



File E350024

Vol X4

Auth. Page 1

Issued: 2019-06-18

Revised: 2020-09-14

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT
(AZOT,AZOT7)

Manufacturer: SEE ADDENDUM FOR MANUFACTURER LOCATIONS

Applicant: 354116 (Party Site)
C-PRO ELECTRONICS CO LTD
(352679-001) 5F 214 Galmachi-ro Jungwon-gu
Seongnam-si Gyeonggi-do 13216 KOREA

Listee: 2282350 (Party Site)
Digital Watchdog (E507366)
16220 Bloomfield Avenue
Cerritos CA 90703

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 Listee/Classified Co. 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 web-site: <http://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 <http://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 Listee/Classified Co. 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 Listee/Classified Co. 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: <http://services.ul.com/fus-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.

Bruce A. Mahrenholz
Director
Conformity Assessment Programs (CPO)
UL LLC

LOCATION

1893743 (Party Site)
C-PRO VIETNAM COMPANY LIMITED
Dong Tho Industrial Cluster Dong Tho commune
Yen Phong District Bac Ninh province VIETNAM
Factory ID: CPROVN
UL Contracting Party for above site is: UL GmbH

(352679-001) 354116 (Party Site)
C-PRO ELECTRONICS CO LTD
5F 214 Galmachi-ro Jungwon-gu
Seongnam-si Gyeonggi-do 13216 KOREA
Factory ID: CPROKR
UL Contracting Party for above site is: UL GmbH



Multiple Listing Correlation Sheet

ML FILE NO. E472318

Issued: 2020-07-15

Revised: 2020-07-16

This page replaces the Multiple Listing Correlation Sheet between files E472318 and E350024, Vol X4.

WITHDRAWN

File		Volume	Page	Date:
E350024	Index	X4	1	25-Oct-20

Index

<u>Product Type</u>	<u>Model/Type Reference</u>	<u>Report Reference #</u>	<u>Status</u>
Outdoor Vandal IP Camera	DWC-MF4Wi (a), DWC-MV84WiA, DWC-MF4Wi(a)C(b), DWC-MV84WiAC(b) (a) can be any alphanumeric (b) can be any alphanumeric	E350024-A6001-UL	
Outdoor Bullet IP Camera	DWC-PB6M4T	E350024-A6002-UL	
Outdoor Vandal DOME IP Camera	DWC-PVF5M1TIR, DWC-PVF5M1TIRC(a).	E350024-A6003-UL	
Bullet IP Camera	DWC-MB44WiA, DWC-MB44WiAC(a), DWC-MB44Wi650, DWC-MB44Wi650C(a), DWC-MB44iALPR, DWC-MB44LPRC(a) (a) - Presence/Capacity of SD Card (can be any alphanumeric)	E350024-A6004-UL	
Outdoor Vandal DOME IP Camera	DWC-MV44WiA(a), DWC-MV44WA(a) (a) can be Blank or B (as enclosure color).	E350024-A6005-UL	
Outdoor Vandal DOME IP Camera	DWC-PVX16W, DWC-PVX16W4	E350024-A6006-UL	
Outdoor Bullet IP Camera	DWC-MB721M4TIR, DWC-MB721M6TIR, DWC-MB721M8TIR, DWC-MB721M4TIRDMP, DWC-MB721M6TIRDMP, DWC-MB721M8TIRDMP	E350024-A6007-UL	
Vandal IP Camera	DWC-PZ21M69T	E350024-A6008-UL	
IP CAMERA	DWC-MVA5Wi(a)T, DWC-MPVA5Wi(a)T	E350024-A6031-UL	
IP CAMERA	DWC-MVA2Wi(a)T, DWC-MPVA2Wi(a)T	E350024-A6033-UL	

UL TEST REPORT AND PROCEDURE

Standard:	UL 62368-1, 3rd Ed, Issued: 2019-12-13 (Audio/video, information and communication technology equipment Part 1: Safety requirements) CAN/CSA C22.2 No. 62368-1:19, 3rd Ed, Issued: 2019-12-13 (Audio/video, information and communication technology equipment Part 1: Safety requirements)
Certification Type:	Listing
CCN:	AZOT, AZOT7 (Audio/video, Information and Communication Technology Equipment)
Complementary CCN:	N/A
Product:	IP CAMERA
Model:	DWC-MVA2Wi(a)T, DWC-MPVA2Wi(a)T
Rating:	12 Vdc, 0.53 A or PoE(802.3af), 0.16 A
Applicant Name and Address:	C-PRO ELECTRONICS CO LTD 4~5F 214 GALMACHI-RO JUNGWON-GU SEONGNAM-SI GYEONGGI-DO 13216 KOREA

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ('UL') in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared By: Lawrence Lee / Project Handler Reviewed By: ByeongUk Lee / Reviewer

Supporting Documentation

The following documents located at the beginning of this Procedure supplement the requirements of this Test Report:

A. Authorization - The Authorization page may include additional Factory Identification Code markings.

B. Generic Inspection Instructions -

- i. Part AC details important information which may be applicable to products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of this Test Report.
- ii. Part AE details any requirements which may be applicable to all products covered by this Procedure. Products described in this Test Report must comply with any applicable items listed unless otherwise stated in the body of each Test Report.
- iii. Part AF details the requirements for the UL Certification Mark which is not controlled by the technical standard used to investigate these products. Products are permitted to bear only the Certification Mark(s) corresponding to the countries for which it is certified, as indicated in each Test Report.

