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IN REPLY
REFER TO

DSCC-VAT

1 July 2004

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Draft of MIL-PRF-8805 /11J, /14F, /15G, /17G, /18G, /19F, /23G, /25F, /34E, /38G, /40H, /47G, /48H, /49H, /65D, /76H, /84E, /90F, /96E, /100F, /101K, /104C, /107C, /110D, and /114C.
Project numbers 5930-1838 through -1863.

The drafts of the above subject documents are being sent to you for review and comments. These drafts consist of the following changes:

Updating of referenced documents.
Incorporation of amendments.

If these documents are of interest to you, please provide your comments electronically. This can be in the form of a return e-mail, with or without an attached text file. A 45-day coordination cycle from the date of this letter has been allotted. Please provide your comments within that time period. If no comments are received in the allotted 45 day coordination cycle, concurrence is assumed and all comments received after will be held to the first amendment. If an electronic response is not possible we will still accept comments via letter, facsimile or phone call but only after you have contacted the project officer listed below. The draft documents can be found at the following DSCC-VA web page:

www.dsccl.dla.mil/Programs/MilSpec/initialdrafts.asp

This process still requires military departments to identify their comments as "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians or this office, as applicable, in sufficient time to allow for consolidating the department reply.

If there are any questions, please contact Mark Rush by the preferred method of E-Mail at Mark.Rush@dla.mil or by telephone at commercial 614-692-0550, DSN 850-0550; or by facsimile at 614-693-1644. Our mailing address as a last resort is Defense Supply Center, Columbus, DSCC-VAT, P.O. Box 3990, Columbus, OH 43216-5000. If you have further questions or concerns you may contact me at Kendall.Cottongim@dla.mil, by telephone at 614-692-0676 or by facsimile at 614-692-6939.

/ SIGNED /
KENDALL A. COTTONGIM
Chief
Electronics Components Team

NOTE: This draft, dated July 1, 2004 prepared by DLA-CC, has not been approved and is subject to modification. DO NOT USE PRIOR TO APPROVAL. (Project 5930-1852)

INCH-POUND
MIL-PRF-8805/49H
DRAFT
SUPERSEDING
MIL-PRF-8805/49G
3 September 1999

PERFORMANCE SPECIFICATION SHEET

SWITCHES, SENSITIVE, LIMIT, ROTARY LINKAGE LEVER (NONSELF-RETURN), RESILIENT SEAL, FLUID RESISTANT

This specification is approved for use by all Departments and Agencies of the Department of Defense

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-PRF-8805.

