

## ON-GRID STRING INVERTERS : 1kW to 60kW

### FEATURES

- Wide input voltage, DC input voltage up to 1100V
- Transformerless & Low noise technique
- Compact Design & Easy Installation
- IP65 compatible
- USB/485 communication interface(Wi-Fi adapter Optional)
- Maximum efficiency of 99.0% and wide input voltage range
- Latest Dual MPPT Technology Which Guarantees 99.5% Efficiency
- Internal DC Switch
- Touch Key & OLED Display
- Comprehensive Warranty Program
- BIS Compliant



| Model no                                   | KSG-I-3.3KN22                      | KSG-I-5KN22                        | KSG-III-5KN22-MC                   |
|--|------------------------------------|------------------------------------|------------------------------------|
| <b>Input Data(DC)</b>                      |                                    |                                    |                                    |
| Max.recommended PV power (For module STC)  | 4200W                              | 7000W                              | 7500W                              |
| Max.DC voltage                             | 550V                               | 550V                               | 1100V                              |
| Start voltage                              | 80V                                | 100V                               | 160V                               |
| Nominal voltage                            | 360V                               | 360V                               | 580V                               |
| MPPT voltage range                         | 65V-550V                           | 80V-550V                           | 140V-1000V                         |
| No. of MPP trackers                        | 1                                  | 2                                  | 2                                  |
| No. of PV strings per MPP tracker          | 1                                  | 1                                  | 1                                  |
| Max. input current per MPP tracker         | 13A                                | 13.5A                              | 13A                                |
| Max. short-circuit current per MPP tracker | 16A                                | 16.9A                              | 16A                                |
| <b>Output data (AC)</b>                    |                                    |                                    |                                    |
| AC nominal power                           | 3000W                              | 5000W                              | 5000W                              |
| Max. AC apparent power                     | 3000VA                             | 5000VA                             | 5500VA                             |
| Nominal AC voltage (range*)                | 230V(180-280V)                     | 230V(180-280V)                     | 220V/380V, 230V/400V (340V-440V)   |
| AC grid frequency (range*)                 | 50/60Hz(45-55Hz/55-65Hz)           | 50/60Hz(45-55Hz/55-65Hz)           | 50/60Hz(45-55Hz/55-65Hz)           |
| Max. output current                        | 14.3A                              | 22.7A                              | 8.3A                               |
| Adjustable power factor                    | 0.8leading-0.8lagging              | 0.8leading-0.8lagging              | 0.8leading-0.8lagging              |
| THDi                                       | <3%                                | <3%                                | <3%                                |
| AC grid connection type                    | Single phase                       | Single phase                       | 3W+N+PE                            |
| <b>Efficiency</b>                          |                                    |                                    |                                    |
| Max. efficiency                            | 97.60%                             | 98.40%                             | 98.30%                             |
| European efficiency                        | 97.10%                             | 97.50%                             | 97.50%                             |
| MPPT efficiency                            | 99.90%                             | 99.90%                             | 99.90%                             |
| <b>Protection Devices</b>                  |                                    |                                    |                                    |
| DC reverse polarity protection             | Yes                                | Yes                                | Yes                                |
| DC Switch                                  | Yes                                | Yes                                | Yes                                |
| AC/DC Surge protection                     | Type III/Type II                   | Type III/Type II                   | Type III/Type II                   |
| Insulation resistance monitoring           | Yes                                | Yes                                | Yes                                |
| AC short-circuit protection                | Yes                                | Yes                                | Yes                                |
| Ground fault monitoring                    | Yes                                | Yes                                | Yes                                |
| Grid monitoring                            | Yes                                | Yes                                | Yes                                |
| Anti-islanding protection                  | Yes                                | Yes                                | Yes                                |
| Residual-current monitoring unit           | Yes                                | Yes                                | Yes                                |
| AFCI protection                            | Optional                           | Optional                           | Optional                           |
| <b>General Data</b>                        |                                    |                                    |                                    |
| Dimensions(W/H/D)                          | 274/254/138mm                      | 375/350/160mm                      | 425/387/178mm                      |
| Weight                                     | 6.2kg                              | 10.8kg                             | 16kg                               |
| Operating temperature range                | -25..+ 60 degree C                 | -25..+ 60 degree C                 | -25..+ 60 degree C                 |
| Night time power consumption               | <0.5W                              | <1W                                | <1W                                |
| Topology                                   | Transformerless                    | Transformerless                    | Transformerless                    |
| Cooling                                    | Natural convention                 | Natural convention                 | Natural convention                 |
| Protection degree                          | IP66                               | IP65                               | IP65                               |
| Relative humidity                          | 0-100%                             | 0-100%                             | 0-100%                             |
| Altitude                                   | 4000m                              | 4000m                              | 4000m                              |
| DC connection                              | H4/MC4(optional)                   | H4/MC4(optional)                   | H4/MC4(optional)                   |
| AC connection                              | connector                          | connector                          | connector                          |
| Display                                    | OLED+LED/WiFi+App                  | OLED+LED/WiFi+App                  | OLED+LED/WiFi+App                  |
| Interfaces: RS485/USB/Wi-Fi/GPRS/RF/LAN    | Yes/Yes/Optional/Optional/Optional | Yes/Yes/Optional/Optional/Optional | Yes/Yes/Optional/Optional/Optional |
| Warranty                                   | 7 Warranty                         | 7 Warranty                         | 7 Warranty                         |

