

user's manual



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NVH-SD40EH-C
NVH-SD40EH-S

NOVUS[®]

WARNINGS

ATTENTION!

THE KNOWLEDGE OF THIS USER'S MANUAL IS AN INDESPENSIBLE CONDITION OF A PROPER DEVICE OPERATING. YOU ARE KINDLY REQUESTED TO FAMILIARIZE YOURSELF WITH THIS MANUAL BEFORE STARTING THE DEVICE. THE MANUAL SHOULD BE KEPT FOR FUTURE USE.



CAUTION!

PRIOR TO UNDERTAKING ANY ACTION THAT IS NOT PROVISIONED FOR THE GIVEN PRODUCT IN ITS USER'S MANUAL AND OTHER DOCUMENTS DELIVERED WITH THE PRODUCT, OR THAT ARISES FROM THE NORMAL APPLICATION OF THE PRODUCT, ITS MANUFACTURER MUST BE CONTACTED OR THE RESPONSIBILITY OF THE MANUFACTURER FOR THE RESULTS OF SUCH AN ACTION SHALL BE EXCLUDED.

IMPORTANT SAFEGUARDS AND WARNINGS

1. Read, keep, and follow these instructions. All the safety and operating instructions should be read before the product is operated.
2. Heed all warnings. All warnings on the product and in the instruction manual should be adhered to.
3. Follow all the safety instructions in this manual. Improper installation and bracket operation may have impact on operator safety as well as bracket operational reliability and working life.
4. All the bracket installations and operations should be done according to this user's manual.
5. Unplug the unit before maintenance activities.
6. Only use attachments / accessories specified by the manufacturer.
7. Installation and servicing should be done only by the qualified service personnel and conform to all local codes.
8. This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your location, consult your product dealer. Do not overload power supply and extension cords as this can result in a risk of fire and/or electronic shock.
9. Power cords and cables should be led in a manner protecting them from damage by being walked on or pinched by items placed upon or against them.

WARNINGS

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10. As well signal and power cables should be equipped with surge protection devices. This will prevent damage to the equipment due to lightning or power-line surges.
 11. Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.
 12. There are no user-serviceable parts inside this unit. Only authorized service personnel may open the unit.
 13. Unplug the unit and refer servicing to qualified service personnel under the following conditions:
 - a. When the power supply cord or plug are damaged.
 - b. If liquid has been spilled or objects have fallen into the unit.
 - c. If the unit does not operate normally by following the operating instructions.
 - e. If the unit has been dropped or the cabinet has been damaged.
 - f. When the unit exhibits a distinct change in performance - this indicates a need for service.
 14. Do not attempt to service the housing yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
 15. After any service operations test the unit and all attachments / accessories functionality.

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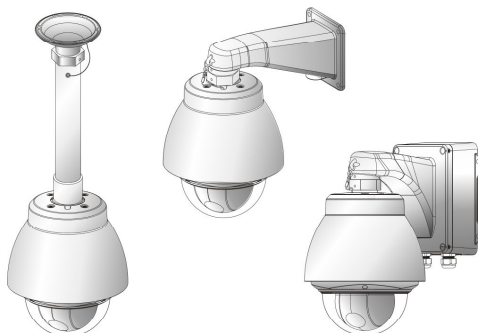
INFORMATION

Data included in the following user's manual is up to date at the time of printing. Novus Security Sp z o.o. holds exclusive rights to modify this manual. The producer reserves the rights for device specification modification and change in the design without prior notice.

MAIN CHARACTERISTICS

1. MAIN CHARACTERISTICS

- ◆ External housing for the Cama-I series speed dome cameras.
- ◆ The body and sunshield (in the outdoor speed dome) made of aluminium with powder coating in beige colour, the internal parts are constructed of steel, the bulb made of plastic (acryl).
- ◆ Built-in heater and fan allow operating in wide temperature range: from - 45°C to 50°C.
- ◆ The housing meets IP66 standards for dust and moisture resistance.
- ◆ The housing is designed to be mounted on the wall, in-ceiling, pole and in the corner thanks to use various adapters and brackets.
- ◆ The wire with the snap hook protecting against collapsing during the installation.



