

Jay-El P/N 10820



**JAY-EL P/N 10820
ILLUMINATED PUSHBUTTON SWITCH
MEETS REQUIREMENTS OF
MIL-S-22885**



ENGINEERING SPECIFICATIONS

ELECTRICAL

Switch Contacts:

Silver alloy contacts are standard. Gold contacts are recommended for reliable low level switching below 1.0 amperes.

Basic Switch contacts per Mil-S 8805/101

Switch Ratings:

SILVER CONTACTS

	Sea Level, 28VDC	50,000 feet, 28VDC
Load	NO or NC	NO or NC
	(Amperes, maximum)	(Amperes, maximum)
Resistive	8.0	8.0
Inductive	5.0	3.0
Lamp	1.0	--

1/ Inrush, 10:1 for 20 milliseconds maximum.

2/ Minimum conditions are dependent on use and atmospheric conditions.

Contact Jay-El for detailed application information.

GOLD CONTACTS

	Sea Level and 50,000 Feet
Max. Voltage	28VDC
Max. Current	1 Amp.Res. .5 Amp. Ind

Contact Resistance:

3 Ohms maximum at low level load

10 Milliamps, 30 Millivolts

Low Level, 10 Milliamps, 30 Millivolts

Logic, 10 Milliamps, 5 Volts

25 Milliohms maximum in accordance with MIL-S-22885 for switch contacts and 1 OHM maximum in accordance with MIL-S-22885 for lamp contacts.

Electrical Life:

25,000 cycles at rated loads per Para. 3.6.24 of MIL-S-22885C.

ENVIRONMENTAL

In accordance with MIL-S-22885 & MIL-S-901

Temperature: High + 85° C Low -55° C

Explosion: Per Mil-Std-810, Method 511 Procedure II

Humidity: Per Mil-Std-202, Method 106

Vibration: 10-2000Hz @ 0.6DA or 15 G (Peak) whichever is less.

