



25 años
mtech
group



The technical forefront
of non-conventional energy sources

**360 solutions for the
renewables energy sector**



Mtech in the Renewable Energy Sector

+25

Years of Experience

Our presence in the global market allows us to support companies that are leading the energy transition towards a more sustainable model.

TOTAL +25GW



+40

Specialist in the renewable sector

Mtech Group has a team of more than 200 people capable of undertaking the most complex customized projects. Specialized talent is one of our main competitive advantages in the Renewable Energy sector.

Our production team

Uses technology to streamline operations and thus reduce the time required to manufacture the panels.



Production Lines

4 assembly lines, each 16 meters long with 8 operators per line for a serial production.



Automatic Tools

Automatic machinery for measuring, cutting and stripping cables, and machinery for crimping terminals.



Pneumatic Tools

Pneumatic tools for tightening torques, key to ensure the durability and reliability of the product in all its years of life.



Industrial Robots

Robots for machining, milling and/or drilling of PVC or polyester boxes or plates, capable of machining almost 200 boxes per day.

Our energy, at your service

What do we offer?

An extensive portfolio of specialized solutions. All feature:

Succes story

The redistribution of the components inside the enclosure, while maintaining the thermal requirements, brought about 14% drop in the price.



100% Flexibility

Our production chain based on the LEAN MANUFACTURING methodology allows us to create serial productions of different runs



Optimized Price

We never charge more for more excellent service. Thanks to ad hoc product design, we achieve savings of over 10% on every project.



Xpert Technical Advice

Our technical and commercial team is made up of experts in the sector. They are ready to take on any case. They are ready for any exception. Your peace of mind is ours as well.



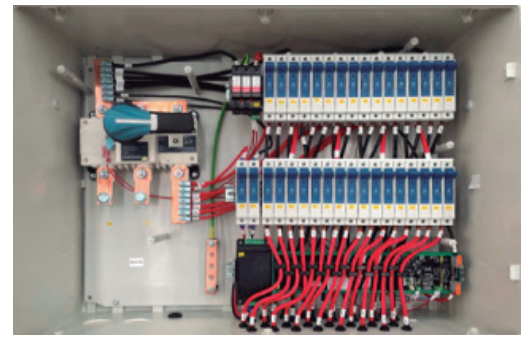
R&D&I Solutions in Collaboration with our Customers

We work with our customers to develop innovative solutions that meet the latest market demands.



String Combiner Box customized for you

SCBs are designed to combine and protect the energy produced by PV plants. At MTECH, we provide solutions in accordance with the needs of the customer. We carry out an ad hoc design for each project, guaranteeing functionality and quality in compact, easy-to-install designs.



Generalities	
Voltage	1000V DC and 1500V DC
Strings	2-32 strings
Enclosures	
Format	Portrait and Landscape
Optional	Support system for pile
Material	Fiberglass-reinforced polyester Fire resistant (960°C IEC 62208)
Dimensions	Standardized according to manufacturer. Selected based on the space requirements of each project (75, 86, 108, etc.)
IP protection code (solids and liquids)	Up to IP66 IEC 60529
IK protection code (mechanical impacts)	Up to IK10 IEC 62262
Operating temperature	Between -25° and 70°C (with fuse and power supply de-rating beginning at 40°).

Monitor (optional)	
Maximum current per string	15 - 40 A, depending on the specific model. Determines the monitoring capacity, single or double.
Type	Shunt or Hall
Monitor type	Single or Double
Measurements	Amperage, Voltage and Temperature
Optional	Disconnecter and Surge Protection status
Communication	RS485 MODBUS /Wireless (Lora) / Fiber-optic
Maximum no. of strings	32 Max, depending on the specific model.

Disconnecter Switch	
Amperage	400A - 630A
Number of poles	2 - 4, Depends on the selected disconnecter.
Breaking capacity	10 kA.
Rated Impulse Withstand Voltage	12 kA
Optional	Auxiliary contact

Surge Protection	
Type	I or I+II
Optional	Auxiliary contact
Nominal discharge current	11 - 20kA.
Maximum discharge current	40kA
Protection Level (+/-/PE)	4.8kV – 5kV

Protections (Fuse holders/ Fuse bases):
Bases:
 10×38, 10×85, 14×51, 22×58, NHX

Nominal voltage:
 1000V - 1500V DC.
Fuses:
 2A - 100A
Breaking capacity: 6 - 40 kA
 LED lighting: With/Without, to display functioning.

