

## 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                            |
| Testing laboratory  | TÜV SÜD Certification and Testing Co., Ltd. Guangzhou Branch, CN |

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