

**I. TYPE**

1. Type : D3V-11G31-1C25-K

**II. SAFETY STANDARD****Standards**

- a. UL
- b. CSA
- c. VDE

**Approval No.**

File No.E41515  
 File No.LR21642  
 File No.119151L

**III. CONFIGURATION**

- 1. Outline Drawing : 0415361
- 2. Operating Method : Snap Action
- 3. Contact Configuration : Single Pole, Double Throw
- 4. Structure : Standard
- 5. Terminal Form : Tab Terminal # 187(0.5)

**IV. OPERATING CHARACTERISTIC**

No	Characteristic	Abb.	Units	Standards	Notes
1	Operating Force	OF	N (gf)	1.47 MAX	150 gf MAX
2	Release Force	RF	N (gf)	0.196 MIN	20 gf MIN
3	Pre - Travel	PT	mm	3.4 MAX	/
4	Movement Differential	MD	mm	1.2 MAX	
5	Over Travel	OT	mm	1.4 MIN	
6	Operating Position	OP	mm	20.3 ± 1.0	

**V. ELECTRICAL CHARACTERISTICS**

- 1. Contact Resistance : 30 mΩ Maximum (Initial value)  
 \* Measuring method : Voltage Drop method at 1 Ampere, 6 Volt DC at Free Position (FP) and Total Travel Position (TTP)

## 2. Insulation Resistance and Dielectric Strength

No	Items	Insulation Resistance (IR) 500 Volt DC	Dielectric Strength (HV) 50/60 Hz. 1 minute
1	Measuring Methods Between each terminal of the same polarity	100 MegaΩ MIN	1000 Volt
2	Between each terminal and ground	100 MegaΩ MIN	2000 Volt (With Separator)

### 3. Switching capacity ratings

Rated Voltage	Item	Non-Inductive load (A)				Inductive Load (A)			
		Resistive		Lamp		Inductive		Motor	
		NO	NC	NO	NC	NO	NC	NO	NC
125 VAC		11	11	1.5	1.5	6	6	2	2
250 VAC		11	11	1.5	1.5	6	6	2	2
125 VDC		0.1	0.1						

#### Notes :

1. Inductive load has a power factor 0.4 MIN. (AC) and a time constant of 7 msec MAX. (DC)
2. Lamp load has an inrush current of 10 times the steady-state current, while motor load has an inrush current of 6 times the steady-state current.

### 4. Safety Standards ratings

UL / CSA	11A 125V , 250 VAC 0.1A 125VDC 1/2HP 125VAC , 1/2HP 250VAC
VDE	11A 250VAC (resistive) 3A 250VAC (motor load)

### 5. Overload current test

It shall possible to switch following condition at frequency 8~10 times perminute, 50 operations.

AC 250V    50(60)Hz    13.75A    power factor 0.75 ~ 0.8  
DC 125V                    0.15A    resistive load

### 6. Temperature Rise

It shall be below 30° C under the following condition :

#### a. Endurance Test

Load : 250 VAC, 11 A power factor 0.75 ~ 0.8 Inductive, 6000 operations.

#### b. Measuring

After Test (a), measured at terminal with current 11 Ampere at  
Free Position (FP) and Total Travel Position (TTP)

### 7. Inrush current

Normally (NO-NC) : 24 A MAX

Note : Load is applied by use of an electric bulb with tungsten filament.

## VI. MECHANICAL CHARACTERISTICS

### 1. Vibration

Contact separation shall be less than 1 msec. at double amplitude 1.5 mm, oscillating frequency of 10 to 55 Hz. in 3 to 5 minute for 1 cycle.

It shall be satisfy following conditions after applied double amplitude of 1.5 mm, vibration frequency of 10~55 Hz in 3 to 5 minute for 2 hours each (a total 6 hours) at X, Y and Z directions.

\* There shall be no abnormality both electrically and mechanically.

2. Shock

Contact separation shall be less than 1 msec. when 200 m/sec<sup>2</sup> (about 20G) at JIS0912 shock test.

Note : Common test conditions for VI.1 and VI.2  
5V DC, 100 mA at FP or TTP

3. Actuator strength

It shall satisfy following condition when a thrust load 10 times of the specified OF 7.4 N (0.75 kgf) to the operating direction vertically for 1 minutes.