Shock: 75G's, 6milliseconds, Half sine & MIL-S-901C

EMI: Per Mil-Std-285

SPLASH PROOF: MIL-STD-108

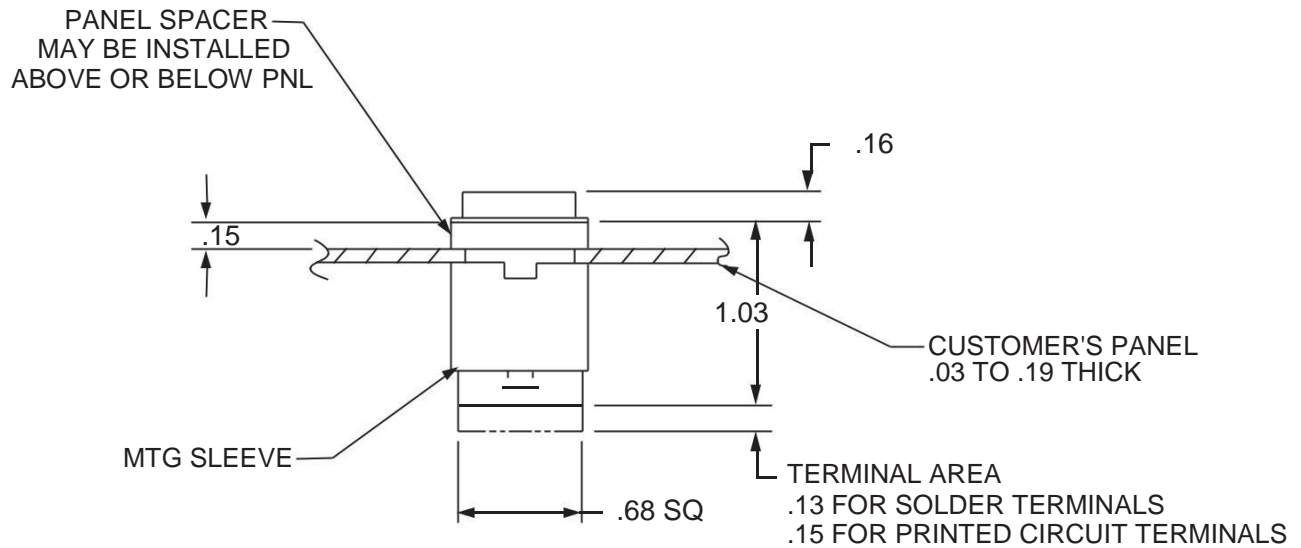
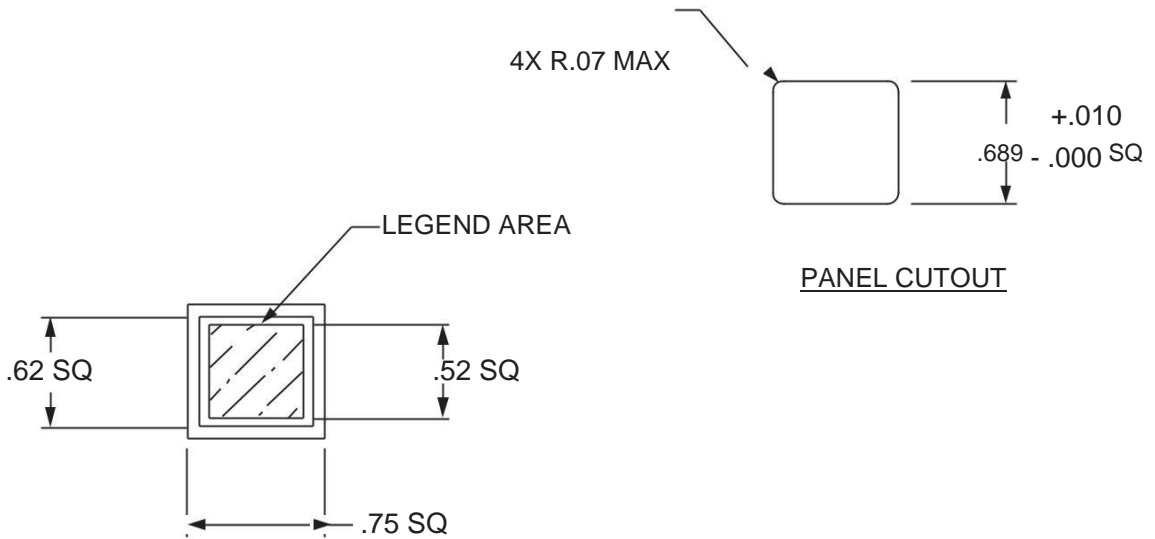
MECHANICAL

