

SERIES 2A

- Sub-miniature toggle switches

AGENCY APPROVALS

File N° E195524

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CHARACTERISTICS

- A tiny switch suitable for most miniature equipments.
- High current switching up to 3 Amps @ 120 VAC or 28 VDC.

SPECIFICATIONS

Contact Rating: **S** (silver) - 3A with resistive load @ 125 VAC or 28 VDC - 1.5A with resistive load @ 250 VAC - **A** (gold) or **K*** (gold/tin-lead) - 0.4 VA max @ 20 VAC or DC max

Electrical life: 30,000 make and break cycles at full load

Contact Resistance: 20 mΩ max. initial @ 2-4 VDC - 100 mA, for both silver and gold plated contacts

Insulation Resistance: 1000 MΩ min.

Dielectric Strength: 1500 VRMS @ sea level

Operating Temperature: -30°C to 85°C

MATERIALS

Case: Dially phthalate (DAP)

Plunger: Brass, chrome plated

Bushing: Brass, nickel plated

Terminal support: Brass, electrotin plated

Housing: Stainless Steel

HOW TO ORDER



N° OF POLES

1 SPDT

2 DPDT

TERMINATIONS

PC PCB

ST Solder tag

U2 U bracket

H9 90° horizontal

V9 90° vertical

H9S 90° horizontal snap-in

V9S 90° vertical snap-in

ELECTRICAL FUNCTIONS

1	on	none	on
2	on	none	(on)
3	on	off	on
4	(on)	off	(on)
5 (∅)	on	off	(on)

BUSHING

F1 Threaded/flat (std)

F2 Unthreaded/flat

F3 Threaded/groove

F4 Unthreaded/groove

B1 (Δ) Threaded/flat 1/4-40 uns

B2 (Δ) Unthreaded/flat

B3 (Δ) Threaded/groove 1/4-40 uns

B4 (Δ) Unthreaded/groove

SEALING

E Seal (std)

ACTUATORS

N Round 9.40 mm (std)

N2 Round 5.33 mm (std with PC option)

N3 Round 7.37 mm

N4 (Δ) Round 10.41 mm

N5 (Δ) Round 5.59 mm

CONTACT MATERIAL

S Silver

A Gold (std)

G Gold over Silver

K Gold/Tin-Lead

(Δ) Min qty required
(∅) Please enquire

SERIES 2A

ELECTRICAL FUNCTIONS

SPDT			
1	on	none	on
2	on	none	(on)
3	on	off	on
4	(on)	off	(on)
5 (◊)	on	off	(on)
	2 - 3	open	2 - 1

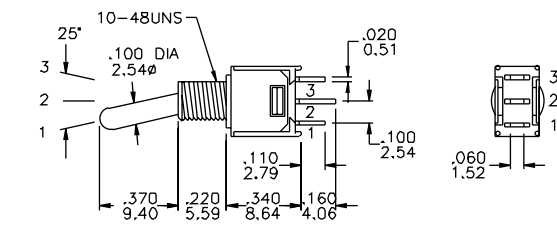
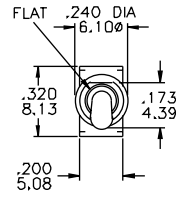
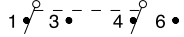
2 Comm.



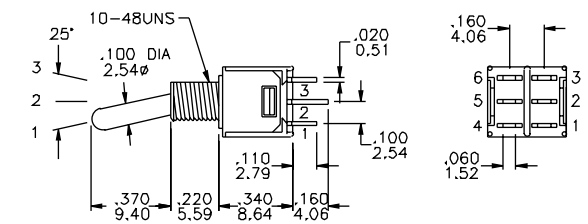
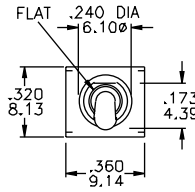
(◊) Please enquire

DPDT			
1	on	none	on
2	on	none	(on)
3	on	off	on
4	(on)	off	(on)
5	on	off	(on)
	2-3, 5-6	open	2-1, 5-4

2 Comm. 5 Comm.

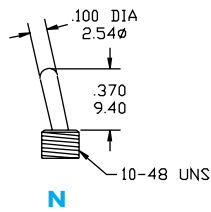
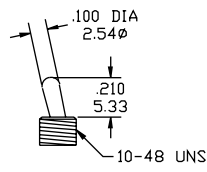
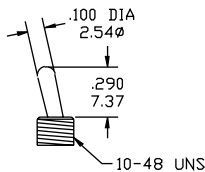
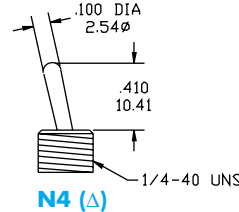
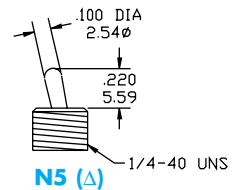


