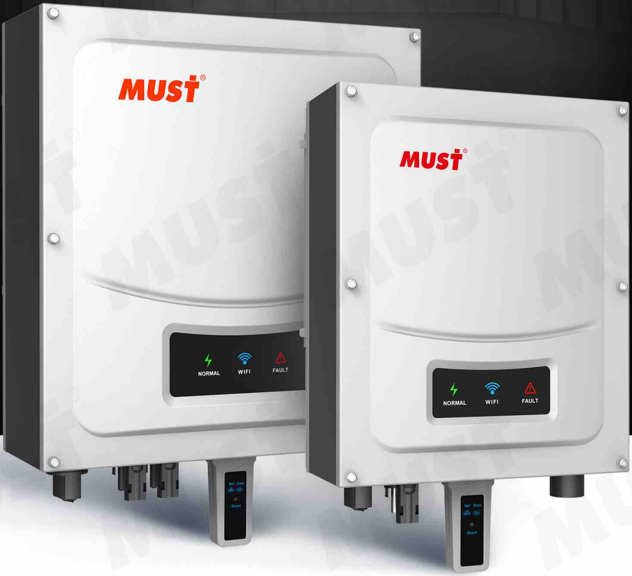
High Frequency on grid solar inverter

PH5000 SERIES(2.5-6KW)/230VAC



THREE COLORS OPTION

●	●	●
ORANGE	SILVER	GREEN

MUST

PH5000 series PV inverters take full account of the needs of end customers, with excellent performance at the same time, use LED as inverter status display, effectively improve product life. Using DSP digital control,could afford wide grid voltage range, have a full range of protection features; to maximize the benefits at the same time, greatly enhance the reliability of the product.

Features

- Rate power: 2.5-6KW
- Wide range of MPPT voltage 100-550V
- MPPT efficiency up to 99.50%
- Optional integrated anti-backflow control
- Multiple communications: USB,WIFI,GPRS etc
- Monitoring inverters freely via mobile phonese APP
- Continuous adjustable power factor
- Five year warranty

Pure sine wave

Multiple communication

High effciency

Low-noise

APP

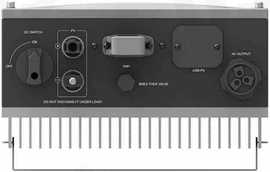
IP65

Appearance

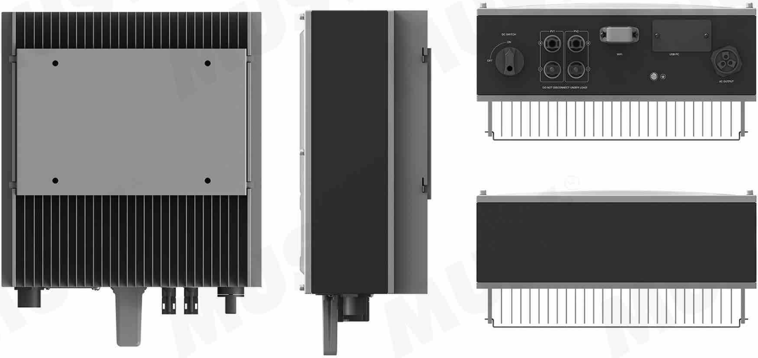
MUST

MUST

MUST
NORMAL
WIFI
FAULT
TMS320
F28034PN
G4
HXN 15-P
418014
Series MDC-1A-040-600
Rated operational data DC-21B
VDC(V) 600 1000
ADC(A) 40 25
MDC-1A-040-600
隔离开关
波兰制造
6103760000
(0417)



3KW

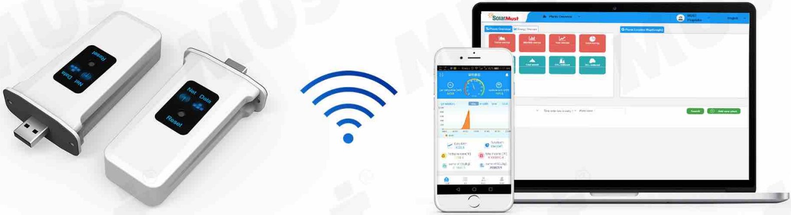


5KW

PRODUCT FEATURES

MUST® MUST® MUST® MUST®

SMART & INTELLIGENT FEATURES



Wifi communication

you can download this app on your cellphone and monitor the whole system, you will know how much electricity the system generate and sell to utility.

