PTO                                                                                                                         | 24 W            | 24 W               |
| PSB                                                                                                                         | 14 W            | 14 W               |
| PCK                                                                                                                         | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input                                                                                  | Electricity     | Electricity        |
| Supplementary Heater: PSUP                                                                                                  | 3.13 kW         | 3.91 kW            |
| Annual energy consumption Q <sub>he</sub>                                                                                   | 4424 kWh        | 5540 kWh           |
| P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL                                                                              | 6.32            | 5.48               |
| COP T <sub>j</sub> = -15°C (if TOL                                                                                          | 2.64            | 2.00               |
| C <sub>dh</sub> T <sub>j</sub> = -15 °C                                                                                     | 0.90            | 0.90               |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 42 dB(A)        | 42 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Warmer Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 279 %           | 180 %              |
| Prated                                              | 8.58 kW         | 8.63 kW            |
| SCOP                                                | 7.12            | 4.58               |
| Tbiv                                                | 7 °C            | 7 °C               |
| TOL                                                 | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 8.44 kW         | 8.06 kW            |
| COP Tj = +2°C                                       | 3.84            | 2.59               |
| Cdh Tj = +2 °C                                      | 0.90            | 0.90               |
| Pdh Tj = +7°C                                       | 5.52 kW         | 5.55 kW            |
| COP Tj = +7°C                                       | 6.18            | 4.10               |
| Cdh Tj = +7 °C                                      | 0.90            | 0.90               |
| Pdh Tj = 12°C                                       | 2.62 kW         | 2.53 kW            |
| COP Tj = 12°C                                       | 9.04            | 5.82               |
| Cdh Tj = +12 °C                                     | 0.90            | 0.90               |
| Pdh Tj = Tbiv                                       | 5.52 kW         | 5.55 kW            |
| COP Tj = Tbiv                                       | 6.18            | 4.10               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.44 kW         | 8.16 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.84            | 2.61               |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 14 W            | 14 W               |
| PTO                                                 | 24 W            | 24 W               |
| PSB                                                 | 14 W            | 14 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 0.14 kW         | 0.48 kW            |
| Annual energy consumption Qhe                       | 1628 kWh        | 2516 kWh           |

## Model LIA 0911HWCF MS

|                                     |                                |
|-------------------------------------|--------------------------------|
| Model name                          | LIA 0911HWCF MS                |
| Application                         | Heating + DHW + low temp       |
| Units                               | Indoor, Outdoor                |
| Climate zone (for heating)          | Warmer Climate, Colder Climate |
| Reversibility                       | Yes                            |
| Cooling mode application (optional) | n/a                            |
| Any additional heat sources         | n/a                            |

## General data

|                  |     |
|------------------|-----|
| Power supply     | n/a |
| Off-peak product | n/a |

## Outdoor Air/Water

### EN 16147 | Average Climate

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 125 %      |
| COP                             | 3.02       |
| Heating up time                 | 1:38 h:min |
| Standby power input             | 23.0 W     |
| Reference hot water temperature | 47.0 °C    |
| Mixed water at 40°C             | 200 l      |

### EN 16147 | Colder Climate

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 107 %      |
| COP                             | 2.61       |
| Heating up time                 | 1:31 h:min |
| Standby power input             | 25.0 W     |
| Reference hot water temperature | 47.0 °C    |
| Mixed water at 40°C             | 200 l      |

### EN 16147 | Warmer Climate

|                                 |            |
|---------------------------------|------------|
| Declared load profile           | L          |
| Efficiency $\eta_{DHW}$         | 151 %      |
| COP                             | 3.66       |
| Heating up time                 | 1:30 h:min |
| Standby power input             | 21.0 W     |
| Reference hot water temperature | 47.0 °C    |
| Mixed water at 40°C             | 200 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 | 10.00 kW        | 9.50 kW            |
| El input    | 2.00 kW         | 3.06 kW            |
| COP         | 5.00            | 3.10               |

#### EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 42 dB(A)        | 42 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Average Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 205 %           | 137 %              |
| Prated                                              | 9.17 kW         | 7.67 kW            |
| SCOP                                                | 5.19            | 3.49               |
| Tbiv                                                | -7 °C           | -7 °C              |
| TOL                                                 | -10 °C          | -10 °C             |
| Pdh Tj = -7°C                                       | 8.11 kW         | 6.78 kW            |
| COP Tj = -7°C                                       | 3.23            | 2.24               |
| Cdh Tj = -7 °C                                      | 0.90            | 0.90               |
| Pdh Tj = +2°C                                       | 5.18 kW         | 4.29 kW            |
| COP Tj = +2°C                                       | 5.01            | 3.42               |
| Cdh Tj = +2 °C                                      | 0.90            | 0.90               |
| Pdh Tj = +7°C                                       | 3.32 kW         | 2.77 kW            |
| COP Tj = +7°C                                       | 7.08            | 4.52               |
| Cdh Tj = +7 °C                                      | 0.90            | 0.90               |
| Pdh Tj = 12°C                                       | 1.65 kW         | 1.58 kW            |
| COP Tj = 12°C                                       | 8.58            | 5.68               |
| Cdh Tj = +12 °C                                     | 0.90            | 0.90               |
| Pdh Tj = Tbiv                                       | 8.11 kW         | 6.78 kW            |
| COP Tj = Tbiv                                       | 3.23            | 2.24               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 7.40 kW         | 5.39 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.96            | 1.83               |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 14 W            | 14 W               |
| PTO                                                 | 24 W            | 24 W               |
| PSB                                                 | 14 W            | 14 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |

|                                           |          |          |
|-------------------------------------------|----------|----------|
| Supplementary Heater: PSUP                | 1.76 kW  | 2.28 kW  |
| Annual energy consumption Q <sub>he</sub> | 3647 kWh | 4539 kWh |

