SP. No.

Yamatake Corporation

製品仕様書 SPECIFICATIONS

1. STANDARDS

・Conform to; JIS C 4505 ・Approved by; UL、CSA

2. STRUCTURE

・Type of Contact; S P D T / S P N C / S P N O

・Shape of Terminal; Quick connect terminal (#187)

・Shape of Contact; Rivet ・Protective Structure; ～

3. ELECTRICAL CHARACTERISTICS

・Insulation Resistance and Dielectric Strength;

Portions to be measured	Insulation Resistance 500VDC megger	Dielectric Strength (50~60Hz, for 1 minute)
Between unconnected terminals	100 MΩ	1000 VAC
Between each terminal and non-live metal part	100 MΩ	1500 VAC
Between each terminal and ground	100 MΩ	1500 VAC

・Contact Resistance; 50 mΩ MAX. (initial) Measured by the voltage drop method at 6 to8 VDC 1A.

・Temperature Rise; 30 °C max. The temperature of terminal parts shall be measured with a thermoelectric thermometer after applying the rated current.

・Inrush Current; 30 A 250 VAC Normally closed
30 A 250 VAC Normally open
} Inrush current of 4 ms width switched 50 times.

・Electrical Ratings; (in amperes)

Current	Voltage	Load			
		Resistive	Inductive	Motor	
				NC	NO
AC	125 VAC	5	3	2	1
	250 VAC	5	3	1	0.5
DC	8 VDC	5	3		
	14 VDC	5	3		
	30 VDC	3	2		
	125 VDC	0.5	0.1		
	250 VDC	0.25	0.04		

Notes 1. Inductive load; Power factor 0.4 (AC), time constant 7 ms (DC)
2. Motor load; With inrush current 6 times as high as the rated current.

Catalog Coding

V-56**D

Type of Contact: 1~3 — Type of Actuater : 0~6

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4	00
3	00
2	00

改番 REV.	来歴 RECORD	日付 DATE	担当 BY	検閲 APPD.

作成DR. TATSUHARA 12, 6, '95		尺度SCALE CHI	記入のない公差 TOL. UNLESS NOTED ～
検図CHK. TSUKAKOSHI 12, 6, '95	形番 MODEL	V-56**D	
認可APPD TSUKAKOSHI 12, 6, '95	名称 NAME	SWITCH-BASIC	
日付DATE 12, 6, '95	図番 NO.	AD51909E	改番REV. 00 / 1/5

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4. MECHANICAL CHARACTERISTICS

- Actuator Strength; Withstand load ten times as high as Operating Force.
  (applied to the direction of actuation for 1 minute.)
- Terminal Strength; Quick Connect Terminal
  Withstand 80N {8.16kgf} tensile and push loads applied for 1 minute.
- Shock; 50 m/s^2 (approx. 5 G)
  Misoperation of the contact shall be 1 ms max. in the free position and the total travel position.
  Except free position of switch with actuator lever.
- Vibration; Peak-to-peak amplitude 1.5 mm Vibration frequency 10 to 55 Hz For continuous 2 hours.
  Misoperation of the contact shall be 1 ms max. in the free position and the total travel position.
  Except free position of switch with actuator lever.
- Allowable Operating Speed; see table mm/s to 1 m/s
  The lowest speed; Unstable condition of the contact shall be 0.1s max.
  The highest speed; The actuator shall not damage.

Type of Actuater	0	1	2	3	4	5	6
Minimum speed	0.24	0.4	0.6	1.2	0.4	0.6	0.6

- Mechanical Operating Frequency; 600 cycles/minute max.

5. LIFE

- Mechanical Life; 10000K cycles min. at "OT" of 70 to 100% of the rating
- Electrical Life; 100k cycles min. at the rated load and
  20 cycles/minute switching frequency

6. ENVIRONMENTAL CHARACTERISTICS

- Operating Temperature; −20 °C to 105 °C (at no freezing or dewing)
- Operating Humidity; 85 %RH max.

7. REFERENCE TEST CONDITIONS

- Temperature; 20°C
- Humidity; 65%RH

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8. REMARKS

(1) MOUNTING

- MOUNT THE SWITCH BODY BY TIGHTENING M3 SCREWS AT THE TORQUE LESS THAN 0.4~0.6N·m (4.1~6.1kgf·cm).
  APPLICATION OF SPRING WASHER OR ADHESIVES IS RECOMMENDED TO PROTECT THE SWITCH FROM LOOSENING.
- CHECK AFTER MOUNTING THE SWITCH IF THE INSULATION DISTANCE BETWEEN EACH TERMINAL AND EARTH IS ENOUGH.
- ARRANGE THE CAM OR DOG SO AS NOT TO GIVE ANY FORCE TO THE SWITCH ACTUATOR WHEN IT IS NOT USED.
- SET THE MOVING DISTANCE AFTER THE SWITCH OPERATION AT THE LEVEL OF MORE THAN 70% OT.
- DO NOT APPLY AN EXESSIVE FORCE EROM THE REVERSE OPERATING DIRECTION OR SIDE DIRECTION IN CASE OF LEVER TYPE SWITCH.