Part N° shown: 2A11-NF1STSE



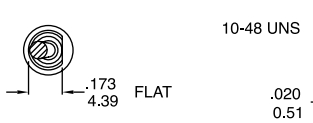
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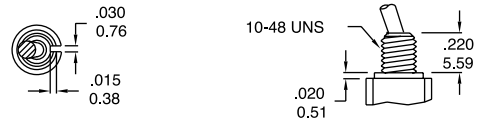
ACTUATORS

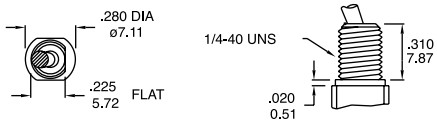

N

N2

N3

N4 (Δ)

N5 (Δ)

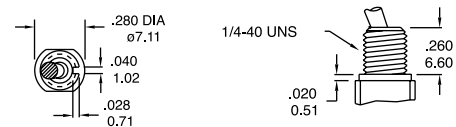
(Δ) Min qty required

BUSHING


F1 Threaded

F2 Non Threaded

F3 Threaded

F4 Non Threaded

B1 (Δ) Threaded flat

B2 (Δ) Non Threaded flat

B3 (Δ) Threaded

B4 (Δ) Non Threaded

(Δ) Min qty required.

 Note: B Bushings can fit actuators **N4** and **N5** only.

SERIES 2A

TERMINATIONS

<p>ST</p> <p>.110 2.79 .040 1.02 .060 1.53 .030 0.76 .060 X .020 THK 1.52 0.51</p>	<p>PC</p> <p>.040 1.02 .130 3.30 .030 X .020 THK 0.76 0.51</p>	<p>For double pole</p>	<p>ST</p> <p>.110 2.79 .040 1.02 .160 4.06 .160 4.06</p>	<p>PC</p> <p>.040 1.02 .200 5.08</p>
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<p>H9 SPDT</p> <p>.173 4.39 FLAT .036 0.9 .240 DIA 6.10 .187 DIA 4.75 .200 5.08</p>	<p>H9S</p> <p>Other Choice</p>	<p>.577 14.65 .362 9.20 .02 0.51 .134 3.40 .152 3.86 .210 5.33 .016 0.41 .200 5.08 .034 0.86 .200 5.08</p>	<p>.320 8.13 .02 0.51 .200 5.08 .200 5.08</p>	<p>P.C. LAYOUT</p> <p>.043 DIA 1.09 5PL .200 5.08 .200 5.08 .200 5.08</p>
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Part N° shown: 2A11-N2F2H9AE

<p>H9 DPDT</p> <p>.173 4.39 FLAT .036 0.9 .240 DIA ø6.10 .187 DIA ø4.75 .200 5.08</p>	<p>H9S</p> <p>Other Choice</p>	<p>.577 14.65 .362 9.20 .02 0.51 .134 3.40 .152 3.86 .210 5.33 .016 0.41 .200 5.08 .034 0.86 .200 5.08</p>	<p>.320 8.13 4 5 6 .360 9.14 .02 0.51 1 2 3 .200 5.08 .200 5.08</p>	<p>P.C. LAYOUT</p> <p>.043 DIA ø1.09 8PL .200 5.08 .200 5.08 .100 2.54 .200 5.08</p>
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Part N° shown: 2A21-N2F2H9AE

<p>V9 SPDT</p> <p>.237 DIA ø6.01 .173 4.39 FLAT .030 0.76 .200 5.08</p>	<p>V9S</p> <p>Other Choice</p>	<p>.220 5.59 .210 5.33 .020 0.51 .130 3.30 .016 0.41 .152 3.86 .200 5.08 .020 0.51 .200 5.08 .400 10.16</p>	<p>.320 8.13 1 2 3 .200 5.08 .200 5.08</p>	<p>P.C. LAYOUT</p> <p>.200 5.08 .043 DIA ø1.09 4PL .100 2.54</p>
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Part N° shown: 2A11-N2F2V9AE

