# MILITARY STANDARD 

## SWITCHES, RF COAXIAL, SELECTION OF



## MIL-STO-1329C

DEPARTMENT OF DEFENSE Washington, DC 20301<br>Switches, RF Coaxial, Selection of

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## MIL-STD-1329C

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1. SCOPE
1.1 Scope. This standard provides a ifst of standard coaxial switches for use in military applications.
1.2 Purpose. The purpose of this standard is to:
a. Provide the equipment designer with a ifst of coaxial switches considered standard for military applications.
b. Restrict the number of coaxial switch types used in military equipment in order to provide effective logistic support of field equipment.
c. Establish criteria pertinent to choice, application, and use of coaxial switches in military equipment.
2. REFERENCED DOCUMENTS

### 2.1 Government documents.

2.1.1 Specifications. The following specifications form a part of this standard to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those ifsted in the issue of the Departaent of Defense index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

## SPECIFICATIONS

## MILITARY

MIL-S-3928 - Switches, Radio Frequency Transmission Line (Coaxial), General Specification For.
MIL-S-24067 - Switches, Coaxial, Radio Frequency Transmission Line, (for Use With Electronic Countermeasures Equipment), General Specification.
MIL-S-25879 - Switch, Radio Frequency Transmission Line SA-521A/A.
(Copies of the specifications required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

## 3. DEFINITIONS

3.1 The terms used in this standard are commonly encountered in coaxial switch engineering practice.

## 4. GENERAL REQUIREMENTS

4.1 Selection of coaxial switches. Coaxial switches to be used in military applications shail be selected from those listed in tables ithrough iV. Cross-reference of type to part number is shown in table v.
4.2 Criteria for selection. The criteria for the selection of coaxial suitehes for inctusion in tifs standard are:
a. The coaxial switches shall be considered by representatives of the Military Departments the best avaliable type for current application.
b. Availability of the coaxial switches shall be reasonably certain.
c. The coaxial switches shall have an approved military specification.
4.3 Application and use. Coaxial switches used in military applications shall be representative of manufactured lots possessing acceptabie material and physical and electrical characteristics and shali in no manner degrade the operational characteristics of the equipment in which used.
4.4 Detailed requirements for coaxial switches. The detalled requirements for coaxial switches listedin this standard are covered by the applicable MIL-S-3928 or MIL-S-24067 specification sheets, or MIL-5-25879.
5. Detalled requirements not applicable.
6. NOTES
6.1 Changes from previous issue. Vertical lines or asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

TABLE $i$. Standard coaxial switches with series $N$ connectors.

