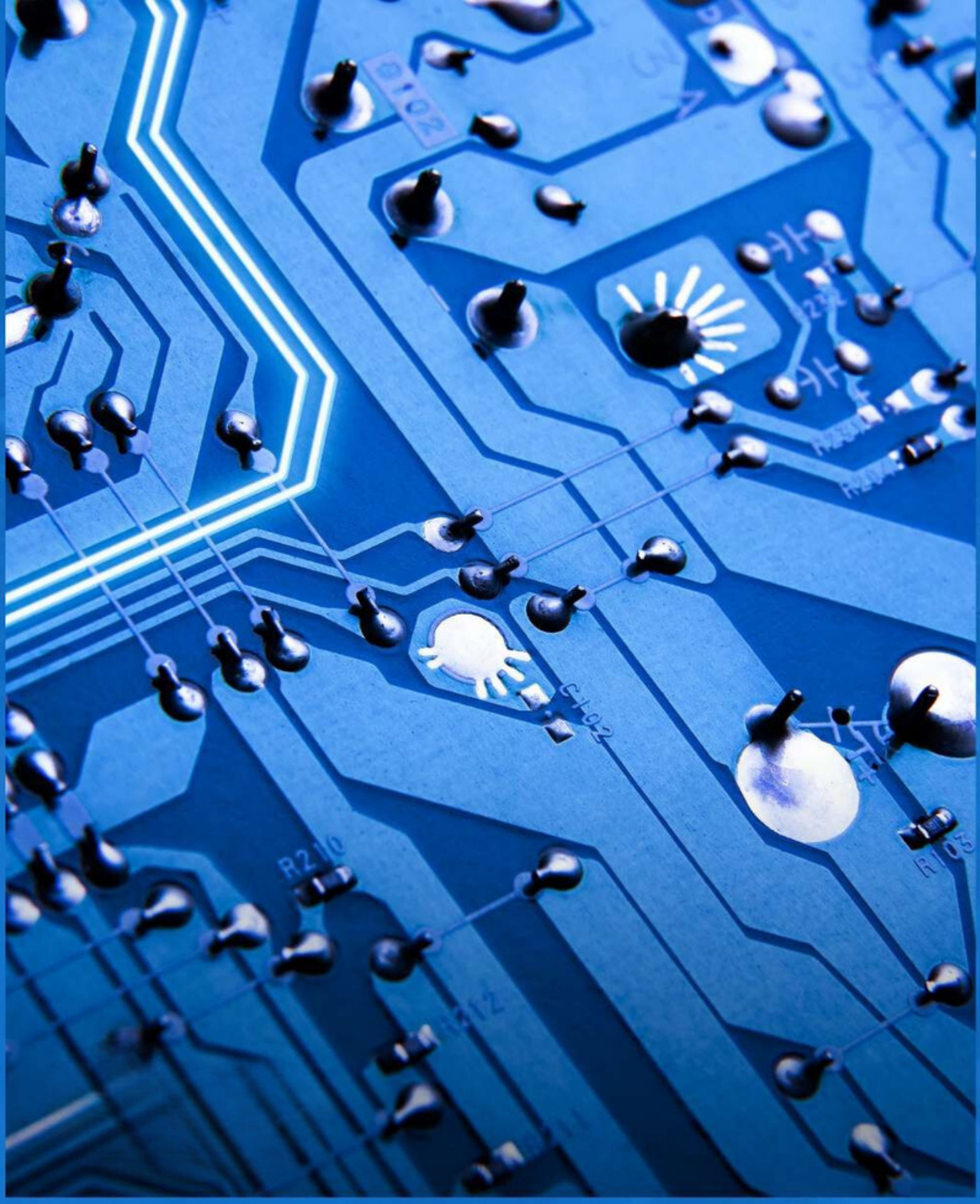


Electronic industry manufacturer, smart electricity meter, UPS, ECU board

Company Profile

Our company is a leading company in innovation, as it has always been.

We manufacture smart electricity meters, generator controllers, ECU controllers for gas generators, online ups and other special electronic cards.

Research and development is the driving force of our company. During the year, the company invested heavily in research and development. Along the way, we have managed to use an effective strategy not only to create new products, but also to add features and improve existing technologies, products and services.

Company Profile

Faham Smart meter

The landscape of electricity distribution is changing rapidly. Companies face more challenges than ever amid regulations, new technologies and changing customer demands. While renewable sources such as wind and solar are leading to more decentralized generation, the growing popularity of sustainable options such as electric cars is creating unprecedented usage peaks that strain existing grid capacity.