Product Description

IP CAMERA has been designed for Indoor or Outdoor use and integrated a bracket for wall or ceiling mount. It is a commercial equipment supplied from DC or PoE (Power over Ethernet) and installed by instructed personnel.

Model Differences

DWC-MVA2Wi(a)T is basic model.

DWC-MPVA2Wi(a)T is identical to basic model except for model designation.

The symbol (a) can be Alphanumeric, hyphen or blank not affecting safety. (Lens size.)

Test Item Particulars

Product group	end product
Classification of use by	Instructed person
Supply Connection	not mains connected: ES1
Supply tolerance	None
Supply connection – type	12Vdc, PoE (Power over Ethernet)
Considered current rating of protective device	N/A
Equipment mobility	wall/ceiling-mounted
Over voltage category (OVC)	OVC I
Class of equipment	Class III
Special installation location	Outdoor location
Pollution degree (PD)	PD 2
Manufacturer's specified T _{ma} (°C)	50 Outdoor: minimum -20
IP protection class	IP 67
Power systems	not AC mains
Altitude during operation (m)	2000 m or less
Altitude of test laboratory (m)	2000 m or less
Mass of equipment (kg)	0.72

Technical Considerations

- ☐ The product was submitted and evaluated for use at the maximum ambient temperature (Tma) permitted by the manufacturer's specification of : 50°C
- ☐ The Risk Group of a lamp or lamp system (including LEDs) is : Exempt
- ☐ The following are available from the Applicant upon request : Installation (Safety) Instructions / Manual
- ☐ The outdoor equipment/enclosure was evaluated for use in an ambient temperature range of: -20 °C to +50 °C

Additional Information

4789531188

- Maximum Normal Load: Continuous operation with LED On.

4789556232

- Volume change from X6 to X4.

- [CCL] Correct Plastic enclosure information.

Additional Standards

The product fulfills the requirements of: N/A

Markings and Instructions

Clause Title	Marking or Instruction Details
Equipment identification marking – Manufacturer identification	Listee's or Recognized Company's name, Trade Name, Trademark or File Number
Equipment identification marking – model identification	Model Number
Equipment rating marking – ratings	Input Ratings (voltage, frequency/dc, current/power) Output Ratings (voltage, frequency/dc, current/power)
Outdoor enclosure type	Type 3, 3X, 3S, 3SX, 4, 4X, 6, 6P, "Raintight", "Rainproof", "Watertight", "Corrosion Resistant", "Dusttight" Enclosure
Manual-1	This product is intended to be supplied by a Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated from 12 Vdc, 0.53 A or PoE(802.3af), 0.16 A.
Manual-2	The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3.af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1 or PS2 as defined in UL62368-1.

Special Instructions to UL Representative

N/A

BD1.0	TABLE: Production-Line Testing Requirements					
BD1.1	Electric Strength Test Special Constructions – Refer to Generic Inspection Instructions, Part AC for further information.					
Model	Component	Removable parts	Test probe location	Test V rms	Test V dc	Test Time, s
N/A	N/A	N/A	N/A	N/A	N/A	N/A
BD1.2	Earthing Continuity Test Exemptions – This test is not required for the following models:					
	All model					
BD1.3	Electric Strength Test Exemptions – This test is not required for the following models:					
	All model					
BD1.4	Electric Strength Test Component Exemptions – The following solid-state components may be disconnected from the remainder of the circuitry during the performance of this test.					
	All model					

BE1.0	Sample and Test Specifics for Follow-Up Tests at UL				
Model	Component	Material	Test	Sample (s)	Test Specifics
N/A	N/A	N/A	N/A	N/A	N/A