Actuation Force: To total travel

Unsealed 2 to 5 pounds

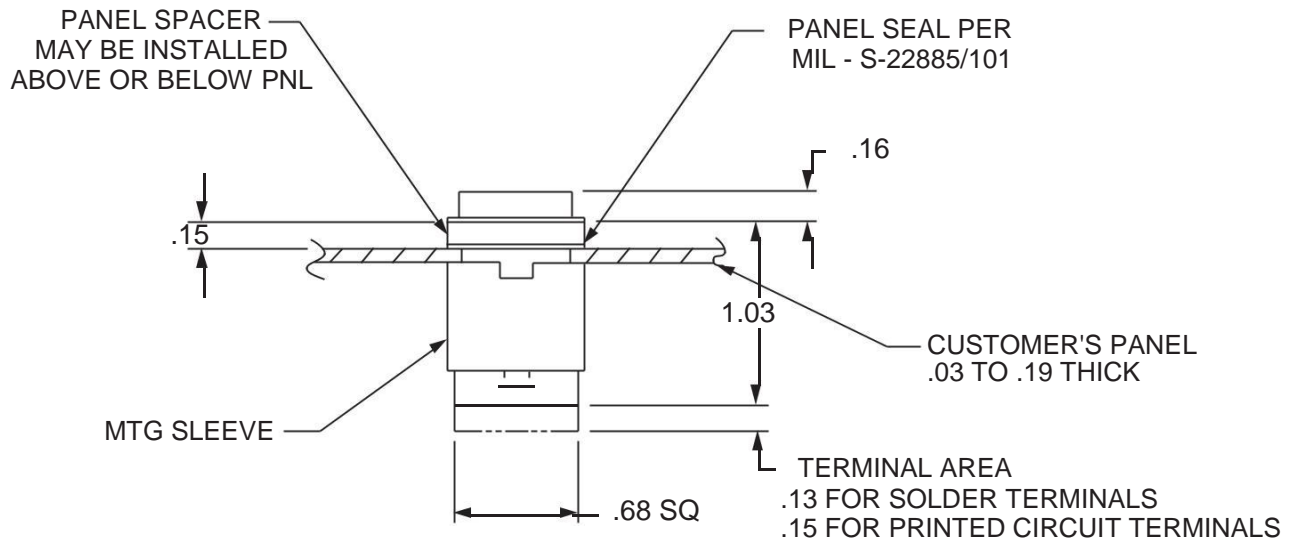
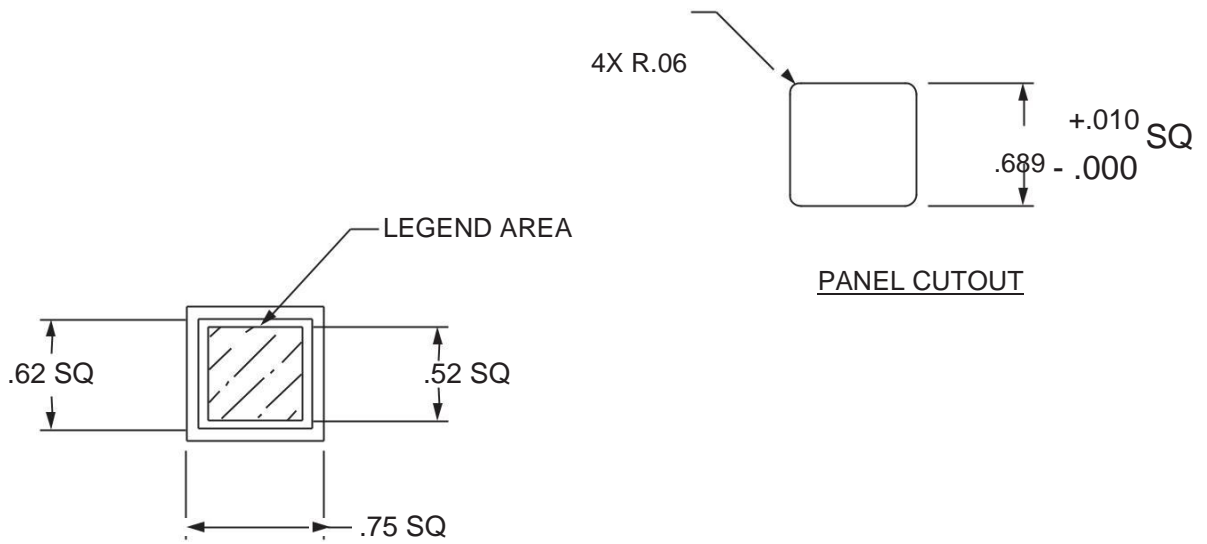
Sealed 2 to 5.5 pounds

To switch contact transfer: 1 to 3.5 pounds.



