

This military standard is approved for use by all Departments and Agencies of the Department of Defense. Selection for all new engineering and design applications and for repetitive use shall be made from this document when applicable.

Review activities: Army - AV
Navy - EC
Air Force - 99
DLA - ES

User activity: Air Force - 11

| | | | | |
|--|--|------------------------------------|---|--------------------------------------|
| <p>P A Air Force - 85 Other Cust Army - ER Navy - AS</p> | | <p>International Interpret</p> | <p>TITLE SWITCH, TOGGLE, ONE POLE, ENVIRONMENTALLY SEALED, LEVER-LOCK</p> | <p>MILITARY STANDARD MS24658</p> |
| <p>Procurement Specification MIL-S-3950</p> | | <p>SUPSEDES</p> | | <p>PAGE 1 OF 4</p> |

Ⓕ Denotes changes

FED SUP CLASS
5930

APPROVED 10 Mar 1960 REVISED C 20 Apr 11 1967 D 16 Sep 1969 E 20 Nov 1980 F 28 Sep 1987

DD FORM 672
1 MAY 73
AMSC N/A

(Coordinated) PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE
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Review activities

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| Inches | mm | Inches | mm |
|--------|------|--------|-------|
| .005 | 0.13 | .42 | 10.7 |
| .008 | 0.20 | .432 | 10.97 |
| .012 | 0.30 | .47 | 11.9 |
| .020 | 0.51 | .635 | 16.13 |
| .060 | 1.52 | 1.05 | 26.67 |
| .076 | 1.93 | 1.140 | 28.96 |
| .25. | 6.49 | 1.180 | 29.97 |
| .38 | 9.65 | 1.270 | 32.26 |

NOTES

1. Dimensions are inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is ± 0.020 (0.51 mm) for two place decimals and ± 0.005 (0.13 mm) for three place decimals.
4. For hardware and terminal screw detail specifications, see appendix of MIL-S-3950.
5. All switches on this standard are designed so that the movement of the switch mechanism is opposite to that of the toggle lever.
6. Maximum weight is 0.10 pound.
7. Locking arrangement: Positive locking shall be accomplished and shall prevent motion of the toggle lever until the locking mechanism is manually released.
8. The force required to release the locking mechanism shall be 3 to 5 pounds.
9. The locking means at the top of the toggle bushing shall be capable of withstanding a torque of 20 inch-pounds applied in both directions immediately following the humidity test.
10. Part number example MS24658-21A (locking combination 'A').
11. In the event of a conflict between the text of this standard and the reference cited herein, the text of this standard shall take precedence.
12. Referenced Government documents of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation form a part of this standard to the extent specified herein.

For changes see pages 1 and 2

REVISED

10 Mar 1960

APPROVED

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|---|------------------------|---|----------------------------------|
| P A Air Force - 85 Other Cust Army - ER Navy - AS | Intense/Name/ Interest | TITLE SWITCH, TOGGLE, ONE POLE, ENVIRONMENTALLY SEALED, LEVER-LOCK | MILITARY STANDARD MS24658 |
| Procurement Specification MIL-S-3950 | | SUPERSEDES | PAGE 2 OF 4 |

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| P A Air Force - 85 Other Cust Army - ER Navy - AS | | International Invariant | TITLE SWITCH, TOGGLE, ONE POLE, ENVIRONMENTALLY SEALED, LEVER-LOCK | MILITARY STANDARD MS24658 |
| Procurement Specification MIL-S-3950 | | | SUPERSEDES | PAGE 3 OF 4 |

| | | | | | | | | | | | | | |
|--|---|---|---|---|---|--|--|--|---|--|---|--|--|
| Locking combinations | | | | | | | | | | | | | |
| A | B | D | E | F | G | H | J | K | L | M | N | P | |
| LOCKED IN THREE POSITIONS AND DOWN POSITION (KEYING SIDE) | LOCKED IN CENTER AND DOWN POSITIONS (KEYING SIDE) | LOCKED OUT OF CENTER POSITION (KEYING SIDE) | LOCKED IN CENTER POSITION (KEYING SIDE) | LOCKED IN UP POSITION (OPPOSITE KEYING) | LOCKED IN DOWN POSITION (KEYING SIDE) | LOCKED OUT OF CENTER AND DOWN POSITION (KEYING SIDE) | LOCKED OUT OF CENTER AND UP POSITION (OPPOSITE KEYING) | LOCKED IN CENTER AND UP POSITION (OPPOSITE KEYING) | LOCKED OUT OF DOWN POSITION (KEYING SIDE) | LOCKED OUT OF AND INTO UP POSITION (OPPOSITE KEYING) | LOCKED OUT OF UP POSITION (OPPOSITE KEYING) | LOCKED OUT OF AND INTO DOWN POSITION (KEYING SIDE) | LOCKED OUT OF CENTER AND DOWN POSITION (KEYING SIDE) |
| FIGURES A THROUGH P DO NOT REPRESENT DETAILS OF CON- STRUCTION. THEY SCHEMATICALLY ILLUSTRATE LOCKING CONFIGURATIONS AND MOMENTARY POSITIONS | | | | | | | | | | | | | |