\* There shall be no abnormality both electrically and mechanically.

4. Terminal Strength

Tab terminal : 80 N (8.16Kgf) /min. (insert and Pull out)

**VII. ATMOSPHERE**

1. Temperature

-25° C ~ +105° C (No freeze in low temperature)

2. Humidity

45% ~ 85% RH

**VIII. ENDURANCE**

1. Operating frequency

Mechanical : 600 times/min. MAX  
Electrical : 60 times/min. MAX

2. Operating speed

0.1 ~ 1000 mm/sec

3. Service Life

Life	Operating frequency	Stroke	Reliability level	Survival rate
200,000 cycle	30 times / min	Full stroke	λ 60 %	95 %

Rated loads (V.3)

4. Mechanical Service Life

Life	Operating frequency	Stroke	Reliability level	Survival rate
10,000,000 cycle	60 times / min	Full stroke	λ 60 %	95 %

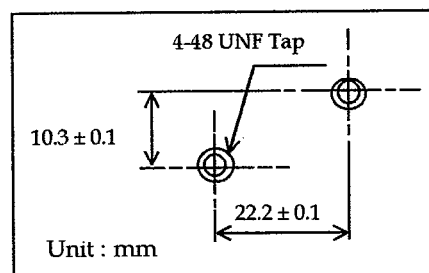
SYM	DATE	E C CONTENTS	E C NO	SIGN

## SPECIAL NOTES

### I. SWITCH MOUNTING

#### 1. Mounting the panel

- \* Process based on right figure which shows processing of the mounting holes
- \* Securely fix the switch using screws of specified size ( 2 x No. 4-48 UNF screws ) with the spring washer.
- \* Tighten the mounting screws of the switch at the specified torque 0.39 ~ 0.59 N.m ( 4 to 6 kg cm )



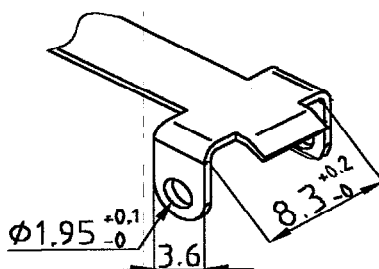
#### 2. Notes on the switch operating and setting

- \* In the free position of a switch actuator, where no external force is exerted upon the actuator.
- \* Sufficiently take a stroke of the actuator in operation. ( Nearly 90% specified OT )
- \* When the moment inertia of the operating body applies to the actuator, it may damage the switch. **Consult OMRON beforehand.**
- \* The operating body works to the way of the actuator movement.

#### 3. Insulating and wiring the switch

- \* Make sure that the switch is provided with an appropriate creepage and air-gap distance when mounting the switch on a metallic panel
- \* Special separator is recommended to be provided on the switch mounting.

#### 4. Recommended dimension for outside lever mounting



### II. CONVERSION OF PRODUCT

1. Avoid to keep in the atmosphere, where happens organic gases and dusts, with high temperature and humidity
2. Re-check for long term conserved switch in 3 to 6 months after production may recommend.

### III. THE TERM OF VALIDITY

This specification will be invalid if we receive no approval or no order placement of yours within one year since this is submitted.

