

Higeco More

SENERGY - HIGECO MORE PPC

ONE SYSTEM TO RULE THEM ALL

MONITORING RENEWABLES

In response to the challenges posed by the different Grid Codes and the different inverter manufacturers, Higeco More offers Senergy. A powerful and flexible Power Plant Controller which allows the monitoring and remote control of power plants, making them compliant with several international Grid Codes: European regulation 2016/631, Italian CEI 0-16 2022-03 and Terna Grid Code annex A68, Romanian Ordin 208-18, UK Ena Ggg recommendation, South African Grid Code 2.9, Uzbekistan Regulation for RES, Panama Anexo B Código de Red, Uganda UETCL Grid Code, and many more.

Senergy allows both to monitor the Point of Delivery and the individual generators, and to regulate the power plant, both in autonomous mode (frequency response, response to voltage variations ...) or via external commands (control of P, Q, PF, V droop, ramp ...).

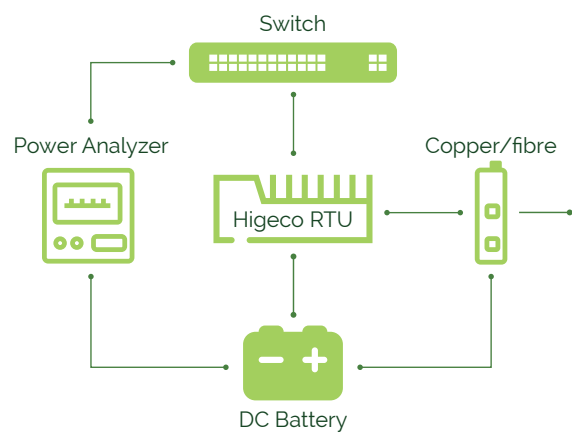
The connection with the DSO / TSO, and any other authorized entities, is simple thanks to the various communication protocols supported: IEC61850, IEC60870-101/104, DNP3, Modbus TCP, OPC UA.

Senergy, like all Higeco More products, is equipped with a web based interface that can be accessed securely (HTTPS) locally and remotely.

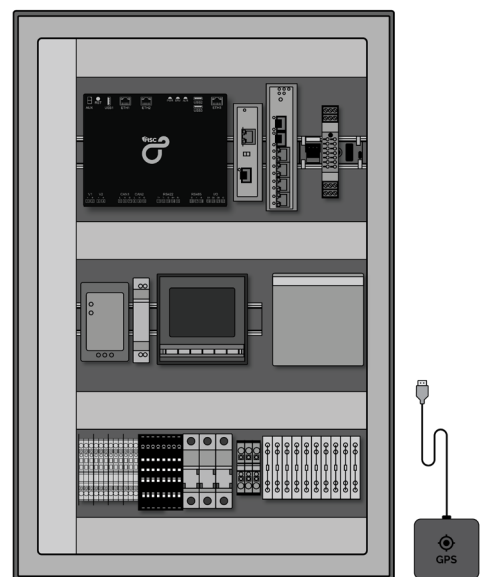
Cyber security is guaranteed thanks to the IsaSecure SDLA IEC 62443-4-1 and CSA IEC 62443-4-2 certifications, and the use of IEC 62351 compliant safe transport profiles.

Senergy was born from the direct and long experience that Higeco More has acquired thanks to the supply of PPC (Power Plant Controller) systems for the regulation of frequency (active power) and voltage (reactive power) of large photovoltaic power plants in Italy and especially abroad.

PPC ARCHITECTURE



Senergy





MAIN ADVANTAGES

FLEXIBILITY	Easy to customize control policy
USER FRIENDLY	Web based graphic user interface
ALL-IN-ONE	One panel including all necessary products
TRACK RECORDS	A product with 5 years of on-field experience and compliant to 8 different grid codes
TURN KEY	Complete service, from design to field tests

TECHNICAL DATA

ENCLOSURE	
Mounting	Wall
Material	Sheet Metal
WidthxHeightxDepth (mm)	406x606x250

AC VERSION Q01-HSC-4T2F-10DI-PA	
AC Power Supply Voltage	230Vac (207Vac - 252Vac)
Power Supply Frequency	50/60Hz
Backup battery	12Ah 4h@25W
Average consumption	0.25A @230Vac
Maximum consumption	10A
IP protection AC version	IP 50

DC VERSION Q01-HSC-4T2F-10DI-PA-DC	
DC Power Supply Voltage	110 Vdc (67.2 - 154 Vdc)
Average consumption	0.52A @110Vdc
Maximum consumption	1.75A
IP protection DC version	IP 54

ENVIRONMENTAL CONDITIONS	
Operative Temperature range	0°C +40°C
Relative humidity	10% to 95%

COMMUNICATION	
CCI - Ethernet (No switch/bridge)	2xEth 1000Base-T 1xEth 100Base-T
CCI - Serial ports	2xRS485 2xCanbus (opzionale) 3xUsb
CCI - Digital Ports	13xDI
Ethernet Medium Converter	100/1000Base-X SFP a 100/1000Base-T
Ethernet Switch	2x100/1000Base-T 2x100/1000Base-X SFP
Communication protocols	IEC 61850, IEC 60870-101, IEC 60870-104, Modbus CanOpen, Opc UA, DNP3

AMPEROMETRIC AND VOLTAMMETRIC INPUTS	
Maximum Voltage	400V TV terminals
Maximum Current	5A TA terminals
Isolation	2.5kV Power Analyzer inputs

FEATURES	
Power Analyzer	Control EMA-90-N Classe 0.2S, 1-5A, 30-400VIn, 24Vdc, 96x96, 200ms, data refresh, door mounting
Visualization User Interface	Web Based
Configuration User Interface	USB
CCI - Monitoring functions	MCI Software License
CCI - Control functions	CCI Software License
PPC - Control functions	PPC Software License
Data Export	IEC 61850 toward DSO, Modbus, DNP3, IEC 60870-104 toward third party systems
GPS receiver for time synchronization	GPS/GLONASS 32dB, IP66, 5m cable, outdoor -40°C - +85°C

CERTIFICATIONS	
Conformity CEI 0-16	Annex O 2022-03 Annex T 2022-03
PMD Conformity	CEI/EN 61557-12
Cyber Security	IsaSecure SDLA for IEC 62443-4-1 IsaSecure CSA for IEC 62443-4-2
Cryptographic component IEC 61850	FIPS 140-2 Livello 3 Test Certificate from UCA User Group
Secure Transport profile IEC 62351-3	Test Certificate IEC 62351-100-3