

# Amphenol LTW

Renewable Energy Market





# Amphenol LTW

**Enabling the  
Electronics Revolution**

# Unrivaled InterConnects for Harsh Environments



**24+**

Product Series

**80,000+**

Part Numbers  
(>70% customized parts)

**30+**

Market  
Applications

**75+**

Distribution  
Channels

**Amphenol LTW**



Headquartered in New Taipei City, Taiwan with factories in Kunshan, Jiangsu Province, China PRC and Nogales, Mexico ALTW designs and manufactures uncompromising stringent quality interconnects.

## Amphenol LTW

Since 1993, Amphenol LTW Technology “ALTW” lives and breathes to create, innovate, design and produce “*unrivaled interconnects for harsh environments*”. With over 280 worldwide patents, not only does ALTW offer the broadest and widest range of rugged interconnects in the industry but also customization with the mission of “Customer Satisfaction First”.

Undoubtedly, ALTW is the leader in rugged interconnects, highly recognized for its uncompromising quality, short lead time, fast and tailored service and its very competitive pricing.

Regardless of the challenging environments that your products will be subject to; there is a very good chance that you will find what you are looking for with ALTW.

## Our Capabilities

ALTW’s strategy is to have as much vertically integrated manufacturing in-house capabilities as possible in order to ensure quality assurance, short lead time and highly competitive pricing. These are for example:

- Testing Laboratories certified TAF and UL WDTP
- CNC lathe machined parts and contacts / pins
- Tooling / mold design and manufacturing
- Horizontal and vertical injection manufacturing
- Semi and full automated connector and cable assembly lines
- Cable assembly
- Total electronic turnkey solutions

## Online Resource



### Your benefits

- ✓ Worldwide access 24/7
- ✓ Product configurator
- ✓ Real time order tracking
- ✓ Online assistance (live chat)
- ✓ Instant drawing release
- ✓ Instant quotation
- ✓ Order online
- ✓ Catalogue

 **Easy to lock:** Quick lock mechanism for fast, easy, secure installation

 **Shielded:** 360° EMI and EMC protection



 **Smaller:** Toward miniaturization

 **Tough:** Withstands extreme/harsh environments

 **Faster:** Higher speed, quick/easy installation and build

**TREND OF PRODUCT DEVELOPMENT**



# Reliable Interconnect Solutions

**Amphenol LTW** (ALTW)'s knowledge and experience in providing solutions for the renewable energy market is second to none.

We have the right solution for your renewable energy applications. When you need power, signal, or hybrid connectors, or complete cable assemblies and highly customized value-added products you can trust the expertise of ALTW.



# Product Overview

Amphenol LTW

**Renewable Energy**

**Gear/Control Box:**  
**Power and Control:** RBL, Ceres OR  
Cable Gland  
**Communication:** RJ45, M12, X-lok  
**Accessories:** Vent, Cap