Our company is honored to offer smart electricity meters that ensure optimum use of energy resources and services.

Faham Smart meter

Type :	1Phase, 2wire. FAHAM 2 standard
Nominal Voltage :	230v
Nominal Current :	5A
MAX. current :	100A
Operating Voltage :	150v ~ 265v
Withstand Voltage :	460v
Accuracy class :	1. class
Active & Reactive measurement error :	<1%
Protection Class :	IP 54
class measurement range :	20mA ~ 100A
Connections :	IEC62056 standard "C" mode & "E" mode, DLMS protocol
Connection ports :	Optical port + RS485
Int. battery :	Lithium ion
Ext. battery :	Replaceable CR2032 battery
services :	COSEM-RELEASE service

Faham Smart meter

Display :	**Exclusive display with 60 degree visual angle**
Memory :	**At least 40years non-volatile memory**
Clock :	**Very accurate with Lower than 0.5second**
Date :	**Seasonal time(spring, winter) and leap years**
Schedule :	**4tariffs** consists of: Definable 10days, Definable 30 special days 6 weeks per a season, 6 seasons per a year
Events :	**Capable to record all the events of the electricity meter**
Magnetic fields :	**Capable to record DC magnetic fields**
MAX. Demand :	**1min ~ 60min Definable time intervals**
Profile bar :	2 types, Based on minute and day with 8 Definable & discrete channels
Operation Temperature :	**(– 40°) ~ (+ 85°)**
Electrical isolation :	**4Kv**
Electrostatic ineffectiveness :	**15kv – IEC61000–4–2 standard**
EFT :	**5kv on each Line (H&N) – NO. IEC61000–4–4 standard**
Electromagnetic compatibility standards (EMC)	**IEC 61000–4–6** **IEC 61000–4–5** **IEC 61000–4–3** **BS EN 55032** (CISPR 32) **CCISPR 22**

Din-Rail meter

Our company is one of Turkey’s new high-tech enterprises. Nowadays, producing electronic products, developing software, etc. work includes research and development, and Our professional manufacturer company designs and produces cost-effective and ideal electronic energy meters.

We will provide you with honest

, quality and efficient service to meet your needs.

Din-Rail meter

Type :	FAHAM2 Din rail advanced 1phase
Nominal Voltage :	230v
Nominal Current :	5A
MAX. current :	100A
Operating Voltage :	150v ~ 265v
Withstand Voltage :	460v
Accuracy class :	1. class
Active & Reactive measurement error :	< 1%
Protection Class :	IP 54
class measurement range :	20mA ~ 100A
Connections :	IEC62056 standard "C" mode & "E" mode, DLMS protocol
Connection ports :	Optical port + RS485
Int. battery :	Lithium ion
Ext. battery :	Replaceable CR2032 battery
services :	COSEM-RELEASE service

Din-Rail meter

Switching On & Off :	**Contains 120A internal relay**
Memory :	**At least 40years non-volatile memory**
Clock :	**Very accurate with Lower than 0.5second**
Date :	**Seasonal time(spring, winter) and leap years**
Schedule :	**4tariffs** consists of: Definable 10days, Definable 30 special days 6 weeks per a season, 6 seasons per a year
Events :	**Capable to record all the events of the electricity meter**
Magnetic fields :	**Capable to record DC magnetic fields**
MAX. Demand :	**1min ~ 60min Definable time intervals**
Profile bar :	2 types, Based on minute and day with 8 Definable & discrete channels
Operation Temperature :	**(-40°) ~ (+85°)**
Electrical isolation :	**4Kv**
Electrostatic ineffectiveness :	**15kv - IEC61000-4-2 standard**
EFT :	**5kv on each Line (H&N) - NO. IEC61000-4-4 standard**
Electromagnetic compatibility standards (EMC)	**IEC 61000-4-6 IEC 61000-4-5 IEC 61000-4-3 BS EN 55032** (CISPR 32) **CCISPR 22**

Generator Controller

TG100 i s a microprocessor-based controller t h a t samples a n d checks t h e single-phase and three-phase voltage of the main power, transfers the load between the main power and the generator and controls the system failures. All the parameters would be read easily through the big LCD of TG100. This controller includes 3operational modes: Automatic, Test, Off which you can define your desired mode through the controller's front panel's buttons.

A s a monitoring and operating unit, this controller can b e installed and operated on all generators including gas, diesel and gasoline.

Operator can set and save any parameter by pressing the " Menu " button and applying the password.

