



2017-01-17

CLIENT: MR. Shunyu He  
ZHEJIANG DAHUA VISION TECHNOLOGY CO LTD  
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CHANGHE ST  
BINJIANG DISTRICT  
HANGZHOU  
ZHEJIANG 310053 CHINA  
PROJECT: 4787707766, E234884.  
SUBJECT: NEMA (Type 4X) - enclosure construction investigation and testing.

Standards: UL 50E - ENCLOSURES FOR ELECTRICAL EQUIPMENT, ENVIRONMENTAL CONSIDERATIONS - Edition 2 - Revised Date 2015/10/16

Dear MR. Shunyu He,

We have completed our investigation of the ZHEJIANG DAHUA VISION TECHNOLOGY CO LTD. Model DH-SPSDmuvwxyz-a, DH-SD60muvwxyz-ab-SL(m=0-9, A-Z or blank ; u=S,H,P or blank; v=0-9 or blank; w=0-9 or blank; x=0-9 or blank; y=A-Z or blank; z=A-Z or blank; a=W,H,G or blank ;b=C,N,S,CI,NI,SI,or blank;) DH-SPSD230UA,DH-SPSD230U,DH-SPSD230,DH-SPSD430U,DH-SPSD530U,DH-SPSD630U,DH-SPSD830U, DH-SD60230UA-HNI-SL,DH-SD60230U-HNI-SL,DH-SPSD230-HNI-SL,DH-SD60430U-HNI-SL,DH-SD60630U-HNI-SL,DH-SPSD830U-HNI-SL series Measuring Equipment, Transmitter, UL Listed (NWGQ/NWGQ7) Information Technology Equipment Including Electrical Business Equipment, File E234884 Volume X1, and our findings are described in the following pages of this report.

**CRITICAL COMPONENTS**

Object/ Part or Description	UL	Manufacturer/ Trademark	Type/ Model	Technical Data	Product Category CCN	Marks of Conformity - Required for FUS
Plastic part	X	mitsubishi ENGINEERING- PLASTICS CORP	S- 3000+(f1), S- 3001+(f1), S- 3003+(f1)	3.0mm thick minimum, rated (f1) HB min.	QMFZ2	UL E41179
Gasket	X	DOW CORNING TORAY CO LTD	SRX495U	Minimum 0.5mm thick V-0	QMFZ2	UL E55519
Metal enclosure	X	--	--	Type 316, Minimum 3.0mm thickness	--	--
Enclosure screw	X	--	--	Type 316	--	--

## TESTS

The following tests were performed with their results (comply/does not comply) given below.

UL 50E

Model Tested	Test	Ratings	Results *
DH-SD60230U-HNI-SL	HOSEDOWN TEST	Type 4/4X	Pass
DH-SD60230U-HNI-SL	ADDITIONAL CORROSION PROTECTION FOR TYPE 4X AND 6P - SEC. 8.9	Type 4/4X	Pass
DH-SD60230U-HNI-SL	GASKET TEST - TENSILE STRENGTH AND ELONGATION:	Type 4/4X	Pass
DH-SD60230U-HNI-SL	COMPRESSION TEST PART I - COMPRESSION AT ROOM TEMPERATURE CAN/CSA-C22.2 No. 94 UL50E / CAN/CSA-C22.2 No. 94.2-15	Type 4/4X	Pass
DH-SD60230U-HNI-SL	COMPRESSION TEST PART II - COMPRESSION AFTER AGING IN AN AIR OVEN CAN/CSA-C22.2 No. 94 UL50E / CAN/CSA-C22.2 No. 94.2-15	Type 4/4X	Pass
DH-SD60230U-HNI-SL	COMPRESSION TEST PART III - COMPRESSION AFTER COLD IMPACT CAN/CSA-C22.2 No. 94 UL50E / CAN/CSA-C22.2 No. 94.2-15	Type 4/4X	Pass

\* Refer to the Datasheets attached for detailed test results.

The preceding tests were conducted in accordance with UL50E and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 94.2-15 Edition Revised 2015/10/01

The tests conducted in accordance with UL 50E 2nd Edition Issued 2007-09-04, revised 2015/10/16, were completed successfully, and therefore the device was found to satisfy the requirements of a Type 4X rating.

**RESULTS:**

The tests were conducted on ZHEJIANG DAHUA VISION TECHNOLOGY CO LTD. DH-PFH610N series, UL Listed (NWGQ/NWGQ7) Information Technology Equipment Including Electrical Business Equipment, File E234884 Volume X1 and results were evaluated for only the internal cavity as shown in pictures attached.

Only the following critical construction items are deemed suitable for Type 4X environmental ratings:

Object/ Part or Description	UL	Manufacturer/ Trademark	Type/ Model	Technical Data	Product Category CCN	Marks of Conformity - Required for FUS
Plastic part	X	MITSUBISHI ENGINEERING-PLASTICS CORP	S-3000+(f1) , S-3001+(f1) , S-3003+(f1)	3.0mm thick minimum, rated (f1) HB min.	QMFZ2	UL E41179
Gasket	X	DOW CORNING TORAY CO LTD	SRX495U	Minimum 0.5mm thick V-0	QMFZ2	UL E55519
Metal enclosure	X	--	--	Type 316, Minimum 3.0mm thickness	--	--
Enclosure screw	X	--	--	Type 316	--	--

Any alternate construction for the above description items will require a repeat of the UL 50E investigation program.

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This concludes our work under the subject project number.

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Please contact me directly if you have any questions.