**Riser:**  
**Power and Control:** RBL, Ceres

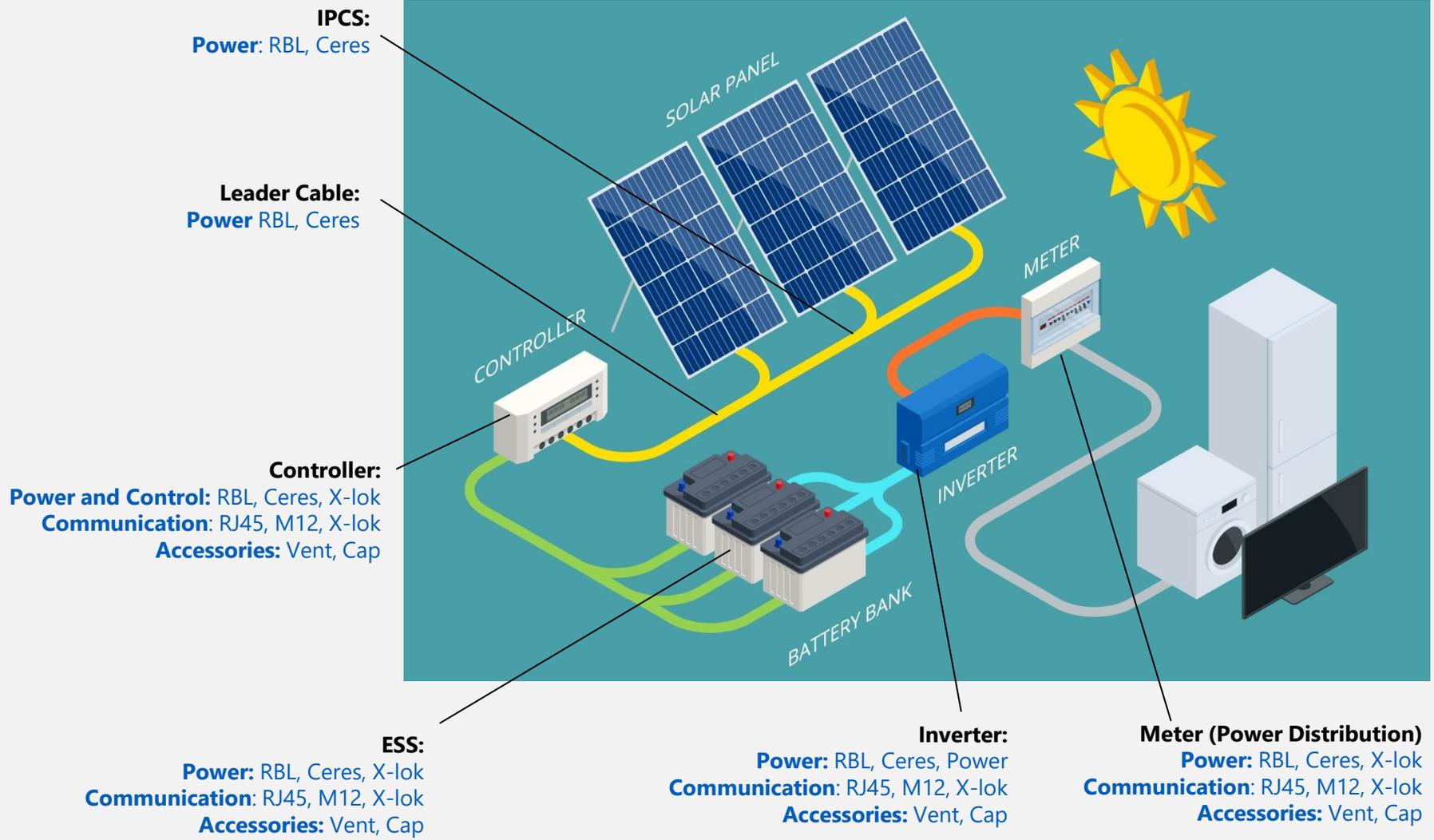
**Splitter:**  
**Power and Control:** RBL, Ceres  
**Communication:** RJ45, M12, X-lok  
**Accessories:** Vent, Cap

**Splitter Input:**  
**Power and Control:** RBL, Ceres  
OR Cable Gland  
**Accessories:** Vent, Cap

**Trunk Cable**  
**With metal cladding or corrugated conduit**



**Heliostat  
(CSP)**



**Residential and Commercial PV**

**Wind Turbine Controller:**  
**Power and Control:** RBL, Ceres, X-lok  
**Communication:** RJ45, M12, X-lok  
**Accessories:** Vent, Cap



### Wind Turbine System Diagram

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Get More

**ESS:**  
**Power:** RBL, Ceres, X-lok  
**Communication:** RJ45, M12, X-lok  
**Accessories:** Vent, Cap

**Distribution:**  
**Power:** RBL, Ceres, X-lok  
**Communication:** RJ45, M12, X-lok  
**Accessories:** Vent, Cap



Wind Farm

# M Series Sensor

Amphenol LTW provides a comprehensive product range of M series, including M5, M8, Guided M8, M10.5, M12, 7/8" and M23, available in receptacle, overmolded cable, field installable and accessory.

