

# NEW

From Solax

## X-HYBRID

X1-HYBRID HV

X3-HYBRID HV



X1-Hybrid HV



X3-Hybrid HV

## X1-HYBRID HV/ X3-HYBRID HV

The World's Leading Hybrid Inverter Just Got Better

More than just an inverter, the innovative X-Hybrid is an intelligent energy management system that stores surplus energy in batteries for later use.

The X-Hybrid works by storing surplus energy in batteries for later use, making it possible to utilize solar power time-independently by storing unused capacity. It converts and directs solar power to where it is needed, when it is needed. X-Hybrid is also supplied EPS (Emergency Power Supply) function, allowing the end-user to use their stored energy in the event of a power outage.

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## X1-Hybrid HV (SINGLE PHASE)

## X3-Hybrid HV (THREE PHASE)

X1-Hybrid-3.0-N-I

X1-Hybrid-3.7-N-I

X1-Hybrid-4.6-N-I

X1-Hybrid-5.0-N-I

X3-Hybrid-5.0-N-E

X3-Hybrid-6.0-N-E

X3-Hybrid-8.0-N-E

X3-Hybrid-10.0-N-E

| INPUT (DC)                                      |                                                                                         |            |            |            |                                                                                   |                |                |                |
|-------------------------------------------------|-----------------------------------------------------------------------------------------|------------|------------|------------|-----------------------------------------------------------------------------------|----------------|----------------|----------------|
| Max.recommended DC power[W]                     | 4500                                                                                    | 5520       | 6900       | 7499       | 7500                                                                              | 9000           | 12000          | 15000          |
| Max.DC voltage[V]                               | 600                                                                                     | 600        | 600        | 600        | 1000                                                                              | 1000           | 1000           | 1000           |
| Nominal DC operating voltage[V]                 | 360                                                                                     | 360        | 360        | 360        | 720                                                                               | 720            | 720            | 720            |
| Max.input current[A]                            | 10/10                                                                                   | 10/10      | 10/10      | 10/10      | 11/11                                                                             | 11/11          | 11/11          | 20/11          |
| Max. short circuit current[A]                   | 14/14                                                                                   | 14/14      | 14/14      | 14/14      | 14/14                                                                             | 14/14          | 14/14          | 23/14          |
| No. of MPP trackers                             | 2                                                                                       | 2          | 2          | 2          | 2                                                                                 | 2              | 2              | 2              |
| Strings per MPP tracker                         | 1                                                                                       | 1          | 1          | 1          | 1                                                                                 | 1              | 1              | 2/1            |
| OUTPUT AC                                       |                                                                                         |            |            |            |                                                                                   |                |                |                |
| Nominal AC power [VA]                           | 3000                                                                                    | 3680       | 4600       | 4999       | 5000                                                                              | 6000           | 8000           | 10000          |
| Max. apparent AC power [VA]                     | 3000                                                                                    | 3680       | 4600       | 4999       | 5000                                                                              | 6000           | 8000           | 10000          |
| Rated grid voltage(AC voltage range) [V]        | 220/230/240 (180 to 270)                                                                |            |            |            | 400 (360-440)                                                                     |                |                |                |
| Rated grid frequency [Hz]                       | 50/60                                                                                   |            |            |            | 50/60                                                                             |                |                |                |
| Nominal AC current [A]                          | 13                                                                                      | 16         | 20         | 21.7       | 7.6                                                                               | 9.1            | 12.1           | 15.2           |
| Displacement power factor                       | 0.8 leading ... 0.8 lagging                                                             |            |            |            | 0.8 leading ... 0.8 lagging                                                       |                |                |                |
| Total harmonic distortion(THD, rated power) [%] | <2                                                                                      |            |            |            | <2                                                                                |                |                |                |
| Parallel operation                              | Yes                                                                                     |            |            |            | Yes                                                                               |                |                |                |
| Load control                                    | Yes (optional)                                                                          |            |            |            | Yes (optional)                                                                    |                |                |                |
| OUTPUT DC (BATTERY)                             |                                                                                         |            |            |            |                                                                                   |                |                |                |
| Battery voltage range [V]                       | 85-400                                                                                  |            |            |            | 170-500                                                                           |                |                |                |
| Recommended battery voltage [V]                 | 300                                                                                     |            |            |            | 200                                                                               | 240            | 320            | 400            |
| Max.charging/discharging power [W]              | 6000                                                                                    |            |            |            | 6000                                                                              | 8000           | 10000          | 10000          |
| Max.charging/discharging current [A]            | 20                                                                                      |            |            |            | 25                                                                                |                |                |                |
| Communication interfaces                        | CAN/RS485                                                                               |            |            |            | CAN/RS485                                                                         |                |                |                |
| Reverse connect protection                      | Yes                                                                                     |            |            |            | Yes                                                                               |                |                |                |
| EPS OUTPUT (WITH BATTERY)                       |                                                                                         |            |            |            |                                                                                   |                |                |                |
| EPS rated power [VA]                            | 4000                                                                                    | 4000       | 5000       | 5000       | 5000                                                                              | 6000           | 8000           | 10000          |
| EPS rated voltage [V], Frequency [Hz]           | 230, 50/60                                                                              | 230, 50/60 | 230, 50/60 | 230, 50/60 | 400/380, 50/60                                                                    | 400/380, 50/60 | 400/380, 50/60 | 400/380, 50/60 |