This significant feature of the TG100

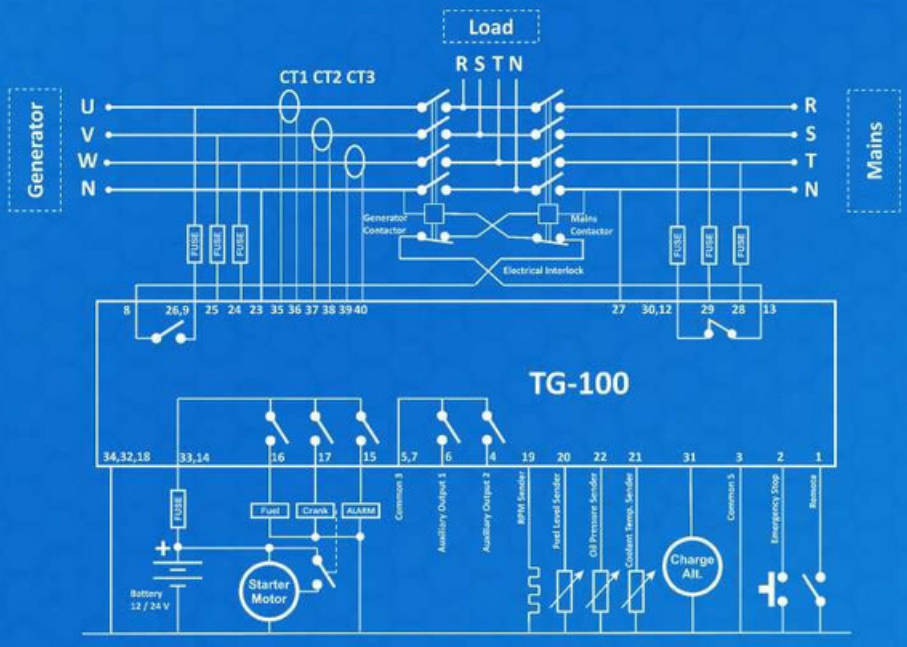
allows it to be easily adapted to

TG10

any generator without t h e necessity foraseparateunit.

Generator Controller

- Input of three–phase of Mains voltage and three–phase voltage of Generator
- Input of three–phase of current transformer
- 12V or 24V DC power supply
- Analog input of water temperature sensor
- Analog input of oil pressure sensor
- Analog input of fuel level sensor
- DC supply voltage input
- Digital input of Emergency Stop
- Fuel solenoid relay output
- Mains contactor relay output (MC)
- Digital input of Remote start
- Start relay output (CRANK)
- Alarm relay output
- Generator contactor relay output (GC)



Generator Controller

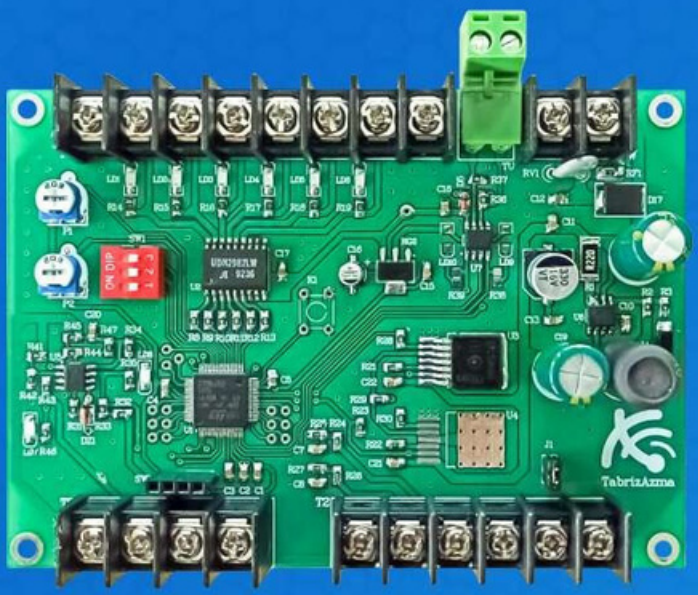
- Automatic Start & Stop of generator
- Starting the diesel generator and transferring the load in case of power failure
- Measurement of voltage and current of **three phases of main electricity and generator**
- Diagnosing generator faults
- Automatic transferring of load
- Containing 3 work modes of : Automatic, Test, Off
- Including LCD to display Measured values and the menus
- Manual control of main contactor (MC) and generator contactor (GC) during the test mode
- Ability to connect to analog sensors of water temperature, oil pressure and fuel level
- Ability to choose screen saver mode