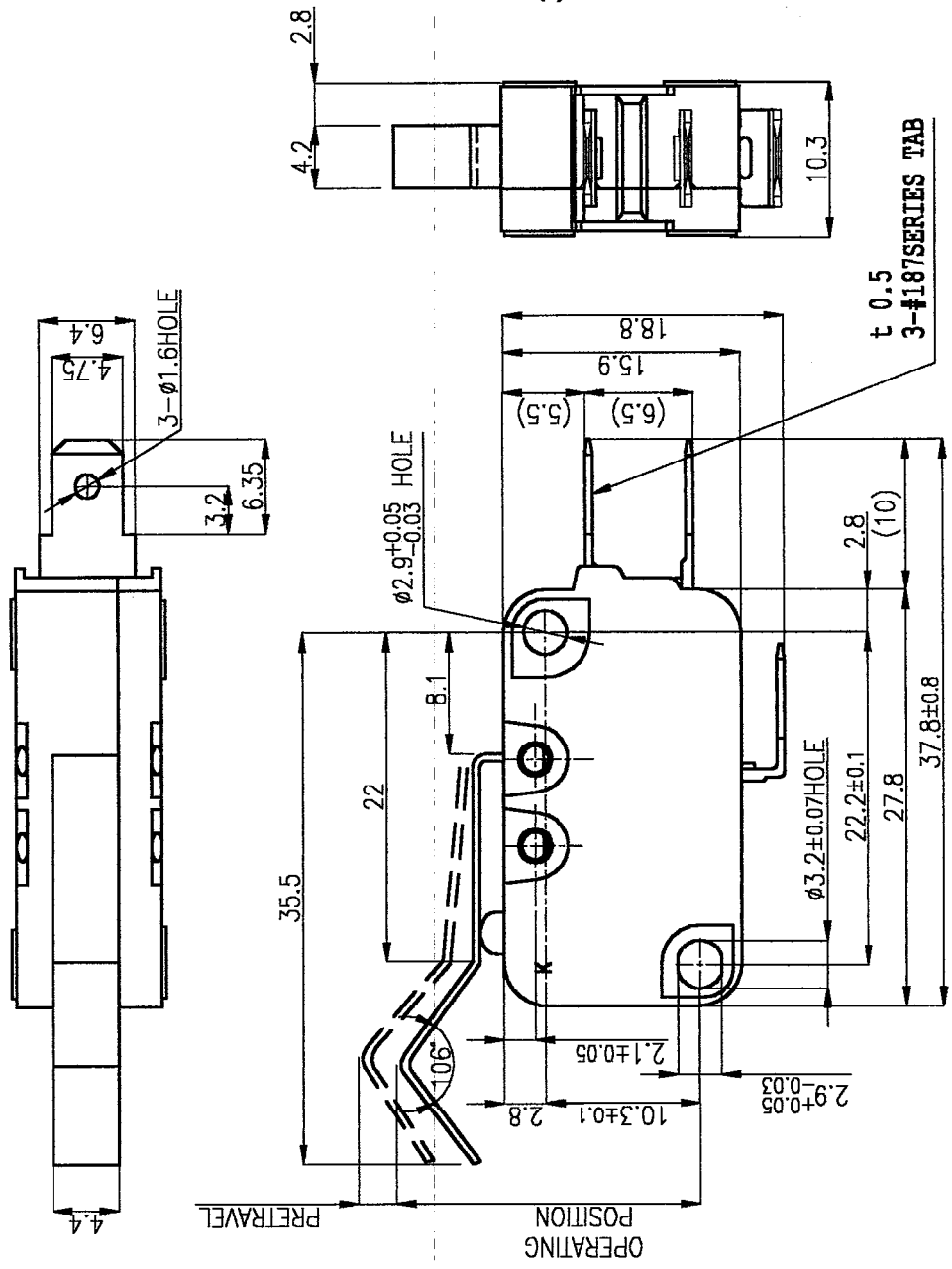
THE MASTER DRAWING.

1 2 3 4 5 6

1. CHARACTERISTICS

OPERATING FORCE	1.47N (150gf) MAX
RELEASE FORCE	0.196N (20gf) MIN
PRETRAVEL	3.4 mm MAX
OVER TRAVEL	1.4 mm MIN
MOVEMENT DIFFERENTIAL	1.2 mm MAX
OPERATING POSITION	20.3 ± 1.0 mm

- CONTACT ARRANGEMENT  
SINGLE POLE DOUBLE THROW
- ELECTRICAL RATINGS  
11A 1/2HP 125 250 VAC ~  
0.1A 125VDC ---



MATERIAL		SCALE		TYPE D3V-11G31-1C25-K	
FINISH		2 : 1		MINIATURE BASIC SWITCH	
TOLERANCES UNLESS SPECIFIED ±0.4		3RD ANGLE SHEET		OUTLINE DRAWING	
DESIGNED	22.02.2001	APPROVED	DRWG NO. 0415361 A		
CHECKED	MERYANTI				
E/C NO.		E/C CONTENTS		DESIGNED FOR D3V	
DATE		SIGN			

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Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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