REVISIONS			
REV.	DESCRIPTION	DATE	APPROVAL
1.0	REL PER ER-40576		James Yeh

Notes: Unless otherwise specified.

1. Sunlight readable display is designed to meet requirements of MIL-STD-411, I.E., readable in direct sunlight (10,000 foot candles) when illuminated and appears flat black when not illuminated. Legend contrast ratios, Illuminated and non-illuminated, appear on sheet 9. It must be noted that sunlight readable displays are not to be judged on brightness but rather by contrast ratios, illuminated and non-illuminated, under 10,000 foot candles ambient light conditions. Installation of RF1 screen will diminish these values by approximately 50%.

2. Series 80 pushbuttons mate with switch indicator modules models 82, 87, 89, 89C, 80M, 80CM, 8SM, 8M, 8CM and 80SM. Refer to those S.C.D.'s for additional details.

3. The pushbuttons are designed to be operated with four T1 Size flange base lamps with .15 M.S.C.P. (I.E.: #6839, #718, ETC.).

4. Refer to standard products catalog for additional ordering information.

5. Pushbuttons are available with captive pushbutton feature, I.E.: Pushbutton remains captive to switch/indicator housing during re-lamping. Note: Not useable on solenoid held switch assemblies (i.e. 80M "D" & 89 "D").

6. Lamp circuitry: Pushbuttons are available in either common lamp ground (CLG) or with split-lamp ground (SLG)
Split lamp ground: Lamps 1 & 4 are common to one contact, lamps 2 & 3 are common to another contact. (See schematics & charts, sheet 5 & 7).

7. Standard configurations are listed below unless otherwise specified.

   7.1 Pushbutton display styles "A" thru "H" (CLG) will be assembled with the latch on the bottom while viewing the display area.

   7.2 Pushbutton display styles F, G, and H (SLG) be assembled with the latch on the bottom while Viewing display area.

stacosystems
One Step Ahead
1139 Baker Street, Costa Mesa, CA 92626
Phone: (714) 549-3041
Fax: (714) 549-0930

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
DECIMALS .XX ± .XXX ±
ANGLES ±

MATERIAL N/A

FINISH N/A

DO NOT SCALE DRAWING

APPROVALS	DATE
DRAWN Tony Hana	4-3-08
CHECKED	T. Payne
PROJ. ENG.	Tony Hana
MGMT.	James Yeh

TITLE
PUSHBUTTON DISPLAY, SUNLIGHT READABLE 4 LAMP ILLUMINATED

SIZE	CAGE CODE	DWG NO.	REV
A	12522	**SERIES 80 & R80 CODED**	1.0

SCALE NONE

Notes: Continued

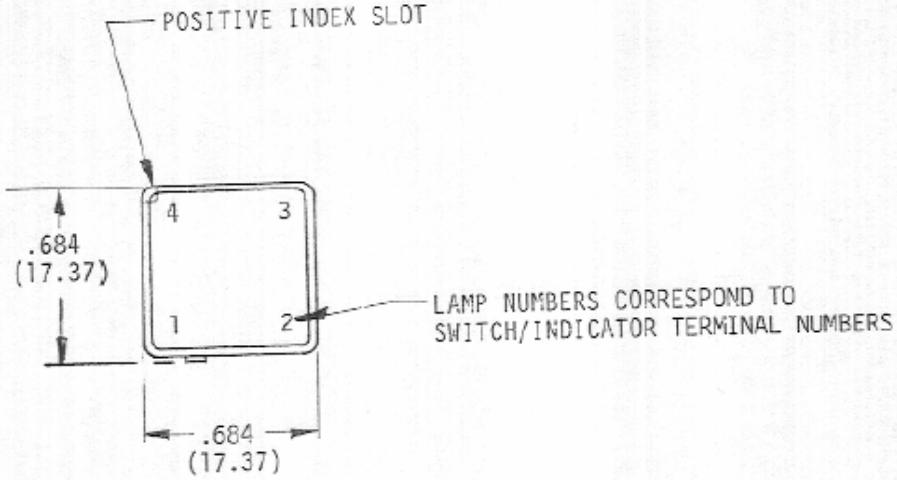
7.3 Pushbutton display styles “A” thru “E” (SLG) will be assembled with the latch to the left while viewing the display area

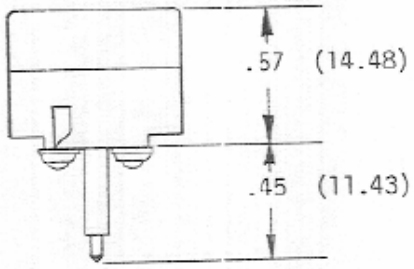
7.4 When pushbutton is rotated 90º, legend must be installed so that it remains right reading.

