



ITW SWITCHES SNAP ACTION SWITCHES

Design, development and manufacture of switch solutions

PUSH BUTTON

SNAP ACTION

ACTUATORS

SLIDE

ROTARY

CUSTOM ASSEMBLIES

MILITARY / AEROSPACE

ITW Switches
SENSORS, SWITCHES, ELECTRONIC CONTROLS



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LICON — SNAP ACTION SWITCHES

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Series 11

MINIATURE 10 AMP DOUBLE-BREAK SNAP ACTION SWITCHES

This rugged miniature switch features the Butterfly® double-break snap action switch mechanism. It is ideal for tough applications where high current capability and Butterfly® reliability are needed.

APPLICATIONS

- Welding guns
- Pipeline valve actuator
- Discrete length tape dispenser machines
- Lift trucks
- Electrical contractors

KEY FEATURES:

- Gold or silver contacts
- Variety of terminals configurations and styles available
- UL recognized and CSA certified
- Reset style switch available
- Roller lever and overtravel plunger actuator are available

ACTUAL SIZE

ORDERING INFORMATION:

Switches

Part Number	Terminals
11-104	End Solder
11-204	#4 Screw
11-304	Side Solder
11-314 Reset	Side Solder
11-504	Quick Disconnect .250

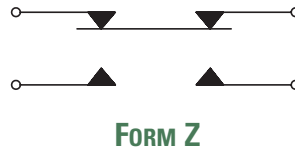
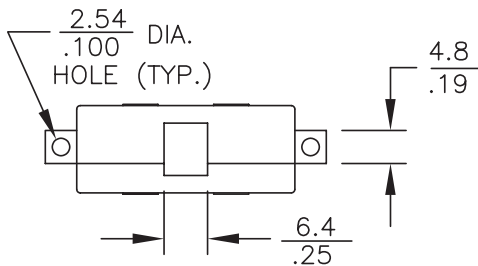
Actuators (see page 68 for additional specifications)

Part Number	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.	Operating Point
71-1040 Roller Lever	3.5 oz max	2 oz min	.093 max	.062 min	.030 ± .015	.671 ± .031
71-2010 Over Travel	8 ± 3 oz	4 oz min	.050 max	.215 min	.020 ± .005	.828±.015

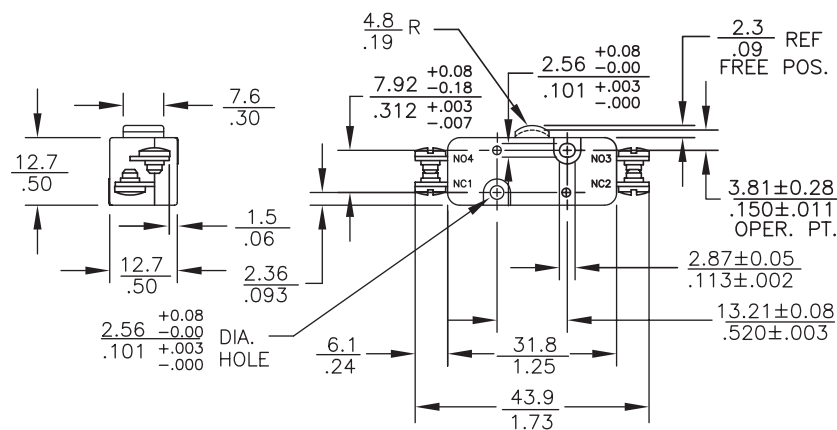
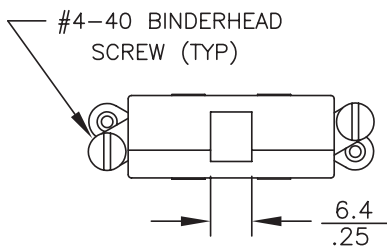
STANDARDS / AGENCY / RATINGS:



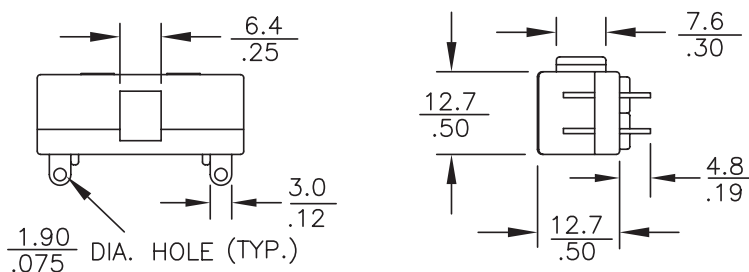
END SOLDER



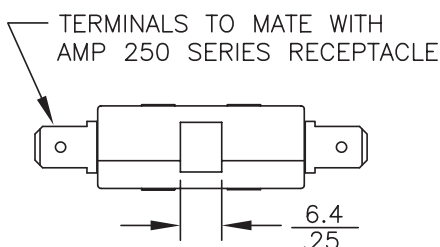
4 SCREW



SIDE SOLDER



QUICK DISCONNECT



MECHANICAL / ELECTRICAL CHARACTERISTICS:

Pretravel:
0.050 inches max

Overtravel:
0.015 inches min

Operating Force:
8 oz + 3 oz

Release Force:
4 oz min

Movement Differential:
0.020 ± 0.007 inches

Operating Point:
0.150 ± 0.011 inches
(from mounting hold centers)

Circuit:
SPDT-DB (Form Z)

Electrical Ratings (Typical):

Circuitry	125/250 VAC	28 VDC
SPST-DB NC (Form Y) or NO (Form X)	10 amp (75-80% PF) 1/2 HP 125 VAC	10 amp Ind 15 amp Res
SPDT-DB (Form Z)	3/4 HP 250 VAC	7 amp Ind 10 amp Res
SPDT-SB (Form C)		4 amp Ind 6 amp Res

Series 14

HEAVY DUTY 20 AMP DOUBLE-BREAK SWITCHES

This rugged single-pole double-break Butterfly® switch will handle up to 20 amps. Ideal for high-current applications which require long life and reliability.

APPLICATIONS

- Train car door operators
- Bus door operators
- Pendant controls
- Lift trucks
- Heavy industrial machinery

KEY FEATURES:

- Available in standard or heavy duty mounting
- Semirefactory contacts and offset #6 screw terminals with cup washers are standard
- Sealed button actuator is available
- Button, overtravel plunger or pivoted lever actuator are available
- UL recognized and CSA certified



ACTUAL SIZE

ORDERING INFORMATION:

Part Number	Mounting	Operating Force	Release Force	Pretravel	Overtravel	Movement Differential	Operating Point	Actuator Style
14-124	Standard	12 ± 3 oz	4 oz min	.074 max	.030 min	.020 ± .007	.808 ± .013	Standard Button Actuator
14-12404	Heavy Duty	12 ± 3 oz	4 oz min	.074 max	.030 min	.021 ± .007	.090 ± .053	Standard Button Actuator
14-324	Standard	12 ± 3 oz	4 oz min	.074 max	.219 min	.020 ± .007	.830 ± .036	Overtravel Panel Mount
14-724	Standard	5 ± 2 oz	2 oz min	.156 max	.060 min	.046 ± .017	1.406 ± .034	Roller Lever Actuator

Electrical Ratings:

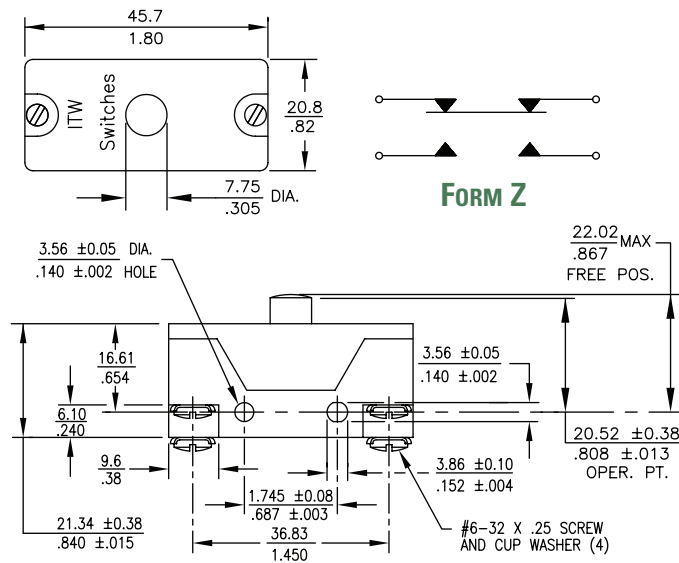
Circuitry	Volts	AC		DC	
		Steady	In-Rush	SPDT	SPST
SPDT-DB(Form Z)	28	20	80	10.0	25.0
SPDT-DB(Form Z)	125	20	80	—	—
SPDT-DB(Form Z)	250	20	80	—	—
SPDT-DB(Form Z)	480	20	50	—	—

UL recognized. Amps @ 125/250/480 VAC 78-80%PF and CSA Certified File No. 16388.
1 HP 125 VAC, 2 HP 250 VAC. Materials recognized by UL for use at temperatures not exceeding 105° C (220° F)

