IMPIANTO DI RETE PER LA CONNESSIONE A 15 KV DELL'IMPIANTO FOTOVOLTAICO

UBICATO NEL COMUNE DI ALESSANDRIA (AL)
STRADA BOLLA, FRAZ. SPINETTA MARENGO

Procedura autorizzativa (Decreto Regionale) N°_____del_____

PROGETTO DEFINITIVO

DOCUMENTAZIONE GENERALE

SISTEMI DI MISURA - GUARASCA

IDENTIFICAZIONE ELABORATO

Livello prog.	Codice rintracciabilità	Tipo docum.	N°Elaborato	N°Foglio	Tot.Fogli	Nome file	Scala	Data
PD	271790739	01	62	-	-	-	-	11/04/2022

Revisione

Revisione	Descrizione	Redatto	Controllato	Approvato	Data
00	Prima emissione	D.Sacchi	A.Fata/M.Gallina	V.Bretti	11/04/2022

Progettista: GOLDER | WSP

Vito Bretti
12.04.2022
15:44:27
GMT+01:00

Dott. Ing. VITO BRETTI ORDINE INGEGNERI ROMA n. A 23403 settore a-b-c

GESTORE RETE ELETTRICA

Firma:

_____

Proponente: ENEL GREEN POWER ITALIA S.R.L.

enel Green Power

Firma:

_____

TITLE: **Sistemi di misura - Guarasca**

AVAILABLE LANGUAGE: ***IT***

SISTEMI DI MISURA - GUARASCA
"Spinetta Marengo FV"
Alessandria (AL)

File: GRE.EEC.R.27.IT.P.13131.00.062.01_Sistemi di misura - Guarasca

REV.	DATE	DESCRIPTION	PREPARED	VERIFIED	APPROVED
01	11/04/2022	*Rev.01 – Aggiornamento STMG*	D.Sacchi	A.Fata M. Gallina	V.Bretti
00	17/06/2021	*EMISSIONE DEFINITIVA*	C.Parrello	A. Fata	V. Bretti

GRE VALIDATION

Name (EGP)	Discipline EGP	PE EGP
COLLABORATORS	VERIFIED BY	VALIDATE BY

PROJECT / PLANT	EGP CODE																		
	GROUP	FUNCION	TYPE	ISSUER		COUNTRY		TEC	PLANT					SYSTEM		PROGRESSIVE			REVISION
Spinetta Marengo FV (13131)	GRE	EEC	R	2	7	I	T	P	1	3	1	3	1	0	0	0	6	2	0 1

CLASSIFICATION	For Information or For Validation	UTILIZATION SCOPE	Basic Design,Detailed Design,Issue for Construction, etc.

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ISKRAEMECO
Metering is our Business

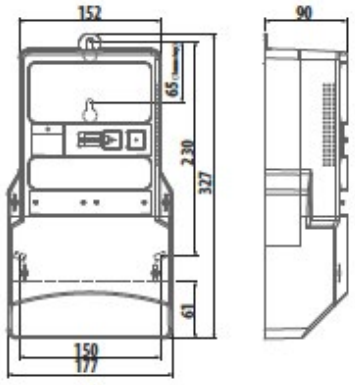
ICG
MT860
High precision modular meter

- Active, Reactive and Apparent Energy
- 4 Quadrant measurement
- Accuracy class
- Multiple connection types
- Transformer connection
- Power quality according to EN 50160
- Maximum demand
- Load profile
- Load control
- Event log
- Real-time clock
- Multi-rate registration
- IEC 62056 - 21 compliance
- Real time SCADA, Modbus communications protocol
- Communication
- RS232 interface, RS485 interface
- CS (20 mA current loop) interface, IR (optical port) interface
- Photovoltaic ready

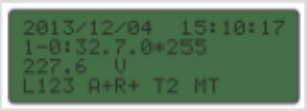
Proven technology, highest precision and communication modularity make the **MT860** the best solution for production and transmission applications. This multi-functional device meets modern market demands with extended functionalities:

- »No power reading« option via optical port
- Anti-tampering features
- Voltage cut, sag and swell detection
- Power quality monitoring
- Photovoltaic friendly design
- Recyclable casing material
- Exchangeable communication modules
- Exchangeable input/output modules

Meter dimensions



ICG MT860 High precision modular meter

		MT860S-T1 CT connected	MT860S-T1 CT & VT connected
Type overview			
Network	High voltage		•
	Medium voltage	•	•
	Low voltage	•	•
Connection type	3P4W	•	•
	3P3W	•	•
Communication type	on board	Optical probe + no power reading, RS-485	
	modules	CS – RS485, RS485-RS485, RS232-RS485, MODBUS TCP/IP & RTU, Ethernet – RS485, GSM/GPRS-RS485	
Outputs – on board		External power supply, Two impulse outputs, RS485	
Input – output options		4 OPTOMOS outputs + 5A bistable relay + 1 input, 5 OPTOMOS outputs + 1 input, 8 OPTOMOS outputs + 4 inputs	
Technical specifications			
Nominal voltage Un		3 x 57.7/100 V ... 3 x 240/415 V	3 x 57.7/100 V ... 3 x 240/415 V
Voltage range		0.8 – 1.15 Un	
Reference frequency		50 Hz ±2 % or 60 Hz ±2 %	
Current	Nominal current In	1 A, 2 A, 5 A, 5/1 A	
	Base current Ib	–	
	Maximal current Imax	6 A, 10 A	
Accuracy class	Active energy	Class 0.2S (IEC 62053 - 22)	
	Reactive energy	Class 2, 3 (IEC 62053-23), calibrated up to 0.5%	
	Apparent energy	According to the IEC 62053 - 22 standard	
Real-time clock	Accuracy	Crystal: < 5 ppm = ≤ ± 3 min./year (T = +25 °C)	
	Back-up power supply	LI battery : 10 years	
External power supply	Value	100 – 240 V AC/DC	
	Tolerance	0.8 – 1.15 Un	
	Frequency (only for AC)	50 Hz or 60 Hz	
Temperature ranges (IEC 62052 - 11)	Operation	-40 °C ... +70 °C	
	Storage	-40 °C ... +80 °C	
Ingress protection IEC 60529		IP 53	
Liquid Crystal Display			
Basic functionality			
Measurement		Active (import/export) and Reactive energy (import/export), 4Q Reactive, Apparent energy & demand, Phase and three phase energy/demand measurements, Current average, maximum and cumulative demand measurement, Maximum demand can be calculated for all energies measured as tariff rated or cumulative	
Tariff functions		Complex time-of-use (TOU), Tariff control via RTC or external inputs	
Load profiles		Two independent Load profiles, Programmable and independent Load profiles period, Event log	
Communication		Independent communication channels, MODBUS RTU and MODBUS TCP/IP	
Power quality		Measurement of RMS phase current, RMS phase voltage, Power factor, Network frequency, Phase angles, Voltage interruptions, Short power outages	
Specific			
Backlit LCD display, Detection of opening main and terminal cover, Secured communication channels, Network anomalies detection, Communication modules, Input/output modules			
Specific			
Enhanced Power quality measurement features (Harmonic components, Total harmonic distortion factor, Voltage sags and swells), Load control, RTC (LI battery)			

ISKRAEMECO

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