MUST

NORMAL
WIFI
FAULT

LED Display Panel

t can show the working status of machine simply and clearly with long lifespan.

MUST

Highly Efficient

They are the first choice when it comes to designing residential solar power plants with easy installation and maintenance in mind

NORMAL
WIFI
FAULT
EFFICIENCY
LEVEL
20
30
40
50
60
70
80
90
100
per cent
meter

PRODUCT DETAILS

MUST HELP YOU CONTROL EVERY DETAIL

Details reflect quality

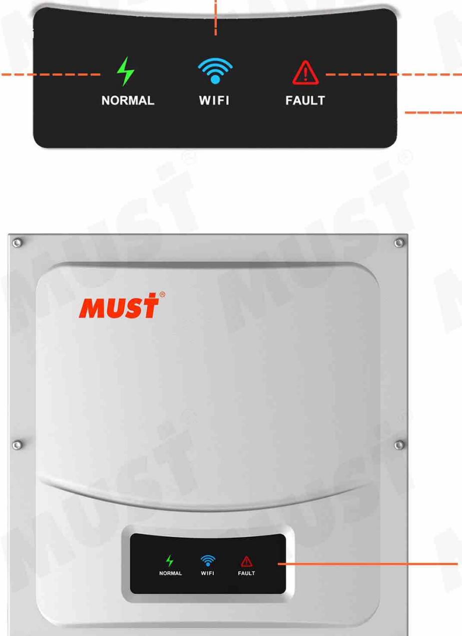
MUST

Green LED	Continuous light	Normal status
	Flicker	Waiting status
Blue LED	Flicker	Wifi normal communication
Red LED	Continuous light	Fault status
	Flicker	Program of procedure or give an alarm

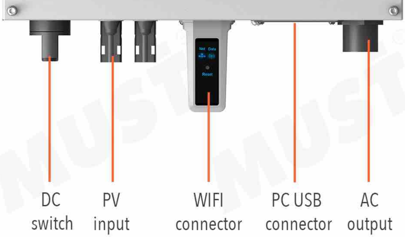
WIFI communication
(Blue)

Operation normal
(Green)

Error display
(Red)

