LIMIT SWITCH

KLNJ-A2

Features

Housing is made of durable aluminum die-casting.

Heat-resistance, vibration-resistance structure (protection IP67)

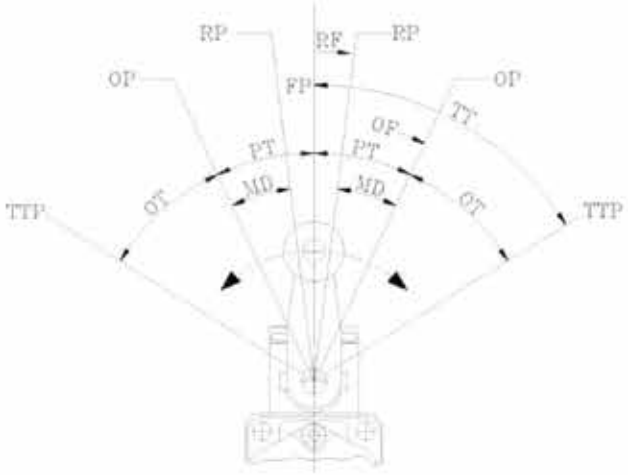
Built-in double-pole double-break standard micro-switches

Operation Indicator (LED or Neon lamp) helps easier inspection and maintenance

Microload models are available

Actuator	Roller lever		75°	90°	Roller lever, adjustable roller lever, adjustable rod lever, fork lever lock
	Plunger		○		Top plunger, top roller plunger, sealed top roller plunger, top ball plunger, side roller plunger
	Flexible rod		○		Coil spring, coil spring aluminum rod
Load	Standard load	1a1b	○		Using of normal double pole, double break switch
	Microload	1a1b			
Environment-resistance specification	High enclosed		○		Using of hermetic sealed built-in switch
	Mold terminal				Lead wire attached Improved hermetic property with epoxy resin in receptacle part
	Heat-resistance	KL □□ -TH			Silicon rubber is used to improve heat-resistance Ambient temperature120℃ Available operation temperature (+5℃ ~+120℃)
	Cold-resistance	KL □□ -TC			Silicon rubber is used to improve cold-resistance Ambient temperature -40℃ Available operation temperature (-40℃ ~+40℃)
Operation indicating lamp		KL □□ -LE	○		Operation state can be monitored easily.
		KL □□ -LD	○		Turn on lamp when operating, available to turn on lamp when not-in-operating

ACTATION RANGE GUIDE



OF	Required force to actuate	Required force to move from free position (FP) to operating position (OP)
RF	Return force	Required force to return from total travel position (TTP) to return position (RP)
PT	Movement to actuation	Distance or angle of movement from free position (FP) to operating position (OP)
MD	Movement differential	Distance or angle of movement from operating position (OP) to return position (RP)
OT	Movement after actuation	Distance or angle of movement from operating position (OP) to total travel position (TTP)
OP	Operating position	Actuator position when a contact point (NO (normal open)) is actuated (On) at free position (FP).
FP	Free position	Actuator position when no external force is applied to actuator
TTP	Total travel position	Actuator position when actuator arrives at stop.
RP	Return position	Actuator when a contact point (NO) is off at operating position (OP).
TT	Entire movement	Distance or angle of movement from free position (FP) to total travel position (TTP).

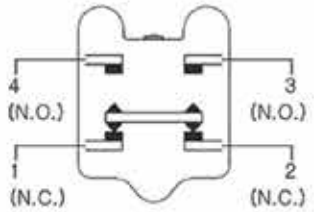
RATINGS

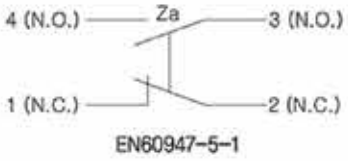
Normal open circuit

Rated Voltage	Non-inductive load				Inductive load			
	Resistance load		Lamp load		Resistance load		Motor load	
	NC	NO	NC	NC	NC	NO	NC	NO
AC125	10	10	3	1.5	6		5	2.5
AC250	10	10	2	1	6		3	1.5
AC480	6	6	1.5	0.8	3		1.5	0.8
AC600	3	1	1	0.5	1.5		1	0.5
DC8	10		6	3	6		6	
DC14	10		6	3	6		6	
DC30	6		4	3	6		6	
DC125	0.8		0.2	0.2	0.8		0.2	
DC250	0.4		0.1	0.1	0.4		0.1	

DPDB Operation

Double-pole, Double-break structure for circuit breaking





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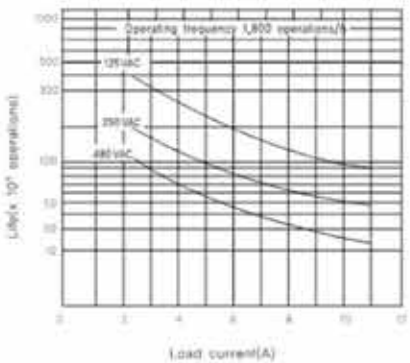
PROPERTY DATA

Electrical durability (cosθ=1)



