# Distributor AEG ABB



# **Company Profile**

We are an electrical trading company with customers all over the world for the past 34 years. Our company is among the few companies that can provide integrated electrical solutions in the field of low and medium voltage distribution networks. The firm covers a wide range of activities, from the scale of trading electrical equipment to the project design, construction and installation.

We represent remarkable European companies such as AEG, ABB, nVent Hoffman, ISKRA, INVERTEK, LOOP, Elettromeccanica Piossasco, Contactplasma, ZIEHL, IDE, Ducati Energia, EFEN, Pollmann, Tele, ETI, LEF, TMC, SEL ELECTRIC and can undertake projects for the private and public sector.

The firm is accredited according to the standards of quality management system of ISO-9001:2008 by BM TRADA.

Our vision is to provide high quality products and services, and "translate" the modern technology and know-how in business value for the end customer.

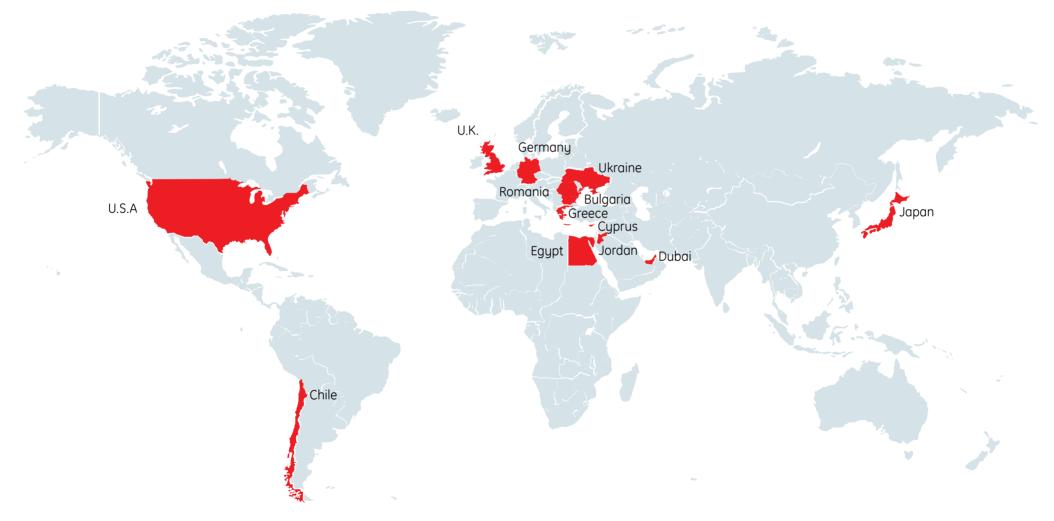








# Activity Countries





# Sectors of Activities





## Medium voltage products

## Metal clad type switchgear – USN



- » Fully metal clad, type tested according IEC62271-200
- » Internal arc withstand up to 25KA/1s
- » Reduced overall dimensions
- » Vacuum circuit breakers draw out type
- » Total safety
- » 12 / 17,5 / 24KV versions

## **Ring Main Units - TPM**



- » Up to 36 KV
- » Indoor and outdoor versions
- » Fully SF6 insulated
- » With line disconnectors and protection unit with fuses and / or cirquit breakers
- » Guaranteed operations over 5000 mechanical cycles
- » According IEC 60694 , 60298, 60265-1, 60420, 60129 standards



## Compact modular switchgear – AIR24

- » Rotary on-load and off-load disconnectors
- » Complete set of mechanical interlocks preventing from any wrong operations
- » Isolation in air-breaking in SF6 gas
- » Visible isolation
- » 3in1: Vacuum cirquit breaker / isolator/earthing switch combined in one single unit (Patented)
- » According to IEC 62271-200
- » Up to 24KV/630A/16KA x1s



## Medium voltage products

### **Distribution Transformers**



### Cast Resin types – TTRES

- » Aluminum or Copper windings
- » E2-C2-F1 certification
- » According to IEC60076-11 standards
- » Minimum maintenance
- » Up to 24KV / 3150KVA

### **Pre - fabricated outdoors substations**

- » Housing made from ISO containers 20 or 40 feet.
- » Easy transport Easy installation
- » Separated rooms for M.V. switchgear transformer low voltage switchgear
- » Plug & Play
- » Customized according to each project needs.

