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Please note, Follow-Up Procedure Revisions or Report Revisions do not include Authorization Pages, Indices, Section General, and/or Appendices unless revisions were required or requested.

Should you have any questions, after reviewing the material, or need to report any inaccuracies, please reach out to your UL representative or find UL contact details for your local Customer Service Department at <https://www.ul.com/about/locations>.

Please find attached the related material

For your convenience, the below describes the related updates:

E549068-Vol1-AuthorizationPage
E549068-vol1-RecCompMarkData
E549068-vol1-Index
E549068-20250731-Description
Figure-1-Total
Illustration-2-Total
E549068-20250825-Description
Figure-1-Total
Illustration-2-Total

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Times change, Trust Remains™



File E549068

Vol 1

Authorization Page 1

Issued: 2025-09-24

Revised: 2025-10-03

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

POWER CIRCUIT AND MOTOR-MOUNTED APPARATUS - COMPONENT
(NMTR2, NMTR8)

Manufacturer:	SEE ADDENDUM FOR MANUFACTURER LOCATIONS
Applicant: (882992-001)	83466 (Party Site) HD Hyundai Electric Co., Ltd. 477, Bundangsuseo-ro, Bundang-gu Seongnam-si Gyeonggi-do 13553 KR
Recognized Company: (882992-001)	83466 (Party Site) SAME AS APPLICANT

Use of the Mark

This Follow-Up Service Procedure authorizes the above Manufacturer(s) to use the marking specified by UL LLC, or any authorized licensee of UL LLC, including the UL Contracting Party, only on products when constructed, tested and found to be in compliance with the requirements of this Follow-Up Service Procedure and in accordance with the terms of the applicable service agreement with UL Contracting Party. The UL Contracting Party for Follow-Up Services is listed in the addendum to this Follow-Up Service Procedure ("UL Contracting Party"). UL Contracting Party and UL LLC are referred to jointly herein as "UL."

It is the responsibility of the Applicant, Manufacturer(s), and Recognized Company to make sure that only the products meeting the aforementioned requirements bear the authorized Marks of UL LLC, or any authorized licensee of UL LLC.

Additional Responsibilities

Additional responsibilities, duties and requirements for the Applicant and Manufacturers are defined under Additional Resources at the following website: <https://www.ul.com/fus>. Manufacturers without Internet access may obtain the current version of these documents from their local UL customer service representative or UL field representative. For assistance, or to obtain a paper copy of these documents or the Follow-Up Service Terms referenced below, please contact UL's Customer Service at <https://www.ul.com/aboutul/locations/>, select a location and enter your request, or call the number listed for that location.

Acceptance of Follow-Up Services

The Applicant and the specified Manufacturer(s) and any Recognized Company in this Follow-Up Service Procedure must agree to receive Follow-Up Services from UL Contracting Party. If your applicable service agreement is a Global Services Agreement ("GSA"), the Applicant, the specified Manufacturer(s), and any Recognized Company will be bound to a Service Agreement for Follow-Up Services upon the earliest by any Subscriber of a) use of the prescribed UL Mark, b) acceptance of the factory inspection, or c) payment of the Follow-Up Service fees. The Service Agreement incorporates such GSA, this Follow-Up Service Procedure and the Follow-Up Service Terms which can be accessed by clicking the following link: <https://www.ul.com/resources/contracts/follow-up-service-terms>. In all other events, Follow-Up Services will be governed by and incorporate the terms of your applicable service agreement and this Follow-Up Service Procedure.

Use and Ownership of the Follow-Up Service Procedure

This Follow-Up Service Procedure, and any subsequent revisions, is the property of UL and is not transferable. This Follow-Up Service Procedure contains confidential information for use only by the Applicant, the specified Manufacturer(s), and representatives of UL and is not to be used for any other purpose. It is provided to the Subscribers with the understanding

that it is not to be copied, either wholly or in part unless specifically allowed, and that it will be returned to UL, upon request.

Definition of Terms

Capitalized terms used but not defined herein have the meanings set forth in the GSA and the applicable Service Terms or any other applicable UL service agreement.

No Third Party Liability

UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages arising out of or in connection with the use or reliance upon this Follow-Up Service Procedure to anyone other than the above Manufacturer(s) as provided in the agreement between UL LLC or an authorized licensee of UL LLC, including UL Contracting Party, and the Manufacturer(s).

Certification Body

UL LLC has signed below solely in its capacity as the certification body to indicate that this Follow-Up Service Procedure fulfills the requirements for certification documentation issued by the certification body. The certification body's accreditation status for the applicable certification scheme and identification of the accreditation body can be found at <https://www.ul.com/resources/accreditation>.

