EQUINOX2 HT Three-phase hybrid solar inverters from 4 to 12 kW

EQUINOX2 HT: Versatility with three-phase renewable energy

The **EQUINOX2 HT** three-phase hybrid solar inverters retain the features of the single-phase EQUINOX2 HSX range, for application in installations with 3 x 380 V / 3 x 400 V.

As such, we can continue to speak of maximum versatility. The **EQUINOX2 HT** has up to six operating modes: general or automatic mode, peak load mode, isolated mode, UPS mode, economy mode (allowing users to program battery charging/discharging and usage times via the app, web or display) and a mode for operation without batteries.

The mode for operation without batteries ensures that photovoltaic energy is still available even when the batteries are in poor condition, disconnected for replacement or even if the user decides to acquire them at a future date and initially operates the system without storage. Although this function is usually temporary, it helps to enhance the already comprehensive availability of the installation.

The UPS function is also of particular note. Thanks to technological advances, our inverter boasts a transfer speed of just 10 ms, thereby ensuring the continued operation of connected devices in the event of an unexpected power outage and without requiring any manual intervention.



Applications: Self-consumption up to 12 kW

The **EQUINOX2 HT** offers a high degree of independence from the electricity network, with a three-phase installation. It is the ideal solution for facilities with low- and medium-power equipment, such as workshops, small production facilities, food retailers, catering establishments, etc.







Performances

- \cdot Input current adapted for high-performance panels.
- \cdot Two 13 A MPPT trackers, without current penalty by the battery connection.
- Very low start-up voltage of 150/180 VDC (depending on the model) and the ability to charge the batteries even with low solar radiation.
- · Admits +60% of input power in DC, above the nominal level.
- \cdot Battery transfer time of less than 10 ms.
- \cdot Option of delivering 10% more power in addition to the nominal.
- \cdot Fast charging/discharging of up to 25 A. Fast battery charging (1 hour).
- · Back-up of up to 100% of nominal power, in battery mode.
- · Wide battery voltage range: 135-750 V.
- \cdot Reduced dimensions and weight.
- \cdot Excellent fanless thermal design extends the life of the device and provides longer MTBF.
- · Integrated DC disconnector.
- Plug & Play connection, with start-up and supervision of the installation via the free EQUINOX app, web portal or OLED screen.
- · Meter and instrument transformers included.
- \cdot Useful life of the battery: 6,000 cycles @ 80% DOD.
- · Maximum energy efficiency (up to 98.2%).

Fast charging and discharging

The **EQUINOX2 HT** enables a one-off delivery of current of up to 30 A, in the event that, in UPS or peak load mode, and on an exceptional basis, it is necessary to supply a load that exceeds the nominal power. In UPS mode, while using the batteries, a 12 kW unit can supply up to 20 kW on an exceptional basis.

Additionally, users can force fast battery charging to ensure full availability of power after just one hour.

Thanks to these features, the **EQUINOX2** hybrid series takes energy availability to the maximum level.

Maximum energy production

All of the models in the **EQUINOX2** series stand out for their low start-up voltage, which translates to maximum exploitation of solar radiation and a substantial increase in the number of production hours compared to our competitors' products. This increase is even more important in winter, when the number of hours of good solar radiation is significantly lower.





Smart energy management

The connection panel for our hybrid inverters allows users to discriminate between the connections for priority loads and those for secondary loads. Consequently, in the event of an interruption to the mains power supply, only the priority loads will be supplied by the energy stored in the batteries and the secondary loads will be ignored, thereby optimising the use of the previously stored energy.

In generation mode, the inverter distributes the photovoltaic energy in accordance with a scale of priorities, supplying the priority loads as a first preference, storing power as a second preference, and supplying power to the secondary circuit as a third preference (whether to supply secondary loads or send excess power to the mains network, as desired).

Range

MODEL	CODE	MAXIMUM DC INPUT POWER (W)	MAXIMUM POWER (W)	MAXIMUM APPARENT OUTPUT POWER (VA)	OUTPUT CURRENT (A)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
EQX2 4002-HT	6B2AB000035	6400	4000	4400	6.7	$175 \times 550 \times 410$	26
EQX2 5002-HT	6B2AB000036	8000	5000	5500	8.3	$175\times 550\times 410$	26
EQX2 6002-HT	6B2AB000037	9600	6000	6600	10	$175\times 550\times 410$	26
EQX2 8002-HT	6B2AB000038	12800	8000	8800	13.3	$175 \times 550 \times 410$	28
EQX2 10002-HT	6B2AB000039	16000	10000	11000	16.5	$175\times 550\times 410$	28
EQX2 12002-HT	6B2AB000040	19200	12000	13200	20	$175\times 550\times 410$	28