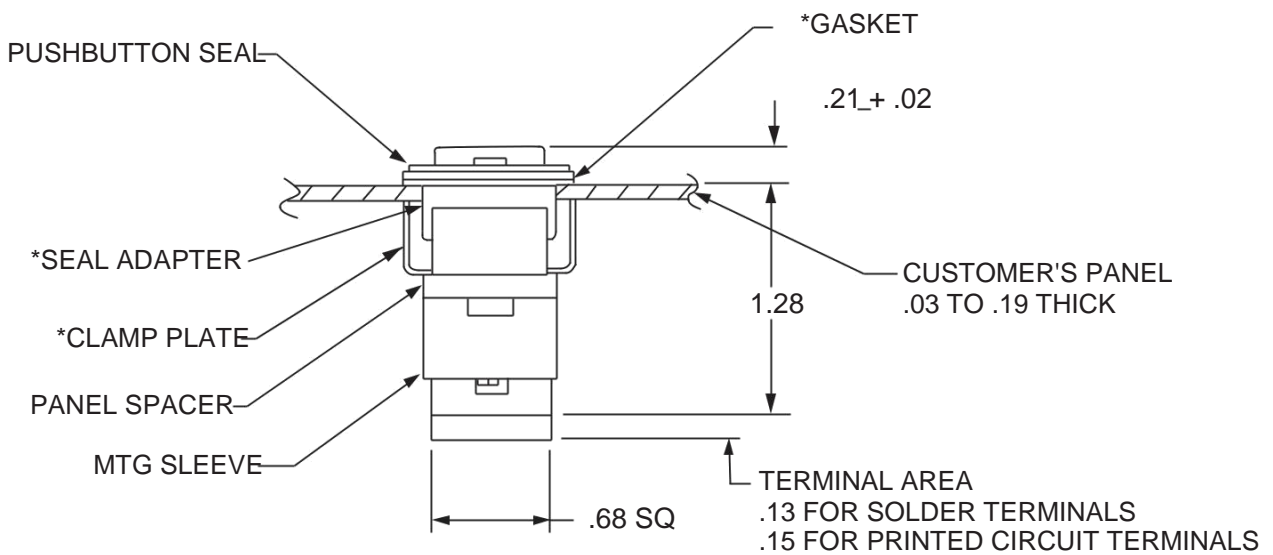
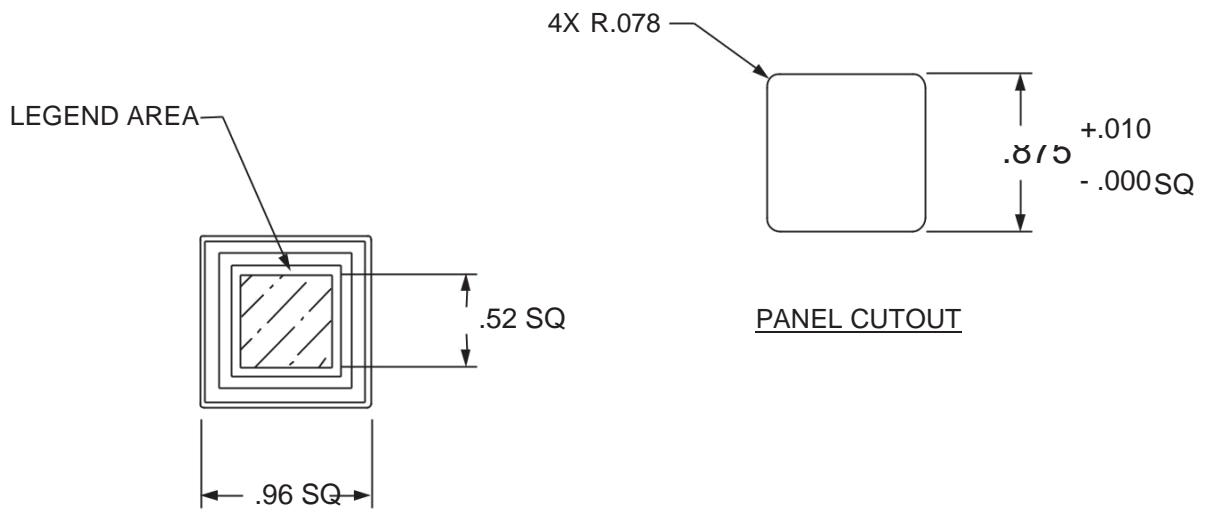
UNSEALED SWITCH AND PUSHBUTTON ASSY

MOUNTING TYPE I



INTERNAL-SEAL SWITCH AND PUSHBUTTON ASSY (DRIP PROOF)