- ✓ Mating style: screw thread, push pull, snap-in
- ✓ Contact density up to 28 contacts
- ✓ High data transmission



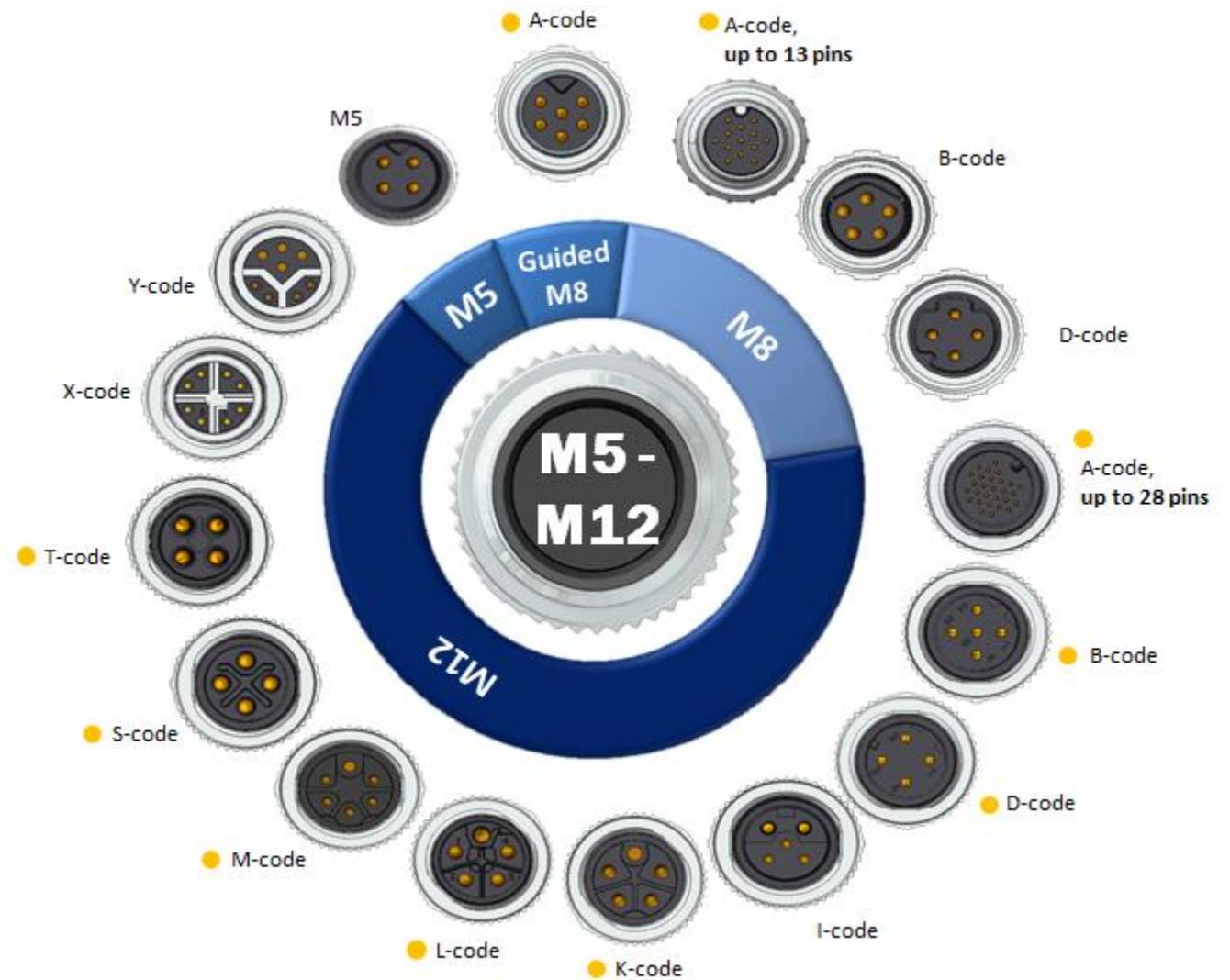
M10.5



M20



M23



● With LED Indicator

# Circular Connector

## X-Lok Push Lock Series



- ✓ Blind Mating & audio feedback
- ✓ Guided key for fool-proof
- ✓ Power, data/signal, hybrid
- ✓ Material: plastic or metal
- ✓ Contact density up to 100 contacts
- ✓ Corrosion resistance up to 500h
- ✓ Long service life  $\geq 1,000$  cycles
- ✓ Protection class IP68
- ✓ Nominal current up to 50A