Rated Voltage (V)	Resistance load (A)
AC 125	0.1
DC 30	

Operational load range: DC5~30V, 0.5~100mA

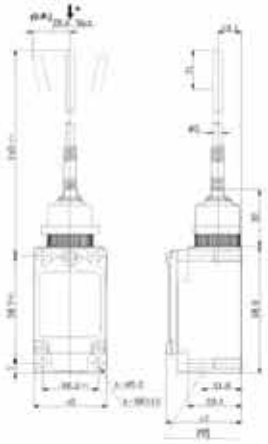
UL, cUL Safety standards, UL508	
Rated Voltage	Rated current
250VAC	10A(resistance load)
125VAC	10A(resistance load)

CHARACTERISTICS

	Actuator		Flexible Rod
Items	Model number		KLNJ KLNJ-A2
External specification	Standard specification		IEC
	Certified specification		CE, certified for electric product safety
Structure	Contact point type		Dual terminal 2 circuit switch
	Load	Standard load	Silver alloy
		Microload	Silver (gold plating)
	Protection structure		IP67(IEC60529), KLD2(IP47)
Electrical properties	Withstand voltage		Between live parts: AC1,000V 60/60Hz for 1minute
			Between dead parts: AC2,000V 50/60Hz for 1 minute
	Isolation resistance		Isolation resistance 100MΩ or more(DC500V isolation resistance gauge)
	Contact resistance (initial value)	Standard load	25mΩ or below
Allowed operating velocity			1 mm/s – 1 m/s
Mechanical performance	Impact resistance		Roller lever : 200 m/s2 of total travel position
			Non-directive actuation: 300 m/s2 of total travel position
			Others: 300 m/s2 free position and total travel position
			(Contact point in free position and total travel position or total travel position
	Vibration-resistance		Double vibration width: 1.5 mm, frequency 10~55Hz, for 2 consecutive hours
			(Others: free position and total travel position)
Durability	Mechanical		10 million operations <plunger type à 5million operations, fork lever lock type à 2million operations>
	Electrical		750,000 operations (when resistance is loaded 250VAC 10A)
	Electrical (microload)		1 million operations
Operating frequency	Mechanical		120operations/min
	Electrical		30operations/min
Environment conditions	Ambient temperature		-10℃ ~ +80℃

KLNJ – A2 Coil spring & Aluminium rod type

KLNJ–A2



KLNJ–A2

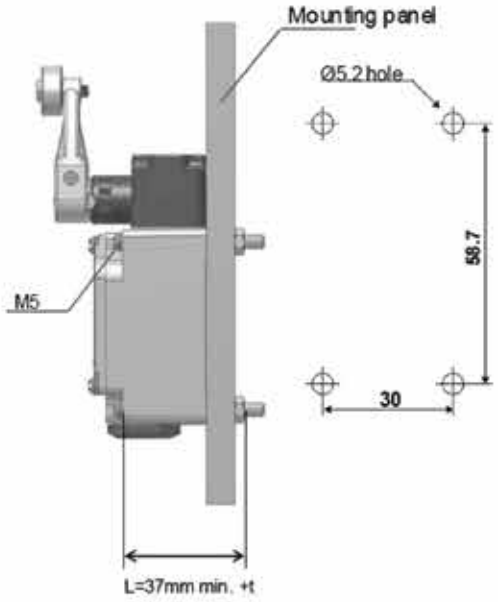
ACTUATION PROPERTY

Model	OF Max.	PT Max.	Material
KLNJ-A2	150g	28.6mm	Body: Aluminium alloy die–casting Head: Aluminium alloy die–casting Roller: Stainless steal Protection degree: IP67

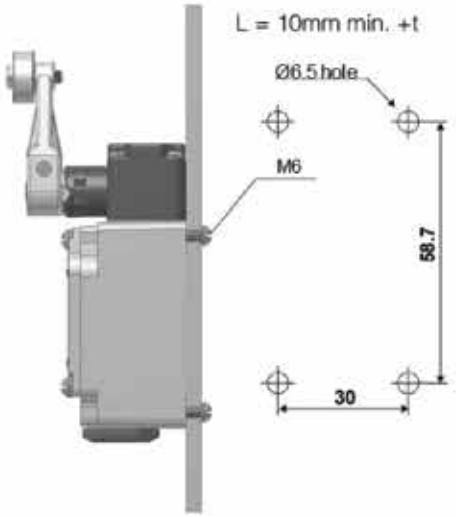
KLNJ–A2 Coil spring aluminium rod	
Non–directional	

Mounting

Front mounting

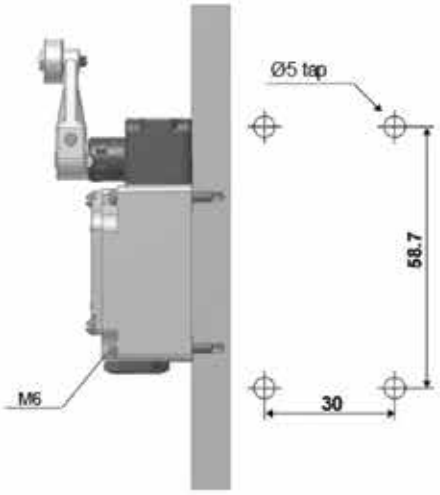


Rear mounting



Tap mounting

To install the Switch, make a mounting panel, as shown in the diagram



L = 29.2mm+Tap depth
Tap depth = 8mm min.

USING THE SWITCHES

Instructions	Applicable actuators	Description
Lever rod length can be adjusted. Lever or rod length can be adjusted by loosening hex bolt.	Adjustable roller lever, Adjustable roller lever,	Rod length can be adjusted by unscrewing nut. 

WIRING METHOD