**National Differences For**

**UL60730-2-8**

**Automatic Electrical Controls – Part 2-8: Particular Requirements for Electrically Operated Water Valves, Including Mechanical Requirements**

National Differences For

UL Standard for Safety for Automatic Electrical Controls – Part 2-8: Particular Requirements for Electrically Operated Water Valves, Including Mechanical Requirements, UL 60730-2-8

Third Edition, Dated March 24, 2023

***Summary of Topics***

***This Third Edition of ANSI/UL 60730-2-8, dated March 24, 2023, is an Adoption of IEC 60730-2-8, Automatic Electrical Controls – Part 2-8: Particular Requirements for Electrically Operated Water Valves, Including Mechanical Requirements, with National Differences.***

***UL 60730-2-8 is an adoption of IEC 60730-2-8, edition 3.1, issued by the IEC in October 2021. Please note that the National Difference document includes all the U.S. National Differences for UL 60730-2-8.***

**This document provides a single listing of the National Differences included in the UL adoption of the corresponding IEC standard.**

Preface

This document provides a single listing of the technical National Differences included in the UL adoption of the corresponding IEC standard.

In its IEC-based standards, UL uses the notations indicated below to identify national difference type, and these types are additionally noted in this document. The standard may not use all types of these deviations.

**D1** - These are deviations which are based on basic safety principles and requirements, elimination of which would compromise safety for U.S. consumers and users of products.

**D2** - These are deviations based on safety practices. These are deviations for IEC requirements that may be acceptable, but adopting the IEC requirements would require considerable retesting or redesign on the manufacturer's part.

**DC** - These are deviations based on the component standards and will not be deleted until a particular component standard is harmonized with the IEC component standard.

**DE** - These are deviations based on editorial comments or corrections.

**DR** - These are deviations based on the national regulatory requirements.

Each national difference contains a description of what the national difference entails. Typically one of the following words is used to explain how the text of the national difference is to be applied to the base IEC text:

**Addition / Add** - An addition entails adding a complete new numbered clause, subclause, table, figure, or annex. Addition is not meant to include adding select words to the base IEC text.

**Deletion / Delete** - A deletion entails complete deletion of an entire numbered clause, subclause, table, figure, or annex without any replacement text.

**Modification / Modify** - A modification is an altering of the existing base IEC text such as the addition, replacement or deletion of certain words or the replacement of an entire clause, subclause, table, figure, or annex of the base IEC text.

## National Differences

**101DV DE *Modification of the print types used in the part 2:***

**– Words in SMALL ROMAN CAPITALS in the text are defined in clause 2.**

**102DV DE *Addition to the part 2:***

**The numbering system in the standard uses a space instead of a comma to indicate thousands and uses a comma instead of a period to indicate a decimal point. For example, 1 000 means 1,000 and 1,01 means 1.01.**

**1.1DV D2 *Modification of 1.1 of the part 2 by adding the following:***

**These requirements do not cover valves for marine use.**

**1.1.1DV DE *Modification of 1.1.1 of the part 2:***

**In the fifth paragraph, sixth dashed item, replace the word "designed" with "intended".**

**2.2.17.114DV D2 *Addition to the UL part 2:***

**SAFETY VALVE**
**A normally closed valve intended to be actuated by a safety control or by an emergency device to prevent the delivery of a fluid that can result in risk of fire.**

**6.12DV D2 *Deletion of 6.12 of the part 1:***

**This clause is not applicable.**

**6.16DV D2 *Deletion of 6.16 of the part 1:***

**This clause is not applicable.**

Table 1DV D2 *Modification of table 1 of the part 2 by replacing it with the following:*

Table 1DV

| Require ment | Information | Clause or subclause | Method |
|---|---|---|---|
| *Modification:* *Replace the following items by:* | | | |
| 7 | The type of load controlled by each circuit (for VALVES with switching devices) [7)] | 6.2, 14, 17, 23.1.1 | C |
| 22 | Temperature limits of the ACTUATOR, if $T_{min}$ lower than 0 °C, or $T_{max}$ other than 55 °C | 6.7, 14.5, 14.7, 17.3 | D |
| 26 | Not applicable | | |
| 28 | Not applicable | | |
| 29 | Type of disconnection or interruption provided by each circuit (for VALVES with switching devices) | 6.9, 2.4 | X |
| 34 | Details of any limitation of OPERATING TIME | 14, 17 | C |
| 36 to 38 | Not applicable | | |
| 39 | TYPE 1 OR TYPE 2 ACTION (for VALVES with switching devices) [101)] | 6.4 | D |
| 40 | Additional features of TYPE 1 OR TYPE 2 ACTIONS (for VALVES with switching devices) [101)] | 6.4.3, 11.4 | D |
| 41 | MANUFACTURING DEVIATION and condition of test appropriate to deviation (for VALVES with switching devices) | 11.4.3, 15, 17.14, 2.11.1 | X |
| 42 | DRIFT (for VALVES with switching devices) | 11.4.3, 15, 2.11.2 | X |
| 43 to 44 | Not applicable | | |
| 47 | Not applicable | | |
| 49 | Control POLLUTION situation of ACTUATOR | 6.5.3 | D |
| *Add the following additional items:* | | | |
| 101 | Power consumption in watts or in VA or current rating | | C |
| 102 | MAXIMUM OPERATING PRESSURE DIFFERENTIAL in Psi | 2.3.114 | D |
| 103 | MINIMUM OPERATING PRESSURE DIFFERENTIAL in Psi | 2.3.115 | D |
| 104 | MAXIMUM WORKING PRESSURE in Psi | 2.3.29, 6.103 | D |
| 105 | Flow direction indicated by an arrow | | C |
| 106 | Maximum water temperature in °C | 6.103 | D |
| 107 | Suitable for DRINKING-WATER or NON-DRINKING-WATER | 6.103, 18.102 | D |