Deborah Jennings-Conner
VP Regulatory Services
UL LLC

LOCATION

3270349 (Party Site)
HD Hyundai Electric Co Ltd
53 Je3gongdan 3-gil Seoun-myeon
Anseong-si Gyeonggi-do 17605 KR

Factory ID: A

UL Contracting Party for above site is: UL GmbH

Recognized Component Marking Data Page (RCMDP)

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

RECOGNIZED COMPONENT MARKING

Products Recognized under UL's Component Recognition Service are identified by marking elements consisting of:

1. The Recognized Company's identification specified in this document.
2. A catalog, model or other applicable product designation specified in the descriptive sections of this document.
3. The UL Recognized Component Mark shown below is optional unless required elsewhere in the Procedure.

Only those components, which actually bear the Marking, should be considered as being covered under the Recognition Program. The UL Listing or Classification Mark is not authorized for use on or in connection with Recognized Components.

Recognized Component Mark



Minimum size of the Recognized Component Mark is not specified as long as it is legible. Minimum height of the registered symbol ® shall be 3/64 inch but may be omitted if it is out of proportion to the Recognized Component Mark or not legible to the naked eye.

The manufacturer may reproduce the Mark electronically. Any decision regarding the acceptability of the manufacturer's Mark reproduction will be made at the Reviewing Office.

Recognized Component Marking Data Page (RCMDP)

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

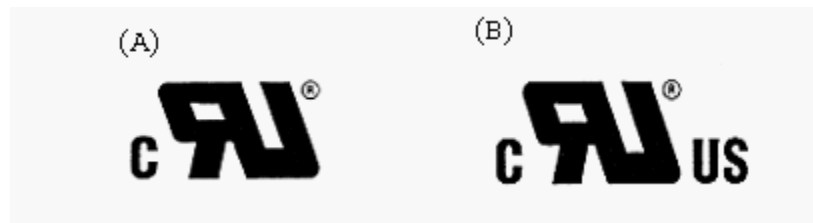
RECOGNIZED COMPONENT MARKING

Products Recognized under UL's Component Recognition Service are identified by marking elements consisting of:

1. The Recognized Company's identification specified in this document.
2. A catalog, model or other applicable product designation specified in the descriptive sections of this document.
3. The UL Recognized Component Mark shown below:
 - (A) Recognized only to Canadian safety requirements, or;
 - (B) Recognized to both U.S. and Canadian safety requirements.

Only those components, which actually bear the Marking, should be considered as being covered under the Recognition Program. The UL Listing or Classification Mark is not authorized for use on or in connection with Recognized Components.

Recognized Component Mark



Minimum size of the Recognized Component Mark is not specified as long as it is legible. Minimum height of the registered symbol ® shall be 3/64 inch but may be omitted if it is out of proportion to the Recognized Component Mark or not legible to the naked eye.

The manufacturer may reproduce the Mark electronically. Any decision regarding the acceptability of the manufacturer's Mark reproduction will be made at the Reviewing Office.

INDEX

Product Covered	Section	Report Date	Requirements Evaluated to (USR and/or CNR)
Voltage Divide Module, Cat. No. VM.	1	2025-07-31	USR, CNR
UVT Time Delay Controller, Cat. No. UVT.	2	2025-08-25	USR, CNR

USR - Indicates these products were investigated using US requirements as noted in the Test Record.

CNR - Indicates these products were investigated using Canadian requirements as noted in the Test Record.

File E549068
Project 4791735443

July 31, 2025

REPORT

On

COMPONENT - Power Circuit and Motor-mounted Apparatus

HD Hyundai Electric Co., Ltd.
477, Bundangsuseo-ro, Bundang-gu
Seongnam-si Gyeonggi-do 13553 KR

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DESCRIPTION

PRODUCT COVERED:

USR, CNR - Voltage Divide Module, Cat. No. VM.

GENERAL:

The unit covered by this Report is open type Voltage Divide Module for Industrial Control Equipment.

ELECTRICAL RATINGS:

Model	Voltage	Maximum Amperes, mA
VM	600 Vac	1.6

ENVIRONMENTAL RATINGS:

Maximum surrounding air temperature: 40 °C.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - The devices are intended for use in industrial control applications where the suitability of the combination has been determined by Underwriters Laboratories Inc.

USR indicates these products were investigated using US requirements as noted in the Test Record.

CNR indicates these products were investigated using Canadian requirements as noted in the Test Record.

CONDITIONS OF ACCEPTABILITY -

1. The terminal block connections have not been evaluated as field wiring terminals. The acceptability of the connections to these terminals in the end-use equipment relative to secureness, temperature, and markings shall be considered.
2. The device shall be installed in compliance with the mounting, spacing, casualty, segregation and enclosure requirements of the ultimate application.

CONSTRUCTION DETAILS:

The product shall be constructed in accordance with the following description.

