



ERRORES TÍPICOS EN UNA INSTALACIÓN FOTOVOLTAICA Y CÓMO EVITARLOS



Félix Salazar

Product and Solution Manager EMAT



Certified Service Partner (CSP) 4 Estrellas

Uno de los 3 en toda Latinoamérica y el único del Cono Sur

Pre-venta

- Apoyo técnico para generar soluciones adaptadas a necesidades y requerimientos
- Asistencia antes de la compra
- Logística completa desde las fábricas en China hasta el proyecto en Chile

Post-venta

- Soporte oficial como CSP Huawei
- Acompañamiento operativo en la puesta en marcha
- Capacitación presencial a los equipos técnicos



Agenda

- Consideraciones en una instalación PV
 - El entorno
 - La instalación
- Consideraciones en una instalación BESS C&I
 - El entorno
 - La instalación
- Cómo gestionar un proceso de solicitud de garantía

Consideraciones en una instalación PV:

El entorno

Ubicación geográfica

- Altura (msnm)
- Corrosión salina
- Temperaturas

Lugar de fijación

- Estructura/muro (vibraciones)
- Suelos inestables
- Suelos con vegetación
- Lugares sin ventilación
- Polvo metálico
- Gases volátiles o corrosivos

Consideraciones en una instalación PV:

El entorno

Ubicación geográfica

- Altura (msnm)
- Corrosión salina
- Temperaturas

General Specifications

Item	SUN2000-115 KTL-M2	SUN2000-110 KTL-M2	SUN2000-100 KTL-M2	SUN2000-100 KTL-M2 (Chinese mainland)	SUN2000-75K TL-M1
Dimensions (W x H x D)	1035 mm x 700 mm x 365 mm				
Net weight	≤ 93 kg				
Operating ambient temperature	-25°C to +60°C				
Cooling mode	Smart air cooling				
Maximum operating altitude	0-5000 m (derated when the altitude is greater than 4000 m)				
Relative humidity	0%-100% RH				
Input terminal ^[1]	Amphenol Helios H4				
Output terminal	OT+waterproof terminal				
IP rating	IP66				
Topology	Transformerless				
Note [1]: The devices with certain BOM numbers use Staubli MC4 connectors.					

SUN2000-(75KTL-M1, 100KTL-M2, 110KTL-M2, 115KTL-M2)
User Manual

1 Safety Information

- The operating temperature range provided in the equipment's technical specifications refers to the ambient temperatures in equipment's installation environment.
- Do not install, use, or operate outdoor equipment and cables (including but not limited to moving equipment, operating equipment and cables, inserting connectors to or removing connectors from signal ports connected to outdoor facilities, working at heights, performing outdoor installation, and opening doors) in harsh weather conditions such as lightning, rain, snow, and level 6 or stronger wind.
- Do not install the equipment in an environment with dust, smoke, volatile or corrosive gases, infrared and other radiations, organic solvents, or salty air.
- Do not install the equipment in an environment with conductive metal or magnetic dust.
- Do not install the equipment in an area conducive to the growth of microorganisms such as fungus or mildew.
- Do not install the equipment in an area with strong vibration, noise, or electromagnetic interference. The equipment shall be installed in an environment with a magnetic field strength less than 4 Gauss. If the magnetic field strength is greater than or equal to 4 Gauss, the equipment may fail to work properly. If the magnetic field strength is high, for example, in a smeltery, you are advised to use a gauss meter to measure the magnetic field strength of the equipment installation position when the smelting equipment is running normally.
- Ensure that the site complies with local laws, regulations, and related standards.
- Ensure that the ground in the installation environment is solid, free from spongy or soft soil, and not prone to subsidence. The site must not be located in a low-lying land prone to water or snow accumulation, and the horizontal level of the site must be above the highest water level of that area in history.
- Do not install the equipment in a position that may be submerged in water.
- If the equipment is installed in a place with abundant vegetation, in addition to routine weeding, harden the ground underneath the equipment using cement or gravel (the area shall be greater than or equal to 3 m x 2.5 m).
- Do not install the equipment outdoors in salt-affected areas because it may be corroded. A salt-affected area refers to the region within 500 m of the coast or prone to sea breeze. Regions prone to sea breeze vary with weather conditions (such as typhoons and monsoons) or terrains (such as dams and hills).

Consideraciones en una instalación PV:

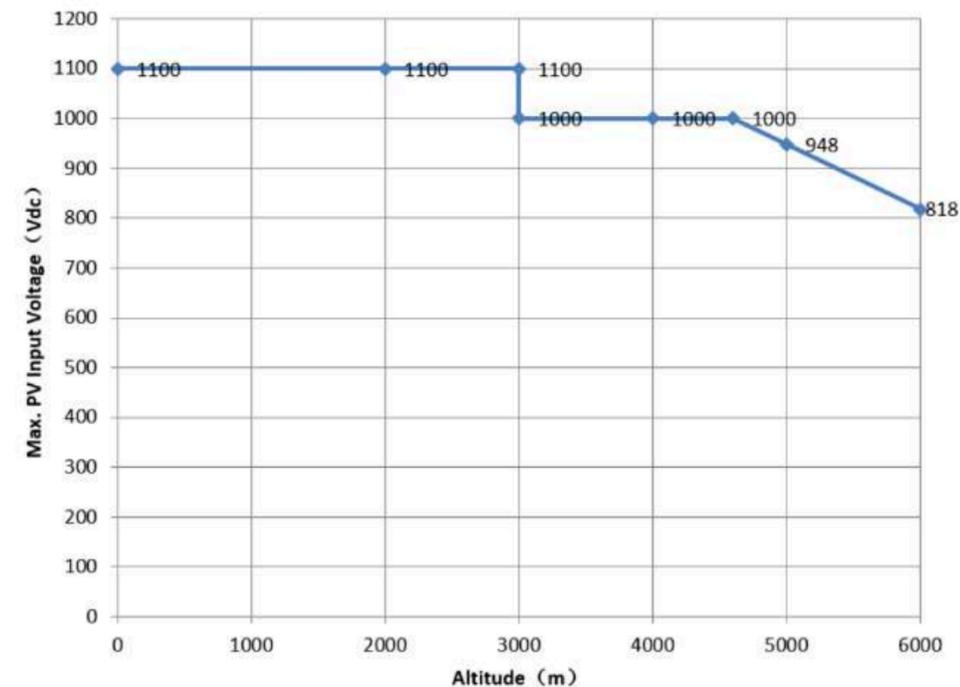
El entorno

Ubicación geográfica

- **Altura (msnm)**
- Corrosión salina
- Temperaturas

SUN2000-100KTL-M2 Output Characteristics Curve

Max. PV Input Voltage vs. Altitude of
SUN2000-100KTL-M2 (380Vac/400Vac)



La distancia de seguridad del inversor SUN2000 está diseñada considerando su funcionamiento a una altitud de hasta 4600 m, a fin de evitar la reducción de potencia (derating).

A medida que la altitud supera los 4600 m, debe tenerse en cuenta la reducción de la tensión en DC del SUN2000, así como una caída de tensión en DC conforme a 13 V/100 m.

Para el inversor SUN2000, la tensión nominal en AC no se ve afectada por la altitud.