4.1.2	TABLE: List of critical components					Pass
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Product Category CCN(s)	Mark(s) of conformity	Supplement ID
Metal enclosure	Interchangeable	Interchangeable	Aluminum alloy, see enclosure for dimension.	-	-	
Plastic enclosure	SABIC INNOVATIVE PLASTICS	9030(f1)(m)	Min. 0.75 mm, HB, 80 deg. C, see enclosure for dimension.	QMFZ2	UL (E45329)	
Internal Plastic	Interchangeable	Interchangeable	Min. HB	QMFZ2	UL	
Gasket for enclosures	DOW TORAY CO., LTD.	B6660INT, RBB-6660-60	HB, Min. 0.83 mm, 150 deg.C, Gasket Test was conducted under E350024-A6002.	QMFZ2 (E55519)	UL	
Transformer (TRANS1) in PoE board	BOB TECH	CP1010-A	130 deg.C, see enclosure for more detail.	-	-	
Transformer (TRANS1) in PoE board - Alternate	S.H.E Co., Ltd.	CP1010-A	130 deg. C, see enclosure for more detail.	-	-	
Opto-coupler (PC2) in IR PoE board	EVERLIGHT ELECTRONICS CO LTD	EL357N	Double protection optical isolators, providing 3750 Vac isolation	FPQU2	UL (E214129)	
Opto-coupler (PC2) in IR PoE board - Alternate	TOSHIBA ELECTRONIC DEVICES & STORAGE CORPORATION	P181 (f)	Single protection optical isolators, providing 3750 Vac isolation	FPQU2	UL (E67349)	
Internal wiring	Interchangeable	Interchangeable	Marked VW-1, Min. 80 deg.C, 30 V	AVLV2	UL	
Thermal pad	Interchangeable	Interchangeable	Min HB, Min 100 deg.C	QMFZ2	UL	
PWB	Interchangeable	Interchangeable	V-0, 130 deg.C	ZPMV2	UL	