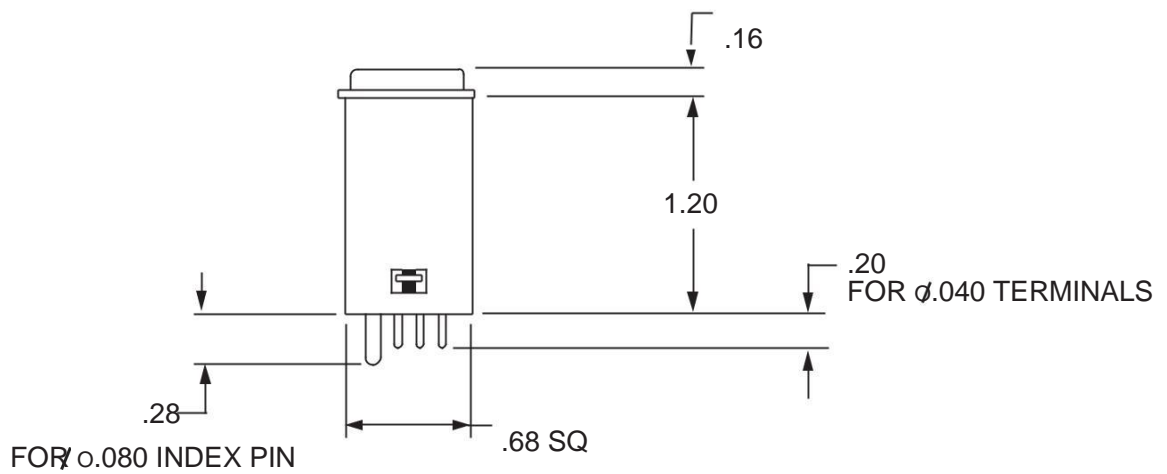
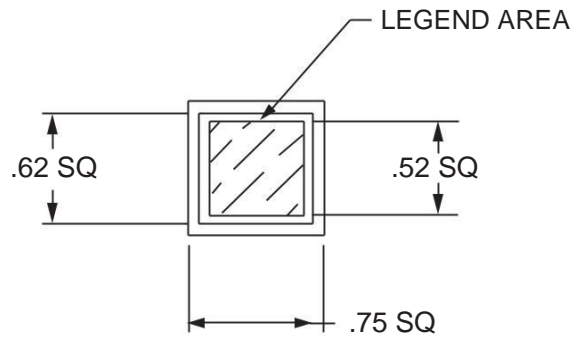
MOUNTING TYPE I



INTEGRALLY-BONDED SEALED PUSHBUTTON AND SWITCH ASSY (SPASHPROOF)

* SEAL KIT: AVAILABLE AS KIT, PN 530649 - [] (-1 IS BLACK FINISH; -2 IS BLACK FINISH - EMI)

MOUNTING TYPE I

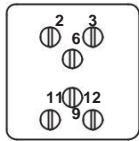
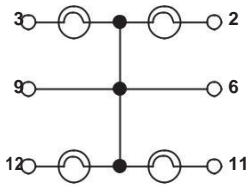


UNSEALED SWITCH AND PUSHBUTTON FOR PLUG-IN MATRIX

MOUNTING TYPE III

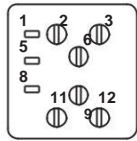
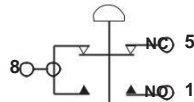
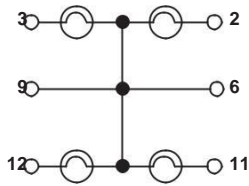
COMMON GROUND LAMP CIRCUIT WITH SOLDER TERMINALS OR PRINTED CIRCUIT TERMINALS

INDICATOR ONLY

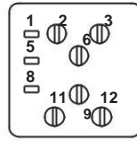
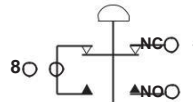
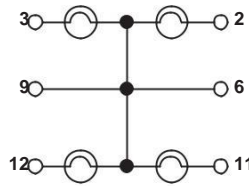


INDICATOR ONLY
NO SWITCH ACTION

SPDT

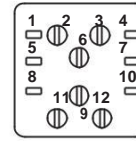
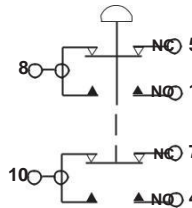
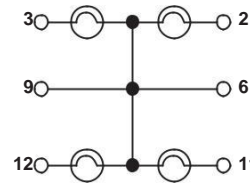


SINGLE POLE
MOMENTARY ACTION

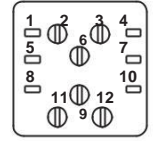
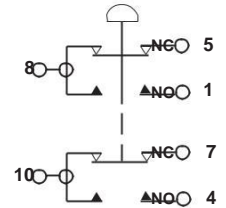
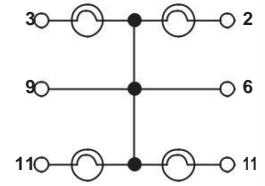


SINGLE POLE
MAINTAINED DEPRESSED
ALTERNATE ACTION

DPDT



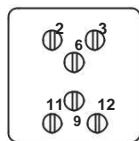
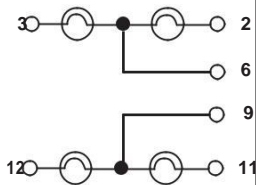
DOUBLE POLE
MOMENTARY ACTION



