

# Position and safety switches

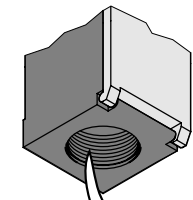
## KB plastic series and KM metal series limit switches dimensions to EN 50047

### Roller lever plunger



KB E1, KB E2  
KM E1, KM E2

KB E3  
KM E3



#### M20 ENTRY

For types with 1/2 NPT entry, add the letter N at the end of the catalog number. E.g. KB E1 S11N

Contacts	Roller material	Catalog number <sup>①</sup>	
		Plastic body	Metal body
1NO+1NC Snap action <sup>②</sup>	Plastic <sup>③</sup>	KB E1 S11	KM E1 S11
	Metal <sup>④</sup>	KB E2 S11	KM E2 S11
	Rubber <sup>⑤</sup>	KB E3 S11	KM E3 S11
2NC Snap action <sup>②</sup>	Plastic <sup>③</sup>	KB E1 S02	KM E1 S02
	Metal <sup>④</sup>	KB E2 S02	KM E2 S02
	Rubber	KB E3 S02	KM E3 S02
1NO+1NC Slow break make before break <sup>⑥</sup>	Plastic <sup>③</sup>	KB E1 A11	KM E1 A11
	Metal <sup>④</sup>	KB E2 A11	KM E2 A11
	Rubber <sup>⑤</sup>	KB E3 A11	KM E3 A11
1NO+1NC Slow break <sup>⑥</sup>	Plastic <sup>③</sup>	KB E1 L11	KM E1 L11
	Metal <sup>④</sup>	KB E2 L11	KM E2 L11
	Rubber <sup>⑤</sup>	KB E3 L11	KM E3 L11
2NC Slow break <sup>⑥</sup>	Plastic <sup>③</sup>	KB E1 L02	KM E1 L02
	Metal <sup>④</sup>	KB E2 L02	KM E2 L02
	Rubber <sup>⑤</sup>	KB E3 L02	KM E3 L02
2NO Slow break	Plastic <sup>③</sup>	KB E1 L20	KM E1 L20
	Metal <sup>④</sup>	KB E2 L20	KM E2 L20
	Rubber <sup>⑤</sup>	KB E3 L20	KM E3 L20
1NO+2NC Slow break <sup>⑥</sup>	Plastic <sup>③</sup>	KB E1 L12	KM E1 L12
	Metal <sup>④</sup>	KB E2 L12	KM E2 L12
	Rubber <sup>⑤</sup>	KB E3 L12	KM E3 L12
2NO+1NC Slow break <sup>⑥</sup>	Plastic <sup>③</sup>	KB E1 L21	KM E1 L21
	Metal <sup>④</sup>	KB E2 L21	KM E2 L21
	Rubber <sup>⑤</sup>	KB E3 L21	KM E3 L21
3NC Slow break <sup>⑥</sup>	Plastic <sup>③</sup>	KB E1 L03	KM E1 L03
	Metal <sup>④</sup>	KB E2 L03	KM E2 L03
	Rubber <sup>⑤</sup>	KB E3 L03	KM E3 L03

① Ø19x5mm = Ø0.75x0.2in

② Ø50x10mm = Ø1.97x0.39in

③ Direct (positive) operating operation ⊕; safety function according to IEC/EN 60947-5-1.

④ Contact Sales & Technical Support for details and pricing.

#### General characteristics

The LOVATO ELECTRIC limit switches have been designed to satisfy requirements comprising quick installation, wiring ease, simple setup, modularity, sturdiness and constant reliability.

The body cover has a captive closing screw and is hinged at the bottom and removable. The innovative locking bayonet mechanism consents to remove and reposition the operating head in the required configuration with no tools. The heads have axial rotation of 45° angles.

The auxiliary contact blocks are removable assuring remarkable wiring simplicity. The heads are made of metal while the body housing of self-extinguishing polymer thermoplastic for the KB types or of aluminum-zinc alloy (zama) for the KM types.

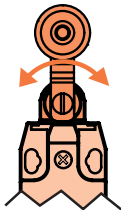
#### Operational characteristics

- Maximum operating rate: 3600 cy/h
- Switching time: 0.5-1.5m/s
- Mechanical life: >10 million cycles
- Rated thermal current Ith: 10A
- UL designation: A600 Q300
- Rated insulation voltage Ui: 690V
- Rated impulse withstand voltage Uimp: 6kV
- Class II insulation
- Contact capacity: <10mΩ
- Short-circuit backup protection:
  - slow-blow fuse: 10A aM maximum admissible size
  - quick fuse: 16A gG maximum admissible size
- Wire connection: Self-releasing screw terminal
- Degree of protection:
  - IP20 for terminals
  - IP65 for body housing
- Operators of aluminum-zinc alloy
- Housing:
  - KB series - Self-extinguishing double-insulation polymer thermoplastic
  - KM series - Aluminum-zinc alloy
- Wire entry: M20 standard supplied; 1/2 NPT available (see the side note for details)
- Operating head fixing: Locking bayonet insert
- Operating force: 27 in oz / 3Ncm
- Lever inclination, 360° adjustment at 15° angle positions
- Operating temperature: -13° to +160°F (-25 to +70°C)
- Storage temperature: -40° to +160°F (-40 to +70°C)
- Pollution degree: 3 (suitable for dirty ambient).

#### Certifications and compliance

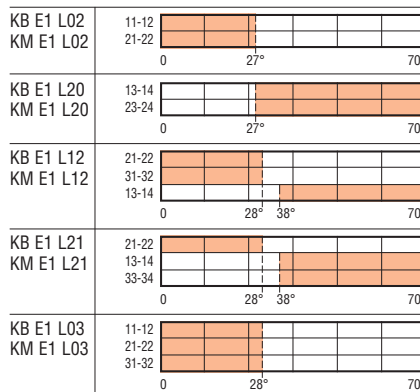
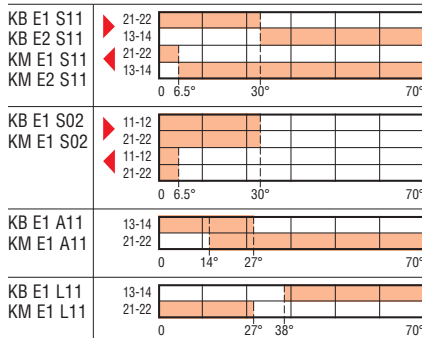
Certifications: cULus pending.

Compliant with standards: IEC/EN 60947-5-1, EN 50047, IEC/EN 60204-1, IEC/EN 60081-1.



- ▶ Forward travel of snap action contacts
- ◀ Return travel of snap action contacts

□ open  
■ closed



To locate additional product specifications and technical drawings go to [www.asi-ez.com](http://www.asi-ez.com)