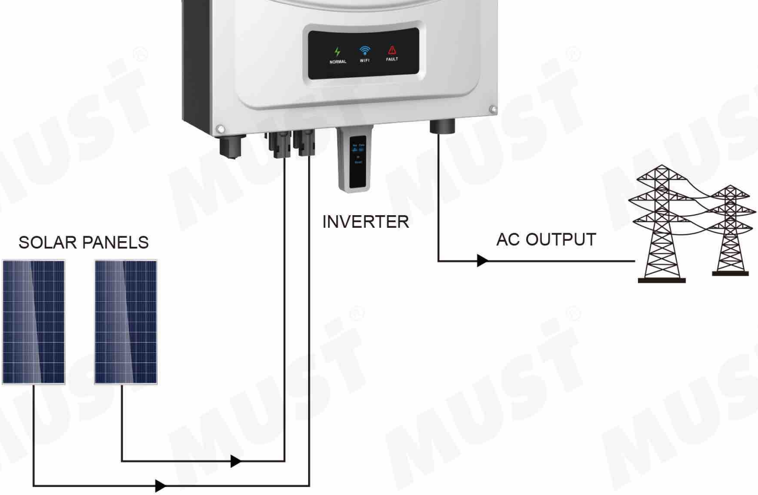


LED

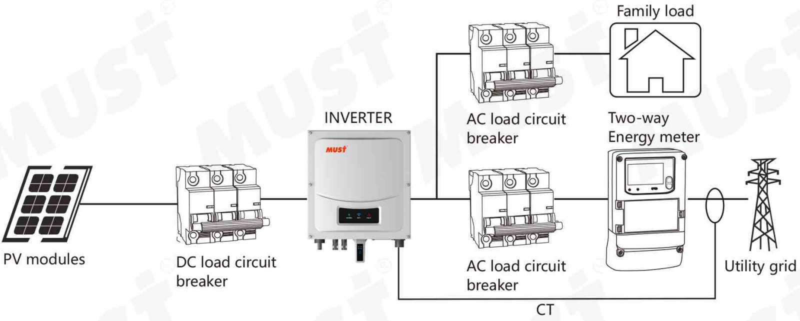


INVERTER SYSTEM CONNECTION

INVERTER + SOLAR PANELS + GRID



This inverter adopts cutting-edge technology in photovoltaic fields. Higher conversion efficiency and lower energy losses are guaranteed to maximize satisfaction. With its reliable power grid support and high protective class, the ph5000 series is compatible with different types of branded solar panels and is also ideal for commercial rooftop systems. The safe and reliable series is the first choice for residential, commercial installation and power plants.



MUST

Note: Only for inverters with load matching functions, General PV grid inverter electrical installation diagram.

PRODUCT PARAMETERS

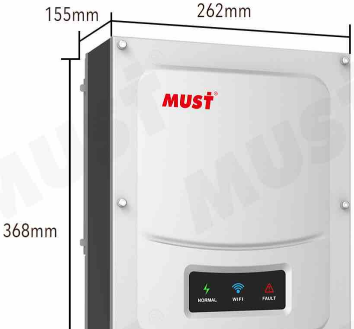
MAKE SURE EACH PARAMETER IS TRUE

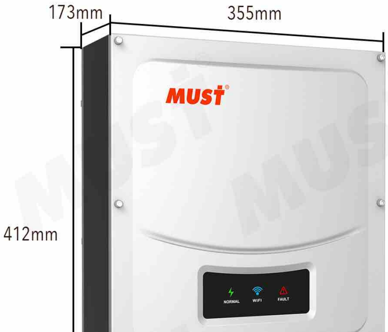
Learn more about the product

MODEL		PH50-2500	PH50-3000	PH50-3600M	PH50-4200M	PH50-4600M	PH50-5000M	PH50-6000M
RATED POWER(W)		2500	3000	3600	4200	4600	5000	6000
PV INPUT(DC)	Maximum recommended DC power(W)	2875	3450	4100	4800	5300	5750	7000
	Nominal DC operating voltage(V)	360						
	Maximum DC voltage(V)	550						
	Start voltage(V)	100						
	MPPT voltage range(V)	80~550						
	Maximum input current(A)	11	11	11/11	11/11	11/11	11/11	11/11
	No.of MPP tracker	1		2				
	Strings per MPP tracker	1						
GRID OUTPUT(AC)	Nominal AC output power(W)	2500	3000	3600	4200	4600	5000	6000
	Maximum AC output power(VA)	2500	3000	3600	4200	4600	5000	6000
	Nominal output voltage(V);range(V)	220/230/240;180-280						
	AC grid frequency(Hz);range(Hz)	50/60;45~55/55-65						
	Nominal output current(A)	10.9	13	15.7	18.3	20.0	21.8	26.1
	Maximum output current(A)	11.4	13.7	16.4	19.1	21.0	22.8	27.3
	Total harmonic distortion i(THDi)	＜3%						
	Power factor at rated power	1						
	Displacement power factor	0.8leading ～ 0.8lagging						
	AC connection	Single phase						
EFFICIENCY	Maximum efficiency	97.2%	97.2%	97.4%	97.4%	97.4%	97.4%	97.4%
	Euro-efficiency	96.8%	96.8%	97.0%	97.0%	97.0%	97.0%	97.0%
	MPPT efficiency	99.5%						
	Self-Consumption night(W)	＜1						

PROTECTION DEVICES	DC reverse polarity protection	Yes						
	DC switch rating for each MPPT	Yes(opt.)						
	Output over current protection	Yes						
	Output overvoltage protection-varistor	Yes						
	Ground fault monitoring	Yes						
	Grid monitoring	Yes						
	Integrated all-pole sensitive leakage current	Yes						
PHYSICAL	Dimension(W/H/D)(mm)	262*368*155	262*368*155	355*412*153	355*412*153	355*412*173	355*412*173	355*412*201
	Net weight (kg)	10	10	13.5	13.5	14.5	14.5	16.5
INTERFACE	DC connection	H4/MC4						
	AC connection	Connector						
	Display	LED						
	Communication interfaces	Wi-Fi/USB/GPRS						
ENVIRONMENT	Ingress protection rating	IP65						
	Humidity	0~95% RH (No condensing)						
	Operating temperature range	-25˚C ~+60˚C With derating above 45˚C						
	Cooling concept	Natural						
	Noise emission(typical)[dB]	≤25						
	Altitude	＜4000m						
OTHERS	Topology	transformerless						
	Warranty	Standard 5years/10 years(opt.)						
	Certificatesand approvals	CE/IEC62109	CE/IEC62109	CE / IEC62109 / CQC				

