

# **Attestation of Conformity**

Attestation No: SHA-AoC-230008

Applicant Name & Address: Afore New Energy Technology (Shanghai) Co., Ltd.

Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China. 201112

Factory Name & Address: Afore New Energy Technology (Shanghai) Co., Ltd.

Building 7, No.333 Wanfang Rd, Minhang District, Shanghai, China. 201112

Product Description: Hybrid inverter

Brand Name: Afore

Model: AF\*-TH (\*=3K, 4K, 5K, 6K, 8K, 10K, 12K, 15K, 17K, 20K, 25K, 30K)

AF\*-THP (\*=3K, 4K, 5K, 6K, 8K, 10K, 12K)

AF\*-THA (\*=3K, 4K, 5K, 6K, 8K, 10K, 12K, 15K, 17K)

AF\*-THC (\*=3K, 4K, 5K, 6K)

Characteristics: See appendix for details

Standards: EN IEC 61000-6-1: 2019; EN IEC 61000-6-3: 2021;

EU Directive: EMC Directive 2014/30/EU

Test Report No: 230601230SHA-001

Issued by: Intertek Testing Services Ltd. Shanghai

Issue date: 2023-07-07

This is to attest that the Technical Construction File for the product listed above has been evaluated against the Essential Safety Requirements of Annex I of the EMC Directive (2014/30/EU). This Attestation can be used in support of the Manufacturers Declaration of Conformity on affixing the CE mark. Product conformity to CE marking is not assured until all other applicable UK Regulations are met in full.

Signature

Name: Gary Hu

CE



**Ratings & Principle Characteristics:** 

| Specifications table                         |                                |                     |                     |           |  |
|--|--------------------------------|---------------------|---------------------|-----------|--|
| Model  | AF3K-TH                        | AF4K-TH             | AF5K-TH             | AF6K-TH   |  |
| PV input                                     |                                |                     |                     |           |  |
| P pv Max(kW)                                 | 5                              | 6                   | 7.5                 | 9         |  |
| Vmax PV (Vdc) (absolute Max.)                | 1000                           | 1000                | 1000                | 1000      |  |
| Isc PV (absolute Max.) (A)                   | 30*2                           | 30*2                | 30*2                | 30*2      |  |
| Number MPP trackers                          | 2                              | 2                   | 2                   | 2         |  |
| Number input strings                         | 1/1                            | 1/1                 | 1/1                 | 1/1       |  |
| Max. PV input current (A)                    | 20*2                           | 20*2                | 20*2                | 20*2      |  |
| MPPT voltage range (Vdc)                     | 150-850                        | 150-850             | 150-850             | 150-850   |  |
| Vdc range @ full power (Vdc)                 | 200-850                        | 200-850             | 200-850             | 250-850   |  |
| Battery (charge/discharge)                   |                                |                     |                     |           |  |
| Battery type                                 |                                | Li-ion/Le           | ad-acid             |           |  |
| Battery Normal Voltage (Range) (Vdc)         | 150                            | 0-800(Field adapt b | attery voltage rang | ge)       |  |
| Max charge/discharge Current(A)              | 30                             | 30                  | 30                  | 30        |  |
| Max charge/discharge Power(kW)               | 3                              | 4                   | 5                   | 6         |  |
| AC Grid (input and output)                   |                                |                     |                     |           |  |
| Normal AC Voltage (VAC)                      |                                | 3P+N+PE/3P          | +PE 230/400         |           |  |
| Frequency (Hz)                               |                                | 5                   | 0                   |           |  |
| Normal AC Current (A)                        | 4.4                            | 5.8                 | 7.3                 | 8.7       |  |
| Max. cont. input/output current (A)          | 8 / 5.3                        | 10.5 / 7            | 13 / 8.5            | 16 / 10.5 |  |
| Rated Power (kW)                             | 3                              | 4                   | 5                   | 6         |  |
| Rated Apparent Power (kVA)                   | 3                              | 4                   | 5                   | 6         |  |
| Max. cont. input/output Power (kW)           | 4.5 / 3.3                      | 6 / 4.4             | 7.5 / 5.5           | 9 / 6.6   |  |
| Max. cont. Apparent input/output Power (KVA) | 4.5 / 3.3                      | 6 / 4.4             | 7.5 / 5.5           | 9 / 6.6   |  |
| Power factor(adjustable)                     |                                | 1.0( -0.8           | 3~ <b>+</b> 0.8)    |           |  |
| AC Load output (stand alone)                 |                                |                     |                     |           |  |
| Normal Voltage (VAC)                         |                                | 3P+N+PE/3P          | +PE 230/400         |           |  |
| Frequency (Hz)                               |                                | 5                   | 0                   |           |  |
| Nominal Current (A)                          | 4.4                            | 5.8                 | 7.3                 | 8.7       |  |
| Max. cont. current (A)                       | 5.3                            | 7                   | 8.5                 | 10.5      |  |
| Max. cont. Power (kW)                        | 3                              | 4                   | 5                   | 6         |  |
| Rated Apparent Power (kVA)                   | 3                              | 4                   | 5                   | 6         |  |
| Max. cont. Apparent Power (kVA)              | 3                              | 4                   | 5                   | 6         |  |
| Power factor                                 | 1.0                            |                     |                     |           |  |
| Others                                       |                                |                     |                     |           |  |
| Ingress protection (IP)                      | IP65                           |                     |                     |           |  |
| Protective class                             | Class I                        |                     |                     |           |  |
| Temperature (°C)                             | -25°C to +60°C (Derating 45°C) |                     |                     |           |  |
| Inverter Isolation                           | Non-isolated (PV-AC-BAT)       |                     |                     |           |  |
| Overvoltage category                         | OVC III (AC Main), OVC II (PV) |                     |                     |           |  |
| Firmware Version                             | V1.01                          |                     |                     |           |  |
| Software Version                             | V01                            |                     |                     |           |  |



