

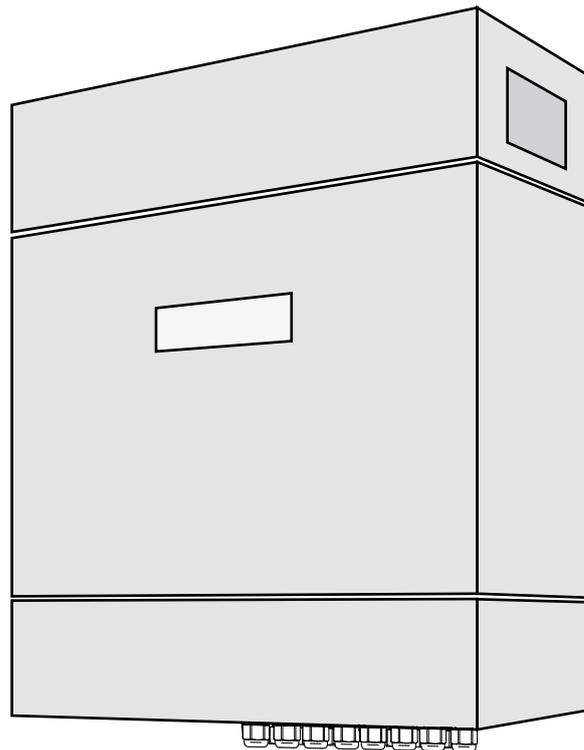
@1500V



# 3PH STRING INVERTER

## TRANSFORMERLESS

### MAX INPUT VOLTAGE @1.500V



R1015 TL  
R1415 TL

MAXIMUM EFFICIENCY

99.0 %

OUTPUT VOLTAGE

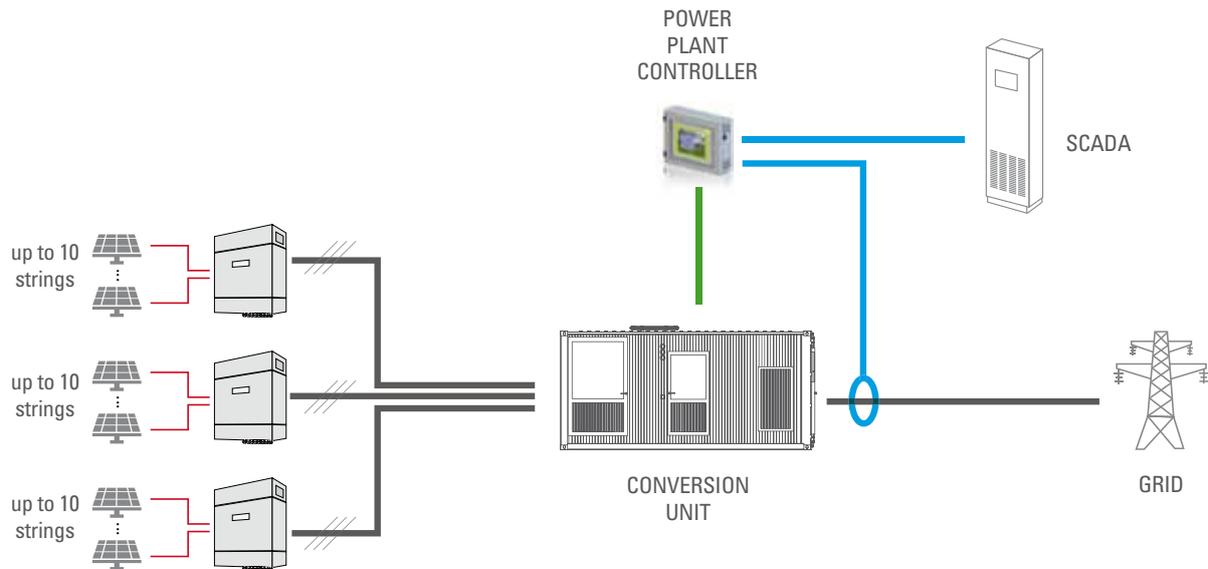
550 V<sub>AC</sub>

MPPT VOLTAGE RANGE

850 - 1.320V<sub>DC</sub>

# MAX INPUT VOLTAGE @1.500V

## R1015 TL R1415 TL



**Our products for photovoltaic industry, highly advanced technologically, then complete FIMER's range of offerings. The new 3PH R series string inverters have been specifically designed for mainly commercial and large scale distributed PV Plants both indoor and outdoor (IP 65).**

### PERFORMANCE

---

Our products for photovoltaic industry, highly advanced technologically, then complete FIMER's range of offerings. The new 3PH R series string inverters have been specifically designed for mainly commercial and large scale distributed PV Plants both indoor and outdoor (IP 65). Thanks to flexible installation and to wide operating voltage range (850-1.320 V<sub>DC</sub>) the new inverters are easily configured with any type of panel and installation, also 1.500V.