△8. Pushbutton assembly will be identified with federal code identification number and date code on surface indicated.

△9. To release pushbutton, move latch to right.

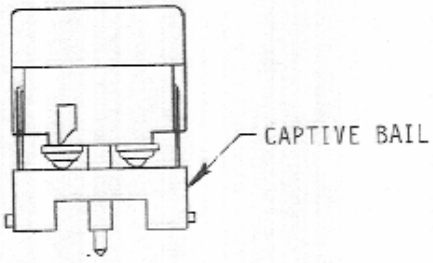
10. Dimensions in parenthesis are in millimeters.





SERIES 80 T1 OR 3

NONCAPTIVE PUSHBUTTONS

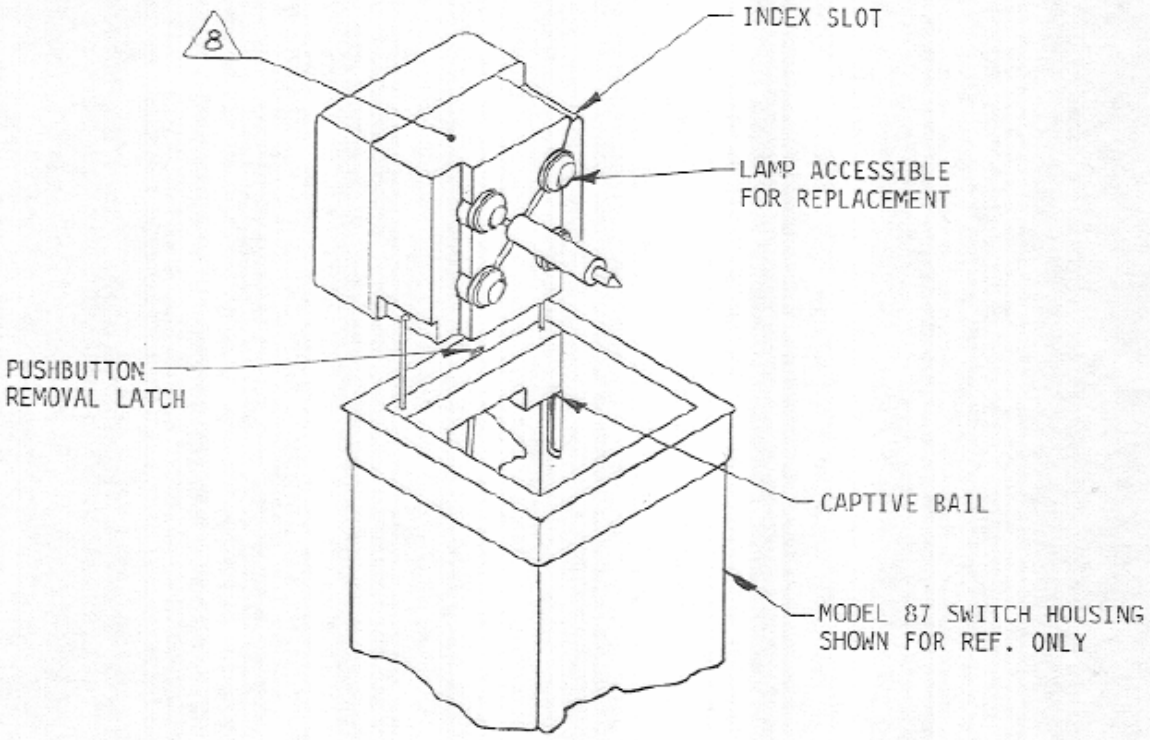


SERIES 80 T2 OR 4

CAPTIVE PUSHBUTTONS 

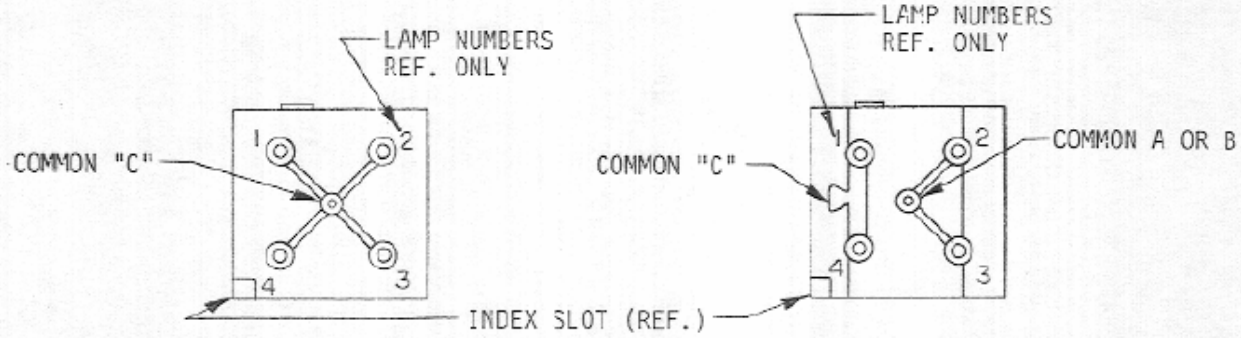