Issue Date: 2020-09-01

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Report Reference #

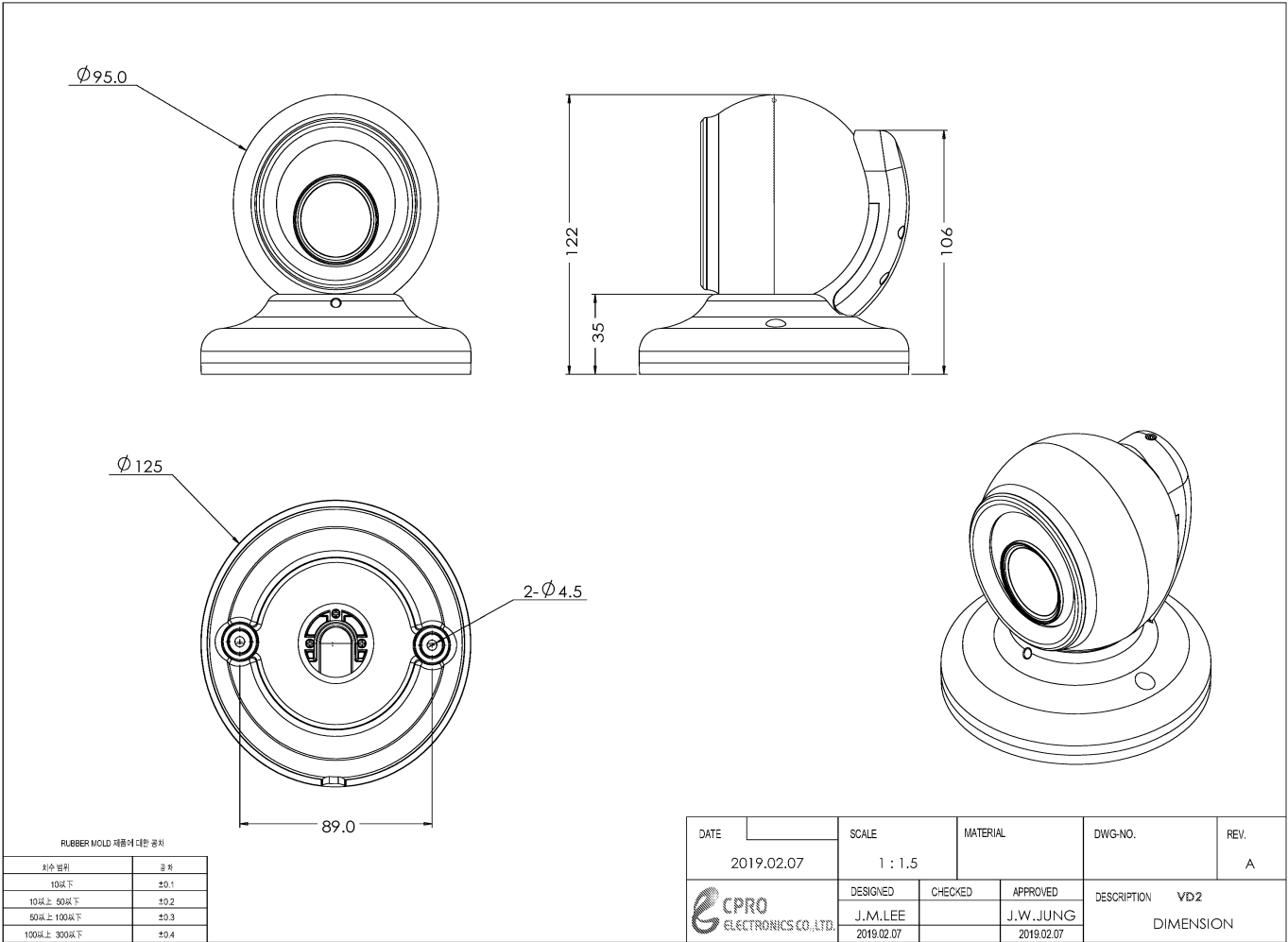
E350024-A6033-UL

Revision Date: 2020-10-24

Label	Interchangeable	Interchangeable	Outdoor Use, Max Temp 100 deg. C, Min Temp-40 deg.C	PGDQ2or PGJ12	UL	
LED (TP1, TP2)	HELIO Optoelectronics Corp.	XPEIFR-L1	Vf: 2.6 Vdc (Max.), wavelength: 850 nm (typical)	-	-	

Enclosures

Type	Supplement Id	Description
Photographs	03-01	External 1
Photographs	03-02	External 2
Photographs	03-03	External 3
Photographs	03-04	Internal
Photographs	03-05	POE board (Top)
Photographs	03-06	POE board (Bottom)
Photographs	03-07	Image sensor board (Top)
Photographs	03-08	Image sensor board (Bottom)
Diagrams	04-01	Enclosure Dimension
Manuals	06-01	Manual
Miscellaneous	07-01	Dual language safety labeling CRD
Miscellaneous	07-02	PoE Transformer (T1) spec (BOB TECH)
Miscellaneous	07-03	PoE Transformer (T1) spec (S.H.E CO., LTD.)
Miscellaneous	07-04	Label



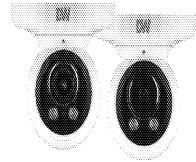


Quick Start Guide



IP Cameras

MEGAPIX® IVA® models	9MP models	2MP/1080p models
DWC-MPVA5W1AT	DWC-MVA5W1AT	DWC-MVA2W1AT
DWC-MPVA5W28T	DWC-MVA5W28T	DWC-MVA2W28T
DWC-MPVA2W1AT		
DWC-MPVA2W28T		



Default Login Information: admin | admin

When logging into the camera for the first time, you will be prompted to set up a new password. You can set the new password using the DW® IP Finder™ software or directly from the camera's browser menu.

WHAT'S IN THE BOX

Hexagonal Wrench	✓	1	Mounting Template	1
Screws and Plastic Anchors - Zocs	✓	1 set	Quick Setup and Installation Guide	1 set
Waterproof Cap and Gasket	✓	1 set		

NOTE: Download all your support materials and tools in one place

- Go to <http://www.digital-watchdog.com/resources>
- Search your product by entering the part number in the **Search by Product** search bar. Results for applicable part numbers will populate automatically based on the part number you enter.
- Click **Search**. All supported materials, including manuals and quick start guide (QSG) will appear in the results.



Attention: This document is intended to serve as a quick reference for the initial set-up. It is recommended that the user read the entire instruction manual for complete and proper installation and usage.

Tel: +1 (866) 446-3595 / (813) 888-9555

digital-watchdog.com

Technical Support Hours
9:00 AM - 8:00 PM EST, Monday through Friday



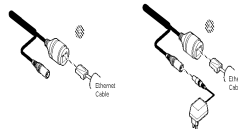
STEP 1 - PREPARING TO MOUNT THE CAMERA

- The mounting surface must withstand five times the camera weight.
- Do not let the cables get caught in improper places or the electric line cover can be damaged. This may cause a short or fire.
- CAUTION:** These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.
- This product is intended to be supplied by a UL Listed Power Supply Unit marked "Class 2" or "LPS" or "PS2" and rated 12 Vdc, 0.59A (DWC-MPVA5W1AT, DWC-MVA5W1AT, DWC-MPVA5W28T and DWC-MVA5W28T), 0.53A (DWC-MPVA2W1AT, DWC-MVA2W1AT, DWC-MPVA2W28T and DWC-MVA2W28T) min.
- The wired LAN hub providing power over the Ethernet (PoE) in accordance with IEEE 802.3af shall be a UL Listed device with the output evaluated as a Limited Power Source as defined in UL60950-1 or PS2 as defined in UL62368-1.
- Unit is intended for installation in a Network Environment 0 as defined in IEC TR 62102. As such, associated Ethernet wiring shall be limited to inside the building.
- Using the mounting template sheet or the camera itself, mark and drill the necessary holes in the wall or ceiling.

STEP 2 - POWERING THE CAMERA

Pass the wires through and make all the necessary connections.

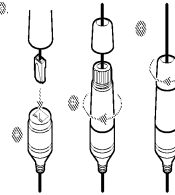
- NETWORK CONNECTIONS** - If you are using a PoE switch, connect the camera using an Ethernet cable for both data and power.
- NETWORK CONNECTIONS** - If you are using a non-PoE switch, connect the camera to the switch using an Ethernet cable for data transmission and use a power adapter to power the camera.