They are characterized by a complete range of accessories which makes them extremely complete and they don't require further options which affect often lead to increased costs.

They include in fact the communication port for remote monitoring. Display is simple and clear thanks to the 4 lines x 20 characters display, also the setting of all parameters has never been easier. The combiner box is separable for maximum flexibility in the installations.

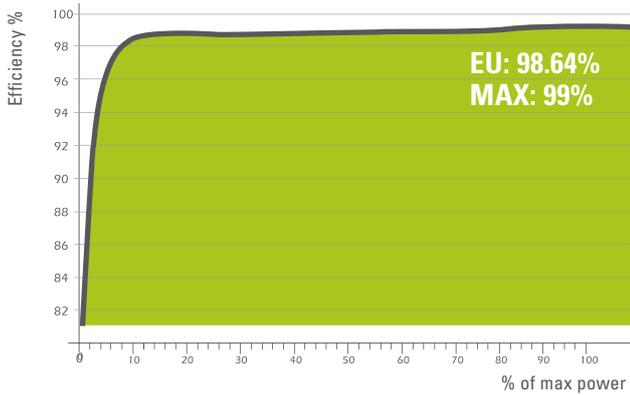
### FEATURES

---

Resilient and high-performing, they can be adapted to both indoor and outdoor environments. All of the controls, settings, monitoring and communication functions are always available.

They have a user-friendly interface, consisting of a 4-lines x 20 character and that constantly monitors the most important parameters of both the plant and the convertor. The LED gives a clear and immediate diagnostic and system warnings and information.

Particular attention has been given to the communication, exchange and transmission of data. The system is equipped with a serial interface, RS485 COM port with MODBUS RTU protocol, for the remote monitoring on the PV converter.



R1015TL - R1415TL

### Advantage

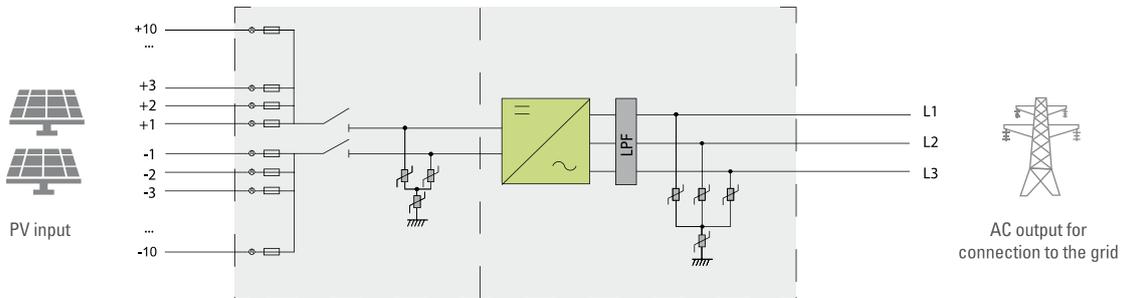
- > High efficiency, up to 99%.

### Features

- > Advance technology (according to IPCCM algorithm).
- > Continual monitoring with all parameters and data available.
- > Outbound communication.

### Accessories

- > Accessories references



### PROTECTION DEGREE

It indicates the classification of the degree of protection provided by mechanical enclosures and electrical boards against the intrusion of solid particles (for example parts of the body and dust) and access of liquids.



### SEMICIRCULAR CAPABILITY

It is the capability of the inverter to be able of generating, upon request, a certain amount of active and reactive power in whichever point of the P,Q space delimited by the semi-circular diagram.



### CE MARKING

The product complies with the safety requirements of the applicable EC directives.



### GRID VOLTAGE REGULATION FUNCTION BY MEANS OF REACTIVE POWER

Grid voltage regulation function is carried out by appropriate generation of reactive power Q by the Inverters in local logic. The curve is completely configurable in order to meet any requirement of the grid code.



### LVFRT

It is the capability of the inverter to remain connected to the grid even following any poly-phase failure and whenever a voltage dip occurs, within some limits of time. The curve is completely configurable in order to meet any requirement of the grid code.