STANDARDS / AGENCY / RATINGS:



STANDARD BUTTON ACTUATOR



FORM Z

MECHANICAL / ELECTRICAL CHARACTERISTICS:

Circuit:

SPDT-DB (Form Z)

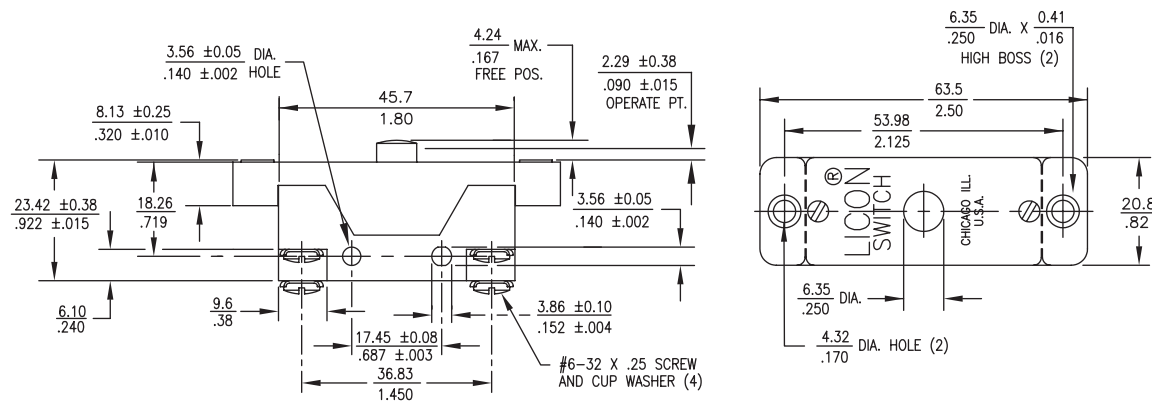
Terminal:

#6 screw with cup washer

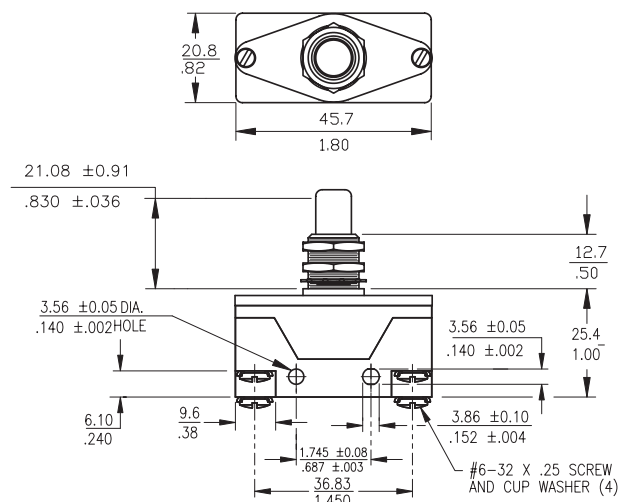
Electrical Ratings :

See chart on left

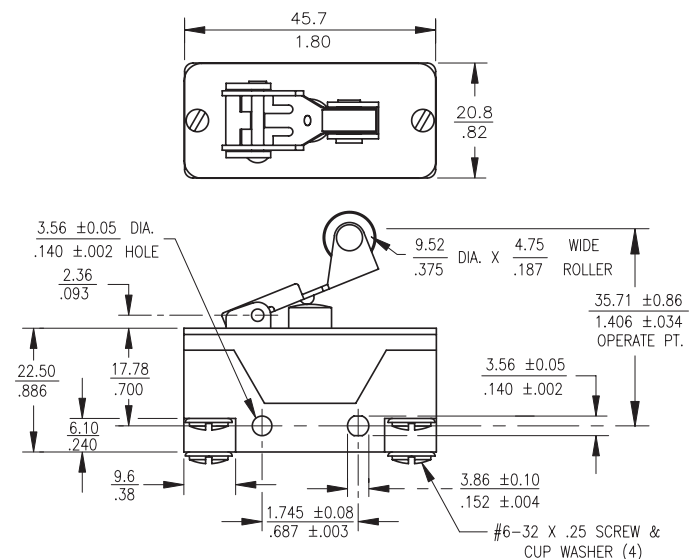
STANDARD BUTTON ACTUATOR—HEAVY DUTY MOUNTING



OVERTRAVEL PANEL MOUNT



ROLLER LEVER



SUB-MINIATURE 10.1 AMP DOUBLE-BREAK SNAP ACTION SWITCHES

Series 16 switches feature the Butterfly® double-break momentary switch mechanism. This offers the capability of handling high (or low) current loads in a small switch and gives the options of controlling two circuits with the Form Z switch circuitry.

APPLICATIONS

- Lift truck seat switch
- Aircraft contactor or actuator
- Sump pump float switch
- Valve actuator
- Industrial equipment and machinery
- Office equipment

KEY FEATURES:

- Gold or silver contacts
- Meets MIL-PRF-8805/7
- UL recognized and CSA certified:
10.1 amps @ 125/250 VAC
- Variety of terminal configurations and styles
- Roller lever, lever, short roller lever and bushing mount actuator are available

ORDERING INFORMATION:

Part Number	Circuit	Temperature Index	Contacts	Terminals	RoHS Compliant
16-104	SPDT (Form Z)	To 275°F Ambient	Silver **	End Solder	✓
16-188051	SPDT (Form Z)	To 275°F Ambient	Gold Plated	End Solder	✓
16-204	SPDT (Form Z)	To 275°F Ambient	Silver **	End Screw	—
16-304	SPDT (Form Z)	To 275°F Ambient	Silver **	Side Solder	✓
16-404	SPDT (Form Z)	To 275°F Ambient	Silver **	Bottom Solder	✓
16-40401	SPDT (Form Z)	To 275°F Ambient	Gold Plated	Bottom Solder	✓
16-4044*	SPDT (Form Z)	To 275°F Ambient	Silver **	Bottom Solder	✓
16-40441*	SPDT (Form Z)	To 275°F Ambient	Gold Plated	Bottom Solder	✓
16-488051	SPDT (Form Z)	To 275°F Ambient	Gold Plated	Bottom Solder	—
16-530004***	SPDT (Form Z)	To 275°F Ambient	Silver **	Bottom QC .110	✓

* Thermoplastic case and cover.

** For electrical loads under 250mA, consult factory.

*** Mounts easily to Series 76-95 Switches.

Actuators (see page 69 for additional specifications)

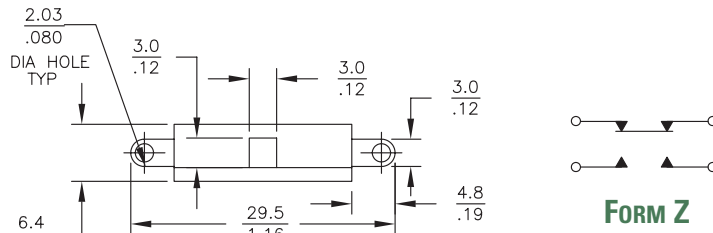
Part Number	Switch Series	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.
76-1200 Roller Lever	16	4 oz max	1 oz min	.125 max	.025 min	.045 ± .011
76-1210 Lever	16	2.5 oz max	1 oz min	.125 max	.025 min	.047 ± .013
76-1220 Short Roller Lever	16	5 + 3 oz - 2 oz min	2 oz min	.050 max	.023 min	.020 ± .005
76-22604 Bushing Mount	16	5 oz	—	.050 max	.156 MIN	—

STANDARDS / AGENCY / RATINGS:

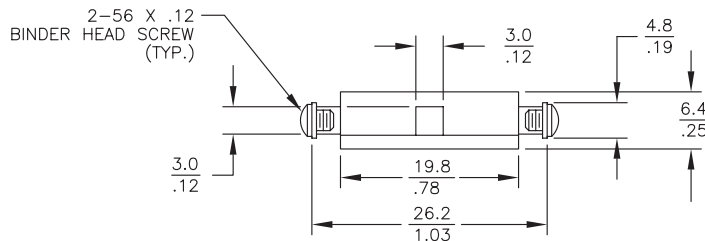


ACTUAL SIZE

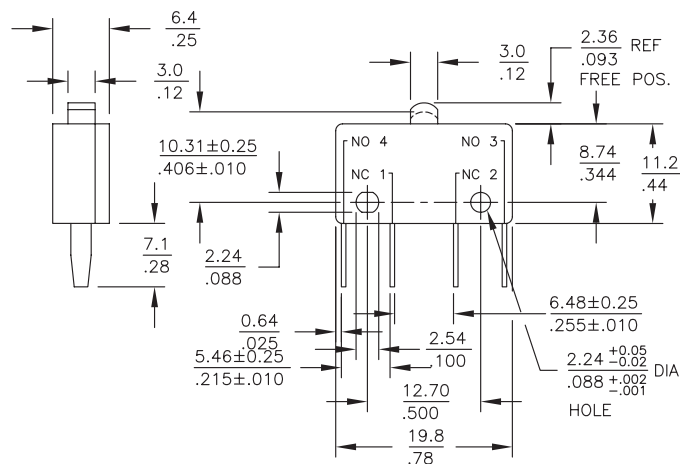
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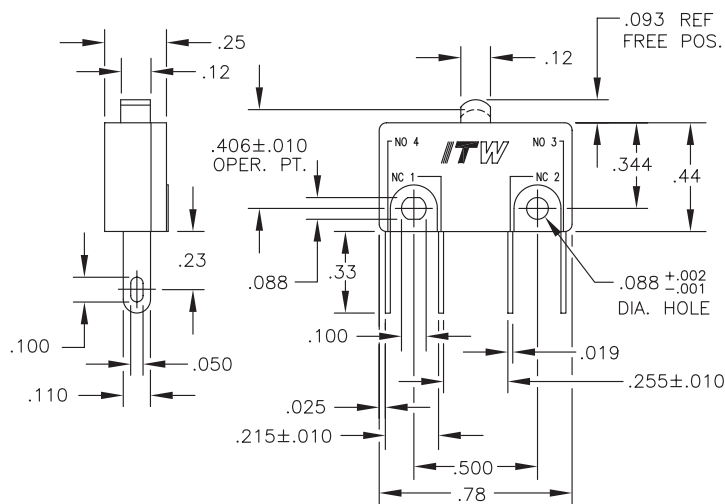
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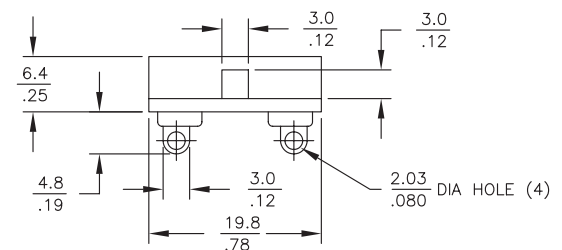
QC TAPER TAB



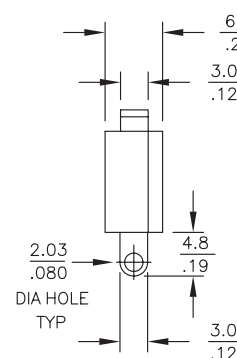
BOTTOM QC .110



SIDE SOLDER



BOTTOM SOLDER



MECHANICAL / ELECTRICAL CHARACTERISTICS:

Pretravel:
0.050 inches max

Overtravel:
0.012 inches min

Operating Force:
5 oz + 3 oz - 2 oz

Release Force:
2 oz min

Movement Differential:
0.020 inches ± 0.005

Operating Point:
0.406 inches ± 0.010
(from mounting hold centers)

Circuit:
SPDT-DB (Form Z)

Temperature Index:
-54°C to +135°C
(-65°F to +275°F)

MIL-PRF-8805/7 QPL listed:
16-188051 MS25476-1
16-488051 MS27217-1

Electrical Rating @ 28VDC:

		Sea Level	70,000 Feet
Form Z 2 Circuit	Res	10A	10A
	Ind*	5A	2A
	Lamp	3A	—
*L/R = .026			

SUB-MINIATURE 10.1 AMP DOUBLE-BREAK SNAP ACTION SWITCHES

Similar to Series 16 switches with improved materials and performance. Ideal for critical applications where long life and reliability are needed.

APPLICATIONS

- Lift truck seat switch
- Aircraft contactor
- Sump pump float switch
- Aircraft actuator
- Valve actuator
- Industrial equipment and machinery
- Office equipment
- Medical equipment

KEY FEATURES:

- Enhanced gold contacts for high or low power applications
- Thermoplastic case sealed to prevent flux intrusion
- Meets MIL-PRF-8805 requirements
- Roller lever, lever, short roller lever and bushing mount actuator are available.

ACTUAL SIZE



ORDERING INFORMATION:

Switches

Part Number	Contacts	Terminals
16-110	Enhanced Gold	End
16-111	Silver	End
16-410	Enhanced Gold	Bottom

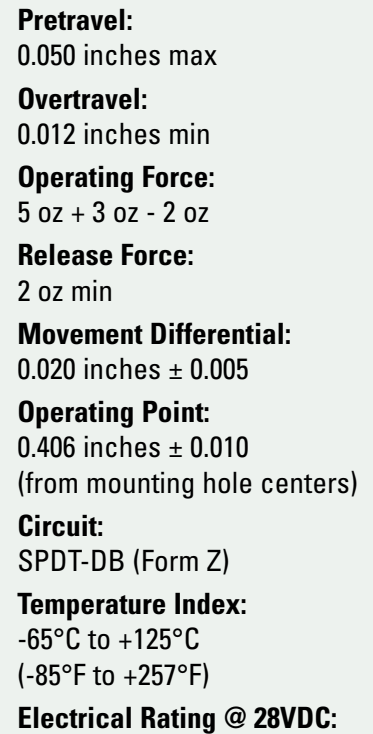
Actuator (see page 69 for additional specifications)

Part Number	Switch Series	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.
76-1200 Roller Lever	16	4 oz max	1 oz min	.125 max	.025 min	.045 ± .011
76-1210 Lever	16	2.5 oz max	1 oz min	.125 max	.025 min	.047 ± .013
76-1220 Short Roller Lever	16	5 + 3 oz - 2 oz min	2 oz min	.050 max	.023 min	.020 ± .005
76-22604 Bushing Mount	16	5 oz	—	.050 max	.156 min	—

STANDARDS / AGENCY / RATINGS:



MECHANICAL / ELECTRICAL CHARACTERISTICS:



		Sea Level	70,000 Feet
Form Z 2 Circuit	Res	10A	10A
	Ind*	5A	2A
	Lamp	3A	—

*L/R = .026

Technical drawing of a mechanical assembly showing a cross-section of a bracket or support structure. The drawing includes dimensions for overall width (29.5), mounting hole diameter (2.03 DIA. (4)), and various offsets and hole sizes (6.4, .25, 3.0, .12 SQ., 19.8, .78, 3.0, .12 (4)).

ULTRA SUB-MINIATURE 7 AMP DOUBLE-BREAK SNAP ACTION SWITCHES

Series 18 switches feature the Butterfly® double-break momentary switch mechanism. This very small package can carry a full 7 amp load (or low current load).

APPLICATIONS

- Industrial valve controls
- Aircraft rotary actuator
- Aircraft linear actuator
- Float control pumps
- Spool valves
- Medical equipment
- Aircraft fuel valves
- Pressure switches

Series 18



ACTUAL SIZE

KEY FEATURES:

- Gold contacts
- Solder terminals
- Meets MIL-S-8805/76
- UL recognized and CSA certified:
7 amps @ 125/250 VAC
- Lever and roller actuator are available

ORDERING INFORMATION:

Switches

Part Number	Contacts	Terminals	RoHS Compliant
18-40421	Gold Plated	End Solder	✓
18-488051 (MS27257-1)	Gold Plated	End Solder	✓

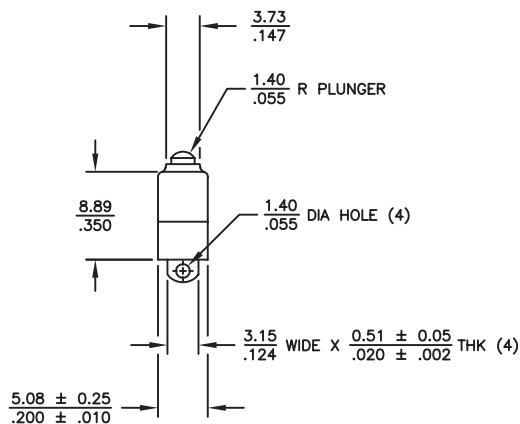
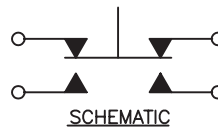
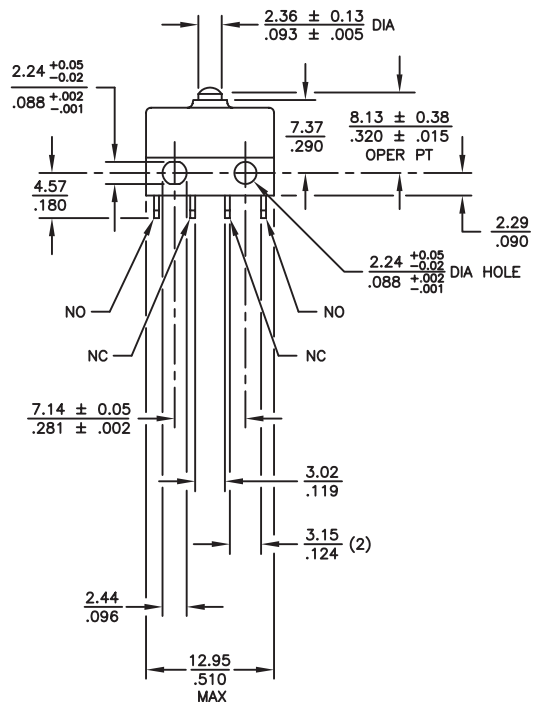
Actuator (see page 70 for additional specifications)

