

RS three-phase



HIGHLIGHTS

- **Maximum efficiency 98.2%**
- **European efficiency 97.7%**
- **Forced ventilation at regulated speed**
- **Wide MPPT operating voltage range**
- **DC and AC type II surge arresters**
- **Dual MPPT**
- **IP65 Protection level**
- **Built-in Wi-Fi and datalogger data management**
- **LCD display divided into multiple sections and multi-LED status indicator**

The evolution of Riello Solartech continues: the new range of high-performance transformerless three-phase inverters. Riello Solartech, a brand of the Italian Riello Elettronica Group, presents the market with the new series of three-phase photovoltaic inverters, implementing the range of residential single-phase inverters. Extremely compact and lightweight, the new RS three-phase inverters from Riello Solartech are available with power ranging from 6 to 30 kW and benefit from a brand new technology with high quality components, the result of the work of the company's R&D team, that guarantee the utmost product reliability allowing them to achieve high efficiency under all working conditions.

TOP TECHNOLOGY

Other outstanding features of the new Riello Solartech RS T three-phase inverters include the DC-side disconnecter, type II DC and AC surge arresters, and multiple inputs for maximum optimization of the strings that converge on the two independent MPPT trackers characterised by a wide voltage range; all of this ensures maximum configuration flexibility, efficiency optimization and prolonged energy production.

The RS T models incorporate natural ventilation (up to 15 kW) with adequate heat sinks to ensure maximum heat exchange or forced ventilation (for 20 to 30 kW models) with controlled speed extraction fans in relation to the operating conditions, to minimize leakage.

The innovative digital control for all power stages guarantees low susceptibility to power disruptions, avoiding undesired disconnection due to variations or micro-interruptions.

Connected via the app or the Cloud, the Riello Solartech RS T inverters feature a unique and innovative design.

The aluminium case makes them strong yet lightweight and ensures a real IP65 protection level, meaning it's well-suited even for outdoor applications.

The user interface on the front panel has LEDs for indicating DC and AC side status and communications; in addition, there is an LCD display divided into several sections that shows: date, time, alarms (if any), type of connection, operating diagram, MPPT1 and MPPT2 voltage/current, E-Day, E-Total, power and all instantaneous network parameters.

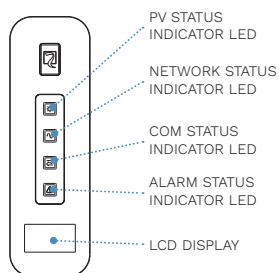
The inverters also interface via the Wi-Fi built into the RS Connect smartphone app, enabling users to manage the configuration and self-test.

Again via Wi-Fi or an Ethernet card (optional), the inverters can be connected to the Internet for data management on the RS Monitoring supervisory portal, where it is possible to remotely monitor the strings in detail and to view the installation's performance.

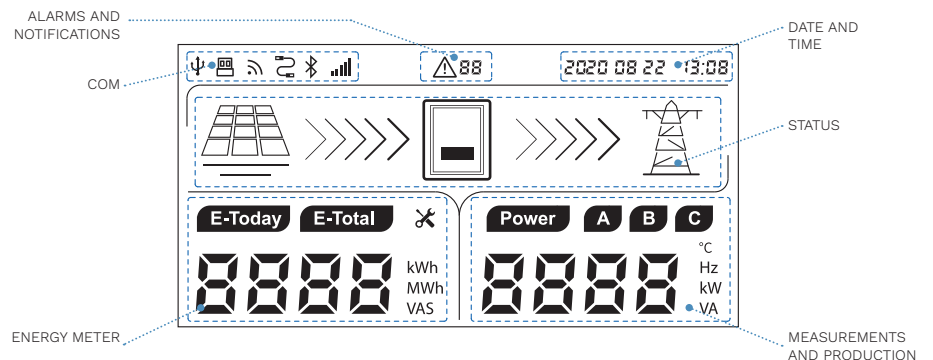
Finally, through the integrated BUS 485 interface it is possible to connect several inverters to a dedicated datalogger to manage the connection to the portal of the whole plant via Ethernet, with the option of connecting energy meters and environmental sensors.



