



Solar inverter

PV + Storage

REACT 2 is FIMER's photovoltaic energy storage system, allowing to store excess energy and optimize the energy use in residential applications.

From 3.6 to 5.0 kW

This new line, available in power ratings of 3.6 and 5.0 kW, has one of the industry's highest energy efficiency rates, providing up to 10% more energy than lower voltage battery systems.

For new and retrofit installations

Thanks to the possibility of both AC and DC side connection, REACT 2 is the ideal solution for new systems or the retrofitting of existing ones, allowing homeowners to improve their energy self-consumption and save on their energy bills.

Wide battery capacity

Providing a totally flexible solution, REACT 2 offers a wide storage capacity, which can be expanded from 4 kWh to 12 kWh (REACT2-BATT) or from 5 kWh to 15 kWh (REACT2-BATT-5.0), depending on the number of batteries used, and can achieve up to 90 percent energy self-reliance. The addition of further battery units can take place anytime during the lifetime of the system.

Design flexibility

The different set-up configurations available allow maximum installation flexibility and optimization of available spaces. Quick and easy to install thanks to the simple plug and play connection, both on inverter and battery side.

Smart connectivity

Future proof technology enables a full smart home experience with advanced communication features and load management capabilities.

The embedded data logger and direct transferring of data to a secure cloud platform allows customers to monitor and keep their system under control through the dedicated mobile app.

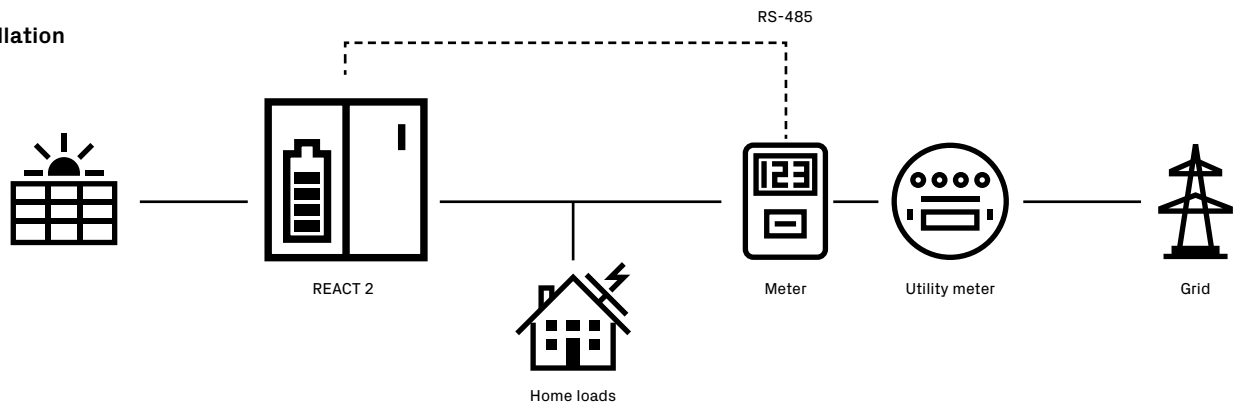
The advanced communication interfaces combined with a standard Modbus communication protocol, Sunspec compliant, allow the inverter to be easily integrated within any smart environment and with third party monitoring and control systems.