Consideraciones en una instalación PV:

El entorno

Ubicación geográfica

- Altura (msnm)
- **Corrosión salina**
- Temperaturas

SUN2000-(75KTL-M1, 100KTL-M2, 110KTL-M2, 115KTL-M2)
User Manual

1 Safety Information

- The operating temperature range provided in the equipment's technical specifications refers to the ambient temperatures in equipment's installation environment.
- Do not install, use, or operate outdoor equipment and cables (including but not limited to moving equipment, operating equipment and cables, inserting connectors to or removing connectors from signal ports connected to outdoor facilities, working at heights, performing outdoor installation, and opening doors) in harsh weather conditions such as lightning, rain, snow, and level 6 or stronger wind.
- Do not install the equipment in an environment with dust, smoke, volatile or corrosive gases, infrared and other radiations, organic solvents, or salty air.
- Do not install the equipment in an environment with conductive metal or magnetic dust.
- Do not install the equipment in an area conducive to the growth of microorganisms such as fungus or mildew.
- Do not install the equipment in an area with strong vibration, noise, or electromagnetic interference. The equipment shall be installed in an environment with a magnetic field strength less than 4 Gauss. If the magnetic field strength is greater than or equal to 4 Gauss, the equipment may fail to work properly. If the magnetic field strength is high, for example, in a smeltery, you are advised to use a gauss meter to measure the magnetic field strength of the equipment installation position when the smelting equipment is running normally.
- Ensure that the site complies with local laws, regulations, and related standards.
- Ensure that the ground in the installation environment is solid, free from spongy or soft soil, and not prone to subsidence. The site must not be located in a low-lying land prone to water or snow accumulation, and the horizontal level of the site must be above the highest water level of that area in history.
- Do not install the equipment in a position that may be submerged in water.
- If the equipment is installed in a place with abundant vegetation, in addition to routine weeding, harden the ground underneath the equipment using cement or gravel (the area shall be greater than or equal to 3 m x 2.5 m).
- Do not install the equipment outdoors in salt-affected areas because it may be corroded. A salt-affected area refers to the region within 500 m of the coast or prone to sea breeze. Regions prone to sea breeze vary with weather conditions (such as typhoons and monsoons) or terrains (such as dams and hills).

ISO9223 Search

Search by Address

Enter address

Latitude

-33.598243

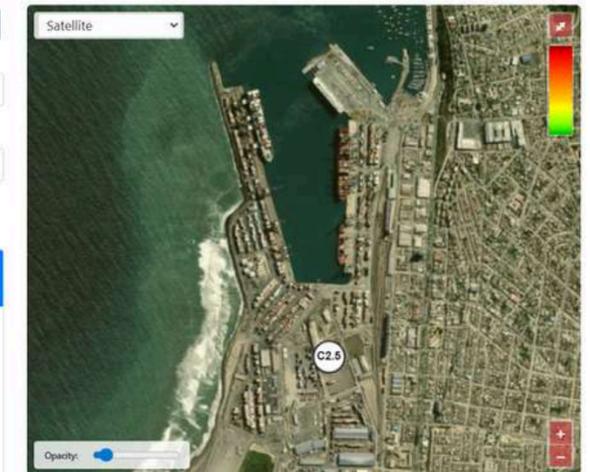
Longitude

-71.618114

Search

Corrosion Classification and Environmental Data
Using Map Package: ISO9223 2019 - 2023 (C1-C5x) (12 rasters)

Parameter	Value	Units	Period
ISO 9223 Steel Corrosion Rate	22.32	µm/year	Rolling 2019-2023
Steel ISO9223 Classification:	C2.5		
ISO 9223 Zinc Corrosion Rate	0.97	µm_Year	Rolling 2019-2023
ISO9223 Zinc Classification:	C3.0		
ISO 9223 Copper Corrosion Rate	1.18	µm/year	Rolling 2019-2023



How to Use the Map

- Right click anywhere on the map to get data values
- Use mouse wheel to zoom in/out

Consideraciones en una instalación PV:

El entorno

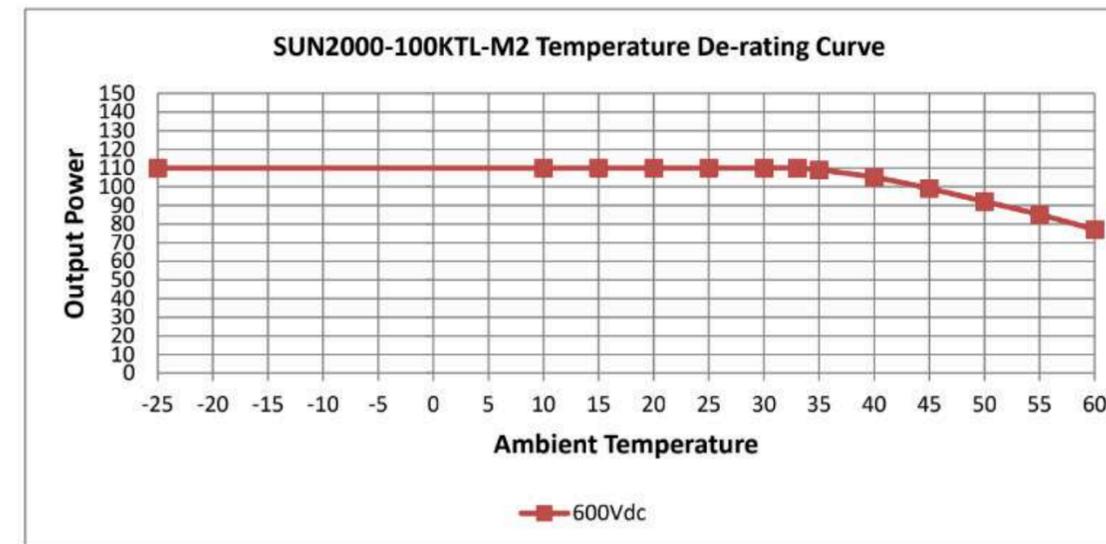
Ubicación geográfica

- Altura (msnm)
- Corrosión salina
- **Temperaturas**

SUN2000-100KTL-M2 Output Characteristics Curve

Power De-rating Curve VS. Ambient Temperature

Power De-rating Curve VS. Ambient Temperature of SUN2000-100KTL-M2:



Grid Voltage: 400Vac, PF=1

Model	-25°C	30°C	33°C	35°C	40°C	45°C	50°C	55°C	60°C
SUN2000-100KTL-M2	110kVA	110kVA	110kVA	109kVA	105kVA	99kVA	92kVA	85kVA	77kVA

Consideraciones en una instalación PV:

El entorno

Lugar de fijación

- **Estructura/muro (vibraciones)**
- Suelos inestables
- Suelos con vegetación
- Lugares sin ventilación
- Polvo metálico
- Gases volátiles o corrosivos



Consideraciones en una instalación PV:

El entorno

Lugar de fijación

- **Estructura/muro (vibraciones)**
- Suelos inestables
- Suelos con vegetación
- Lugares sin ventilación
- Polvo metálico
- Gases volátiles o corrosivos

Figure 4-3 Horizontal installation mode (recommended)