- ◆ The brackets seen on the above picture are not included in the set.

2. CONTENTS OF THE PACKAGE

The following items should be in the set:

Housing:	1 pcs
User's manual:	1 pcs
Bundle of cables with the terminal block connectors (installed in the housing)	1 pcs
Screws for camera mounting:	1 pcs
Torx L-Wrench:	1 pcs

If the equipment has been damaged during transport or is incomplete, the contents of package should be packed back to the original box. Contact the local NOVUS distributor for further assistance.

SPECIFICATIONS

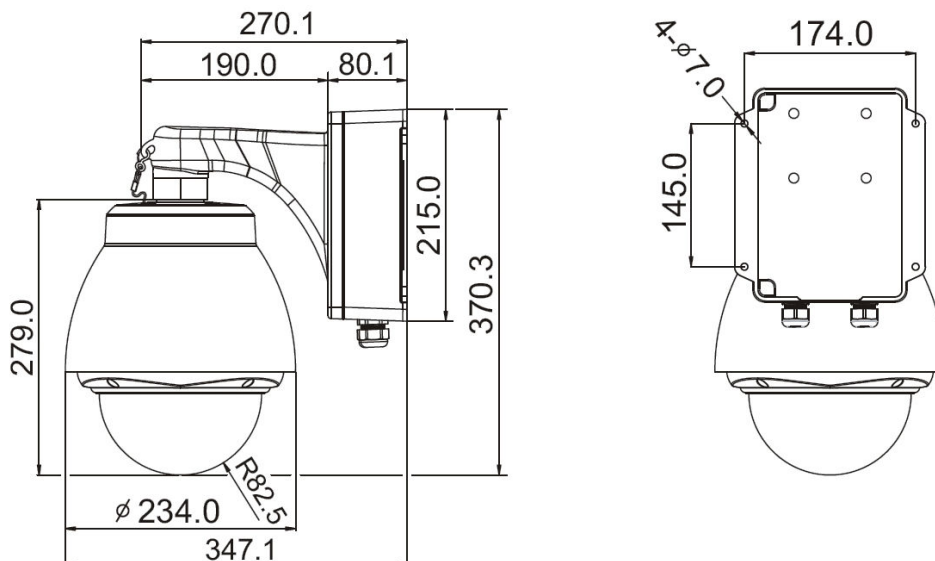
3. SPECIFICATIONS

Model	NVH-SD40EH-C	NVH-SD40EH-S
Type	external	
Mount type	wall (also in corner by means of adapter), in-ceiling and pole thanks to use various adapters and brackets	
Construction material	body - aluminium, internal parts made of steel, bulb - acryl	
Housing color	beige	
Bulb	clear	smoke
Heater	yes	
Fan	yes	
Degree of protection	IP66	
Power supply	24 VAC	
Power consumption	50W - heater, 3W - fan	
Operating temperature	-45°C ~ 50°C	
Dimensions (mm)	234 (Ø) x 278 (H) (the dimensions in details find below)	
Weight	2.9 kg	
In set included	housing, sunshield, torx, screws, user's manual	

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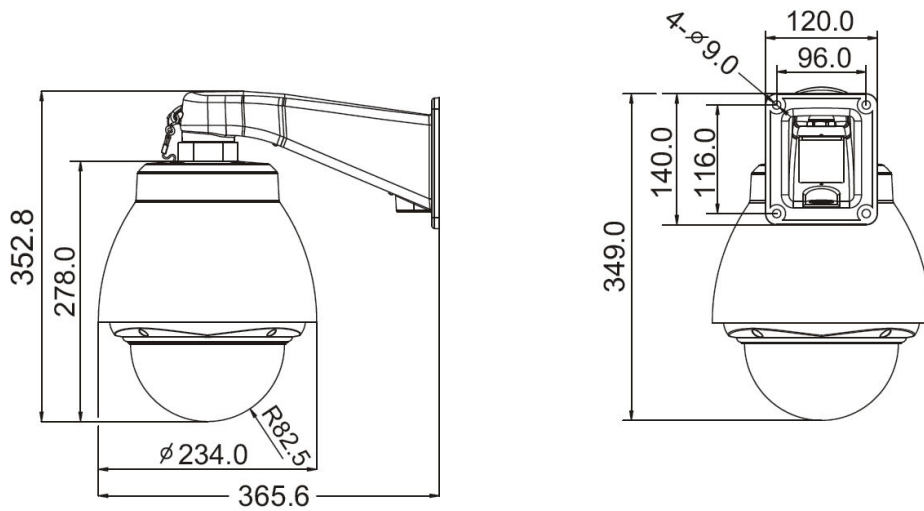
3.1 External dimensions