Highlights

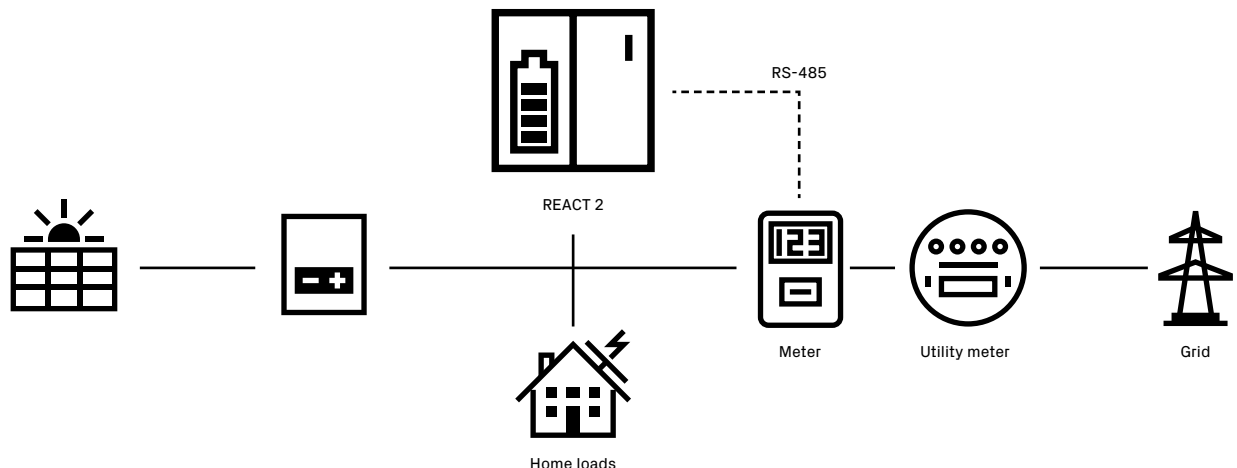
- Li-Ion battery unit for energy storage (from 4 kWh to 12 kWh or from 5 kWh to 15 kWh based on battery model choice)
- Industry leading energy efficiency
- Suitable for new and existing applications
- Battery units can be upgraded anytime during lifetime of system
- Flexible and modular design, optimizes installation space
- Simple and safe installation with plug and play connection
- System monitoring through dedicated mobile app
- Modbus TCP/RTU Sunspec compliant
- Energy community ready

REACT 2 - DC and AC coupled connection

New installation



Retrofit

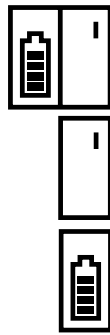


Possible configurations

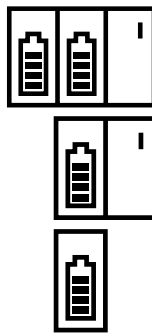
Hybrid inverter
(Battery ready)



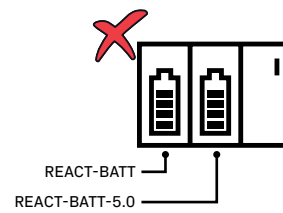
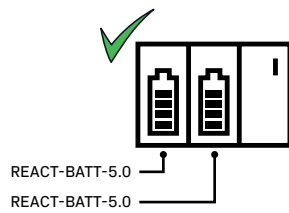
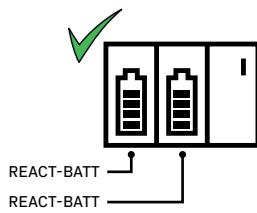
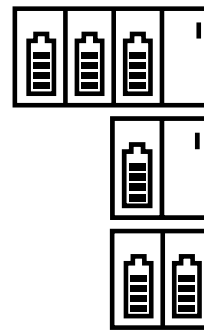
4 kWh kit (REACT-BATT)
5 kWh kit (REACT-BATT-5.0)



8 kWh kit (REACT-BATT)
10 kWh kit (REACT-BATT-5.0)



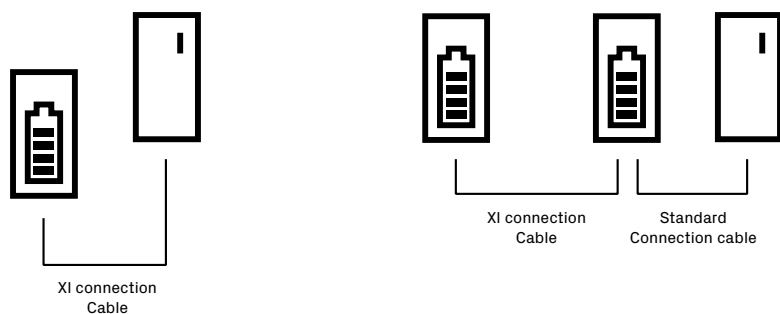
12 kWh kit (REACT-BATT)
15 kWh kit (REACT-BATT-5.0)