## RBL Push Lock Series



- ✓ Push Lock with latch & fool-proof design
- ✓ Intuitive mating with audible feedback
- ✓ Power, data/signal, hybrid
- ✓ Material: plastic
- ✓ Contact density up to 18 contacts
- ✓ Corrosion resistance up to 48h
- ✓ Long service life  $\geq 250$  cycles
- ✓ Protection class IP68
- ✓ Nominal current up to 50A

## Ceres Series



- ✓ Mating style: 2 or 3 points lock bayonet, screw thread, push lock
- ✓ Power, data/signal, hybrid
- ✓ Material: plastic or metal
- ✓ Contact density up to 22 contacts
- ✓ Corrosion resistance up to 500h
- ✓ Long service life  $\geq 2,000$  cycles
- ✓ Protection class IP67
- ✓ Nominal current up to 20A

# Power Connector

## Power Series



- ✓ Power, data/signal, hybrid
- ✓ Material: plastic
- ✓ Contact density up to 14 contacts
- ✓ Corrosion resistance up to 720h
- ✓ Long service life  $\geq 500$  cycles
- ✓ Protection class IP69K
- ✓ Nominal current up to 150A

# Other Connector

## RJ Series



- ✓ High transmission speed up to 10Gbps
- ✓ Support PoE
- ✓ Excellent EMI shielding
- ✓ Protection class IP67

## USB Series



- ✓ High speed transmission up to 10Gbps
- ✓ Material: plastic
- ✓ Protection class IP68

## FICX Series



- ✓ Screw-in, crimp, push-in terminations
- ✓ Protection class IP68
- ✓ Nominal current up to 30A
- ✓ Operating voltage up to 600V



Amphenol LTW

Know More

# Other Connector

## Pressure Relief Vent



Stainless



Metal



Snap-In



Plastic



M6 Plastic



Translucent



Calculate Vent  
Equilibrium Time



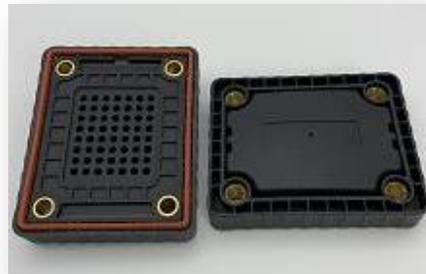
- ✓ Available in screw thread & snap-in version
- ✓ Metal / stainless / plastic version
- ✓ Hydrophobic membranes type (water resistant) & oleophobic membranes type (water & oil resistant)
- ✓ Air permeability up to 3,000 ml/min @ 70mbar
- ✓ Flammability UL 94V-0
- ✓ Protection class IP69K

## Explosion Proof Vent



- ✓ Aluminum alloy
- ✓ Waterproof and dustproof
- ✓ Air permeability > 30,000 ml/min @ 70mbar
- ✓ Equalize/balance pressure
- ✓ Explosion proof
- ✓ Extend the service life of sealed enclosure
- ✓ High ingress protection meet IP69K

## Customized Square Shape Vent



- ✓ Waterproof and dustproof
- ✓ Air permeability > 10,000 ml/min @ 70mbar
- ✓ Equalize/balance pressure
- ✓ Explosion proof
- ✓ Extend the service life of sealed enclosure
- ✓ High ingress protection meet IP69K