Size





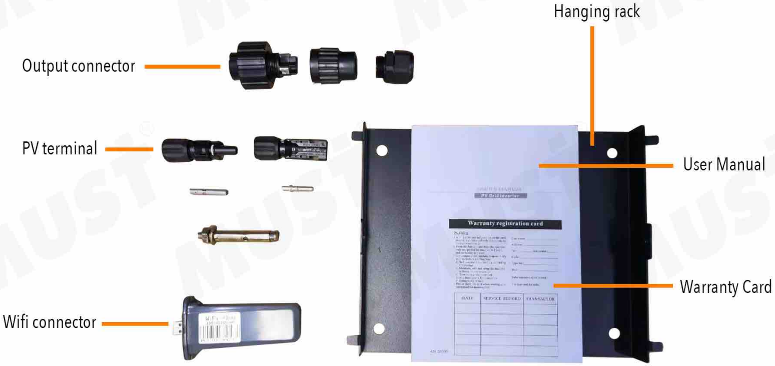
MUST®

(2.5KW / 3KW)

(4.6KW / 5KW)

◆ 3.6KW / 4.2KW: 355*412*153MM	◆ 6KW: 355*412*201MM

Package



MUST

PH5000 2.5-4.2KW			
BOX DIMENSION	530*450*260		
LOADING	20GP	40GP	40HQ
	403	870	1048

PH5000 4.6-6KW			
BOX DIMENSION	525*445*275		
LOADING	20GP	40GP	40HQ
	390	843	1015

PV Grid
MUST
MODEL
WEIGHT
PH50-4600M
PH50-5000M
16Kg
Box Dimension(LxWxH)
525X445X275(mm)
PV Grid Inverter

Packaging

PRACTICAL APPLICATION

MUST

APPLICABLE PLACE

MUST
NORMAL
WIFI
FAULT

USE IN HOME POWER SYSTEM

MUST
NORMAL
WIFI
FAULT

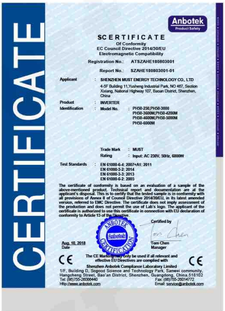
USE IN POWER STATION

PROFESSIONAL CERTIFICATION

CE FCC MSDS ISO9001

MUST®

High quality and high standard


CERTIFICATE

Anbotek Product Safety

SCERTIFICATE
Of Conformity
EC Council Directive 2014/30/EU
Electromagnetic Compatibility

Registration No.: ATSZAHE180803001
Report No.: SZAHE180803001-01

Applicant : SHENZHEN MUST ENERGY TECHNOLOGY CO., LTD
4-5F Building 11,Yusheng Industrial Park, NO 467, Section Xixiang, National Highway 107, Baoan District, Shenzhen, China
Product : INVERTER
Identification : Model No. : PH50-250,PH50-3000 PH50-3600M,PH50-4200M PH50-4600M,PH50-5000M PH50-6000M
Trade Mark : MUST
Rating : Input: AC 230V, 50Hz, 6000W
Test Standards : EN 61000-6-4: 2007+A1: 2011
EN 61000-3-2: 2014
EN 61000-3-3: 2013
EN 61000-6-2: 2005

The certificate of conformity is based on an evaluation of a sample of the above-mentioned product. Technical report and documentation are at the applicant's disposal. This is to certify that the tested sample is in conformity with all provisions of Annex II of Council Directive 2014/30/EU, in its latest amended version, referred to EMC Directive. The certificate does not imply assessment of the production and does not permit the use of Lab's logo. The applicant of the certificate is authorized to use this certificate in connection with EU declaration of conformity to Article 15 of the Directive.