Technical data and types

Inverter	REACT2-UNO-3.6-TL	REACT2-UNO-5.0-TL
Input side		
Absolute maximum DC input voltage ($V_{max,abs}$)		575 V
Start-up DC input voltage (V_{start})		200 V (adj. 120...350 V)
Operating DC input voltage range ($V_{dmin}...V_{dmax}$)		$0.7 \times V_{start}...575$ V (min 90 V)
Rated DC input voltage (V_{dcr})		390 V
Rated DC input power (P_{dcr})	5000 W	6000 W
Suggested maximum DC input power	6666 W	8000 W
Number of independent MPPT		2
Maximum DC input power for each MPPT ($P_{MPPT,max}$)	2500 W	3000 W
DC input voltage range with parallel configuration of MPPT at P_{acr} , not operative battery	160 V...480 V	195 V...480 V
Maximum DC input current ($I_{dc,max}$) / for each MPPT ($I_{MPPT,max}$)	24 A / 12 A	27 A / 13.5 A
Maximum input short circuit current for each MPPT		15.0 A
Number of DC inputs pairs for each MPPT		2
DC connection type		PV quick fit connector ¹⁾
Input protection		
Reverse polarity protection		Yes, from limited current source
Input over voltage protection for each MPPT - varistor		Yes
Photovoltaic array isolation control		According to local standard
DC switch rating for each MPPT		25 A / 575 V
Battery port		
Operating DC voltage range		170-575 V
N° of battery units	1, 2, 3	1, 2, 3
Charge power	1.6 kW, 3.2 kW, 4.8 kW (REACT2-BATT) 2 kW, 4 kW, 5 kW (REACT2-BATT-5.0)	1.6 kW, 3.2 kW, 4.8 kW (REACT2-BATT) 2 kW, 4 kW, 6 kW (REACT2-BATT-5.0)
Discharge power	2 kW, 3.6 kW, 3.6 kW (REACT2-BATT) 2.5 kW, 3.6 kW, 3.6 kW (REACT2-BATT-5.0)	2 kW, 4 kW, 5 kW (REACT2-BATT) 2.5 kW, 5 kW, 5 kW (REACT2-BATT-5.0)
Grid connected output side		
AC Grid connection type		Single-phase
Rated AC power (P_{acr} @ $\cos\phi=1$)	3600 W	5000 W ²⁾
Maximum AC output power ($P_{ac,max}$ @ $\cos\phi=1$)	3600 W	5000 W ²⁾
Maximum apparent power (S_{max})	3600 VA	5000 VA ²⁾
Rated AC grid voltage (V_{acr})		230 V
AC voltage range		180...264 V ³⁾
Maximum AC output current ($I_{ac,max}$)	16 A	22 A
Contributory fault current	16 A	22 A
Rated output frequency (f_r)		50 Hz / 60 Hz
Output frequency range ($f_{min}...f_{max}$)		45...55 Hz / 55...65 Hz ⁴⁾
Nominal power factor and adjustable range		> 0.995, adj. $\pm 0.1 - 1$ (over/under excited)
Total current harmonic distortion		< 3%
AC connection type		AC circular connector