#### EN 12102-1 | Colder Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 42 dB(A)        | 42 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Colder Climate

|                                                                                                                             | Low temperature | Medium temperature |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                                                                                                    | 170 %           | 116 %              |
| Prated                                                                                                                      | 7.75 kW         | 6.71 kW            |
| SCOP                                                                                                                        | 4.32            | 2.99               |
| T <sub>biv</sub>                                                                                                            | -15 °C          | -15 °C             |
| TOL                                                                                                                         | -22 °C          | -22 °C             |
| P <sub>dh</sub> T <sub>j</sub> = -7°C                                                                                       | 4.83 kW         | 4.27 kW            |
| COP T <sub>j</sub> = -7°C                                                                                                   | 3.60            | 2.54               |
| C <sub>dh</sub> T <sub>j</sub> = -7 °C                                                                                      | 0.90            | 0.90               |
| P <sub>dh</sub> T <sub>j</sub> = +2°C                                                                                       | 2.94 kW         | 2.57 kW            |
| COP T <sub>j</sub> = +2°C                                                                                                   | 5.26            | 3.51               |
| C <sub>dh</sub> T <sub>j</sub> = +2 °C                                                                                      | 0.90            | 0.90               |
| P <sub>dh</sub> T <sub>j</sub> = +7°C                                                                                       | 1.92 kW         | 1.66 kW            |
| COP T <sub>j</sub> = +7°C                                                                                                   | 7.08            | 4.37               |
| C <sub>dh</sub> T <sub>j</sub> = +7 °C                                                                                      | 0.90            | 0.90               |
| P <sub>dh</sub> T <sub>j</sub> = 12°C                                                                                       | 1.66 kW         | 1.48 kW            |
| COP T <sub>j</sub> = 12°C                                                                                                   | 7.96            | 5.96               |
| C <sub>dh</sub> T <sub>j</sub> = +12 °C                                                                                     | 0.90            | 0.90               |
| P <sub>dh</sub> T <sub>j</sub> = T <sub>biv</sub>                                                                           | 6.32 kW         | 5.48 kW            |
| COP T <sub>j</sub> = T <sub>biv</sub>                                                                                       | 2.64            | 2.00               |
| P <sub>dh</sub> T <sub>j</sub> = TOL or P <sub>dh</sub> T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub> | 4.63 kW         | 2.80 kW            |
| COP T <sub>j</sub> = TOL or COP T <sub>j</sub> = T <sub>designh</sub> if TOL < T <sub>designh</sub>                         | 1.97            | 1.22               |
| WTOL                                                                                                                        | 65 °C           | 65 °C              |
| P <sub>off</sub>                                                                                                            | 14 W            | 14 W               |
| PTO                                                                                                                         | 24 W            | 24 W               |
| PSB                                                                                                                         | 14 W            | 14 W               |
| PCK                                                                                                                         | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input                                                                                  | Electricity     | Electricity        |
| Supplementary Heater: PSUP                                                                                                  | 3.13 kW         | 3.91 kW            |
| Annual energy consumption Q <sub>he</sub>                                                                                   | 4424 kWh        | 5540 kWh           |
| P <sub>dh</sub> T <sub>j</sub> = -15°C (if TOL                                                                              | 6.32            | 5.48               |
| COP T <sub>j</sub> = -15°C (if TOL                                                                                          | 2.64            | 2.00               |
| C <sub>dh</sub> T <sub>j</sub> = -15 °C                                                                                     | 0.90            | 0.90               |

#### EN 12102-1 | Warmer Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 42 dB(A)        | 42 dB(A)           |
| Sound power level outdoor | 60 dB(A)        | 60 dB(A)           |

#### EN 14825 | Warmer Climate

|                                                     | Low temperature | Medium temperature |
|-----------------------------------------------------|-----------------|--------------------|
| $\eta_s$                                            | 279 %           | 180 %              |
| Prated                                              | 8.58 kW         | 8.63 kW            |
| SCOP                                                | 7.12            | 4.58               |
| Tbiv                                                | 7 °C            | 7 °C               |
| TOL                                                 | 2 °C            | 2 °C               |
| Pdh Tj = +2°C                                       | 8.44 kW         | 8.06 kW            |
| COP Tj = +2°C                                       | 3.84            | 2.59               |
| Cdh Tj = +2 °C                                      | 0.90            | 0.90               |
| Pdh Tj = +7°C                                       | 5.52 kW         | 5.55 kW            |
| COP Tj = +7°C                                       | 6.18            | 4.10               |
| Cdh Tj = +7 °C                                      | 0.90            | 0.90               |
| Pdh Tj = 12°C                                       | 2.62 kW         | 2.53 kW            |
| COP Tj = 12°C                                       | 9.04            | 5.82               |
| Cdh Tj = +12 °C                                     | 0.90            | 0.90               |
| Pdh Tj = Tbiv                                       | 5.52 kW         | 5.55 kW            |
| COP Tj = Tbiv                                       | 6.18            | 4.10               |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 8.44 kW         | 8.16 kW            |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 3.84            | 2.61               |
| WTOL                                                | 65 °C           | 65 °C              |
| Poff                                                | 14 W            | 14 W               |
| PTO                                                 | 24 W            | 24 W               |
| PSB                                                 | 14 W            | 14 W               |
| PCK                                                 | 0 W             | 0 W                |
| Supplementary Heater: Type of energy input          | Electricity     | Electricity        |
| Supplementary Heater: PSUP                          | 0.14 kW         | 0.48 kW            |
| Annual energy consumption Qhe                       | 1628 kWh        | 2516 kWh           |