Models	Power requirements	Power consumption
DWC-MPVA5W1AT DWC-MVA5W1AT	DC 12V PoE IEEE 802.3af Class 3 (Adapter not included)	DC 12V max 7.1W PoE max 8.5W
DWC-MPVA5W28T DWC-MVA5W28T		
DWC-MPVA2W1AT DWC-MVA2W1AT		DC 12V max 6.4W PoE max 7.6W
DWC-MPVA2W28T DWC-MVA2W28T		

STEP 3 - INSTALLING THE CAMERA

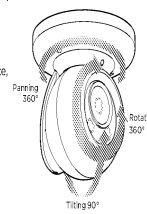
- To use the camera's waterproof wiring:
 - Install the LAN cable into ①.
 - ② will be assembled to ③ with a 1/4 turn.
 - Thread ④ tightly to ⑤.



NOTE: To ensure moisture seal, make sure the o-ring is in place between ② and ③. In extreme environments use of an outdoor rated sealer is recommended.

NOTE: When using the waterproof cap, crimp the RJ45 connector after passing the cable through the waterproof cap.

- Once all cables have been connected, use the screws included with the camera to properly mount and secure the camera to the mounting surface.
- Adjust the camera's pan, tilt and position to achieve the desired view. The cameras' max angles are:
Pan: 0° - 360°
Tilt: 0° - 90°
Rotation: 0° - 360°
- Once the installation is complete, tighten the pan/tilt/rotation screw until it's secure.

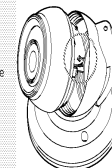


Resetting the camera: To reset the camera, detach the ball module from the base by rotating it counter-clockwise. See the diagram on the bottom right.

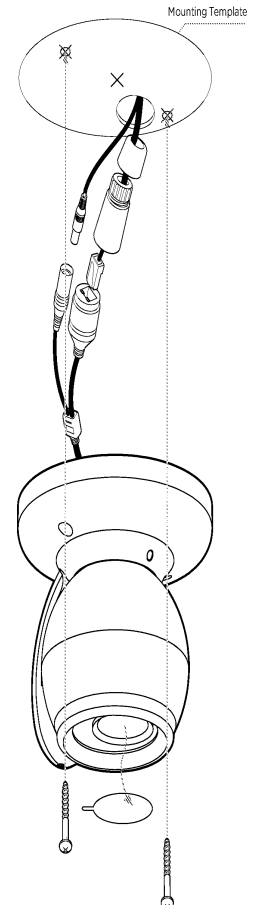
Do not touch any other parts of the camera.

Press the reset button on the base of the camera's lens module. Pressing the button for five (5) seconds will initiate a camera-wide reset of all the settings, including network settings.

When replacing the camera's ball module back into place, make sure no cables are caught or got disconnected. Rotate the ball module clockwise until it is secured in place.



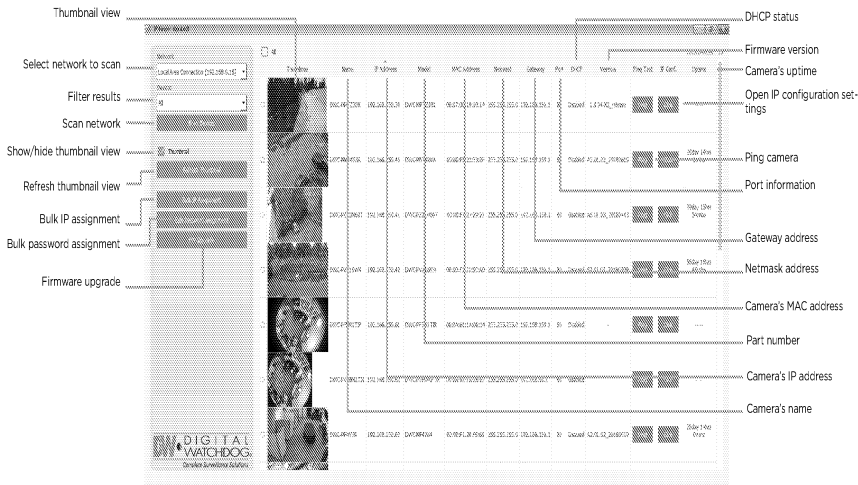
Quick Start Guide





STEP 4 - DW* IP FINDER™

Use the DW IP Finder software to scan the network and detect all MEGAPIX* cameras, set the camera's network settings or access the camera's web client.

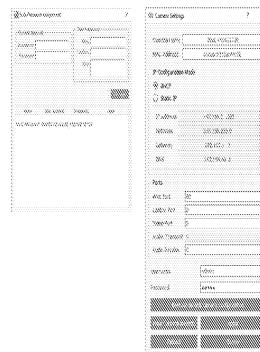


Network Setup

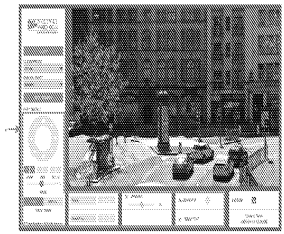
1. To install the DW IP Finder, go to <http://www.digital-watchdog.com>
2. Enter "DW IP Finder" in the search box at the top of the page.
3. Go to the "Software" tab on the DW IP Finder page to download the installation file.
4. Follow the installation to install the DW IP Finder. Open the DW IP Finder and click 'Scan Devices'. It will scan the selected network for all supported devices and list the results in the table. During the scan, the DW* logo will turn gray.