**Ratings & Principle Characteristics:** 

| Specifications table                   |                                    |                     |                |             |  |  |
|--|------------------------------------|---------------------|----------------|-------------|--|--|
| Model                                  | AF8K-TH AF10K-TH AF12K-TH AF15K-TH |                     |                |             |  |  |
| PV input                               | -                                  |                     |                |             |  |  |
| P pv Max(kW)                           | 12                                 | 15                  | 18             | 22.5        |  |  |
| Vmax PV (Vdc) (absolute Max.)          | 1000                               | 1000                | 1000           | 1000        |  |  |
| Isc PV (absolute Max.) (A)             | 30*2                               | 30*2                | 30*2           | 30+48       |  |  |
| Number MPP trackers                    | 2                                  | 2                   | 2              | 2           |  |  |
| Number input strings                   | <br>1/1                            | 1/1                 | 1/1            | 1/2         |  |  |
| Max. PV input current (A)              | 20*2                               | 20*2                | 20*2           | 20+32       |  |  |
| MPPT voltage range (Vdc)               | 150-850                            | 150-850             | 150-850        | 150-850     |  |  |
| Vdc range @ full power (Vdc)           | 300-850                            | 500-850             | 500-850        | 500-850     |  |  |
| Battery (charge/discharge)             |                                    | 000 000             | 000 000        | 000 000     |  |  |
| Battery type                           |                                    | l i-ion/l e         | ead-acid       |             |  |  |
| Battery Normal Voltage (Range) (Vdc)   | 150                                | 0-800(Field adapt l |                | ae)         |  |  |
| Max charge/discharge Current(A)        | 30                                 | 30                  | 30             | 50          |  |  |
| Max charge/discharge Power(kW)         | 8                                  | 10                  | 12             | 15          |  |  |
| AC Grid (input and output)             |                                    |                     | . <del>-</del> |             |  |  |
| Normal AC Voltage (VAC)                |                                    | 3P+N+PE/3P          | +PE 230/400    |             |  |  |
| Frequency (Hz)                         |                                    |                     | 0              |             |  |  |
| Normal AC Current (A)                  | 11.6                               | 14.5                | 17.4           | 21.8        |  |  |
| Max. cont. input/output current (A)    | 20 / 13.5                          | 26 / 17             | 32 / 21.5      | 40.5 / 27   |  |  |
| Rated Power (kW)                       | 8                                  | 10                  | 12             | 15          |  |  |
| Rated Apparent Power (kVA)             | 8                                  | 10                  | 12             | 15          |  |  |
| Max. cont. input/output Power (kW)     | 12 / 8.8                           | 15 / 11             | 18 / 13.2      | 22.5 / 16.5 |  |  |
| Max. cont. Apparent input/output Power |                                    |                     |                |             |  |  |
| (kVA)                                  | 12 / 8.8                           | 15 / 11             | 18 / 13.2      | 22.5 / 16.5 |  |  |
| Power factor(adjustable)               |                                    | 1.0( -0.8           | 3~ +0.8)       |             |  |  |
| AC Load output (stand alone)           |                                    | `                   | ,              |             |  |  |
| Normal Voltage (VAC)                   |                                    | 3P+N+PE/3P          | +PE 230/400    |             |  |  |
| Frequency (Hz)                         |                                    | 5                   | 0              |             |  |  |
| Nominal Current (A)                    | 11.6                               | 14.5                | 17.4           | 21.8        |  |  |
| Max. cont. current (A)                 | 13.5                               | 17                  | 21.5           | 27          |  |  |
| Max. cont. Power (kW)                  | 8                                  | 10                  | 12             | 15          |  |  |
| Rated Apparent Power (kVA)             | 8                                  | 10                  | 12             | 15          |  |  |
| Max. cont. Apparent Power (kVA)        | 8                                  | 10                  | 12             | 15          |  |  |
| Power factor                           | 1.0                                |                     |                |             |  |  |
| Others                                 |                                    |                     |                |             |  |  |
| Ingress protection (IP)                | IP65                               |                     |                |             |  |  |
| Protective class                       | Class I                            |                     |                |             |  |  |
| Temperature (°C)                       | -25°C to +60°C (Derating 45°C)     |                     |                |             |  |  |
| Inverter Isolation                     | Non-isolated (PV-AC-BAT)           |                     |                |             |  |  |
| Overvoltage category                   | OVC III (AC Main), OVC II (PV)     |                     |                |             |  |  |
| Firmware Version                       | V1.01                              |                     |                |             |  |  |
| Software Version                       | V01                                |                     |                |             |  |  |



