NAiS

2-CIRCUIT LINE DOOR INTERLOCK SWITCH

GL (AGL) SWITCHES

Right side hinge lever type

Pin plunger type

Left side hinge lever type

FEATURES

- **Conforming to IEC 950**
  Contact gap of greater than 1.0mm .039inch
- **2-circuit line of high capacity load contact and low-level circuit load contact**
- **The high capacity load contact accepts the DC load due to its snap-action construction (6A 30V DC)**
- **Self-standing terminal for PC board**
- **Flame retardancy: UL94V-0**
- **UL/CSA/TÜV/SEMKO approved**

TYPICAL APPLICATIONS

1. Office equipment
• Copiers • Printers • Facsimiles etc.

2. Power supply units

PRODUCT TYPES

Actuator	O.F. (N)	Part number
Pin plunger	Max. 3.23	AGL4020
Right side hinge lever	Max. 1.47	AGL4021
Left side hinge lever	Max. 1.47	AGL4022

Remark: Unless you request otherwise, the switch comes with a stamp indicating its conformance to standards.

SPECIFICATIONS

1. Contact rating

	Resistive load (cos $\phi \fallingdotseq 1$)	Low-level circuit load
High capacity load contact	5A 250V AC 6A 30V DC	—
Low-level circuit load contact	0.1A 125V AC 10mA 8V DC	5mA 6V DC 2mA 12V DC 1mA 24V DC

2. Characteristics

Item		Characteristics
Expected life (min.)	Electrical (at 10 cpm)	10^5
	Mechanical (at 60 cpm)	10^5
Insulation resistance		Min. 100MΩ (at 500V DC)
Dielectric strength	Between terminals	1,000 Vrms for 1 min.
Dielectric strength	Between terminals and other exposed metal parts	1,500 Vrms for 1 min.
Dielectric strength	Between terminals and ground	1,000 Vrms for 1 min.
Contact resistance (initial, max.)		100 mΩ (by voltage drop) at 1A to 8V DC
Temperature rise (load current 5A)		Initial: Max. 45 deg. After test: Max. 55 deg.
Vibration resistance		10 to 55 Hz at amplitude at 0.75mm (Contact opening: Max. 1 msec.)
Shock resistance		Min. 294m/s² {30G} (Contact opening: Max. 1 msec.)
Actuator strength		39.2N {4kgf} min.
Tensile terminal strength		11.8N {1.2kgf} min.
Allowable operating speed		1 to 500 mm/s
Maximum operating cycle rate		300 cpm
Ambient temperature		–25°C to +60°C –13°F to +140°F (Not freezing below 0°C 32°F)
Ambient humidity		Max. 85% R.H.
Flame retardancy		UL 94V-0

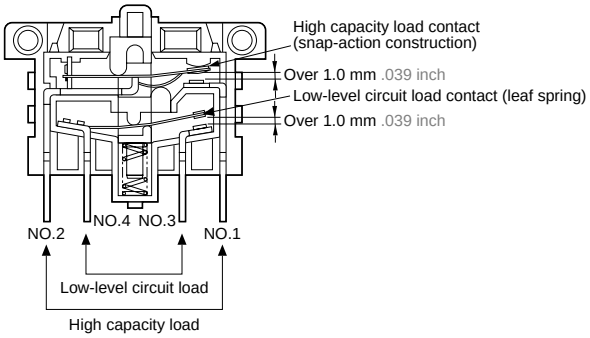
Remark: Test condition and judgement are conforming to JIS C 4505, VDE 0630 (EN61058-1), UL 1054 and CSA C22.2.

3. Operating characteristics

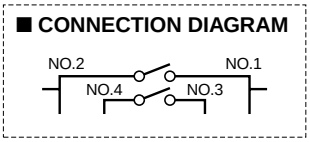
		Pin plunger type		Hinge lever type	
		From basis	From boss center	From basis	From boss center
Free position	mm inch	Max. 7.5 .295	Max. 5.1 .201	Max. 12.5 .492	Max. 10.1 .398
Operating position	mm inch	6.5+0.4 .256+.016	4.1+0.4 .161+.016	9.5+1.3 .374+.051	7.1+1.3 .280+.051
Total travel position	mm inch	Max. 5.45 .215	Max. 3.05 .120	Max. 6.0 .236	Max. 3.6 .142
Over travel	mm inch	Min. 0.75 .030		Min. 1.6 .063	
Operating force, Max.		3.23 N {330 gf}		1.47 N {150 gf}	
Total force, Max.		5.68 N {580 gf}		2.45 N {250 gf}	

Remark: Total force is weighed at each total travel position.