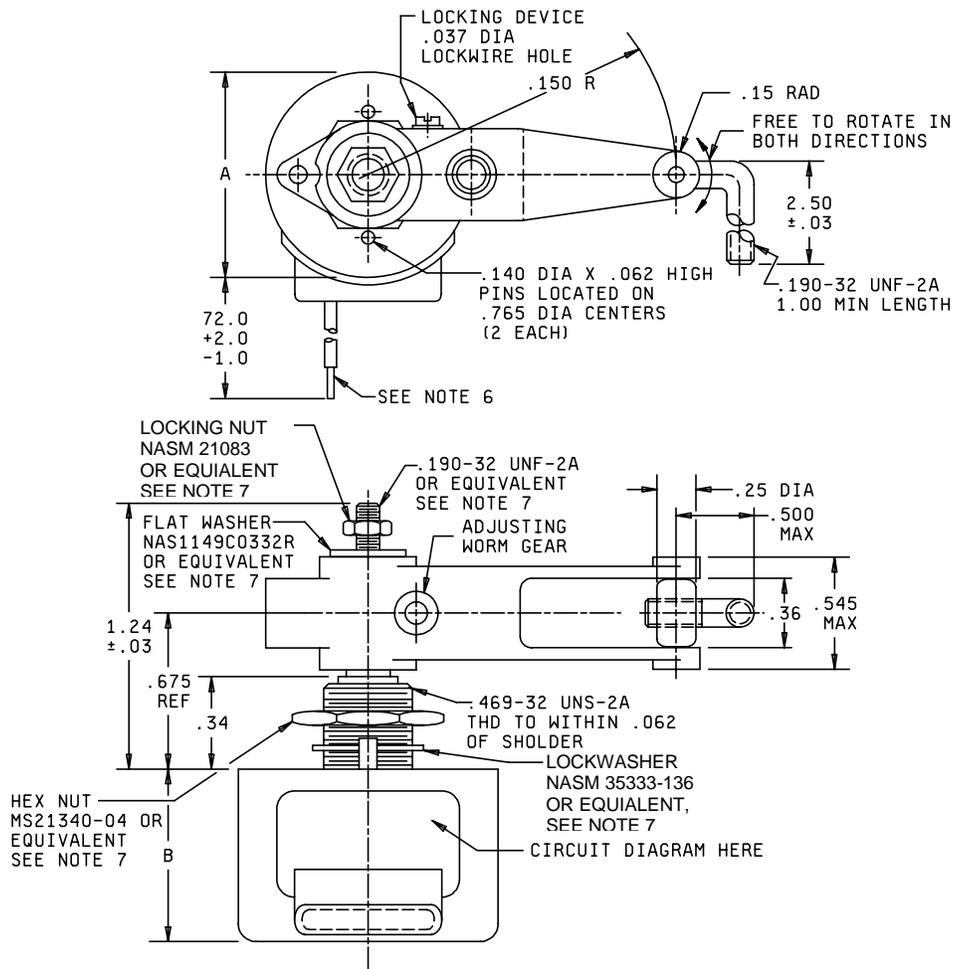
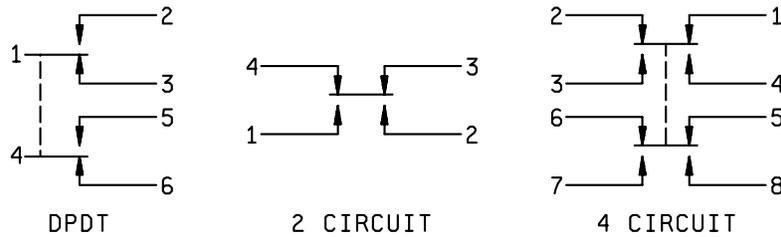
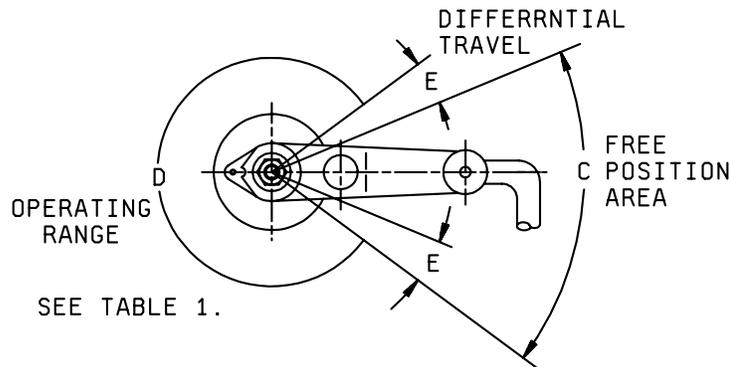


FIGURE 1. Configuration and dimensions.

MIL-PRF-8805/49G



CIRCUIT SCHEMATIC



Inches	mm	Inches	mm	Inches	mm
.003	0.76	.25	6.35	.765	19.43
.037	0.94	.34	8.64	1.0	25.4
.062	1.57	.36	9.14	1.24	31.50
.140	3.56	.469	11.91	1.50	38.10
.15	3.8	.500	12.70	2.0	50.
.190	4.83	.545	13.84	2.5	63.5
		.675	17.15	72.0	1828.

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ± 0.02 (0.51 mm) for two place decimals and ± 0.005 (0.13 mm) for three place decimals.
4. Lever shall be adjustable for an infinite number of positions through 360° without removing lever.
6. Envelope optional provided dimensions specified are not exceeded.
7. Alternative base metals and protective finishes, as approved by the qualifying activity, may be utilized for locking nut, flat washer, hexagon mounting nut and lock washer. Dimensions shall be in accordance with the referenced hardware specifications.

FIGURE 1. Configuration and dimensions - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1 and table I.

TABLE I. Dimensions and operating characteristics.

S24420-	Maximum dimensions		Wire leads		Operating characteristics ^{1/}					
	A	B	Wire size	Number required	C		D		E	Maximum operating torque inch-pounds
					Free position area	Circuits made	D Operating range	Circuits made	Maximum differential travel	
1	1.030 (26.16)	1.050 (26.67)	20	6	35° ±15°	1-3 and 4-6	301° REF	1-2 and 4-5	12°	3
2	1.530 (38.86)	1.680 (42.67)	18							
3		1.430 (36.32)		8		1-2 and 6-5	3-4 and 7-8	10		
4		1.820 (46.23)							20	
5										

^{1/} ±20 percent variation from specified values acceptable after tests.