| \| $\begin{gathered}\text { Part } \\ \text { number }\end{gathered}$ | $\mid$ \|configuration $\mid$ | Type actuator | $\begin{aligned} & \text { Operating } \\ & \text { voltage } \\ & \text { (nominal) } \end{aligned}$ | $\begin{aligned} & \mid \text { Position } \\ & \mid \text { indicating } \\ & \mid \text { circuit } \end{aligned}$ | Type actuator connector |
| :---: | :---: | :---: | :---: | :---: | :---: |
| M3928/7-02 | 1P2T | Manual | --- | None | --- |
| \|M3928/7-06 | 1P6T | Manual |  | None | -- |
| \|M3928/7-09 | 1 P 2 T | Solenoid | 110 dc | None | 6-32NC-2A |
| [M3928/7-11 | 1 P 3 T | Solenotd | 110 dc | Hone | MS3456 - 1145-25 |
| [M3928/7-12 | $1 P 3 T$ | Manual | --- | None | -- |
| \|M3928/7-14 | 1P2T | Manual | -- | None | --- |
| \|M3928/7-15 | 1P6T \| | Manual | -- | None | ---- |
| 1M3928/7-16 | $1 P 4 T$ | Manual | --- | None | -- |
| \|M3928/7-17 | 1P2T \| | Solenoid | 26 dc | None | 16-32NC-2A |
| \|M3928/7-18 | IP2T I | Solenoid | 26 dc | None | 16-32NC-2A |
| \|M3928/7-19 | 1P2T \| | Solenold | 110 dc | None | 16-32NC-2A |
| [M3928/7-20 | 1P2T \| | Solenoid | 28 dc | None | 16-32NC-2A |
| [M3928/7-22 | $1 P 4 T$ | Manual |  | Hone | --- |
| [M3928/7-24 | $1 P 4 T$ | Solenoid | 28 dc | None | 16-32NC-2A |
| [M3928/7-25 | TR | Solenoid | 28 dc | None | 1MS83723-- |
|  |  |  |  |  | \| 13R1006N |
| (M3928/7-26 | TR | Solenotd | 28 de | None | $\left\lvert\, \begin{aligned} & M S 83723- \\ & 13 R 1006 N \end{aligned}\right.$ |
| \| M3928/9-04 | 2P2T | Manual | --- | None | - -.. |
| \|M3928/9-05 | 1 P 2 T | Manual | --- | None | --- |
| \|M3928/9-13 | TR | Manual | --- | None | \| --- |
| \|M3928/9-14 | 1P3T | Manual | --- | None | -- |
| \| M3928/9-15 | 1P6T | Manual | --- | None | 1 |
| \|M3928/9-17 | TR | Motor | 28 de | Yes | 1MS3452K- |
|  |  |  |  | 1 ) | 112-105 1/ |
| /M3928/10-01 | 1 P 2 T | Solenotd | 110 dc | None | 1 solder Eerminals |
| \| M 3 928/10-02 | $192 T$ \| | Solenotd | 28 dc | None | \|Solder terminals |
| 1M3928/10-03 | 1P2T \| | Solenotd | 115 dc | None | \|Solder terminals |
| 1M3928/10-04 | 1P2T \| | Solenotd | 28 dc | Nane | Solder terminals |
| \|M3928/10-05 | $1 P 2 T$ | Solenotd | 28 dc | Yes | $\mid$ Solder terminais |
| (M3928/10-06 | 1 P 2 T | Solenoid | 28 dc | None | \|MS27484T8-F985 1/1 |
| 1 M3928/10-07 | TR | Solenotd | 28 dc | None | \|MS27484T8-F98S I/ |
| (M3928/10-08 | TR I | solenold | 28 dc | Yes | \|MS3113H10-6P - |
| \| M3928/10-11 | TR I | Solenoid | 28 dc | None | \| |
| \| M3928/10-12 | $1{ }^{1} 2 \mathrm{~T}$ | Solenoid | 28 de |  | \|Solder terminals |
| \| M24067/1-001 | 1 P 2 T | solenotd | 28 dc | Yes | [MS3102R-14S-6P |
| $1 \quad 2-001$ | 2P2T \| | Solenoid | 28 dc | Yes | \|MS3102R-14S-5P |
| \|(MIL-S-25849) |  |  |  |  |  |
| $\mid S A-521 A / A$ | - 1P2T | Solenoid | 28 V de | None | \|MS3106-10SL-3S $\underline{1 /}$ |
|  | 1 |  |  | \| |  |

$\underline{\prime /}$ Mates with.

TABLE Il. Standard coaxial switches with series gNC connectors.

| Part number M3928/ | \|Configuration $\mid$ | Type actuator | ```Operating voltage (nom\nal)``` | $\begin{aligned} & \text { \{Position } \\ & \text { indicating } \\ & \text { cifcuit } \end{aligned}$ | $\|$Type <br> actuator <br> connector |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 7-10 | 1P2T | Solenoid | 26 dc | None | 16.32NC-2A |
| 7-13 | $1 \mathrm{P6T}$ | Manual | $\cdots$ | None | 16. $-\cdots$ |
| 7-23 | $192 T$ | Solenoid | 115 ac | None | 16-32NC-2A |
| 8-01 | TR | Solenoid | 28 dc | Nore | \|Solder terminals |
| 8.03 | 1P2T | Solenotd | 28 dc | None | \|Solder terminals |
| 8-05 | \| 1P2T | Solenold | 115 ac | None | \|Solder terminals |
| $8-07$ | 1 P 2 T | Solenold | 110 dc | None | \|Solder terminals |
| 8.18 | 1P2T | Solenold | 28 dc | None | \|Solder terminals |
| 8.19 | 1P2T | Solenold | 28 dc | None | \|Solder terminals |
| 8-20 | 1 P 2 T | Solenold | 28 dc | None | \|Solder terminais |
| 8-21 | $1196 T$ | Manual | $\cdots$ | Hone | 1 -as |
| $8-22$ | 1 P4T | Solenold | 28 dc | None | \| - - |

TABLE III. Standard coaxtal switches with series SMA connectors.