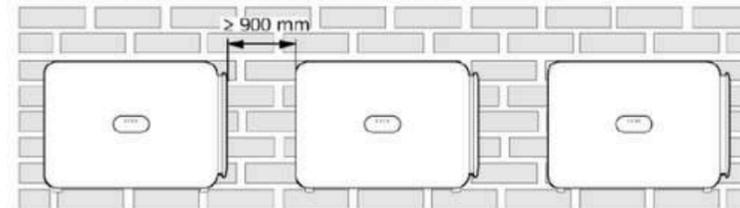
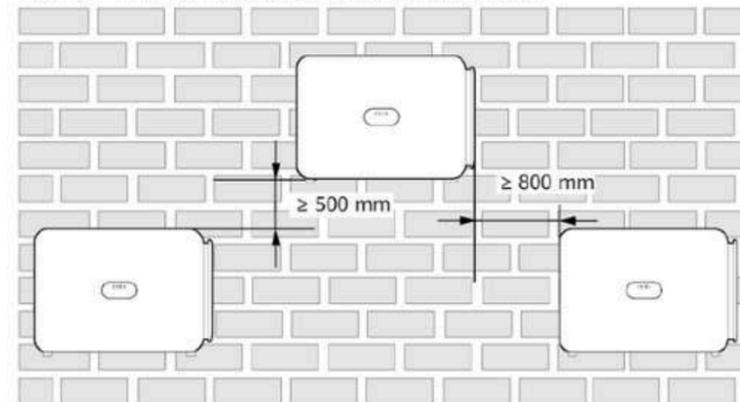
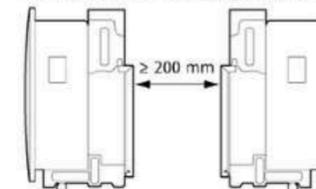


Figure 4-4 Triangle installation mode (recommended)



SUN2000-(50K, 75K, 80K, 150K)-MG Series
User Manual

Figure 4-5 Back-to-back installation mode (recommended)

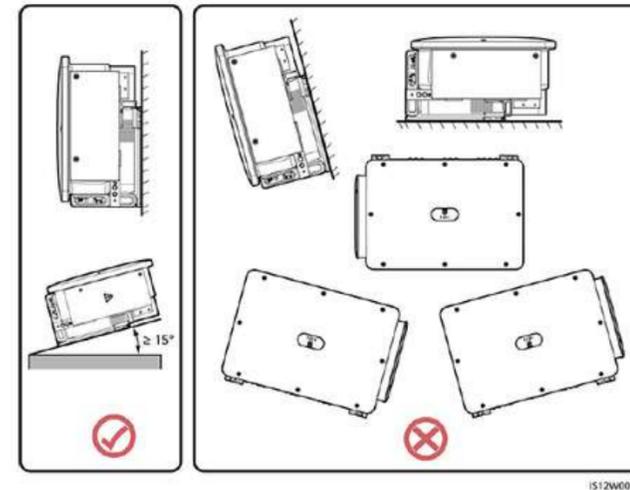


El entorno

Lugar de fijación

- Estructura/muro (vibraciones)
- **Suelos inestables**
- Suelos con vegetación
- Lugares sin ventilación
- Polvo metálico
- Gases volátiles o corrosivos

Figure 4-2 Installation angle



SUN2000-(75KTL-M1, 100KTL-M2, 110KTL-M2, 115KTL-M2)
User Manual

4 Installation

Figure 4-1 Mounting structure

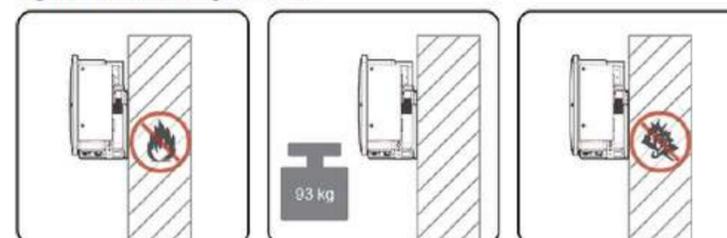


Imagen generada por IA

El entorno

Lugar de fijación

- Estructura/muro (vibraciones)
- Suelos inestables
- **Suelos con vegetación**
- Lugares sin ventilación
- Polvo metálico
- Gases volátiles o corrosivos

Installation Environment Requirements

- Keep the inverter out of reach of children.
- Do not install the inverter in working or living areas to avoid personal injury or property loss caused by accidental contact by non-professionals or other reasons during device operation.
- Do not install the inverter in noise-sensitive areas (such as residential areas, office areas, and schools) to avoid complaints. If the preceding areas are unavoidable, the distance between the installation position and noise-sensitive areas must be greater than 40 m. Alternatively, use other low-noise models.
- If the device is installed in public places (such as parking lots, stations, and factories) other than working and living areas, install a protective net outside the device and set up a safety warning sign to isolate the device. This is to avoid personal injury or property loss caused by accidental contact by non-professionals or other reasons during device operation.
- If the equipment is installed in a place with abundant vegetation, in addition to routine weeding, harden the ground underneath the equipment using cement or gravel (the area shall be greater than or equal to 3 m x 2.5 m).

Figure 8-4 Pulling out the fan tray (2)

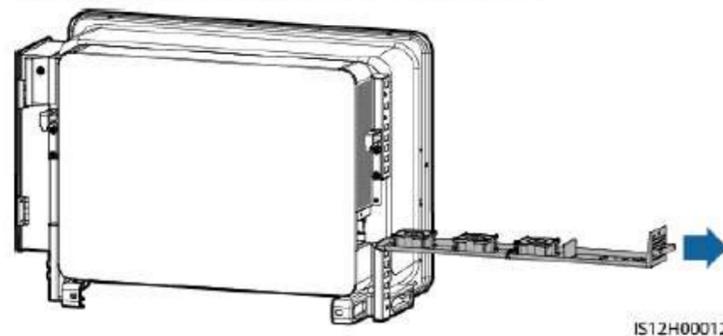


Imagen generada por IA

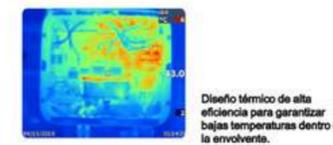
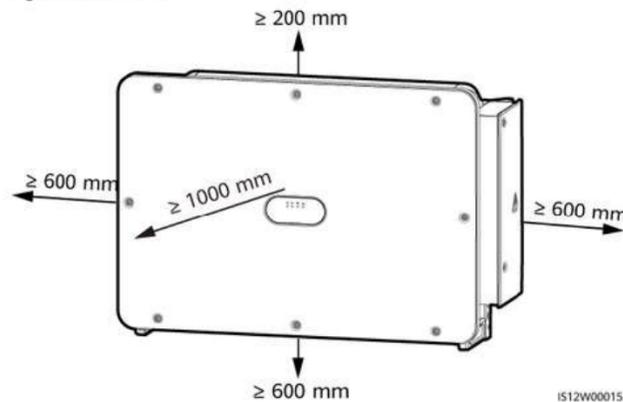
Consideraciones en una instalación PV:

El entorno

Lugar de fijación

- Estructura/muro (vibraciones)
- Suelos inestables
- Suelos con vegetación
- **Lugares sin ventilación**
- Polvo metálico
- Gases volátiles o corrosivos

Figure 4-3 Clearance



Consideraciones en una instalación PV:

El entorno

Lugar de fijación

- Estructura/muro (vibraciones)
- Suelos inestables
- Suelos con vegetación
- Lugares sin ventilación
- Polvo metálico
- **Gases volátiles o corrosivos**



Consideraciones en una instalación PV:

La Instalación

- **Conexiones DC**
- Conexiones AC
- Conexiones Puesta a tierra
- Cableado comunicaciones
- DC/AC Ratio



9. ARREGLOS Y CONEXIÓN ELÉCTRICA

9.1 Todas las conexiones en corriente continua (CC) deberán realizarse utilizando conectores tipo MC4 o su equivalente, los cuales deben garantizar un montaje rápido sin comprometer la seguridad, el aislamiento y la impermeabilidad del sistema fotovoltaico. Se prohíbe expresamente el uso de uniones mediante enroscamiento de conductores o conexiones a través de regletas en el lado de corriente continua (CC), ya que estas prácticas pueden comprometer la integridad del sistema.