- The dimensions of the housing in connection with optional wall bracket NVB-SD40PWB/230 (not included in set)

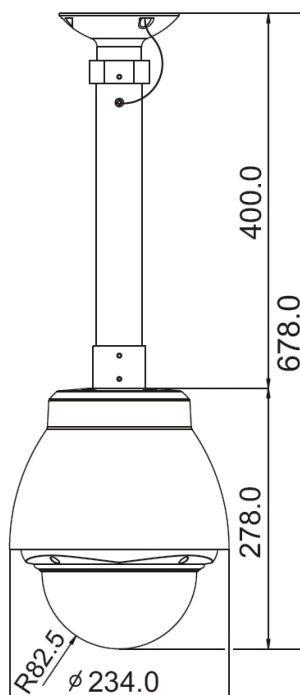
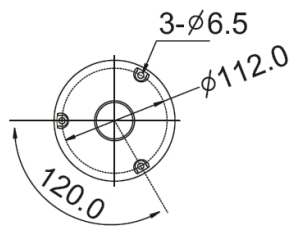


SPECIFICATIONS

- The dimensions of the housing in connection with optional wall bracket **NVB-SD40WB** (not included in set)

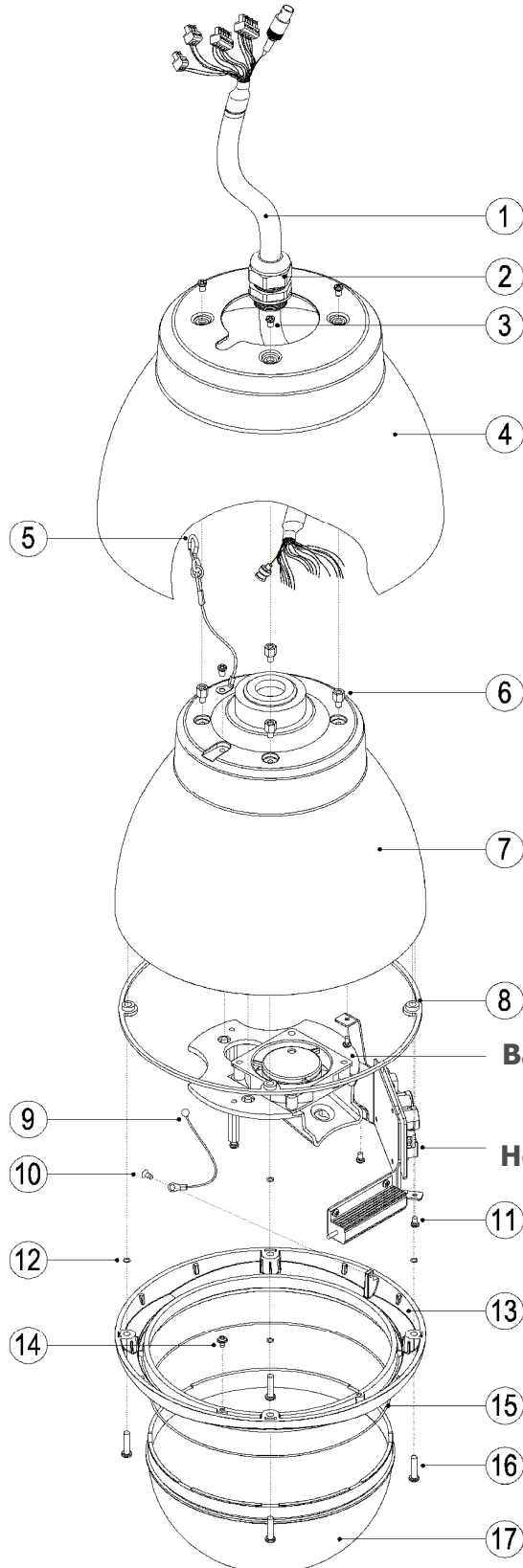


- The dimensions of the housing in connection with optional ceiling bracket **NVB-SD40CB** (not included in set)