CODE IDENT NO.	DRAWING NO.	REV.	SHEET
12522	STYLE 80 & R80 CODED	1.0	3

CAPTIVE PUSHBUTTON FEATURE (SERIES 80-2 OR -4)
REF. NOTE 5



CODE IDENT NO.	DRAWING NO.	REV.	SHEET
12522	SERIES 80 & R80 CODED	1.0	4

(AS VIEWED FROM REAR OF PUSHBUTTON)



MODEL 80 T1 OR 2

COMMON LAMP GROUND (CLG) 6

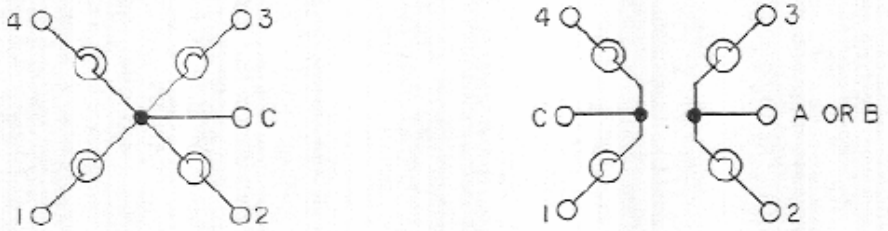
MODEL 80 T3 OR 4

SPLIT LAMP GROUND (SLG) 6

SEE CHART NO. 1 ON SHEET 8

CIRCUIT DIAGRAMS

(AS VIEWED FROM FRONT OF PUSHBUTTON)