Part Number	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.	Operating Point
78-3000 Spring Lever	6 ± 2 oz	2 oz min	.125 max	.030 min	.030 ± .015	.325 ± .030
78-3100 Roller Lever	6 ± 2 oz	2 oz min	.125 max	.030 min	.035 ± .015	.560±.030

STANDARDS / AGENCY / RATINGS:



PRODUCT DRAWINGS



MECHANICAL / ELECTRICAL CHARACTERISTICS:

Pretravel:
0.030 inches max

Overtravel:
0.006 inches min

Operating Force:
5 oz + 3 oz - 2 oz

Release Force:
1.5 oz min

Movement Differential:
0.015 inches ± 0.005

Operating Point:
0.320 inches ± 0.015
(from mounting hole centers)

Circuit:
SPDT-DB (Form Z)

MIL-PRF-8805/77 QPL listed:
18-488051 MS27257-1

Electrical Rating @ 28VDC:

Circuitry	Current
2 Circuit (SPDT-DB)	5 amp Res 3 amp Ind*
1 Circuit (SPST)	8 amp Res 7 amp Ind*
*L/R = .026	

5-AMP SUB-MINIATURE SWITCHES

This fully sealed snap action switch series is ideal for applications in harsh environments where ingress of water and dust must be prevented.

APPLICATIONS

- Industrial equipment
- Battery chargers for cordless tools
- Medical equipment
- Welding guns

KEY FEATURES:

- Insert molded terminals—fully sealed base
- Meets IP67
- BEAB and ENEC approvals
- SPDT (Form C) circuitry
- Choice of actuator
- Silver or gold contacts
- Non-flammable switch UL94-V0 rated materials

Series 19



ACTUAL SIZE

ORDERING INFORMATION:

Part Number	Contacts	Actuator Style*	Terminal Style	Sealed	RoHS Compliant	IP67 Compliant
19N402	Silver	Plunger	Solder	Yes	✓	✓
19N402L18	Silver	Leaf lever	Solder	Yes	✓	✓
19N402R15	Silver	Roller lever	Solder	Yes	✓	✓
19N403	Silver	Plunger	Solder	No	✓	—
19N412	Gold	Plunger	Solder	Yes	✓	✓
19N502	Silver	Plunger	P.C.	Yes	✓	✓
19N503	Silver	Plunger	P.C.	No	✓	—
19N512	Gold	Plunger	P.C.	Yes	✓	✓
19N602	Silver	Plunger	Q.C.	Yes	✓	✓
19N603	Silver	Plunger	Q.C.	No	✓	—
19N702	Silver	Plunger	Wire Leads	Yes	✓	✓
19N712	Gold	Plunger	Wire Leads	Yes	✓	✓
19N703	Silver	Plunger	Wire Leads	No	✓	—
19N713	Silver	Plunger	Wire Leads	No	✓	—
19N920	Gold	Plunger	P.C. Right Angle (L)	Yes	—	✓
19N922	Gold	Lever	P.C. Right Angle (R)	Yes	—	✓

*Note: Lever and roller lever actuator are available as options on most switches. Consult factory.

STANDARDS / AGENCY / RATINGS:



MECHANICAL / ELECTRICAL CHARACTERISTICS:



Standard switch to mounting holes.....	0.360 inches / 9,14mm (max)
Standard switch to PCB.....	0.486 inches / 12,35mm (max)
Sealed switch to mounting holes.....	0.368 inches / 9,35mm (max)
Leaf lever to mounting holes.....	0.492 inches / 12,50mm (max)
Leaf lever to PCB	0.618 inches / 15,70mm (max)
Roller lever to mounting holes	0.677 inches / 17,20mm (max)
Roller lever to PCB	0.803 inches / 20,40mm (max)

Standard switch to mounting holes	0.330 inches ±.016 / 8,40mm ± 0,40
Standard switch to PCB	0.457 inches ±.016 / 11,60mm ± 0,40
Sealed switch to mounting holes	0.335 inches±.016 / 8,50mm ± 0,40
Leaf lever to mounting holes	0.400 inches±.054 / 10,15mm ± 1,37
Leaf lever to PCB	0.527 inches ±.054 / 13,38mm ± 1,37
Roller lever to mounting holes	0.610 inches ±.045 / 15,50mm ± 1,14
Roller lever to PCB	0.719 inches ±.045 / 18,25mm ± 1,14

Contact bounce:
5 millisecond (max),
1 millisecond per each pulse

TW Switches
SENSORS. SWITCHES. ELECTRONIC CONTROLS

Series 22

MINIATURE 10 AMP DOUBLE-POLE / SIMULTANEOUS SNAP ACTION SWITCHES

This rugged double-pole double-break Butterfly® mechanism switch can be configured for Form XX, Form YY or Form ZZ switching. This unique design is ideal for your toughest applications where reliability is a must.

APPLICATIONS

- Pressure control sensors
- Pendant controls
- Door openers for transit equipment
- Valve actuator
- Lift trucks
- Interlock kiosk

KEY FEATURES:

- Gold or silver contacts
- UL recognized and CSA certified
- Variety of terminal styles
- Roller lever and overtravel plunger actuator are available



ACTUAL SIZE

ORDERING INFORMATION:

Switches

Part Number	Terminals
22-104	End Solder
22-204	#4 Screw
22-304	Side Solder
22-504	Quick Disconnect .250

Actuator (see page 71 for additional specifications)

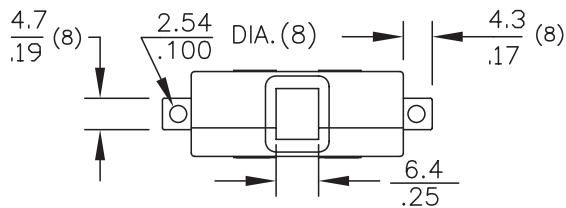
Part Number	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.	Operating Point
72-1160 Roller Lever (1)	10 oz max	1.5 oz min	.150 max	.035 min	.070 ± .015	1.0 ± .031
72-2080 Over Travel (2)	17 ± 5 oz	4 oz min	.060 max	.215 min	.030 ± .007	.828±.031

(1) When used with 22-104 basic switch or 22-204 basic switch
(2) When used with 22-304 basic switch

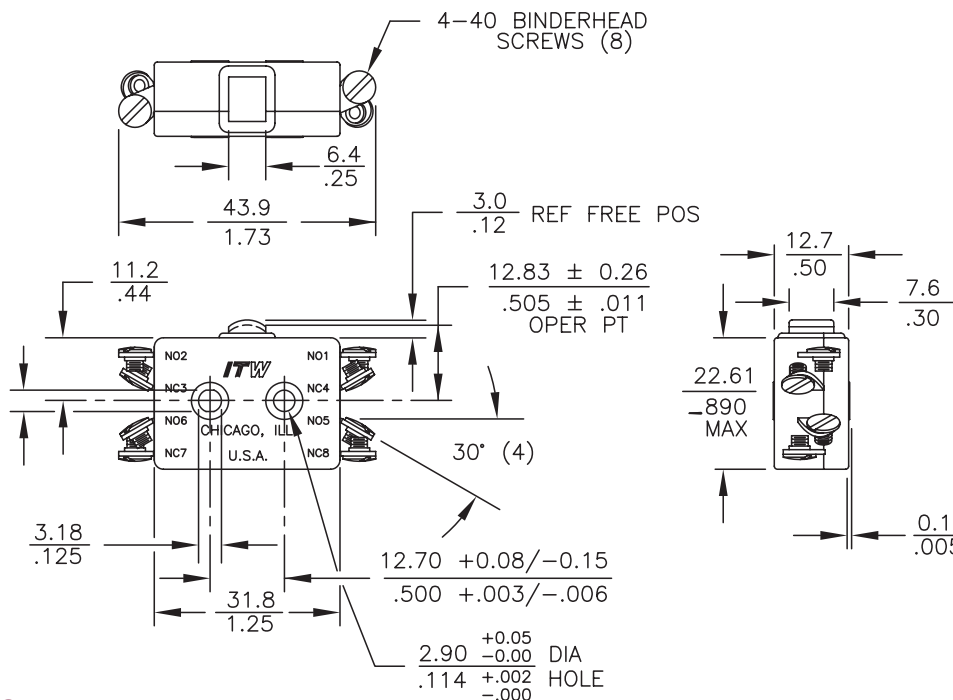
STANDARDS / AGENCY / RATINGS:



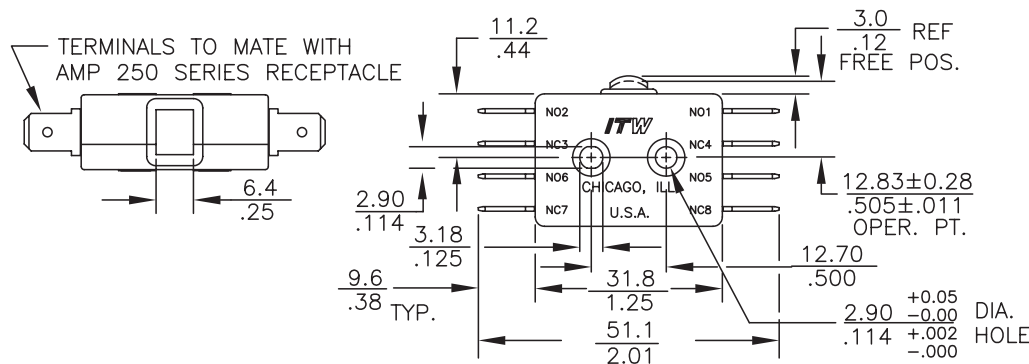
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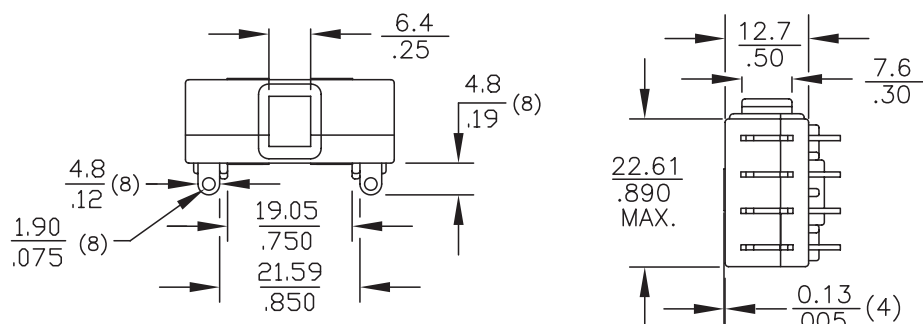
#4 SCREW



QUICK DISCONNECT



SIDE SOLDER



MECHANICAL / ELECTRICAL CHARACTERISTICS:

Pretravel:
0.060 inches max

Overtravel:
0.015 inches min

Operating Force:
17 ± 5 oz

Release Force:
4 oz min

Movement Differential:
0.030 inches ± .009

Operating Point:
0.505 inches ± .011
(from mounting hole centers)

Circuit:
DPDT-DB (Form ZZ)

Electrical Ratings:

Circuitry	125/250 VAC	28 VDC
DPST-DB NO or NC (Form XX or YY)	10 amp (75-80% PF) 1/2 HP 125 VAC	10 amp Ind 15 amp Res
DPDT-DB (Form ZZ)	3/4 HP 250 VAC	7 amp Ind 10 amp Res

Series 26

SUB-MINIATURE 8 AMP DOUBLE POLE SNAP ACTION SWITCHES

This unique design has a DPDT-DB (Form ZZ) contact arrangement, or can be wired externally to provide two commons to form standard DPDT (Form CC) circuitry. This switch can control up to 4 isolated circuits.

APPLICATIONS

- Aircraft rotary actuator
- Aircraft valve actuator
- Circuit breakers
- Aircraft contractors
- Industrial machinery

KEY FEATURES:

- Gold or silver contacts
- Meets MIL-PRF-8805/77
- End or side terminals available
- UL recognized and CSA certified: 8 amps @ 125/250 VAC
- Roller lever, lever, short roller lever and bushing mount actuator are available

ACTUAL SIZE ACTUAL SIZE

ORDERING INFORMATION:

Switches

Part Number	Simultaneity	Contacts	Terminals	RoHS Compliant
26-804	Simultaneous*	Silver**	End Solder	✓
26-888051	Ref. M8805/77-001	Gold Plated	End Solder	—
26-904	Simultaneous*	Silver**	Side Solder	✓
26-988051	Ref. M8805/77-002	Gold Plated	Side Solder	—

* Within .004" of plunger travel.

** For electrical loads under 250 mA, consult factory.

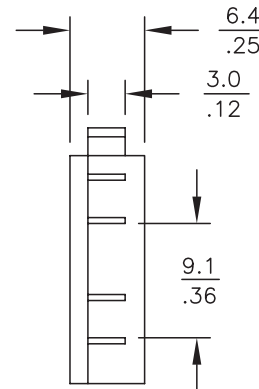
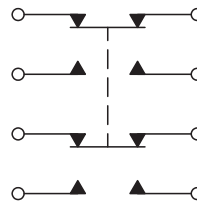
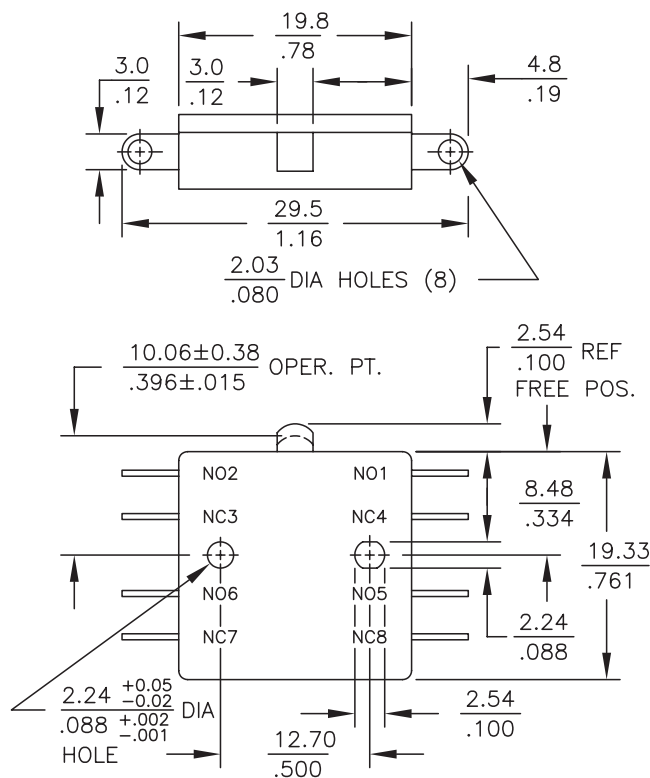
Actuator (see page 72 for additional specifications)

Part Number	Switch Series	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.
76-1200 Roller Lever	26	8 oz max	1 1/2 oz min	.130 max	.026 min	.054 ± .022
76-1210 Lever	26	7 oz max	2 oz min	.155 max	.025 min	.065 max
76-1220 Short Roller Lever	26	16 oz max	5 oz min	.050 max	.012 min	.020 ± .010 - .005
76-22604 Bushing Mount	16	5 oz	—	.050 max	.156 min	—

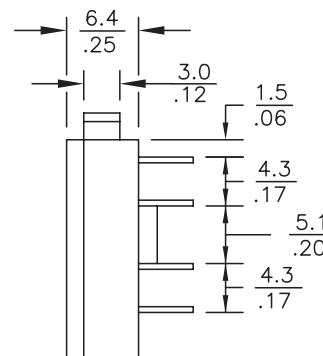
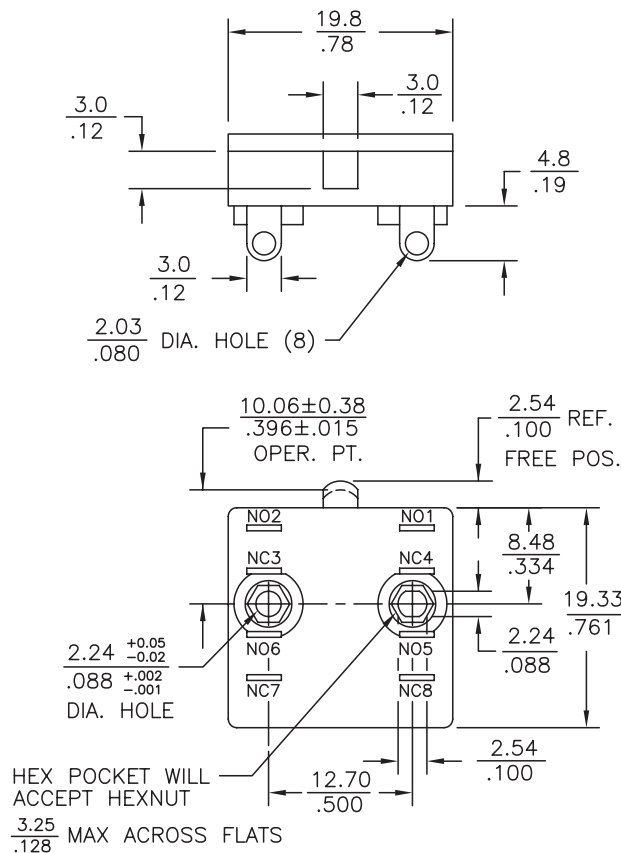
STANDARDS / AGENCY / RATINGS:



END SOLDER



SIDE SOLDER



MECHANICAL / ELECTRICAL CHARACTERISTICS:

Pretravel:
0.050 inches (Max)

Overtravel:
0.012 inches (Min)

Operating Force:
12 ± 4 oz

Release Force:
5 oz (Min)

Movement Differential:
0.020 inches ± .010 / .005

Operating Point:
0.396 inches ± .015
(from mounting hole centers)

Circuit:
DPDT-DB (Form ZZ)

Temperature Index:
To 275°F Ambient

MIL-PRF-8805/7 QPL listed:
26-888051 M8805/77-001
26-988051 M8805/77-002

Electrical Ratings:

Circuitry	Current	Voltage
DPDT-DB	8 Amps	125/250 VAC 75-80% PF
(Form ZZ)	5 Amps	28 VDC

SUB-MINIATURE 8 AMP DOUBLE POLE/SIMULTANEOUS SNAP ACTION SWITCHES

Similar to Series 26 with improved materials and performance. Ideal for critical applications where long life and reliability are needed.