Spacings - Spacings of not less than 9.5 mm through air and 12.7 mm over the surface of insulating material are maintained between any uninsulated live part and an uninsulated live part of opposite polarity, uninsulated grounded part other than the enclosure, or exposed metal part.

Spacings of not less than 12.7 mm measured over the shortest distance are maintained between any uninsulated live part and the intended mounting surface.

Tolerances - Unless specified otherwise, all indicated dimensions are nominal.

Corrosion Protection - All parts are of corrosion resistant material or are plated or painted as corrosion protection.

Markings - Molded, die-stamped, laser marking, paint-stenciled, stamped or etched metal, ink-stamped on cover or adhesive backed label (PDGQ2) secured to the device with Recognized Company's name and/or file number or trademark and model or catalog number, electrical ratings (Optional)

Cat. No. VM - FIG. 1

General - Fig. 1 shows overall View of TBD. Refer to Ill. 1 for detail

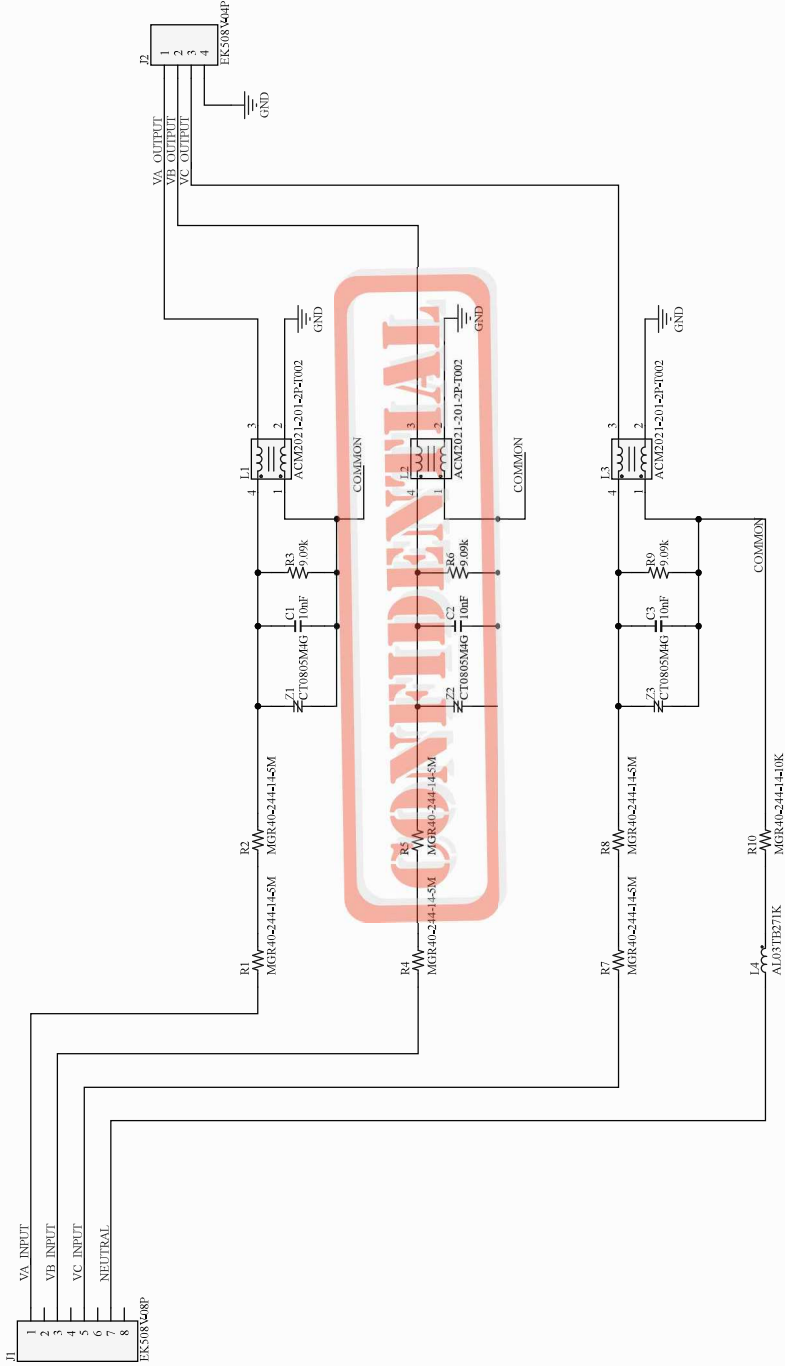
1. Case - R/C (QMFZ2/8), SABIC INNOVATIVE PLASTICS US L L C (E121562), Model 500R, rated V-0, RTI 130 °C. Minimum thickness 1.5 mm. Refer to Ill. 2 for details.
2. PWB - R/C(ZPMV2), rated V-0, minimum 105 °C.
3. Terminal - R/C (XCFR2/8), DINKLE ENTERPRISE CO LTD (E102914), Model EK508, rated 300 V, 20 A, MOT 105 °C.
4. Resistor (R1 ~ R8) - Glass Glaze Thick Film High Voltage Resistor, rated 1700 V, 1 W, 5 M Ω .
5. Line Filter (L1 ~ L3) - Manufactured by TDK, type ACM2021, rated 50 V.

