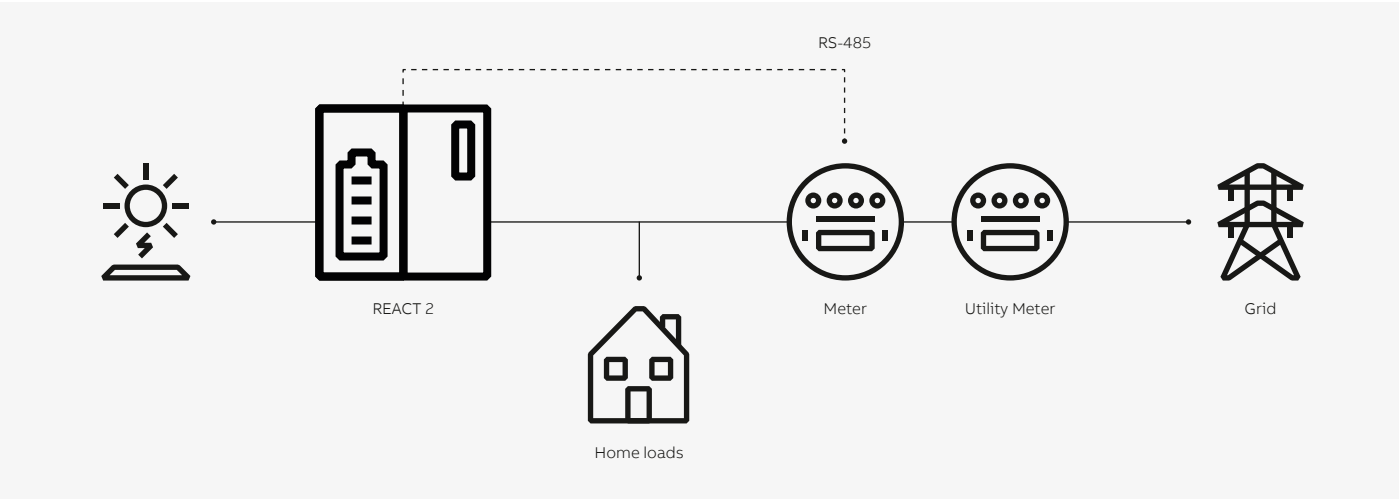


ABB PV + Storage

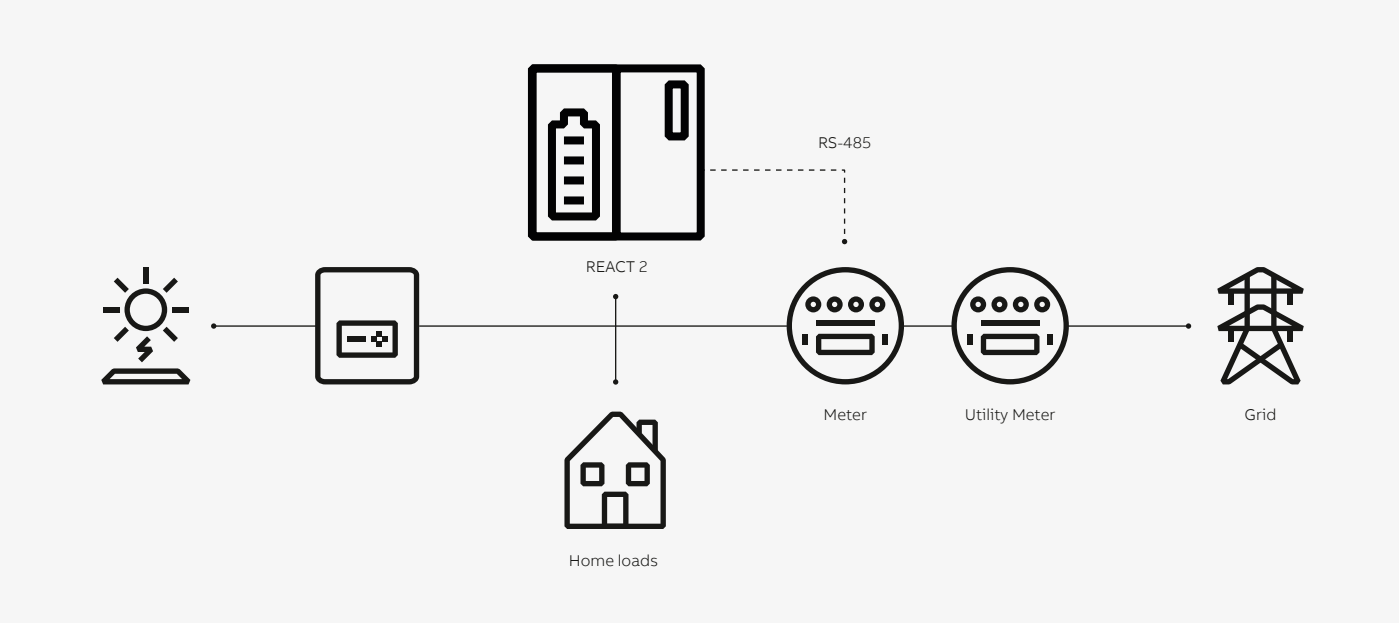
REACT 2

REACT 2 -DC and AC coupled connection

New installation



Retrofit





For more information please contact
your local ABB representative or visit:

www.abb.com/solarinverters
www.abb.com/react
www.abb.com

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SOLAR INVERTERS

ABB PV + Storage

REACT 2

3.6 to 5.0 kW *



—
REACT 2 3.6/5.0
PV + Storage inverter

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, 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

* Preliminary

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

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 min 4 kWh to 12 kWh)
- 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
- Compatible with ABB free@home for a full ABB smart home experience

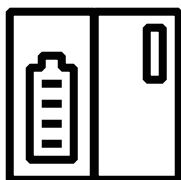
ABB PV + Storage

REACT 2

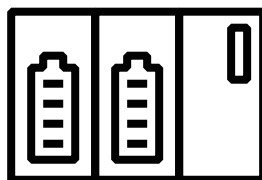
3.6 to 5.0 kW



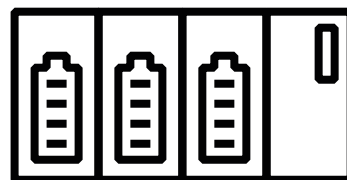
Hybrid inverter
(battery ready)



4 kWh kit



8 kWh kit



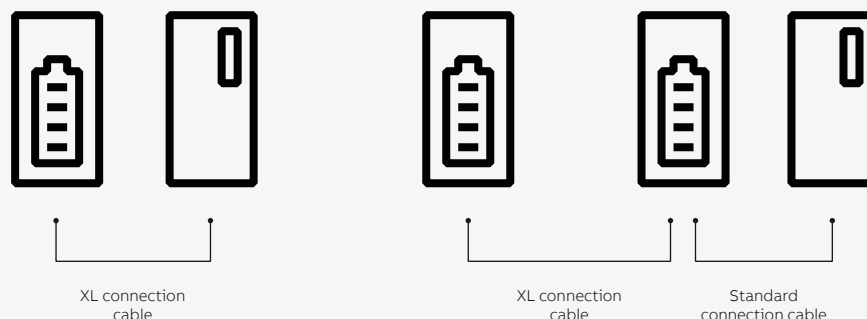
12 kWh kit

Possible
configurations

Technical data and types

Inverter	REACT 2-3.6-TL-OUTD	REACT 2-5.0-TL-OUTD
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 ($V_{dcmin}...V_{dcmax}$)	0.7 x $V_{start}...575$ V (min 90 V)	
Rated DC input voltage (V_{dcr})	360 V	
Rated DC input power (P_{dcr})	5000 W	6000 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_{dcr} , not operative battery	Linear derating [$480\ V \leq V_{MPPT} \leq 575\ V$] 160 V...480 V	Linear derating [$480\ V \leq V_{MPPT} \leq 575\ V$] 195 V...480 V
Maximum DC input current ($I_{dc\ max}$) / for each MPPT ($I_{MPPTmax}$)	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 side		
N° of battery unit	1, 2, 3	1, 2, 3
Charge power	1.6 kW, 3.2 kW, 4.8 kW	1.6 kW, 3.2 kW, 4.8 kW
Discharge power	2 kW, 3.6 kW, 3.6 kW	2 kW, 4 kW, 5 kW
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 ($P_{acmax}\ @\cos\phi=1$)	3600 W	5000 W ⁽²⁾
Maximum apparent power (S_{max})	3600 VA	5000 VA ⁽²⁾
Rated AC grid voltage ($V_{ac,r}$)	230 V	
AC voltage range	180...264 V ⁽³⁾	
Maximum AC output current ($I_{ac\ max}$)	16 A	22 A
Contributory fault current	24 A (60 ms)	
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 exited)	> 0.995, adj. \pm 0.1 - 1 (over/under exited)
Total current harmonic distortion	< 3%	
AC connection type	Screw terminal block	
Grid connected output protection		
Anti-islanding protection	According to local standard	
Maximum external AC overcurrent protection	25 A	32 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	

REACT 2 - Installation flexibility



Technical data and types

Inverter	REACT 2-3.6-TL-OUTD	REACT 2-5.0-TL-OUTD
Backup output side		
Rated AC grid Voltage (V_{acr})	230 V	
AC Voltage range	180...264 V ⁽³⁾	
Maximum AC output current ($I_{ac\ max}$)	16 A	
Contributory fault current	24 A (60 ms)	
Rated output frequency (f_r)	50 Hz / 60 Hz	
Output frequency range ($f_{min}...f_{max}$)	45...55 Hz / 55...65 Hz ⁽⁴⁾	
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	Wireless ⁽⁵⁾ , 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, 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, IFC 61727, IFC 62116	

