



Specification For Approval

Customer : _____
Description : Heat Exchanger 20W/K
Customer Part No. : _____ Rev. : _____
Delta Model No. : HEX020VA Rev : 05
Sample Issue No. : _____
Sample Issue Date : Jun. 4. 2020

Please send one copy of this specification back after you
signed approval for production pre-arrangement

Approved by : _____

Date : _____

Delta Electronics, Inc.
252, Shang Ying Road, Kuei San
Taoyuan Hsien 333, Taiwan, R. O. C.

TEL : 886-(0)3-3591968
FAX : 886-(0)3-3591991

*** SAMPLE HISTORY***

CUSTOMER :

CUSTOMER P/N :

DELTA MODEL : HEX020VA[illegible]

Table of content

1. Description.....	2
1-1. General description.....	2
1-2. Main feature	2
1-3. Dimension.....	3
1-3-1 Label	3
1-3-2. Dimension drawing	3
1-3-3. Mounting panel cutout.....	4
1-4. Configuration & Maintenance	4
1-4-1. Configuration	4
1-4-2. Maintenance	5
1-5. Thermal path and Airflow baffle.....	5
2. Electrical specification.....	6
2-1. Connector	6
3. Environmental condition	6
3-1. Operating temperature	6
3-2. Storage temperature	6
3-3. Humidity	6
3-4. Ingress protection rating (external side)	6
3-5. MTBF.....	6
4. Reliability table.....	7
5. Safety certification	7
6. Packing list.....	7

Specification For Approval

Customer :

Description : Heat Exchanger 20W/K

Customer P/N :

rev. :

Delta model no. : HEX020VA

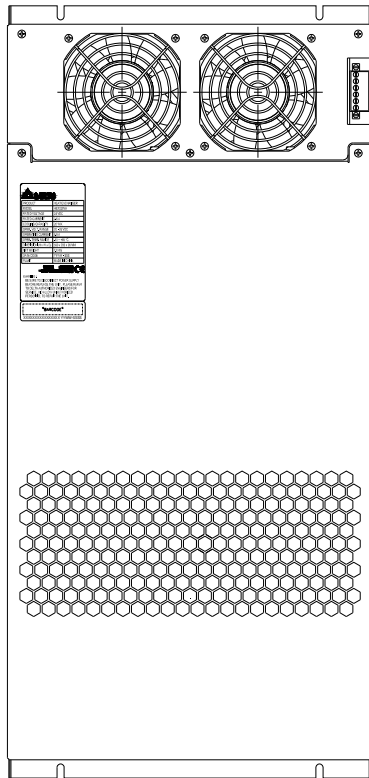
rev. : 05

Sample revision :

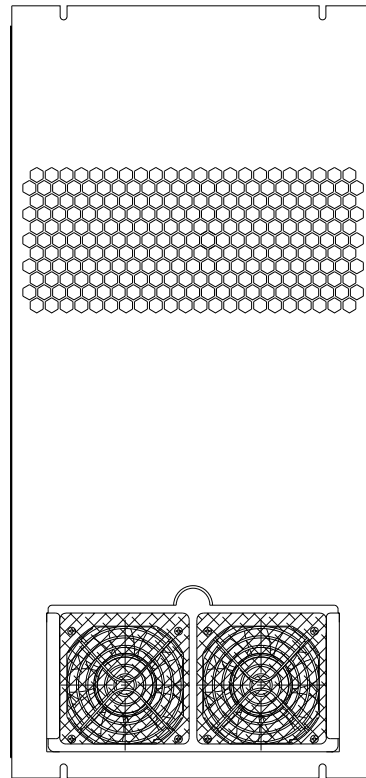
Issue no. :

Sample issue date :

Quantity : sets



INTERNAL



EXTERNAL

Part no. :

Delta model no. : HEX020VA

1. Description

1-1. General description

The Heat Exchanger (HEX) is designed for direct air to air heat exchange to remove the heat from the cabinet . It is easy to be installed in the cabinet with the nuts. (Recommended on the door of the cabinet)

The internal and the external air circulation loops of the HEX are separated to prevent the introduction of dust, humidity and dirt.

The HEX on the external air loop conforms to IP55 protection rating.

