

TEST RECORD NO. 1

SAMPLES:

A sample of the HIS-ML21 as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

The Model No. HIS-ML21 was used for test purposes and was considered representative of both the HIS-ML21 and HIS-ML19.

GENERAL:

Test results relate only to the items tested.

Due to the construction of the HIS-ML21 (see Illustration 1 for details), the 127 mm (5 inch) Flame Test, Mold Stress Test and Resistance to Impact tests were waived.

The following tests were conducted.

Test	Reference
TEMPERATURE TEST	UL508, 17 th Ed. Sec. 6.4
DIELECTRIC TEST	UL508, 17 th Ed. Sec. 6.8
CRUSHING RESISTANCE TEST	UL 746C, 6 th Ed.

The following tests were conducted in accordance with UL508 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142-2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised July 11th, 2005.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL508 - The Standard for Industrial Control Equipment, 17th Edition, revised 07/11/05 as well as CSA C22.2 No 142-2004 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

TEST RECORD NO. 2

SAMPLES:

A sample of the HIS-ML19 with alternate monitor VS11962 as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

The Model No. HIS-ML19 was used for test purposes and was considered representative of both the HIS-ML15 and HIS-ML17.

GENERAL:

Test results relate only to the items tested.

Due to the construction of the HIS-ML19 (see Illustration 1 for details), the 127 mm (5 inch) Flame Test, Mold Stress Test and Resistance to Impact tests were waived.

Tests were considered covered as follows:

Test	File Reference	Report Date	Test Record No.
Crushing Resistance Test	E318630	2008-05-07	1

The following tests were conducted.

Test	Reference
TEMPERATURE TEST	UL 508, 17 th Edition, revised July 11 th , 2005. Sec. 6.4
DIELECTRIC TEST	UL 508, 17 th Edition, revised July 11 th , 2005. Sec. 6.8

The following tests were conducted in accordance with UL508 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142-2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised July 11th, 2005.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL508 - The Standard for Industrial Control Equipment, 17th Edition, revised 07/11/05 as well as CSA C22.2 No 142-2004 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

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Test Record by:

Reviewed by:

Daniel S. Wong

Associate Project Engineer

Conformity Assessment Services

Conformity Assessment Services

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

TEST RECORD NO. 3

SAMPLES:

Samples of the HIS-ML12 and HIS-ML21 as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

The Model Nos. HIS-ML12 and HIS-ML21 were used for test purposes and were considered representative of the HIS-ML15, HIS-ML17 and HIS-ML19.

GENERAL:

Test results relate only to the items tested.

The following tests were conducted.

Test	Reference
HOSEDOWN TEST	UL 50E 1 st Edition, issued September 4 th , 2007 Sec. 8.6
ULTRAVIOLET LIGHT EXPOSURE TEST	UL 746 C 6 th Edition, revised September 10 th , 2004 Sec. 59
WATER IMMERSION TEST	UL 746 C 6 th Edition, revised September 10 th , 2004 Sec. 58

The following tests were conducted in accordance with UL508 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142-2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised July 11th, 2005.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL508 - The Standard for Industrial Control Equipment, 17th Edition, revised 07/11/05 as well as CSA C22.2 No 142-2004 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Record by:

Reviewed by:

Daniel S. Wong

Associate Project Engineer

Conformity Assessment Services

Conformity Assessment Services

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

TEST RECORD NO. 4

SAMPLES:

Samples of the HIS-RL19 and HIS-RM19 as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

GENERAL:

Test results relate only to the items tested.

Tests were considered covered as follows:

Test	File Reference	Report Date	Test Record No.
Crushing Resistance Test	E318630	2008-05-07	1
Temperature Test	E318630	2008-05-07	1
Dielectric Test	E318630	2008-05-07	1

The following tests were conducted in accordance with UL508 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142-2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised Sep. 19, 2008.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 508, The Standard for Industrial Control Equipment, 17th Edition, dated 2006-01-28, revised 2008-09-19, CSA C22.2 No. 14-05, Tenth Edition, Reaffirmed 2008-04-01 and, therefore, such products are judged eligible to bear UL's mark as described on the Conclusion Page of the Report. Any Information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Record by:

Reviewed by:

Daniel S. Wong

Associate Project Engineer

Conformity Assessment Services

Samina Hasan

Samina Hasan

Sr. Project Engineer

Conformity Assessment Services

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

TEST RECORD NO. 5

SAMPLES:

A sample of the HIS-ML21 as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test for a 50°C ambient temperature rating.