- ① Select DHCP to allow the camera to receive its IP address automatically from the DHCP server.
- ② Select "Static" to manually enter the camera's IP address, (Sub)Netmask, Gateway and DNS information.
- * The camera's IP must be set to Static if connecting to Spectrum* IP/VMS
- ③ Contact your network administrator for more information.
- ④ Default TCP/IP information: DHCP

5. When connecting to the camera for the first time, a password must be set. To set up a password for your new camera.
 - a. Check the box next to your new camera from the IP Finder's search results. You can select multiple cameras.
 - b. Click "Bulk Password Assign" on the left.
 - c. In the pop-up window, enter admin/admin in the current username and password fields. Enter a new username and password to the right.
 - d. Press "change" to apply all changes.
6. Select a camera from the list by double-clicking on the camera's image or clicking on the 'Click' button under the IP Conf. column. The pop-up window will show the camera's current network settings, allowing admin users to adjust the settings as needed.
7. To access the camera's web page, go to the IP Config page and click on the 'View Camera Website'.
8. To save the changes made to the camera's setting, input the username and password of the camera and click Apply.



STEP 5 - WEB VIEWER

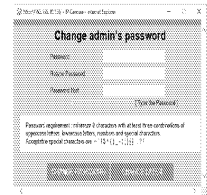


The GUI display may differ by camera models.

Once the camera's network settings have been setup properly, you can access the camera's web viewer using the DW IP Finder.

To open the camera's web viewer:

1. Find the camera using the DW IP Finder.
2. Double-click on the camera's view in the results table.
3. Press the 'View Camera Website'. The camera's web viewer will open up in your default web browser.
4. Enter the camera's username and password you setup in the DW IP Finder. If you did not setup a new username and password via the DW IP Finder, you will not be able to view video from the camera. A message will direct you to setup a new password for the camera to view video.



5. When accessing the camera for the first time, install the VLC player for web files to view video from the camera.

NOTE: 32bit version of the VLC player must be installed. If you are using a 64bit system, uninstall the previous 64bit version and reinstall using the 32bit version.

NOTE: Some menu options may not be available based on the camera model. See the full manual for more information.

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Rev Date: 08/20 Specifications and pricing are subject to change without notice.

Miscellaneous-01 Page-1

Project No. 4789531188 File E158873 Page 1
 Compliance Review Conducted by: _____
 Printed Name Signature Date

Standard SCC Requirements and Guidance - Product Edition/
 Certification Body Accreditation Program Revision
 Date 2016-04-06

Clause/Par. Reference and Construction Requirement	Comply			Comments/Measurements	Inst. ID No.
	Yes	No	N/A		
9.2.3 CBs shall include dual language safety labeling within their product certification requirements, if so required by the standard or by the authority having jurisdiction.					
The manufacturer has confirmed they have the ability to include English and French safety labeling exactly as specified in the product standard; or, if NOT specified in the product standard, the ability to include English and French safety labelling consisting of markings associated with the signal words DANGER, WARNING, and CAUTION when required.	X			The ability of the manufacturer to include these markings was verified by either (1) visual inspection of the markings on the actual product or (2) draft of labels that will be applied to the product or (3) written confirmation from the customer of the markings that will appear on the product. If the product standard provides the exact translation, the evidence must match the exact translation. If the product standard does NOT provide the exact translation, the evidence must simply include both the English and French text (no verification of translation is required).	N/A

Miscellaneous-01 Page-2

Project No. 4789531188
Compliance
Review
Conducted by:

File E158873

Page 2

Printed Name

Signature

Date

Clause/Par. Reference and Construction Requirement	Comply			Comments/Measurements	Inst. ID No.
	Yes	No	N/A		
Manufacturer has a method to manage distribution of products, IF all products with the Canadian certification mark are NOT going to include the dual language.	X			Evaluation staff are to only verify that the manufacturer has a method to control distribution. Evaluation staff do not have to record the method of control nor are the evaluation staff expected to verify the effectiveness of the method of control. This requirement to verify that a method exists will be noted in the FUS Procedure. The UL Field Engineer will verify the method during surveillance. If the manufacturer is going to include the dual language on all products with the Canadian certification mark, then this item is N/A; no further action required.	N/A



SPECIFICATION

CUSTOMER :	C-PRO	TYPE:	EP10
CUSTOMER P/N:	CP1010-A	REV:	A
BOB TECH P/N:		REV:	A
DESCRIPTION:	TRANSFORMER	DATE:	2019-05-20

