TECO
together, we empower the Future

PCS
Power Conditioning System

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Power Conditioning System

To support the global energy transition and the rapid growth of energy storage applications, TECO leverages decades of experience in power electronics and automation to introduce a high-efficiency Power Conditioning System (PCS). This system provides a stable and reliable core solution for smart energy applications.

The PCS supports bidirectional power conversion and is suitable for various scenarios, including energy storage stations, commercial and industrial facilities, and microgrid systems.

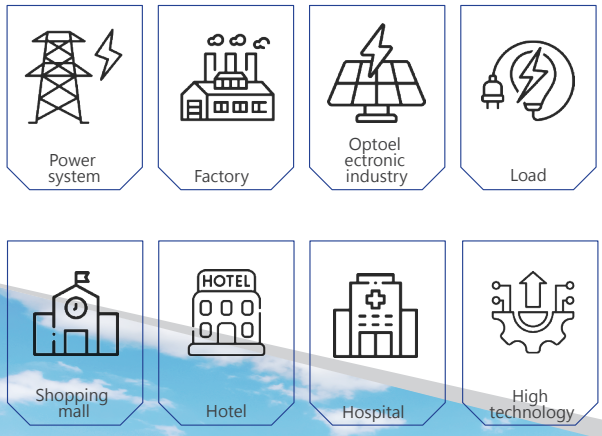
Driven by the mission to become a key enabler of global electrification, intelligent transformation, and green energy transition, TECO continuously advances its PCS development to align with international standards and meet diverse global market needs.

Through technological innovation and cross-industry collaboration, TECO partners with stakeholders worldwide to accelerate the transition to a sustainable and low-carbon future.

Product Features

- 99% bidirectional conversion efficiency
- Can be integrated with various types of battery systems
- Wide DC voltage range enables more flexible battery configuration.
- Equipment miniaturization, saving floor space
- Supports VSG and black start f unctionality
- Compact design to save installation space
- Multiple safety protections
- Remote monitoring and communication integration