Series KAP 26



APPLICATIONS

- Aircraft rotary actuators
- Aircraft valve actuators
- Circuit breakers
- Aircraft contractors
- Industrial machinery
- Medical equipment

KEY FEATURES:

- Enhanced gold contacts for high or low power applications
- Thermoplastic case sealed to prevent flux intrusion
- Meets MIL-PRF-8805/77
- End or side terminals available
- Roller lever, lever, short roller lever and bushing mount actuators are available

ACTUAL SIZE

ORDERING INFORMATION:

Switches

Part Number	Simultaneity	Contacts	Terminals
26-810	Simultaneous*	Enhanced Gold	End Solder

* Within .002" of plunger travel.

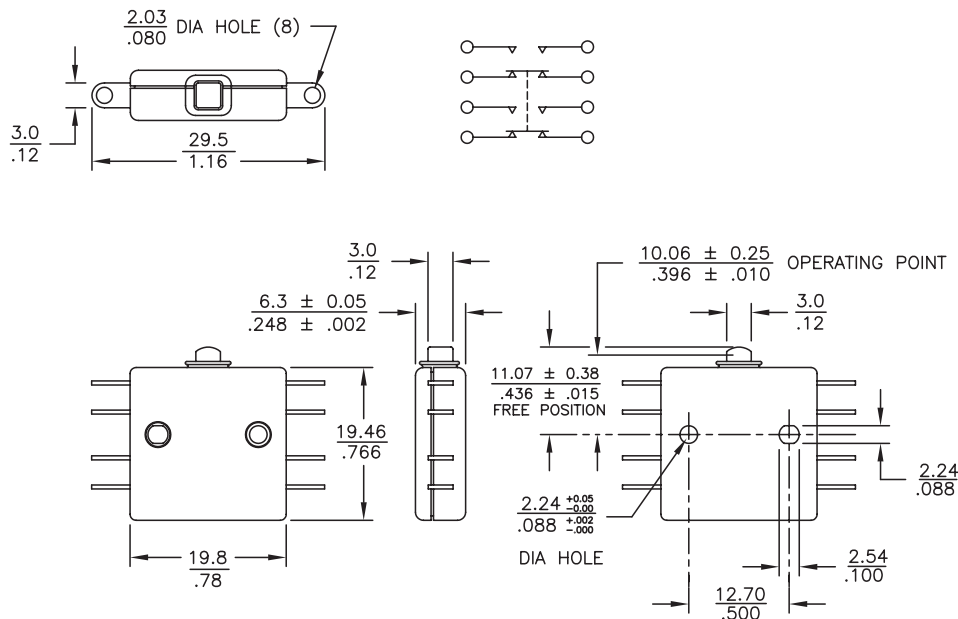
Actuator (see page 72 for additional specifications)

Part Number	Switch Series	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.
76-1200 Roller Lever	26	8 oz max	1 1/2 oz min	.130 max	.026 min	.054 ± .022
76-1210 Lever	26	7 oz max	2 oz min	.155 max	.025 min	.065 max
76-1220 Short Roller Lever	26	16 oz max	5 oz min	.050 max	.012 min	.020 ± .010 - .005

STANDARDS / AGENCY / RATINGS:



END TERMINATION



Electrical rating, 26-810:

Load	Sea Level				70,000 Ft.	
	28 VDC DPDT	28 VDC 4 CKT	115 VAC 60 HZ DPDT	115 VAC 60 HZ 4 CKT	28 VDC DPDT	28 VDC 4 CKT
Resistive	8 amp	8 amp	6 amp	4 amp	8 amp	8 amp
Inductive	6 amp	4 amp	4 amp	4 amp	2 amp	1 amp
Lamp	0.5 amp	0.5 amp	2 amp	1 amp	—	—

MECHANICAL / ELECTRICAL CHARACTERISTICS:

- Pretravel:**
0.060 inches (Max)
- Overtravel:**
0.020 inches (Min)
- Operating Force:**
18 ± 5 oz
- Release Force:**
5 oz (Min)
- Movement Differential:**
0.025 inches ± .010
- Operating Point:**
0.396 inches ± .010
(from mounting hole centers)
- Circuit:**
DPDT-DB (Form ZZ)
- Temperature Index:**
-85°F to +275°F Ambient
- MIL-PRF-8805 QPL Listed:**
26-810 M8805/77-003
- Electrical Ratings:**
See chart to the left

SEALED 10 AMP SUB-MINIATURE SWITCHES

These rugged metal enclosed sealed switches use the Butterfly® switch mechanism providing long-life, durability and reliability. These switches are ideal for demanding military and industrial applications.

APPLICATIONS

- Aircraft valves
- Wheelchair lifts
- Machine tools
- Missiles and missile launchers
- Heavy industrial equipment

KEY FEATURES:

- Meets the (watertight) requirements per MIL-PRF-8805 enclosure design symbol 3
- Gold contacts
- Variety of actuators available
- Solder terminals standard or wire leads available
- Temperature rating: -55°C to +85°C (-65°F to +185°F)
- MIL-PRF-8805 QPL listed switches available



ACTUAL SIZE

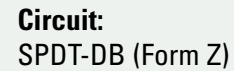
ORDERING INFORMATION:

Part Number	Actuator	P.T.	O.T.	O.F.	R.F.	M.D.
65-201000	Pin plunger	.050 max	.012 min	24 ± 8 oz	8 oz min	.010-.030
65-301000	Roller lever	.115 max	.025 min	16 oz max	5 oz min	.058 max
65-401000	Over travel	.070 max	.187 min	36 oz max	8 oz min	.010-.030

STANDARDS / AGENCY / RATINGS:



MECHANICAL / ELECTRICAL CHARACTERISTICS:



Temperature range:

-55°C to +85°C
(-65°F to +185°F)

Electrical Ratings (Typical):

Circuitry	125/250 VAC	28 VDC
SPDT-DB (Form Z)	10 A	5 A Ind.

Technical drawing of a connector assembly showing two views: a side view on the left and a front view on the right.

Side View Dimensions and Labels:

- Top section: $.310 + .010 / -.000$
- Thread: $.375-32 \text{ UNEF-2A THD}$
- Labels: HEX NUT (2), KEYWAY WASHER, INTERNAL TOOTH LOCKWASHER
- Base hole: $.080 \text{ DIA HOLE (4)}$
- Bottom section: $.120 \pm .015 (4)$
- Bottom width: $.375 + .010 / -.000$

Front View Dimensions and Labels:

- Top pins: $.125 \text{ DIA}$ and $.187 \text{ DIA}$
- Top width: $.32 \pm .02$
- Top thickness: $.062$
- Top height: $.882 \text{ REF}$
- Base height: $.56$
- Base thickness: $.05 \text{ MAX}$
- Pin height: $.69$
- Pin spacing: $.500 \text{ CENT}$
- Base width: $.850$
- Note: SEE NOTE 3.

DOOR INTERLOCK SWITCHES FOR CABINET, SERVICE DOOR SAFETY

Door interlocks use 10 amp Butterfly® switch mechanisms to provide long life and reliability.