CONSTRUCTION



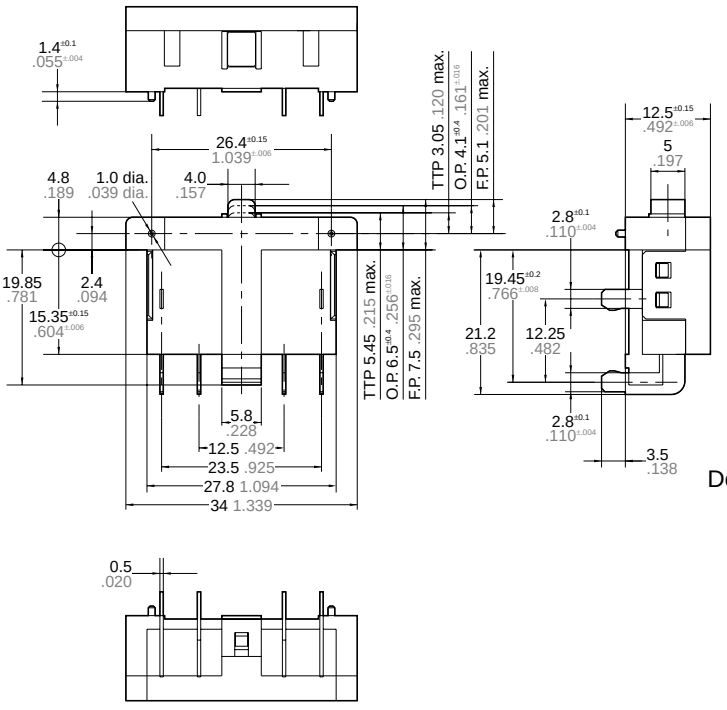
CONNECTION DIAGRAM



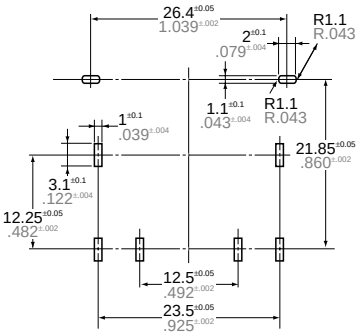
DIMENSIONS

mm inch

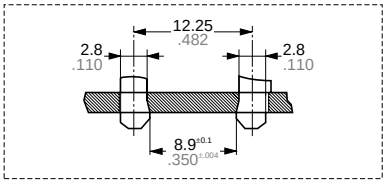
1. Pin plunger type



PC board pattern



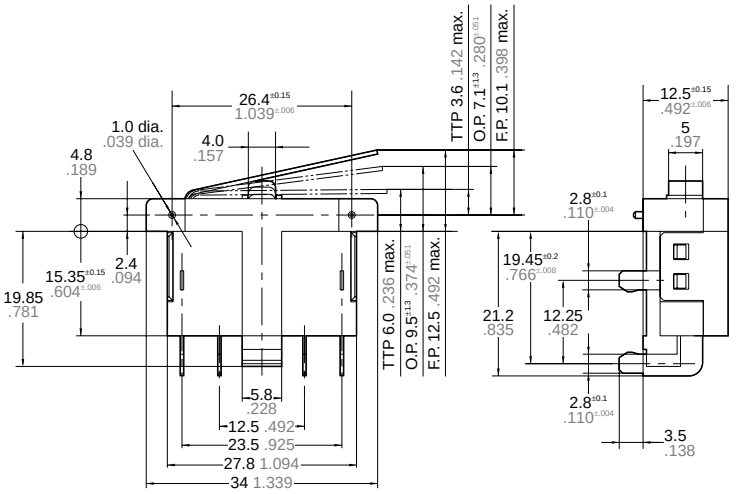
Detailed dimensions of terminal mounting



2. Right side hinge lever type

mm inch

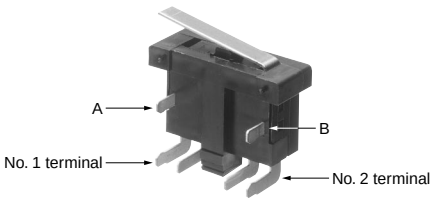
3. Left side hinge lever type



Remark: Other dimensions are the same as those of pin plunger type.

NOTES

1. A and B of the figure below are the additional terminals to fix the switch body on the PC board. Since these terminals are related No.1 terminal and No.2 terminal respectively, please be sure to maintain adequate insulating clearance between each terminal and ground.



2. In setting the movement after operation, the over-travel should be set from 70% to 100%. Setting the movement less than 70% may cause degrading the electrical mechanical performance.

3. Soldering operation

Soldering must be done as quickly as possible.
260°C 500°F: within 10 seconds
350°C 662°F: within 3 seconds
During the operation, care should be taken to prevent flux entrance inside the switch. The positioning tab may be changed in shape.

4. Please pay attention to the insulation distance between terminals and between terminal and the ground after mounting and wiring.

5. Environment

Avoid the location nearby the conductive material which possibly attaches the switch.