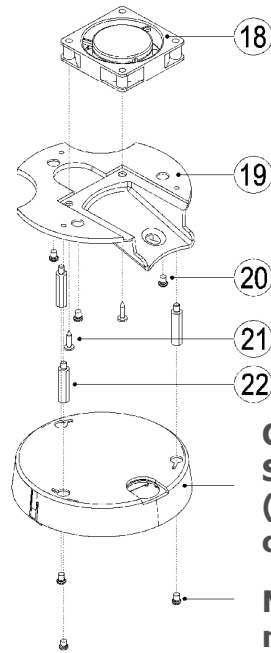


SPECIFICATIONS

3.2. Parts list



Base camera in details



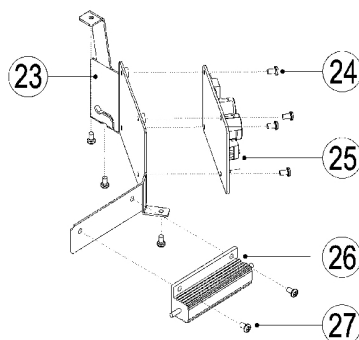
Connector base of Speed dome camera (part of speed dome camera)

M4x8 BH camera machine screw

Base module

Heater module

Heater module in details



SPECIFICATIONS

No	Name	Quantity
1	Bundle of cables with the terminal block connectors	1
2	Plastic bushing	1
3	M4x5 PH machine screw	5
4	Aluminium sunshield	1
5	“A” safety wire	1
6	DAPG-16 plastic bushing	1
7	“A” screw spacer	4
8	Body	1
9	Silicon rubber gasket	1
10	“B” safety wire	1
11	M3x6 FH2 tapping screw of “B” safety wire	1
12	M3x8 PH machine screw of heater's module	3
13	Bubble ring, ABS	1
14	M3x5 NPH tapping screw	1
15	O-ring silicon	1
16	M4x17 TORX screw	4
17	Acrylic bubble, gauge 2.5 mm	1
18	Fan	1
19	Camera base	1
20	M4x8 PH machine screw of base module	3
21	M5x14 PH tapping screw of fan	2
22	MSWR screw spacer	3
23	Heater bracket	1
24	PCB M3x4.5 PH machine screw of heater's module	4
25	Fan & heater board	1
26	Heater	1
27	M3x4.5 PH machine screw of heater	2

