

# IMPIANTO AGRIVOLTAICO EG ORTENSIA SRL E OPERE CONNESSE

## POTENZA IMPIANTO 24,94 MW<sub>p</sub> - COMUNE DI VITERBO (VT)

### Proponente

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### Titolo Elaborato

#### SCHEDA POWER STATION

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DEFINITIVO	PD_ST03	IT-2021-0243_PD_ST03.00-Scheda power station.docx	12/09/2022

### Revisioni

REV.	DATA	DESCRIZIONE	ESEGUITO	VERIFICATO	APPROVATO
0	12/09/22	EMISSIONE PER PERMITTING	FTE	FTE	FTE



COMUNE DI VITERBO (VT)  
REGIONE LAZIO



# SCHEDA POWER STATION



**MEDIUM VOLTAGE  
POWER STATION  
CUSTOMIZED UP  
TO 7.65 MVA,  
WITH ALL THE  
COMPONENTS  
SUPPLIED ON TOP  
OF THE SAME  
SKID PLATFORM**

## From 2500 up to 7650 kVA

This medium-voltage solution integrates all the necessary elements to develop a large-scale solar PV plant.

### **Maximize your investment with a minimal effort**

Ingeteam's FSK power station is a compact, customizable and flexible solution that can be configured to suit each customer's requirements. It is supplied together with up to two photovoltaic inverters. All the equipment is suitable for outdoor installation, so there is no need of any kind of housing.

### **Higher adaptability and power density**

This power station is now more versatile, as it presents the MV transformer integrated into a steel platform together with the LV and MV components, including the PV inverters. Moreover, it features one of the market's greatest power densities.

### **Plug & Play technology**

This MV solution integrates power conversion equipment (up to 7.65 MVA), liquid-filled hermetically sealed transformer up to 38 kV and

provision for low voltage equipment. The MV Skid is delivered pre-assembled for a fast on-site connection with up to two PV inverters from Ingeteam's INGECON® SUN 3Power C Series inverter family.

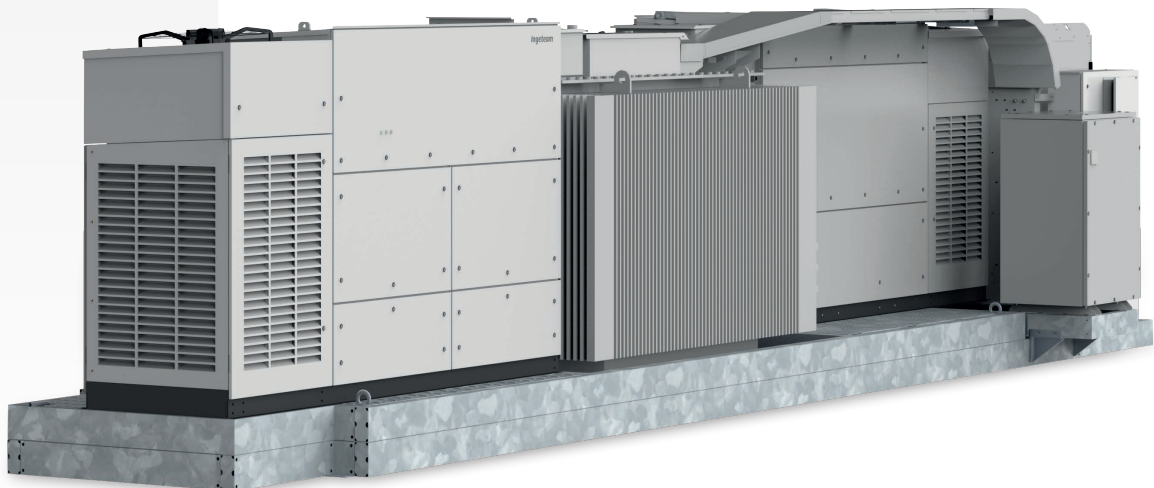
### **Complete accessibility**

Thanks to the lack of housing, the inverters, the switchgear and the transformer can have immediate access. Furthermore, the design of the 3Power C Series central inverters has been conceived to facilitate maintenance and repair works.

### **Maximum protection**

Ingeteam's 3Power C Series central inverters feature an IP65 protection class for their power stacks thanks to a combined water and air cooling system that optimises the operating temperature of the power electronics.

Apart from that, they feature the main electrical protections and they deploy grid support functionalities, such as low voltage ride-through capability, reactive power deliverance and active power injection control.



CONSTRUCTION

- Steel base frame.
- Suitable for slab or piers mounting.
- Compact design, minimising freight costs.
- Minimum installation at project site.

