FIMER



Monitoring and communications VSN700 Data Logger

This high-performance VSN700 data management system allows solar customer to connect their commercial, industrial and utility scale photovoltaic systems with the Aurora Vision® cloud for enabling condition monitoring and O&M remote cloud services in a very cost effective manner.

This SunSpec compliant datalogger records data and events from inverters, energy meters, weather stations, and other supported photovoltaic plant devices, and acts as an Internet gateway to send the data securely and reliably to the Aurora Vision®.

VSN700-05

The VSN700-05 Data Logger is a cost-optimized external logger enabling remote monitoring via Aurora Vision cloud products of solar plant where FIMER's inverters not already featuring an embedded data logger are installed.

The VSN700-05 Data Logger is easy toinstall and capable to get information from FIMER's inverters as well as many other supported device (like environmental sensors and meter) connected to its two RS-485 ports or Ethernet.

Fully integrated with Aurora Vision cloud, the VSN700-05 allows residential, commercial and industrial customers to enable the condition monitoring of their FIMER solar plant, so as to maximize energy generation and to optimize self-consumption in a very easy and intuitive manner.

The VSN700-05 also provides a set of advanced functionalities making it the ideal tool to get an utility scale plant to be easily integrated with a third party monitoring and control platform.

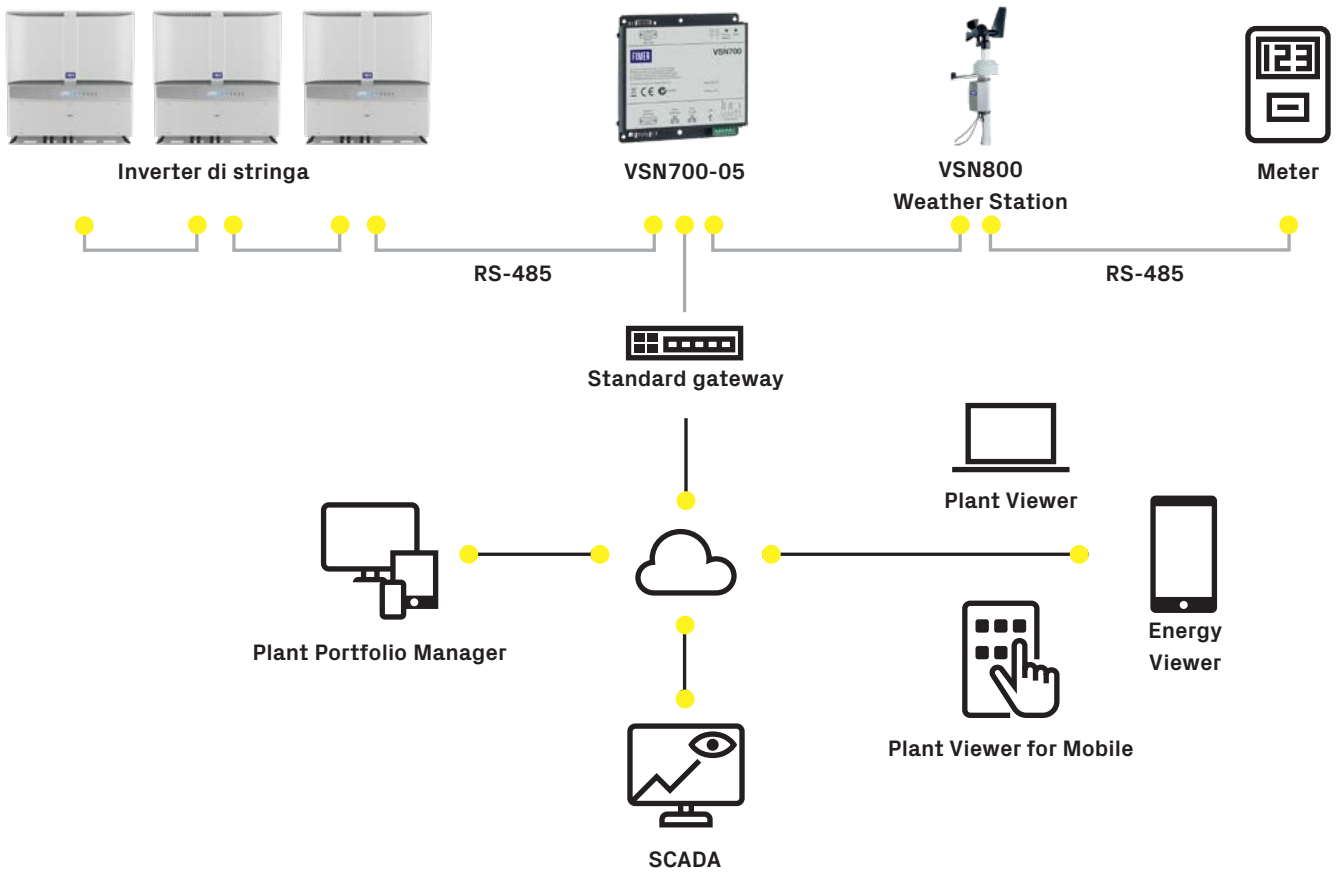
Basic functionalities:

- Data management system with serial and Ethernet ports for data and event logging
- Quick installation and fast plug and play commissioning with device discovery mechanism
- Network Provisioning with dynamic IP addressing (DHCP client and server)
- Reliable and secure transmission of operational data to Aurora Vision® cloud

Advanced functionalities:

- No software limitation on number of devices logged (up to 64 modbus device by logger)
- Modbus TCP server using SunSpec compliant Modbus maps for easy SCADA system integration, data collection, and inverter command execution
- Support for most FIMER inverters as well as a wide list of thrid party component like meters, smart combiners and weather stations