Model HIS-ML21 was used for test purposes and was considered representative for the entire series.

GENERAL:

Test results relate only to the items tested.

The following tests were conducted.

Test	Reference
TEMPERATURE TEST	UL 508, 17 th Edition, revised September 19 th , 2008. Sec. 6.4
DIELECTRIC TEST	UL 508, 17 th Edition, revised September 19 th , 2008. Sec. 6.8

The following tests were conducted in accordance with UL 508 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142-2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised Sep. 19, 2008.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 508, The Standard for Industrial Control Equipment, 17th Edition, dated 2006-01-28, revised 2008-09-19, CSA C22.2 No. 142-2004, Reaffirmed 2004 and, therefore, such products are judged eligible to bear UL's mark as described on the Conclusion Page of the Report.

Test Record by:

Reviewed by:

Daniel S. Wong

Samina Hasan

Associate Project Engineer

Sr. Project Engineer

Conformity Assessment Services

Conformity Assessment Services

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

TEST RECORD NO. 6

SAMPLES:

A sample of the HIS-ML17 with alternate components Listed (NWGQ/7) Model No. VS11359, rated 100-240 VAC, 1.2 A, manufactured by Viewsonic and Listed (NWGQ/7) Model No. VS11280, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic, as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

GENERAL:

Test results relate only to the items tested.

Due to similarity of these devices to HIS-ML21 Listed for this manufacturer, no tests were considered necessary.

Tests were considered covered as follows:

Test	Model	File Reference	Report Date	Test Record No.
Temperature Test	HIS-ML21	E318630	2008-05-07	1
Dielectric Test	HIS-ML21	E318630	2008-05-07	1

The following tests were conducted in accordance with UL 508 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142-2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised Sep. 19, 2008.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 508, The Standard for Industrial Control Equipment, 17th Edition, dated 2006-01-28, revised 2008-09-19, CSA C22.2 No. 142-2004, Reaffirmed 2004 and, therefore, such products are judged eligible to bear UL's mark as described on the Conclusion Page of the Report.

Test Record by:

Daniel S. Wong

Associate Project Engineer

Conformity Assessment Services

Reviewed by:

John J. Carrigan

John J. Carrigan

Staff Engineer

Conformity Assessment Services

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

TEST RECORD NO. 7

SAMPLES:

A representative production sample of the type HIS-ML20 with alternate construction including a listed (NWGQ/7), type L20NP-C LCD monitor manufactured by LG Electronics and Fan Recognized (GPWV2/8), type 120KL-01W-B50, manufactured by Minebea Motor Mfg, as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

GENERAL:

Test results relate only to the items tested.

Only limited tests were performed on the HIS-ML20 due to similarity in construction to previously tested HIS-ML21 device in file E318630 volume 1, section 1 dated 2008-05-07.

Tests were considered covered as follows:

Model	Test	File	Report Date	Test Record No.
HIS-ML20	ALL	E318630	2008-05-07	1-6

[] The following tests were conducted.