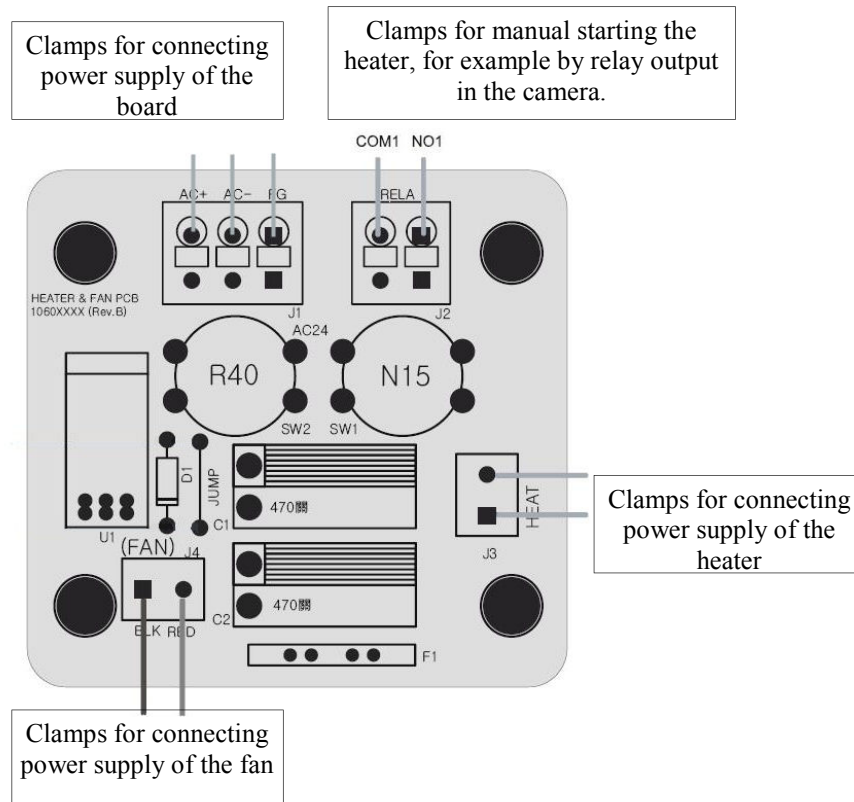
SPECIFICATIONS

3.3. The location of the elements on the heater's board.

The housing is equipped with a fan and a heater which is controlled by thermostat. Thermostat of the heater is set to turn it on at 4°C ($\pm 5^{\circ}\text{C}$) and to turn it off from 15°C ($\pm 5^{\circ}\text{C}$). The fan operates continuously while housing is powered. It provides good air circulation inside the housing.

Thermostat, additional electronic elements and connectors are located on the board fastened to the heater bracket. The heater is fastened to the same heater bracket. The fan is located above the base of speed dome camera.

Both the heater and the fan are connected to the right connectors on the board by default that's why during installation connect just the power and the ground using the available connectors in the terminal block of base camera. Beneath there is a view of board with the description of connectors.



Although the housing and the camera are supplied with alternate current and the polarization is not significant each input is appropriately described $AC+$ i $AC-$. It is recommended to connect the same phase to the proper connectors of power in several receivers (for example cameras and housings) particularly if one transformer supplies more than one camera.

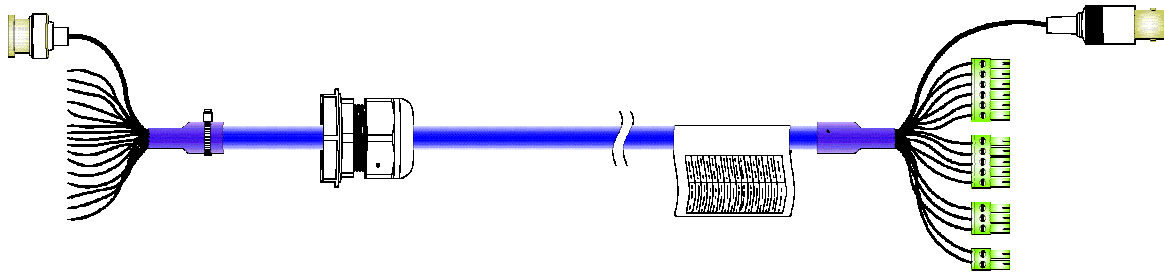
The connector named FG is a ground connector. The connector with similar sign is located on the block of connectors in the camera.

SPECIFICATIONS

3.4. The description of color cables

The housing is accompanied by 45cm long bundle of cables. It is utilized to convenient connect chosen signals and power. The shape of cross-section and the diameter are adjusted to the bushing screw in the housing. Thanks to it the cable connection in the housing is leak proof.

Additionally, thanks to connectors at the end of cable the installation and connection with the NVB-SD40PWB/230 bracket which has compatible connectors is convenient.



The bundle of cable consists of 16 colour cables with the connectors at one end and soldered cable and BNC coax cable at the other.

In case of using more alarm inputs in the camera it is demanded to put the additional cables outside the bundle.