El uso de conectores de diferentes marcas debe evitarse, especialmente al mezclar conectores macho y hembra de distintos fabricantes. En casos excepcionales donde se requiera el uso de conectores de diferentes marcas, esta elección deberá ser debidamente justificada en la memoria técnica del proyecto y en los planos de la instalación. Además, se deberá adjuntar documentación técnica que acredite la compatibilidad entre los conectores utilizados, conforme a las especificaciones de cada fabricante. Esta documentación será revisada para garantizar el cumplimiento de los estándares de seguridad y operatividad del sistema fotovoltaico.



5.7.2 Connecting Cables to Amphenol Helios H4 Terminals

Specifications

Cables with high rigidity, such as armored cables, are not recommended, because poor contact may be caused by the bending of cables.

CAUTION

Use the Amphenol Helios H4 PV connectors delivered with the inverter. If the PV connectors are lost or damaged, purchase the connectors of the same model. The device damage caused by incompatible PV connectors is not covered under any warranty.

Consideraciones en una instalación PV: La Instalación

- **Conexiones DC**
- Conexiones AC
- Conexiones Puesta a tierra
- Cableado comunicaciones
- DC/AC Ratio

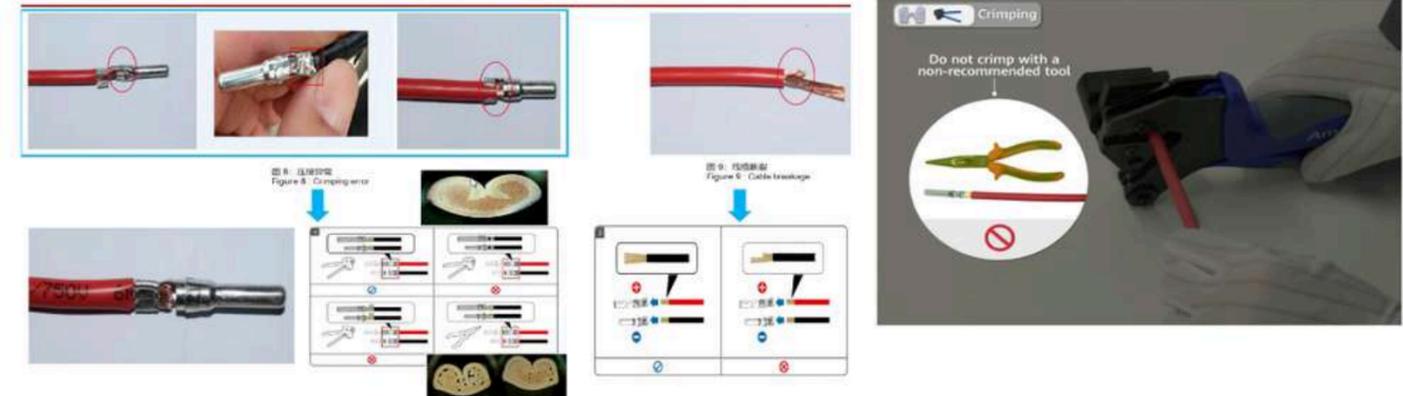
NOTE

- Select cables in compliance with local cable standards.
- The factors to be considered in cable selection include the rated current, cable type, routing mode, ambient temperature, and maximum acceptable line loss.
- If MBUS is used for communication, you are advised to use multi-core cables with the maximum communication distance of 1000 m. To use other types of AC power cables, contact local technical support.

Table 5-2 Cable description (S indicates the conductor cross-sectional area of the AC cable, and S_p indicates the conductor cross-sectional area of the PE cable)

No.	Cable	Type	Conductor Cross-Sectional Area	Outer Diameter	Source
1	DC input power cable	PV cable that meets the 1100 V standard	4–6 mm ²	5.5–9 mm	Prepared by the customer

3. PV端子安装常见问题/Common errors in PV terminal installation



MEJORES PRÁCTICAS: CONECTORES

Riesgos en la conexión cruzada

Exposición a la humedad	Evento térmico
<p>Razones técnicas</p> <ul style="list-style-type: none"> • Diferentes tolerancias • Diferente diseño en el contacto eléctrico • Uso de diferentes tipos de metal en la construcción de los contactos • Materiales incompatibles • Diferentes estándares de producción QA/QC 	<p>Impacto</p> <ul style="list-style-type: none"> • Pérdida de generación de energía • Problemas de seguridad (conectores quemados o derretidos) • Aceleración de la degradación térmica • Riesgo de arco eléctrico • Fallos inesperados en la generación causados por problemas en los conectores fotovoltaicos

Consideraciones en una instalación PV:

La Instalación

- **Conexiones DC**
- Conexiones AC
- Conexiones Puesta a tierra
- Cableado comunicaciones
- DC/AC Ratio

For 11 to 19 PV strings, the following DC input terminals are recommended.

Figure 5-20 DC input terminal connection solution

Number of PV Inputs	SWITCH 1				SWITCH 2			SWITCH 3		
	MPPT1	MPPT2	MPPT3	MPPT4	MPPT5	MPPT6	MPPT7	MPPT8	MPPT9	MPPT10
11	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1									
12	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1									PV19
13	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1		PV5							PV19
14	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1		PV5					PV15		PV19
15	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1		PV5			PV9		PV15		PV19
16	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1		PV5		PV9		PV13		PV17	PV19
17	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1	PV3		PV7	PV9		PV13		PV17	PV19
18	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1	PV3	PV5		PV9	PV11		PV15	PV17	PV19
19	PV2	PV4	PV6	PV8	PV10	PV12	PV14	PV16	PV18	PV20
	PV1	PV3	PV5	PV7	PV9		PV13	PV15	PV17	PV19

1512P00012

SUN2000-(50K, 75K, 80K, 150K)-MG Series
User Manual

5 Electrical Connections

Figure 5-17 Sealing plugs with snap-fits



SUN2000-150K-MG0-ZH

Sealing plug+/Sealing plug--: CT75A-FJB6/
CT75A-FJB5

SUN2000-150K-MG0

Sealing plug+/Sealing plug--: HY024-FHG-3/
HY024-FHG-4

SUN2000-80K-MGLO



Consideraciones en una instalación PV:

La Instalación

- Conexiones DC
- **Conexiones AC**
- Conexiones Puesta a tierra
- Cableado comunicaciones
- DC/AC Ratio

SUN2000-(75KTL-M1, 100KTL-M2, 110KTL-M2, 115KTL-M2)
User Manual

5 Electrical Connections

No.	Cable	Type	Conductor Cross-Sectional Area	Outer Diameter	Source
	AC output power cable (single-core)	(Recommended) Single-core outdoor cable and M12 OT/DT terminal	<ul style="list-style-type: none"> • Copper cable: S: 70–240 mm² • Aluminum alloy cable or copper-clad aluminum cable: S: 95–240 mm² 	14–32 mm	Prepared by the customer

Note [1]: The S_p value is valid only if the conductors of the PE cable and AC output power cable use the same material. If the materials are different, ensure that the conductor cross-sectional area of the PE cable produces a conductance equivalent to that specified in this table. The specifications of the PE cable are subject to this table or calculated according to IEC 60364-5-54.

