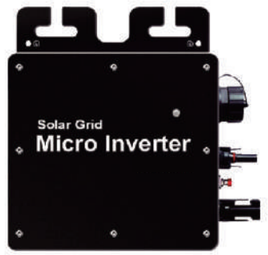
HECHENG
Electric

CONTACT US

ZHEJIANG HECHENG SMART ELECTRIC CO.,LTD
ADD: NO. 1125, ZHIXING STREET,QIAONAN DEVELOPMENT ZONE, XIAOSHAN ECONOMIC AND TECHNOLOGICALDEVELOPMENT ZONE, HANGZHOU,ZHEJIANG,CHINA
WEBSITE: WWW.HECHENG-ELECTRIC.COM
WWW.H6T.COM
TEL: +86 132 1617 9977
EMAIL: SALES@HECHENG-ELECTRIC.COM

HECHENG
Electric

PHOTOVOLTAIC MODULE



MICRO INVERTER SERIES

PV OPTIMIZER SERIES

RAPID SHUTDOWN SERIES

PV COMBINER-BOX SERIES

PV FUSES SERIES

DC CIRCUIT BREAKET SERIES

SURGE PROTECTION SERIES

CONTENTS

HECHENG Electric

Our Vision:
To be the world's leading supplier focused on HVAC/R and new energy electrical solutions.

Our Mission:
Stick to the original heart and make better products.

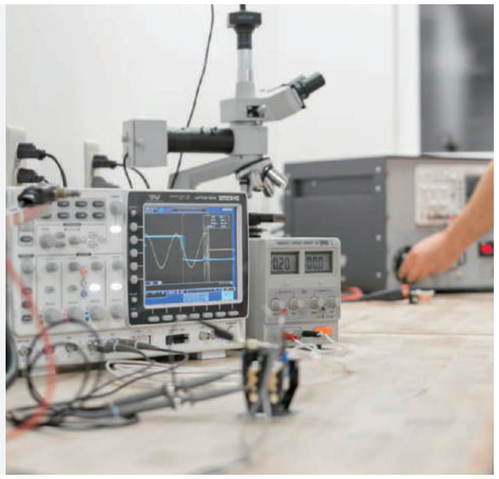
Our Values:
Customer-oriented, Persistent struggle.
Harmony and cooperation, sincerity and trustworthiness.

About US

Zhejiang Hecheng Smart Electric Co., Ltd., founded in 2004, is now headquartered in Xiaoshan Economic and Technological Development Zone, Hangzhou, ZhejiangProvince, covering an area of 30,000 $m^2$with another two manufacturing sites located in Mingguang City Anhui Province and Yueqing City Zhejiang province.

As a global leading supplier in renewable energy and industrial control solutions, Hecheng Electric focuses on electrical applications in such areas as HVAC/R, electricvehicle, solar photovoltaic system, energy storage system, industrial control etc. Our product line includes high voltage DC relays / contactors, high voltage DC fuses,UL 489 circuit breakers, DP contactors, A/C disconnect switches, pull-out switches, IEC industrial contactors, micro inverters,PV rapid shutdown, solar optimizer, DCminiature circuit breakers, surge protection devices, combination boxes etc. most of which are granted internatioanl certifications like UL, CSA, INTERTEK, CE, CB,TUV,etc. and also REACH&ROHS compliant . Hecheng Electric is certified by ISO9001 system. PLM+ERP+MES system ensures the digitalization and intelligence of ourfactory production, enabling the traceability of our R&D, manufacturing and selling processes.

We have rich experience in producing and trading with automatic production lines, advanced laboratories, professional and responsive R&D and sales team. As an18-year professional manufacturer and exporter, you can get the best quality products and the most competitive price here.



HECHENG Electric

Headquarters

Zhejiang Hecheng Electric Co.,Ltd
Email: sales@hecheng-electric.com
Phone: +86 132 1617 9977
Address: No. 1125, Zhixing Road, Qiaonan Development Zone,
Xiaoshan Economic and Technological Development Zone Hangzhou

Hvacstar

Factories

Mingguang Hecheng Electric Co.,Ltd.
NO.21 Hongwu Road,Mingguang Industry Park,
Mingguang City,Anhui

Yueqing HeCheng Electrical Co.,ltd
Add:538# Dongdajie, Beibaixiang, Baitawang Industrial Zone,
Wenzhou, Zhejiang, China, 325603

Why Choose Us?