INTERFACE PANEL



LCD DISPLAY



MODELS	RS 6.0 T	RS 10.0 T	RS 15.0 T
PRODUCT CODE	6PS36K0B	6PS310KB	6PS315KB
EFFICIENCY			
Maximum efficiency	97.9%	98.0%	98%
European efficiency	97.3%	97.4%	97.5%
INPUT			
Maximum input voltage [V]	1000		
Nominal input voltage [V]	620		
Maximum input current [A]	26 (2x13)	39 (13 + 26)	
Maximum short circuit current [A]	30 (2x15)	45 (15 + 30)	
Starting voltage / Minimum operating voltage [V]	200 / 160		
MPPT OPERATING VOLTAGE RANGE [V]	160–950		
MPPT operating voltage range (full load) [V]	300–800	470–800	
Maximum number of PV strings	2 (1/1)	3 (1/2)	
MPPT number	2		
OUTPUT			
AC active power (nominal) [W]	6000	10000	15000
Maximum apparent AC power [VA]	6600	11000	16500
Active power max. AC (PF = 1) [W]	6600	11000	16500
Max current AC output [A]	3x10	3x16	3x23
Nominal voltage AC [V]	380 / 400 3L+N+PE		
AC voltage range [V]	277– 520 (configurable)		
Nominal mains frequency [Hz]	50/60		
Grid frequency range [Hz]	45-55 / 55-65		
Harmonic Distortion (THDi)	<3% (nominal power)		
Direct current injection	<0.5% In		
Power factor	> 0.99 nominal power (selectable 0.8 inductive – 0.8 capacitive)		
PROTECTIONS			
DC disconnect switch	YES		
Anti-islanding protection	YES		
AC overcurrent protection	YES		
Short circuit protection	YES		
DC pole inversion control	YES		
Surge arresters (VDR)	DC type II / AC type II		
Ground fault detection	YES		
Current leakage protection	YES		
OVERALL SPECIFICATION			
Type	Transformer-free		
Protection level	IP65		
Night self-consumption [W]	<1		
Natural	cooling		
Operating temperature range	-25 °C – 60 °C		
Relative humidity range	0–100%		
Maximum operating altitude [m]	4000 (>2000 derating)		
Noise level [dB]	<30 (measured at 1 m)		
Dimensions (WxDXH) [mm]	422x187x520		
Weight [kg]	21.5	23.5	
COMMUNICATIONS			
Display	LCD + LED		
Communications	Integrated Wi-Fi, integrated RS485, Ethernet (optional)		
Monitoring	APP, Supervisory Portal		
CERTIFICATIONS			
Safety	IEC62109-1, IEC62109-2		
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		
Regulations	CEI 0-21, CEI 0-16, IEC62727, IEC62116		
Warranty	5 years (with possibility of extending to 10 years)		

MODELS	RS 20.0 T	RS 25.0 T	RS 30.0 T
PRODUCT CODE	6PS320KA	6PS325KA	6PS330KA
EFFICIENCY			
Maximum efficiency	98.2%	98.2%	98.2%
European efficiency	97.7%	97.7%	97.7%
INPUT			
Maximum input voltage [V]	1000		
Nominal input voltage [V]	620		
Maximum input current [A]	2x25	2x37.5	
Maximum short circuit current [A]	60 (2x30)	90 (2x45)	
Starting voltage / minimum operating voltage [V]	250 / 180		
MPPT operating voltage range [V]	180–960		
MPPT operating voltage range (full load) [V]	480–800		
Maximum number of PV strings	4 (2/2)	6 (3/3)	
MPPT number	2		
OUTPUT			
AC active power (nominal) [W]	20000	25000	30000
Maximum apparent AC power [VA]	22000	27500	33000
Active power max. AC (PF = 1) [W]	22000	27500	33000
Max current AC output [A]	3x33.5	3x40	3x48
Nominal voltage AC [V]	380 / 400 3L+N+PE		
AC voltage range [V]	277– 520 (configurable)		
Nominal mains frequency [Hz]	50 / 60		
Grid frequency range [Hz]	45-55 /55-65		
Harmonic Distortion (THDi)	<3% (nominal power)		
Direct current injection	<0.5% In		
Power factor	> 0.99 nominal power (selectable 0.8 inductive – 0.8 capacitive)		
PROTECTIONS			
DC disconnect switch	YES		
Anti-islanding protection	YES		
AC overcurrent protection	YES		
Short circuit protection	YES		
DC pole inversion control	YES		
Surge arresters (VDR)	DC type II / AC type II		
Ground fault detection	YES		
Current leakage protection	YES		
OVERALL SPECIFICATION			
Type	transformer-free		
Protection level	IP65		
Night self-consumption [W]	<1		
Forced	cooling with fans at controlled speed		
Operating temperature range	-25 °C – 60 °C		
Relative humidity range	0–100%		
Maximum operating altitude [m]	4000 (>2000 derating)		
Noise level [dB]	<30 (measured at 1 m)		
Dimensions (WxDxH) [mm]	577x270x445		
Weight [kg]	37	41.5	
COMMUNICATIONS			
Display	LCD + LED		
Communications	Integrated Wi-Fi, integrated RS485, Ethernet (optional)		
Monitoring	APP, Supervisory Portal		
CERTIFICATIONS			
Safety	IEC62109-1, IEC62109-2		
EMC	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		
Regulations	CEI 0-21, CEI 0-16, IEC62727, IEC62116		
Warranty	5 years (with possibility of extending to 10 years)		