



# Central inverter

## PVS800-57B

FIMER central inverters raise reliability, efficiency and ease of installation to new levels. The inverters are aimed at system integrators and end users who require high performance solar inverters for large photovoltaic (PV) power plants. The inverters are available up to 1732 kW nominal rating, with 2078 kW output power at lower temperatures.

**From 1645 to 1732 kW**

### World's leading inverter platform

The FIMER central inverters have been developed on the basis of decades of experience in the industry and proven technology platform. Unrivalled expertise from the world's market and technology leader in frequency converters is the hallmark of this solar inverter series.

Based on FIMER's highly successful platform, the inverters are the most efficient and cost-effective way to convert the direct current (DC) generated by solar modules into high-quality and CO<sub>2</sub>-free alternating current (AC) that can be fed into the power distribution network.

### Solar inverters from FIMER

FIMER central inverters are ideal for large PV power plants but are also suitable for large-sized power plants

installed in commercial or industrial buildings.

High efficiency, proven components, compact and modular design and a host of life cycle services ensures FIMER central inverters provide a rapid return on investment.

### Highlights

- High total performance
- Modular and compact product design
- Extensive DC and AC side protection
- Full grid support functionality
- Fast and easy installation
- Complete range of industrial-type data communication options, including remote monitoring
- Life cycle service and support through FIMER's extensive global service network



## Maximize yields without losing a watt

### Maximum energy and feed-in revenues

FIMER central inverters have a high total efficiency level. Optimized and accurate system control and a maximum power point tracking (MPPT) algorithm together with high efficiency power converter design ensure that maximum energy is delivered to the power distribution network from the PV modules. For end users this generates the highest possible revenues from the feed-in tariffs.

### Proven components

The inverters comprise proven components with a long track record of performance excellence in demanding applications and harsh environments. Equipped with extensive electrical and mechanical protection, the inverters are engineered to provide a long and reliable service life of at least 20 years.

### Compact and modular design

The inverters are designed for fast and easy installation. The industrial design and modular platform provides a wide range of options like remote monitoring, fieldbus connection and modular and flexible DC input cabinet. The integrated DC cabinet saves space and costs as the solar array junction boxes can be connected directly to the inverter DC cabinet fused busbars.

The inverters are customized to meet end user needs and are available with short delivery times.

### Effective connectivity to power distribution network

FIMER's transformerless central inverter series enables system integrators to design the PV power plant using optimum combination of different power rating inverters. Inverters are connected to the medium voltage (MV) power distribution network either centrally or in a distributed manner depending on the plant size and shape and network connection position

### Advanced grid support features

FIMER central inverter software includes all the latest grid support and monitoring features including active power limitation, low voltage ride through (LVRT) with current feed-in and reactive power control. Active and reactive power output can be limited by using an external source. Active power can also be limited automatically as a function of grid frequency.

All grid support functions are parameterized allowing easy adjusting for local utility requirements. FIMER central inverters are also able to support grid stability even at night by providing reactive power with the DC input disconnected.

## Technical data and types

Type designation	PVS800-57B-1645kW-C	PVS800-57B-1732kW-C
<b>Input (DC)</b>		
Maximum input power ( $P_{PV, max}$ ) <sup>1)</sup>	2468 kWp	2598 kWp
DC voltage range, mpp ( $U_{DC, mpp}$ )	550 to 850 V	580 to 850 V
Maximum DC voltage ( $U_{max(DC)}$ )	1000 V	1000 V
Maximum DC current ( $I_{max(DC)}$ )	3700 A	3700 A
Number of protected DC inputs	16 to 24	16 to 24
<b>Output (AC)</b>		
Nominal power ( $P_{N(AC)}$ ) <sup>2)</sup>	1645 kW	1732 kW
Maximum output power <sup>3)</sup>	1975 kW	2078 kW
Power at $\cos\phi = 0.95$ <sup>2)</sup>	1562 kW	1645 kW
Nominal AC current ( $I_{N(AC)}$ )	2500 A	2500 A
Nominal output voltage ( $U_{N(AC)}$ ) <sup>4)</sup>	380 V	400 V
Output frequency	50/60 Hz	50/60 Hz
Harmonic distortion, current <sup>5)</sup>	< 3%	< 3%
Distribution network type <sup>6)</sup>	TN and IT	TN and IT
<b>Efficiency</b>		
Maximum <sup>7)</sup>	98.5%	98.5%
Euro-eta <sup>7)</sup>	98.3%	98.4%
<b>Power consumption</b>		
Own consumption in operation	1800 W	1800 W
Standby operation consumption	60 W	60 W
External auxiliary voltage	400 V	400 V
<b>Dimensions and weight</b>		
Width/Height/Depth, mm (W/H/D)	4030/2150/720	4030/2150/720
Weight appr. <sup>8)</sup>	3000 kg	3000 kg

1) Recommended maximum input power

2) At 50 °C. See the user manual for details.

