

## Subtype R290 monobloc 7, 9kW\_1 phase &amp; 3phases\_UB40

|                     |                                                       |
|---------------------|-------------------------------------------------------|
| Certificate Holder  | LG Electronics Inc.                                   |
| Address             | 84, Wanam-ro, seongsan-gu                             |
| ZIP                 | 51554                                                 |
| City                | Changwon-si                                           |
| Country             | KR                                                    |
| Certification Body  | DIN CERTCO Gesellschaft für Konformitätsbewertung mbH |
| Subtype title       | R290 monobloc 7, 9kW_1 phase & 3phases_UB40           |
| Registration number | 011-1W0831                                            |
| Heat Pump Type      | Outdoor Air/Water                                     |
| Refrigerant         | R290                                                  |
| Mass of Refrigerant | 0.9 kg                                                |
| Certification Date  | 17.07.2024                                            |
| Testing basis       | HP KEYMARK certification scheme rules V14             |

**Model HM091HF UB40 / HN1616HC NK0**

|                                     |                             |
|-------------------------------------|-----------------------------|
| Model name                          | HM091HF UB40 / HN1616HC NK0 |
| Application                         | Heating (medium 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**

|                  |             |
|------------------|-------------|
| 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 | 9.00 kW         | 5.50 kW            |
| El input    | 1.91 kW         | 1.67 kW            |
| COP         | 4.70            | 3.30               |

**EN 12102-1 | Average Climate**

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 39 dB(A)        | 39 dB(A)           |
| Sound power level outdoor | 50 dB(A)        | 50 dB(A)           |

**EN 14825 | Average Climate**

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 205 %           | 151 %              |
| Prated         | 6.00 kW         | 7.00 kW            |
| SCOP           | 5.20            | 3.86               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 5.30 kW         | 6.40 kW            |
| COP Tj = -7°C  | 3.30            | 2.45               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 3.20 kW         | 3.90 kW            |
| COP Tj = +2°C  | 5.25            | 3.92               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |

|                                                     |          |          |
|-----------------------------------------------------|----------|----------|
| Pdh Tj = +7°C                                       | 2.40 kW  | 3.90 kW  |
| COP Tj = +7°C                                       | 6.55     | 5.05     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 2.40 kW  | 3.90 kW  |
| COP Tj = 12°C                                       | 8.30     | 6.30     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 6.00 kW  | 7.20 kW  |
| COP Tj = Tbiv                                       | 2.90     | 2.15     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.00 kW  | 7.20 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.90     | 2.15     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL                                                | 75 °C    | 75 °C    |
| Poff                                                | 10 W     | 10 W     |
| PTO                                                 | 30 W     | 30 W     |
| PSB                                                 | 10 W     | 10 W     |
| PCK                                                 | 0 W      | 0 W      |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 0.00 kW  | 0.00 kW  |
| Annual energy consumption Qhe                       | 2386 kWh | 3856 kWh |

## Model HM091HF UB40 / PHCS0 ENCXLEU

|                                     |                              |
|-------------------------------------|------------------------------|
| Model name                          | HM091HF UB40 / PHCS0 ENCXLEU |
| Application                         | Heating (medium temp)        |
| Units                               | Outdoor                      |
| Climate zone (for heating)          | n/a                          |
| 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 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 | 9.00 kW         | 5.50 kW            |
| El input    | 1.91 kW         | 1.67 kW            |
| COP         | 4.70            | 3.30               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 0 dB(A)         | 0 dB(A)            |
| Sound power level outdoor | 50 dB(A)        | 50 dB(A)           |

## EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 205 %           | 151 %              |
| Prated         | 6.00 kW         | 7.00 kW            |
| SCOP           | 5.20            | 3.86               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 5.30 kW         | 6.40 kW            |
| COP Tj = -7°C  | 3.30            | 2.45               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 3.20 kW         | 3.90 kW            |
| COP Tj = +2°C  | 5.25            | 3.92               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |

|                                                     |          |          |
|-----------------------------------------------------|----------|----------|
| Pdh Tj = +7°C                                       | 2.40 kW  | 3.90 kW  |
| COP Tj = +7°C                                       | 6.55     | 5.05     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 2.40 kW  | 3.90 kW  |
| COP Tj = 12°C                                       | 8.30     | 6.30     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 6.00 kW  | 7.20 kW  |
| COP Tj = Tbiv                                       | 2.90     | 2.15     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.00 kW  | 7.20 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.90     | 2.15     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL                                                | 75 °C    | 75 °C    |
| Poff                                                | 10 W     | 10 W     |
| PTO                                                 | 30 W     | 30 W     |
| PSB                                                 | 10 W     | 10 W     |
| PCK                                                 | 0 W      | 0 W      |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 0.00 kW  | 0.00 kW  |
| Annual energy consumption Qhe                       | 2386 kWh | 3856 kWh |