Figure-1 Page-1



The following Page(s) are related to Illustration-1. The next supplement, if applicable, will be identified with a new Supplement Page Heading

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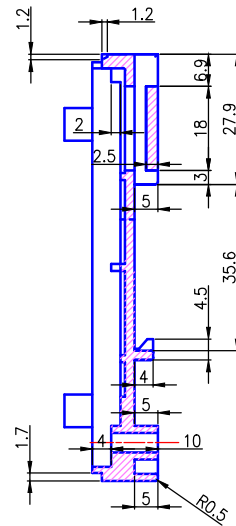
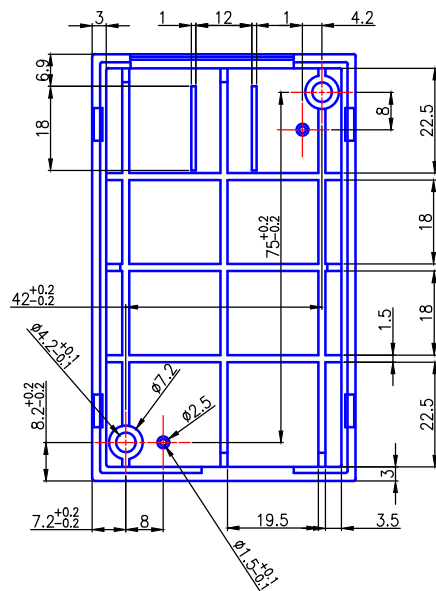
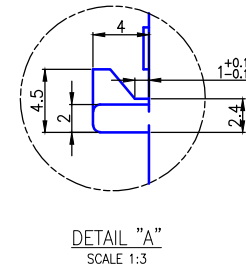
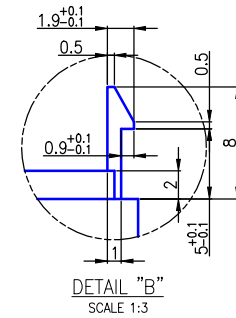
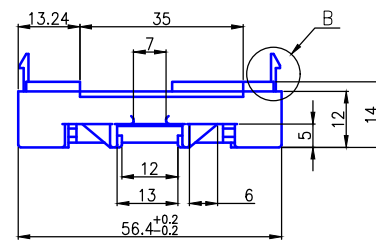
REV.		DATE	CONTENTS	REV'D BY	CHK'D BY	APP'D BY
REVISIONS						
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QTY	DESCRIPTION		MATERIAL		DIMENSION	WEIGHT	DWG NO.	PART NO
	APPD BY	UNIT	MANUFACTURE	APPLICATION				
	CHKD BY	SCALE	ACB AC					
	CHKD BY	PROJECTION	TITLE					
A3					Voltage module 1150V			
			DATE	2023.07.13				
	 HYUNDAI ELECTRIC				REF. NO.			
					DWG NO.			
					SHT. NO	1		
					OF	2		
					REV.	1		

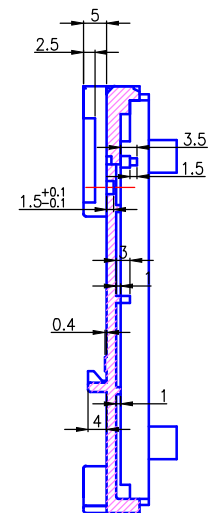
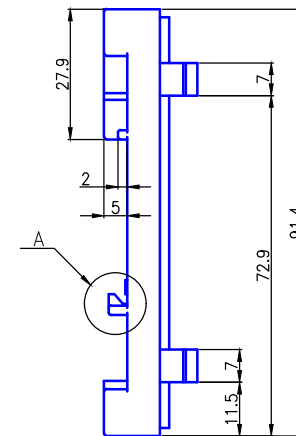
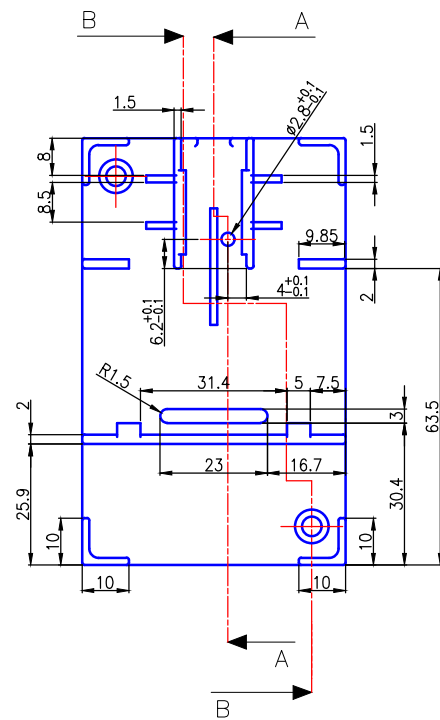
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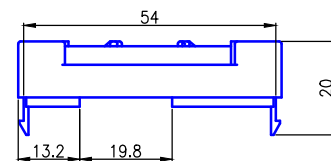
MODULE CASE/UPPER		PC G/F10% V0				3AT-04501	1
DESCRIPTION		MATERIAL		DIMENSION	WEIGHT	DWG NO.	PART NO
명수	UNIT	mm	MANUFACTURE	확정			
종턱	SCALE	1/1	APPLICATION	ACB POWER MODULE			
	PROJECTION	3RD	TITLE U-POWER MODULE CASE/UPPER				
선형	DATE	20130205					
HYUNDAI ELECTRIC			REF. NO.				SHT. NO OF
			DWG NO.	3AT-04501			REV. R00