3) At 25 °C. See the user manual for details.

4) +/- 10%

5) At nominal power

6) Inverter side must be IT type

7) Without auxiliary power consumption at min  $U_{DC}$

8) For the smallest number of protected inputs. See the user manual for details.

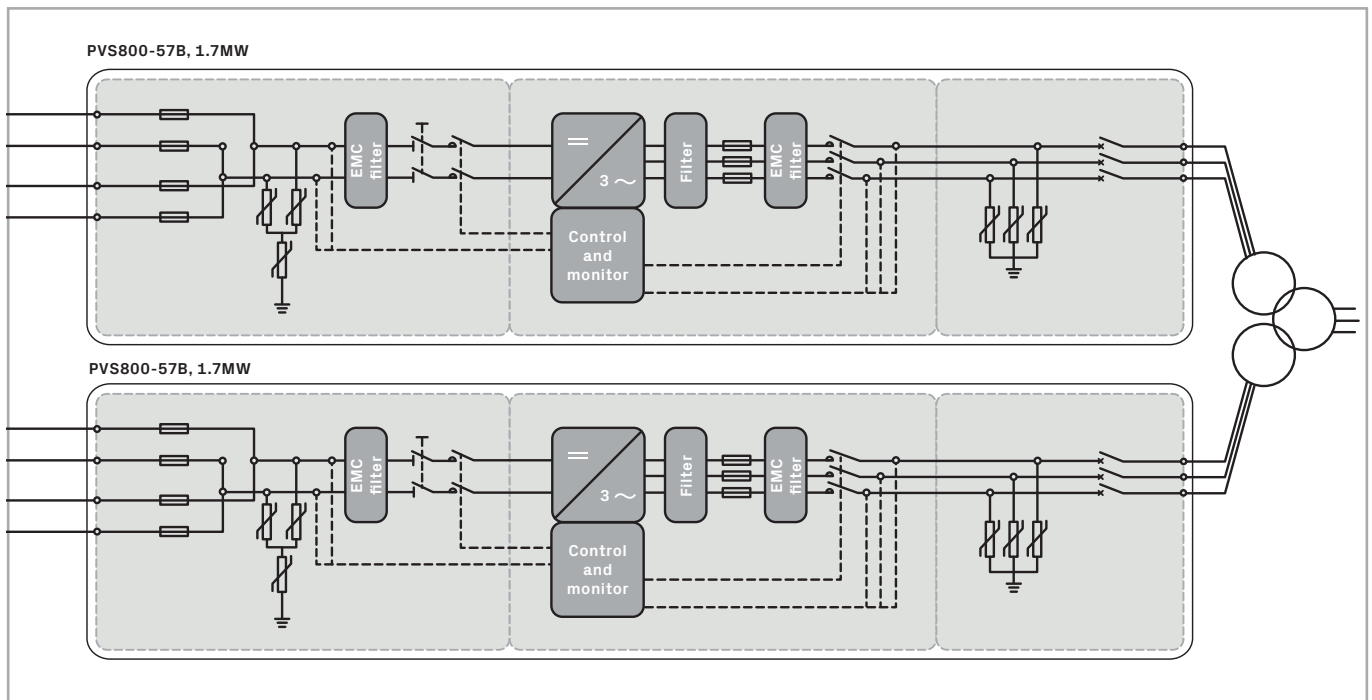
**Technical data and types**

Type designation	PVS800-57B-1645kW-C	PVS800-57B-1732kW-C
<b>Environmental limits</b>		
Degree of protection	IP41	IP41
Ambient temp. range (nom. ratings) <sup>9)</sup>	-20 to +50 °C	-20 to +50 °C
Maximum ambient temperature <sup>10)</sup>	+60 °C	+60 °C
Relative humidity, not condensing	15 to 95%	15 to 95%
Maximum altitude (above sea level) <sup>11)</sup>	3000 m	3000 m
Maximum noise level <sup>12)</sup>	< 75 dBA	< 75 dBA
Maximum air flow	10200 m <sup>3</sup> /h	10200 m <sup>3</sup> /h
<b>Protection</b>		
Ground fault monitoring	Yes	Yes
Grid monitoring	Yes	Yes
Anti-islanding	Yes	Yes
DC reverse polarity	Yes	Yes
AC and DC short circuit and over current	Yes	Yes
AC and DC over voltage and temperature	Yes	Yes
<b>User interface and communications</b>		
Local user interface		Local control panel
Analog inputs/outputs		Extendable as option
Digital inputs/relay outputs		Extendable as option
Fieldbus connectivity		Modbus, Profinet, Ethernet
<b>Product compliance</b>		
Safety and EMC		CE conformity according to LV and EMC directives
Certifications and approvals <sup>13)</sup>		CEA, CEI 0-16
Grid support and grid functions		Reactive power compensation <sup>14)</sup> , FRT, Anti-islanding