1-2. Main feature

Main feature	Unit	Model Number
		HEX020VA
Outline Dimension	mm	590 H x 283 W x 99 D
Cooling Capacity (*Note 1)	W/K	20
Operating Voltage Range	VDC	20 ~ 26
Operating Temperature Range	℃	-10 ~ +65
Rated Voltage	VDC	24
Rated Current (*Note 2)	A	2.6
Operating Current	A	0.9
Operating Power	W	22.0
Operating Voltage Range	VDC	20 ~ 26
Operating Temperature Range	℃	-10 ~ +65
Mounting Location	N/A	Internal Door / Wall
Controller	N/A	Built-in
Fan alarm	N/A	Dry Contact Output
Acoustic Noise at 1.0M (SPL)	dB-A	60.0
Weight	Kg	7.0

*Note 1 : The cooling capacity (W/K or W/℃) is defined as $Q / (T_I - T_A)$

Q : Heat dissipation (W) from inside

T_I : Return temperature of internal air circuit (K OR ℃)

T_A : Ambient temperature of external air circuit (K OR ℃)

*Note 2 : Rated current is announcement of safety , the current of a;; application have to under this definition

Part no. :

Delta model no. : HEX020VA

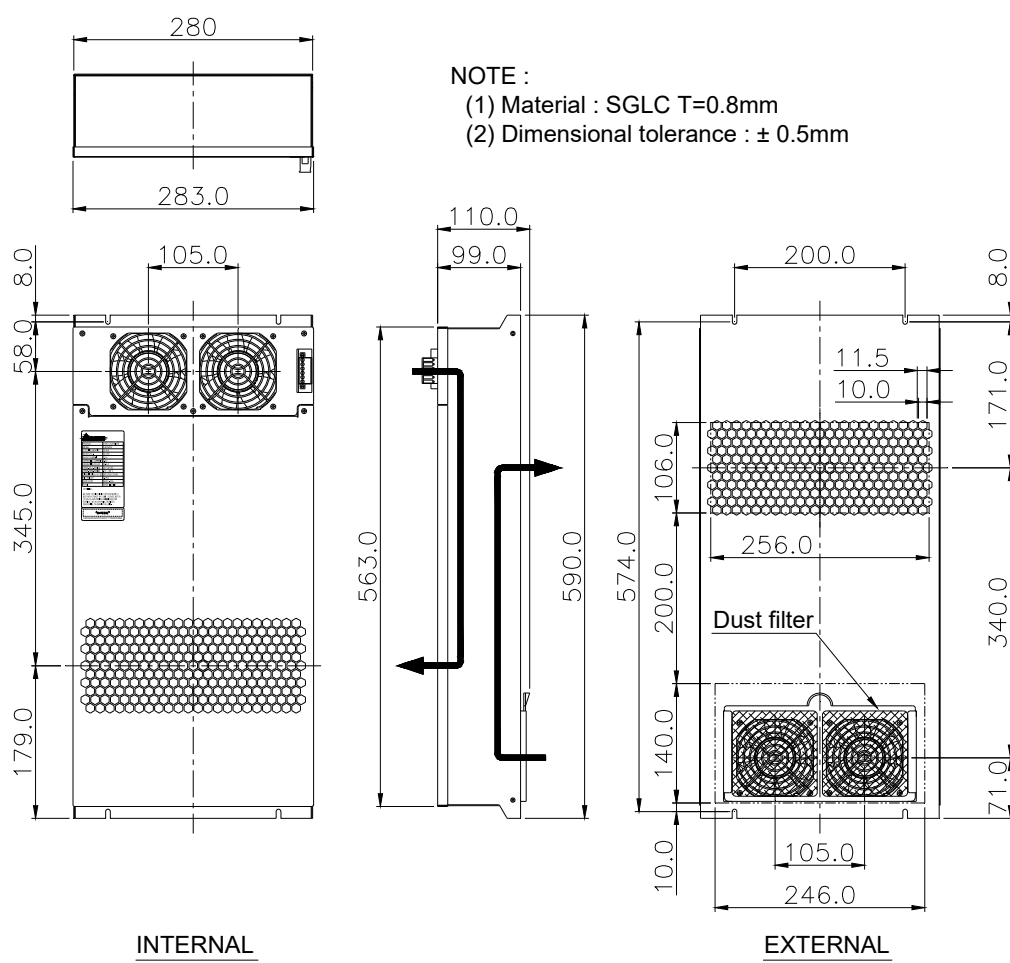
1-3. Dimension

1-3-1 Label

50	
90	
	
PRODUCT	HEAT EXCHANGER
MODEL	HEX020VA
COOLING CAPACITY	20 W/K
RATED VOLT.	24 VDC
RATED CURRENT	2.6 A
OPERATING CURRENT	0.9 A
OPERATING POWER	22.0 W
OPER. VOLT. RANGE	20 ~ 26 VDC
OPER. TEMP. RANGE	-10 ~ +65 °C
DIMENSION (H x W x D)	590 x 283 x 99 MM
NET WEIGHT	7.0 KG
DATE CODE	MMYY - SSS
PLANT	MADE IN CHINA
WARNING!	
BE SURE TO DISCONNECT POWER SUPPLY BEFORE REPLACE THE UNIT. PLEASE REFER TO DELTA AUTHORIZED ENGINEERS FOR SERVICE. NO ALLOW UNAUTHORIZED PERSONNEL TO REPAIR THE UNIT.	