SECTION
B-B



SECTION
A-A



1. 외관은 뒤틀림 없이 미려해야 하며, 가스자국, 기포 없을 것.
2. 성형 후 수축으로 인한 변형 및 게이트부를 포함한 PART'G부 FLASH는 0.1mm 미만일 것.
3. 성형작업 후 조립부는 FLASH를 제거할 것.
4. 색상 : Pantone Cool Gray 1C
5. MAKER : LEXAN 500R-GY8G259(SABIC)
GRADE : PC GF10% V-O
6. 원소재 물성에 대한 자료는 MAKER의 GRADE NO. 에 해당하는 물성값을 참고할 것.
7. 원소재 재생혼합 비율은 0% 미만으로 할 것.
8. 상세치수는 Modeling을 참조할 것.

지시 외 공차	KS B ISO 2768-m 급 적용
지시 외 라운드	R 0.5
지시 외 빼기구배	1/100

1	U-POWER MODULECASE/BOTTOM			PC G/F10% V0				3AT-04502	1	
Q'TY	DESCRIPTION			MATERIAL		DIMENSION		WEIGHT	DWG NO.	PART NO
A3	APPD BY	김명수	UNIT	mm	MANUFACTURE	확정				
	CHKD BY	박종덕	SCALE	1/1	APPLICATION	ACB POWER MODULE				
	CHKD BY		PROJECTION	3RD	TITLE U-POWER MODULECASE/BOTTOM					
	DSND BY	이선형	DATE	20130205						
					REF. NO.				SHT. NO OF	
				DWG NO.	3AT-04502			REV. R00		

File E549068
Project 4791735451

August 25, 2025

REPORT

On

COMPONENT - Power Circuit and Motor-mounted Apparatus

HD Hyundai Electric Co., Ltd.
Seongnam-si, Gyeonggi-do, Korea

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DESCRIPTION

PRODUCT COVERED:

USR, CNR - UVT Time Delay Controller, Cat. No. UVT.

GENERAL:

The unit covered by this Report is open type UVT Time Delay Controller for Industrial Control Equipment.

ELECTRICAL RATINGS:

Model	Voltage	Maximum Amperes, A
UVT	125 Vdc	2

Alarm output: 120 Vac, 10 A, 24 Vdc, 10 A, resistive load.
Auxiliary input: 12 Vac, 360 mW.

ENVIRONMENTAL RATINGS:

Maximum surrounding air temperature: 40 °C.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - The devices are intended for use in industrial control applications where the suitability of the combination has been determined by Underwriters Laboratories Inc.

USR indicates these products were investigated using US requirements as noted in the Test Record.

CNR indicates these products were investigated using Canadian requirements as noted in the Test Record.

CONDITIONS OF ACCEPTABILITY -

1. The terminal block connections have not been evaluated as field wiring terminals. The acceptability of the connections to these terminals in the end-use equipment relative to secureness, temperature, and markings shall be considered.
2. The device shall be installed in compliance with the mounting, spacing, casualty, segregation and enclosure requirements of the ultimate application.

CONSTRUCTION DETAILS:

The product shall be constructed in accordance with the following description.

Spacings - Spacings of not less than 9.5 mm through air and 12.7 mm over the surface of insulating material are maintained between any uninsulated live part and an uninsulated live part of opposite polarity, uninsulated grounded part other than the enclosure, or exposed metal part.

Spacings of not less than 12.7 mm measured over the shortest distance are maintained between any uninsulated live part and the intended mounting surface.

Tolerances - Unless specified otherwise, all indicated dimensions are nominal.