| EPS rated current [A]                           | 17.4                                                                                    | 17.4       | 21.7       | 21.7       | 7.2                                                                               | 8.7            | 11.6           | 14.5           |
| EPS peak power[W],Duration [s]                  | 6000,10                                                                                 | 6000,10    | 8000,10    | 8000,10    | <7500,60                                                                          | <9000,60       | <12000,60      | <15000,60      |
| Switch time[s]                                  | <0.5                                                                                    |            |            |            | <0.5                                                                              |                |                |                |
| Total harmonic distortion(THD, linear load) [%] | <2                                                                                      |            |            |            | <2                                                                                |                |                |                |
| Parallel operation                              | No                                                                                      |            |            |            | Being developed                                                                   |                |                |                |
| EFFICIENCY                                      |                                                                                         |            |            |            |                                                                                   |                |                |                |
| MPPT efficiency [%]                             | 99.90                                                                                   |            |            |            | 99.90                                                                             |                |                |                |
| Euro efficiency [%]                             | 97.00                                                                                   |            |            |            | 97.00                                                                             |                |                |                |
| Max. efficiency [%]                             | 97.80                                                                                   |            |            |            | 97.80                                                                             |                |                |                |
| Battery charge/discharge efficiency [%]         | 98.50(PV-BAT) 97.00(BAT-AC)                                                             |            |            |            | 97.0 / 96.0                                                                       | 97.0 / 96.0    | 97.5/ 96.5     | 97.5/ 96.5     |
| POWER CONSUMPTION                               |                                                                                         |            |            |            |                                                                                   |                |                |                |
| Standby consumption(night) [W]                  | <7                                                                                      |            |            |            | <7                                                                                |                |                |                |
| Idle mode                                       | YES                                                                                     |            |            |            | YES                                                                               |                |                |                |
| STANDARD                                        |                                                                                         |            |            |            |                                                                                   |                |                |                |
| Safety                                          | IEC62109-1-2 / IEC62040                                                                 |            |            |            | IEC62109-1-2 / IEC62040                                                           |                |                |                |
| EMC                                             | EN61000-6-1/EN61000-6-2/EN61000-6-3                                                     |            |            |            | EN61000-6-1/EN61000-6-2/EN61000-6-3                                               |                |                |                |
| Certification                                   | VDE0126-1-1 A1:2012/VDE-AR-N4105/G83/G59/AS4777/EN50438/CEI 0-21/VDE 2510               |            |            |            | VDE 0126-1-1 A1:2012 / VDE-AR-N 4105 / G83 / AS4777 / EN50438/ CEI 0-21 /VDE 2510 |                |                |                |
| ENVIRONMENT LIMIT                               |                                                                                         |            |            |            |                                                                                   |                |                |                |
| Protection class                                | IP65                                                                                    |            |            |            | IP65                                                                              |                |                |                |
| Operating temperature range [°C]                | -20 to+60 (derating at+45)                                                              |            |            |            | -25 to+60 (derating at+45)                                                        |                |                |                |
| Altitude[m]                                     | <2000                                                                                   |            |            |            | <2000                                                                             |                |                |                |
| Storage temperature[°C]                         | -20 to+60                                                                               |            |            |            | -20 to+60                                                                         |                |                |                |
| Noise emission(typical) [dB]                    | <40                                                                                     |            |            |            | <30                                                                               |                |                |                |
| Over voltage category                           | III (electric supply side), II (PV side)                                                |            |            |            | III (electric supply side), II (PV side)                                          |                |                |                |
| DIMENSION AND WEIGHT                            |                                                                                         |            |            |            |                                                                                   |                |                |                |
| Dimensions(WxHxD) [mm]                          | 476*464*180                                                                             |            |            |            | 655*456*208                                                                       |                |                |                |
| Weight[kg]                                      | 27                                                                                      |            |            |            | 40                                                                                |                |                |                |
| Cooling concept                                 | Natural                                                                                 |            |            |            | Natural                                                                           |                |                |                |
| Topology                                        | Transformerless                                                                         |            |            |            | Transformerless                                                                   |                |                |                |
| Communication                                   | Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm, Parallel operation |            |            |            | Ethernet, Meter, WIFI (optional), RF(optional), DRM, USB, ISO alarm               |                |                |                |
| LCD display                                     | Backlight 20*4 character                                                                |            |            |            | Backlight 20*4 character                                                          |                |                |                |
| Standard warranty [years]                       | 5                                                                                       |            |            |            | 5                                                                                 |                |                |                |

\*Can be modified without notice.(V3)