APPROVED FOR CUSTOMER:

PLEASE RETURN AFTER APPROVING

DRAWN	CHECKED	APPROVED

BOB TECH

4-214, International Distribute Complex, Hoggie 1-Dong, Dongan-Gu, Anyang-Si, Gyeonggi-Do, Korea
TEL : 070 - 7619 - 6970
FAX : 031 - 421 - 6969

BOB TECH

SPECIFICATION				CUSTOMER:		C-PRO			
				CUSTOMER P/N:		CP1010-A		REV:	A
				BOB TECH P/N:				REV:	A
4. Winding parameters									
No	S-F	wire or other	turns	barrier tape	winding way	wind tape	turns	remark	
W1	1--4	2UEW 0.20φ	42		CLOSE	25u*5.5mm(Y)	2		
W2	8--5	2UEW 0.30*2#	15		CLOSE	25u*5.5mm(Y)	2		
W3	1--4	2UEW 0.20φ	42		CLOSE	25u*5.5mm(Y)	2		
W4	2--3	2UEW 0.15φ	15		CLOSE	25u*5.5mm(Y)	2		
CORE wrapping tape: 25u*7.5mm(Y), 3TS									
5. Electrical Characteristics(AT 25℃)									
NO.	ITEM		TERMINAL		SPECIFICATION		REMARK		
1	INDUCTANCE		1--4		120 uH±10%		LCR-3302 1KHz ,1V		
3	INSULATION RESISTANCE		P COIL---S COIL		100MΩ MIN		AN9632W DC500V		
			P、SCOIL---CORE						
4	WITHSTANDING VOLTAGE		P COIL---S COIL		AC 1.0KV/SEC/5mA		AN9632W		
			P、SCOIL---CORE		AC 1.0KV/SEC/5mA				
6. Materials list									
NO.	COMPONENT	MATERIAL S	MANUFACTURERS			TEMP. CLASS	REMARKS		
1	CORE EP10	P4	ACME ELECTRONICS CORPORATION			-	N/A		
2	BOBBIN	PM9630	SUMITOMO BAKELITE CO LTD			UL94V-0	E41429		
3	WIRE	UEW	SHANDONG SAINT ELECTRIC CO., LTD			130 (B)	E194410		
4	INSULATION TAPE	CT	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO., LTD			130 (B)	E165111		
6	VARNISH	319-5F	JIANGYIN CITY DENG FENG ELECTRICAL MATERIAL CO., LTD			130 (B)	E239866		
7. Operating temp. : -40 to +80℃									
BOB TECH									



Rev. No. 0
Date . 2020-07-27

Specification of approval

Customer. **C-PRO ELECTRONICS CO., LTD.**
Model name. **TRANSFORMER**
Parts name. **CP1010-A**
Specification. **SMD EP10-8P**

Customer Approved

Designed by	Checked by	Approved by
K.D.H	L.E.A	Y.M.J
2020-07-27	2020-07-27	2020-07-27



S.H.E CO., LTD.

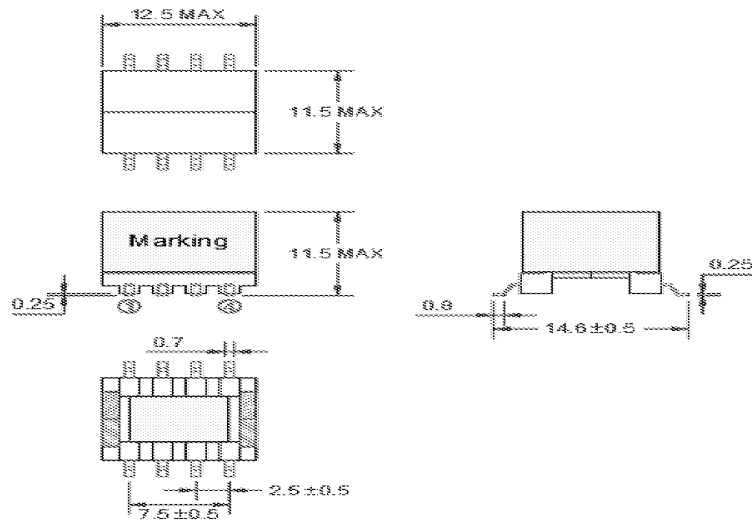
HEAD-OFFICE : D/255, Suwon GongGu Town Bldg, 23-26, Pyeong-Dong,
Gwonseon-Gu, Suwon-Si, Gyeonggi-Do, Korea
TEL : 82-70-4253-9157
FAX : 82-31-297-9257

S.H.E CO., LTD.