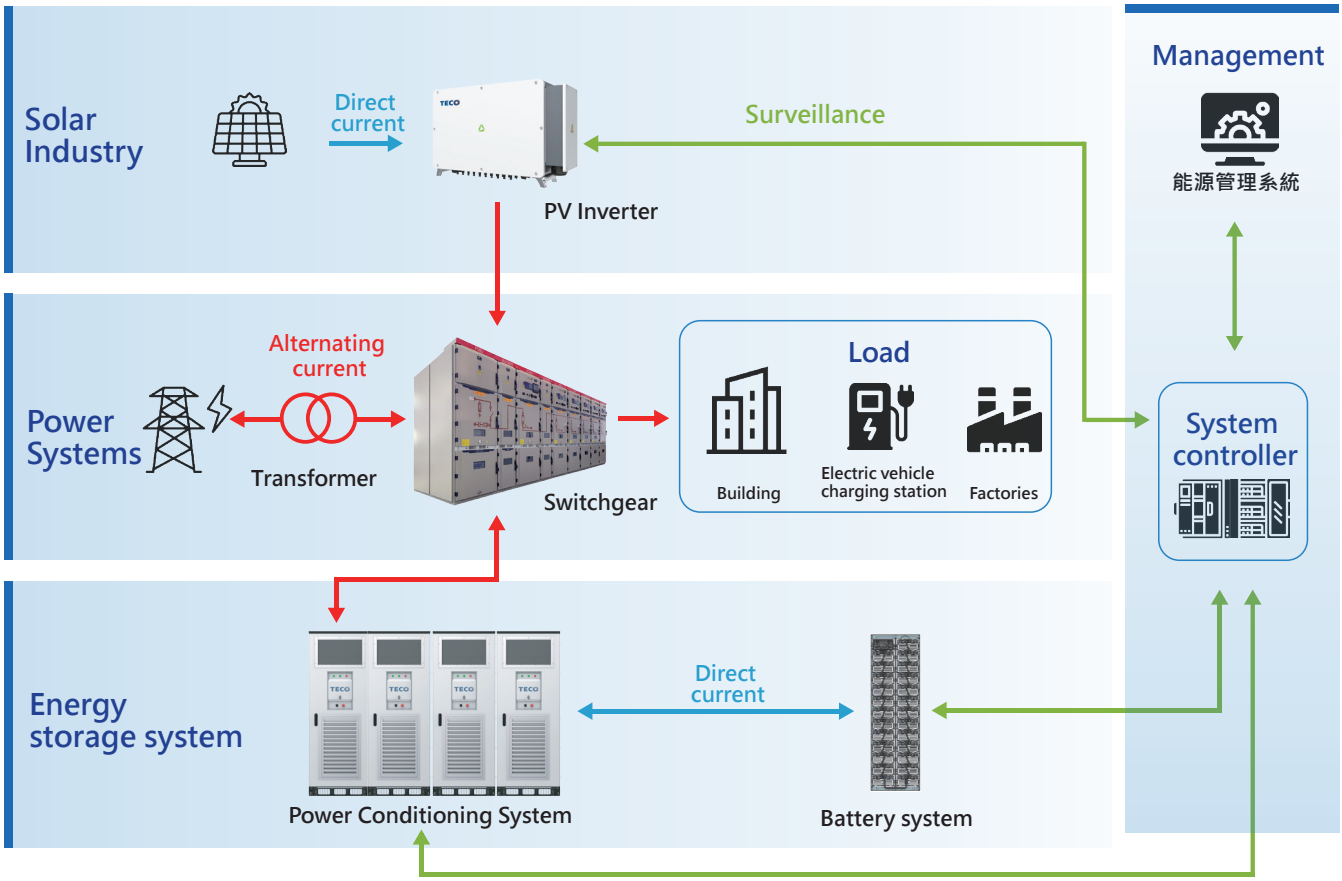
Application Areas



Key Specifications:

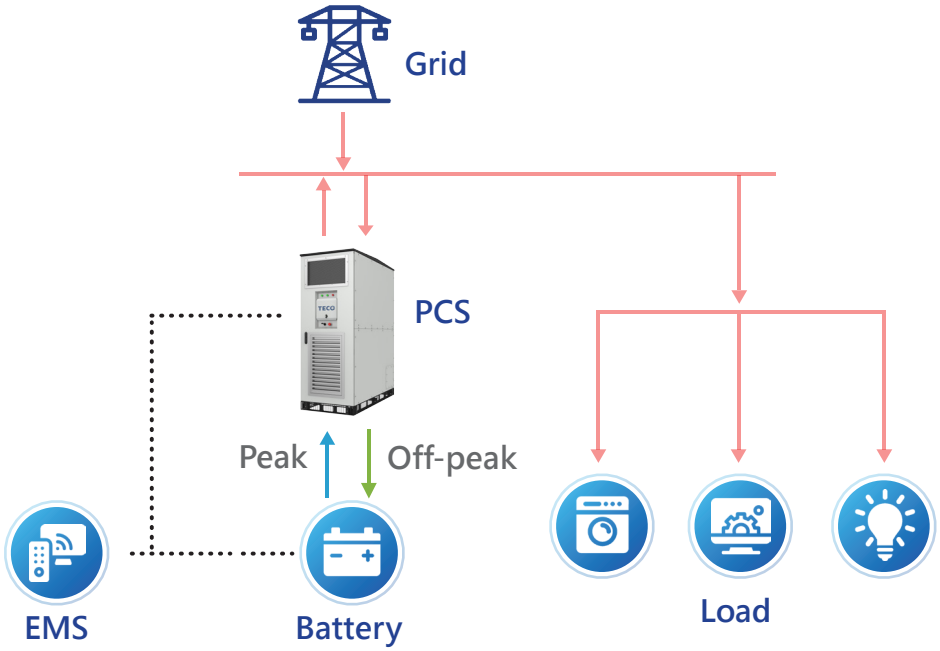
Rated AC Output Power	1250kW、1500kW、1725kW
DC Voltage Range	1000~1500V
Rated AC Voltage	690V±10%
Output Accuracy	1%
Max. Eff.	>99%
Harmonics Voltage	<3%
Harmonics Current	<3%
Response Time	≦200mS (Fully loaded)
Standby Loss	<200W
Protection Level	IP55、IP65
Communication Protocols	Modbus-RTU、Modbus-TCP、IEC 61850