Aug. 10, 2018
Date

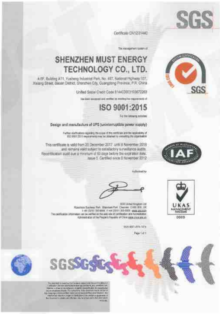
Certified by
Tom Chen
Tom Chen
Manager

CE

The CE Marking may only be used if all relevant and effective EU Directives are complied with

CE

Shenzhen Anbotek Compliance Laboratory Limited
1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China.518102
Tel: (86)755-26066440 Fax: (86)755-26014772
Http://www.anbotek.com Email: service@anbotek.com


SGS

Certificate CN1231440

The management system of

SHENZHEN MUST ENERGY TECHNOLOGY CO., LTD.

4-5F, Building A11, Yusheng Industrial Park, No. 467, National Highway 107, Xixiang Street, Baoan District, Shenzhen City, Guangdong Province, P.R. China

Unified Social Credit Code 914403003153872280

has been assessed and certified as meeting the requirements of

ISO 9001:2015

For the following activities

Design and manufacture of UPS (uninterruptible power supply)

Further clarifications regarding the scope of this certificate and the applicability of ISO 9001:2015 requirements may be obtained by consulting the organisation.

This certificate is valid from 20 December 2017 until 6 November 2018 and remains valid subject to satisfactory surveillance audits. Recertification audit due a minimum of 60 days before the expiration date. Issue 5. Certified since 5 November 2012

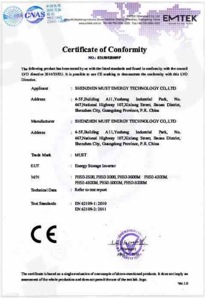
Authorised by

SGS United Kingdom Ltd
Rossmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK
t +44 (0)151 350-6666 f +44 (0)151 350-6600 www.sgs.com
The certification information can be verified on the web site of Certification and Accreditation Administration of the People's Republic of China www.cnca.gov.cn

Page 1 of 1

IAF

UKAS MANAGEMENT SYSTEMS
0005


CNAS TESTING CNAS L2291

EMTEK

Certificate of Conformity
NO.: ES150928009P

The following product has been tested by us with the listed standards and found in conformity with the council LVD directive 2014/35/EU. It is possible to use CE marking to demonstrate the conformity with this LVD Directive.

Applicant : SHENZHEN MUST ENERGY TECHNOLOGY CO.,LTD
Address : 4-5F,Building A11,Yusheng Industrial Park, No. 467,National Highway 107,Xixiang Street, Baoan District, Shenzhen City, Guangdong Province, P.R. China
Manufacturer : SHENZHEN MUST ENERGY TECHNOLOGY CO.,LTD
Address : 4-5F,Building A11,Yusheng Industrial Park, No. 467,National Highway 107,Xixiang Street, Baoan District, Shenzhen City, Guangdong Province, P.R. China
Trade Mark : MUST
EUT : Energy Storage Inverter
M/N : PH50-2500, PH50-3000, PH50-3600M PH50-4200M, PH50-4600M, PH50-5000M, PH50-6000M
Technical Data : Refer to test report
Test Standards : EN 62109-1: 2010
EN 62109-2: 2011

CE

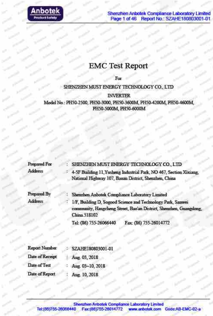
(Manager)

The certificate is based on a single evaluation of one sample of above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo.

Ver.1.0

TEST REPORT

Have quality inspection to use with confidence


Anbotek Product Safety

Shenzhen Anbotek Compliance Laboratory Limited
Page 1 of 46 Report No.: SZAHE180803001-01

EMC Test Report

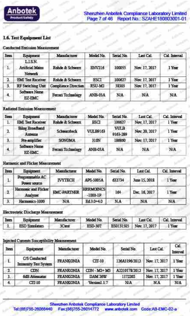
For
SHENZHEN MUST ENERGY TECHNOLOGY CO., LTD
INVERTER
Model No.: PH50-2500, PH50-3000, PH50-3600M, PH50-4200M, PH50-4600M, PH50-5000M, PH50-6000M