24/7 Emergency Callout

18 years OEM production experience ensure quality products with quick delivery time.

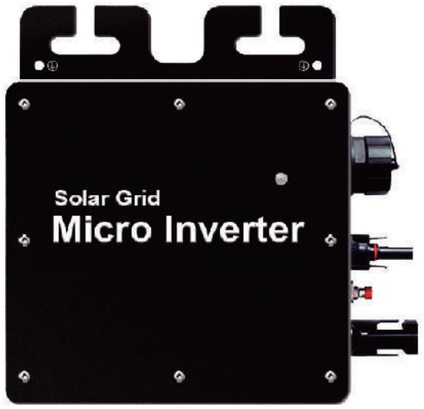
Fully Qualified & Insured

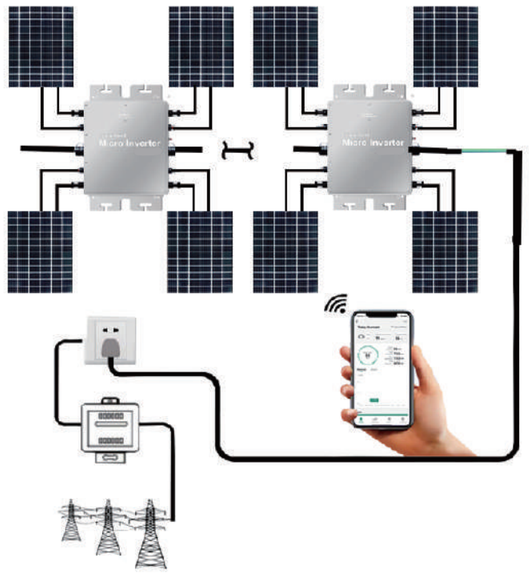
We adopt ISO 9001:2008 System, We use PLM+ERP System for R&D and production control to ensure quality.

Certification

Before marketing, Whole products approved by UL、CSA、TUV、CCC、CE and necessary testing

MICRO INVERTER Series





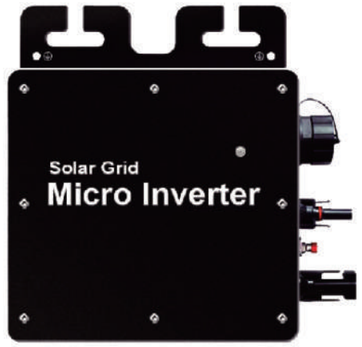
Features

- ♦ WIFI communication and cloud monitoring
- ♦ Single phase output; Flexible 3-phase PV system
- ♦ Customized various input (DV PV) voltage range
- ♦ Nominal MPPT Efficiency: 99.5%
- ♦ Isolated Island Protection;Voltage Protection
- ♦ Frequency Protection; Temperature
- ♦Protection;Current Protection
- ♦ Low cost; Easy installation