(2) WIRING

- USE A TAB 187 SPECIFIED RECEPTACLE AND INSERT IT IN PARALLEL WITH TERMINAL.

(3) SWITCH SELECTION

- SELECT A SWITCH CAUSING ANY PROBLEM EVEN IF THE OPERATION IS CHANGED TO THE SPECIFIED VALUE PLUS/MINUS 20%.

(4) ENVIRONMENT

- AVOID THE USE OR STOCK AT THE LOCATION WHERE CORROSIVE GAS OR SILICON CAUSING BAD INFLUENCE ON THE CONTACTS EXISTS AND/OR THERE IS MUCH DUST.

(5) CAUTION FOR USE

- APPLY A SPARK ELIMINATION CIRCUIT TO PROTECT THE CONTACTS FROM DAMAGING BY ARC WHEN USING THE SWITCH TO MAKE OR BREAK THE INDUCTIVE LOAD SUCH AS RELAY, SOLENOID, BUZZER, ETC..

(6) REQUEST

- CONFIRM THE QUALITY UNDER THE ACTUAL APPLICATION CONDITION TO ENSURE THE RELIABILITY IN ACTUAL USE.

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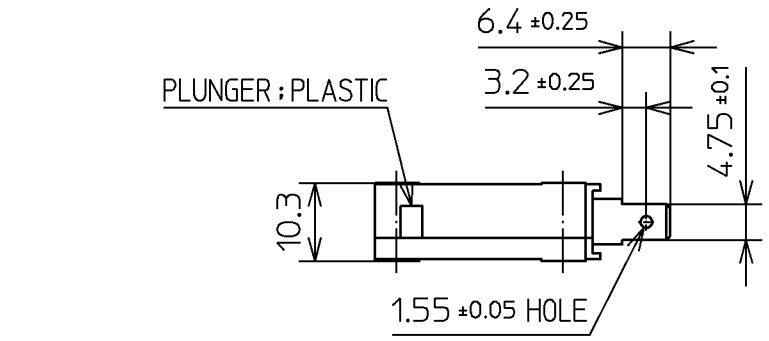
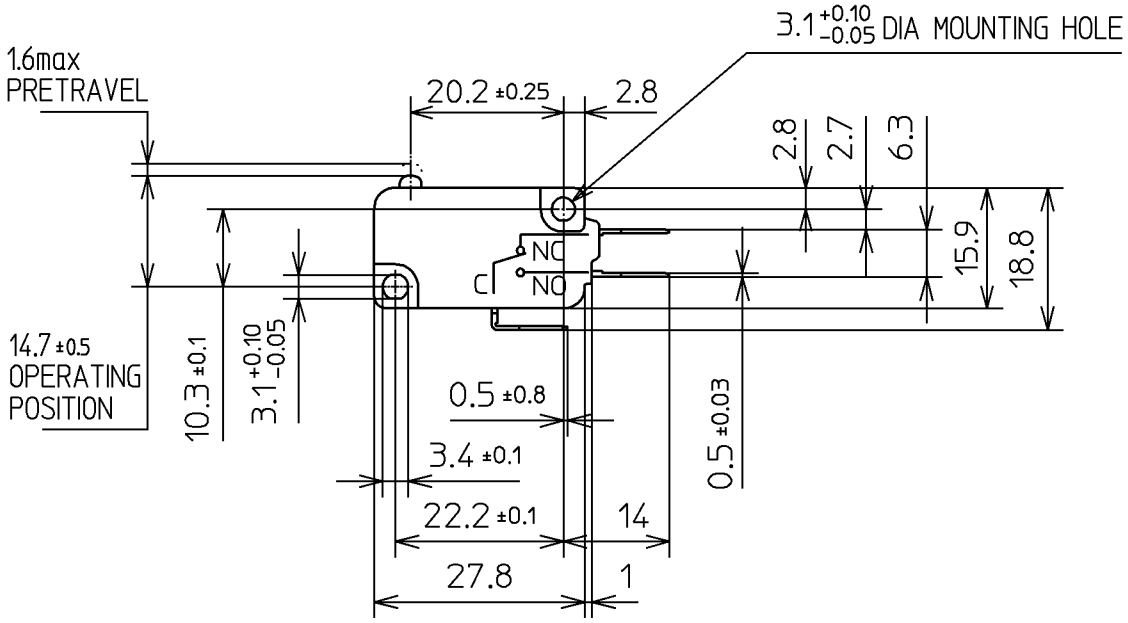
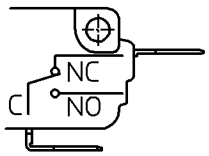
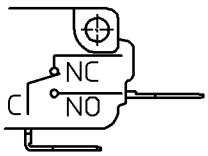
9. DIMENSIONS