Application Areas



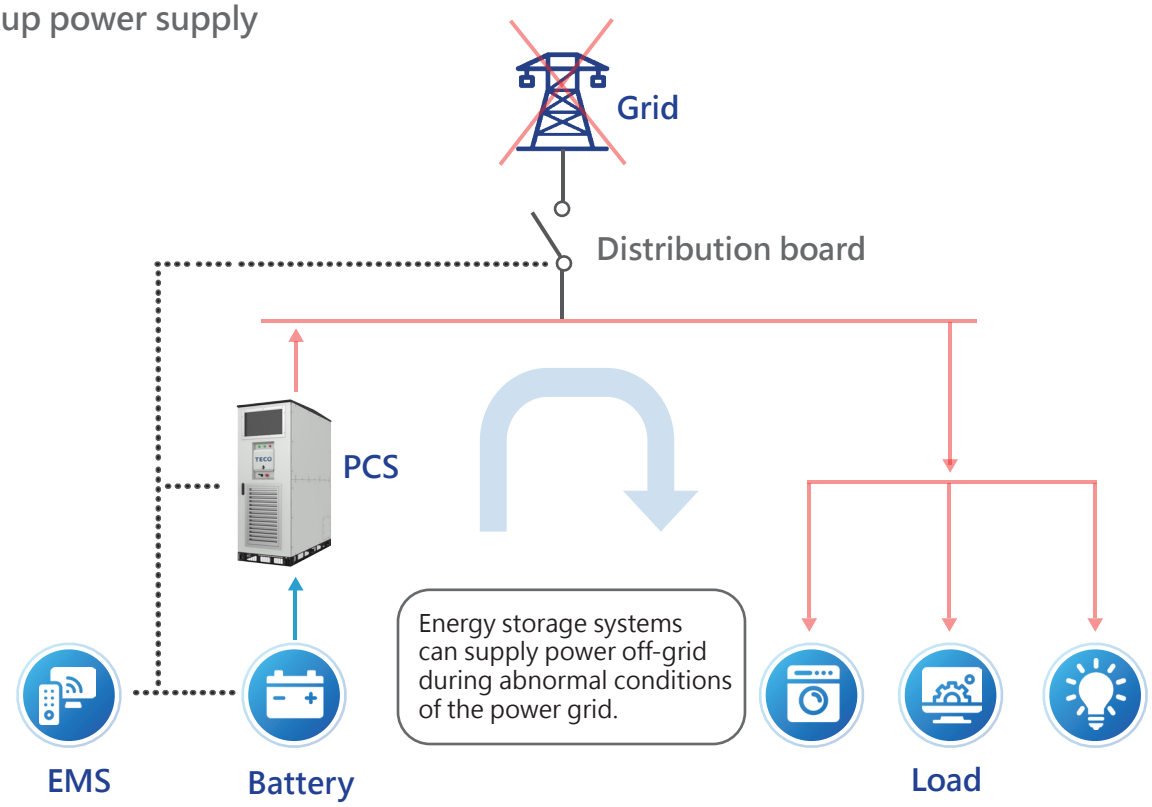
Application 1

Time-based Electricity Pricing Management / Energy Arbitrage



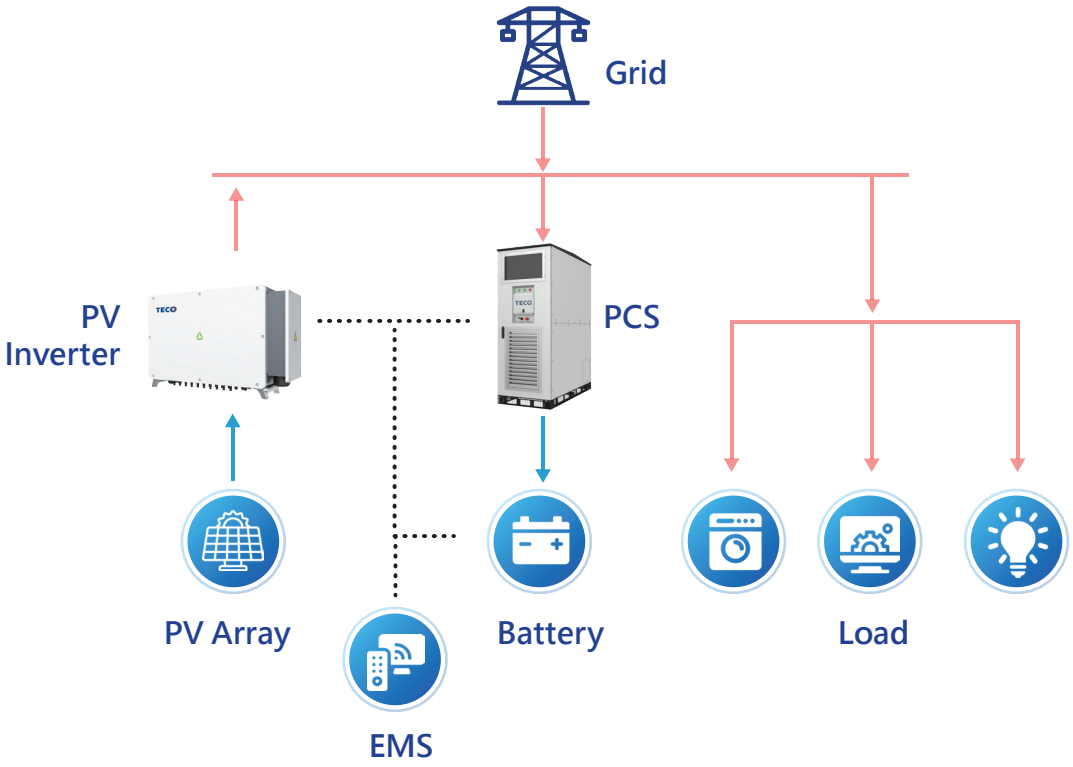
Application 2

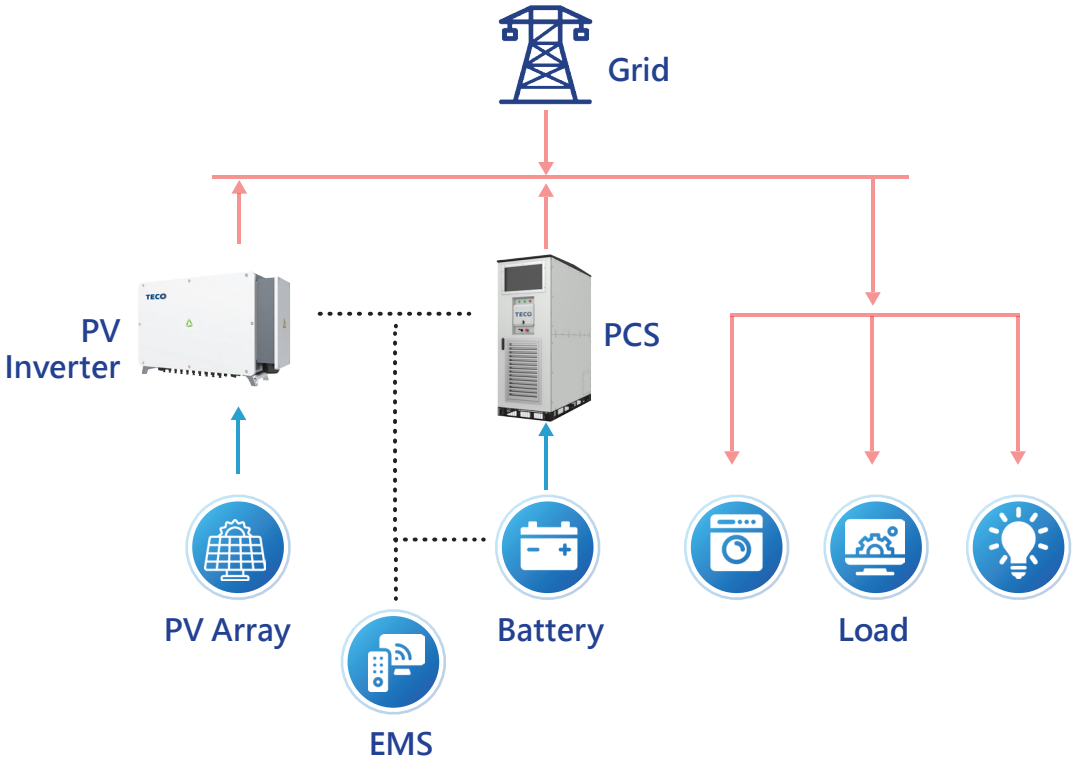
Backup power supply



Application 3

Increase the proportion of self-use of photovoltaics



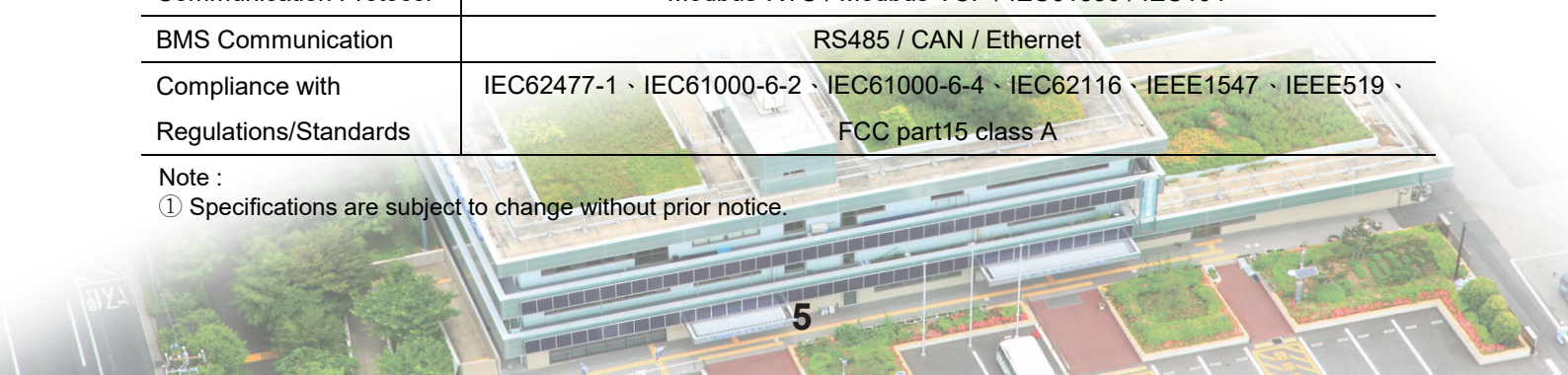


Solar power generation > load, PCS charging
Solar power generation < load, PCS charging, When the battery level is too low, power is supplied to the load by solar energy and the power grid.

Specifications:

Model	TE-PCS-1250K-OTL	TE-PCS-1500K-OTL	TE-PCS-1725K-OTL
DC side			
Max DC Voltage	1500Vdc		
DC Voltage Range	800/900/1000～1500Vdc	900/1000～1500Vdc	1000～1500Vdc
Max DC Currnet	1754A	1870A	1936A
AC side			
Rated AC Output Power	1250kW	1500kW	1725kW