Corrosion Protection - All parts are of corrosion resistant material or are plated or painted as corrosion protection.

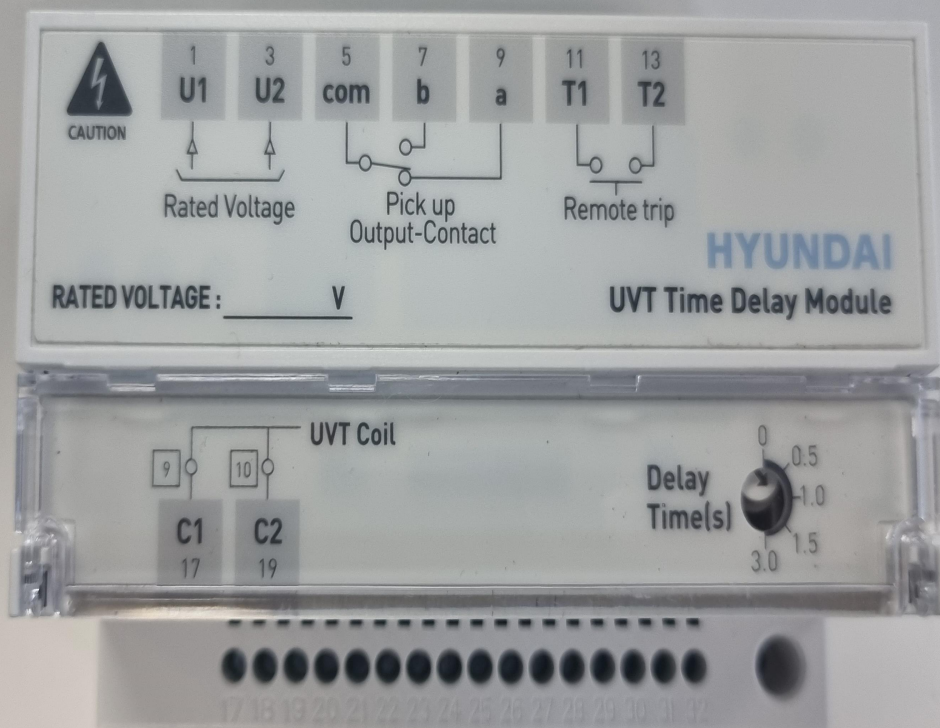
Markings - Molded, die-stamped, laser marking, paint-stenciled, stamped or etched metal, ink-stamped on cover or adhesive backed label (PDGQ2) secured to the device with Recognized Company's name and/or file number or trademark and model or catalog number, electrical ratings (Optional)

Cat. No. UVT - FIG. 1

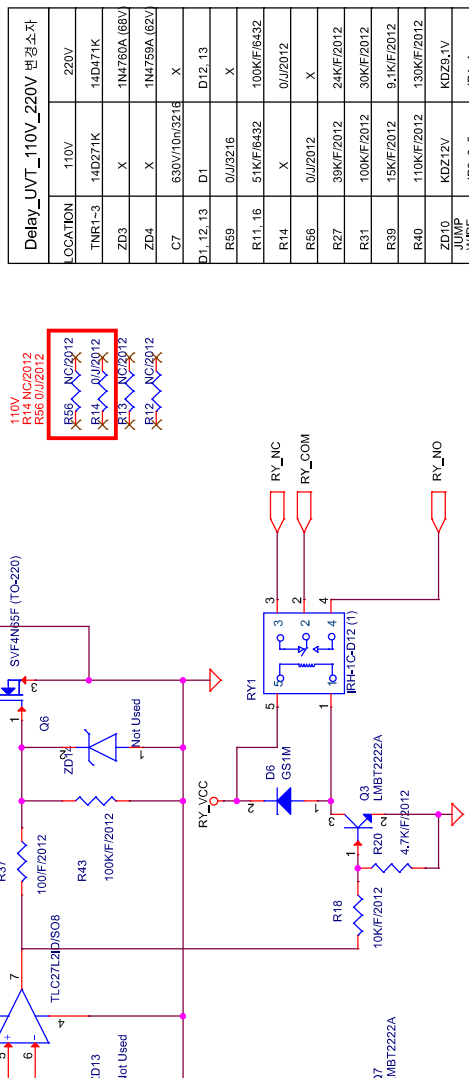
General - Fig. 1 shows overall View of UVT. Refer to Ill. 1 for detail