| Part number M3928/ | \|Configuration | Type actuator | $\begin{aligned} & \text { Operating } \\ & \text { voltage } \\ & \text { (nominal) } \end{aligned}$ | $\begin{aligned} & \text { iposition } \\ & \text { Ifndicating } \\ & \text { !circuit } \end{aligned}$ | $\left\{\begin{array}{l}\text { Type } \\ \text { actuator } \\ \text { connector }\end{array}\right.$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 15-01 | $1 P 2 T$ | Solenold | 28 dc | None | \|Solder terminals |
| 15.02 | 1 P 2 T | Solenold | 28 dc | None | \|solder terminals |
| 15-03 | $1 P 2 T$ | Solenotd | 28 de | None | \|Solder terminals |
| 15.04 | 1 P 2 T | Solenold | 28 dc | Yes | Solder terminals |
| 15-05 | 1 P 2 T | Sotenold | 28 de | Yes | Solder terminals |
| 15.07 | 1 P 2 T | Solenoid | 28 dc | Mone | Solder terminals |
| 15-08 | $192 T$ | Solenold | 28 dc | Yes | Solder terminals |
| 16.01 | 1 P 3 T | Solenotd | 28 dc | Yes | $1 \mathrm{MS3114E-12-10p}$ |
| 17-01 | 194 T | Solenotd | 28 dc | Yes | [M8372311」H1210N |
| 17.02 | $1 P 4 T$ | Solenold | 28 de | None | (RTK07-8-7P ( Deutch ) or |
| 1 | 1 \| |  |  |  | lequivalent |
| 117.03 | $194 T$ | Solenoid | 28 de | None | Solder terminals |
| 118.01 | 1P6T | Solenoid | 28 dc | None | $\begin{aligned} & \text { RTKO7 B } 7 \text { P } \\ & \text { (Deutch) or } \end{aligned}$ |
|  |  |  |  | 1 | lequivalent |
| 18.02 | 1P6T | Solenotd | 28 dc | 1 None | \|Solder terminals |
| 118.03 | 1P6T I | Solenold | 28 dc | \| None | \|Solder terminals |
| 1 18-04 | 1P6T 1 | Solenoid | 28 dc | 1 None | \|Solder terminals |
| 118.05 | 1P6T | Solenoid | 28 de | \| None | IMS3112E-14-18PN |
| 18-06 | $1 \mathrm{P} 6 T$ | Solenold | 28 dc | I Yes | \|MS3112E-14-15P |
| 18-07 | $1 \mathrm{P} 6 T$ | Solenotd | 28 dc | 1 Yes | \|Solder terminals |
| 18.08 | $1 \mathrm{P} 6 T$ | Solenold | 28 dc | - None | \|Solder terminals |
| 19-02 | TR | Solenotd | 28 dc | Mone | \|Solder terminals |
| 19-03 | 1 TR | Solenoid | 28 dc | I Yes | \|Solder terminals |
| 1 19.04 | 1 TR | Solenoid | 28 dc | - None | Solder terminals |
| 19.05 | 1 TR | Solenold | 28 de | 1 Yes | \| Soider terminals |
| 119.06 | TR | Solenold | 115 ac | 1 Yes | \|MS3113H10-6P |
| 25-01 | 1951 | Solenotd | 26 dc | 1 None | \|Solder terminals |

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TABLE IV. Standard coaxial switches with series TNC connectors.


1/ Center connector (common) is series SC.
2/ Mates with.

TABLE V. Cross-reference of type to part number.

| $\begin{gathered} \text { Part number } \\ \text { M3928/ } \end{gathered}$ | $\text { SAa } \left.{ }^{\text {Type }}\right) / U$ | ```Part number M3928/``` | $S A+\left(\begin{array}{c} \text { Type } \\ \text { IV } \end{array}\right.$ |
| :---: | :---: | :---: | :---: |
| 7.09 | 1328 | $8 \pm 03$ | 1350 |
| $7+10$ | 1329 | 8-05 | 1352 |
| $7+11$ | 1330 | 8.07 | 1354 |
| 7.12 | 1331 | 9+13 | 1345 |
| 7.13 | 1332 | $9+14$ | 1346 |
| 7-14 | 273 | 9-15 | 1347 |
| $7+15$ | 275 | 10401 | 1360 |
| 7-16 | 274 | 10.02 | 1361 |
| 8.01 | 1348 | 10403 | 1362 |

## CONCLUDING MATERIAL

```
Custodians:
    Navy - EC
    Army & ER
    Afr Force & 85
Review activitfes:
    Army & MI
    Navy - SH
    A1r Force & 11, 17.99
    DLA & ES
User activities:
    Army a AV
    Navy & AS, CG, MC, OS
    Alr Force 4 19
```

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