Test	Reference
Temperature test	SEC. 43, 73A, 77A (Clause 6.2)
Dielectric test	PAR. 49.1, 73C, 77B UL 508 17th ed. (Clause 6.8)
Inoperative blower motor test	SEC. 24

The following tests were conducted in accordance with UL 508, 17th Edition, issued January 28th, 1999, revised Sep. 19, 2008 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142, May 01, 1987, revised 2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised Sep. 19, 2008 and consider representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142, May 01, 1987, revised 2004.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 508, The Standard for Industrial Control Equipment, 17th Edition, dated 2006-01-28, revised 2008-09-19, CSA C22.2 No. 142, May 01, 1987, revised 2004 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Record by:

Reviewed by:

Taqi Nasir

John J. Carrigan

Engineer

Staff Engineer

Conformity Assessment Services

Conformity Assessment Services

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

TEST RECORD NO. 8

SAMPLES:

Samples of the Model No. HIS-ML15, HIS-RM15, HIS-RL15 with alternate construction including a listed (NWGQ/7), Model No. VS13021, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic and Model No. HIS-ML22, as indicated below and constructed as described herein, were submitted by the manufacturer for examination and test.

GENERAL:

Test results relate only to the items tested.

Due to similarity of HIS-ML15, HIS-RM15, HIS-RL15 with alternate construction including a listed (NWGQ/7), Model No. VS13021, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic and Model No. HIS-ML22 to HIS-ML21 Listed previously by the manufacturer, no tests were considered necessary.

Tests were considered covered as follows:

Model	Test	File	Report Date	Test Record No.
HIS-ML21	ALL	E318630	2008-05-07	1-6


The following tests were conducted in accordance with UL 508, 17th Edition, issued January 28th, 1999, revised April 15th, 2010 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142, May 01, 1987, revised 2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised April 15th, 2010 and consider representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142, May 01, 1987, revised 2004.

Test Record Summary:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in UL 508, The Standard for Industrial Control Equipment, 17th Edition, dated 2006-01-28, revised 2010-04-15, CSA C22.2 No. 142, May 01, 1987, revised 2004 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report. Any information and documentation involving UL Mark services are provided on behalf of Underwriters Laboratories Inc. (UL) or any authorized licensee of UL.

Test Record by:



Daniel S. Wong

Project Engineer

Conformity Assessment Services

Reviewed by:



Len Grant

Engineer Sr. Staff

Conformity Assessment Services

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

TEST RECORD NO. 9

SAMPLES:

A sample of the Model Number HIS-RL/RM/ML19 as indicated below and constructed as described herein, was submitted by the manufacturer for examination and test.

ALTERNATE COMPONENT:

LCD Monitor - (Model Number HIS-ML19 only) - Listed (NWGQ/7) Model No. E1910TW, rated 100-240 VAC, 0.8 A, manufactured by LG Electronics.

Alternate - (Model Number HIS-ML19 only) Listed (NWGQ/7) Model No. VS13642, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic.

Fan - R/C (GPWV2/8) Part Number 1204KL-01W-B50, manufactured by Minebea Motor Mfg Corp., rated 5 VDC, 0.24 A.

Input Rating: Increased rating from 1.2 A to 1.5 A.

GENERAL:

Test results relate only to the items tested.

Due to the similarity of these devices to Models HIS-ML12 Listed previously by this manufacturer, no tests were considered necessary

Test	Model	Report Date	File Reference	Test Record No.
All	HIS-ML19 and HIS-ML21	2008-05-07	E318630	1-2

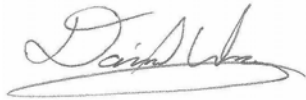
The following tests were conducted in accordance with UL508 and are considered representative of the same tests required by Canadian National Standard, CAN/CSA C22.2 No. 142-2004.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, issued January 28th, 1999, revised April 15th, 2010.

Test Record Summary:

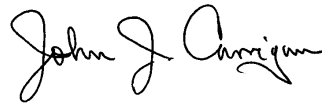
The results of this investigation indicate that the products evaluated comply with the applicable requirements in UL 508, Standard for Industrial Control Equipment, 17th Edition, Revision Date 2010-04-15, and CSA C22.2 No. 142, Process Control Equipment, reaffirmed 2004, and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:



Daniel S. Wong
Project Engineer

Reviewed by:



John J. Carrigan
Staff Engineer

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

TEST RECORD NO. 10

SAMPLES:

A sample of the Models as indicated below and constructed as described herein, was submitted by the manufacturer for examination.