**Ratings & Principle Characteristics:** 

| Specifications table                         |                                    |                    |                     |           |  |
|--|------------------------------------|--------------------|---------------------|-----------|--|
| Model  | AF3K-THP AF4K-THP AF5K-THP AF6K-TH |                    |                     |           |  |
| PV input                                     |                                    |                    |                     |           |  |
| P pv Max(kW)                                 | 5                                  | 6                  | 7.5                 | 9         |  |
| Vmax PV (Vdc) (absolute Max.)                | 1000                               | 1000               | 1000                | 1000      |  |
| Isc PV (absolute Max.) (A)                   | 30*2                               | 30*2               | 30*2                | 30*2      |  |
| Number MPP trackers                          | 2                                  | 2                  | 2                   | 2         |  |
| Number input strings                         | 1/1                                | 1/1                | 1/1                 | 1/1       |  |
| Max. PV input current (A)                    | 20*2                               | 20*2               | 20*2                | 20*2      |  |
| MPPT voltage range (Vdc)                     | 150-850                            | 150-850            | 150-850             | 150-850   |  |
| Vdc range @ full power (Vdc)                 | 200-850                            | 200-850            | 200-850             | 250-850   |  |
| Battery (charge/discharge)                   |                                    |                    |                     |           |  |
| Battery type                                 |                                    | Li-ion/Le          | ead-acid            |           |  |
| Battery Normal Voltage (Range) (Vdc)         | 80                                 | -600(Field adapt b | attery voltage rang | je)       |  |
| Max charge/discharge Current(A)              | 50                                 | 50                 | 50                  | 50        |  |
| Max charge/discharge Power(kW)               | 3                                  | 4                  | 5                   | 6         |  |
| AC Grid (input and output)                   |                                    |                    |                     |           |  |
| Normal AC Voltage (VAC)                      |                                    | 3P+N+PE/3P         | +PE 230/400         |           |  |
| Frequency (Hz)                               |                                    | 5                  | 0                   |           |  |
| Normal AC Current (A)                        | 4.4                                | 5.8                | 7.3                 | 8.7       |  |
| Max. cont. input/output current (A)          | 8 / 5.3                            | 10.5 / 7           | 13 / 8.5            | 16 / 10.5 |  |
| Rated Power (kW)                             | 3                                  | 4                  | 5                   | 6         |  |
| Rated Apparent Power (kVA)                   | 3                                  | 4                  | 5                   | 6         |  |
| Max. cont. input/output Power (kW)           | 4.5 / 3.3                          | 6 / 4.4            | 7.5 / 5.5           | 9 / 6.6   |  |
| Max. cont. Apparent input/output Power (KVA) | 4.5 / 3.3                          | 6 / 4.4            | 7.5 / 5.5           | 9 / 6.6   |  |
| Power factor(adjustable)                     |                                    | 1.0( -0.8          | 3~ +0.8)            |           |  |
| AC Load output (stand alone)                 |                                    |                    |                     |           |  |
| Normal Voltage (VAC)                         |                                    | 3P+N+PE/3P         | +PE 230/400         |           |  |
| Frequency (Hz)                               |                                    | 5                  | 0                   |           |  |
| Nominal Current (A)                          | 4.4                                | 5.8                | 7.3                 | 8.7       |  |
| Max. cont. current (A)                       | 5.3                                | 7                  | 8.5                 | 10.5      |  |
| Max. cont. Power (kW)                        | 3                                  | 4                  | 5                   | 6         |  |
| Rated Apparent Power (kVA)                   | 3                                  | 4                  | 5                   | 6         |  |
| Max. cont. Apparent Power (kVA)              | 3                                  | 4                  | 5                   | 6         |  |
| Power factor                                 | 1.0                                |                    |                     |           |  |
| Others                                       |                                    |                    |                     |           |  |
| Ingress protection (IP)                      | IP65                               |                    |                     |           |  |
| Protective class                             | Class I                            |                    |                     |           |  |
| Temperature (°C)                             | -25°C to +60°C (Derating 45°C)     |                    |                     |           |  |
| Inverter Isolation                           | Non-isolated (PV-AC-BAT)           |                    |                     |           |  |
| Overvoltage category                         | OVC III (AC Main), OVC II (PV)     |                    |                     |           |  |
| Firmware Version                             | V1.01                              |                    |                     |           |  |
| Software Version                             | V01                                |                    |                     |           |  |