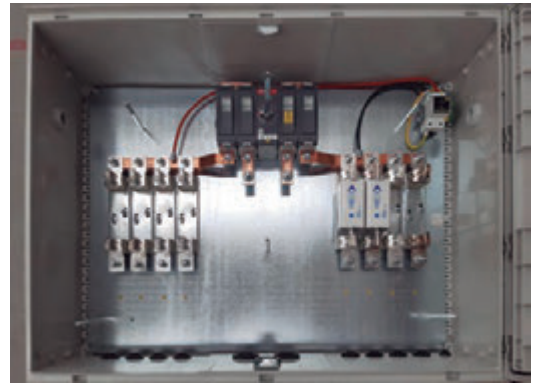
Power source Different power source options are available:
 • DC-DC self-generating power source: 1000V DC to 24V DC and 1,500V DC to 24V DC.

- Power source with independent 230V AC or 127V AC line.
- Independent 24V DC continuous line

Others:
 String input: Cable glands, Fittings or MC 4 connectors
Wire: Solar cable with up to 1800V DC insulation
Grounding: Screw, flat wire, terminal. etc
Passive protection systems:
 • IP55 aerators or IP66 pressure compensators
 • IP20 protective polycarbonate for preventing direct contact between active parts

Junction DC Box Trunk Solutions

Junction DC Box are designed for the bundling of BUS cables, which in turn, group together the strings located along the length of a photovoltaic park upstream. It also allows the protection of these cables and the opening of the circuit for maintenance operations.



Generalities	
Voltage	1000V DC and 1500V DC
Strings	1-6 inputs (each input combine several strings)
Enclosures	
Format	Portrait and Landscape
Optional	Support system for pile
Material	Fiberglass-reinforced polyester Fire resistant (960°C IEC 62208)
Dimensions	Standardized according to manufacturer. Selected based on the space requirements of each project (75, 86, 108, etc.)
IP protection code (solids and liquids)	Up to IP66 IEC 60529
IK protection code (mechanical impacts)	Up to IK10 IEC 62262
Operating temperature	Between -25° and 70°C (with fuse and power supply de-rating beginning at 40°).

Monitor (optional)	
Maximum current per input	400 A Max, depending on the specific model.
Type	Hall
Monitor type	Single
Measurements	Amperage, Voltage and Temperature
Optional	Disconnecter and Surge Protection status
Communication	RS485 MODBUS /Wireless (Lora) / Fiber-optic
Maximum no. of strings	6 Max depending on the specific model.

Disconnecter Switch	
Amperage	400A - 630A
Number of poles	2, 3 or 4. Depending on the selected disconnecter.
Breaking capacity	10 kA.
Rated Impulse Withstand Voltage	12 kA
Optional	Auxiliary contact

Surge Protection	
Type	I or I+II
Optional	Auxiliary contact
Nominal discharge current	20kA
Maximum discharge current	40kA
Protection Level (+/-/PE)	4.8kV – 5kV

Protections (Fuse holders/ Fuse bases):

Bases:
NH1 XL, NH2 XL, NH3 L.

Nominal voltage:
1000V - 1500V DC.

Rated Current:
80A – 400A

Breaking capacity: 10kA

Power source Different power source options are available:

- DC-DC self-generating power source: 1000V DC to 24V DC and 1,500V DC to 24V DC.