A4 (210x297)

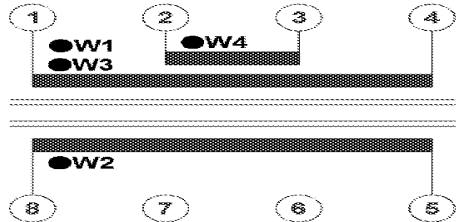
Model name.	Parts name.	Specification.	Rev. No.	Date .	Page-No.
TRANSFORMER	CP1010-A	SMD EP10-8P	0	2020-07-27	3 / 7

1. DIMENSION (UNIT : mm)



Marking
CP1010-A

2. SCHEMATIC DIAGRAM (Bottom-View)

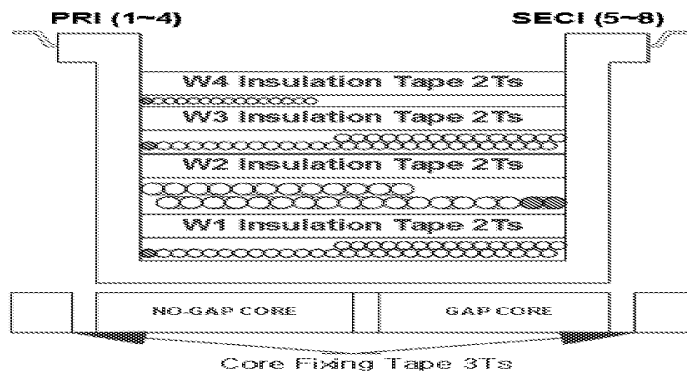


Remove-Pin: (NONE)

Model name.	Parts name.	Specification.	Rev. No.	Date .	Page-No.
TRANSFORMER	CP1010-A	SMD EP10-8P	0	2020-07-27	4 / 7

3. WINDING SPECIFICATION

Winding	Barrier	Terminal	Winding	Insulation Tape (Yellow)
No	PRI	SEC	Class & gage	Thick(t)/Width(mm)
W1	X	X	UEW $\phi 0.20$	0.025t / 5.5mm (YL)
W2	X	X	UEW $\phi 0.3 \times 2P$	0.025t / 5.5mm (YL)
W3	X	X	UEW $\phi 0.20$	0.025t / 5.5mm (YL)
W4	X	X	UEW $\phi 0.15$	0.025t / 5.5mm (YL)
CORE FIXING (Center-Air-gap)				0.025t / 7.5mm (YL)
**Attention **				3
1) TUBE-Pin: (NONE)		2) Remove-Pin: (NONE)		3) Cutting-pin:(NONE)



4. ELECTRICAL CHARACTERISTIC

No.	ITEM	Terminal	Spec	Related conditions
1	Inductance	PIN(1-4)	120uH $\pm 10\%$ at 1KHz/1V	LCR METER
2	Withstanding Voltage	PRI-SEC	AC 1.0kVrms / SEC	Cut off Current 5mA
		PRI, SEC - CORE	AC 1.0kVrms / SEC	
3	Insulation resistance	PRI-SEC PRI,SEC-CORE	100M Ω min at DC 500v	MEGA OHM METER

Model name.	Parts name.	Specification.	Rev. No.	Date .	Page-No.
TRANSFORMER	CP1010-A	SMD EP10-8P	0	2020-07-27	5 / 7

5. MATERIAL LIST

No	ITEM	Material & Dimension	Manufacturer	UL Safety No.
1	CORE	EP10 TD4	ZHEJIANG TONGDA MAGANETIC PRODUCTS CO., LTD. or Equivalent.	not applicable
2	BOBBIN	PHENOL T375HF SMD EP10-8P	CHANG CHUN PLASTICS CO., LTD. SUMITOMO BAKELITE CO., LTD. or Equivalent.	E59481 E41429
3	Polyurethane Enamelled Wire	2UEW Φ0.15, Φ0.20, Φ0.30	ZHEJIANG WUGU COPPER INDUSTRY CO.,LTD SHANDONG SAINT ELECTRIC CO.,LTD or Equivalent.	E336659 E194410
4	Insulation TAPE	PS 0.025t /5.5mm KL-168 (YELLOW)	GUANGDONG KANGLI NEW ENERGY MATERIAL TECHNOLOGY CO.,LTD. JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO.,LTD. or Equivalent.	E511186 E165111
5	CORE FIXING TAPE	PS 0.025t /7.5mm KL-168 (YELLOW)	GUANGDONG KANGLI NEW ENERGY MATERIAL TECHNOLOGY CO.,LTD. JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO.,LTD. or Equivalent.	E511186 E165111
6	SOLDER	LEAD-FREE 8EB34 Sn98+Cu2	TIAJIN SONGBEN ENVIRONMENTAL SCIENCE & TECH CO.,LTD. or Equivalent.	not applicable
7	VARNISH	T4260 319-5F	SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO, LTD. JIANGYIN CITY DENG FENG ELECTRICAL MATERIAL CO, LTD. or Equivalent.	E228349 E239866

PRODUCT LABEL



PRODUCT LABEL



PRODUCT LABEL



PRODUCT LABEL