#### **Ratings & Principle Characteristics:**

| Specifications table                         |   |                        |                       |  |  |
|--|---|------------------------|-----------------------|--|--|
| Model  | AF8K-THP AF10K-THP AF12K-TI               |                        |                       |  |  |
| PV input                                     |   |                        |                       |  |  |
| P pv Max(kW)                                 | 12 15                                     |                        | 18                    |  |  |
| Vmax PV (Vdc) (absolute Max.)                | 1000                                      | 1000                   | 1000                  |  |  |
| Isc PV (absolute Max.) (A)                   | 30*2                                      | 30*2                   | 30*2                  |  |  |
| Number MPP trackers                          | 2   | 2                      | 2                     |  |  |
| Number input strings                         | 1/1                                       | 1/1                    | 1/1                   |  |  |
| Max. PV input current (A)                    | 20*2                                      | 20*2                   | 20*2                  |  |  |
| MPPT voltage range (Vdc)                     | 150-850                                   | 150-850                | 150-850               |  |  |
| Vdc range @ full power (Vdc)                 | 300-850                                   | 500-850                | 500-850               |  |  |
| Battery (charge/discharge)                   |   |                        |                       |  |  |
| Battery type                                 |   | Li-ion/Lead-acid       |                       |  |  |
| Battery Normal Voltage (Range) (Vdc)         | 80-600(Field adapt battery voltage range) | 120-650(Field adapt ba | attery voltage range) |  |  |
| Max charge/discharge Current(A)              | 50  | 50                     | 50                    |  |  |
| Max charge/discharge Power(kW)               | 8   | 10                     | 12                    |  |  |
| AC Grid (input and output)                   |   |                        |                       |  |  |
| Normal AC Voltage (VAC)                      | 3P  | +N+PE/3P+PE 230/400    |                       |  |  |
| Frequency (Hz)                               |   | 50                     |                       |  |  |
| Normal AC Current (A)                        | 11.6                                      | 14.5                   | 17.4                  |  |  |
| Max. cont. input/output current (A)          | 20 / 13.5                                 | 26 / 17                | 32 / 21.5             |  |  |
| Rated Power (kW)                             | 8   | 10                     | 12                    |  |  |
| Rated Apparent Power (kVA)                   | 8   | 10                     | 12                    |  |  |
| Max. cont. input/output Power (kW)           | 12 / 8.8 15 / 11                          |                        | 18 / 13.2             |  |  |
| Max. cont. Apparent input/output Power (kVA) | 12 / 8.8 15 / 11                          |                        | 18 / 13.2             |  |  |
| Power factor(adjustable)                     |   | 1.0( -0.8~ +0.8)       |                       |  |  |
| AC Load output (stand alone)                 |   |                        |                       |  |  |
| Normal Voltage (VAC)                         | 3P  | +N+PE/3P+PE 230/400    |                       |  |  |
| Frequency (Hz)                               |   | 50                     |                       |  |  |
| Nominal Current (A)                          | 11.6                                      | 14.5                   | 17.4                  |  |  |
| Max. cont. current (A)                       | 13.5                                      | 17                     | 21.5                  |  |  |
| Max. cont. Power (kW)                        | 8   | 10                     | 12                    |  |  |
| Rated Apparent Power (kVA)                   | 8   | 10                     | 12                    |  |  |
| Max. cont. Apparent Power (kVA)              | 8   | 10                     | 12                    |  |  |
| Power factor                                 | 1.0                                       |                        |                       |  |  |
| Others                                       |   |                        |                       |  |  |
| Ingress protection (IP)                      | IP65                                      |                        |                       |  |  |
| Protective class                             | Class I                                   |                        |                       |  |  |
| Temperature (°C)                             | -25°C to +60°C (Derating 45°C)            |                        |                       |  |  |
| Inverter Isolation                           | Non-isolated (PV-AC-BAT)                  |                        |                       |  |  |
| Overvoltage category                         | OVC III (AC Main), OVC II (PV)            |                        |                       |  |  |
| Firmware Version                             | V1.01                                     |                        |                       |  |  |
| Software Version                             | V01                                       |                        |                       |  |  |