Series 76-6



APPLICATIONS

- Computer door interlocks
- Audio-Visual equipment
- Oil exploration equipment
- Seismographic sending
- Process control enclosures
- Remote enclosure for telephone switches

KEY FEATURES:

- Protection for testing and servicing electronic equipment
- Automatic interruption of power
- Manual set allows continuation of power for testing
- Restores power with closing of door or drawer
- UL recognized

ACTUAL SIZE

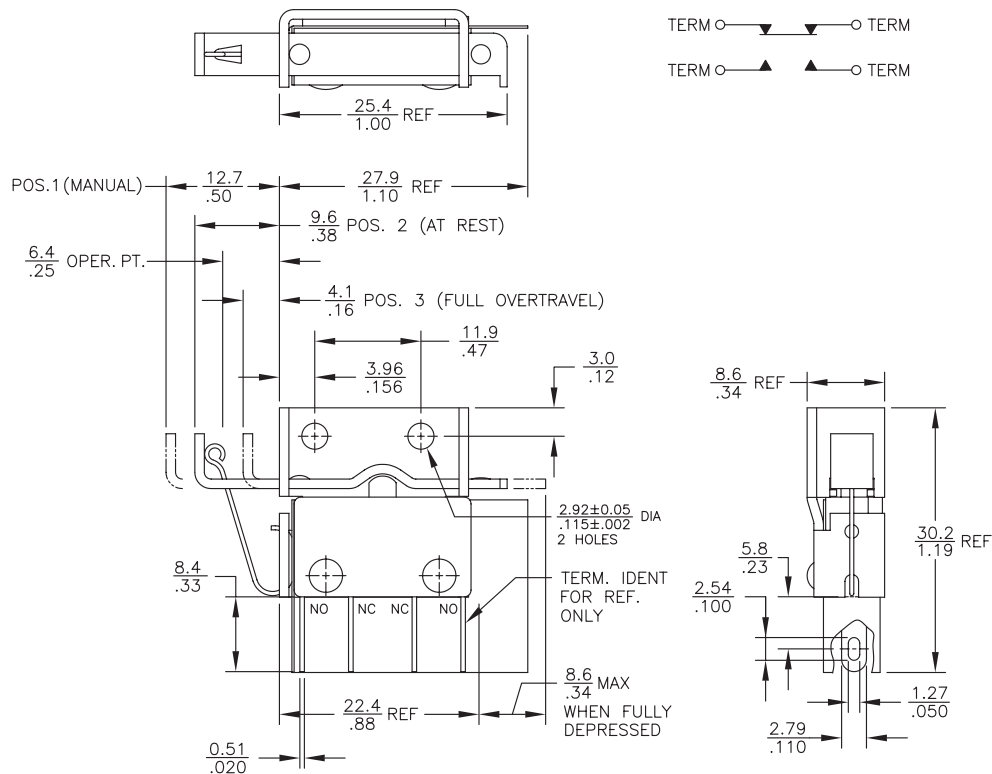
ORDERING INFORMATION:

Part Number	CIRCUIT	125/250 VAC	28 VDC IND	TERMINALS
76-6005	SPDT (Form Z)	5A *	3A	Bottom Solder/ .110 QC
* 75-80% Power Factor				
** Contact Factory for Minimums				

STANDARDS / AGENCY / RATINGS:



PRODUCT DRAWINGS



MECHANICAL / ELECTRICAL CHARACTERISTICS:

Circuit:
SPDT-DB

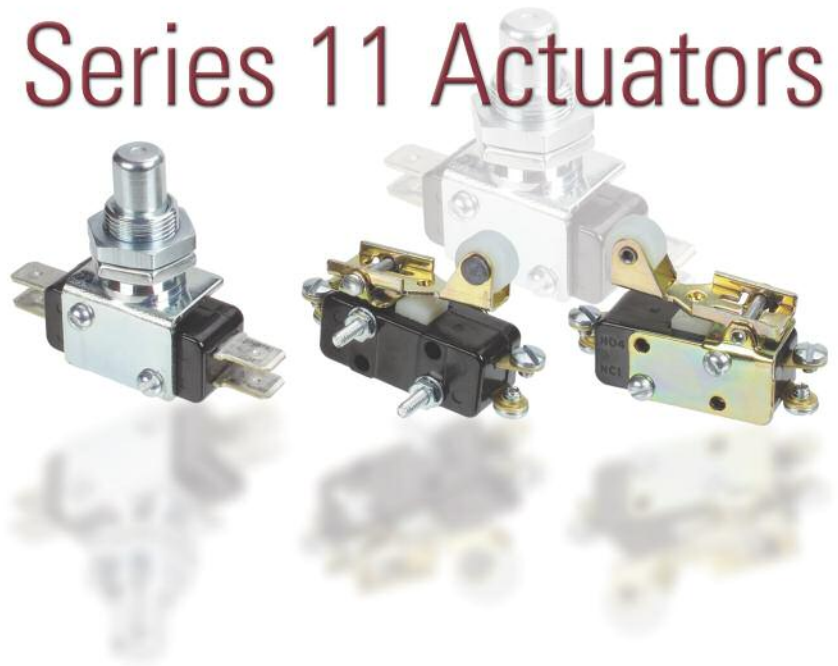
Electrical Ratings:

Circuitry	Current	Voltage
Form X or Y	10 Amps	125/250 VAC *
	10 Amps	28 VDC IND
Form Z	5 Amps	125/250 VAC
	3 Amps	28 VDC IND

* UL and CSA Listed 75% PF

SEE PAGE 46
FOR SWITCHES

Series 11 Actuators



KEY FEATURES:

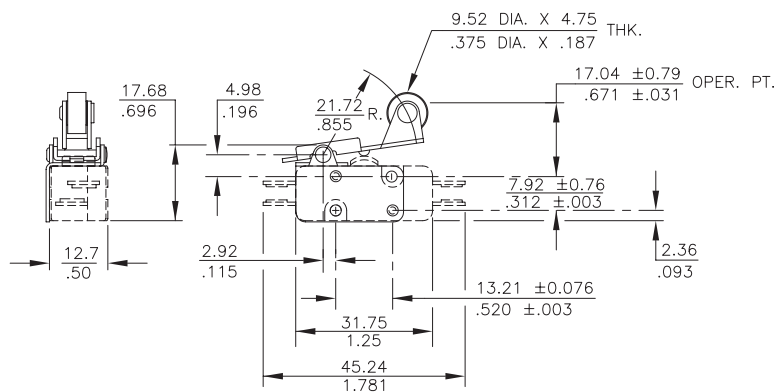
- Roller Lever
- Overtravel

MECHANICAL CHARACTERISTICS*:

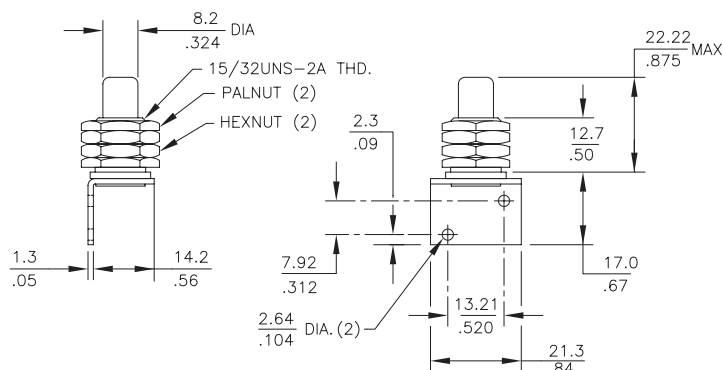
Part Number	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.	Operating Point
71-1040 Roller Lever	3.5 oz max	2 oz min	.093 max	.062 min	.030 ± .015	.671 ± .031
71-2010 Overtravel Plunger	8 ± .3 oz	4 oz min	.050 max	.215 min	.020 ± .005	.828 ± .015

*Mechanical characteristics when used with Basic Switch 11-104.

71-1040

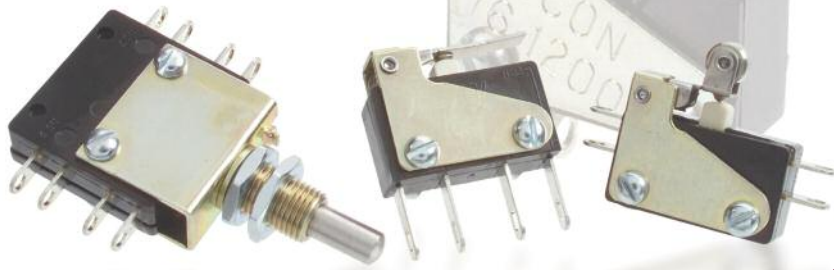


71-2010



Series 16 Actuators

SEE PAGES 50 & 52
FOR SWITCHES



KEY FEATURES:

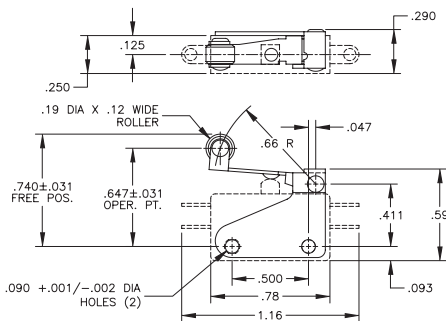
- Roller Lever
- Short Roller Lever
- Lever
- Bushing Mount

MECHANICAL CHARACTERISTICS:

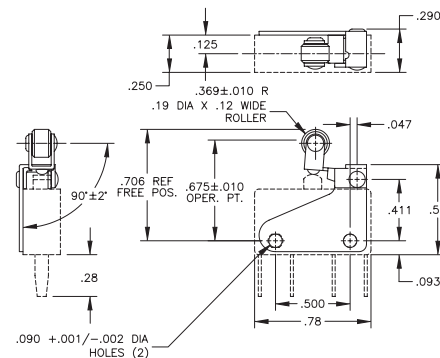
Part Number	Switch Series	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.
76-1200 Roller Lever	16	4 oz max	1 oz min	.125 max	.025 min	.045 ± .011
76-1210 Lever	16	2.5 oz max	1 oz min	.125 max	.025 min	.047 ± .013
76-1220 Short Roller Lever	16	5 + 3 oz - 2 oz min	2 oz min	.050 max	.023 min	.020 ± .005
76-22604 Bushing Mount	16	5 oz	—	.050 max	.156 min	—

Notes: (1) Characteristics may vary depending on type of basic switch used in assembly. (2) All actuators supplied with mounting hardware.