DOUBLE POLE
MAINTAINED DEPRESSED
ALTERNATE ACTION

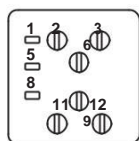
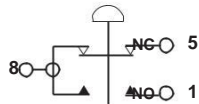
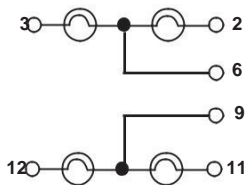
SPLIT GROUND LAMP CIRCUIT WITH SOLDER TERMINALS OR PRINTED CIRCUIT TERMINALS

INDICATOR ONLY

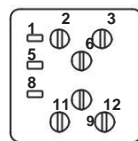
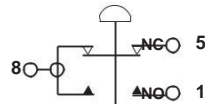
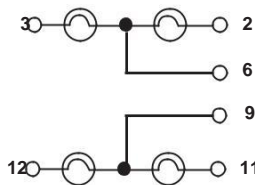


INDICATOR ONLY
NO SWITCH ACTION

SPDT

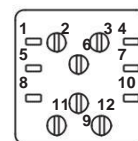
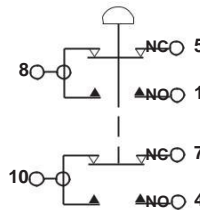
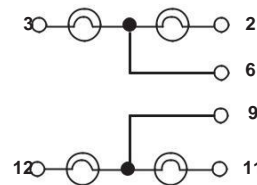


SINGLE POLE
MOMENTARY ACTION

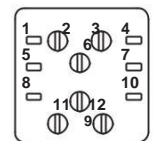
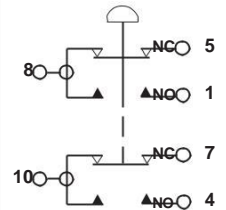
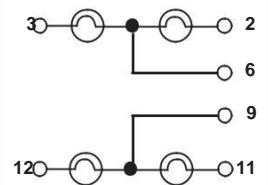