1. Case - R/C (QMFZ2/8), SABIC INNOVATIVE PLASTICS US L L C (E121562), Model 500R, rated V-0, RTI 130 °C. Minimum thickness 1.5 mm. Refer to Ill. 2 for details.
2. PWB - R/C (ZPMV2), rated V-0, minimum 105 °C.
3. Terminal - R/C (XCFR2/8), DINKLE ENTERPRISE CO LTD (E102914), Model EK508, rated 300 V, 20 A, MOT 105 °C.
4. Bridge Diode (BD1) - Manufactured by JGD, type KBP206, rated 600 V.
5. Line Filter (L1) - Manufactured by Hanamelec, type UU1014, rated 250 V, 126 mA.
6. Relay (RY1) - R/C (NRNT2/8), ILOSAM ELECTRONICS CO LTD (E195815), Model IRH-1C-D12S, rated 120 Vac, 10 A, 24 Vdc, 10 A.
7. Switching IC (U3) - Manufactured by Power Integrations, Inc., type LNK304PN, rated 230 V.
8. X-Cap (C1, C2) - R/C (FOWX2/8), Cowell Fashion Co Ltd (E165646), Model PCX2 337, rated 275 Vac.
9. Varistor (TNR1) - R/C (VZCA2/8), AMOTECH CO LTD (E332687), type 14D471K, rated 300 V.