SUN2000-(75KTL-M1, 100KTL-M2, 110KTL-M2, 115KTL-M2)
User Manual

5 Electrical Connections

No.	Cable	Type	Conductor Cross-Sectional Area	Outer Diameter	Source
5	AC output power cable (multi-core)	<ul style="list-style-type: none"> • If you connect a PE cable to the ground point on the enclosure and no neutral wire is used, you are advised to use a three-core (L1, L2, and L3) outdoor cable and M12 OT/DT terminals (L1, L2, and L3). • If you connect a PE cable to the ground point in the maintenance compartment and no neutral wire is used, you are advised to use a four-core (L1, L2, L3, and PE) outdoor cable, M12 OT/DT terminals (L1, L2, and L3), and M10 OT/DT terminals (PE). • If you connect a PE cable to the ground point on the enclosure and a neutral wire is used, you are advised to use a four-core (L1, L2, L3, and N) outdoor cable and M12 OT/DT terminals (L1, L2, L3, 	<ul style="list-style-type: none"> • Copper cable: <ul style="list-style-type: none"> – S: 70–240 mm² – $S_p \geq S/2$ • Aluminum alloy cable or copper-clad aluminum cable: <ul style="list-style-type: none"> – S: 95–240 mm² – $S_p \geq S/2$ 	24–66 mm	Prepared by the customer

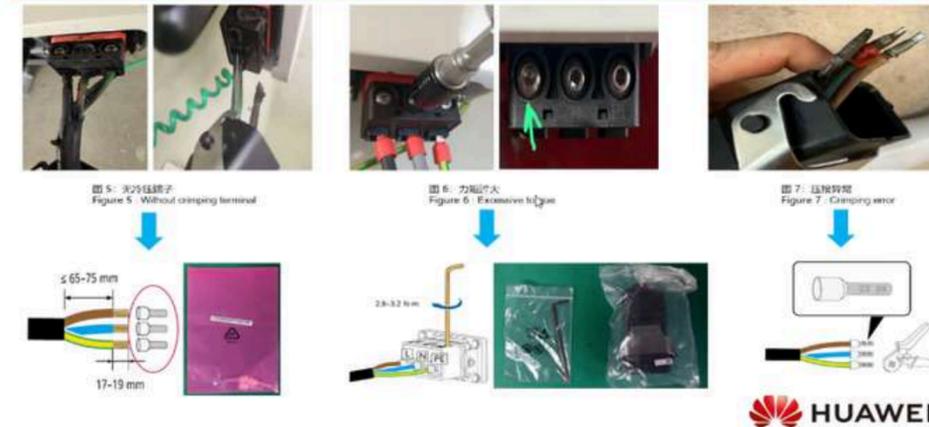
Consideraciones en una instalación PV:

La Instalación

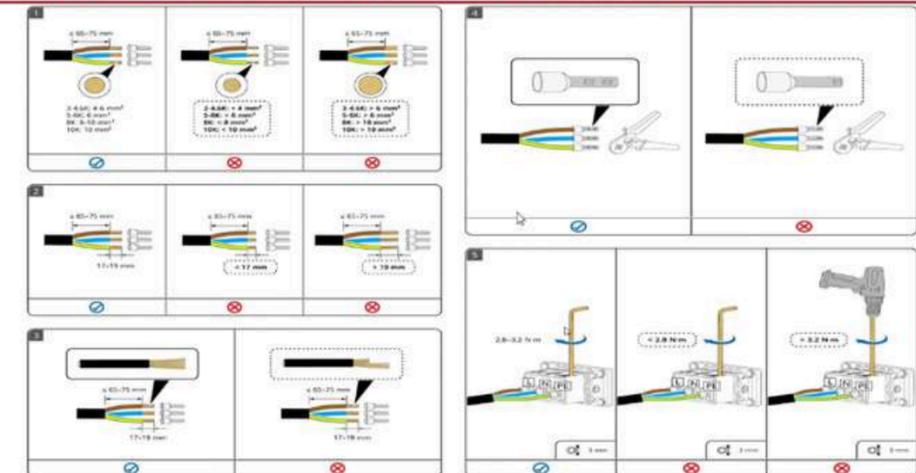
- Conexiones DC
- **Conexiones AC**
- Conexiones Puesta a tierra
- Cableado comunicaciones
- DC/AC Ratio



2. AC端子安装常见问题/Common errors in AC terminal installation



2. AC端子安装常见问题/Common errors in AC terminal installation



Consideraciones en una instalación PV:

La Instalación

- Conexiones DC
- **Conexiones AC**
- Conexiones Puesta a tierra
- Cableado comunicaciones
- DC/AC Ratio