## Model HM093HF UB40 / HN1639HC NK0

|                                     |                             |
|-------------------------------------|-----------------------------|
| Model name                          | HM093HF UB40 / HN1639HC NK0 |
| Application                         | Heating (medium 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

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 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 | 9.00 kW         | 5.50 kW            |
| El input    | 1.91 kW         | 1.67 kW            |
| COP         | 4.70            | 3.30               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 39 dB(A)        | 39 dB(A)           |
| Sound power level outdoor | 50 dB(A)        | 50 dB(A)           |

## EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 205 %           | 151 %              |
| Prated         | 6.00 kW         | 7.00 kW            |
| SCOP           | 5.20            | 3.86               |
| Tbiv           | -10 °C          | -10 °C             |
| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 5.30 kW         | 6.40 kW            |
| COP Tj = -7°C  | 3.30            | 2.45               |
| Cdh Tj = -7 °C | 0.900           | 0.900              |
| Pdh Tj = +2°C  | 3.20 kW         | 3.90 kW            |
| COP Tj = +2°C  | 5.25            | 3.92               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |

|                                                     |          |          |
|-----------------------------------------------------|----------|----------|
| Pdh Tj = +7°C                                       | 2.40 kW  | 3.90 kW  |
| COP Tj = +7°C                                       | 6.55     | 5.05     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 2.40 kW  | 3.90 kW  |
| COP Tj = 12°C                                       | 8.30     | 6.30     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 6.00 kW  | 7.20 kW  |
| COP Tj = Tbiv                                       | 2.90     | 2.15     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.00 kW  | 7.20 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.90     | 2.15     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL                                                | 75 °C    | 75 °C    |
| Poff                                                | 10 W     | 10 W     |
| PTO                                                 | 30 W     | 30 W     |
| PSB                                                 | 30 W     | 30 W     |
| PCK                                                 | 10 W     | 10 W     |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 0.00 kW  | 0.00 kW  |
| Annual energy consumption Qhe                       | 2386 kWh | 3856 kWh |

## Model HM093HF UB40 / PHCS0 ENCXLEU

|                                     |                              |
|-------------------------------------|------------------------------|
| Model name                          | HM093HF UB40 / PHCS0 ENCXLEU |
| Application                         | Heating (medium temp)        |
| Units                               | Outdoor                      |
| Climate zone (for heating)          | n/a                          |
| Reversibility                       | Yes                          |
| Cooling mode application (optional) | n/a                          |
| Any additional heat sources         | n/a                          |

## General data

|                  |             |
|------------------|-------------|
| Power supply     | 3x400V 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 |
|-------------|-----------------|--------------------|
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| COP         | 4.70            | 3.30               |

## EN 12102-1 | Average Climate

|                           | Low temperature | Medium temperature |
|---------------------------|-----------------|--------------------|
| Sound power level indoor  | 39 dB(A)        | 39 dB(A)           |
| Sound power level outdoor | 50 dB(A)        | 50 dB(A)           |

## EN 14825 | Average Climate

|                | Low temperature | Medium temperature |
|----------------|-----------------|--------------------|
| $\eta_s$       | 205 %           | 151 %              |
| Prated         | 6.00 kW         | 7.00 kW            |
| SCOP           | 5.20            | 3.86               |
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| TOL            | -10 °C          | -10 °C             |
| Pdh Tj = -7°C  | 5.30 kW         | 6.40 kW            |
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| COP Tj = +2°C  | 5.25            | 3.92               |
| Cdh Tj = +2 °C | 0.900           | 0.900              |

|                                                     |          |          |
|-----------------------------------------------------|----------|----------|
| Pdh Tj = +7°C                                       | 2.40 kW  | 3.90 kW  |
| COP Tj = +7°C                                       | 6.55     | 5.05     |
| Cdh Tj = +7 °C                                      | 0.900    | 0.900    |
| Pdh Tj = 12°C                                       | 2.40 kW  | 3.90 kW  |
| COP Tj = 12°C                                       | 8.30     | 6.30     |
| Cdh Tj = +12 °C                                     | 0.900    | 0.900    |
| Pdh Tj = Tbiv                                       | 6.00 kW  | 7.20 kW  |
| COP Tj = Tbiv                                       | 2.90     | 2.15     |
| Pdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 6.00 kW  | 7.20 kW  |
| COP Tj = TOL or COP Tj = Tdesignh if TOL < Tdesignh | 2.90     | 2.15     |
| Cdh Tj = TOL or Pdh Tj = Tdesignh if TOL < Tdesignh | 0.900    | 0.900    |
| WTOL                                                | 75 °C    | 75 °C    |
| Poff                                                | 10 W     | 10 W     |
| PTO                                                 | 30 W     | 30 W     |
| PSB                                                 | 30 W     | 30 W     |
| PCK                                                 | 10 W     | 10 W     |
| Supplementary Heater: Type of energy input          | n/a      | n/a      |
| Supplementary Heater: PSUP                          | 0.00 kW  | 0.00 kW  |
| Annual energy consumption Qhe                       | 2386 kWh | 3856 kWh |