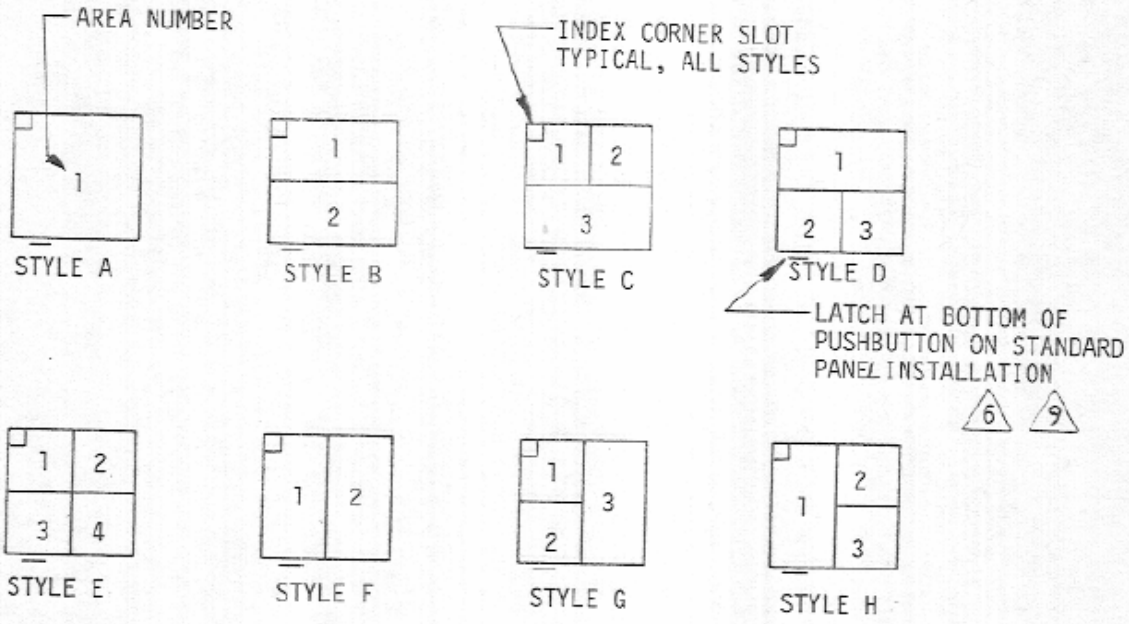


COMMON LAMP GROUND (CLG) 6

SPLIT LAMP GROUND (SLG) 6

CODE IDENT NO.	DRAWING NO.	REV.	SHEET
12522	STYLE 80 & R80 CODED	1.0	5

PUSHBUTTON DISPLAY SCREEN STYLES & LEGEND AREA



CODE IDENT NO.	DRAWING NO.	REV.	SHEET
12522	SERIES 80 & R80 CODED	1.0	6

CHART NO. 1 △5 △6

MODEL	DESCRIPTION
T 1	NON-CAPTIVE, C.L.G.
T 2	CAPTIVE, C.L.G.
T 3	NON-CAPTIVE, S.L.G.
T 4	CAPTIVE, S.L.G.

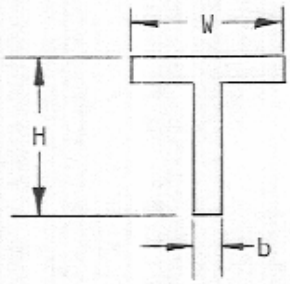
C.L.G. = COMMON LAMP GROUND

S.L.G. = SPLIT LAMP GROUND

(SEE SHEET 6)

LEGENDS

1. THE CHARACTER FORMAT FOR LEGENDS IN ALPHA-NUMERICS IS AN ALTERNATE GOTHIC NO. 2 (SANS-SERIF) WITH THE FOLLOWING LINE RELATIONSHIPS:



LETTER HEIGHT-TO-WIDTH RATIO, LETTER T: 2.5:1

LINE WEIGHT RATIO $\frac{H}{b}$ = 6:1

2. STANDARD LEGEND HEIGHTS ARE .100* AND .125* OTHER LEGEND HEIGHTS ARE AVAILABLE BY SPECIAL ORDER AND NUMBER OF CHARACTERS PER SECTION WILL BE PROPORTIONAL. REFER TO CHART 2 BELOW FOR STANDARD LEGEND DETAILS.

CHART NO. 2

*.100 = (2.54)
.125 = (3.18)

DISPLAY STYLE CODE	LEGEND AREA	CHARACTERS/LINE/COL (XX) MAX. NO.					XX COL/LINES/AREA MAX. NO.				
		CHAR HGT.	LEGEND AREA 1	2	3	4	CHAR HGT.	LEGEND AREA 1	2	3	4
A	1	.100*	8	-	-	-	.100*	4	-	-	-
		.125*	7	-	-	-	.125*	3	-	-	-
B	1 / 2	.100*	8	8	-	-	.100*	2	2	-	-
		.125*	7	7	-	-	.125*	1	1	-	-
C	1 2 / 3	.100*	3	3	8	-	.100*	2	2	2	-
		.125*	3	3	7	-	.125*	1	1	1	-
D	1 / 2 3	.100*	8	3	3	-	.100*	2	2	2	-
		.125*	7	3	3	-	.125*	1	1	1	-
E	1 2 / 3 4	.100*	3	3	3	3	.100*	2	2	2	2
		.125*	3	3	3	3	.125*	1	1	1	1
F	1 2	.100*	XX 5	XX 5	-	-	.100*	XX 2	XX 2	-	-
		.125*	XX 4	XX 4	-	-	.125*	XX 2	XX 2	-	-
G	1 3 / 2	.100	3	3	XX 5	-	.100	2	2	XX 2	-
		.125	3	3	XX 4	-	.125	1	1	XX 2	-
H	1 2 / 3	.100	XX 5	3	3	-	.100	XX 2	2	2	-
		.125	XX 4	3	3	-	.125	XX 2	1	1	-

.125* CHARACTER HEIGHT RECOMMENDED FOR OPTIMUM SUNLIGHT READIBILITY. REFER TO ORDERING INFORMATION CODE ON SHEET 11.