Figure 5-16 Single-core cable connection

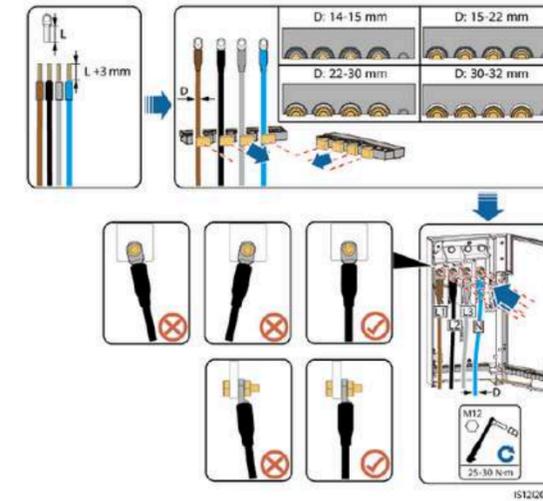


Figure 5-13 Requirements for the OT/DT terminal

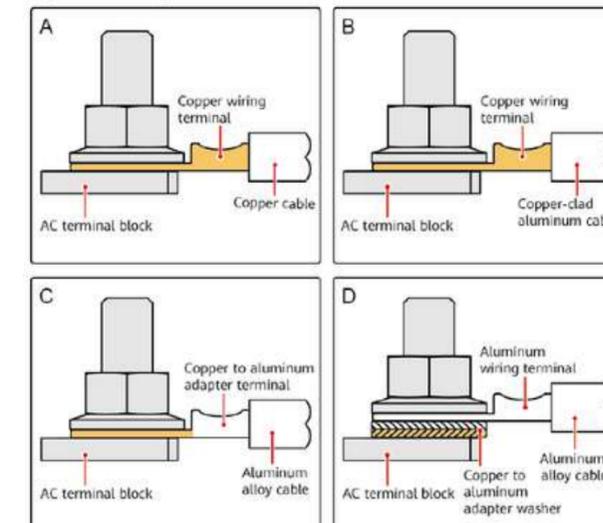


Table 5-4 Bending radius requirements for AC power cables

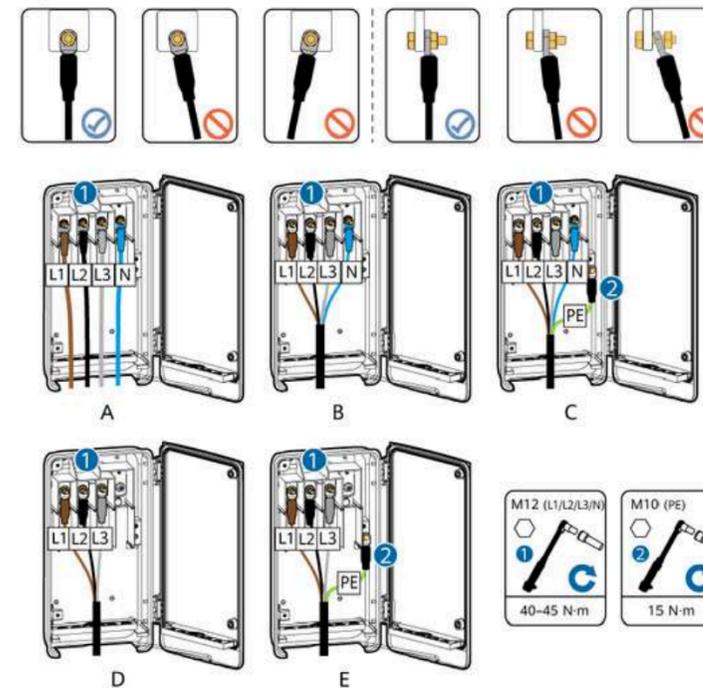
Picture	Single-core Cable		Multi-core Cable	
	Unarmored	Armored	Unarmored	Armored
<p>IS18W00015</p>	$R \geq 20D$	$R \geq 15D$	$R \geq 15D$	$R \geq 12D$
	<p>R indicates the bending radius, and D indicates the outer diameter of the cable.</p> <p>NOTE The AC power cable must be routed vertically into the maintenance compartment.</p>			

Consideraciones en una instalación PV:

La Instalación

- Conexiones DC
- Conexiones AC
- **Conexiones Puesta a tierra**
- Cableado comunicaciones
- DC/AC Ratio

Figure 5-6 Cable connection



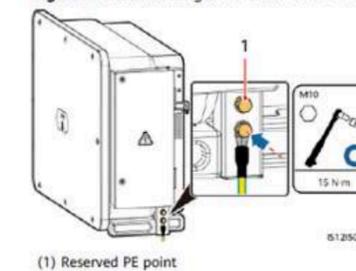
SUN2000-(50K, 75K, 80K, 150K)-MG Series
User Manual

5 Electrical Connections

NOTICE

- Proper grounding is helpful for resisting the impact of surge voltage and improving the electromagnetic interference (EMI) performance. Before connecting the AC power cable, DC power cables, and communications cable, connect the PE cable to the PE point.
- You are advised to connect the PE cable to the PE point on the enclosure. The PE point in the maintenance compartment is used for connecting to the PE wire of a multi-core AC power cable. If the cross-sectional area of the PE cable meets the requirements, select either PE point on the enclosure or in the maintenance compartment for connecting the PE cable.
- It is recommended that the inverter be connected to a nearby PE point. Connect the PE points of all inverters in the same array to ensure equipotential connections to PE cables.

Figure 5-2 Connecting a PE cable to the PE point (on the enclosure)



(1) Reserved PE point

Figure 5-2 Connecting a PE cable to the PE point (on the enclosure)

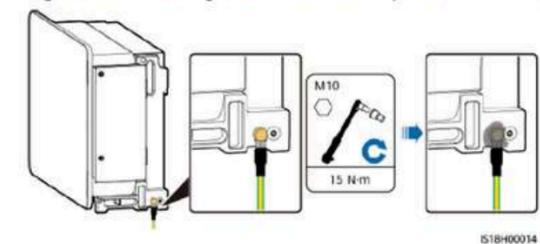
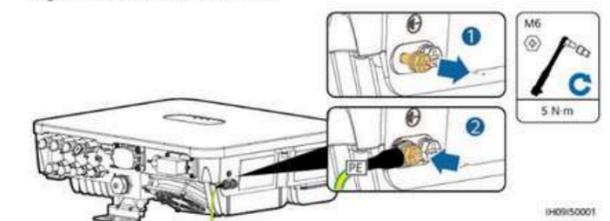


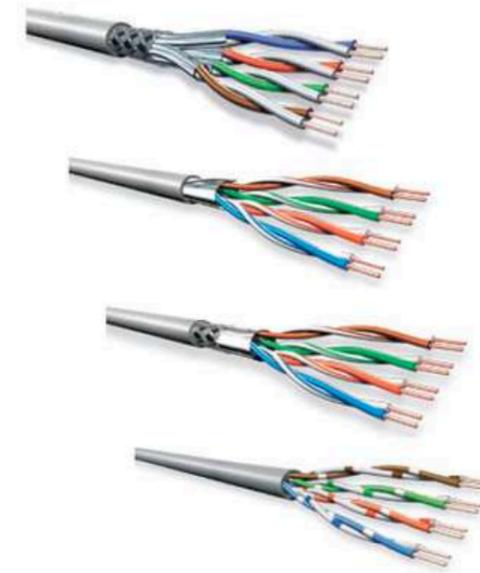
Figura 5-3 Conexión del cable de tierra



Consideraciones en una instalación PV:

La Instalación

- Conexiones DC
- Conexiones AC
- Conexiones Puesta a tierra
- **Cableado comunicaciones**
- DC/AC Ratio



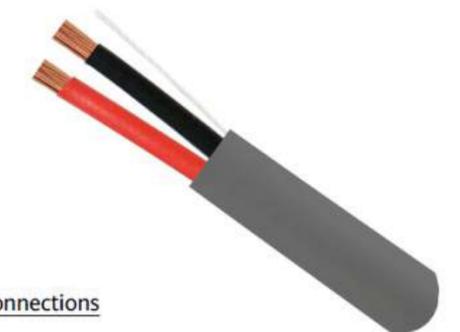
Different types of twisted pair cables

S/FTP:
overall braid screen (S),
elements foil screened (FTP)

F/UTP:
overall foil screen (F),
elements unshielded (UTP)

SF/UTP:
overall braid and foil screen (SF),
elements unshielded (UTP)

U/UTP:
no overall screen (U),
elements unshielded (UTP)



SUN2000-(50K, 75K, 80K, 150K)-MG Series
User Manual

5 Electrical Connections

No.	Cable	Type	Conductor Cross-Sectional Area	Outer Diameter	Source
	AC output power cable (single-core)	(Recommended) Single-core outdoor cable and M12 OT/DT terminal	<ul style="list-style-type: none"> • S: 95–400 mm² • S_p ≥ S/2 	14–38 mm	Prepared by the customer
4	RS485 communications cable	Outdoor shielded twisted pair cable that meets the local standard	0.25–1 mm ²	<ul style="list-style-type: none"> • One or two communications cables: 4–11 mm • Three communications cables: 4–8 mm 	Prepared by the customer

Consideraciones en una instalación PV:

La Instalación

- Conexiones DC
- Conexiones AC
- Conexiones Puesta a tierra
- Cableado comunicaciones
- **DC/AC Ratio**



STATEMENT

SUN2000 Inverter Allowable Maximum DC/AC Ratio

To whom it may concern,

This is a letter to confirm that the allowable maximum DC/AC Ratio of the Huawei SUN2000 3-phase string inverters is up to 1.5, which will not violate the standard warranty of SUN2000 inverters.