TYPE OF CONTACT : SPDT
CATALOG LISTING : V-561*

SPNC
V-562*

SPNO
V-563*

ELECTRICAL DATA

5A-1/6HP-125 OR 250 VAC
0.5A-125 VDC
0.25A-250 VDC
Y14

作成DR. TATSUHARA 12, 6, '95		尺度SCALE 1:1	記入のない公差 TOL. UNLESS NOTED ±0.4
検図CHK. TSUKAKOSHI 12, 6, '95	形番 MODEL	V-56**D	
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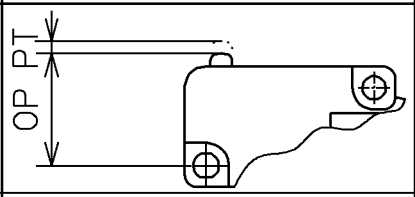
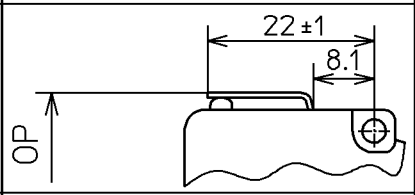
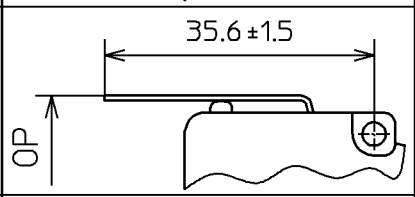
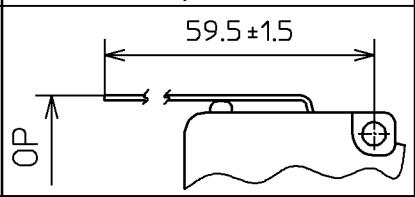
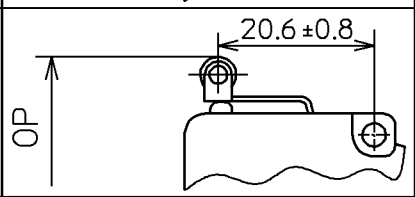
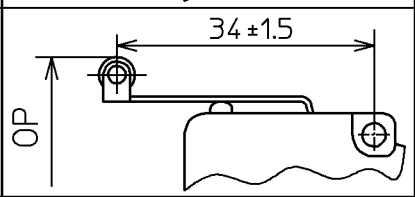
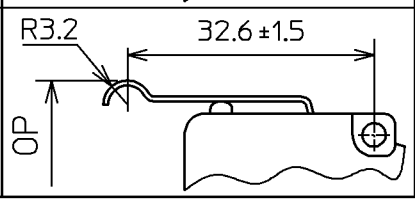
10. SHAPE AND DIMENSION OF ACTUATOR AND OPERATION CHARACTERISTICS

CODE	ACTUATOR Shape · Measure	OPERATING FORCE (gf) MAX	RELEASE FORCE (gf) MIN	PRETRAVEL MAX	OPERATING POSITION	MOVEMENT DIFFERENTIAL MAX	OVERTRAVEL MIN
0		0.25N (25.5gf)	0.06N (6.1gf)	1.6	14.7 ±0.5	0.4	0.8
1		0.25N (25.5gf)	0.06N (6.1gf)	1.6	15.3 ±0.5	0.4	0.8
2		0.15N (15.3gf)	0.025N (2.5gf)	3.2	15.3 ±1.5	1.2	1.3
3		0.074N (7.5gf)	0.015N (1.5gf)	6.4	15.3 ±3	2.4	2.6
4		0.29N (29.6gf)	0.05N (5.1gf)	1.6	20.6 ±0.8	0.4	0.8
5		0.15N (15.3gf)	0.025N (2.5gf)	3.2	20.6 ±1.6	1.2	1.3
6		0.15N (15.3gf)	0.025N (2.5gf)	3.2	18.5 ±1.5	1.2	1.3

NOTES 1. ROLLER : 4.8 ±0.25 DIA. 4.8 ±0.25 WIDE, PLASTIC
2. LEVER : STAINLESS STELL

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"RESTRICTIONS ON USE"

This product has been designed, developed and manufactured for general-purpose application in machinery and equipment.
Accordingly, when used in applications outlined below, special care should be taken to implement a fail-safe and/or redundant design concept as well as a periodic maintenance program.

- Safety devices for plant worker protection
- Start/stop control devices for transportation and material handling machines
- Aeronautical/aerospace machines
- Control devices for nuclear reactors

Never use this product in applications where human safety may be put at risk.