#### **Ratings & Principle Characteristics:**

| Specifications table                         |                                |                     |                     |          |  |
|--|--------------------------------|---------------------|---------------------|----------|--|
| Model  | AF17K-TH                       | AF20K-TH            | AF25K-TH            | AF30K-TH |  |
| PV input                                     |                                |                     |                     |          |  |
| P pv Max(kW)                                 | 25.5                           | 30                  | 37.5                | 45       |  |
| Vmax PV (Vdc) (absolute Max.)                | 1000                           | 1000                | 1000                | 1000     |  |
| Isc PV (absolute Max.) (A)                   | 48*2                           | 48*2                | 60*2                | 60*2     |  |
| Number MPP trackers                          | 2                              | 2                   | 2                   | 2        |  |
| Number input strings                         | 2/2                            | 2/2                 | 2/2                 | 2/2      |  |
| Max. PV input current (A)                    | 32*2                           | 32*2                | 40*2                | 40*2     |  |
| MPPT voltage range (Vdc)                     | 150-850                        | 150-850             | 150-850             | 150-850  |  |
| Vdc range @ full power (Vdc)                 | 500-850                        | 500-850             | 500-850             | 500-850  |  |
| Battery (charge/discharge)                   |                                |                     |                     |          |  |
| Battery type                                 |                                | Li-ion/Le           | ead-acid            |          |  |
| Battery Normal Voltage (Range) (Vdc)         | 150                            | )-800(Field adapt b | oattery voltage ran | ige)     |  |
| Max charge/discharge Current(A)              | 50                             | 50                  | 60                  | 60       |  |
| Max charge/discharge Power(kW)               | 17                             | 20                  | 25                  | 30       |  |
| AC Grid (input and output)                   |                                |                     |                     |          |  |
| Normal AC Voltage (VAC)                      |                                | 3P+N+PE/3P          | +PE 230/400         |          |  |
| Frequency (Hz)                               |                                | 5                   | 0                   |          |  |
| Normal AC Current (A)                        | 24.7                           | 29                  | 36.3                | 43.5     |  |
| Max. cont. input/output current (A)          | 45 / 30                        | 48 / 32             | 60 / 40             | 72 / 48  |  |
| Rated Power (kW)                             | 17                             | 20                  | 25                  | 30       |  |
| Rated Apparent Power (kVA)                   | 17                             | 20                  | 25                  | 30       |  |
| Max. cont. input/output Power (kW)           | 25.5 / 18.7                    | 45 / 33             |                     |          |  |
| Max. cont. Apparent input/output Power (kVA) | 25.5 / 18.7                    | 30 / 22             | 37.5 / 27.5         | 45 / 33  |  |
| Power factor(adjustable)                     |                                | 1.0( -0.8           | 3~ +0.8)            |          |  |
| AC Load output (stand alone)                 |                                |                     |                     |          |  |
| Normal Voltage (VAC)                         |                                | 3P+N+PE/3P          | +PE 230/400         |          |  |
| Frequency (Hz)                               |                                | 5                   | 0                   |          |  |
| Nominal Current(A)                           | 24.7                           | 29                  | 36.3                | 43.5     |  |
| Max. cont. current (A)                       | 30                             | 32                  | 40                  | 48       |  |
| Max. cont. Power (kW)                        | 17                             | 20                  | 25                  | 30       |  |
| Rated Apparent Power (kVA)                   | 17                             | 20                  | 25                  | 30       |  |
| Max. cont. Apparent Power (kVA)              | 17                             | 20                  | 25                  | 30       |  |
| Power factor                                 | 1.0                            |                     |                     |          |  |
| Others                                       |                                |                     |                     |          |  |
| Ingress protection (IP)                      | IP65                           |                     |                     |          |  |
| Protective class                             | Class I                        |                     |                     |          |  |
| Temperature (°C)                             | -25°C to +60°C (Derating 45°C) |                     |                     |          |  |
| Inverter Isolation                           | Non-isolated (PV-AC-BAT)       |                     |                     |          |  |
| Overvoltage category                         | OVC III (AC Main), OVC II (PV) |                     |                     |          |  |
| Firmware                                     | V1.01                          |                     |                     |          |  |
| Software Version                             | V01                            |                     |                     |          |  |