| Model no                                   | KSG-III-10KN22-MD                  | KSG-III-15KN22-MD                  | KSG-III-20KN22-MD                  | KSG-III-30KN22-MC                  |
|--|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| <b>Input Data(DC)</b>                      |                                    |                                    |                                    |                                    |
| Max.recommended PV power (For module STC)  | 15000W                             | 22500W                             | 30000W                             | 45000W                             |
| Max.DC voltage                             | 1100V                              | 1100V                              | 1100V                              | 1100V                              |
| start voltage                              | 160V                               | 160V                               | 250V                               | 250V                               |
| Nominal voltage                            | 580V                               | 580V                               | 580V                               | 600V                               |
| MPPT voltage range                         | 140V-1000V                         | 140V-1000V                         | 160V-1000V                         | 200V-1000V                         |
| No. of MPP trackers                        | 2                                  | 2                                  | 2                                  | 3                                  |
| No. of PV strings per MPP tracker          | 1                                  | 1/2                                | 2                                  | 3/3/2                              |
| Max. input current per MPP tracker         | 13A                                | 13A/26A                            | 27A                                | 37.5A/37.5A/25A                    |
| Max. short-circuit current per MPP tracker | 16A                                | 16A/32A                            | 33.8A                              | 45A                                |
| <b>Output Data (AC)</b>                    |                                    |                                    |                                    |                                    |
| AC nominal power                           | 10000W                             | 15000W                             | 20000W                             | 30000W                             |
| Max. AC apparent power                     | 11000VA                            | 16500VA                            | 22000VA                            | 33300VA                            |
| Nominal AC voltage (range*)                | 220V/380V,230V/400V(340-440V)      | 220V/380V, 230V/400V (340-440V)    | 220V/380V, 230V/400V (340-440V)    | 220V/380V, 230V/400V (340-440V)    |
| AC grid frequency (range*)                 | 50/60Hz(45-55Hz/55-65Hz)           | 50/60Hz(45-55Hz/55-65Hz)           | 50/60Hz(45-55Hz/55-65Hz)           | 50/60Hz(45-55Hz/55-65Hz)           |
| Max. output current                        | 16.7A                              | 25A                                | 31.9A                              | 48.3A                              |
| Adjustable power factor                    | 0.8leading-0.8lagging              | 0.8leading-0.8lagging              | 0.8leading-0.8lagging              | 0.8leading-0.8lagging              |
| THDi                                       | <3%                                | <3%                                | <3%                                | <3%                                |
| AC grid connection type                    | 3W+N+PE                            | 3W+N+PE                            | 3W+N+PE                            | 3W+N+PE                            |
| <b>Efficiency</b>                          |                                    |                                    |                                    |                                    |
| Max.efficiency                             | 98.60%                             | 98.20%                             | 98.75%                             | 98.70%                             |
| European efficiency                        | 98.10%                             | 98.10%                             | 98.60%                             | 98.40%                             |
| MPPT efficiency                            | 99.90%                             | 99.90%                             | 99.90%                             | 99.90%                             |
| <b>Protection Devices</b>                  |                                    |                                    |                                    |                                    |