9) Frosting is not allowed. May need optional cabinet heating.  
 10) Power derating after 50 °C  
 11) Power derating above 1000 m

12) At five meters  
 13) More detailed information, please contact FIMER  
 14) Also during the night

**FIMER central inverter design and power network connection**



# Central inverter

## PVS800-58B from 1645 to 1732 kW



### High total performance

- High power density with small footprint
- Low auxiliary power consumption
- Efficient maximum power point tracking
- Long and reliable service life of at least 20 years

### Full grid support functionality

- Reactive power compensation also during the night time
- Active power limitation
- Low voltage ride through with current feed in

### Grid code compatibility

- Wide country-specific grid code compliance
- Adjustability to various local utility requirements

### Life cycle service and support

- FIMER's extensive global service network
- Extended warranties
- Service contracts
- Technical support throughout the service life

### Modular industrial design

- Compact and easy-to-maintain product design
- Fast and easy installation
- Integrated and flexible DC input cabinet

### Extensive protections

- DC and AC side protection with built-in fuses, surge protection and filters
- Increased reliability and safety with DC and AC side contactors
- Heavy-duty surge protection

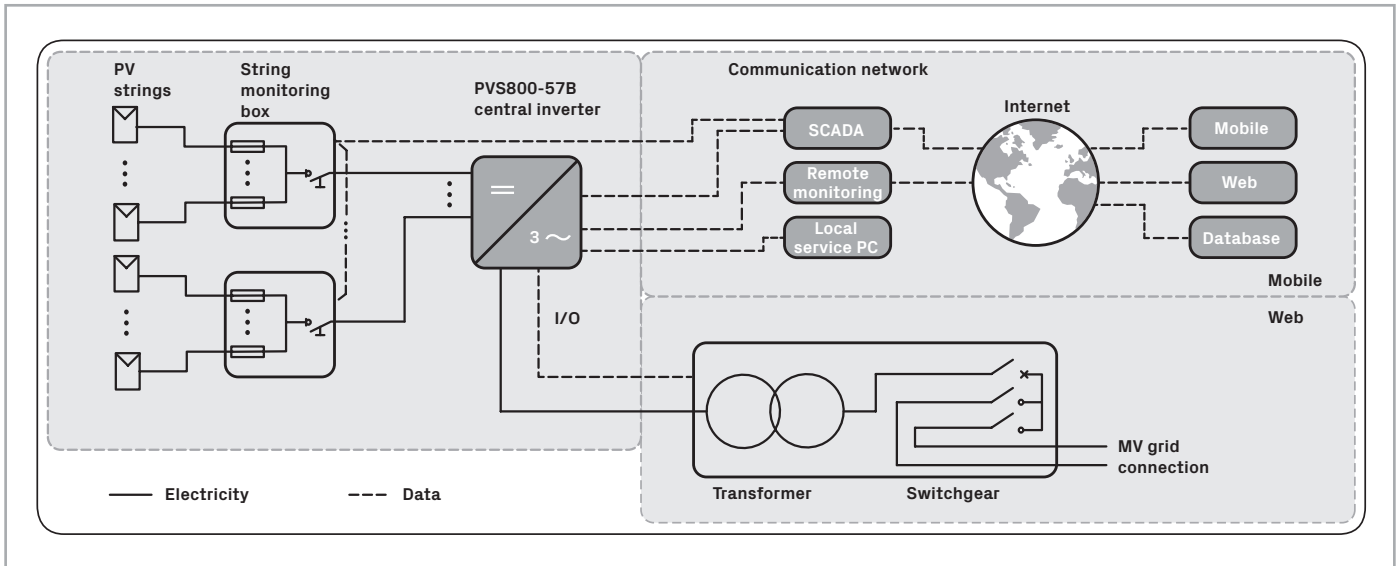
### Proven technology

- Based on FIMER's market-leading technology platform used in frequency converters

### Wide communication options

- Complete range of industrial data communication options
- Ethernet/Internet Protocol
- Remote monitoring

## Data communication principle for FIMER central inverter



### Options

- Integrated and flexible DC input extension cabinets
- Cabinet heating
- I/O extensions
- DC grounding (negative and positive)
- Fieldbus and Ethernet connections
- Current measurement to each DC input
- Warranty extensions
- Solar inverter care contracts

### Accessories

- Solar array junction boxes with string monitoring
- Remote monitoring solutions

### Support and service

FIMER supports its customers with a dedicated global service network and provides a complete range of life cycle services from installation and commissioning to preventative maintenance, spare parts, repairs and recycling.



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

[fimer.com](http://fimer.com)

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