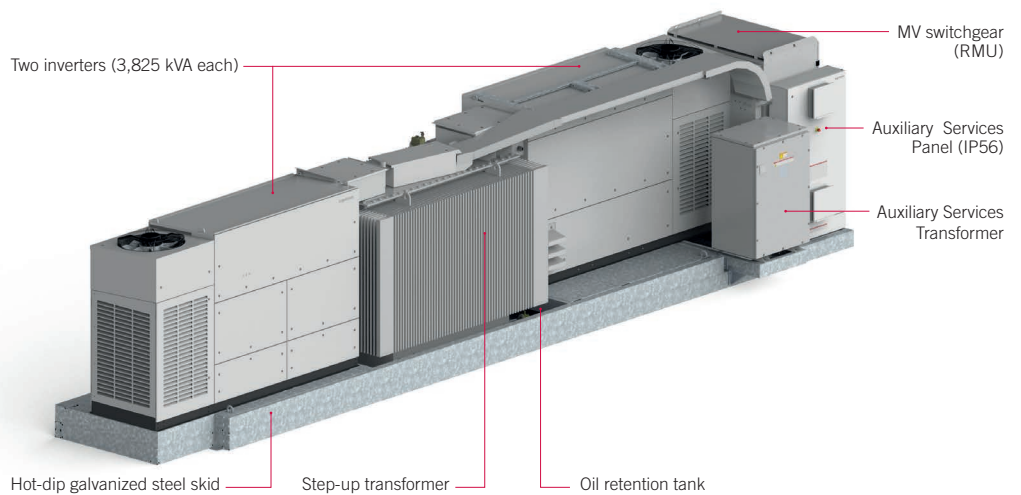
OPTIONAL ACCESSORIES

- Auxiliary services transformer (up to 60 kVA, Dyn11).
- MV Surge arresters.
- Auxiliary services panel (IP56)
- Power plant commissioning.
- High-speed Ethernet / fibre optic communication infrastructure for Plug & Play connection to the Power Plant Controller and/or SCADA systems.
- INGECON® SUN StringBox with 16 / 24 / 32 input channels. Intelligent or passive string combiner box.
- Energy meter for auxiliary services and/or energy production.
- Insulation monitoring relay for continuous monitoring of IT systems insulation.
- Reactive power regulation when there is no PV power available.
- Ground connection of the PV array.

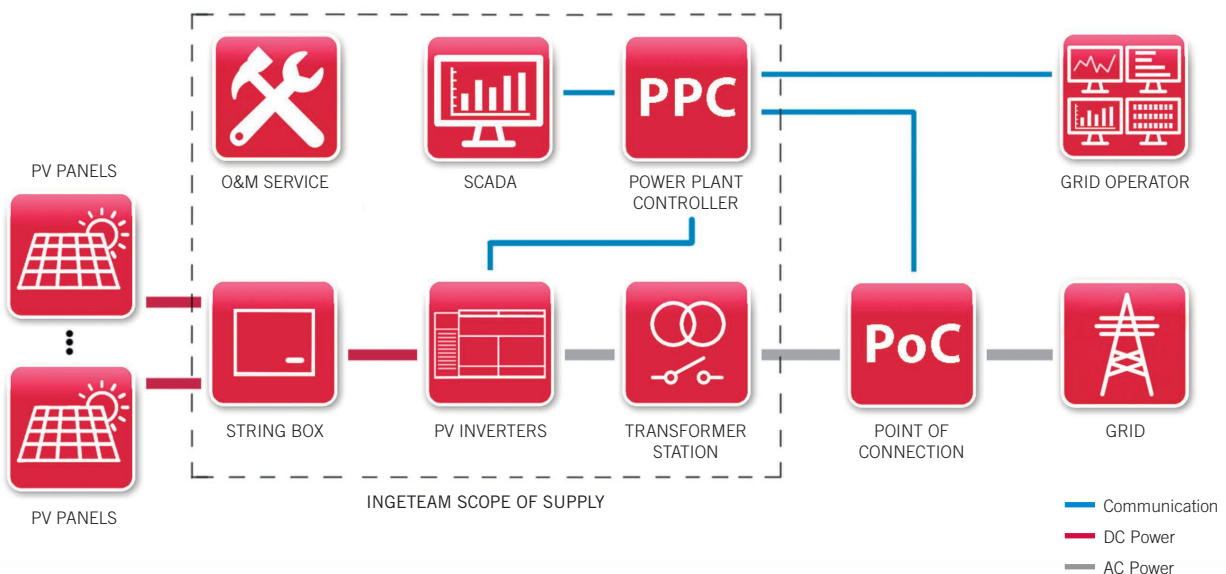
STANDARD EQUIPMENT

- Up to two inverters with an output power of 7.65 MVA.
- Liquid-filled hermetically-sealed transformer up to 36 kV.
- 1L1A MV switchgear (2L1A optional).
- Oil-retention tank.
- Metal frame for installation of LV equipment.