| DC reverse polarity protection             | Yes                                | Yes                                | Yes                                | Yes                                |
| DC Switch                                  | Yes                                | Yes                                | Yes                                | Yes                                |
| AC/DC Surge protection                     | Type III/Type II                   | Type III/Type II                   | Type III/Type II                   | Type III/Type II                   |
| Insulation resistance monitoring           | Yes                                | Yes                                | Yes                                | Yes                                |
| AC short-circuit protection                | Yes                                | Yes                                | Yes                                | Yes                                |
| Ground fault monitoring                    | Yes                                | Yes                                | Yes                                | Yes                                |
| Grid monitoring                            | Yes                                | Yes                                | Yes                                | Yes                                |
| Anti-islanding protection                  | Yes                                | Yes                                | Yes                                | Yes                                |
| Residual-current monitoring unit           | Yes                                | Yes                                | Yes                                | Yes                                |
| AFCI protection                            | Optional                           | Optional                           | Optional                           | Optional                           |
| <b>General Data</b>                        |                                    |                                    |                                    |                                    |
| Dimensions(W/H/D)                          | 425/387/178mm                      | 425/387/178mm                      | 525/395/222mm                      | 680/508/281mm                      |
| Weight                                     | 16kg                               | 16kg                               | 23kg                               | 52kg                               |
| Operating temperature range                | -25..+ 60 degree C                 | -25..+ 60 degree C                 | -25..+ 60 degree C                 | -25..+ 60 degree C                 |
| Night time power consumption               | <1W                                | <1W                                | <1W                                | <1W                                |
| Topology                                   | Transformerless                    | Transformerless                    | Transformerless                    | Transformerless                    |
| Cooling                                    | Natural convention                 | Natural convention                 | Smart air cooling                  | Smart air cooling                  |
| Protection degree                          | IP66                               | IP66                               | IP65                               | IP65                               |
| Relative humidity                          | 0-100%                             | 0-100%                             | 0-100%                             | 0-100%                             |
| Altitude                                   | 4000m                              | 4000m                              | 4000m                              | 4000m                              |
| DC connection                              | H4/MC4(optional)                   | H4/MC4(optional)                   | H4/MC4(optional)                   | H4/MC4(optional)                   |
| AC connection                              | connector                          | connector                          | connector                          | Cable gland+OT terminal            |
| Display                                    | OLED+LED/WiFi+App                  | OLED+LED/WiFi+App                  | OLED+LED/WiFi+App                  | OLED+LED/WiFi+App                  |
| Interfaces: RS485/USB/Wi-Fi/GPRS/RF/LAN    | Yes/Yes/Optional/Optional/Optional | Yes/Yes/Optional/Optional/Optional | Yes/Yes/Optional/Optional/Optional | Yes/Yes/Optional/Optional/Optional |
| Warranty                                   | 7 Warranty                         | 7 Warranty                         | 7 Warranty                         | 7 Warranty                         |