## Oil immersed types – TTOL

- » Conservator or hermetically sealed types
- » Aluminum or Copper windings
- » Up to 24KV/2500KVA
- » According to IEC60076 standards







## Low voltage products





### Low voltage switchboards

- Low Voltage switchboards for Industrial and Building applications
- » Rating Voltage 690V, 50/60Hz
- » Up to 4000A

### U.P.S.

Providing mission-critical products and systems that bridge the gap between utility feed and power quality needs

- » Advanced Power Systems™ (APS™) - 250 kVA to 50 MVA
- » Uninterruptible Power Supplies (UPS) - 1 kVA to 500 kVA
- » Data Protection & Management Software
- Remote Monitoring & Diagnostics (RM&D)
- » Switchgear
- » Static Switches

### Industrial cirquit breakers

- » ACB's ranging 400-6400 A/ 50-150KA
- » MCCB's ranging 16-1600 A/ 18-150KA
- » State of the art electronic trip units
- » Fixed / Plug-in / draw-out versions
- » Complete range of accessories



## Low voltage products



### **Motor Protection – Soft Starters - Speed Drives**

- » Thermal & magnetic motor protection breakers
- » Standard and high breaking capacities
- » Combinations with contactors thermal overload relays for DOL, Star/Delta, reversing applications
- » Variable speed drives up to 1200KW
- » Special speed drives for fun/pumps applications
- » Static soft starters up to 1000KW

### **Control & Automation**

- » 3-4 pole contactors up to 450KW/825A in AC3
  - » Thermal overload relays
  - » Electronic time relays and monitoring relays
  - » Push-button / Indicators



### **Residential Components**

- » Complete line of top quality residential components
- » MCB's 3/4,5/6/10/25 KA Red line
- » RCCB's and RCBO's with ratings from 16A up to 100A and 10mA up to 500mA .
- » Comfort functions (relays, contactors, time switches, impulse switches, surge arresters, measuring instruments) for DIN-rail installation.
- » Insulated enclosures for flush or wall mounting



## Low voltage products

### **General Purpose Enclosures**

- » Polyester enclosures up to IP67-IK10
  » Available sizes for all kind of applications
  » Sell extinguishing, halogen free polyester
  » Maintenance free corrosion resistant for demanding environments
- Metallic enclosures wild steel and stainless steel »
- For indoor or outdoor use **»**
- » Special enclosures for EMC protection





## Electric Vehicle Charging Stations

## EV-FLEX EU<sup>TM</sup> Electric Vehicle Level 2 Charging Station

- » Up to 2.9x faster than standard level 2 chargers
- » Sleek, compact modern design
- » Flexibly mounted on a wall, ceiling, pole or pedestal
- » WiFi & LTE cellular enabled for public or private networks
- » RFID, Smartphone App and Bluetooth user authentication
- » Real-time load management and demand response
- » Tamper resistant; rated for indoor/outdoor use
- » Single or three phase power source
- » Universal compatibility