Cable's colour	Function
Brown-white	24 VAC - , power supply of heater and fan module
Black-white	24 VAC + , power supply of heater and fan module
Red	COM1, common output for the relay no 1
Brown	NC1, normally closed mode for the relay no 1
Black	NO1, normally open mode for the relay no 1
Grey	AL1, alarm input no 1
Blue	AL1, alarm input no 2
Green	AL1, alarm input no 3
Yellow	AL1, alarm input no 4
Orange	GND for the alarm inputs
Red-white	24 VAC + , Power supply of the camera
Orange-white	24 VAC - , Power supply of the camera
Yellow-white	FGND
Green-white	RX- (TX-), control RS-485
Grey-white	RX+ (TX+), control RS-485
Blue-white	GND

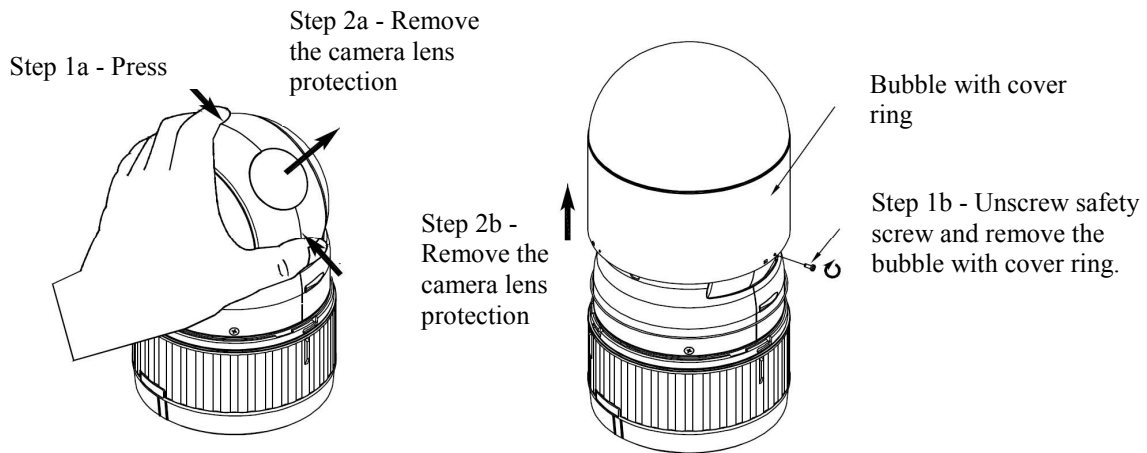
CAMERA INSTALLATION

4. CAMERA INSTALLATION IN THE HOUSING

4.1 Camera installation in the housing by means of the NVB-SD40PWB/230 wall bracket with power supply .

STEP 1 - Preparing the camera for mounting

- a. Before mounting a camera remove the camera lens protection (plastic round glass) by pressing on both sides of the camera (refer to the image below) and attach the bubble with cover ring using the mounting screw.



- b. Detach the main module of the camera and the base (refer to the camera manual).
- c. Make the necessary setting of the address, protocol, baud rate and termination (if needed).
- d. Remove the bubble (15). In order to remove the bubble unscrew 4 screws (14) fixing the bubble.
- e. Release the bushing tightening the bundle of cables. If necessary lead the additional cables.
- f. Connect essential cables with the connectors of the camera base (according to the camera manual and the description on the previous page) and, additionally, connect by means of cable appropriate power supply clamps of the heater board (23) with the power supply clamps located in the base of the camera (block of the connectors has two pairs of clamps $AC+$, $AC-$ and FG , which can be utilized for it). Make sure to put the cables through the hole in the base.
- g. Screw the base of the camera to the screw spacer (20) by means of 3 M4x8 BH machine screws that are attached (make sure that the padlock icon on the base is located in such a manner that it is visible during camera mounting).
- h. Gently withdraw the excess of the cables from the housing and tighten up the bushing (4). The thread is plastic and that is why during the tightening the nut up make sure you do it softly you don't damage the thread. Additionally, seal up the cables in the gland by means of silicon.

CAMERA INSTALLATION

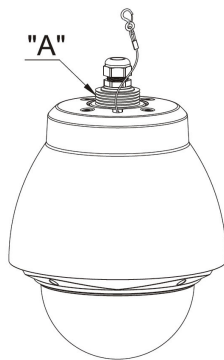
- i. Connect the camera with the base correctly.
- j. Mount the bubble (15). Pay attention to the proper location of the rubber gasket (7) before tightening up the torx screws (14).