Standards/Approvals

CE

MICRO INVERTER Series HCMI-400



MICRO INVERTER Series HCMI-600

Technical Specifications

Model	HCMI-400	HCMI -600
Input Data (DC, PV)		
Number of Input MC4 Connector	1 sets	2 sets
MPPT Voltage Range	22V-48V	22V-48V
Operation Voltage Range	22-50V	22-50V
Maximum Input Voltage	52V	52V
Startup Voltage	22V	22V
Maximum input power	400W	600W
Maximum input Current	12A	12A*2
Output Data(AC)		
Single-Phase Grid Type	120V&230V	120V&230V
Rated Output Power	400VA	600VA
Maximum Output Power	400VA	600VA
Nominal Output Current	@120VAC:5A/@230VAC:2.6A	@120VAC:5A/@230VAC:2.6A
Nominal Output Voltage	120VAC /230VAC	120VAC /230VAC
Default Output Voltage Range	@120VAC:80V-160V/@230VAC180V-270V	@120VAC:80V- 160V/@230VAC:180V
Nominal Output Frequency	50Hz / 60Hz	50Hz / 60Hz
Default Output Frequency Range	@50Hz:51Az/@60Hz:58Hz-61Hz	@50Hz:51Az/@60Hz:58Hz-61Hz
Power Factor	>99%	>99%
Total Harmonic Distortion	THD <5%	THD <5%
Maximum Units per Branch	@120VAC:5units /@230VAC: 10units	@120VAC:5units /@230VAC: 10units
Eifficiency		
Nominal MPPT Efficiency	99.5%	99.5%
Peak Efficiency	95%	95%
Night Power Consumption	<1W	<1W
Other Features		
Communication	WIFI(Cloud monitoring)	WIFI(Cloud monitoring)

MICRO INVERTER series

MICRO INVERTER Series HCMI-800

MICRO INVERTER Series HCMI-1200

Technical Specifications

Model	HCMI-800	HCMI-1200
Input Data (DC, PV)		
Number of Input MC4 Connector	2 sets	4sets
MPPT Voltage Range	22V-48V	22V-48V
Operation Voltage Range	20-50V	22-50V
Maximum Input Voltage	52V	52V
Startup Voltage	22V	22V
Maximum input power	800W	1200W
Maximum input Current	12A*2	15A*4
Output Data(AC)		
Single-Phase Grid Type	120V&230V	120V&230V
Rated Output Power	800VA	1200VA
Maximum Output Power	800VA	1200VA
Nominal Output Current	@120VAC:5A/@230VAC:2.6A	@120VAC:5A/@230VAC:2.6A
Nominal Output Voltage	120VAC /230VAC	120VAC /230VAC
Default Output Voltage Range	@120VAC:80V-160V/@230VAC:190V-270V	@120VAC:90V-160V /@230VAC:190V-270V
Nominal Output Frequency	50Hz / 60Hz	50Hz / 60Hz
Default Output Frequency Range	@50Hz:48Hz-51Hz/@60Hz:58Hz-61Hz	@50Hz:48Hz-51Hz/@60Hz:58Hz-61Hz
Power Factor	>99%	>99%
Total Harmonic Distortion	THD <5%	THD <5%
Maximum Units per Branch	@120VAC:5units /@230VAC: 10units	@120VAC:5units /@230VAC: 4units
Eiff diency		
Nominal MPPT Efficiency	99.5%	99.5%
Peak Efficiency	95%	95%
Night Power Consumption	<1W	<1W
Other Featur e		
Communication	WIFI(Cloud monitoring)	WIFI(Cloud monitoring)

MICRO INVERTER series

MICRO INVERTER Series HCMI-1400

MICRO INVERTER Series HCMI-1600

Technical Specifications

Model	HCMI-1400	HCMI-1600
Input Data (DC, PV)		
Number of Input MC4 Connector	4sets	4sets
MPPT Voltage Range	22V-48V	22V-48V
Operation Voltage Range	22-50V	20-50V
Maximum Input Voltage	52V	52V
Startup Voltage	22V	22V
Maximum input power	1400W	1600W
Maximum input Current	15A*4	15A*4
Output Data(AC)		
Single-Phase Grid Type	120V&230V	120V&230V
Rated Output Power	1400VA	1600VA
Maximum Output Power	1400VA	1600VA
Nominal Output Current	@120VAC:5A/@230VAC:2.6A	@120VAC:5A/@230VAC:2.6A
Nominal Output Voltage	120VAC /230VAC	120VAC /230VAC
Default Output Voltage Range	@120VAC:90V-160V/@230VAC:190V-270V	@120VAC:90V-160V /@230VAC:190V-270V
Nominal Output Frequency	50Hz / 60Hz	50Hz / 60Hz
Default Output Frequency Range	@50Hz:48Hz-51Hz/@60Hz:58Hz-61Hz	@50Hz:48Hz-51Hz/@60Hz:58Hz-61Hz
Power Factor	>99%	>99%
Total Harmonic Distortion	THD <5%	THD <5%
Maximum Units per Branch	@120VAC:2units /@230VAC: 4units	@120VAC:2units /@230VAC: 4units
Eifficiency		
Nominal MPPT Efficiency	99.5%	99.5%
Peak Efficiency	95%	95%
Night Power Consumption	<1W	<1W
Other Features		
Communication	WIFI(Cloud monitoring)	WIFI(Cloud monitoring)