Correction from(Page 5 & TR8):

Alternate - (Model Number HIS-RL15 only) Listed (NWGQ/7) Model No. VS13021, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic.

To:

Alternate - (Model Number HIS-RL17 only) Listed (NWGQ/7) Model No. VS13021, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic.

Correction from (Page 7 & TR8):

Alternate - (Model Number HIS-RM15 only) Listed (NWGQ/7) Model No. VS13021, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic.

To:

Alternate - (Model Number HIS-RM17 only) Listed (NWGQ/7) Model No. VS13021, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic.

Correction: Add Alternates to Model HIS-RM19 which was previously added to HIS-ML19(Page 3 & TR9) but not added to the HIS-RM19(Page 5):

Alternate - (Model Number HIS-RM19 only) Listed (NWGQ/7) Model No. VS13642, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic.

Alternate - (Model Number HIS-RM19 only) - Listed (NWGQ/7) Model No. E1910TW, rated 100-240 VAC, 0.8 A, manufactured by LG Electronics.

Correction: Add Alternates to Model HIS-RL19 which was previously added to HIS-ML19(Page 3 & TR9) but not added to the HIS-RL19(Page 7):

Alternate - (Model Number HIS-RL19 only) Listed (NWGQ/7) Model No. VS13642, rated 100-240 VAC, 1.5 A, manufactured by Viewsonic.

Alternate - (Model Number HIS-RL19 only) - Listed (NWGQ/7) Model No. E1910TW, rated 100-240 VAC, 0.8 A, manufactured by LG Electronics.

GENERAL:

Due to the similarity of these devices being previously evaluated under Test Records No. 1 to 9, no additional evaluation was deemed necessary to process these corrections.

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements of UL 508, Standard for Industrial Control Equipment, 17th Edition, Revision Date 2010-04-15, and CSA C22.2 No. 142, Process Control Equipment, reaffirmed 2009 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:

Karl Moeller

Senior Project Engineer

Reviewed by:

Ryan Bridgemohansingh

Staff Engineer

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

TEST RECORD NO. 11

SAMPLES:

A sample of the Models as indicated below and constructed as described herein, was submitted by the manufacturer for examination.

Change 1: New Model HIS-ML23 rated 90-264 VAC, 0.6A-0.25A, 63-47 Hz or 12Vdc, 3.3 A or 24 Vdc, 1.7 A employing the following display:

Listed (NWGQ/7) Model No. VS14822, rated 12-24 Vdc, 2.1 A, mfr'd by Viewsonic.

For unit which is rated 90-264 V a power supply is employed as follows: R/C (QQGQ2/8) rated 90-264Vac, 0.8A/0.56A, 44.4W, mfr by Mean Well(E183223), Cat. No. PS-45-12 or R/C (QQGQ2/8), rated 90-264Vac, 60W,mfr by Cincon, Cat. No. CFM60S120.

Change 2: Alternate for Model Number HIS-ML22 only - Listed (NWGQ/NWGQ7) Model VS14517, rated 100-240Vac, 1.5 A, mfr'd by Viewsonic.

Change 3: Alternate For all 17 inch versions - Listed (NWGQ/7) Model No. VS14863 or VS14814, rated 100-240 V, 50/60Hz, 1.5 A, mfr'd by Viewsonic.

GENERAL:

Due to the similarity of these devices being previously evaluated under Test Records No. 1 to 9 and suitable ratings and evaluation of the alternate components, no additional evaluation was deemed necessary to process these changes.

No additional environmental testing was deemed necessary on the Model HIS-ML23 based upon the frame stud spacing of the Model HIS-ML21 of 5.86 in as compared to the lesser frame stud spacing of the Model HIS-ML23 of 5.52 in and based upon the Hose Down Testing conducted on the Model HIS-ML21 under Test Record No. 3 of this Report.

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements of UL 508, Standard for Industrial Control Equipment, 17th Edition, Revision Date 2010-04-15, and CSA C22.2 No. 142, Process Control Equipment, reaffirmed 2009 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:

Karl Moeller

Senior Project Engineer

Reviewed by:

Lenworth E. Grant

Senior Staff Engineer

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

TEST RECORD NO. 12

SAMPLES:

A sample of the Models as indicated below and constructed as described herein, was submitted by the manufacturer for examination.