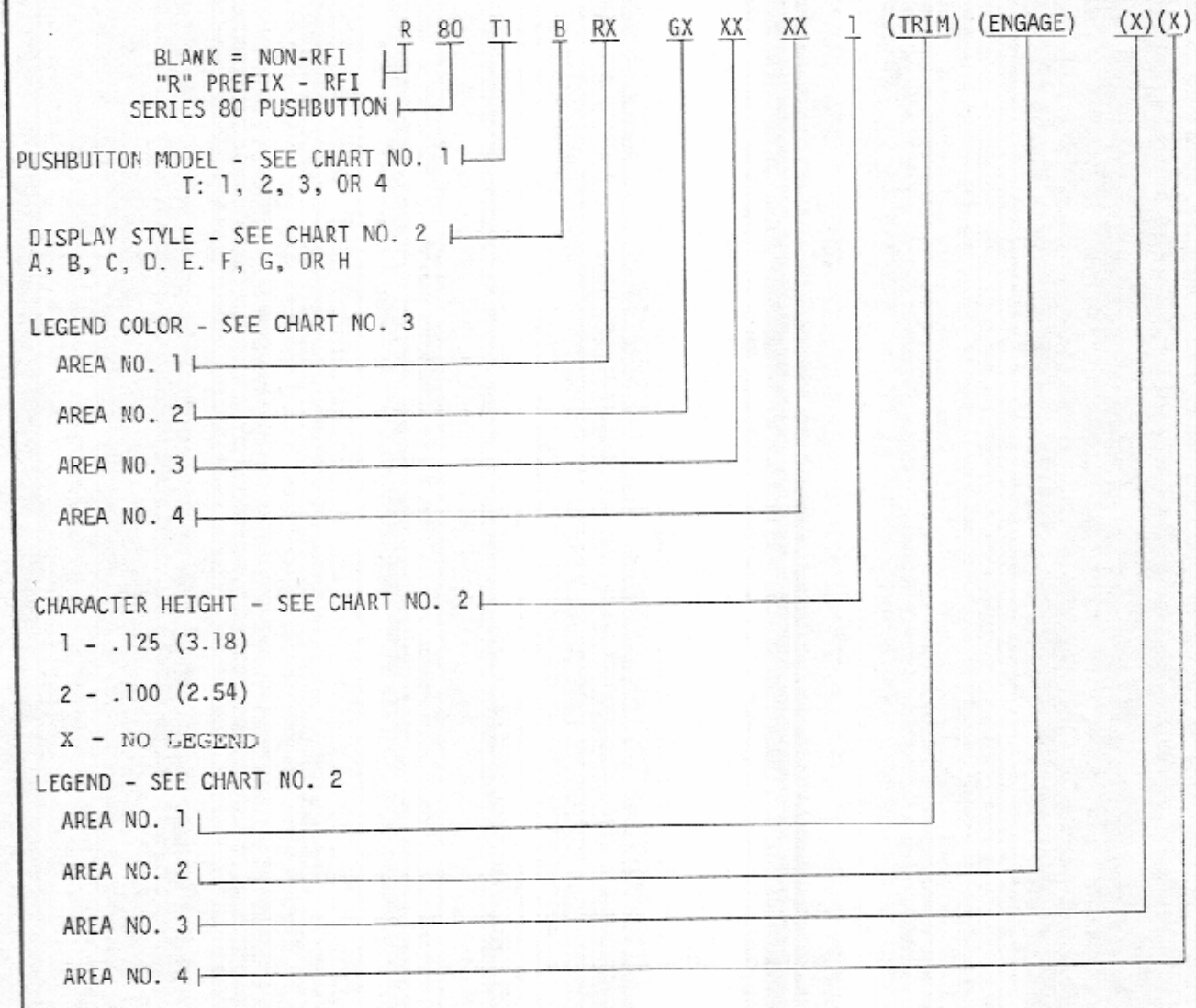
ENCLOSE LEGEND FOR EACH AREA IN PARENTHESIS. USE X FOR LEGEND AREAS NOT USED. SEPARATE LINES IN EACH LEGEND AREA BY SEMI-COLON.
EXAMPLE: (AUTO; POWER) (MANUAL; POWER) (X) (X)

CHART NO. 3

READABILITY OF LEGENDS IN 10,000 FOOT-CANDLE AMBIENT (1)

COLOR CODE	COLOR	CONTRAST RATIOS-.15 LAMPS		CHROMATICITY LIMITS (X/Y) X X (X/Y) -Y -Y (X/Y) (X/Y)
		ILLUM. MIN.	NON-ILLUM.	
BX	BLUE	.03	-.1 TO +.1	.230/.420 .320/.420 .230/.350 .320/.350
GX	GREEN	.6		.340/.640 .415/.565 .300/.600 .375/.523
RX	RED	.6		.660/.340 .703/.297 .655/.324 .695/.285
WX	WHITE	.8		.430/.430 .500/.430 .430/.380 .500/.380
AX	AMBER	1.2		.585/.415 .610/.390 .574/.404 .599/.379
YX	YELLOW	1.4	-.1 TO +.1	.560/.440 .583/.417 .549/.429 .572/.405
XX	NO COLOR	-	-	

