

KMR4 Series

Micro Miniature Tactile Switch for SMT

4.6 x 2.8 mm, with 2.5 mm Height Actuator



Description

The KMR4 series microminiature SMT top actuated switch has ultra-low current capabilities and is ideal for industrial, medical and automotive applications. It is a long-lasting switch with an excellent tactile feel, even when used in the harshest environments.

Features & Benefits

- Small footprint
- 4 actuation forces
- Excellent tactile feel
- Ultra low current capabilities
- IP40

Applications

- Transportation
- Industrial electronics
- Medical equipment

Specifications

Function	Momentary action
Contact Arrangement	1 make contact = SPST, N.O.
Terminals	Gullwing type for SMT
Tactile Feeling	KMR 4 series with actuation force in 2N - 3N - 4N: $\geq 25\%$ KMR 4 series with actuation force in 1.2N: $\geq 20\%$
Packaging	In reels of 6,000 pieces. External diameter 330 mm \pm 2mm

Electrical Characteristics

	Silver	Gold
Maximum Power	1 VA	0.2 VA
Maximum Voltage	32 VDC	32 VDC
Minimum Voltage	20 mVDC	20 mVDC
Maximum Current	50 mA	10 mA
Minimum Current	1 mA ¹	1 mA ¹
Dielectric Strength	≥ 250 Vrms	
Contact Resistance	≤ 100 m Ω	
Insulation Resistance	≥ 1 G Ω	
Bounce Time	≤ 3 ms	

Environmental Characteristics

Operating Temperature	-40°C to 85°C	-40°C to 125°C
Storage Temperature	-55°C to 85°C	-55°C to 125°C

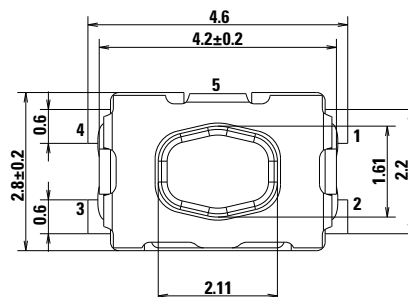
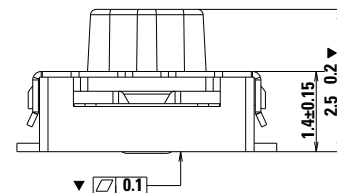
Process

Soldering	Lead free reflow soldering process in accordance with IEC 61760-1.
------------------	--

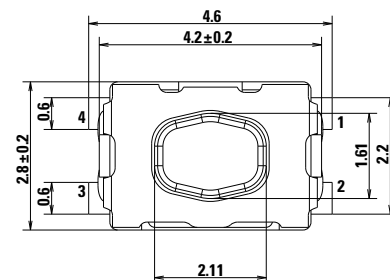
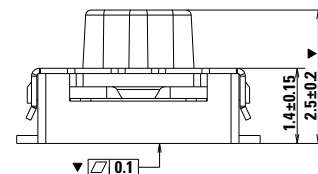
Notes:

1. For ULC version minimum current is 1 μ A at 1.8 VDC
2. Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

G - Ground Pin



NG - No Ground Pin



KMR4 Series

Micro Miniature Tactile Switch for SMT
4.6 x 2.8 mm, with 2.5 mm Height Actuator

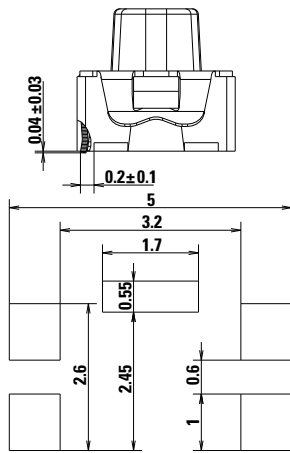


Mechanical Characteristics

Type G and NG	Operation Force N (grs)	Operating Life (cycles)	Travel (mm)
KMR411 LFS, KMR411 ULC LFS	1.2 (120) ± 0.30	100,000	0.20 mm ± 0.1
KMR413 LFG, KMR413 ULC LFG	1.2 (120) ± 0.30	100,000	0.20 mm ± 0.1
KMR421 LFS, KMR421 ULC LFS	2.0 (200) ± 0.50	100,000	0.25 mm ± 0.1
KMR423 LFG, KMR423 ULC LFG	2.0 (200) ± 0.50	100,000	0.25 mm ± 0.1
KMR431 LFS, KMR431 ULC LFS	3.0 (300) ± 0.75	100,000	0.25 mm ± 0.1
KMR432 LFS, KMR432 ULC LFS	3.0 (300) ± 0.75	300,000	0.25 mm ± 0.1
KMR433 LFG, KMR433 ULC LFG	3.0 (300) ± 0.75	100,000	0.25 mm ± 0.1
KMR441 LFS, KMR441 ULC LFS	4.0 (400) ± 1.00	100,000	0.30 mm ± 0.1
KMR442 LFS, KMR442 ULC LFS	4.0 (400) ± 1.00	200,000	0.30 mm ± 0.1
KMR443 LFG, KMR443 ULC LFG	4.0 (400) ± 1.00	100,000	0.30 mm ± 0.1

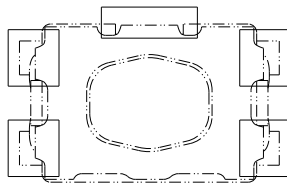
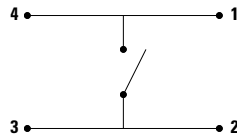
Notes:
1. Silver long life is available in 3N and 4N actuation force. For other versions, please contact Customer Service.