Rated AC Voltage	550Vac±10% @800～1500Vdc 600Vac±10% @900～1500Vdc 690Vac±10% @1000～1500Vdc	600Vac±10% @900～1500Vdc 690Vac±10% @1000～1500Vdc	690Vac±10%
Max.AC Output Current	1443A	1588A	1588A
Frequency	50Hz / 60Hz		
Current THDi	<3% (rated power)		
Power Factor(@rated Power)	0～1 (leading and lagging)		
Efficiency			
Max. Eff.	99.01%		
CEC Eff	98.54%		
Standby Loss	<200W		
Body Design			
Dimension(W×H×D)	860×2270×1725mm (IP55)		
Weight	1550kg		
Ingress Protection	IP55		
Cooking Type	Air cooling		
Environment			
Operation temperature	-35℃～60℃ (≧45℃ derating)		
Humidity	0~100% (no condensing)		
Altitude	4000m (>2000m derating)		
Acoustic Noise	≦80dB @1m		
Others			
Communication Protocol	Modbus-RTU / Modbus-TCP / IEC61850 / IEC104		
BMS Communication	RS485 / CAN / Ethernet		
Compliance with Regulations/Standards	IEC62477-1、IEC61000-6-2、IEC61000-6-4、IEC62116、IEEE1547、IEEE519、FCC part15 class A		

Note :
① Specifications are subject to change without prior notice.



Certifications

Compliant with multiple international standards

IEC 61000-6-2 (Electromagnetic Compatibility)

IEC 61000-6-4 (Electromagnetic Compatibility)

IEC 62116 (Island Effect)

IEC 62477-1 (Safety)

IEEE 1547 (Grid Connection)

IEEE 519 (Power Quality)

FCC part15 class A (U.S. EMC certification)

CERTIFICATE

No. B 004289 0015 Rev. 00

Holder of Certificate: Teco Electric & Machinery Co., Ltd.
Hu-Kou Plant No.15, Chung Hwa Rd., Hsinchu Industrial Park
303 Hsinchu
TAIWAN

Certification Mark:

Product: Converter
Power Conversion System

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 704092346105-00

Valid until: 2028-08-15

Date, 2023-08-30

(Zhengdong Ma)

Page 1 of 4
TÜV SÜD Product Service GmbH • Certification Body • Ridlerstraße 65 • 80339 Munich • Germany

