Jay-El Keyboard P/N 10530

JAY-EL KEYBOARD P/N 10530
ILLUMINATED PUSHBUTTON SWITCH
MIL-S-22885/79 ON THE
QUALIFIED PRODUCTS LIST

Catalog No. 1004 J 11-03

For more information, contact our sales team at 310.513.7200 or hmisales@ducommun.com
MIL-S-22885/79 on the Qualified Products List

DESIGN FEATURES

The Keyboard Switch is an illuminated pushbutton switch designed and qualified for military, airborne and commercial computer applications. Dry circuit or power switch available.

Solder or Printed Circuit Board terminations in single or two pole double throw switching.

Lighting and display techniques are available to meet military and commercial requirements.

Seven different pushbutton sizes Sealed or Un-sealed.

LEGEND REQUIREMENTS

Many combinations of character of background illumination may be accomplished, including sunlight readable Display Type 8. NVIS Compatible lighting contact factory.

ENGINEERING SPECIFICATIONS

ELECTRICAL

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

Switch Ratings:

SILVER CONTACTS Maximum 2/

<table>
<thead>
<tr>
<th>Load</th>
<th>Sea Level</th>
<th>50,000 FT 28VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resistive</td>
<td>28VDC 115VAC, 60Hz</td>
<td></td>
</tr>
<tr>
<td>7.0 Amps</td>
<td>7 Amps</td>
<td>4.0 Amps</td>
</tr>
<tr>
<td>4.0 Amps</td>
<td>7 Amps</td>
<td>2.5 Amps</td>
</tr>
<tr>
<td>2.5 Amps</td>
<td>2 Amps</td>
<td>2.5 Amps</td>
</tr>
</tbody>
</table>

GOLD CONTACTS

Gold Contacts: Sea level to 50,000 feet, 28V, 1Amp. Res., .5 Amp Ind.

Contact Resistance: 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: Para. 3.6.24 of MIL-S-22885

Lamp Type: T1 3/4 midget flange base incandescent is standard.

MECHANICAL

Light Weight : 18.3 grams maximum
Actuation Force : 22 ± 4 oz.; unsealed
                  24 ± 8 oz.; sealed
Pre-travel : .125 ± .060
Over-travel : .015 minimum
Switch Action : 1 and 2 pole momentary
Mounting Torque : 5 ± .5 inch lbs.
Mechanical Life 100,000 cycles
Pushbutton Extraction Force : 2 to 8 lbs.

ENVIRONMENTAL

Temperature high: +85°C   Low: -55°C
Humidity: Per MIL-STD-202, Method 106
Explosion: Per Per MIL-STD-810, Method 511, Procedure 11
Shock: 75 G's, 6 milliseconds, Half Sine and MIL-S-901C
EMI: Per Per MIL-STD-285
Vibration: 10 to 500 @ 0.06DA or 10g (peak) which ever is less.

Basic switch contacts per MIL-S-8805

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MAJOR OUTLINE DIMENSIONS

PUSHBUTTON STYLES

Lens surface concave approximately .03 inches on B, C & D pushbutton only.

All Display Type 8 lens surfaces are flat.


CHARACTER INFORMATION

- Table 11: Switch Action
- Table 12: Unlighted Background Color
- Table 13: Display Data
- Table 14: Display Style
- Table 15: Display Type
- Table 16: Character Size and Placement

NOTES

* AG or AY should be specified when green or yellow is to meet MIL-C-25050.

* B1 and AG1 special high brightness blue & green recommended for Display Type 8.

* Display Type 8 is available in .012 stroke width only.

CHARACTER INFORMATION

(HORIZONTAL DIRECTION ONLY)

If additional characters per line are required, specify Futura Medium Condensed.

<table>
<thead>
<tr>
<th>FUTURA MEDIUM CONDESED</th>
<th>SIZE</th>
<th>STROKE</th>
<th>HEIGHT</th>
<th>CHARACTERS PER LINE</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAY - EL PRODUCTS INC.</td>
<td>-1</td>
<td>.012</td>
<td>.072</td>
<td>B 6 C 6 D 8 E 8 F 8 G 8 H 5</td>
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<tr>
<td>JAY - EL PRODUCTS INC.</td>
<td>-2</td>
<td>.012</td>
<td>.087</td>
<td>B 5 C 5 D 7 E 7 F 7 G 7 H 4</td>
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<td>JAY - EL PRODUCTS INC.</td>
<td>-3</td>
<td>.012</td>
<td>.109</td>
<td>B 4 C 4 D 5 E 5 F 5 G 5 H 3</td>
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<tr>
<td>JAY - EL PRODUCTS</td>
<td>-4</td>
<td>.012</td>
<td>.125</td>
<td>B 3 C 3 D 4 E 4 F 4 G 4 H 3</td>
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<tr>
<td>JAY - EL PRODUCTS</td>
<td>-5</td>
<td>.012</td>
<td>.145</td>
<td>B 3 C 3 D 4 E 4 F 4 G 4 H 2</td>
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<td>JAY - EL PRODUC</td>
<td>-6</td>
<td>.012</td>
<td>.175</td>
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<tr>
<td>JAY - EL PRODUC</td>
<td>-7</td>
<td>.012</td>
<td>.222</td>
<td>B 2 C 2 D 2 E 2 F 2 G 2 H 2</td>
</tr>
</tbody>
</table>

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### Major Outline Dimensions

#### Switch

![Switch Diagram](image)

- P/N 10530
- .075 Knurled Mounting Nut
- .562 DIA
- 15-32 Threads
- MS 25082 - 21 Nut
- Lockwasher MS 35333 - 126

#### One Pole

- 1.00 MAX
- .005
- .010
- .562 Dia
- .562

#### Two Pole

- .640 MAX
- .005
- .010
- 1.13
- .562 Dia

#### Indicator

![Indicator Diagram](image)

- Pushbutton (C Style Ref)
- 2.30 Min
- .425
- 1.00 Max
- .010
- .50 Dia
- .562 Dia

#### PC Termination

![PC Termination Diagram](image)

- Pushbutton (C Style Ref)
- .562 Dia
- .562

#### Schematics

<table>
<thead>
<tr>
<th>Indicator</th>
<th>One Pole</th>
<th>Two Pole</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 C NC NO 2</td>
<td>1 C NC NO 2</td>
<td>1 C NC NO 2</td>
</tr>
</tbody>
</table>

#### Panel Cutout

- .468 X .214
- .468
- .214

**D** pattern hole shown for body keying, .468 dia.

### Tolerances

- Unless otherwise specified - Fraction ± 1/32", .XX±.01, XXX ± .005

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