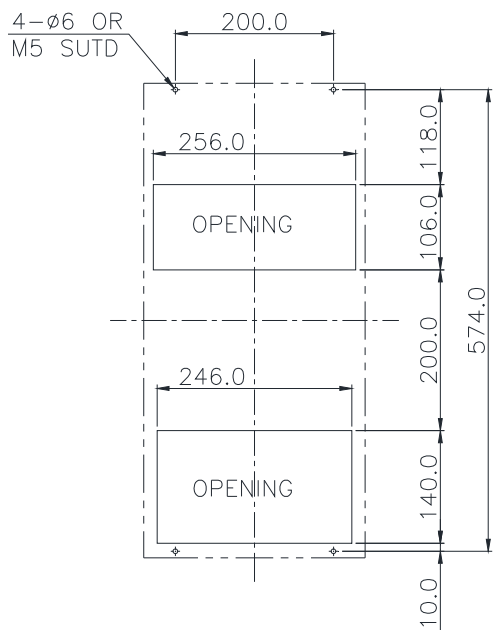
NAME PLATE LABEL

1-3-2. Dimension drawing



Part no. :
.....
Delta model no. : HEX020VA
.....

1-3-3. Mounting panel cutout

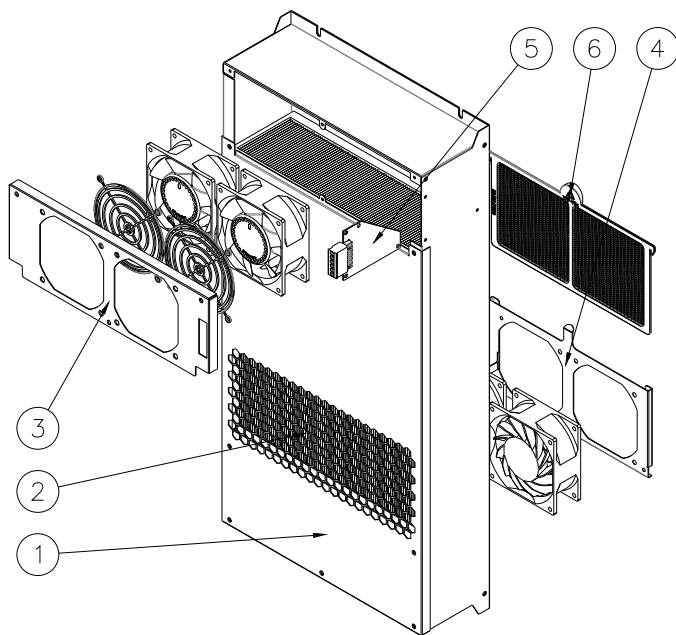


Dimensional tolerance : ± 0.5mm

1-4. Configuration & Maintenance

1-4-1. Configuration

The HEX is composed of the key components as the following :
Chassis , Heat exchange Core , Controller Internal/External fan tray
& dust filter .



Item	Q'ty	Description
1	1	Chassis
2	1	Heat exchange CORE
3	1	Internal fan tray
4	1	External fan tray
5	1	Controller
6	1	Dust filter

Part no. :

Delta model no. : HEX020VA

1-4-2. Maintenance

To avoid the dust or any object to obstruct the airflow tunnel to affect the cooling capacity , please kindly follow below suggestion for cleaning , the maintenance cycle time can be adjusted by customer at different application , .