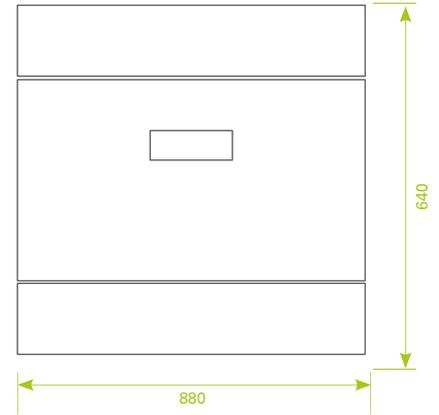
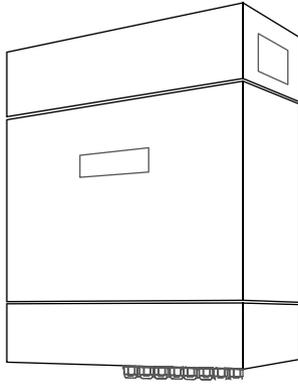
### POWER FACTOR FUNCTION OF ACTIVE POWER

It is the capability of the inverter to regulate in local logic and the power factor at the POI as a function of the active power P. The curve is completely configurable in order to meet any requirement of the grid code.



### OVER FREQUENCY P REDUCTION

It is the capability of the inverter to reduce the active power P for transient over-frequency of the grid and consequently to participate to Primary Frequency regulation at the POI. The curve is completely configurable in order to meet any requirement of the grid code.



## DC Input - PV Module

	R1015 TL	R1415 TL
DC power (kWp)	70 - 100	110 - 140
MPPT voltage range ( $V_{DC}$ )	850 - 1.320 V	850 - 1.320 V
Max input current ( $A_{DC}$ )	125	140
DC-voltage ripple (%)	<2%	<2%
Absolute max. Voltage ( $V_{DC}$ )	1.500 V	1.500 V
Number of MPPT	1	1
Number of input max in parallel	10 string	16 string
Reverse polarity protection	•	•
DC input connection	Fuse Holder or MC4	Fuse Holder or MC4
Overvoltage protection	SPD varistor device Class II (optical Class I+II)	SPD varistor device Class II (optical Class I+II)

## AC Output grid

Max Power @25°C/50°C (kW) *(Note 1)	80 / 70	120 / 110
Nominal Apparent Power $S_{max}$ @25°C/50°C (kVA)	80 / 70	120 / 110
Max current @25°C/50°C ( $A_{AC}$ )	85 / 75	128 / 115
Max unbalance current	< 2%	< 2%
Operating voltage range ( $V_{AC}$ )	550 ±10%	550 ±10%
Nr Phase	3-phase (L1-L2-L3-PE)	3-phase (L1-L2-L3-PE)
Frequency (Hz)	50/60 Hz	50/60 Hz
Distortion factor (THD) *(Note 2)	< 3%	< 3%
Power Factor *(Note 3)	from 0 to 1 inductive or capacitive	from 0 to 1 inductive or capacitive
AC input connection	magneto-thermic circuit breaker (MCCB)	magneto-thermic circuit breaker (MCCB)
Galvanic insulation	No (transformerless)	No (transformerless)

## General Data

Maximum efficiency	99 %	99 %
European efficiency	98.6 %	98.6 %
Night consumption (W)	< 10 W	< 10 W
Weight (kg)	67.8 kg	71,3 kg
Protection degree	IP65	IP65
Cooling	Air forced cooling fan speed controlled	Air forced cooling fan speed controlled
Dimensions (WxHxD mm)	880x640x380 mm	880x640x380 mm
Noise level (dBA)	< 70 dBA	< 70 dBA
Operating temperature (°C)	-10° C ÷ +55° C	-10° C ÷ +55° C
Storage temperature (°C)	-20° C ÷ +60° C	-20° C ÷ +60° C
Humidity Not condensing	0 ÷ 95%	0 ÷ 95%
Height above the sea (without derating) *(Note 4)	1.800 m	1.800 m
Air Flow	500 m³/h	600 m³/h
Max power dissipated in overload condition	1.400W - 1.203 Kcal/h	1.680W - 1.440 Kcal/h
Overvoltage category	II	II
Colour	RAL 9006	RAL 9006

Note 1: valid at PF.=1and Vac nominal

Note 2: THD is lower than 3% for inverter power greater than 25%.

Note 3: P-Q capability is semicircular.

Note 4: above 1800m derate the Maximum Operating Temperature of 0.4 °C per 100 m up to3000 m a.s.l.  
above 2000m derate the Absolute Maximum DC Voltage of 1.3 % per 100 m up to3000 m a.s.l.  
above 2000m derate the Maximum MPPT Voltage of 1.2 % per 100 m up to3000 m a.s.l.  
(contact Factory for details).



FIMER S.p.A.

Via J.F. Kennedy - 20871 Vimercate (MB) - Italy - Phone +39 039 98981 - Fax +39 039 6079334  
www.fimer.com | info@fimer.com | solar@fimer.com