Large scale application



Technical data and types

Type code	VSN700 Data Logger
Communication interfaces	
Serial port interface	(2) RS-485 + (2) RS-232
Maximum devices per serial port	Physical limitation of 32 (reduced by poll rate, inverter data set size and logger type)
Fieldbus cable	RS-485 Shielded Twisted Pair. Recommend Belden # 1120A cable or # 3106A for 3 conductors
Ethernet port 0	Firewall protected Ethernet WAN port for Internet connection
Ethernet port 1	Local LAN with static IP address
Ethernet connections	RJ-45 Ethernet 10/100 base-T (LAN/WAN)
Communication protocols	
Plant fieldbus protocols	Aurora Protocol, Modbus RTU (SunSpec)
LAN/WAN protocols	HTTP, DHCP, SSL, SSH, XML
Data logging specifications	
Data sampling rate	High frequency data sampling (less than 1 minute average)
Local storage	Log data for 30 days based on 15-minute intervals (Days logged may be reduced by intervals shorter than 7 minutes)
Upgradeability	Field upgradable over the Internet or locally via USB memory stick
Power supply	
AC power supply input	100 - 240 VAC
DC power supply output	12 VDC, 1 A
Environmental parameters	
Ambient temperature range	Logger only -40°F to 185°F (-40°C to 85°C); power supply 32°F -104°F (0°C-40°C)
Environmental protection	IP20
Relative humidity	< 85% Non-condensing
Mechanical parameters (per unit)	
Dimensions (H x W x D)	133 mm x 132 mm x 31 mm (5,2" x 5.1" x 1,2")
Weight	0.91 kg (2 lbs)
Mounting system	Screws through flanges
Warranty	
Standard warranty	Two years
Accessories	
VSN-MGR-DIN	Din rail mount kit to mount logger on a din rail
VSN800-12	Weather Station with sensors: ambient temperature, panel temperature, global irradiance
VSN800-14	Weather Station with sensors: ambient temperature, panel temperature, global irradiance, plane of array irradiance, wind speed and direction
Compliance	
Emissions	FCC Part 15 Class B, CISPR 22, EN 55022 conducted and radiated emission, EN55024

VSN700-05 specifications

Feature	VSN700-05
Logging real-time power values	1, 3, 5, 15 minute configurable intervals
Modbus/TCP server	Yes
Inverter control commands	Yes
Devices supported	All FIMER inverters [1)] Up to 64 Modbus (RTU) supported devices (from both FIMER and 3° party)

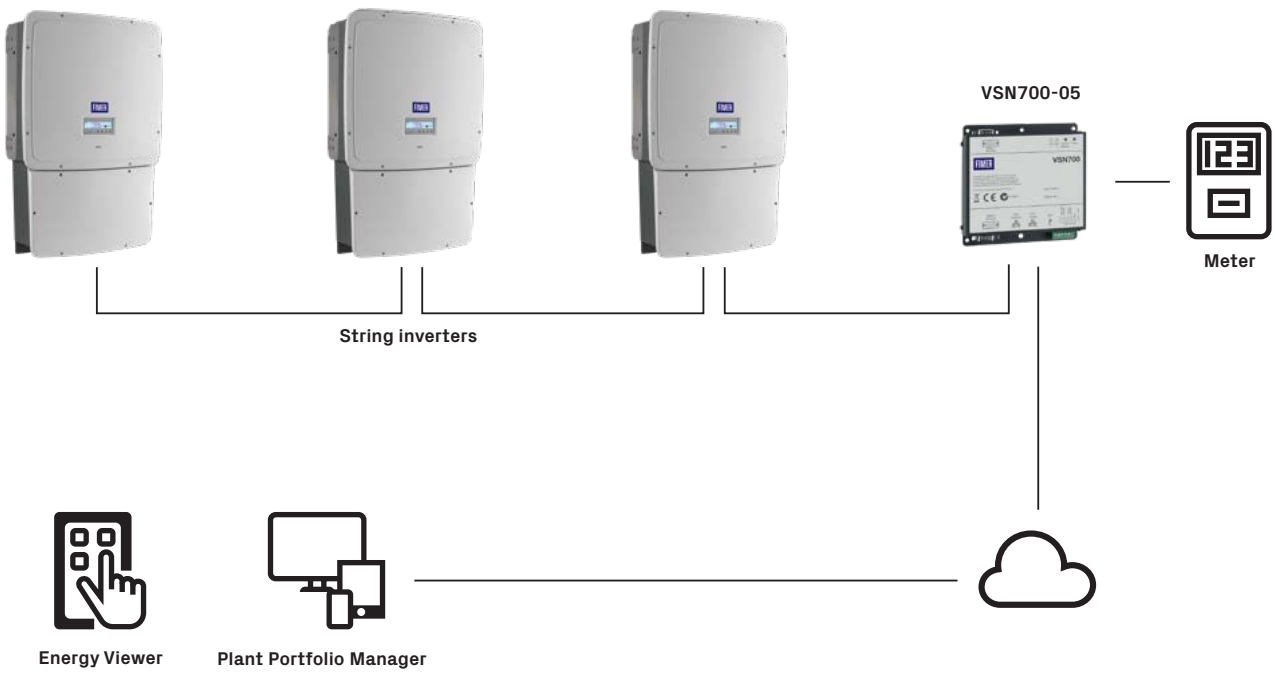
1) Please refer to the document "Accessories compatibility matrix" available at www.fimer.com for information on the compatible models and/or devices.

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

VSN700 Data Logger Accessories

VSN-MGR-DIN	Din rail kit to mount logger on a din rail	
VSN800-12	Weather station with sensors: ambient, panel, global irradiance	
VSN800-14	Weather station with sensors: ambient, panel, global irradiance, plane of array irradiance, wind speed and direction	

C&I application with TRIO



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