- Power source with independent 230V AC or 127V AC line.
- Independent 24V DC continuous line

Others:

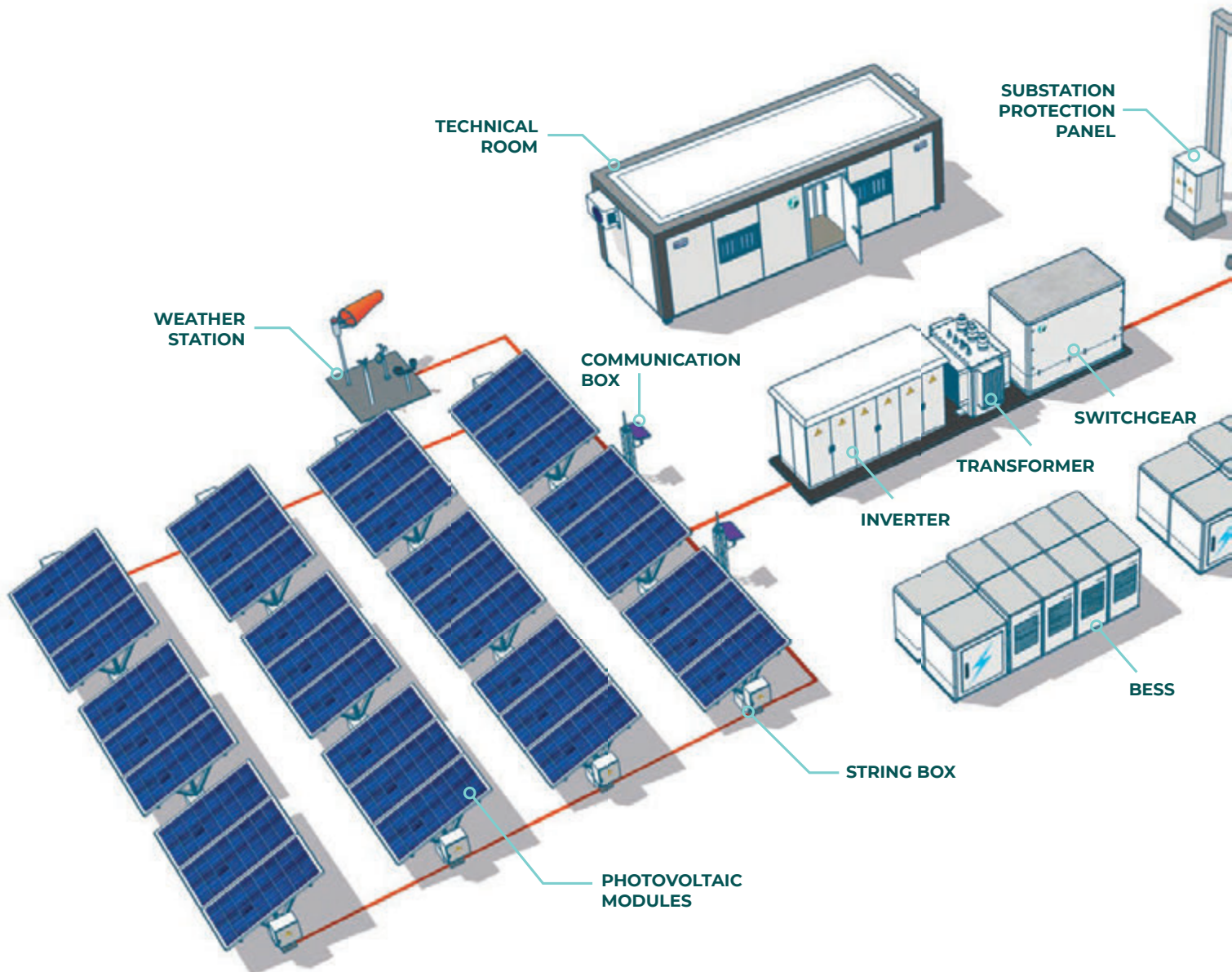
Wire: Solar cable with up to 1800V DC insulation
Grounding: Screw, flat wire, terminal. etc

