

EnergyHub XL

17,5 – 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. Multiple EnergyHub XL modules can be connected in a 19" rack up to 168 kVA per cabinet. 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			
AC side			
Rated AC power	17,5 kVA	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, 25 A	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, $I_{DC(max)}$	24 A	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	220 x 520 x 650 mm		
Weight	36 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 EHUBs in parallel	Up to 1000 kVA		
Maximum DC bus cable length ²⁾	1 200 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) Consult Ferroamp for design guidelines for projects with cable lengths exceeding 100 meters