Ratings & Principle Characteristics:

| Specifications table                         |                                     |                     |                     |           |  |  |
|--|-------------------------------------|---------------------|---------------------|-----------|--|--|
| Model  | AF3K-THA                            | AF4K-THA            | AF5K-THA            | AF6K-THA  |  |  |
| PV input                                     |                                     |                     |                     |           |  |  |
| P pv Max(kW)                                 | 5                                   | 6                   | 7.5                 | 9         |  |  |
| Vmax PV (Vdc) (absolute Max.)                | 1000                                | 1000                | 1000                | 1000      |  |  |
| Isc PV (absolute Max.) (A)                   | 30*2                                | 30*2                | 30*2                | 30*2      |  |  |
| Number MPP trackers                          | 2                                   | 2                   | 2                   | 2         |  |  |
| Number input strings                         | 1/1                                 | 1/1                 | 1/1                 | 1/1       |  |  |
| Max. PV input current (A)                    | 20*2                                | 20*2                | 20*2                | 20*2      |  |  |
| MPPT voltage range (Vdc)                     | 150-850                             | 150-850             | 150-850             | 150-850   |  |  |
| Vdc range @ full power (Vdc)                 | 200-850                             | 200-850             | 200-850             | 200-850   |  |  |
| Battery (charge/discharge)                   |                                     |                     |                     |           |  |  |
| Battery type                                 |                                     |                     | ead-acid            |           |  |  |
| Battery Normal Voltage Range (Vdc)           | 150                                 | )-600(Field adapt I | pattery voltage ran | ge)       |  |  |
| Max charge/discharge Current(A)              | 30                                  | 30                  | 30                  | 30        |  |  |
| Max charge/discharge Power(kW)               | 3                                   | 4                   | 5                   | 6         |  |  |
| AC Grid (input and output)                   |                                     |                     |                     |           |  |  |
| Normal AC Voltage (VAC)                      |                                     | 3P+PE/3I            | P 133/230           |           |  |  |
| Frequency (Hz)                               |                                     | 5                   | 0                   |           |  |  |
| Normal AC Current (A)                        | 7.6                                 | 10.1                | 12.6                | 15.1      |  |  |
| Max. cont. input/output current (A)          | 16 / 10.5                           | 20 / 13.5           | 26 / 17             | 32 / 21.5 |  |  |
| Rated Power (kW)                             | 3                                   | 4                   | 5                   | 6         |  |  |
| Rated Apparent Power (kVA)                   | 3                                   | 4                   | 5                   | 6         |  |  |
| Max. cont. input/output Power (kW)           | 4.5 / 3.3                           | 6 / 4.4             | 7.5 / 5.5           | 9 / 6.6   |  |  |
| Max. cont. Apparent input/output Power (kVA) | 4.5 / 3.3 6 / 4.4 7.5 / 5.5 9 / 6.6 |                     |                     |           |  |  |
| Power factor(adjustable)                     |                                     | 1.0( -0.8           | 3~ +0.8)            |           |  |  |
| AC Load output (stand alone)                 |                                     |                     |                     |           |  |  |
| Normal Voltage (VAC)                         |                                     |                     | P 133/230           |           |  |  |
| Frequency (Hz)                               |                                     | _                   | 0                   |           |  |  |
| Nominal Current (A)                          | 7.6                                 | 10.1                | 12.6                | 15.1      |  |  |
| Max. cont. current (A)                       | 10.5                                | 13.5                | 17                  | 21.5      |  |  |
| Max. cont. Power (kW)                        | 3                                   | 4                   | 5                   | 6         |  |  |
| Rated Apparent Power (kVA)                   | 3                                   | 4                   | 5<br>5              | 6<br>6    |  |  |
| Max. cont. Apparent Power (kVA)  Others      | ა                                   | 4                   | 5                   | 0         |  |  |
|  |                                     |                     | <u> </u>            |           |  |  |
| Ingress protection (IP)                      | IP65                                |                     |                     |           |  |  |
| Protective class                             | Class I                             |                     |                     |           |  |  |
| Temperature (°C)                             | -25°C to +60°C (Derating 45°C)      |                     |                     |           |  |  |
| Inverter Isolation                           | Non-isolated (PV - AC - BAT)        |                     |                     |           |  |  |
| Overvoltage category                         | OVC III (AC Main), OVC II (PV)      |                     |                     |           |  |  |
| Firmware                                     | V1.01                               |                     |                     |           |  |  |
| Software Version                             | V01                                 |                     |                     |           |  |  |



