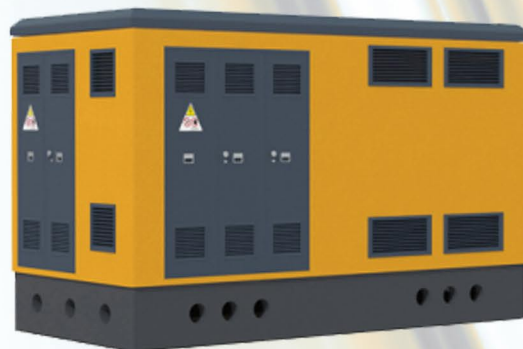




SIRIO CENTRAL STATION (SCS)

HV-MT Central Inverter

- Complete, safe and high-performing “Plug&Play” solution
- MV transformer and cabin in concrete for outdoor installation
- Without LV transformer: higher efficiency thanks to the direct connection to the MV distribution network
- AC transformer station with measurement
- Air-conditioning system is not required



General Specifications

OPTIONS

- MT distribution system configurable for installation of large solar parks
- MT transformers for voltages other than 20Kv

How to increase the overall efficiency of a conversion system and cut installation costs. This objective can be achieved by using a Sirio Central Station (SCS) system with Sirio Central HV-MT inverters connected to a common medium voltage transformer. The devices are installed in concrete stations to prolong their useful life, improve thermal insulation and to provide resistance to atmospheric agents and the most unfavourable environmental conditions.

An integral system for large plants

Sirio Central Station is available in versions ranging from 200kW to 1MW offering a complete, safe and highperforming “Plug&Play” solution. The modular system, which uses inverters housed in separate stations, each with its own MV/LV transformer, enables the inverters to have a barycentric position within the photovoltaic field to optimize installation. The logic of having separate stations cuts production losses caused by failures and during ordinary and extraordinary maintenance operations. The stations are built in vibrated reinforced concrete, in accordance with the CEI.0-16 standards currently in force, with the Guide for Connections to the Enel Distribuzione Power Grid Ed. 1 December 2008 and with the Enel DG 2092 Construction Specifications Ed. 1 December 2008. The structures are particularly resistant to atmospheric agents since they are treated with special plastic and waterproofing coatings which protect against the formation of cracks and seepages. The external walls are coated with a quartz/rubber paint with a textured finish to provide optimal resistance to atmospheric agents, even in marine, mountain, industrial or very polluted environments. The normal operating conditions of the installed equipment are guaranteed by a natural ventilation system using air vents thus avoiding recourse to air conditioning systems. The whole structure is assembled entirely with electromechanical equipment in the factory in accordance with the CEI EN 62271-202 standard, and electrical equipment where applicable, ready to be placed on site for subsequent start-up.

Optional solutions

Tescom can also offer pre-assembled solutions for:

- User stations with interface and general device protection in compliance with CEI 0-16 requirements;
- Public Utility cabins implemented in compliance with ENEL unification standards DG 2092 Rev.2 with the measurement unit where the electricity distribution utility takes its readings;
- Intermediate configurations from 200kW are available in addition to versions present in the catalogue;
- In-shelter execution.

Reliable Power



Technical Specifications

| MODELS | | SCS 500 |
|---|--|---|
| Rated power alternating current | | 500kW |
| INPUT | | |
| Maximum direct voltage in an open circuit | | 880Vcc |
| MPPT Full Rating Range | | 450÷760Vcc |
| Maximum input current | | 2x590Acc |
| Input number | | 2 |
| MPPT number | | 2 |
| D.C. connectors | | Bus bar |
| OUTPUT | | |
| Operating voltage | | 20kV |
| Frequency interval | | 47,5÷51,5Hz |
| Settable frequency interval | | 47÷53Hz |
| Nominal current | | 14,45Aca |
| Current Harmonic Distorsion (THDi) | | <3% |
| Power factor | | from 0,9 ind. to 0,9 cap. |
| SYSTEM | | |
| European efficiency | 97,3% | (data include the auxiliary inverters and BT/MT transformers) |
| European efficiency | 96,7% | (data include the auxiliary inverters and BT/MT transformers) |
| Operating temperature | | -20°C+40°C (without derating) |
| Humidity | | 0÷95% non-condensing |
| STATION FEATURES | | |
| Materials | Block construction with reinforced concrete, class Rck 250 Kg/sq. cm with superfluidifying and waterproofing additives | |
| Structure | Comprising electro-soldered metal mesh reinforcement and corrugated iron, with improved adherence, both in Feb44k | |
| Walls | Waterproof plastic coating painted with quartz/rubber paint with a textured finish | |
| Cooling | Natural ventilation through metal ducting | |
| Dimensions (WxDxH) | 5440x2500x2550mm | |
| Weight | 22000Kg | |
| Lighting | 2x18W fluorescent lamps, of which 1x18W is for emergency lighting, for each prefabricated structure | |
| Standard features | 2 ENEL-approved meters, GSM remote reading system, extinguisher | |
| Conformance to specifications | CEI 0-16 ed.2 July 2008; ENEL Guide for connection to ENEL distribution opwer grid ed. December 2008 | |
| TRANSFORMER FEATURES | | |
| Construction | Resin or Oil bath sea | |
| Primary nominal power | 500kVA | |
| secondary nominal power | 2x250kVA | |
| In/Out voltage | 2x(270V)/20000V | |

Reliable Power