STEP 2 - bracket and housing installation

- k. Mount the base of the bracket using included M6 type screws and anchors (for detail information see the bracket manual).

CAUTION: For safety reasons, the structure that a mounting base is installed on should be strong enough to support a minimum of 25 kg.

- l. Unscrew 4 screws mounting the front part of the bracket to the base and open the bracket on the left (the parts are hinged).
- m. Put the cable through the bracket.
- n. Protect the housing against the collapsing by fastening the snap hook with the bracket.
- o. Connect the cables with the connectors at the end with the appropriate block on the board inside the bracket. Connect the rest of cables according to the bracket manual.
- p. Check the correctness of the connection by switching on the power of the camera and then verifying video image, controlling the dome and alarm inputs/outputs if they are used.
- q. Wind teflon tape around the „A” thread of about 20 times to seal it.



- r. Screw the housing to the bracket by means of the nut in the bracket till the soft resistance. It is not necessary to apply too much strength particularly if the spanner is long. Simultaneously, withdraw the excess of the cable from the gland in the bracket.

CAUTION: It is not allowed to turn the housing because the cables inside the housing can be twisted.

- s. Protect the nut against twisting off by tightening it up by means of Hex L-Wrench.
- t. Seal the bracket and close according the bracket manual.

CAMERA INSTALLATION

4.2 Camera installation in the housing by means of the NVB-SD40WB wall bracket.

STEP 1 - Preparing the camera and housing for mounting

- a. Execute functions described in the points from *a. to j. in the 4.1 sub-menu.*

STEP 2 - bracket and housing installation

- b. Unscrew 2 screws fastening the covered board of a service hole.
- c. Put the camera bundle of cables into the bracket.
- d. Mount the bracket to the wall.

CAUTION: For safety reasons, the structure that a mounting base is installed on should be strong enough to support a minimum of 25 kg.

- e. Put the camera bundle of cables from the housing into the bracket.
- f. Protect the housing against the collapsing by fastening the snap hook with the bracket.
- g. Connect the cables passing the service hole by means of appropriate connectors at the end of the cable.
- h. Execute functions described in the points from *p. to s. in the 4.1 submenu.*
- i. Put the protruding cables into the bracket and close the service hole.

It is possible to directly connect the external cables to the camera without the bundle of cables delivered with the housing. If necessary, put the cable through the bracket and connect the camera directly by the bracket.

CAMERA INSTALLATION

4.3 Camera installation in the housing by means of the NVB-SD40CB ceiling bracket.

STEP 1 - Preparing the camera and housing for mounting

- a. Execute functions described in the points from *a. to j. in the 4.1 sub-menu.*

STEP 2 - bracket and housing installation

- b. Put the camera bundle of cables through the base of bracket.
- c. Mount the base of bracket to the ceiling.

CAUTION: For safety reasons, the structure that a mounting base is installed on should be strong enough to support a minimum of 25 kg.

- e. Put the cable from the housing into the bracket.
- f. Fasten the bracket shoulder to the housing and wind the teflon around the thread to seal it.
- g. Protect the housing against collapsing by fastening the snap hook with the brackets shoulder.
- h. Connect the bundle of cables from the bracket by means of appropriate connectors at the end of cables.
- i. Execute functions described in points from *p. to s. in the 4.1 sub-menu.*

It is possible to directly connect the external cables to the camera without the bundle of cables delivered with the housing. If necessary, put the cable through the bracket and connect the camera directly by the bracket.

MAINTENANCE

5. MAINTENANCE

Because of environmental factors (dust, rain) the bubble gets dirty. The decrease of transparency causes the decrease of the video quality and in some circumstances it causes auto-focusing problem.

It is recommended to periodically clean the bubble.

Clean the bubble with a mild nonabrasive detergent, water and a soft cloth to maintain picture clarity. During the cleaning it is necessary to wash out the cloth in order to avoid scratching the surface of the bubble.

Additionally, it is recommended to periodically check fan operation. The bearings wear out during the operation. First symptom of such condition is noisy operation. Replace the fan with new one in this case. Too long exploitation of the fan may damage the bearings and there will be no air circulation inside the housing.

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