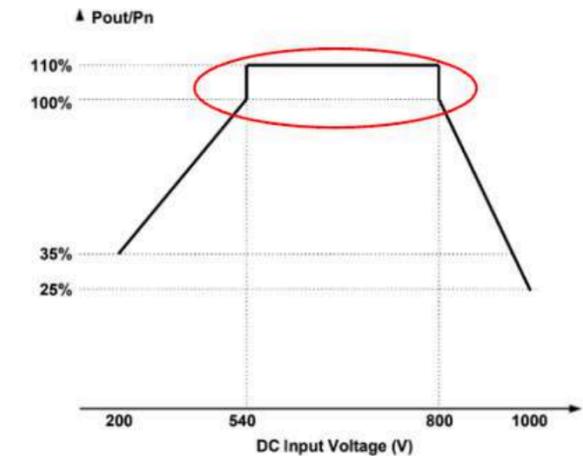
Note: The DC/AC ratio is calculated on the basis the module peak power (DC) at STC conditions and inverter nominal power (AC).

Best Regards,
GUOJUN WANG 王国军 
Director of Solution Sales
Huawei LATAM Solar Development Dept.
Email: fusionsolar-la@huawei.com

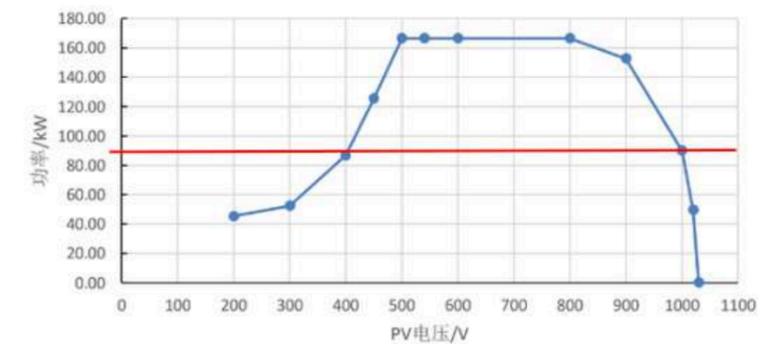


Power- DC Input Voltage Curve

Power-DC Input Voltage Curve of SUN2000-100KTL-M2 (380/400Vac)



SUN2000-150K-MG (400Vac)
Power- DC Input Voltage Curve



Consideraciones en una instalación BESS:

El entorno

Ubicación geográfica

- Altura (msnm)
- Corrosión salina
- Temperaturas

Lugar de instalación

- Fundaciones (vibraciones)
- Suelos inestables
- Polvo metálico
- Gases volátiles o corrosivos

Consideraciones en una instalación BESS:

El entorno

Ubicación geográfica

- Altura (msnm)
- Corrosión salina
- Temperaturas

ISO9223 Search My Location Reset Search

Search by Address
Enter address

Latitude: -33.598243 Longitude: -71.618114

Search

Corrosion Classification and Environmental Data
Using Map Package: ISO9223 2019 - 2023 [C1-C5] (12 raster)

Parameter	Value	Units	Period
ISO 9223 Steel Corrosion Rate	22.32	µm/year	Rolling 2019-2023
Steel ISO9223 Classification	C2.5		
ISO 9223 Zinc Corrosion Rate	0.97	µm/Year	Rolling 2019-2023
ISO9223 Zinc Classification	C3.0		
ISO 9223 Copper Corrosion Rate	1.18	µm/year	Rolling 2019-2023



How to Use the Map

- Right click anywhere on the map to get data values
- Use mouse wheel to zoom in/out

Parámetros del Sistema de almacenamiento de energía	
Modelo	LUNA2000-215-2S10
Capacidad máxima de almacenamiento de energía	215.0kWh
Ratio de Carga y Descarga	0.5 CP
Máx. eficiencia de ciclo (RTE) con auxiliares	91.3%
Profundidad de carga y descarga	0~100%
Dimensiones (A x P x A)	1150mm x 1800mm x 2100mm
Peso	≤ 2.8 T
Rango de temperatura en operación	-30 °C ~ 55 °C (> 50°C. Derating)
Rango de temperatura en almacén	-35 °C ~ 60 °C
Rango de humedad	0 ~ 100% (sin condensación)
Máx. Altitud en operación	4,000 m
Modo de control de temperatura	Refrigeración híbrida
Modo de balance	Balance activo
Modo de calibración SOC	Automático
Sistemas de extinción de incendios	Barrera oxígeno a nivel pack, extracción de gases direccional, panel de liberación de presión, Aerosol
Consumos auxiliares	176~300 Vac, una fase, ≤5 kW
Consumo en standby	≤150 W
Puerto de comunicaciones	Ethernet / Fibra Óptica
Protocolo de comunicaciones	Modbus TCP
Grado de protección	IP55
Grado de protección EMC	Class B
Ruido (condiciones operativas)	≤65 dB(A)
Protección de sobretensiones en CC	Tipo II (Puerto AC)
Protecciones	Protección anti-isa, detección de corriente residual, detección de resistencia de aislamiento, protección de sobrecorrientes en AC y protección para conexión cable AC
Seguridad	RoHS6
Certificados	UL9540A; UL1973; UN38.3; IEC 62477-1; IEC 62040-1; IEC 61000-6-1/2/3/4; IEC 62619; IEC 60529; VDE-AR-E 2510-2/50; IEC 62933-5-1/2; IEC 61727; EN 50549; GB/T 34120

General Requirements

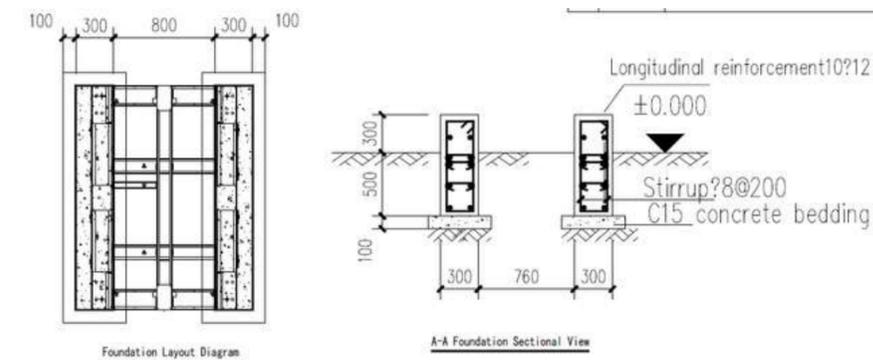
- Ensure that the equipment is stored in a clean, dry, and well ventilated area with proper temperature and humidity and is protected from dust and condensation.
- Keep the installation and operating environments of the equipment within the allowed ranges. Otherwise, its performance and safety will be compromised.
- Do not install, use, or operate outdoor equipment and cables (including but not limited to moving equipment, operating equipment and cables, inserting connectors to or removing connectors from signal ports connected to outdoor facilities, working at heights, performing outdoor installation, and opening doors) in harsh weather conditions such as lightning, rain, snow, and level 6 or stronger wind.
- Do not install the equipment in an environment with dust, smoke, volatile or corrosive gases, infrared and other radiations, organic solvents, or salty air.
- Do not install the equipment in an environment with conductive metal or magnetic dust.
- Do not install the equipment in an area conducive to the growth of microorganisms such as fungus or mildew.
- Do not install the equipment in an area with strong vibration, noise, or electromagnetic interference.

