REQUIREMENTS:

1. GENERAL:
   A. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
   B. SWITCHES SHALL BE CAPABLE OF MEETING THE REQUIREMENTS OF MIL-S-6743, EXCEPT AS OTHERWISE SPECIFIED HEREIN.
   C. THE SUPPLIER SHALL CONFORM TO QUALITY ASSURANCE PROVISIONS AS CONTAINED IN ND 100215, CLASS I.
   D. UNITS SHALL BE CAPABLE OF MEETING THE QUALIFICATION REQUIREMENTS OF ND 100205 UNLESS MODIFIED OR AMENDED BY DESIGN REQUIREMENT SECTION OF THIS DRAWING.
   E. PRESERVATION, PACKAGING, PACKING AND CONTAINER MARKING PER ND 100225 CLASS I CODE 1.

2. INSPECTION AND ACCEPTANCE:
   A. MECHANICAL REQUIREMENTS:
      (1) ACTUATING FORCE: 7 OUNCES, MAXIMUM.
      (2) RELEASE FORCE: 1 OUNCE, MINIMUM.
      (3) PRE TRAVEL: 0.030, MAXIMUM.
      (4) DIFFERENTIAL MOVEMENT: 0.005 MAXIMUM.
      (5) OVER TRAVEL: 0.003, MINIMUM.
      (6) OVER TRAVEL FORCE: 3 POUNDS MAXIMUM.
      (7) CONTACT ARRANGEMENT: SINGLE POLE, DOUBLE THROW.
   B. MATERIAL AND FINISH:
      (a) EXTERNAL METAL PARTS (EXCEPT TERMINALS) - STAINLESS STEEL, PASSIVATED.
      (b) TERMINALS SOLDER LUG-NICKEL IRON ALLOY-SOLDER DIPPED.
      (c) TERMINAL AND LEAD IMBEDMENT-RTV SILICONE RUBBER PER NASA DRAWING 1006720.
   C. MARKING:
      (a) PIECEMARKING: PARTS SHALL BE PERMANENTLY AND LEGIBLY MARKED PER ND 1002019 WITH THE NASA DRAWING NUMBER, PLUS DASH NUMBER AND REVISION LETTER, AND MANUFACTURER'S SERIAL NUMBER, TERMINAL IDENTIFICATION SHALL BE PERMANENTLY AND LEGIBLY MARKED ON THE PARTS.
      (b) PACKAGE: INTERNAL INDIVIDUAL OR COLLECTIVE PACKAGES AND EXTERNAL PACKAGING SHALL BE MARKED WITH THE FOLLOWING INFORMATION: MANUFACTURER'S NAME OR SYMBOL, NASA PART NUMBER AND REVISION LETTER, MANUFACTURER'S LOT OR SERIAL NUMBER, DATE CODE OR DATE OF MANUFACTURE.
      (c) MANUFACTURER'S PART NUMBER MAY APPEAR ON THE PART OR PACKAGE.
   D. SEALING: (100%) LEAKAGE SHALL BE LESS THAN 10^-8 CC/SEC, (CONVERTED TO LEAKAGE OF HELIUM) AT A PRESSURE DIFFERENTIAL OF 1 ATMOSPHERE. TEST SHALL BE PERFORMED WITH A MASS SPECTROMETER OR OTHER EQUIPMENT CAPABLE OF THE REQUIRED ACCURACY.

PROCURE ONLY FROM APPROVED SOURCES LISTED ON ND 1002034 FOR THIS DRAWING.
INSPECTION AND ACCEPTANCE: (CONTINUED)

B. ELECTRICAL REQUIREMENTS:
   (1) DIELECTRIC WITHSTANDING VOLTAGE: 1000 VOLTS RMS, 70,000 FEET: 300 VOLTS RMS.
   (2) INSULATION RESISTANCE: (1000) SHALL BE A MINIMUM OF 100 MEGOHMS WHEN MEASURED WITH 100 VDC APPLIED FOR A MAXIMUM OF 1 MINUTE BETWEEN TERMINALS AND GROUND OR CASE AND MUTUALLY INSULATED PARTS.
   (3) CONTACT RESISTANCE: (1000) SHALL BE MEASURED WITH 1 MILLIAMPERE FROM A 6 VOLT DC OPEN CIRCUIT VOLTAGE.
   THE CONTACTS SHALL NOT DRIP THE MEASURING LOAD.
   LIMITS SHALL BE 1 OHM MAX. INITIALLY, DURING AND AFTER THE SPECIFIED CYCLES OF LIFE.

C. DESIGN:
   A. TEMPERATURE RANGE: MINUS 300°F TO PLUS 250°F.
   B. CONTACT RATING (20 VOLTS DC/125 VOLTS, 400 CYCLES):
      (1) RESISTIVE: 5 AMPERES
      (2) INDUCTIVE: 3 AMPERES
   C. STRENGTH OF TERMINALS: PER ND 1002055, EXCEPT AS OTHERWISE NOTED IN TABLE BELOW.
   D. STRENGTH OF ACTUATOR AND STOP: 10 POUNDS.
   E. MINIMUM OPERATING CYCLES: 25,000
   F. SWITCHES SHALL BE HERMETICALLY SEALED AND FILLED WITH AN INERT GAS.
   G. TERMINALS-SOLDER LUGS ONLY, SHALL BE TINNED FOR SOLDERING.
   H. DIELECTRIC STRENGTH: PER ND 1002055, EXCEPT TEST VOLTAGE AT A SIMULATED ALTITUDE OF 70,000 FEET SHALL BE 300 VOLTS RMS AT 60 CPS.
   J. SHOCK: PER ND 1002055, EXCEPT HALF SINE WAVE SHOCK INPUT SHALL BE USED.
   K. LIFE: PER ND 1002055, EXCEPT DIELECTRIC STRENGTH SHALL BE PERFORMED AT A TEST VOLTAGE OF 500 VOLTS RMS AT 60 CPS AND CONTACT RESISTANCE LIMITS SHALL BE 500 MILLIOHM MAXIMUM WHEN CHECKED UNDER ACTUAL LIFE TEST LOAD CONDITIONS.

4. SPECIAL CONDITIONING:
   A. EXPOSED SURFACE OF TERMINAL IMPROVEMENT MATERIAL FOR SOLDER LUG TERMINALS SHALL BE ROUGHENED OR ABRASION BY SAND BLASTING OR OTHER SUITABLE MEANS FOR FUTURE PRIMING AND WATER PROOFING.

THE PART NUMBER IS THE DRAWING NUMBER PLUS THE APPLICABLE DASH NUMBER.
NO. 22 WIRE LEAD
PER MIL-W-16878
(TYPE E) 3 REQ

.030 MAX
PRETRAVEL

.036 SPHERICAL
.026 RADIUS

.090 MAX
SEE NOTE 1

.33 OPERATING
POSITION
SEE NOTE 1

.260
.240

.22
.09

.375 SEE
NOTE 1

.610 REF

DASH -4

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

SWITCH, SENSITIVE

SPECIFICATION CONTROL DRAWING

80230C 1010901

SCALE WKT SHEET 3 OF 3