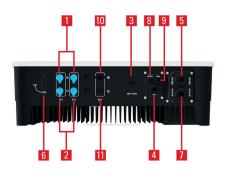
Batteries selection

MODEL	BASE CODE	BMS CODE	BATTERY CODE	DIMENSIONS (F x AN x AL mm)	WEIGHT (kg)	RATED CAPACITY (kWh)	RATED VOLTAGE
EQX2 Li-lon BATT 7 kWh	6B20P000015	6B2AC000001	2 x 6B2AC000002	315 x 708 x 562	110.9	7.7	153.6
EQX2 Li-Ion BATT 10 kWh	6B20P000015	6B2AC000001	3 x 6B2AC000002	315 x 708 x 699	143.2	10.2	204.8
EQX2 Li-lon BATT 12 kWh	6B20P000015	6B2AC000001	4 x 6B2AC000002	315 x 708 x 836	175.5	12.8	256.0
EQX2 Li-Ion BATT 15 kWh	6B20P000015	6B2AC000001	5 x 6B2AC000002	315 x 708 x 973	207.8	15.4	307.2
EQX2 Li-lon BATT 18 kWh	6B20P000015	6B2AC000001	6 x 6B2AC000002	315 x 708 x 1110	240.1	17.9	358.4
EQX2 Li-Ion BATT 20 kWh	6B20P000015	6B2AC000001	7 x 6B2AC000002	315 x 708 x 1247	272.4	20.5	409.6
EQX2 Li-lon BATT 23 kWh	6B20P000015	6B2AC000001	8 x 6B2AC000002	315 x 708 x 1384	304.7	23.0	460.8
EQX2 Li-Ion BATT 25 kWh	6B20P000015	6B2AC000001	9 x 6B2AC000002	315 x 708 x 1521	337.0	25.6	512.0

Dimensions



Connections



EQX2 4002÷12002-HT

- **1.** Positive photovoltaic input terminals.
- 2. Negative photovoltaic input terminals.
- 3. Main communication port (communication module connection).
- 4. Auxiliary communication port (optional).
- 5. AC / mains terminal.
- 6. DC disconnector.
- 7. Output connection for critical loads.
- 8. Connection port for current metering.
- **9.** Communication port with batteries.
- 10. Positive battery connection terminal.
- **11.** Negative battery connection terminal.



Technical specifications

MODEL		EQX2 4002/5002-HT	EQX2 6002-HT	EQX2 8002÷12002-HT			
INPUT	Maximum DC input voltage (Vdc)		1000				
	Working-out rank (Vdc)	150 ÷ 850 200 ÷ 850					
	Inputs per MPPT	·	1/1				
	Max. short-circuit current per MPPT		18/18				
	Starting voltage (Vdc)	150 180					
	Nr. MPP trackers		2				
	Input maximum current per tracker (A)		13/13				
OUTPUT	Power factor	0.8 inductive0.8 capacitive					
	Network voltage	3x400 V Three-phase (3L, N, PE)					
	Voltage ranges	195.5 ÷ 253 V (F-N) according to UNE 217002					
	Total harmonic distortion (THDi)		<3%				
	Frequency	50 Hz (45.5 ÷ 55 Hz) / 60 Hz (55 ÷ 65 Hz)					
	Performance EU	97,3%		97,4%			
	Maximum performance	98,1%		98,2%			
COMMUNICATION	Ports	RS485, WiFi					
INDICATIONS	Туре	3 LED states , LED bar for battery level, OLED displa					
PROTECTION	Input DC disconnector	Included					
	Integrated in the device	Inverse polarity DC, Residual Current, DC disconnector, Over-voltage, Over-temperature, Differential, Islanding operation, AC short-circuit, Over-voltage AC					
	Over-voltage protection category	PV: II / AC: II					
GENERAL	Contamination level	PD2/PD3					
	Self-consumption (at night)	<1 W					
	Operating temperature	30° C ~ +60°C (de-rate for temperature >45°C)					
	Relative humidity	0~100%					
	Maxium operating altitude	3,000 masl (power degradation up to 4,000 m)					
	Degree of protection	IP65					
	Isolation	Transformerless					
	Acoustic noise at 1 metre	<25 dB					
	Terminal type	MC4					
	Installation	Indoor and outdoor installation / Wall support					
	Topology	Hybrid					
STANDARDS	Certificate	EN 61000-6-2/3(1)					
	Safety / EMC	IEC 62109-1/2 / EN 61000-6-2/3					
	Energy efficiency	IEC EN UNE 61683					
	Environmental tests	IEC EN UNE 60068-1/2/14/30					
	Operation / Protection	UNE EN 62116:2014, IEC	014, IEC 61727:2004, UNE 217002:2020, UNE 217001:2020				
	Quality and environmental management	ISO 9001, ISO 14001, ISO 45001					

(1) Consult available regulations for other countries



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