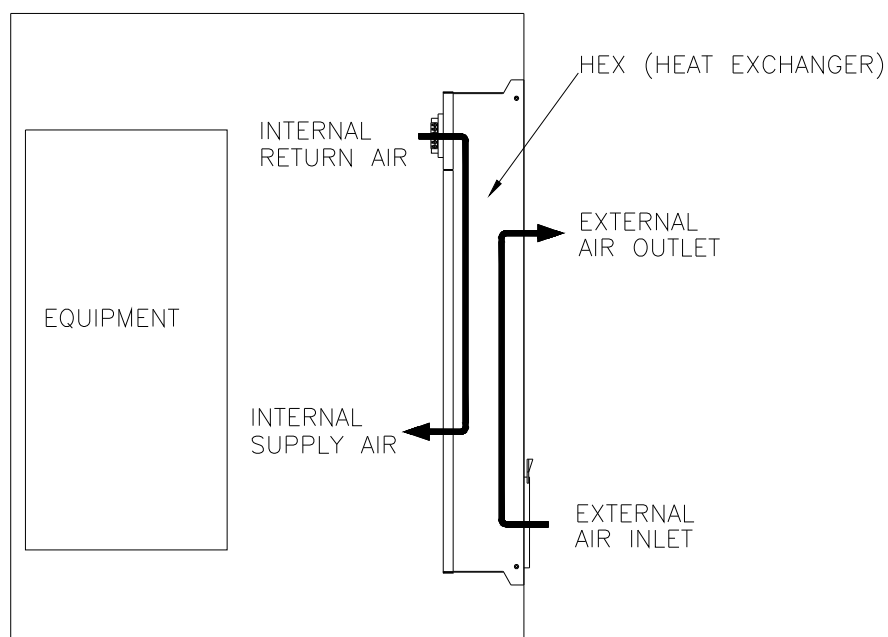
Monthly : Take out the dust filter for cleaning

Quarterly : Cut out the power at first , then disassemble dust filter and both external / internal fan tray for cleaning

1-5. Thermal path and Airflow baffle

With the forced convection using the axial fan , the warmer return air will be blowing into the HEX ,the cooler supply air will be used to cool down the system ; While on the opposite side , cooler air will be drawn into the lower inlet and bring the heat out from the upper outlet .

The thermal exchange path is shown in the figure below.



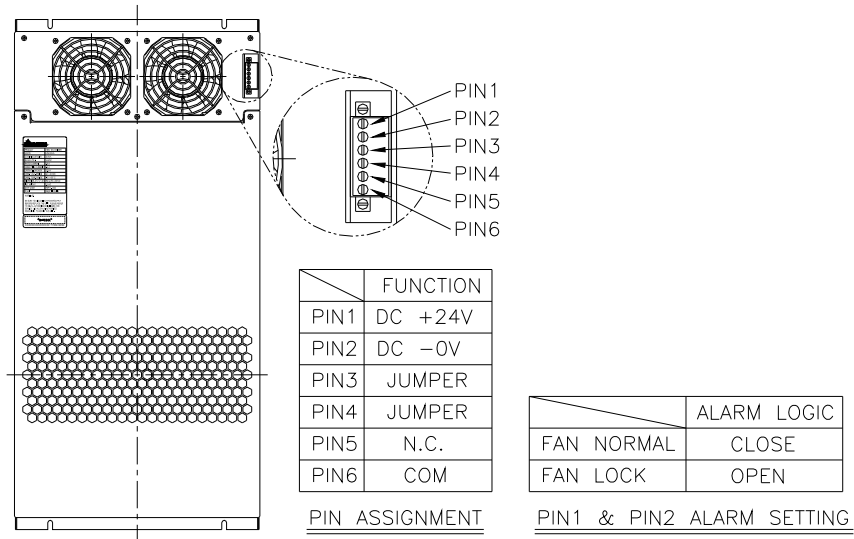
Part no. :

Delta model no. : HEX020VA

2. Electrical specification

2-1. Connector

on panel plate : 2EHDRM-06P ,
mate with : 2ESDPLM-06P



3. Environmental condition

3-1. Operating temperature

-10°C to +65°C

3-2. Storage temperature

-40°C to +75°C

3-3. Humidity

External air loop : 0 ~ 100% RH

Internal air loop: 0 ~ 90% RH, non-condensing

3-4. Ingress protection rating (external side)

IP55 (IEC60529)

3-5. MTBF

The L10 Fan life is expected to be at least 70,000 hours continuous operation at 40°C with 15 ~ 65%RH .@ label rated voltage

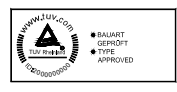
Part no. :

Delta model no. : HEX020VA

4. Reliability table

Test item	Condition
High temperature	IEC 60068-2-2
Low temperature	IEC 60068-2-1
High temp. / High humidity	IEC 60068-2-14 TEST Nb
Temperature cycle	IEC 60068-2-3
Vibration	ETSI 300 019-1-4 CLASS 4.1
Ingress protection (External side)	IEC 60529 IP55
Salt fog test (External fan)	GR-487 3.38.1
Package bump	IEC 60068-2-29

5. Safety certification

Description	P/N	Safety
Heat exchanger	HEX020VA	UL/cUL, TUV, CE  

6. Packing list

Description	Unit	Quantity
Heat exchanger	SET	1
Dust filter	PCS	1
Waterproof foam (1M)	PCS	3
User manual	PCS	1