

EnergyHub XL Single

21 – 28 kVA



Modular bidirectional inverter with DC nanogrid technology

- One single inverter for PV, storage and EV charging
- ACE technology for three phase load balancing
- High resolution energy measurement and analytics
- Future proof design enables easy expansion
- Use DC loads in your building

The new DC infrastructure for PV, storage and more

The EnergyHub system brings a new future proof way of integrating PV, storage, small scale wind and DC loads. With one single inverter, new DC devices can be added when required. The bidirectional inverter acts as a bridge between the utility AC grid and a local DC nanogrid within the building where solar cells, batteries and loads are connected. Up to four EnergyHub XL Single can be connected in parallel for more capacity in one system. One second resolution measurements of energy production and consumption coupled with internet connectivity enables a new level of energy services and energy efficiency measures. The patented ACE technology provides three phase load balancing for reduced grid fees or faster EV charging. The DC nanogrid architecture enables energy to be stored or used directly on the DC side for optimum flexibility and minimal losses.

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EnergyHub XL Single	
AC side	
Rated AC power	21 kVA 28 kVA
Reactive power capability	Full 4-quadrant capability within current limit
Rated AC voltage	230/400 VAC
Rated mains frequency	50 Hz
AC connection	5-wire (L1, L2, L3, N, PE)
Fusing	MCB type B, 32 A MCB type B, 40 A
DC side	
DC bus voltage, V_{DC}	760 V (nominal)
DC bus voltage range, V_{DC}	720 - 800
Maximum DC bus current, $I_{DC(max)}$	29 A 38 A
DC bus connection	4-wire (DC+, M, DC-, PE)
Max efficiency DC to AC	98.5 %
Max efficiency AC to DC	98.0 %
DC bus communication	Narrow band power line communication (PLC)
Physical	
Dimensions H x W x D	1004 x 522 x 318 mm
Weight	45 kg
Color	Black
Installation	
Ambient temperature ¹⁾	-10°C – 45°C
Humidity	0 – 95% RH non condensing
Degree of protection	IP 21
AC connector	Phoenix VC-AMC-5, screw terminal max 10 mm ²
DC bus connector	Phoenix VC-AMC-4, screw terminal max 10 mm ²
System design	
Number of EnergyHub Single in parallel ²⁾	1 – 4 units (maximum 112 kVA)
Maximum DC bus cable length ³⁾	200 m
Measurement data	AC x 3: Voltages, currents, phase angles, DC: voltage, current
Connectivity	Ethernet, USB, CAN
Compliance	
LVD	EN 62109-1, EN 62109-2
EMC	EN 61000-6-2, EN 61000-6-3
Grid interaction	EN 50438:2013
RoHS	Yes
Protection functions	AC overvoltage protection, DC overvoltage protection, DC bus short circuit, Overtemperature

- 1) Output power may be derated if ambient temperature exceeds 35 °C
- 2) Installation kit for connecting in parallel is sold separately
- 3) Consult Ferroamp for design guidelines for projects with cable lengths exceeding 200 meters

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