G - Ground Pin

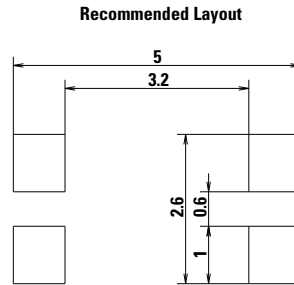


Recommended Layout

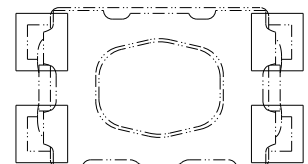
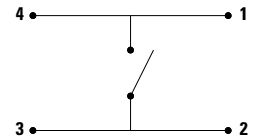
Electrical Diagram



NG - No Ground Pin



Electrical Diagram

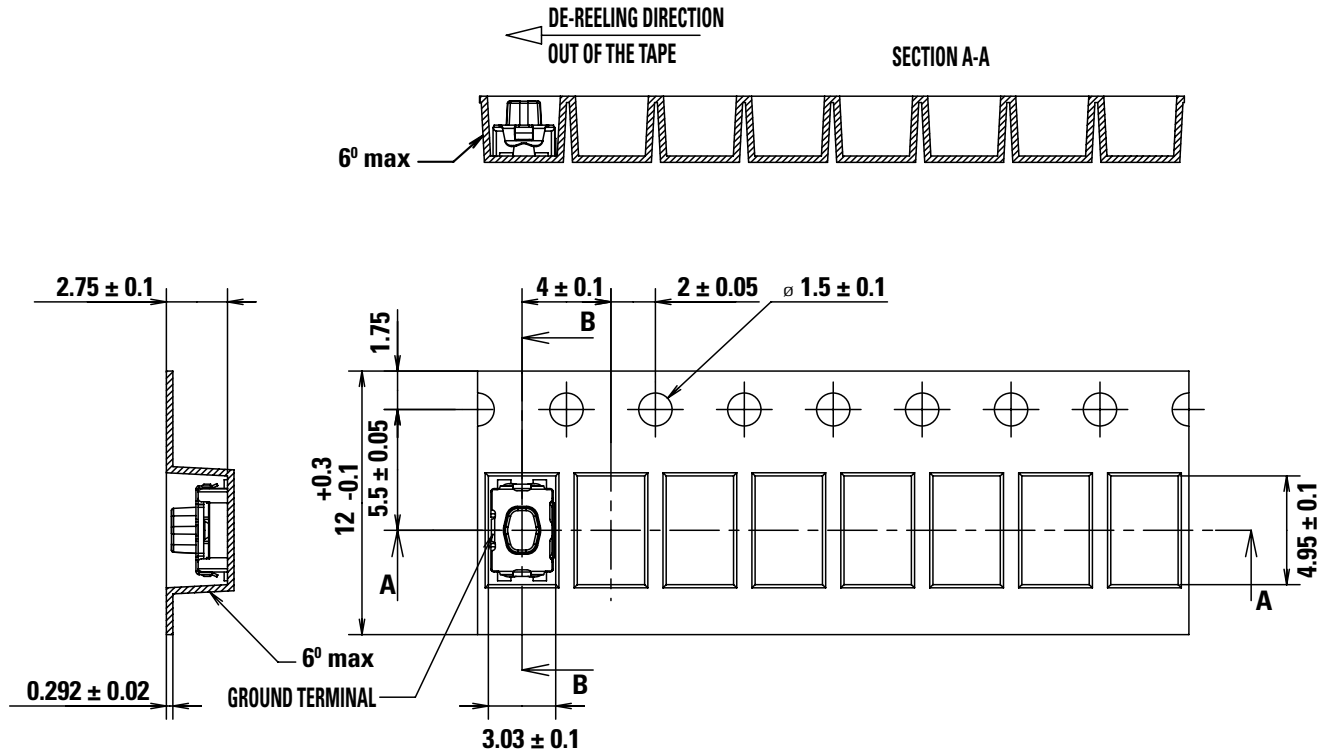


KMR4 Series

Micro Miniature Tactile Switch for SMT
4.6 x 2.8 mm, with 2.5 mm Height Actuator

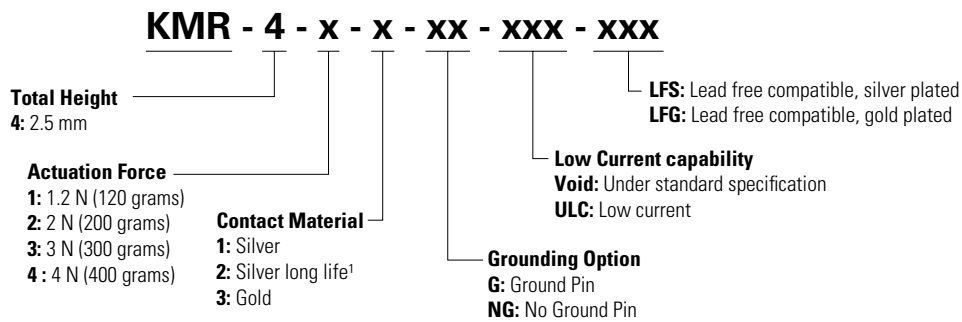


Tape & Reel



Ordering Number

For any part number different from those listed above, please consult your local representative.



Liability Limitation

This datasheet does not provide enough information for applications that require a certain level of quality or safety such as automotive, medical systems, or safety equipment. Please contact customer service for the contractual specification package.

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at <http://www.littelfuse.com/disclaimer-electronics>.