Alternate Monitor (For all 19 inch versions) Listed (NWGQ/7) Model No. VS15103, rated 100-240Vac, 50/60 Hz, 1.5 A, mfr'd by Viewsonic.

GENERAL:

Due to the similarity of these devices being previously evaluated under Test Records No. 1 to 9, suitable ratings and evaluation of the alternate components, no additional evaluation was deemed necessary to process these changes.

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements of UL 508, Standard for Industrial Control Equipment, 17th Edition, Revision Date 2010-04-15, and CSA C22.2 No. 142, Process Control Equipment, reaffirmed 2009 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:

Karl Moeller

Senior Project Engineer

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

TEST RECORD NO. 13

SAMPLES:

No samples were required for adding DC-DC converters to programmable controller modules, Models HIS-ML19 and HIS-ML23.

Change 1: For programmable controller modules, Models HIS-ML19 and HIS-ML23, DC-DC converters are employed as following:

For unit rated 9.6-36.6 Vdc, a DC-DC converter is employed as follows: R/C (QQGQ2/8), Delta Electronics Inc., (E131881), Model S24SE12003, rated input 9.6-36.6 Vdc, 4.9 A; output 12 Vdc, 2.5 A.

GENERAL:

Test results relate only to the items tested.

Due to the similarity of these devices being previously evaluated and suitable ratings, no additional evaluation was deemed necessary to process these changes.

Tests were considered covered as follows:

Model	Test	File	Report Date	Test Record No(s).
HIS-ML19	ALL	E318630	2008-05-07	1, 2, 4, 9, 12
HIS-ML23	ALL	E318630	2008-05-07	11

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, revised March 15, 2013 and Canadian Standard for Process Control Equipment, CSA C22.2 No. 142-M1987, Third Edition, Reaffirmed 2009.

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements of UL 508, Standard for Industrial Control Equipment, 17th Edition, revised March 15, 2013, and CSA C22.2 No. 142, Process Control Equipment, reaffirmed 2009 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:

TJ Cheng

Project Engineer

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

TEST RECORD NO. 14

SAMPLES:

No samples were required for adding connector for the DC-DC converters or to add the new 20 inch monitor.

GENERAL:

Test results relate only to the items tested.

No testing was considered necessary to add R/C On-Sight Technology connector model OSTVZ35050 due to being within a Class 2 or SELV/LPS circuit. This input connector will be marked for connection to Class 2 or SELV/LPS supply.

No testing was considered necessary to UL Listed Dell monitor model 200FP, due to the similarity of other monitors. The test record for this monitor was reviewed and it was determined that critical components would be within the temperature limits when in a 50°C environment.

The test methods and results of the above tests have been reviewed and found to comply with the requirements in the Standard for Industrial Control Equipment, UL 508, 17th Edition, revised March 15, 2013 and Canadian Standard for Process Control Equipment, CSA C22.2 No. 142-M1987, Third Edition, Reaffirmed 2009.

Test Record Summary:

The results of this investigation indicate that the products evaluated comply with the applicable requirements of UL 508, Standard for Industrial Control Equipment, 17th Edition, revised March 15, 2013, and CSA C22.2 No. 142, Process Control Equipment, reaffirmed 2009 and, therefore, such products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Test Record by:

Wendy Russell

Senior Project Engineer

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

CONCLUSION

Samples of the products covered by this Report have been found to comply with the requirements covering the class and the products are judged to be eligible for Listing and Follow-Up Service. Under the service the manufacturer is authorized to use the Laboratories' Mark on such products which comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only the products which properly bear the Laboratories' Mark are considered as Listed by Underwriters Laboratories Inc.

Test Record by:

Reviewed by:

Daniel S. Wong

Samina Hasan

Engineer

Sr. Project Engineer

Conformity assessment Services

Conformity Assessment Services

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