**Ratings & Principle Characteristics:** 

| Specifications table                         |                                |                    |                     |           |  |
|--|--------------------------------|--------------------|---------------------|-----------|--|
| Model  | AF3K-THC                       | AF4K-THC           | AF5K-THC            | AF6K-THC  |  |
| PV input                                     |                                |                    |                     |           |  |
| P pv Max(kW)                                 | 5                              | 6                  | 7.5                 | 9         |  |
| Vmax PV (Vdc) (absolute Max.)                | 1000                           | 1000               | 1000                | 1000      |  |
| Isc PV (absolute Max.) (A)                   | 30*2                           | 30*2               | 30*2                | 30*2      |  |
| Number MPP trackers                          | 2                              | 2                  | 2                   | 2         |  |
| Number input strings                         | 1/1                            | 1/1                | 1/1                 | 1/1       |  |
| Max. PV input current (A)                    | 20*2                           | 20*2               | 20*2                | 20*2      |  |
| MPPT voltage range (Vdc)                     | 150-850                        | 150-850            | 150-850             | 150-850   |  |
| Vdc range @ full power (Vdc)                 | 200-850                        | 200-850            | 200-850             | 200-850   |  |
| Battery (charge/discharge)                   |                                |                    |                     |           |  |
| Battery type                                 |                                |                    | ead-acid            |           |  |
| Battery Normal Voltage Range (Vdc)           |                                | -600(Field adapt b | attery voltage rang | ge)       |  |
| Max charge/discharge Current(A)              | 50                             | 50                 | 50                  | 50        |  |
| Max charge/discharge Power(kW)               | 3                              | 4                  | 5                   | 6         |  |
| AC Grid (input and output)                   |                                |                    |                     |           |  |
| Normal AC Voltage (VAC)                      |                                | 3P+PE/3I           | P 133/230           |           |  |
| Frequency (Hz)                               |                                | 5                  | 0                   |           |  |
| Normal AC Current (A)                        | 7.6                            | 10.1               | 12.6                | 15.1      |  |
| Max. cont. input/output current (A)          | 16 / 10.5                      | 20 / 13.5          | 26 / 17             | 32 / 21.5 |  |
| Rated Power (kW)                             | 3                              | 4                  | 5                   | 6         |  |
| Rated Apparent Power (kVA)                   | 3                              | 4                  | 5                   | 6         |  |
| Max. cont. input/output Power (kW)           | 4.5 / 3.3                      | 6 / 4.4            | 7.5 / 5.5           | 9 / 6.6   |  |
| Max. cont. Apparent input/output Power (kVA) | 4.5 / 3.3                      | 6 / 4.4            | 7.5 / 5.5           | 9 / 6.6   |  |
| Power factor(adjustable)                     | 1.0( -0.8~ +0.8)               |                    |                     |           |  |
| AC Load output (stand alone)                 |                                |                    |                     |           |  |
| Normal Voltage (VAC)                         |                                | 3P+PE/3I           | P 133/230           |           |  |
| Frequency (Hz)                               |                                | _                  | 0                   |           |  |
| Nominal Current (A)                          | 7.6                            | 10.1               | 12.6                | 15.1      |  |
| Max. cont. current (A)                       | 10.5                           | 13.5               | 17                  | 21.5      |  |
| Max. cont. Power (kW)                        | 3                              | 4                  | 5                   | 6         |  |
| Rated Apparent Power (kVA)                   | 3                              | 4                  | 5<br>5              | 6         |  |
| Max. cont. Apparent Power (kVA)              | 3                              | 4                  | 5                   | 6         |  |
| Others                                       |                                |                    |                     |           |  |
| Ingress protection (IP)                      | IP65                           |                    |                     |           |  |
| Protective class                             | Class I                        |                    |                     |           |  |
| Temperature (°C)                             | -25°C to +60°C (Derating 45°C) |                    |                     |           |  |
| Inverter Isolation                           | Non-isolated (PV - AC - BAT)   |                    |                     |           |  |
| Overvoltage category                         | OVC III (AC Main), OVC II (PV) |                    |                     |           |  |
| Firmware                                     | V1.01                          |                    |                     |           |  |
| Software Version                             | V01                            |                    |                     |           |  |