Alarm

- Motor's low speed and over speed
- Water High temperature
- Generator's over current
- Battery's low voltage and over voltage
- Mains power's low voltage and over voltage
- Generator's low voltage and over voltage
- Start Failure
- Low oil pressure
- Charger's low voltage

Engine Control Unit (ECU)

An engine control unit (ECU), is a type of electronic control unit that controls a series of actuators on an internal combustion engine to ensure optimal engine performance. It does this by reading values from a multitude of sensors within the engine bay, interpreting the data using multidimensional performance maps, and adjusting the engine actuators. For perfect performance, ignition signals must be measured with very high precision in the range of microseconds.

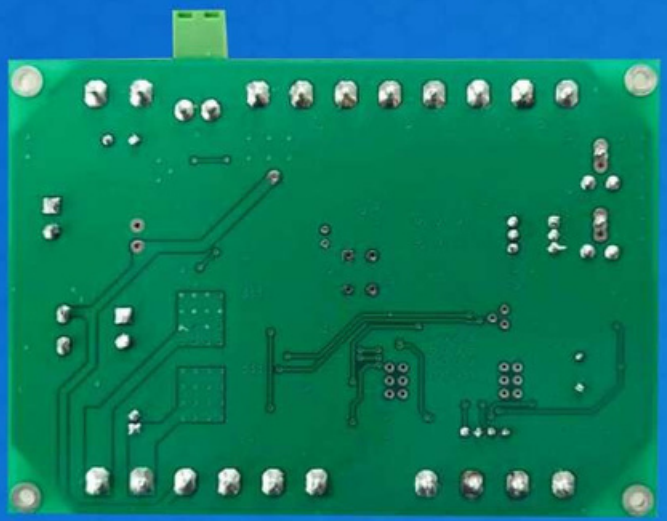


▪ Engine Control Unit (ECU)

The ECU manufactured by İ.D.Ç electronics contains " Self–Diagnostic " system which in case of Occurrence of any problem, It automatically cuts off the ignition outputs.

This unique product of the company has many advantages in compare of other similar products.

Reducing emissions, reducing fuel consumption and noise caused by generator engine operation are just some of them. This engine control unit (ECU) can be used in any generators that works with gas.



Engine Control Unit (ECU)

- Processing of motor's sensors
- Accurate ignition timing to start the engine
- switching power supply with 12 & 24 volt inputs
- ability to connect various sensors like camshaft, flywheel, temperature sensor, oil sensor and etc.
- 6–temporal ignition system with the ability to drive 6 pump units
- Ability to automatically control the engine speed by controlling the inlet throttle
- RS485 connection for customization settings
- WATCHDOG mechanism in order to being able to recovery as soon as possible
- EMC electromagnetic compatibility and noise immunity
- Protection against overcurrent and overvoltage
- Processing system to reduce emissions and reduce fuel consumption
- –25 to +85°C Operating temperature
- Perfect performance even with existence all kinds of electronic interference
- Ability to start the device instantly
- High stability of the product
- High–security of software and hardware
- Considered all safety measures to prevent damage to the engine
- Hardware protection against overvoltage, undervoltage and noises
- Small product volume due to "Embedded " management of the system

UPS

UPS is a high-level electronic power source that provides the necessary power uninterruptedly.
In terms of power outages and surges, equipment failure, and loss of sensitive information, our company decided to design and manufacture a special voltage conversion topology to increase power density.
and reduce extra costs.
TO-1000UPS provides pure sine wave and absolute improved efficiency.
This topology is the “Isolated Bidirectional DC-DC Converter (IBDC)” type and it increases the voltage and provides the energy required for the inverter from the battery, as well as causing isolation between the battery and the output.

UPS

Technical Specifications	
Type of topology	Online
Capacity (VA)	1000
Power Factor	90%
Input	
Voltage range	Half Load (100 ~ 300) ± 5 VAC Full Load (160 ~ 295) ± 5 VAC
Frequency	40 ~ 60 Hz
Output	
Voltage	220 VAC
Frequency	50 Hz
Harmonic Distortion	≥ 2%
Waveform	Pure Sine Wave
Digital stabilizer	Always ON
Display	LCD
Internal Battery	
Battery type	Solid acid
DC Voltage	12 v
Battery capacity (Ah)	9 Ah
Cover box material	Fireproof ABS
Battery weight	2.25 kg
Humidity & Temperature	20 – 95% / 0 – 40° C

UPS

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