¹⁾ Refer to the document "String inverter – Product Manual appendix" available at www.abb.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

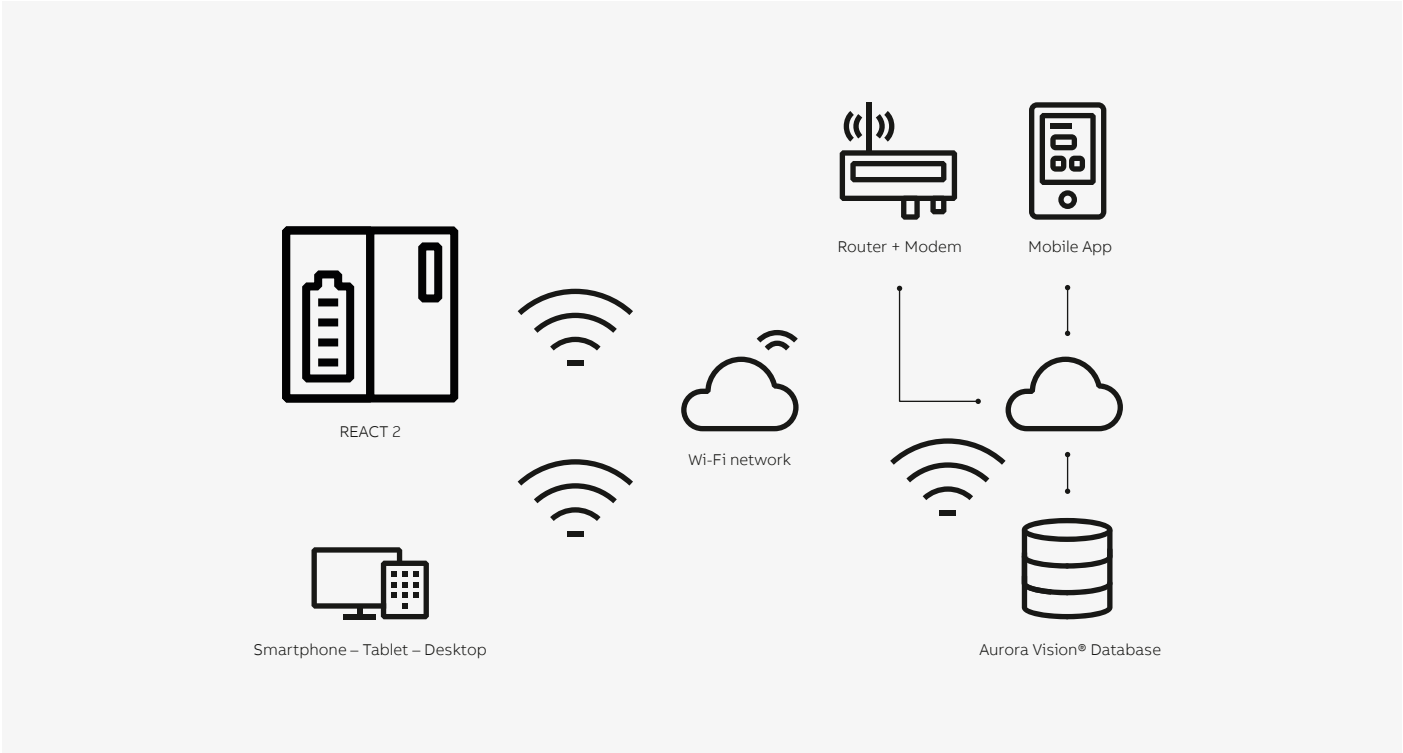
³⁾ The AC voltage range may vary depending on specific country grid standard

⁴⁾ The Frequency range may vary depending on specific country grid standard

⁵⁾ As per IEEE 802.11 b/g/n standard

Remark. Features not specifically listed in the present data sheet are not included in the product

REACT 2 - Communication diagram



Technical data and types

Inverter	
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	Yes
Battery unit	
REACT2-BATT	
Modules manufacturer	Samsung
Battery type	Li-Ion
Total energy	4 kWh
Battery voltage	200 V
Deep of discharge (DoD)	100%
Charge power	1.6 kW
Discharge power	2 kW
Cooling	Natural
Dimension (H x W x D)	740 mm x 490 mm x 229 mm
Weight	< 57 kg
Mounting system	Wall bracket
Safety and EMC	CE, IEC 62619, UN38.3, UN3480
Compatible ABB meter List	
REACT-MTR-1PH	Single-phase, 20 A
B21-212	Single-phase, 65 A
B23-212	Three-phase, 65 A
B24-212	Three-phase with external CT (opt.)