# Applications and Success Story

Amphenol LTW

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**Renewable Energy**

**PV Panel**

**CPV**  
Concentrated Photovoltaic

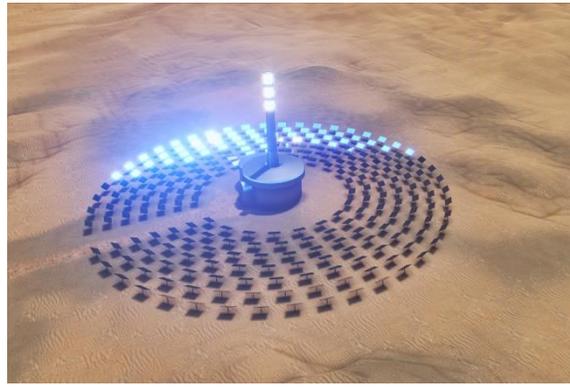
**CSP**  
Concentrated Solar Power

**Inverter**

**Micro Inverter**

**Wind Turbine**

**ESS**



① Single and Dual-Axis Tracking Systems

② Heliostat Drive Motors and Systems

③ Solar Field Integrated Control Systems

④ Portable Energy Systems and Equipment

⑤ Power Distribution and Control

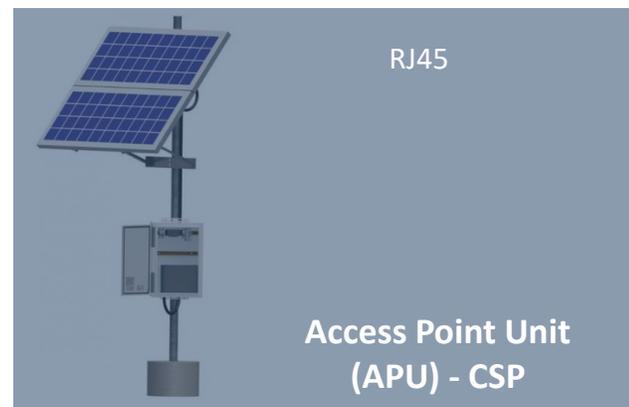
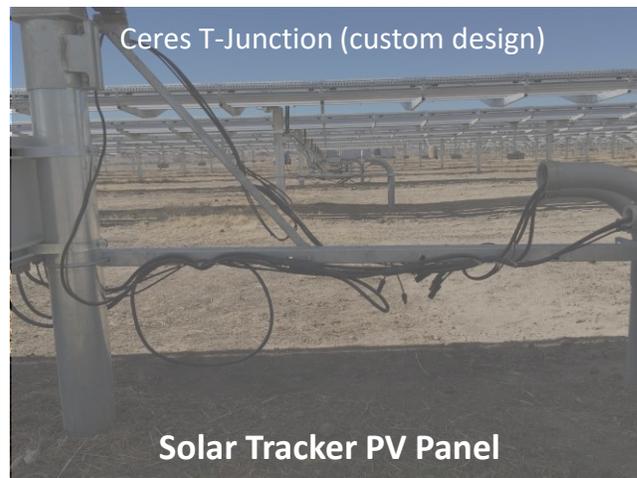
⑥ Communication System