<p>V9 DPDT</p> <p>FLAT .237 DIA ø6.01 .173 4.39 .030 0.76 .076 .200 5.08</p>	<p>V9S</p> <p>Other Choice</p>	<p>.220 5.59 .210 5.33 .020 0.51 .130 3.30 .016 0.41 .152 3.86 .200 5.08 .020 0.51 .200 5.08 .400 10.16</p>	<p>.320 8.13 6 5 4 3 2 1 9.14 .200 5.08 .200 5.08</p>	<p>P.C. LAYOUT</p> <p>.200 5.08 .043 DIA ø1.09 4PL .100 2.54</p>
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Part N° shown: 2A21-N2F2V9AE

<p>U2 SPDT</p> <p>.366 9.30 .130 3.30 .030 0.76 .200 5.08</p>	<p>.210 5.33 .220 5.59 .016 0.41 .100 2.54 .400 10.16 .020 0.51</p>	<p>P.C. LAYOUT</p> <p>.043 DIA ø1.09 .100 2.54 .400 10.16</p>
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Part N° shown: 2A11-N2F2U2AE

<p>U2 DPDT</p> <p>.363 9.22 .366 9.30 .130 3.30 .030 0.76 .200 5.08</p>	<p>.210 5.33 .220 5.59 .016 0.41 .100 2.54 .400 10.16 .020 0.51</p>	<p>P.C. LAYOUT</p> <p>.043 DIA ø1.09 .100 2.54 .400 10.16 .200 5.08</p>
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Part N° shown: 2A21-N2F2U2AE

SERIES 2A

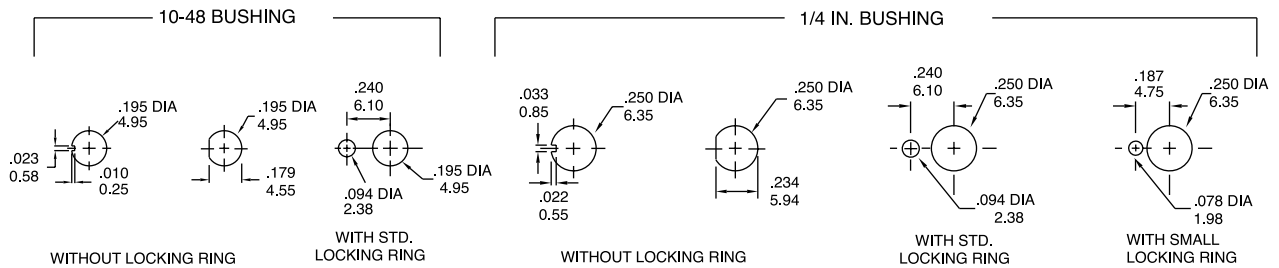
CONTACT MATERIALS

CONTACT RATINGS

- S** **Moving Contacts:** coin silver, silver plated
Terminals: brass, silver plated
Rating: 3 Amps @ 120 VAC or 28 VDC
 1.5 Amps @ 250 VAC
- A (std)** **Moving Contacts:** brass with gold plate over nickel plate
Terminals: brass with gold plate over nickel plate
Rating: 0.4 Volts/Amps max @ 20 VAC or DC max
- K (Δ)** Same as **A**, but with pre-tinned terminals
- G** **Moving Contacts:** coin silver gold plated
Terminals: brass silver plated and gold plated
Note: **G** option used for either "high" (2 Amps @ 250 VAC) or "low" (0.4 Volts/Amps max) contact rating (one exclude the other)

(Δ) Min qty required

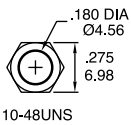
PANEL CUT-OUT



ACCESSORIES

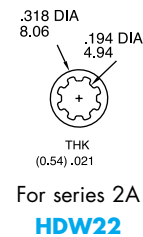
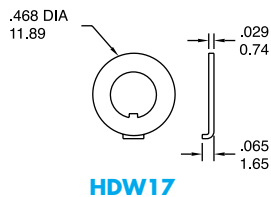
NUTS

STD.200



For series 2A
HDW21

RINGS & WASHERS



STANDARD SUPPLY

- 2 Nuts**
- 1 Locking Ring**
- 1 Lock Washer**

SERIES 2A

PACKAGING

Transparent Trays 15x21x4 cm



Qty per tray: (ST, PC Terminals)
 Series 2A1x 500 pcs
 2A2x 200 pcs

MARKING (on products)



The switches are individually marked with the following information:

- Side 1** TRADE MARK
 SERIES AND MODEL
 DATE CODE
- Side 2** RATING
 CONTACTS

Note: Not all informations may be available on some products.

LABELLING (on packaging)

The label on each tray gives full information on the products contained.

P/N: EL.FNC.: Q.TY: DATE CODE:	  <small>Made in Taiwan</small>
Remarks	

A Bar code indicating Model, Quantity, Date Code enables easy traceability.