

BRUX H1 Series

Single-Phase Hybrid Solar Inverter

(for residential PV + storage with fast backup and smart monitoring)

Models: BRUX-3K-H1 | BRUX-3K6-H1 | BRUX-4K-H1 | BRUX-4K6-H1 | BRUX-5K-H1 | BRUX-6K-H1



- ✓ **Designed & Engineered in Belgium**
- ✓ **10-Year Standard Warranty | Extendable to 15 Years**

2 MPPT trackers	<10 ms EPS	150% DC oversizing	IP66 Protection	97.5% Max. efficiency
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Key Highlights

Efficient	Smart	Safe & Backup
<ul style="list-style-type: none"> • Wide MPPT voltage range: 100–550 V • Up to 150% DC oversizing • Max. PV short-circuit current (per MPPT): 20 A • Supports high-current PV modules • Parallel operation supported (see installation manual for limits) 	<ul style="list-style-type: none"> • Smart I–V curve diagnosis for PV string fault detection • Remote firmware upgrade (via monitoring platform) • Remote monitoring & diagnostics • AFCI (Optional) 	<ul style="list-style-type: none"> • IP66 enclosure for outdoor installation • DC & AC Type II surge protection • EPS output, < 10 ms transfer time • Reverse polarity protection (battery)

Note: parallel operation limits and requirements depend on grid code and installation design.



Scan for product page

Technical Specifications

Parameter	BRUX-3K-H1	BRUX-3K6-H1	BRUX-4K-H1	BRUX-4K6-H1	BRUX-5K-H1	BRUX-6K-H1
Input (PV)						
Max. PV input power	4.50 kW	5.40 kW	6.00 kW	6.90 kW	7.50 kW	9.00 kW
Max. PV input voltage	600 V					
Start-up voltage	100 V					
Rated voltage	360 V					
MPPT voltage range	100 V – 550 V					
Number of MPPT trackers	2					
Number of strings (per MPPT)	1					
Max. input current (per MPPT)	16 A					
Max. short-circuit current (per MPPT)	20 A					
AC Output (On Grid)						
Rated output power	3.00 kW	3.68 kW	4.00 kW	4.60 kW	5.00 kW	6.00 kW
Max. apparent power	3.00 kVA	3.68 kVA	4.00 kVA	4.60 kVA	5.00 kVA	6.00 kVA
Max. output current	15 A	16 A	20 A	20.9 A	22.7 A	30.0 A
Rated voltage	230 V					
Rated frequency	50 Hz					
THDi (at rated power)	< 3%					
Power factor	0.8 leading – 0.8 lagging					
AC Output (EPS)						
Max. output power	3.00 kW	3.68 kW	4.00 kW	4.60 kW	5.00 kW	6.00 kW
Max. output current	15 A	16 A	20 A	20.9 A	22.7 A	30.0 A
Peak output power, time	4.50 kW, 10 s	5.50 kW, 10 s	6.00 kW, 10 s	6.90 kW, 10 s	7.50 kW, 10 s	7.50 kW, 10 s
Rated voltage, frequency	230 V, 50 Hz					
THDv (at rated power)	< 3%					
Transfer time	< 10 ms					
Battery						
Battery type	Lithium					
Battery voltage range	40 V – 60 V					
Max. charge / discharge power	3.0 kW	3.6 kW	4.0 kW	4.6 kW	5.0 kW	6.0 kW
Max. battery interface current	100 A DC					
Communication	CAN					
Efficiency						
Max. efficiency	97.50%					
EU efficiency	97.20%					
Protection						
DC switch	Yes					
DC reverse polarity protection	Yes					
Anti-islanding protection	Yes					
AC short-circuit protection	Yes					
Residual current monitoring	Yes					
Insulation resistance monitoring	Yes					
Ground fault monitoring	Yes					
Over-current / over-voltage protection	Yes					

Battery soft start protection	Yes
Surge protection (AC & DC)	Type II
AFCI protection	Optional

Communication

Display	LCD
Communication	RS485 / CAN / Wi-Fi / 4G / Bluetooth (optional accessories)

Standard Compliance

Certification	Safety (LVD): EN 62109-1:2010; EN 62109-2:2011
	EMC: EN IEC 61000-6-1:2019; EN IEC 61000-6-3:2021; EN 62920:2017/A1:2021
	International (Utility interface / Anti-islanding): IEC 61727:2004; IEC 62116:2014
	Belgium: Synergrid C10/11:2021
	European Grid Connection: EN 50549-1:2019+A1:2023; EN 50549-10:2022
	Germany: VDE-AR-N 4105:2018-11 (DIN VDE V 0124-100:2020-06)
	France: UTE C 15-712-1:2013; Enedis-PRO-RES_10E v5; VFR 2019
United Kingdom: G99 Issue 1 Amendment 9 (03 Oct 2022)	
Spain: UNE 217001:2020; UNE 217002:2020; RD 647/2020; Orden TED/749/2020 (Annex I, 2.3.6 & 5.3); NTS:2021 (Rev. 2.1)	
Grid Protection Standard: DIN V VDE V 0126-1-1:2013	

General Data

Dimensions (W × H × D)	481 × 390 × 200 mm
Weight	21.35 kg
Operating temperature range	−30°C to +60°C
Cooling method	Natural
Ingress protection (IP)	IP66
Max. operating altitude	4000 m
Relative humidity	0–100%
Self-consumption	< 10 W
Topology	High-frequency isolation (battery)
Warranty	Warranty: 10 years standard; extendable to 15 years (paid). See Warranty Terms & Conditions

Notes:

- Specifications are subject to change without notice.
- Battery current depends on battery voltage and inverter power; the battery interface is rated up to 100 A DC.
- Warranty coverage and service processes vary by final installation country/region. Contact your installer or SOLAR-IN for the applicable Warranty Terms & Conditions.
- Features, functions, and certifications may vary by region and firmware version.

Disclaimer:

Values are obtained under controlled test conditions. Actual performance may vary with product configuration, firmware/software versions, installation practices, operating conditions, and environmental factors.

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