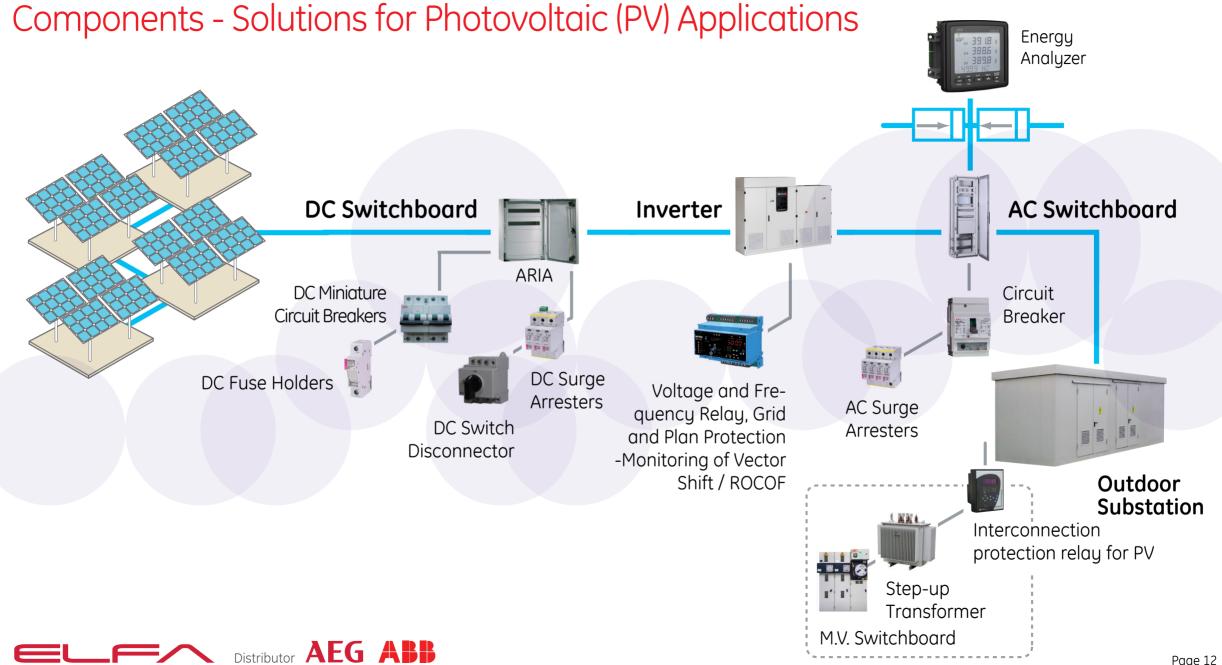
N Distributor AEG ABB



## EV-FAST<sup>TM</sup> Electric Vehicle DC Fast Charging Station

- » Slim, compact and stylish design
- » Reduced installation time and cost
- Durable, low maintenance
- » Liquid cooled & IP65 rated
- » Whisper quiet operation mode
- » Eichrecht DE-M DC Meter Compatible
- » Latest safety standards
- » Universal compatibility







### SOLAR PROJECT IN ENGLAND

ELFA S.A. delivers complete substation solutions for large solar power plants since 2010, according customer needs. ELFA has won numerous large orders for PV power plant substations in Greece, Japan and England.

Each PV substation consists of outdoor, prefabricated and tested housing, with or without solar inverter, step up transformer, and protection equipment according to local grid rules, both in low and medium voltage sides.

For Solar project in Ingham- England , ELFA delivered outdoor substation 36KV for the grid connection of the solar plant, with MV panels SEL electric, protection relays SIEMENS, aux. transformer Elettromeccanica Piossasco oil type and low voltage switchgears ABB.

After installation, the ELFA Service Team commissioned the equipment on site.

CUSTOMER INFORMATION SUNEL UK

### SPECIFICATIONS

Location: INGHAM-ENGLAND Inst. nominal power: 12MW

PRODUCTS ELFA

Grid connection Substation 36kv

Commissioning of the project: **APRIL 2022** 



### SOLAR PROJECT IN UKRAINE

ELFA S.A. delivers complete substation solutions for large solar power plants since 2010, according customer needs. ELFA has won numerous large orders for PV power plant substations in Greece, Japan and England.

Each PV substation consists of outdoor, prefabricated and tested housing, with or without solar inverter, step up transformer, and protection equipment according to local grid rules, both in low and medium voltage sides.

For Solar project in Progressovka - Ukraine, ELFA delivered containerized substations 36KV for the grid connection of 5 solar plants, with MV panels Contact Plasma, protection relays ABB, and low voltage switchgears AEG.

After installation, the ELFA Service Team commissioned the equipment on site.

CUSTOMER INFORMATION SUNEL UK

### SPECIFICATIONS

Location: Progressovka-Ukraine Inst. nominal power: 147,74MWp

### PRODUCTS ELFA

Grid connection Substations 36kv

Commissioning of the project: **APRIL 2021** 







### SOLAR PROJECT IN ROMANIA

ELFA S.A. delivers complete substation solutions for large solar power plants since 2010, according customer needs. ELFA has won numerous large orders for PV power plant substations in Greece, Japan and England.

Each PV substation consists of outdoor, prefabricated and tested housing, with or without solar inverter, step up transformer, and protection equipment according to local grid rules, both in low and medium voltage sides.

For Solar projects in Romania, ELFA delivered 8pcs containerized outdoor substations, with power 2x1600KVA, up to 2x2500KVA equipped with MV panels SEL electric, power transformers Elettromeccanica Piossasco oil type and low voltage switchgears ABB.