SINGLE POLE
MAINTAINED DEPRESSED
ALTERNATE ACTION

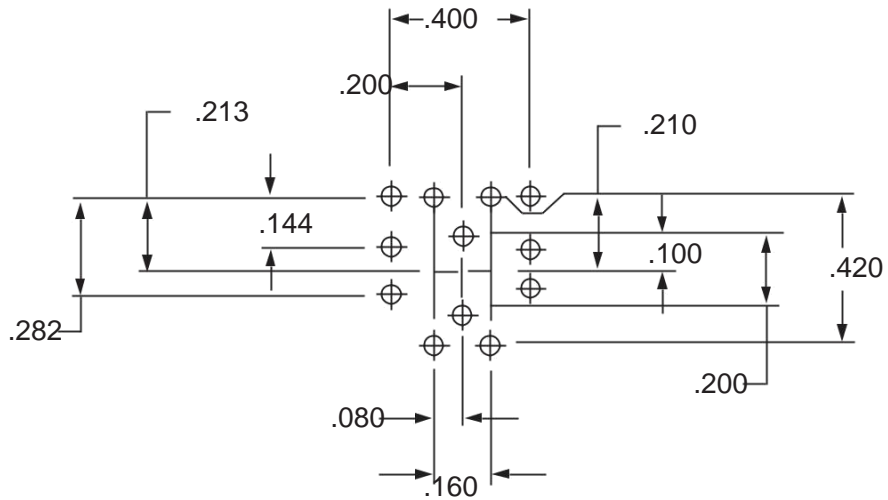
DPDT



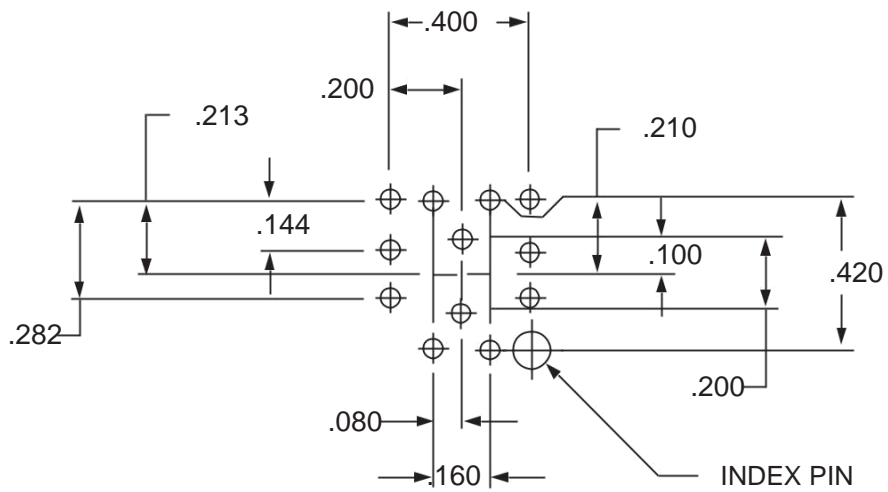
DOUBLE POLE
MOMENTARY ACTION



DOUBLE POLE
MAINTAINED DEPRESSED
ALTERNATE ACTION



TERMINAL LOCATIONS
(SOLDER OR PRINTED CIRCUIT TERMINATIONS)



TERMINAL LOCATIONS
(PLUG-IN SWITCH, MATRIX MOUNTED TERMINATIONS)
TYPE III

ORDERING PROCEDURE - Fill out Preliminary Product Specification using Tables below and submit to Jay-El for Customer Code assignment.

TABLE 1 BASIC P/N	TABLE 2 MOUNTING TYPE	TABLE 3 BEZEL COLOR	TABLE 4 SPLIT GROUND	TABLE 5 EMI	TABLE 6 SEAL	TABLE 7 RETAINED PUSHBUTTON
10820	I III	BLACK CRES	YES NO	YES NO	SPLASHPROOF DRIP-PROOF NO	YES

TABLE 8 PUSHBUTTON STYLE	TABLE 9 SWITCH POLES	TABLE 10 CONTACTS	TABLE 11 SWITCH ACTION	TABLE 12 UNLIGHTED BACKGROUND COLOR	TABLE 13 DISPLAY DATA
STANDARD	0 INDICATOR 1 1 SPDT 2 2 SPDT	(ABOVE 1 AMP) S SILVER CONTACTS (BELOW 1 AMP) G GOLD CONTACTS	O INDICATOR M MOMENTARY D MAINTAINED DEPRESSED ALTERNATE	BLK BLACK DW DIFFUSED WHITE NG NEUTRAL GRAY R RED A AMBER Y YELLOW G GREEN B BLUE	TO BE SPECIFIED ON PRELIMINARY FORM

TABLE 14 * LIGHTED COLOR	TABLE 15 ** DISPLAY TYPE	TABLE 18 CHARACTER SIZE AND PLACEMENT	TABLE 17 LAMPS										
C CLEAR R RED A AMBER Y YELLOW G GREEN B BLUE DW DIFFUSED WHITE WL WHITE LIGHT NG NUETRAL GRAY AG AVIATION GREEN AY AVIATION YELLOW AG1 AVIATION GREEN 1 B1 BLUE 1	<ol style="list-style-type: none"> BLACK CHARACTERS ON DIFFUSED WHITE BACKGROUND. BACKGROUND ILLUMINATES IN COLOR. REPLACED BY DISPLAY TYPE 7. UNREADABLE BEFORE LIGHTED. OPAQUE CHARACTERS ON NUETRAL GRAY ILLUMINATING BACKGROUND. ILLUMINATING CHARACTERS ON BLACK BACKGROUND. CHARACTERS SHALL NOT APPEAR ILLUMINATED IN UNLIT CONDITION. CONTRASTING OPAQUE CHARACTERS ON ILLUMINATING COLORED BACKGROUND. BLACK CHARACTERS ON YELLOW OR AMBER BACKGROUND. WHITE CHARACTERS ON ALL OTHER COLORS. DISPLAY TYPES NOT COVERED BY THIS TABLE SHOULD BE SPECIFIED BY A NOTE ON PURCHASE ORDER OR MAY BE SPECIFIED ON JAY-EL CUSTOMER SPECIFICATION. WHITE CHARACTERS ILLUMINATE IN COLOR ON BLACK BACKGROUND. SUNLIGHT READABLE ILLUMINATING CHARACTERS ARE HIDDEN BEFORE LIGHTED. BLACK BACKGROUND. CHARACTERS ARE VISIBLE IN DIRECT SUNLIGHT. (10,000FC) WHEN LIGHTED. SUNLIGHT READABLE ILLUMINATING BLACK BACKGROUND IS HIDDEN BEFORE LIGHTED. BLACK OPAQUE. CHARACTERS ARE VISIBLE IN DIRECT SUNLIGHT (10,000FC) WHEN LIGHTED. 	SEE CHARACTER INFORMATION CHARTS	<table border="1"> <thead> <tr> <th>T1 NO.</th> <th>VOLTS</th> </tr> </thead> <tbody> <tr> <td>3071</td> <td>5</td> </tr> <tr> <td>718</td> <td>5</td> </tr> <tr> <td>6839</td> <td>28</td> </tr> <tr> <td colspan="2">OR EQUIV</td> </tr> </tbody> </table>	T1 NO.	VOLTS	3071	5	718	5	6839	28	OR EQUIV	
T1 NO.	VOLTS												
3071	5												
718	5												
6839	28												
OR EQUIV													