COMPONENTS



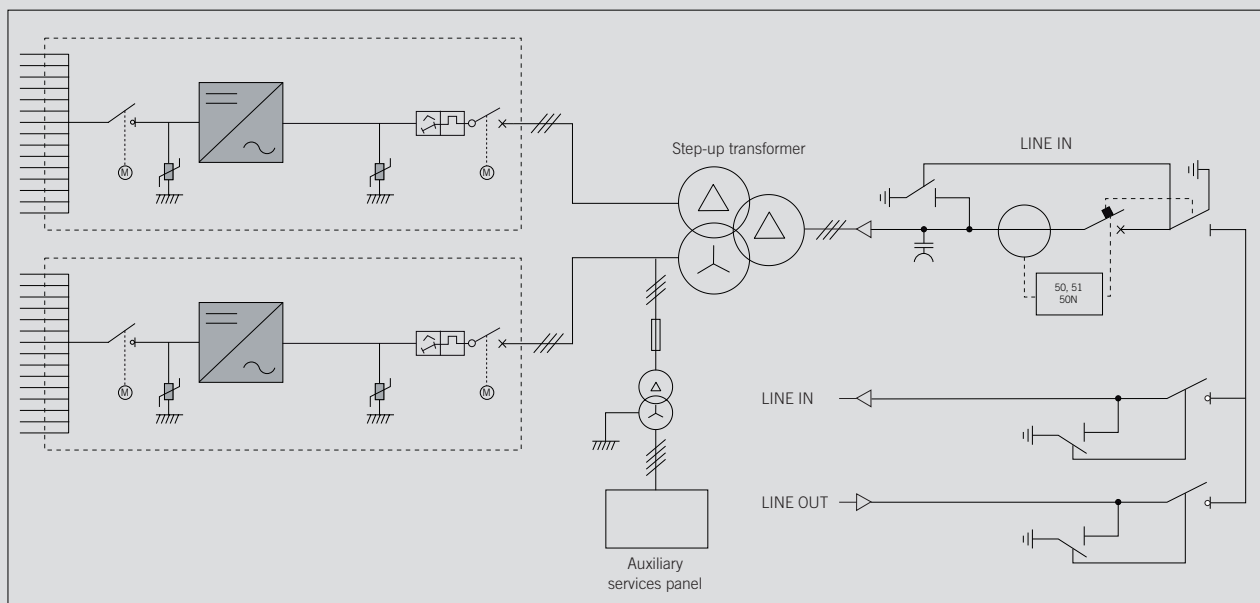
PLANT CONFIGURATION



	3825 FSK C Series	7650 FSK C Series
<b>General information</b>		
Number of inverters	1	2
Max. power. @35 °C / 95 °F <sup>(1)</sup>	3,824 kVA	7,648 kVA
Operating temperature range	from -5 °C to +50 °C	
Relative humidity (non condensing)	0 - 100%	
Maximum altitude	3,000 masl (power derating starting at 1,000 masl)	
<b>LV/MV Transformer</b>		
Medium voltage	From 20 kV up to 36 kV, 50-60 Hz	
Cooling system	ONAN (KNAN optional)	
Minimum PEI (Peak Efficiency Index) <sup>(2)</sup>	99,50%	
Protection degree	IP54	
<b>MV Switchgear (RMU)</b>		
Medium voltage	24 kV / 36 kV / 40.5 kV	
Rated current	630 A	
Cooling system	Natural air ventilation	
Protection degree	IP54 (IP55 optionally)	
<b>Equipment</b>		
Auxiliary services panel	Standard version (optional monitoring system)	
Step-up transformer	Oil-immersed hermetically sealed transformer	
MV Switchgear	1L1A cells (2L1A optional)	
<b>Mechanical information</b>		
Structure type	Hot dip galvanized steel skid	
Dimensions Full Skid (W x D x H)	11,390 x 2,100 x 2,460 mm	11,390 x 2,100 x 2,460 mm
Full Skid	16 T	25 T
Standards	IEC 62271-212, IEC 62271-200, IEC 60076, IEC 61439-1	

**Notes:** <sup>(1)</sup> Maximum power calculated with the inverter model INGECON® SUN 3825TL C690. For other inverter models, please contact Ingeteam's Solar sales department <sup>(2)</sup> For European installations, ECO design according to the EU 548/2014 and EU 2019/1783 standards.

**Configuration with two C Series solar inverters**



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