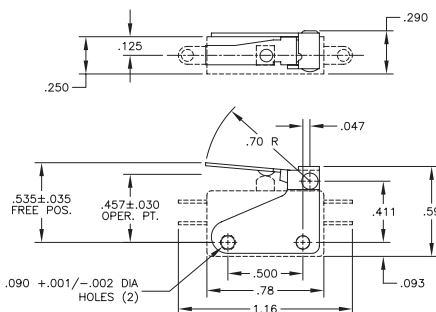
76-1200



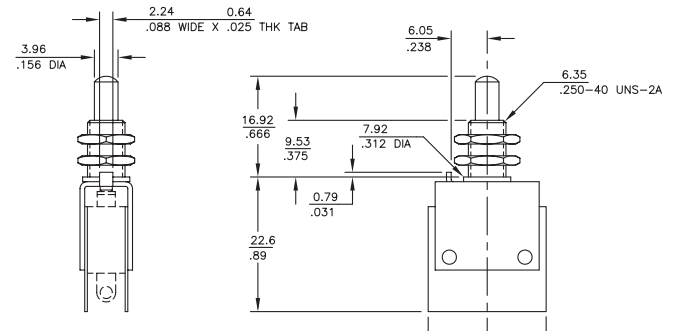
76-1220



76-1210



76-22604



SEE PAGE 54
FOR SWITCHES

Series 18 Actuators



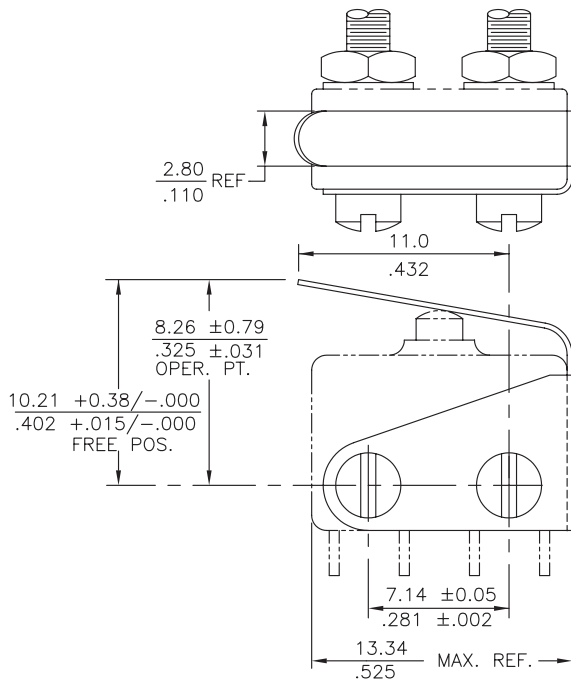
KEY FEATURES:

- Spring Lever
- Roller Lever

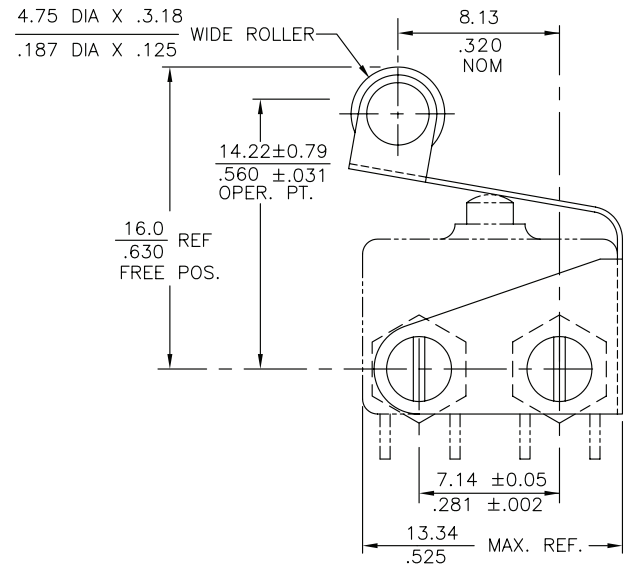
MECHANICAL CHARACTERISTICS:

Part Number	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.	Operating Point
78-3000 Spring Lever	6 ± 2 oz	2 oz min	.125 max	.030 min	.030 ± .015	.325 ± .030
78-3100 Roller Lever	6 ± 2 oz	2 oz min	.125 max	.030 min	.035 ± .015	.560 ± .030

78-3000



78-3100



- Roller Lever
- Overtravel

Part Number	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.	Operating Point
72-1160 Roller Lever (1)	10 oz max	1.5 oz min	.150 max	.035 min	.070 ± .015	1.0 ± .031
72-2080 over travel (2)	17 ± 5 oz	4 oz min	.060 max	.215 min	.030 ± .007	.828 ± .031

(1) When used with 22-104 basic switch or 22-204 basic switch. (2) When used with 22-304 basic switch

15/32-32 HEX NUT

21.03 ± 0.79
.828 ± .031
OPER. PT.

STAINLESS STEEL
INTERNAL TOOTH
LOCKWASHER

17V
CHICAGO, ILL.
U.S.A.

TYPICAL SWITCH APPLICATION
(SWITCH NOT INCLUDED)

71

800.544.3354

SEE PAGE 60 & 62
FOR SWITCHES

Series 26 Actuators



KEY FEATURES:

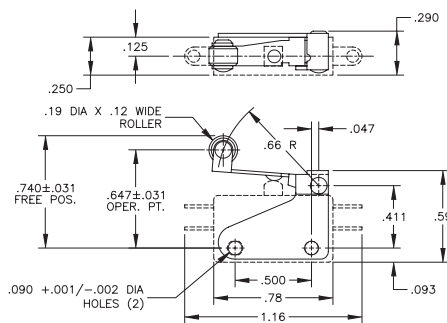
- Roller Lever
- Short Roller Lever
- Lever
- Bushing Mount

MECHANICAL CHARACTERISTICS:

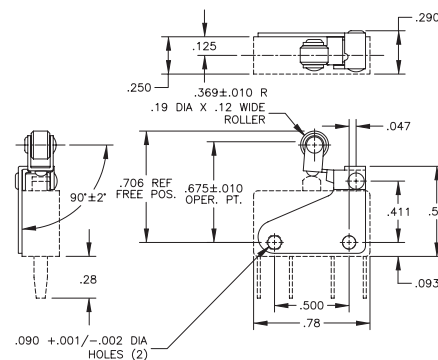
Part Number	Switch Series	Oper. Force	Release Force	Pretravel	Overtravel	Movement Diff.
76-1200 Roller Lever	26	8 oz max	1.5 oz min	.130 max	.026 min	.054 ± .022
76-1210 Lever	26	7 oz max	2 oz min	.155 max	.025 min	.065 max
76-1220 Short Roller Lever	26	16 oz max	5 oz min	.050 max	.012 min	.010 ± .005
76-22604 Bushing Mount	16	5 oz	—	.050 max	.156 min	—

Notes: (1) Characteristics may vary depending on type of basic switch used in assembly. (2) All actuators supplied with mounting hardware.

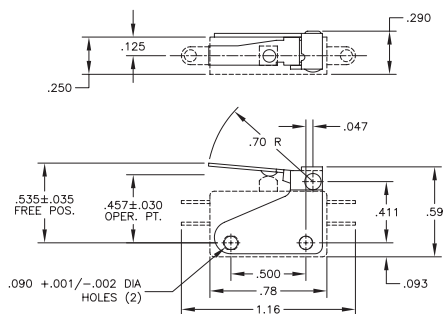
76-1200



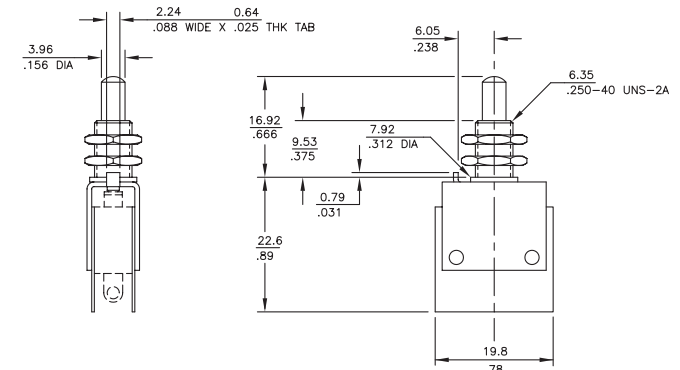
76-1220



76-1210



76-22604



Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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