After installation, the ELFA Service Team commissioned the equipment on site.

CUSTOMER INFORMATION SUNNERG

### SPECIFICATIONS

Location: Romania Inst. nominal power: 28,7 MVA

**PRODUCTS ELFA** Containerized Substations

Commissioning of the project: APRIL-OCTOBER 2022

### SOLAR PROJECT IN ANNAKA, JAPAN

ELFA S.A. delivers complete substation solutions for large solar power plants since 2010, according customer needs. ELFA has won numerous large orders for PV power plant substations in Greece, Japan and England.

CUSTOMER INFORMATION HEYWARD INVESTMENT LIMITED

### SPECIFICATIONS

Location: Annaka - Japan EPC Contractor: Eco Life Inst. nominal power: 1,7MWp

### PRODUCTS ELFA

2 pcs ELFA BOX Solar Substations With AEG PS Central Inverters  $3 \times PV560$ 

Commissioning of the project: July 2016

Each PV substation consists of outdoor, prefabricated and tested housing, with or without solar inverter, step up transformer, and protection equipment according to local grid rules, both in low and medium voltage sides.

For Annaka project, ELFA delivered 2 outdoor substations, with insulation panels, equipped with the newest-generation central inverters from AEG PS-Germany, along with step-up transformers 6,6KV and medium- low voltage switchgear.

After installation, the ELFA Service Team commissioned the equipment on site.





### WIND FARM IN CHIOS ISLAND, GREECE

ELFA S.A. delivered the main medium voltage switchboard for grid connection in the wind farm of PPC RENEWABLES in the Greek island of Chios, with nominal power 1 MW.

The switchboard is composed by 2 incoming panels with SF6 fuse-switches, one metering panel, one general protection panel with motorized vacuum cirquit breaker and protection relay and one outgoing panel with SF6 load break switch. CUSTOMER INFORMATION PPC RENEWABLES

#### SPECIFICATIONS

Location: Chios island - Potamia -Greece EPC Contractor: PPC RENEWABLES Inst. nominal power: 1MWp

**PRODUCTS ELFA** Grid connection panels

Commissioning of the project: **October 2009** 



### SOLAR PROJECT IN OMAEDA, JAPAN

according to local grid rules, both in low and medium voltage sides.

along with a step-up transformer 6,6KV, and low voltage switchgear.

ELFA S.A. delivers complete substation solutions for large solar power plants since 2010, according customer needs. ELFA has won numerous large orders for PV power plant substations in Greece, Japan and England.

Each PV substation consists of outdoor, prefabricated and tested housing,

with or without solar inverter, step up transformer, and protection equipment

For Omaeda project, ELFA delivered outdoor substation with insulation panels,

equipped with the newest-generation central inverter from AEG PS-Germany,

After installation, the ELFA Service Team commissioned the equipment on site.

HEYWARD INVESTMENT LIMITED

CUSTOMER INFORMATION

SPECIFICATIONS

Location: Omaeda - Japan EPC Contractor: Eco Life Inst. nominal power: 500 KWp

#### PRODUCTS ELFA

ELFA BOX Solar Substation With AEG PS Central Inverter PV560

Commissioning of the project: **February 2016** 





### **POWER STATION IN IKARIA ISLAND, GREECE**

ELFA S.A. delivered the main medium voltage switchboards in the power plant of Ikaria.

The switchboard is composed by 10 incoming cubicles, 5 outgoing cubicles, 2 metering cubicles, 2 internal services cubicles and 1 bus coupler cubicle.

The cubicles are of the Metal Clad type, type tested, with fully withdrawable vacuum cirquit breakers. They also include arc protection system and protection relays.

CUSTOMER INFORMATION PPC ISLANDS

### SPECIFICATIONS

Location: Ikaria - Greece EPC Contractor: SOLERGON Project: Power Station

PRODUCTS ELFA Metal Clad Switchgear

Commissioning of the project: **September 2015** 



### SOLAR PROJECT IN PANTYMOCH, U.K.

ELFA S.A. delivers complete substation solutions for large solar power plants since 2010, according customer needs. ELFA has won numerous large orders for PV power plant substations in Greece, Japan and England.