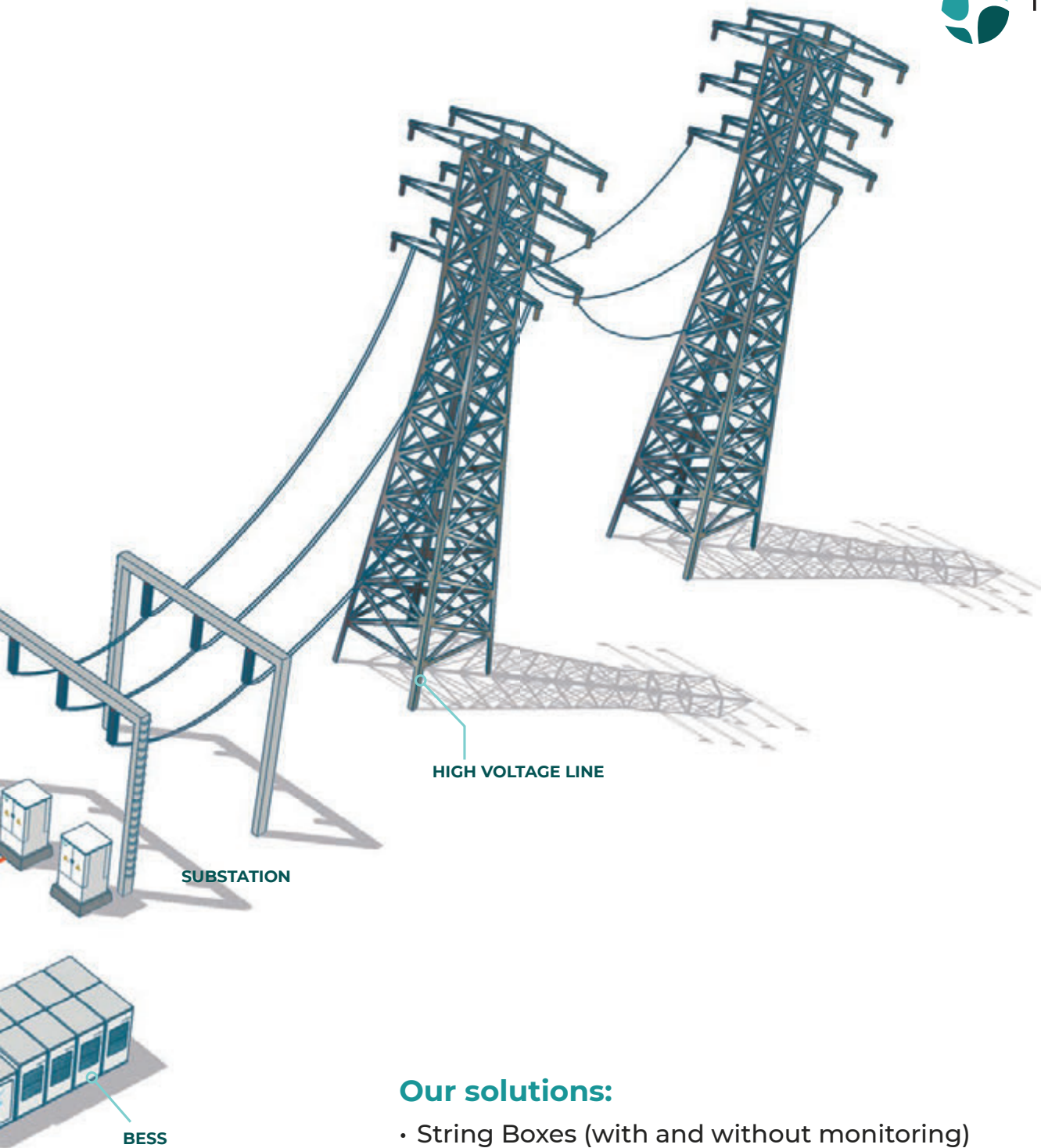
Passive protection systems:

- IP55 aerators or IP66 pressure compensators
- IP20 protective polycarbonate for preventing direct contact between active parts

360 solutions for the Renewables Energy Sector

The products we offer have helped
to materialize the most complex projects.





Our solutions:

- String Boxes (with and without monitoring)
- Switchgear boxes
- Communications infrastructure
- Weather Station and Tracker control boxes
- Inverters and electrical panels for Power Stations
- BESS
- Substation engineering
- Protection and control panels

Other solutions

AC Combiner Box for Inverters

The AC combiner box for inverters collects the AC output from fuses of the string inverters.

At Mtech we have solutions for 800V string inverters. This technology has been consolidated as a genuine alternative in the sector as it acquires an increasing market share. Our solutions are compatible with the main inverter manufacturers (Huawei, Sungrow, SMA, among others).