Consideraciones en una instalación BESS:

La Instalación

Lugar de instalación

- Fundaciones (vibraciones)
- Suelos inestables
- Polvo metálico
- Gases volátiles o corrosivos



Notes:

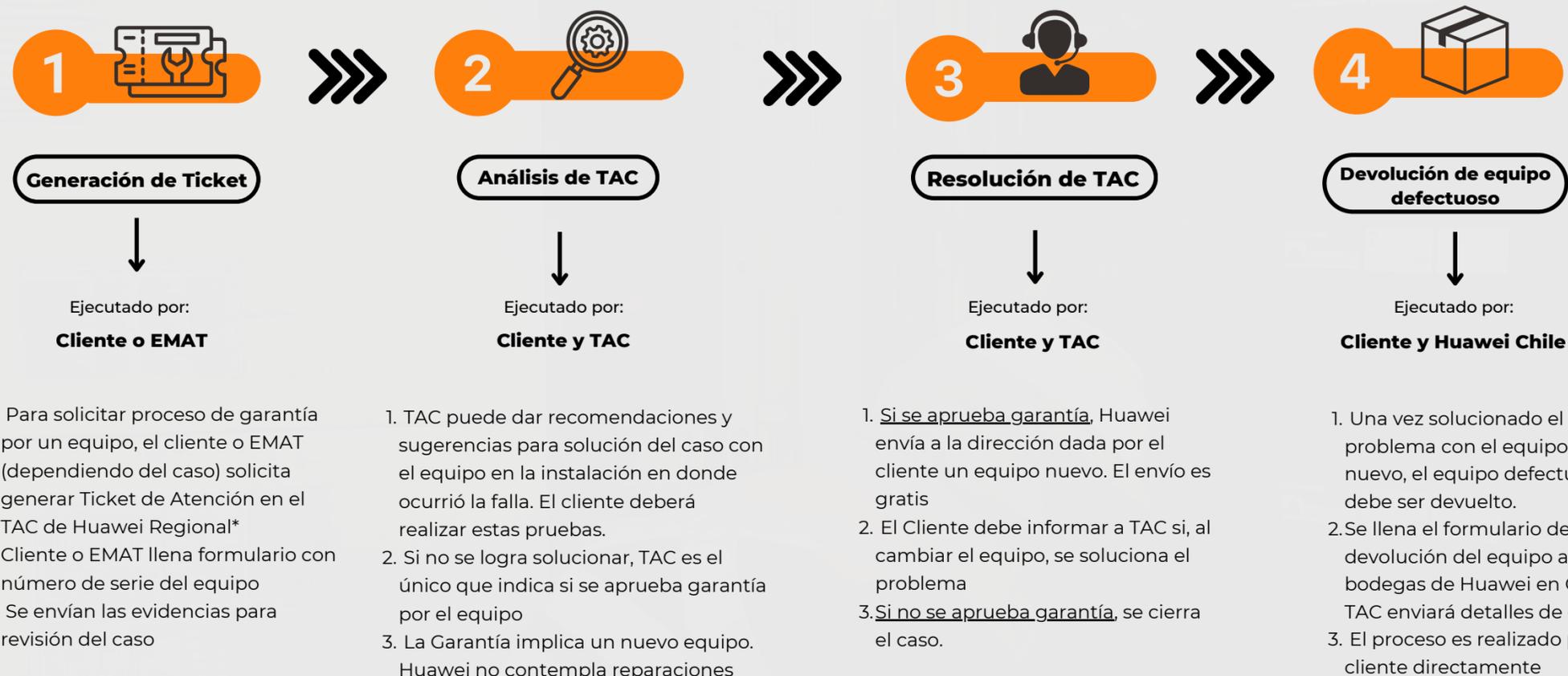
1. The net weight of the ESS does not exceed 2800 kg;
2. The foundation must be dug to the old soil layer, and the characteristic value of the foundation bearing capacity must be greater than or equal to 100 kPa. If the soil layer at the design elevation does not meet the requirements, excavate to the soil layer that meets the requirement, and use sand and aggregate at a ratio of 3:7 to backfill to the design elevation. The four sides are 300 mm wider for each additional 500 mm depth, and the density is greater than or equal to 0.94.
3. The concrete grade of the foundation is C25. The thickness of the protective layer is 50 mm. The concrete grade of the bedding is C15. The four sides of the bedding are 100 mm wider than the foundation.
4. After the foundation is excavated, prevent water from entering the foundation. If water enters the foundation, excavate and replace the affected parts.
5. The error of the elevation of the top surface of the foundation (column) shall be less than or equal to 3 mm.
6. The error of the elevation of the top surface of the foundation (column) shall be less than or equal to 3 mm. It is recommended that the foundation be 300 mm higher than the horizontal ground.
7. Ensure that the bottom of the equipment is higher than the local highest water level to prevent rain from corroding the ESS base and interior.
8. A drainage system must be constructed onsite to prevent the bottom or internal devices of the ESS from being immersed in water in rainy seasons or when a large amount of precipitation occurs.
9. Reserve trenches or cable inlets for the C&D ESS during foundation construction.
10. The reserved holes on the foundation and the cable inlets at the bottom of the equipment shall be sealed.

Cómo gestionar un proceso de

Solicitud de Garantía

- Creación del ticket a través de www.ematchile.com/soporte
- Revisión de incidente/problema. Análisis y troubleshooting
- Recaudación de evidencias y preparación del caso
- Equipo debe estar con garantía vigente (básica o extendida)
- <https://support.huawei.com/enterprise/ecareWechat?lang=us>
- Descarga de los registros de la planta (Archivos LOG's)
- Escalamiento a TAC Huawei
- Aprobación de un RMA
- Envío de Spare Part desde Bodega EMAT o Huawei Local
- Devolución por parte del cliente del equipo defectuoso

Cómo gestionar un proceso de **Solicitud de Garantía**



*TAC (Technical Assistant Center) de Huawei Regional: Área de este fabricante que brinda soporte técnico a los clientes de Latinoamérica que solicitan garantía por un equipo, esta oficina está ubicada en México.

Importante:

1. **Gestión de EMAT:** Como distribuidor, EMAT solo puede intervenir en el paso 1 del proceso de Garantías (Generación de Ticket) y, por políticas de Huawei, a partir de este cada etapa se realiza entre el Cliente y TAC.
2. No existe un tiempo estimado de respuesta para la resolución del proceso de garantía, ya que esta varía según cada caso en específico y sus necesidades puntuales.

Gracias, y recuerda:

No siempre lo que creemos que puede proteger o cuidar nuestra instalación está avalado por el fabricante





 +56 9 3305 0429

 info@ematchile.com

 ematchile.com

EMAT Chile



Comercial: Av. Andrés Bello 2711, Oficina 1801, Las Condes, Santiago
Logística: Camino Lo Echevers 901, Quilicura.