Each PV substation consists of outdoor, prefabricated and tested housing, with or without solar inverter, step up transformer, and protection equipment according to local grid rules, both in low and medium voltage sides.

For Pantymoch project, ELFA delivered 4 pcs step-up transformers 2500KVA/ 33KV, 2 pcs outdoor substations with insulation panels, equipped with 33KV switchgear, aux. transformers and low voltage control panels. CUSTOMER INFORMATION GEMEC LIMITED

#### **SPECIFICATIONS**

Location: Pantymoch – Wales - U.K. EPC Contractor: GEMEC LIMITED Inst. nominal power: 10 MWp

#### PRODUCTS ELFA

2 pcs ELFA BOX Solar Substations 4 pcs 2500KVA power T/F 2pcs 100KVA T/F for aux. loads

Commissioning of the project: June 2016







### WIND FARM IN PSARA ISLAND, GREECE

ELFA S.A. delivered the main medium voltage switchboard for grid connection in the wind farm of PPC RENEWABLES in the Greek island of Psara, with nominal power 2,03 MW.

The switchboard is composed by 2 incoming panels with SF6 fuse-switches, one metering panel, one general protection panel with motorized vacuum cirquit breaker and protection relay and one outgoing panel with SF6 load break switch. CUSTOMER INFORMATION PPC RENEWABLES

### SPECIFICATIONS

Location: Psara island - Profitis Ilias - Greece EPC Contractor: PPC RENEWABLES Inst. nominal power: 2,03 MWp

**PRODUCTS ELFA** Grid connection panels

Commissioning of the project: **October 2009** 

### SOLAR PROJECT IN TOCHIGI, JAPAN

ELFA S.A. delivers complete substation solutions for large solar power plants since 2010, according customer needs. ELFA has won numerous large orders for PV power plant substations in Greece, Japan and England.

CUSTOMER INFORMATION ECO ENERGY SYSTEMS JAPAN KK

### SPECIFICATIONS

Location: Tochigi -Japan EPC Contractor: Eco Life Inst. nominal power: 1 MWp

### PRODUCTS ELFA

ELFA BOX Solar Container With AEG PS Central Inverter PV880

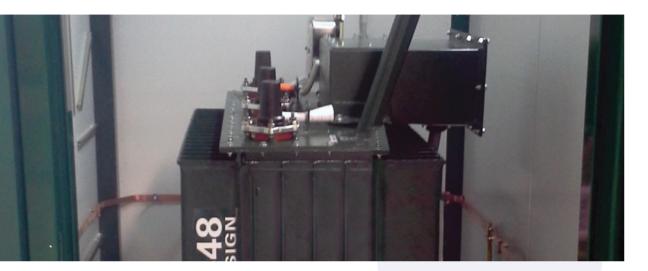
Commissioning of the project: **May 2015** 



Each PV substation consists of outdoor, prefabricated and tested housing, with or without solar inverter, step up transformer, and protection equipment according to local grid rules, both in low and medium voltage sides.

For Tochigi project, ELFA delivered containerized outdoor substation, equipped with the newest-generation central inverter from AEG PS-Germany, along with a step-up transformer 6,6KV, medium and low voltage switchgear.

After installation, the ELFA Service Team commissioned the equipment on site.



### SOLAR PROJECT IN ROYSTON, U.K.

ELFA S.A. delivers complete substation solutions for large solar power plants since 2010, according customer needs. ELFA has won numerous large orders for PV power plant substations in Greece, Japan and England.

Each PV substation consists of outdoor, prefabricated and tested housing, with or without solar inverter, step up transformer, and protection equipment according to local grid rules, both in low and medium voltage sides.

For Royston project, ELFA delivered 1 pc outdoor substation panel insulated, equipped with 33KV switchgear, aux. transformer and low voltage control panels

CUSTOMER INFORMATION GEMEC LIMITED

#### SPECIFICATIONS

Location: Royston - Wales - U.K. EPC Contractor: GEMEC LIMITED Inst. nominal power: 5 MWp

#### PRODUCTS ELFA

1 pc ELFA BOX Solar Substation with 100KVA/33KV aux.transformer, 33KV switchgear and LV panels

Commissioning of the project: June 2016



Clients





TERNA ENERGY

















## www.elfa.gr