Prepared For : SHENZHEN MUST ENERGY TECHNOLOGY CO., LTD
Address : 4-5F Building 11,Yusheng Industrial Park, NO 467, Section Xixiang, National Highway 107, Baoan District, Shenzhen, China

Prepared By : Shenzhen Anbotek Compliance Laboratory Limited
Address : 1/F, Building D, Sogood Science and Technology Park, Sanwei community, Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China 518102
Tel: (86) 755-26066440 Fax: (86) 755-26014772

Report Number : SZAHE180803001-01
Date of Receipt : Aug. 03, 2018
Date of Test : Aug. 03~10, 2018
Date of Report : Aug. 10, 2018

Shenzhen Anbotek Compliance Laboratory Limited
Tel:(86)755-26066440 Fax:(86)755-26014772 www.anbotek.com Code:AB-EMC-02-a


Anbotek Product Safety

Shenzhen Anbotek Compliance Laboratory Limited
Page 7 of 46 Report No.: SZAHE180803001-01

1.6. Test Equipment List

Conducted Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	L.I.S.N. Artificial Mains Network	Rohde & Schwarz	ENV216	100055	Nov. 17, 2017	1 Year
2.	EMI Test Receiver	Rohde & Schwarz	ESCI	100627	Nov. 17, 2017	1 Year
3.	RF Switching Unit	Compliance Direction	RSU-M2	38303	Nov. 17, 2017	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

Radiated Emission Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde & Schwarz	ESCI	100637	Nov. 17, 2017	1 Year
2.	Bilog Broadband Antenna	Schwarzbeck	VULB9163	VULB 9163-289	Nov. 20, 2017	1 Year
3.	Pre-amplifier	SONOMA	310N	186860	Nov. 17, 2017	1 Year
4.	Software Name EZ-EMC	Ferrari Technology	ANB-03A	N/A	N/A	N/A

Harmonic and Flicker Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Programmable AC Power source	IVYTECH	APS-5005A	632734	June 15, 2018	1 Year
2.	Harmonic and Flicker Analyzer	EMC-PARTNER	HRRMOINCS -1000-1P	164	Dec. 16, 2017	1 Year
3.	Harmonics-1000	N/A	Ed.3.0+4.0	N.A	N/A	N/A

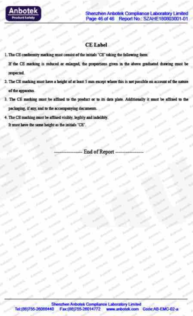
Electrostatic Discharge Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Simulators	3Ctest	ESD-30T	ES0131505	Nov. 17, 2017	1 Year

Injected Currents Susceptibility Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	C/S Conducted Immunity Test System	FRANKONIA	CIT-10	126A1196/2012	Nov. 17, 2017	1 Year
2.	CDN	FRANKONIA	CDN - M2+ M3	A2210178/2012	Nov. 17, 2017	1 Year
3.	6dB Attenuator	FRANKONIA	DAM 26W	1172202	Nov. 17, 2017	1 Year
4.	CIT-10	FRANKONIA	Version1.1.7	N/A	N.A	N/A

Shenzhen Anbotek Compliance Laboratory Limited
Tel:(86)755-26066440 Fax:(86)755-26014772 www.anbotek.com Code:AB-EMC-02-a


Anbotek Product Safety

Shenzhen Anbotek Compliance Laboratory Limited
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CE Label

1. The CE conformity marking must consist of the initials 'CE' taking the following form:
If the CE marking is reduced or enlarged, the proportions given in the above graduated drawing must be respected.
2. The CE marking must have a height of at least 5 mm except where this is not possible on account of the nature of the apparatus.
3. The CE marking must be affixed to the product or to its data plate. Additionally it must be affixed to the packaging, if any, and to the accompanying documents.
4. The CE marking must be affixed visibly, legibly and indelibly.
It must have the same height as the initials "CE".

---------------- End of Report ----------------

Shenzhen Anbotek Compliance Laboratory Limited
Tel:(86)755-26066440 Fax:(86)755-26014772 www.anbotek.com Code:AB-EMC-02-a

MUST®

SHENZHEN MUST ENERGY TECHNOLOGY CO.,LTD.