SERIES 80 SUNLIGHT READABLE DISPLAY PUSHBUTTON



CODE IDENT NO.	DRAWING NO.	REV.	SHEET
12522	SERIES 80 & R80 CODED	1.0	10

SPECIFICATION, SERIES 80 SUNLIGHT READABLE PUSHBUTTON:

THE PUSHBUTTONS DEFINED BY THIS SPECIFICATION CONTROL DRAWING MEET OR EXCEED ALL APPLICABLE REQUIREMENTS OF MIL-S-22885.

1. MECHANICAL:

   A. WEIGHT, INCLUDING LAMPS: .011 LBS. (4.99 GMS)

   B. FACEPLATE WILL WITHSTAND 25 POUND (11.35 Kgm) DISTRIBUTED LOAD.

   C. RELAMPING MAY BE ACCOMPLISHED WITHOUT TOOLS.

2. ELECTRICAL:

   A. DIELECTRIC STRENGTH

      SEA LEVEL — 1,056 VRMS

      70,000 FEET — 450 VRMS

   B. INSULATION RESISTANCE — 1,000 MEGOHMS @ 500 VDC

3. ENVIRONMENTAL (TO BE MET INSTALLED IN MATING SWITCH/INDICATOR) (2)

   A. TEMPERATURE - OPERATING — -55°C TO +85°C

   B. THERMAL SHOCK — -55°C TO +85°C, PER MIL-STD-202, METHOD 107, TEST CONDITION A

   C. ALTITUDE — SEA LEVEL TO 70,000 FEET (21, 341 METERS)

   D. VIBRATION — .06 (1.52) DA OR 15 G'S, 10 TO 2,000 HZ PER MIL-STD-202, METHOD 204, TEST CONDITION B

   E. SHOCK — 75 G'S, 6 ±1 MILLISECOND, PER MIL-STD-202, METHOD 213, TEST CONDITION B

   F. SAND AND DUST — PER MIL-STD-202, METHOD 110, TEST CONDITION CONDITION B

   G. HUMIDITY — 10 DAYS WITH 10 CYCLES AT 90-98 PERCENT RELATIVE HUMIDITY AT 65°C PER MIL-STD-202, METHOD 106

H.	SALT SPRAY	96 HR., PER MIL-STD-202C, METHOD 101 TEST CONDITION A, WITH PUSHBUTTON INSTALLED IN A MATING SWITCH/INDICATOR.
I.	FUNGUS	NONE OF THE MATERIALS OR FINISHES USED IN THE CONSTRUCTION OF THIS ASSEMBLY WILL SUPPORT ANY FUNGUS ENCOUNTERED IN TROPICAL CLIMATES.
J.	EXPLOSION	SWITCHES OR INDICATORS COMPLETE WITH THESE PUSHBUTTONS CAN BE SAFELY OPERATED UNDER LOAD IN AN EXPLOSIVE ATMOSPHERE WITHOUT DANGER OF EXPLOSION PER MIL-STD-202C, METHOD 109.

Appendix A <u>RoHS (Restriction of certain Hazardous Substance) Compliance requirement per EU Directive 2002/95/EC.</u>

No Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr^{+6}), PBB or PBDE is intentionally added to these devices. Any traces impurities of these substances contained in the parts are below RoHS specified threshold levels:

Substance	RoHS (Max allowed)
Cd (Cadmium)	100ppm or 0.01% by weight
Pb (Lead)	1000ppm or 0.1% by weight
Hg (Mercury)	1000ppm or 0.1% by weight
Cr6+ (Hexavelant Chromium)	1000ppm or 0.1% by weight
PBBs (Polybrominated Biphenyls)	1000ppm or 0.1% by weight
PBDEs (Polybrominated Dipheny Ethers)	1000ppm or 0.1% by weight

Exemptions to the RoHS Directive:
Lead as an alloying element in steel containing up to 0.35 % lead by weight, aluminum containing up to 0.4 % lead by weight and as a copper alloy containing up to 4 % lead by weight.

Note1: Lamps are not included.

Note2: The product does not contain printed circuit board (PCB).