Figure-1 Page-1



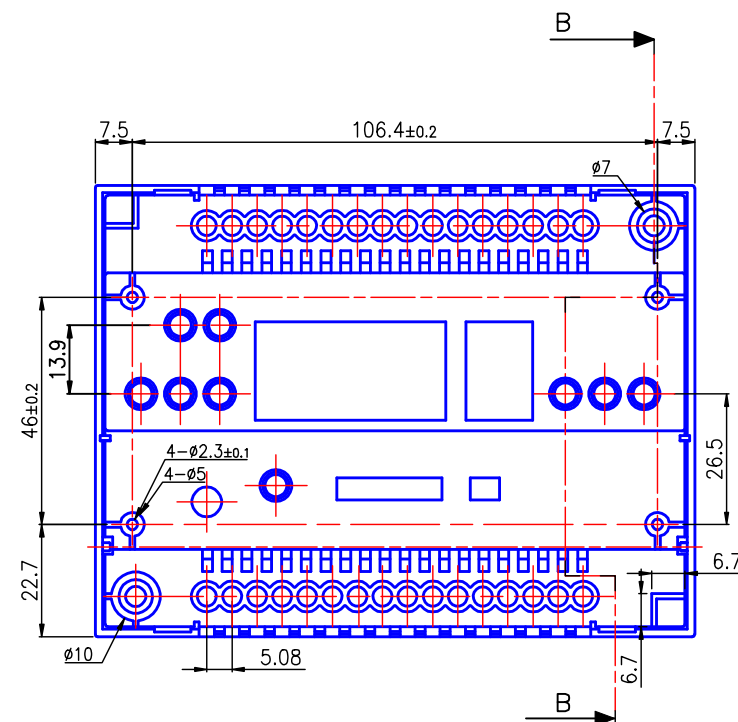
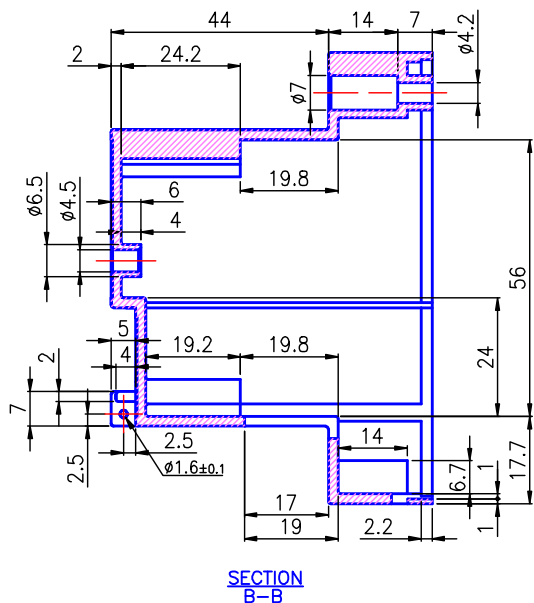
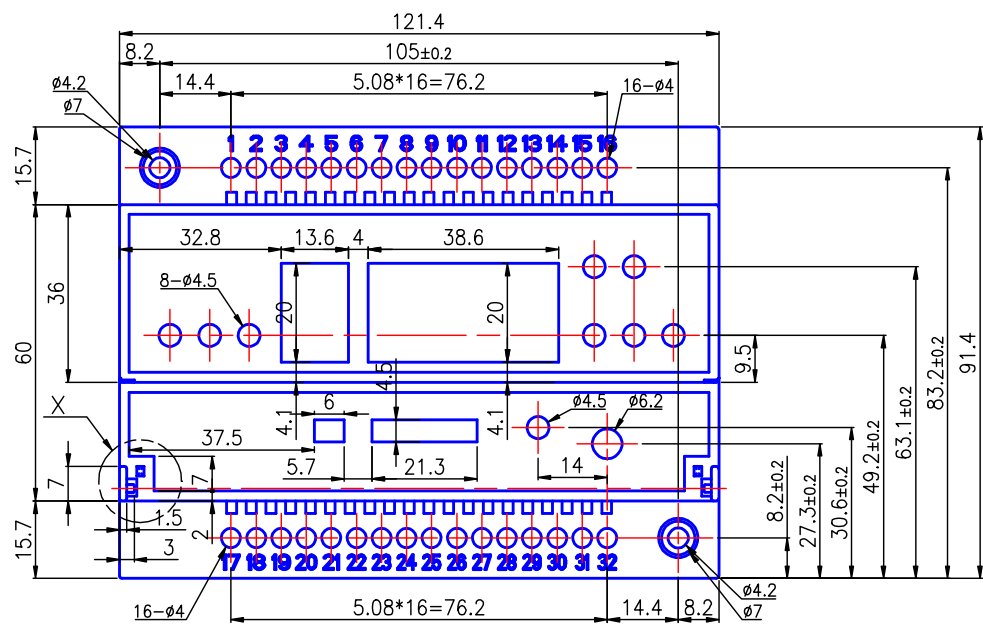
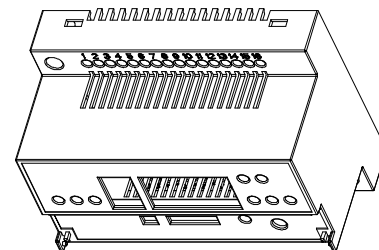
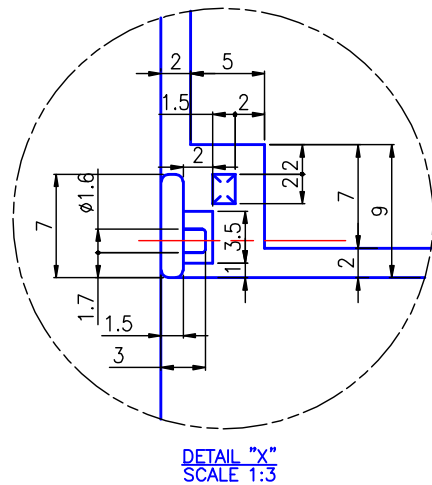
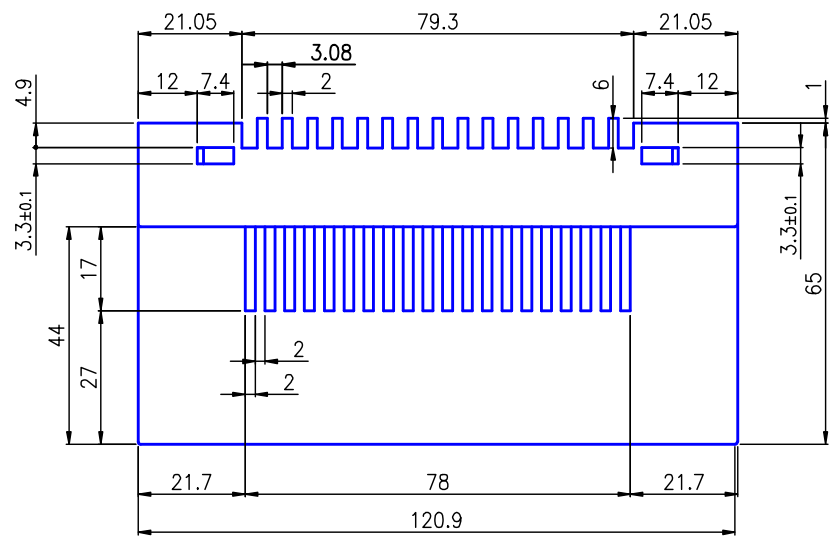
The following Page(s) are related to Illustration-1. The next supplement, if applicable, will be identified with a new Supplement Page Heading



The following Page(s) are related to Illustration-2. The next supplement, if applicable, will be identified with a new Supplement Page Heading



REVISIONS	REV.	DATE	CONTENTS	REVD BY	CHKD BY	APPD BY
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	△					
	△					



NOTE.

- 외관은 뒤틀림 없이 미려해야 하며, 가스자국, 기포, 수축 없을 것.
- 파팅면 Burr 높이 0.2 이하일 것.
- 색상은 흰색으로 할 것.
- 지시외 공차 : 사내 성형품 치수공차표 "B" 급 적용
- 지시외 빼기구배 : 1/100
- 상세 형상 및 치수는 3D MODELING 참조할 것.

1	RCTU UPPER CASE		△PC G/F10% V-0				1
Q'TY	DESCRIPTION		MATERIAL		DIMENSION	WEIGHT	PART NO
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	DSND BY	SAMJIN	DATE	20130410			
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					DWG NO.	3AT-04360	REV. 1