**Ratings & Principle Characteristics:** 

| Specifications table                            |                                |               |                 |                |             |
|---|--------------------------------|---------------|-----------------|----------------|-------------|
| Model   | AF8K-THA                       | AF10K-        | AF12K-          | AF15K-         | AF17K-      |
|   | AI OK IIIA                     | THA           | THA             | THA            | THA         |
| PV input  |                                |               |                 |                |             |
| P pv Max(kW)                                    | 12                             | 15            | 18              | 22.5           | 25.5        |
| Vmax PV (Vdc) (absolute Max.)                   | 1000                           | 1000          | 1000            | 1000           | 1000        |
| Isc PV (absolute Max.) (A)  Number MPP trackers | 30+48                          | 48*2<br>2     | 48*2<br>2       | 60*2<br>2      | 60*2        |
| Number input strings                            | 2<br>1/2                       | 2/2           | 2/2             | 2/2            | 2<br>2/2    |
| Max. PV input current (A)                       | 20+32                          | 32*2          | 32*2            | 40*2           | 40*2        |
| MPPT voltage range (Vdc)                        | 150-850                        | 150-850       | 150-850         | 150-850        | 150-850     |
| Vdc range @ full power (Vdc)                    | 200-850                        | 200-850       | 250-850         | 300-850        | 300-850     |
| Battery (charge/discharge)                      |                                |               |                 |                |             |
| Battery type                                    |                                | L             | _i-ion/Lead-aci | d              |             |
| Battery Normal Voltage Range (Vdc)              |                                | 150-600(Field | adapt battery   | voltage range) |             |
| Max charge/discharge Current(A)                 | 50                             | 50            | 50              | 60             | 60          |
| Max charge/discharge Power(kW)                  | 8                              | 10            | 12              | 15             | 17          |
| AC Grid (input and output)                      |                                |               |                 |                |             |
| Normal AC Voltage (VAC)                         |                                | 3F            | P+PE/3P 133/2   | 30             |             |
| Frequency (Hz)                                  |                                |               | 50              |                |             |
| Normal AC Current (A)                           | 20.1                           | 25.1          | 30.1            | 37.6           | 42.7        |
| Max. cont. input/output current (A)             | 40.5 / 27                      | 45 / 30       | 48 / 32         | 60 / 40        | 72 / 48     |
| Rated Power (kW)                                | 8                              | 10            | 12              | 15             | 17          |
| Rated Apparent Power (kVA)                      | 8                              | 10            | 12              | 15             | 17          |
| Max. cont. input/output Power (kW)              | 12 / 8.8                       | 15 / 11       | 18 / 13.2       | 22.5 / 16.5    | 25.5 / 18.7 |
| Max. cont. Apparent input/output Power (kVA)    | 12 / 8.8                       | 15 / 11       | 18 / 13.2       | 22.5 / 16.5    | 25.5 / 18.7 |
| Power factor(adjustable)                        |                                | •             | 1.0( -0.8~ +0.8 | )              |             |
| AC Load output (stand alone)                    |                                |               |                 |                |             |
| Normal Voltage (VAC)                            |                                | 3F            | P+PE/3P 133/2   | 30             |             |
| Frequency (Hz)                                  | 00.4                           | 05.4          | 50              | 07.0           | 40.7        |
| Nominal Current (A)                             | 20.1                           | 25.1          | 30.1            | 37.6           | 42.7        |
| Max. cont. current (A)  Max. cont. Power (kW)   | 27<br>8                        | 30<br>10      | 32<br>12        | 40<br>15       | 48<br>17    |
| Rated Apparent Power (kVA)                      | 8                              | 10            | 12              | 15             | 17          |
| Max. cont. Apparent Power (kVA)                 | 8                              | 10            | 12              | 15             | 17          |
| Others  | Ŭ                              | 10            | 12              | 10             | .,          |
| Ingress protection (IP)                         |                                |               | IP65            |                |             |
| Protective class                                | Class I                        |               |                 |                |             |
| Temperature (°C)                                | -25°C to +60°C (Derating 45°C) |               |                 |                |             |
| Inverter Isolation                              | Non-isolated (PV - AC - BAT)   |               |                 |                |             |
| Overvoltage category                            | OVC III (AC Main), OVC II (PV) |               |                 |                |             |
| Firmware  | V1.01                          |               |                 |                |             |
| Software Version                                |                                |               | V01             |                |             |
|   | 1                              |               |                 |                |             |