HCPO1 PV Optimizer

Features&Benefits:

- 3% ~ 25% optimization, retrieve power generation loss;
- Δ < 10℃ Anti-Hotspot, more safe and durable;
- Applies to all types of modules, Optimization +VoltageLimiting +Anti-Hotspot;
- Based on power optimization chip, eliminate panel or cell level mismatch;
- Solve the current mismatch issues caused by shading gradients, agingvariations, temperature gradients, soiling gradients, etc;
- Optimize power generation, lower LCOE, improve solar system reliability, extendthe service life of module;
- Certification： TUV

Standards/Approvals

TÜVRheinland®

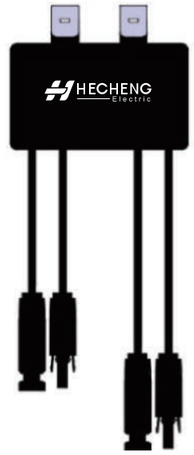
Characteristic parameters

Product Model	HCPO1-600	
Input Parameter	Maximum Input Power	600W
	Maximum Input Voltage	80V
	MPPT Voltage Range	8~80V
	Maximum input Current	15A
	Over-current Protection	18A
	Over-temperature Protection	160℃
Output Parametrt	Maximum Output Current	17A
	Maximum Output Voltage	80V
	Total Maximum System Voltage	1500V
Conversion Efficiency	Peak Conversion Efficiency	99.50%
	Power Consumption @5A	0.9W
	Power Consumption @8A	1.4W
	Power Consumption @12A	2.9W
	Power Consumption @15A	3.8W
Specifications	Dimensions(L*W*H)	105*105*20mm
	Weight	500g
	Cable	4.0mm²
		Input Wire 50cm*2Pcs
		Output Wire 70cm*2Pcs
	Connector	MC4 or compatible MC4
	Operating Temperature Range	-40℃~+85℃
	Protection Degree	IP68
Design Standard	Designed Life	25 Years
	Quality Commitment	10 Years
Functiom	Standard Features	Optimization |Anti-Hotspot

HS4-A-O Smart Solar Optimizer

Features&Benefits

- Rapid shutdown, recovery power generation loss 3%~25%
- With wireless 2.4GHz communication
- Real-time monitoring of monolithic photovoltaic panel power generation
- Voc limit function for longer string
- Maximum input power: 800Wp
- Δ < 10℃ None-Hotspot, more safe and durable
- Certification: TUV



Standards/Approvals

TÜVRheinland®

Characteristic parameters

Product Name:	HS4-A-O
Maximum Input Power	800Wp
Operating Voltage Range	7-70V
MPPT Voltage Range	7-70V
Maximum input Current	20A
Over-current Protection	25A
Over-temperature Protection	150℃
Maximum Output Current	22A
Output Voltage Limit	42V
Maximum System Voltage	1500V
Serial connection of 72-cell module@1500V	36 modules
Serial connection of 72-cell module@1100V	26 modules
Serial connection of 72-cell module@1000V	24 modules
Peak Conversion Efficiency	99.5%

Data Collector series

HS4-A-M Solar Communication Gateway

Features&Benefits

Mode	HS4-A-M
Communication mode	4G/WiFi wireless communication
Maximum number of nodes	500
eSIM/SIM card	Yes
Rated power	< 0.5W
Input voltage range	20~60V
Maximum input current	20A
Maximum communication distance	100m
Current detection accuracy	±0.1A
Voltage detection accuracy	±0.2V
Temperature detection accuracy	±2℃
Maximum system voltage	1500V
Level of protection	IP68

The Product is Combined with HS4-A-O to Work

App or Website

APP download and registration

Download the mobile APP "Solar Point"

from the mobile app store or the official website.