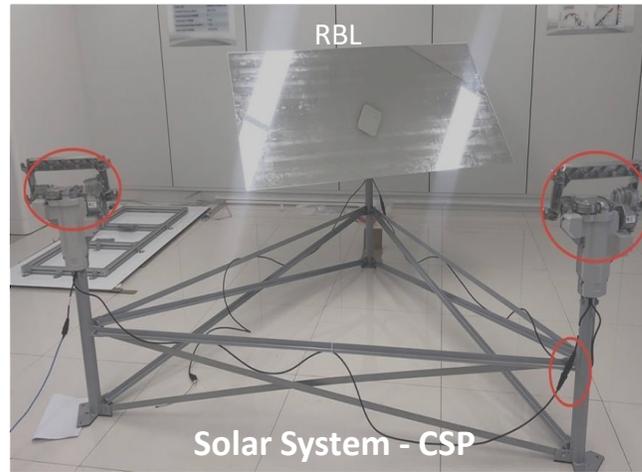
⑦ PV Inverter

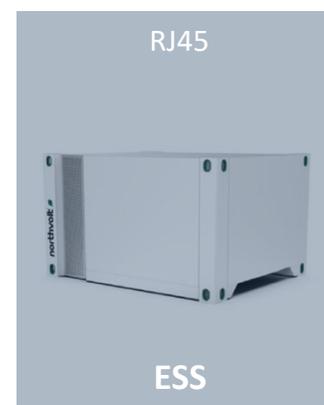
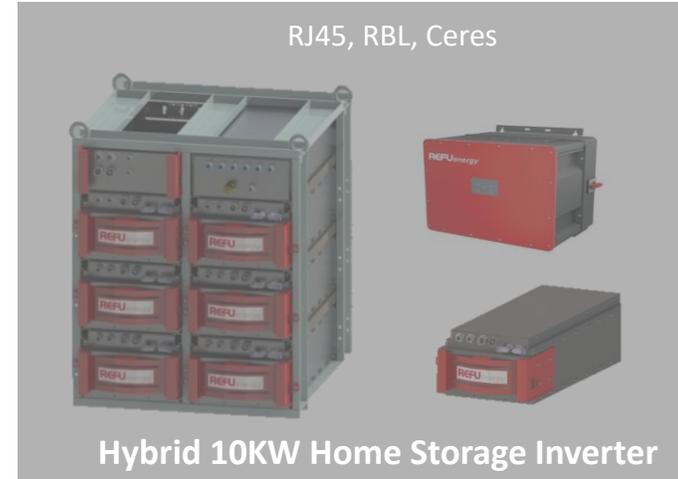
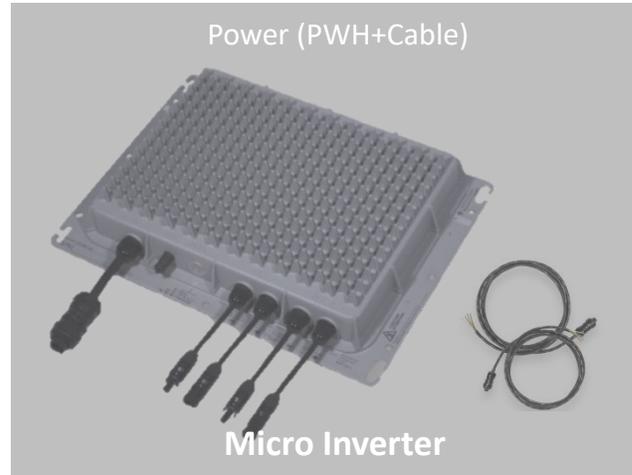
⑧ Micro Inverter

⑨ Wind Turbine Monitoring System

⑩ Energy Storage System







RJ45



Industrial & Commercial ESS

RJ45



Industrial & Commercial ESS

M12, Power



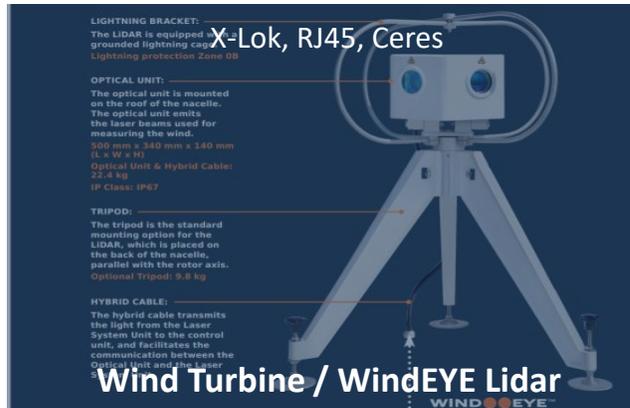
ESS

X-Lok, T Adaptor



Micro Inverter

X-Lok, RJ45, Ceres



Wind Turbine / WindEye Lidar

RJ45



Residential ESS





**Amphenol LTW Technology Co., Ltd.**

Address: 5F-3, No.51, Sec.4, Zhongyang Rd., Tucheng Dist., New Taipei City 236, Taiwan

O: +886-2-7741-6888 | Sales and Marketing: luc@ltw-tech.com | Web site: amphenolltw.com

# Thank You