Certificate No : L2362-230707

Accreditation Number : 2362
Laboratory Head : LIN, Chi-Hsing

◤ 31. 08 Electrical power equipment
High Voltage Switch Board/Panel
E006
a.Design and visual checks
b.Dielectric tests on the main & auxiliary circuit
c.Measurement of the resistance of the main circuit
d.Mechanical operation tests
e.Verification of the correct wiring and electric operation test
(include tests of auxiliary and control correct)
CNS 3990 (1995)
CNS 3991 (1995)
IEC 62271-1 (2017)
IEC 62271-200 (2021)
CNS 15156-200 (2022)
IEC 62271-1 (2011)
IEC 62271-200 (2011)
CNS15156-200 (100)
3 φ 36 kV Max., 2500 A Max., 60 Hz

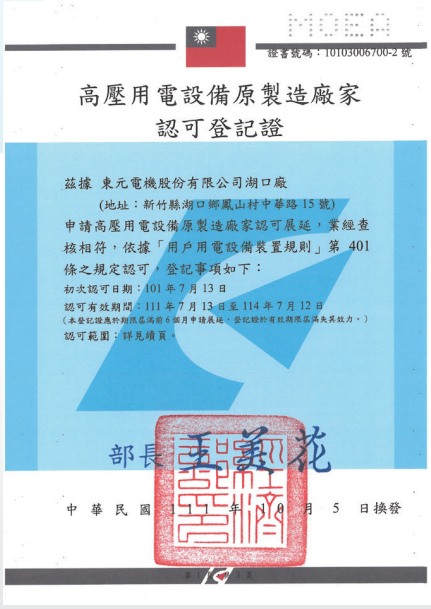
Approval Signatory: KUANG, Yu-Neng; LIN, Chi-Hsing; PENG, Chih-Min

◤ 31. 12 Electrical power equipment
Low voltage switch Panel
E007
a.Design and visual checks
b.Mechanical operating tests
c.Sequence test
d.Dielectric test (power frequency voltage test)
CNS 13542
CNS 13543
1 φ/3 φ 600 V Max., 6000 A Max., 60 Hz

Approval Signatory: KUANG, Yu-Neng; LIN, Chi-Hsing; PENG, Chih-Min

(Null below)

P2, total 2 pages
The Appendix forms an integral part of this Certificate, which shall be invalid when use without the Appendix



證書號碼：101030006700-2 號

高壓用電設備原製造廠家
認可登記證

茲據 東元電機股份有限公司湖口廠
(地址：新竹縣湖口鄉鳳山村中華路 15 號)
申請高壓用電設備原製造廠家認可展延，業經查核相符，依據「用戶用電設備裝置規則」第 401 條之規定認可，登記事項如下：
初次認可日期：101 年 7 月 13 日
認可有效期間：111 年 7 月 13 日至 114 年 7 月 12 日
(本登記證應於期限屆滿前 6 個月申請展延，登記證於有效期限屆滿失其效力。)
認可範圍：詳見續頁。

部長 王美花

中 華 民 國 1 1 2 年 1 0 月 5 日換發

Certificate

Standard ISO 9001:2015

Certificate Registr. No. 01 100 822 1633191

Certificate Holder: TECO Electric & Machinery Co., Ltd.
Energy Products Business Unit Hukou Plant
No. 15, Chung Hwa Rd., Hsinchu Industrial Park, Hsinchu County 303, Taiwan, R.O.C.

including the locations according to annex

Scope: Design/Development, Sale, Production and Servicing of High/Low Voltage Switchgear, Motor Starter and Control Panel, Distribution Panel, Gas Insulated Switch Equipment, Distribution Line (Gas Seal) Switch Equipment, Vacuum Insulated Switch Equipment, Lightning Arrester, Smart Distribution System, Electric Vehicle Recharging, Magnetic Starters (include Thermal Overload Relays, Magnetic Contacts), Circuit Breakers (include Molded Case Circuit Breakers, Leakage Current Protective Devices), Power Conversion System
Design/Development, Sales and Servicing of Engine-Generator Set, Generator, Motor-Generator Set.

Proof has been furnished by means of an audit that the requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2024-01-18 until 2027-01-17.
It remains valid subject to satisfactory surveillance audits.
First certification 2016

2023-12-20

TÜV Rheinland Taiwan Ltd.
11F, No. 758, Sec. 4, Bade Rd., Taipei 105, Taiwan

www.tuv.com

TÜVRheinland®
Precisely Right.

CERTIFICATE

TECO

TECO Electric & Machinery Co., Ltd.

5F, No. 19-9, San Chong Rd., Nan-Kang, Taipei 11501, Taiwan (R.O.C.)
Tel 886-2-26553333 ext 3380

About TECO

About IE