The download address is:

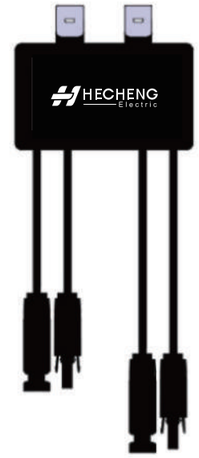
https://www.spo.cn/#/support/download

Mobile APP registration. Or register at https://www.spo.cn/#/register

Wechat Mini Program

RAPID SHUTDOWN series

HS4-A Shutdown



Features&Benefits:

- Low MOSFET Rdson,
- PLC communication , no peripheral signal cable;
- MINI type shell design, easy installation;
- Compatible with short circuit,
- reverse irrigation design, high reliability;
- A low-cost, high-efficiency, 25-year life design.

Standards/Approvals

- NEC 2020 690.12
- SUNSPEC
- TUV
- CSA

Standards/Approvals

TÜVRheinland

C SA US

Characteristic parameters

Product Model	HS4-A-F	HS4-A-2F
Sunspec agreement	Yes	Yes
Rated power	800W	1600W
Length of Cable	Input Wire Output Wire	
RSS system voltage	1000V/1500V (Optional)	
Maximum input voltage	110V	
Maximum input current	20A	
Maximum input power	800W	1600W
Start-up voltage	9.5V	
Mode of communication	PLC	
Degree of protection	IP68	
Storage and operating temperature	-40 C ~ 85 C	
Connector	MC4 or compatible MC4	
Execution standards	UL 1741/NEC 2020 690.12	

RAPID SHUTDOWN series

HCPS1 PV Shutdown

Features&Benefits:

- ♦ Low internal resistance MOSFET switch, low temperature rise, no arc pulling and no sputtering;
- ♦ PLC communication technology, no peripheral signal cable;
- ♦ MINI type shell design, frame snap-on insertion, easy installation;
- ♦ Reverse polarity protection, compatible with short circuit, reverse irrigation design, high reliability;
- ♦ A low-cost, cost-effective, 25-year life design.

Standards/Approvals

- ◇ NEC 2020 690.12
- ◇ SUNSPEC
- ◇ TUV
- ◇ CSA

Standards/Approvals

TÜVRheinland®

C SA® US

Characteristic parameters

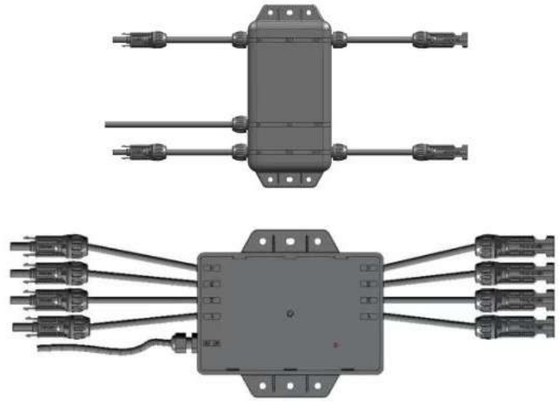
Product Model	HCPS1-01	HCPS1-02
Sunspec agreement	Yes	No
Rated DC Current	16A	
Length of Cable	Input Wire 100 cm * 2Pcs Output Wire 70 cm* 2Pcs	
RSS system voltage	1000V/1500V (Optional)	
Maximum input voltage	80V(Io=0)	
Maximum input current	20A	
Maximum input power	750W	
Start-up voltage	12V	
Rated current	16A	
Rated power	600W	
Mode of communication	PLC	
Degree of protection	IP68	
Storage and operating temperature	-40 C ~ 85 C	
Connector	MC4 or compatible MC4	
Execution standards	UL 1741/NEC 2017 690.12	

HCPT1 PV TRANSMITTER series

HCPT1 PV Transmitter

Product description

This product acts on the switching device at the component level and defaults to the off state. When receiving the transmitted signal of the incoming controller, the component string channel is opened and the inverter operates normally; When the transmitsignal is not received, the MOSFET is quickly turned off, and the component string channel is also closed, so that the system high voltage is reduced to less than 30V within 30S to ensure the safety of fire fighting and installation and maintenance personnel.