Protections (Fuse holders/Fuse bases):

Bases: 10×38 NHX

Nominal voltage: Up to 800V AC

Fuses: Up to 630A

Breaking capacity: Up to 80kA

Arrester (up to 400V AC):

Type: 1+2+3

Optional: Auxiliary contact

Nominal discharge current: 40kA.

Maximum discharge current: 100kA

Others:

Inputs: Cable glands, Fittings

Connections: Wire with insulation voltage of 1000V or copper flat wire

Grounding: Screw, flat wire, terminal, etc.

Passive ventilation systems:

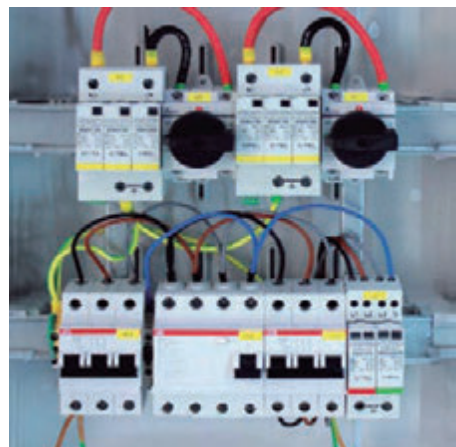
- IP55 aerators or IP66 pressure compensators
- IP20 protective polycarbonate for preventing direct contact between active parts.



DG Distribution Generation

Recently we are witnessing a series of regulatory changes in the Spanish energy market that is providing a new boost to the photovoltaic sector in the residential and tertiary markets. These new lines have certain characteristics and require specific systems that are different to systems for large-scale generation.

Mtech Group has launched a new line of products to address the challenges of this new regulatory frameworks and to cover the resulting demand. This solution integrates protection at the inverter input (direct current) and at the output to the general installation (alternating current).



Battery Energy Storage System (BESS)

Is a technology developed to store electrical charge through the use of specially developed batteries. The underlying idea is that such stored energy can be used at a later time. An enormous amount of research has led to advances in batteries that have shaped the concept of the Battery Energy Storage System into a commercial reality. The different cabinets used to carry out this system have been the following:



Cabinet type

Control cabinet

Battery Connection Panel

Auxiliary Services Cabinets (Substations)

These panels are used to supply the equipment installed in the substation, both non-essential supplies and essential supplies.



Protection cabinets (substations)

These cabinets are used to protect substation equipment on High Voltage (HV) lines. Within the electrical cabinets and panels manufactured by MTECH, Protection and Control (P&C) cabinets are in great demand, whose leading customers are Iberdrola, Red Eléctrica de España (REE), Hitachi - ABB, Siemens, Ingeteam, etc.



Communication Box (Combox)



Mtech Group's Comboxes are the ultimate solution to centralize and simplify the control and monitoring of key devices in any environment. These smart boxes are designed to efficiently group the communications equipment needed to manage trackers and weather stations, among other essential devices. Our Combox offers a comprehensive solution that ensures smooth operation of your tracking and weather systems. With a robust and highly functional design, it provides a stable and reliable platform to coordinate all communication operations.

Control Box

At Mtech Group, we specialize in the creation of customized control panels for photovoltaic parks. Our solutions are designed to optimize the management and performance of solar systems, guaranteeing optimal energy efficiency.



About us

Spanish company with 25 years in the energy sector. Our services are focused on offering complete solutions that respond to the new challenges of the digital environment, clean energy and smart industry.

9.000 m² of factory in Madrid and Bilbao

Equipped with the most advanced production means in addition to our own manufacturing of enclosures.



More than 200 clients across the globe

Our extensive industry experience has made us a leading company in the engineering, manufacturing, consultancy, managing and programming of electrical panels.

Renewable Energy



We have taken part in generating **+25GW** of solar photovoltaic energy by manufacturing more than **100,000 string combiner boxes**.

Energy



For electrical substations, we have provided

- More than **2,000 Protection and Control** racks for Substations.
- More than **500 Ancillary Service panels**, MV/HV marshalling box and resistors.

Railways



We have participated in extending **+ 15,000 km** of railroad track

Industry



We perform **+15,000 electrical assemblies** per year.