Enclosure design: Four (resilient). All entrances to the switch cavity except through the actuator bushing shall be sealed by fusion of glass-to-metal, metal-to-metal, or ceramic-to-metal and the lead wires shall be potted to provide stress relief.

Temperature characteristic: 1 (-55°C to +85°C).

Shock type: M (100 G).

Sinusoidal vibration grade: 1 (10 to 500 Hz).

Finish: Switch housing shall be processed to resist corrosion.

Maximum weight with leads:

MS24420-1: .52 pound.

MS24420-2: .75 pound.

MS24420-3: .61 pound.

MS24420-4, -5: 1.10 pounds.

NOTE: MS24420 was superseded by MIL-PRF-8805/49; the MS24420 Part Numbers (PINS) were retained.

Operating characteristics: See table 1.

Coincidence of operating and releasing point: Not applicable.

Contact resistance: Not applicable.

Insulation resistance: 100 megohms minimum.

Dielectric withstanding voltage:

At atmospheric pressure: 1,000 V rms.

At reduced barometric pressure: 50,000 feet; 400 V rms.

Mechanical endurance: 25,000 cycles.

Electrical endurance: 25,000 cycles.

Electrical ratings: See table II.

TABLE II. Electrical ratings.

Rating code	Load							
	Sea level - 28 V dc				50,000 feet - 28 V dc			
	Resistive (amps)	Inductive (amps)	Lamp (amps)	Motor (amps)	Resistive (amps)	Inductive (amps)	Lamp (amps)	Motor <u>1/</u> (amps)
A	4	3	2.4	4	4	1	2.4	4
B	10	6	3.6	6	10	3	3.6	6
C	15	10	3.0	5	15	10	3.0	5

1/ Application information only.

Fluid resistance: Except for the cut end of the lead wire, switches shall be submerged in each of the following fluids for 2 minutes to 2 minutes 30 seconds, which shall consist of one cycle (one cycle is 10 minutes to 12 minutes 30 seconds total). Each switch shall be subjected to three cycles.

- a. Turbine fuel (MIL-DTL-5624).
- b. Hydraulic fluid (SAE AS1241A).
- c. Coolanol 1/ (MIL-PRF-87252).
- d. Ethylene glycol (ASTM-E1119).
- e. Lubricating oil (MIL-PRF-7808).

After each immersion, the excess fluid shall be blown off the external surfaces of the switch with an air jet. Following the third cycle, the switch shall be subjected to and shall meet the requirements for dielectric withstanding voltage, insulation resistance, operating characteristics, seal tests, and marking visibility.

Marking: The circuit schematic shall be marked on the switch case.

1/ Monsanto Company registered trademark.

Part or Identifying Number (PIN): See table III.

TABLE III. PIN and characteristics.

PIN	Electrical rating code (table II)	Circuit
MS24420-1	A	DPDT
MS24420-2	B	DPDT
MS24420-3	C	2 circuit
MS24420-4	C	4 circuit
MS24420-5	B	4 circuit

NOTE: MS24420 was superseded by MIL-PRF-8805/49; the MS24420 Part Numbers (PINS) were retained.

Qualification inspection:

Group submission: See table IV.

Group A inspection:

Seal test: Only watertight test shall be performed.

TABLE IV. Qualification inspection (group submission).

Examinations or test	Samples	Extent of approval
Qualification inspection table of MIL-PRF-8805	MS24420-4 (28 units)	All
Visual and mechanical examination, group II	MS24420-1, -3 (2 units each)	
Group VII	MS24420-1, -2 (14 units each)	

Reference Documents:

MIL-PRF-8805
MIL-DTL-5642
MIL-PRF-7808
MIL-PRF-87252
MS21340
NAS1149
ASTM –E1119
NASM 21083
NASM 35333
SAE-AS1241

Marginal notations are not used in this revision to identify changes with respect to the previous issue.

Custodians:

Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5930-1852)

Review activities:

Army - AR, AV, MI
Navy - AS, MC, OS
Air Force – 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at www.dodssp.daps.mil.