Standards/Approvals

TÜVRheinland®

C SA® US

The Product Is Combined With HCS4-A-F, or HCS4-A-2F ,or HCPS1 To Work

Transmitter	HCPT1-01	HCPT1-02
Working line	4 road	2 road
Sunspec agreement	Yes	No
Operating voltage range	100V-240V 50-60Hz	
Waterproof rating	IP67	
Dimensions (length, width and height)	169.5mm*146.5mm*35mm	
Weight	520g	
Operating temperature range	-40 C-+65 C	
PLC communication distance	300m	
Connector	MC4 or compatible MC4 compatible	

PV Combiner-Box series

PV Combiner-Box

Customized/certified according to customer requirements
Short circuit protection, overload protection, lightning protection
Support data monitoring: power generation, current, voltage, temperature, fault alarm

Combiner Boxes

	HCS-PV1~16/1~2
PV surge protection combiner box (intelligent)	1 string~16 string
PV String Input	
VDC)Input Voltage VDC)	0--1500
Input	1 string~16 string
A Max.input current of single string	20
Input fuse per string(optional)	15A/20A
Input anti-reverse protection of single string	Anti-reverse diode：55A/1600VDC
Input cable sheath of single string	PG9:1*4mm²
Remote Monitoring and Protection	
Total output	1 string、2 string
Total circuit breaker output protection	YES
Surge protection device (SPD)	YES
Total overcurrent output protection	YES
Remote monitoring (optional)	YES
Monitoring data information collection (optional)	Input current of single string· Total output voltage· Internal temperature of the box· SPD status· Circuit breaker status· Error alarm· Power generation statistics·
Power supply mode for Collector (optional)	Self powered
Total output cable sheath	PG21:13-18mm²/PG36：22-32mm² （Size is optional
Ground cable sheath	PG21:13-18mm²
General Data	
Reference dimension Reference weight	Refer to installation dimension drawing
Cooling method	Air cooling
Relative humidity	0~95%
Installation Environment	Indoor or out door
Installationmethod	Wall mounting
IPdegree	IP65
Noise	≤ 30
Altitude	≤ 2000
Operating temperature	-20~+60

PV FUSES series

HCPVT1000-10R Series

Features&Benefits:

- The HCPVT1000 solar fuse is designed to integrate into an in-line assembly within a wire harness.no arc pulling and no sputtering;
- The fuse provides photovoltaic(PV)protection that meets UL 248-19 for photovoltaic applications.
- The Can be electrically insulated by eitherover molding or using heat-shrink.
- Same time Meets IEC 60269-6 electrical performance requirement.

Standards/Approvals

- ◇ REFER TO UL-248-19/IEC 60269-1/6
- ◇ REACH DECLARATION AVAILABLE UPON REQUEST
- ◇ ROHS COMPLIANT

Fuse Ratings

Part No.	Fuse Amps	Average @30KA/1000Vdc		Power Loss (W)		Approvals
		A²s Melting	A²s Clearing	80%	100%	UL
HCPVT1000-10A-10R	10	210	1175	1.1	1.5	○ Pending
HCPVT1000-12A-10R	12	252	1405	1.3	1.7	○ Pending
HCPVT1000-15A-10R	15	315	1757	1.6	2.3	○ Pending
HCPVT1000-16A-10R	16	326	1780	1.6	2.3	○ Pending
HCPVT1000-20A-10R	20	420	2340	2.1	2.9	○ Pending
HCPVT1000-25A-10R	25	525	2929	2.7	3.5	○ Pending
HCPVT1000-30A-10R	30	630	3515	3.2	4.2	○ Pending
HCPVT1000-32A-10R	32	890	3995	4	5.3	○ Pending
HCPVT1000-35A-10R	35	975	4545	4.6	6.2	○ Pending

Ferrule xxA-10R

✧ DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25℃ ;

DC CIRCUIT BREAKET series

HCDB1-63H

Features&Benefits:

- Overload and the short circuit protection function
- Non-polarity and Polarity both available
- Designed for PV, energy storage and other DC applications

Standards/Approvals

Characteristic Parameters

Pole	1P	2P	3P	4P
Rated Oporational Voltage	250VDC	500 VDC	750 VDC	1000 VDC
Frame Current	63A			
Rated Current	6/10/16/20/25/32/40/50/63A			
Rated Insulation Voltage	500V		1000V	
Rated Impulse Withstand Voltage	6kV			
Tripping Characteristics	B/C			
TrippingType	Thermal Magnetic			
Rated Utimate Short-Circuit Breaking Capacity	10kA			
Rated Service Short-Circuit Breaking Capacity	7.5kA			
Electrical Life	4000 Cycles			
Mechanical Life	20000 Cycles			
Overvoltage Category	III			
Pollution Degree	3			
Protection Degree	IP20			
Resistance to Humidity and Heat	Class 2			
Relative Humidity	≤ 95%			
Vibration	IEC 60068-2-6			
Shocks	IEC 60068-2-27			
Terminal Capacity	2.5~50mm^2			
Fastening Torque of Terminal	2.0~2.5N·m			
Ambient Temperature	-5°C~+40°C			
Storag Temperature	-25°C~+70 C			
Installation Method	DIN			
Altitude	≤ 2000m			
Dimension	Width (1 pole *Height*Depth: 18*87.5*76mm			
Weight	0.12kg/ Pole			

SURGE PROTECTION device

HCDSP

Product Type

- Location of Use: String box,Inverter
- Mode of Protection: (DC+)- PE, (DC-)- PE, (DC+)- (DC-)
- HCDSP2 Surge Ratings: I_n= 20 kA (8/20 μs)
  I_{total}= 40 kA (8/20 μs)
- HCDSP3 Surge Rating: I_{total} = 12.5 kA (10/350 μs)
  I_{total} = 40 kA (8/20 μs)
- Protective Elements: High Energy MOV
- Housing: Pluggable Design
- Compliance: IEC 61643-31
  EN 61643-31
  UL 1449 4th Editio

Standards/Approvals

Technical Specifications

IEC Electrical			HCDSP2			
HCDSP2 series			600	1000	1200	1500
Macimum Continuous Operating DC Voltage	(DC+) - PE, (DC-) - PE	U_{CPV}	600V	1000V	1200V	1500V
	(DC+) - (DC-)	U_{CPV}				
Nominal Discharge Current (8/20μs)		I_n	20kA			
Total Discharge Current (8/20 μs)		I_{Total}	40 kA			
Maximum Discharge Current (8/20 μs)		I_{max}	40 kA			
Voltage Protection Level	(DC+) - PE, (DC-) - PE	U_p	≤2200V	≤4000V	≤4400V	≤5200V
	(DC+) - (DC-)	U_p				
Response Time		t_A	< 25 ns			
Circuit Current Rating		I_{SCPV}	2000A			
Mechanical & Environmental			**HCDSP3**			
Operating Temperature Range		T_a	-40 ºF to +158 ºF [-40 ºC to +70 ºC]			
Permissible Operating Humidity		RH	5%...95%			
Atmospheric pressure and altitude			80k Pa ... 106k Pa / -500 m ... 2000 m			
Terminal Screw Torque		M_{max}	39.9 lbf·in [4.5 Nm]			
Conductor Cross Section (max)			2 AWG (Solid, Stranded)/ 4 AWG (Flexible) 35 mm 2 (Solid, Stranded)/ 25 mm 2 (Flexible)			
Mounting			35 mm DIN Rail, EN 60715			
Degree of Protection			IP 20 (built-in)			
Housing Material			Thermoplastic: Extinguishing Degree UL 94 V-0			
Thermal Protection			Yes			
Operating State / Fault Indication			Green ok / Red defect			
Remote Contacts (RC)			Option			
RC Switching Capacity			AC: 250V / 0.5 A; DC: 250V / 0.1 A; 125 V / 0.2 A; 75 V / 0.5			
RC Conductor Cross Section (max			16 AWG (Solid)/ 1.5 mm 2 (Solid)			