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| P A Air Force - 85 Other Cust Army - ER Navy - AS | | International Intersect | TITLE SWITCH, TOGGLE, ONE POLE, ENVIRONMENTALLY SEALED, LEVER-LOCK | MILITARY STANDARD MS24658 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Procurement Specification MIL-S-3950 | | | SUPERSEDES | PAGE 4 OF 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Detail requirements:</p> <table border="1"> <thead> <tr> <th rowspan="2">MS part number</th> <th rowspan="2">Available locking combinations</th> <th colspan="2">Circuit with toggle lever in</th> <th colspan="2">Current capacity (amperes)</th> <th colspan="2">Current capacity (amperes)</th> </tr> <tr> <th>Keying side</th> <th>Center keying side</th> <th>Lamp-load circuit</th> <th>Resistive circuit</th> <th>Lamp-load circuit</th> <th>Resistive circuit</th> </tr> </thead> <tbody> <tr> <td>MS24658-21</td> <td>A11</td> <td>1-2 On</td> <td>Off</td> <td>2-3 On</td> <td></td> <td>115 volts, 60 and 400 hertz ac</td> <td></td> </tr> <tr> <td>MS24658-22</td> <td>D, F, G</td> <td>Off</td> <td>None</td> <td>2-3 On</td> <td>5</td> <td>20</td> <td>15</td> </tr> <tr> <td>MS24658-23</td> <td>D, F, G</td> <td>1-2 On</td> <td>None</td> <td>2-3 On</td> <td></td> <td></td> <td>10</td> </tr> <tr> <td>MS24658-24</td> <td>E, F, K, M</td> <td>None</td> <td>Off</td> <td>2-3 On</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MS24658-25</td> <td>F</td> <td>None</td> <td>Mom. off</td> <td>2-3 On</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MS24658-26</td> <td>F</td> <td>1-2 Mom. on</td> <td>None</td> <td>2-3 On</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MS24658-27</td> <td>E, L, N</td> <td>1-2 Mom. on</td> <td>Off</td> <td>2-3 Mom. on</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MS24658-28</td> <td>E</td> <td>1-2 Mom. on</td> <td>Off</td> <td>None</td> <td>4</td> <td>15</td> <td>10</td> </tr> <tr> <td>MS24658-29</td> <td>F</td> <td>Mom. off</td> <td>None</td> <td>2-3 On</td> <td></td> <td></td> <td>2</td> </tr> <tr> <td>MS24658-30</td> <td>F</td> <td>1-2 Mom. on</td> <td>None</td> <td>Off</td> <td></td> <td></td> <td>15</td> </tr> <tr> <td>MS24658-31</td> <td>E, F, K, L, M, N</td> <td>1-2 Mom. on</td> <td>Off</td> <td>2-3 On</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MS24658-32</td> <td>E</td> <td>None</td> <td>On 1-2</td> <td>2-3 Mom. on</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MS24658-33</td> <td>E, F, K, M</td> <td>None</td> <td>On 1-2</td> <td>2-3 On</td> <td>5</td> <td>20</td> <td>15</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>3</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>15</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>10</td> </tr> </tbody> </table> | | | | | MS part number | Available locking combinations | Circuit with toggle lever in | | Current capacity (amperes) | | Current capacity (amperes) | | Keying side | Center keying side | Lamp-load circuit | Resistive circuit | Lamp-load circuit | Resistive circuit | MS24658-21 | A11 | 1-2 On | Off | 2-3 On | | 115 volts, 60 and 400 hertz ac | | MS24658-22 | D, F, G | Off | None | 2-3 On | 5 | 20 | 15 | MS24658-23 | D, F, G | 1-2 On | None | 2-3 On | | | 10 | MS24658-24 | E, F, K, M | None | Off | 2-3 On | | | | MS24658-25 | F | None | Mom. off | 2-3 On | | | | MS24658-26 | F | 1-2 Mom. on | None | 2-3 On | | | | MS24658-27 | E, L, N | 1-2 Mom. on | Off | 2-3 Mom. on | | | | MS24658-28 | E | 1-2 Mom. on | Off | None | 4 | 15 | 10 | MS24658-29 | F | Mom. off | None | 2-3 On | | | 2 | MS24658-30 | F | 1-2 Mom. on | None | Off | | | 15 | MS24658-31 | E, F, K, L, M, N | 1-2 Mom. on | Off | 2-3 On | | | | MS24658-32 | E | None | On 1-2 | 2-3 Mom. on | | | | MS24658-33 | E, F, K, M | None | On 1-2 | 2-3 On | 5 | 20 | 15 | | | | | | | | 3 | | | | | | | | 15 | | | | | | | | 10 |
| MS part number | Available locking combinations | Circuit with toggle lever in | | Current capacity (amperes) | | | Current capacity (amperes) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Keying side | Center keying side | Lamp-load circuit | Resistive circuit | Lamp-load circuit | Resistive circuit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-21 | A11 | 1-2 On | Off | 2-3 On | | 115 volts, 60 and 400 hertz ac | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-22 | D, F, G | Off | None | 2-3 On | 5 | 20 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-23 | D, F, G | 1-2 On | None | 2-3 On | | | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-24 | E, F, K, M | None | Off | 2-3 On | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-25 | F | None | Mom. off | 2-3 On | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-26 | F | 1-2 Mom. on | None | 2-3 On | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-27 | E, L, N | 1-2 Mom. on | Off | 2-3 Mom. on | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-28 | E | 1-2 Mom. on | Off | None | 4 | 15 | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-29 | F | Mom. off | None | 2-3 On | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-30 | F | 1-2 Mom. on | None | Off | | | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-31 | E, F, K, L, M, N | 1-2 Mom. on | Off | 2-3 On | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-32 | E | None | On 1-2 | 2-3 Mom. on | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MS24658-33 | E, F, K, M | None | On 1-2 | 2-3 On | 5 | 20 | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| APPROVED | | 10 Mar 1960 | REVISED (F) | For changes see pages 1 and 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |