# Rocker

N Series

0.4VA Max. AC/DC 28V Max.

**PCB Termina** Straight

SP 2P

#### **Outline of the Series**

This is an ultra-compact switch series designed exclusively for printed circuit boards, available in toggle, rocker, and push-button types.

#### **Features of the Series**

- 1. The occupied PCB area is just 31.5 mm<sup>2</sup> with straight terminals, enabling highly space-efficient mounting.
- 2. The sealed construction allows for full-board washing with flux-cleaning solvents.
- 3. The terminal pitch conforms to the standard 2.54 mm PCB spacing, and square terminals are used.

### **Common Specifications**

### Ratings

Voltage	Ratings	Load	Note
AC/DC 28V Max.	0.4VA Max.	Resistive Load Load only with Resisti Factor=1	

<sup>\*</sup> A resistive load refers to a load consisting solely of resistance. In actual circuits, however, there may be inductive, capacitive, or motor loads, each of which can generate inrush current. Therefore, when selecting a switch, be sure to choose a rating with sufficient margin above the steady-state current.

For more details, please refer to "Useful Advices and Precautions on Usage of Operational Switches."

Contact Resistance	80 mΩ Max. (DC2V 10mA) (Initial value)		
Withstanding Voltage	AC500V 1 Minute		
Insulating Resistance	500MΩ Min. (DC500V)		
Electrical Life	50,000 times ~ 100,000 times		
Operating Temperature Range	-20°C∼ +80°C		
Storage Temperature Range	-20°C∼+80°C		
Hand-soldering Conditions	400°C within 4±1 sec.		
Flow Soldering Conditions	265±5°C within 10 sec.		

Packaging Quantity			
PCB Straight	25 pcs		

Specifications of Materials			
Part Name	Materials		
Case	PPS		
Operational-part	PPS		
Frame	PA		
Insulation Bar	PEI		
Fixed Plate (Fixed Contact)	Copper Alloy		
Movable Plate (Movable Contact)	Copper Alloy		
Coil Spring	Piano Wire		

#### **Cautions on Handling Products**

- 1. Alcohol-based cleaning agents can be used.
- 2. Thanks to the sealed construction, full-board washing is possible; however, please verify the cleaning conditions in advance under your actual usage environment.

## **Compliance with the European RoHS Directive**

All DIP switches, control switches, connectors, and terminal blocks manufactured by OTAX with the following RoHS Directive:

Directive 2011/65/EU of the European Parliament and of the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).

Our products do not contain any of the ten specified hazardous substances (except for exempted applications):

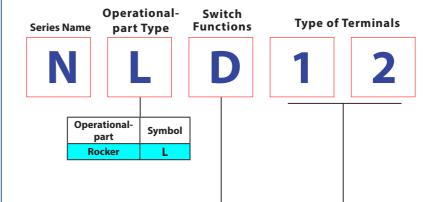
Lead (Pb) Mercury (Hg) Cadmium (Cd) Hexavalent chromium (Cr<sup>6†</sup>) Polybrominated biphenyls (PBB)

Polybrominated diphenyl ethers (PBDE) Di(2-ethylhexyl) phthalate (DEHP) Butyl benzyl phthalate (BBP) Dibutyl phthalate (DBP) Diisobutyl phthalate (DIBP)

\* For products other than those listed above or for custom items, please contact us.

# OTAX Co., Ltd. 1215, Nippacho, Kohoku-ward, Yokohama, Kanagawa, 223-8558 Japan https://www.otax-en.com/

### **Product Designations**



SwitchFunctions		Symbol		
Left Push	Center	Right Push	SP	DP
ON	-	ON	D	N
ON	OFF	ON	E	Р

	Type of Terminals	Symbol
P	CB Straight Terminal	12

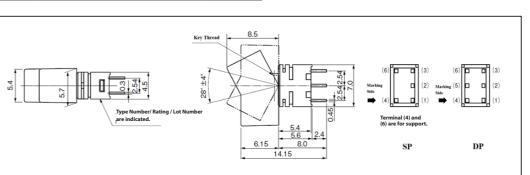
<sup>\*</sup> Type of Terminals Symbol is not indicated on the body.

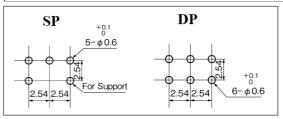
### Switch Names, Functions, Terminal Diagram, PCB Holes Diagram

## **PCB Straight Terminal**

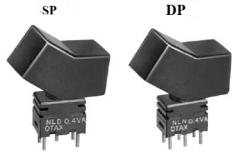
Duaduat	Product Name Circuit	Functions <> = Momentary		
NLD12	SPDT	ON 2-3	-	ON 2-1
NLE12	SPDT	ON 2-3	OFF	ON 2-1

Due du et		Functions <> = Momentary			
Product Name	Circuit				
NLN12	DPDT	ON 2-3 5-6	_	ON 2-1 5-4	
NLP12	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	

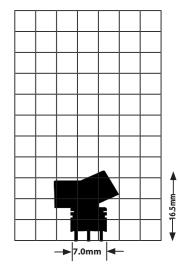




**\*** The Case is common both for SP and DP.



# Silhouette (NTD12)



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Rocker

0.4VA

Max.

AC/DC 28V

Max.

**PCB Terminal** 

Straight

SP 2P