**** DISPLAY TYPE 8 AVAILABLE WITH .012 STROKE WIDTH ONLY**

NOTES:

- * AG OR AY SHOULD BE SPECIFIED WHEN GREEN OR YELLOW IS TO MEET MIL - C - 25050 AY APPEARS AMBER WHEN ILLUMINATED.
- * B1 AND AG1 SPECIAL HIGH BRIGHT BLUE & GREEN RECOMMENDED FOR DISPLAY TYPE 8.

CHARACTER INFORMATION
(HORIZONTAL DIRECTION ONLY)

To obtain more characters per line other type fonts are available.
Contact Jay-El for further information.

DISPLAY TYPE 1 THRU 7	LEGEND SEGMENTS *				CHARACTERS PER LINE			NUMBER OF LINES	
					SEGMENT	SEGMENT	SEGMENT	SEGMENT	SEGMENT
	CONDENSED BLOCK	SIZE	STROKE HEIGHT	-1	-2-3	-4-5-6	-1-4-5	-2-3-6	
<p>.53 SQ. LEGEND AREA</p> <p>STANDARD .62 SQ.</p>	JAY-EL PRODUCTS INC.	-1	.010	.072	8	8	3	5	2
	JAY-EL PRODUCTS INC.	-2	.012	.087	7	7	3	4	2
	JAY-EL PRODUCTS INC.	-3	.015	.109	6	6	3	3	1
	JAY-EL PRODUCTS	-4	.018	.125	5	5	2	3	1
	J AY - EL PRODUCTS	-5	.020	.145	4	4	2	3	1
	JAY-EL PRODU	-6	.025	.175	4	4	1	2	1
	<p>JAY-EL</p>	-7	.035	.222	3	0	1	2	0
	JAY-EL P	-8	.040	.290	2	0	0	1	0

* DISPLAY TYPE 8 AND 9	LEGEND SEGMENTS				CHARACTERS PER LINE			NUMBER OF LINES	
					SEGMENT	SEGMENT	SEGMENT	SEGMENT	SEGMENT
	FUTURA MEDIUM CONDENSED	SIZE	STROKE HEIGHT	-1	-2-3	-4-5-6	-1-4-5	-2-3-6	
<p>.48 SQ. LEGEND AREA</p>	JAY-EL PRODUCTS INC.	-1	.012	.072	11	11	5	5	2
	JAY-EL PRODUCTS INC.	-2	.012	.087	9	9	4	4	2
	JAY-EL PRODUCTS INC.	-3	.012	.109	7	7	3	3	1
	JAY-EL PRODUCTS	-4	.012	.125	6	6	3	3	1
	J AY - EL PRODUCTS	-5	.012	.145	5	5	2	3	1
	JAY-EL PRODU	-6	.012	.175	4	4	1	2	1
	<p>JAY-EL</p>	-7	.012	.222	3	3	0	2	0

* **BASIC INFORMATION** Legend area .480 square for full face on all push button styles.
.230 x .480 for 1/2 section (may be used with combination of other Display Types.)