| Model no                                  | KSG-III-40KN22-MC                  | KSG-III-50KN22-MX                  | KSG-III-60KN22-MC                  |
|---|------------------------------------|------------------------------------|------------------------------------|
| <b>Input Data(DC)</b>                     |                                    |                                    |                                    |
| Max.recommended PV power (For module STC) | 60000W                             | 75000W                             | 90000W                             |
| Max.DC voltage                            | 1100V                              | 1100V                              | 1100V                              |
| start voltage                             | 250V                               | 250V                               | 250V                               |
| Nominal voltage                           | 600V                               | 600V                               | 600V                               |
| MPPT voltage range                        | 200V-1000V                         | 200V-1000V                         | 200V-1000V                         |
| No. of MPP trackers                       | 3                                  | 3                                  | 3                                  |
| No. of PV strings per MPP tracker         | 3/3/3                              | 4/3/3                              | 4/4/4                              |
| Max. input current per MPP tracker        | 37.5A/37.5A/37.5A                  | 50A/37.5A/37.5A                    | 50A/50A/50A                        |
| Max. short-circuit current per MPP        | 45A                                | 55A                                | 55A                                |
| <b>Output data (AC)</b>                   |                                    |                                    |                                    |
| AC nominal power                          | 40000W                             | 50000W                             | 60000W                             |
| Max. AC apparent power                    | 44400VA                            | 55500VA                            | 66600VA                            |
| Nominal AC voltage (range*)               | 220V/380V, 230V/400V (340-440V)    | 220V/380V, 230V/400V (340-440V)    | 220V/380V, 230V/400V (340-440V)    |
| AC grid frequency (range*)                | 50/60Hz(45-55Hz/55-65Hz)           | 50/60Hz(45-55Hz/55-65Hz)           | 50/60Hz(45-55Hz/55-65Hz)           |
| Max. output current                       | 64.4A                              | 80.5A                              | 96.6 A                             |
| Adjustable power factor                   | 0.8leading-0.8lagging              | 0.8leading-0.8lagging              | 0.8leading-0.8lagging              |
| THDi                                      | <3%                                | <3%                                | <3%                                |
| AC grid connection type                   | 3W+N+PE                            | 3W+N+PE                            | 3W+N+PE                            |
| <b>Efficiency</b>                         |                                    |                                    |                                    |
| Max. efficiency                           | 98.70%                             | 98.70%                             | 98.80%                             |
| European efficiency                       | 98.50%                             | 98.50%                             | 98.50%                             |
| MPPT efficiency                           | 99.90%                             | 99.90%                             | 99.90%                             |
| <b>Protection Devices</b>                 |                                    |                                    |                                    |
| DC reverse polarity protection            | Yes                                | Yes                                | Yes                                |
| DC Switch                                 | Yes                                | Yes                                | Yes                                |
| AC/DC Surge protection                    | Type III/Type II                   | Type III/Type II                   | Type III/Type II                   |
| Insulation resistance monitoring          | Yes                                | Yes                                | Yes                                |
| AC short-circuit protection               | Yes                                | Yes                                | Yes                                |
| Ground fault monitoring                   | Yes                                | Yes                                | Yes                                |
| Grid monitoring                           | Yes                                | Yes                                | Yes                                |
| Anti-islanding protection                 | Yes                                | Yes                                | Yes                                |
| Residual-current monitoring unit          | Yes                                | Yes                                | Yes                                |
| AFCI protection                           | -                                  | -                                  | -                                  |
| <b>General Data</b>                       |                                    |                                    |                                    |
| Dimensions(W/H/D)                         | 680/508/281mm                      | 680/508/281mm                      | 680/508/281mm                      |
| Weight                                    | 52kg                               | 52kg                               | 52kg                               |
| Operating temperature range               | -25..+ 60 degree C                 | -25..+ 60 degree C                 | -25..+ 60 degree C                 |
| Night time power consumption              | <1W                                | <1W                                | <1W                                |
| Topology                                  | Transformerless                    | Transformerless                    | Transformerless                    |
| Cooling                                   | Smart air cooling                  | Smart air cooling                  | Smart air cooling                  |
| Protection degree                         | IP65                               | IP65                               | IP65                               |
| Relative humidity                         | 0-100%                             | 0-100%                             | 0-100%                             |
| Altitude                                  | 4000m                              | 4000m                              | 4000m                              |
| DC connection                             | H4/MC4(optional)                   | H4/MC4(optional)                   | H4/MC4(optional)                   |
| AC connection                             | Cable gland+OT terminal            | Cable gland+OT terminal            | Cable gland+OT terminal            |
| Display                                   | OLED+LED/WiFi+App                  | OLED+LED/WiFi+App                  | OLED+LED/WiFi+App                  |
| Interfaces: RS485/USB/Wi-Fi/GPRS/Rf/LAN   | Yes/Yes/Optional/Optional/Optional | Yes/Yes/Optional/Optional/Optional | Yes/Yes/Optional/Optional/Optional |
| Warranty                                  | 7 Warranty                         | 7 Warranty                         | 7 Warranty                         |

## Kirloskar Solar Technologies Pvt. Ltd. A Kirloskar Group Company

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