Table 1DV Continued on Next Page

Table 1DV Continued

| Requirement | Information | Clause or subclause | Method |
|---|---|---|---|
| 108 | For VALVES intended to be cleaned in NORMAL USE, the method of disassembling, cleaning, reassembling and maintenance | 18.101.1 | D |
| 109 | If a VALVE is intended to be used in water supply installations where WATER HAMMER may occur and test method per annex BB or EE | 18.101.3 | X |
| 110 | Material identification of wetted parts | 6.102.4 | X |
| 111 | VALVE features | 6.101, 6.102 | D |
| 112 | Plastic VALVES intended to be hand-tightened | 18.103.5 | D |
| 113 | VALVES incorporated in those household appliances covered by the IEC 60335 series where the loss of water supply or dry VALVE is considered as an abnormal use condition. [102)] | 14.5.107, 27.101 | D |
| 114 | For VALVES identified under item 113, details of any limitation of OPERATING TIME (DUTY CYCLE). [103)] | 27.101.2 | D |
| 115 | A VALVE intended for a water circulating system of a swimming pool | 9.5.101DV.1 | C |

NOTES

[3)] Not applicable

[4)] Not applicable

[101)] The WATER VALVE itself is TYPE 1 ACTION.

[102)] Not applicable in Canada, Japan and the USA.

[103)] Not applicable in Canada, Japan and the USA.



7.4.3DV D2 *Deletion of 7.4.3 of the part 1:*

This clause is not applicable.

9.2.101DV D2 *Addition of 9.2.101DV.1 and 9.2.101DV.2 to the part 2:*

9.2.101DV.1 A single point reference ground may be employed in a low-voltage circuit if current is not carried through the equipment grounding means, metallic raceway, power supply grounding means, or the earth ground.

9.2.101DV.2 Compliance is checked by inspection.

9.5.101DV D2 *Addition of 9.5.101DV.1 to the part 2:*

9.5.101DV.1 Swimming pool valve

**9.5.101DV.1.1 Valves marked "swimming pool valve" (Table 1 item 113) shall be provided with a wire connector securely mounted to the outside of the valve housing for the connection of a minimum 8 AWG solid copper wire.**

**9.5.101DV.1.2 Compliance is checked by inspection.**

**11.4.15DV D2 *Deletion of 11.4.15 of the part 1:***

**This clause is not applicable.**

**11.9.3.101DV D2 *Addition to the part 2:***

**An inlet bushing may be used for a low-voltage valve connected to a non-safety control circuit or for a valve intended for use only within other equipment and where the valve is provided with leads of flexible cord not smaller than Type P-1 or with insulated conductors having not less than 1,2 mm thick insulation. The surface against which such leads may bear shall be rounded.**

**11.102DV D2 *Addition to the part 2:***

**11.102DV.1 Springs**

**11.102DV.1.1 A spring shall be protected against abrasion and shall be guided or arranged to reduce the likelihood of binding, buckling, or other interference with its free movement.**

**11.102DV.1.2 *Compliance is checked by operation, inspection and the requirements of Clause 17.***

**11.103DV D2 *Addition to the part 2:***

**11.103DV.1 Metal parts**

**11.103DV.1.1 A metal part coming in contact with a diaphragm shall have no sharp edges, burrs, projections, and the like that may chafe or abrade the diaphragm.**

**11.103DV.1.2 *Compliance is checked by inspection*.**

**11.104DV D2 *Addition to the part 2:***

**11.104DV.1 Threaded fasteners**

**11.104DV.1.1 If threaded fasteners attach operating parts to movable members, they shall be locked or otherwise prevented from loosening.**

**11.104DV.1.2 *Compliance is checked by operation, inspection and the requirements of Clause 17.***

**12.2DV D2** ***Deletion of 12.2 of the part 1:***

**This clause is not applicable.**

**14.5.104DV D2** ***Modification of 14.5.104 by adding the following:***

**If stalling of the motor is not part of the normal operation, the limits in Table 13 do not apply. The motor, when stalled or otherwise operated with a blocked valve stem, shall comply with the test of Clause 27.2.**

**14.5.105DV D2** ***Modification of 14.5.105 by adding the following:***

**In addition, openings for the connection of metal-clad cable or rigid conduit shall be provided with at least 1-foot length of conduit or metal-clad cable through which leads of the valve are to be carried.**

**17.3.2DV D2** ***Modification of 17.3.2 of the part 1 by adding the following:***

***If $T_{min}$ is less than 0 °C, 50 % of the tests shall be run at $T_{max}$ and 50 % shall be run at $T_{min}$, using the same sample.***

**17.4.3DV D2** ***Deletion of 17.4.3 of the part 1:***

**This clause is not applicable.**

**17.16DV D2** ***Modification of 17.16 of the part 2 by adding the following:***

**If the valve includes an auxiliary switching device, the endurance test shall be conducted for 6 000 cycles.**

**18.2DV D2** ***Deletion of 18.2 of the part 1:***

**This clause is not applicable. See 18.4.**

**18.9.4DV.1 D2** ***Deletion of 18.9.4DV.1 of the UL part 1:***

**This clause is not applicable.**

**23DV D2** ***Modification of the part 2:***

**This clause is not applicable for valves in general-use applications. It is only applicable for safety valves.**