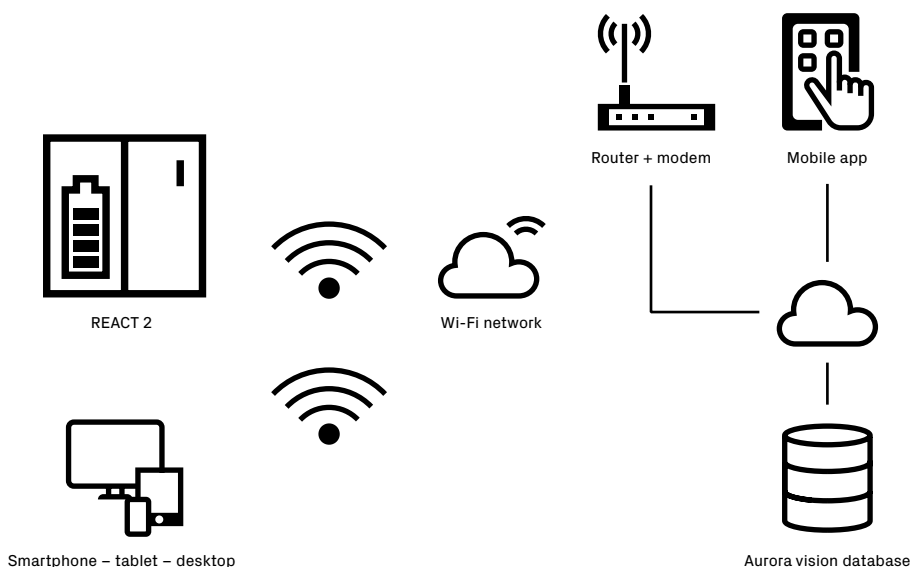
REACT 2 - Installation flexibility



Technical data and types

Inverter	REACT2-UNO-3.6-TL	REACT2-UNO-5.0-TL
Grid connected output protection		
Anti-islanding protection		According to local standard
Maximum external AC overcurrent protection	20 A	25 A
Output overvoltage protection - varistor		2 (L - N / L - PE)
Backup output side		
AC grid connection type		Single-phase
Maximum apparent power (S _{max})		3000 VA
Rated AC grid Voltage (V _{acri})		230 V
AC Voltage range		180...264 V ⁴⁾
Maximum AC output current (I _{ac max})		13 A
Rated output frequency (f _r)		50 Hz / 60 Hz
Output frequency range (f _{min} ...f _{max})		45...55 Hz / 55...65 Hz ⁵⁾
AC connection type		Screw terminal block
Backup output protection		
Maximum external AC overcurrent protection		16 A
Output overvoltage protection - varistor		2 (L-N/L-PE)
Embedded communication		
Embedded physical interface		Wi-Fi [®] , 2 x Ethernet, RS485
Embedded communication protocols		Modbus TCP (SunSpec), Modbus RTU (SunSpec), ABB-free@home [®]
Datalogger data retention		30 days
Remote monitoring		Mobile app
Local monitoring		Web server user interface
Environmental		
Ambient temperature range	-20...+55°C with derating above 50°C	-20...+55°C with derating above 45°C
Relative humidity		4...100 % condensing
Acoustic noise emission level		< 50 dB (A) @ 1 m
Maximum operating altitude without derating		2000 m
Physical		
Environmental protection rating		IP65
Cooling		Natural
Dimension (H x W x D)		740 mm x 490 mm x 229 mm
Weight		< 22 kg
Mounting system		Wall bracket
Safety		
Isolation level		Transformerless
Marking		CE (50 Hz only)
Safety and EMC standard	IEC/EN 62109-1, IEC/EN 62109-2, IEC 62477-1, EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN61000-3-11, EN61000-3-12	
Grid standard (check your sales channel for availability)	CEI 0-21, DIN V VDE V 0126-1-1, VDE-AR-N 4105, G83/2, G59/3, RD 413, AS/NZS 4777.2, C10/11, IEC 61727, IEC 62116	
Other features		
Load manager		Yes, with two integrated relays
AC backup output, off grid		Yes
Battery charge from AC		Yes, it can be enabled
AC-coupled feature		Yes, settable during commissioning

REACT 2 - Communication diagram



Technical data and types

Battery unit	REACT2-BATT	REACT2-BATT-5.0
Battery type		Li-Ion
Total energy	4 kWh	5 kWh
Operating DC voltage range		170-575 V
Absolute maximum DC voltage		575 V
Module voltage		200 V
Deep of discharge (DoD)	95%	90%
Charge power	1.6 kW	2 kW
Discharge power	2 kW	2.5 kW
Environmental		
Environmental protection rating	IP 54 (suggested indoor installation for preserving battery life time)	
Ambient temperature range	-20...+55°C (power derating occurs out of suggested ambient temperature range)	
Suggested ambient temperature	+0 to +40 °C	
Relative humidity	4...100 % condensing	
Physical		
Cooling	Natural	
Dimension (H x W x D)	740 mm x 490 mm x 229 mm	
Weight	< 50 kg	
Mounting system	Wall bracket	
Safety		
Marking	CE	
Safety	IEC 62619, UN38.3, UN3480	
Compatible meters⁶⁾		
REACT-MTR-1PH	Single-phase, 20 A	
ABB B21	Single-phase, 65 A	
ABB B23	Three-phase, 65 A	
ABB B24	Three-phase, External CT (opt.)	
ABB A43	Three-phase, 80 A	
ABB A44	Three-phase, External CT (opt.)	

1) Refer to the document "String inverter – Product Manual appendix" available at www.fimer.com/solarinverters to know the brand and the model of the quick fit connector"
 2) For VDE-AR-N 4105 setting, maximum active power of 4600 W and maximum apparent power of 4600 VA
 3) The AC voltage range may vary depending on specific country grid standard
 4) The Frequency range may vary depending on specific country grid standard
 5) As per IEEE 802.11 b/g/n standard

6) Refer to the document "Meters supported by FIMER string inverters and the VSN700-05 Data Logger", available at www.fimer.com, to know the complete compatible meter list

Remarks:
 • **Designed and manufactured in Italy**
 • **Features not specifically listed in the present data sheet are not included in the product**



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