



**THE DATASHEET OF  
KMR431NG LFS**



# 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

<b>Function</b>	Momentary action
<b>Contact Arrangement</b>	1 make contact = SPST, N.O.
<b>Terminals</b>	Gullwing type for SMT
<b>Sealing</b>	IP40 <sup>1</sup>

**Notes:**  
For IP67 versions, please refer to KMR7.

## Electrical Characteristics

	Silver	Gold
<b>Maximum Power</b>	1 VA	0.2 VA
<b>Maximum Voltage</b>	32 VDC	32 VDC
<b>Minimum Voltage</b>	20 mVDC	20 mVDC
<b>Maximum Current</b>	50 mA	10 mA
<b>Minimum Current</b>	1 mA <sup>1</sup>	1 mA <sup>1</sup>
<b>Dielectric Strength</b>	≥ 250 Vrms	
<b>Contact Resistance</b>	≤ 100mΩ	
<b>Insulation Resistance</b>	≥ 1 GΩ	
<b>Bounce Time</b>	≤ 3 ms	

## Environmental Characteristics

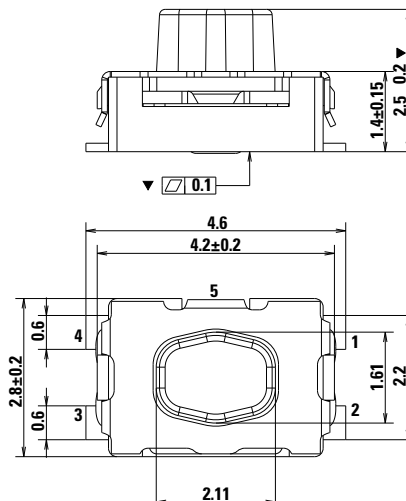
<b>Operating Temperature</b>	-40°C to 85°C	-40°C to 125°C
<b>Storage Temperature</b>	-55°C to 85°C	-55°C to 125°C

## Process

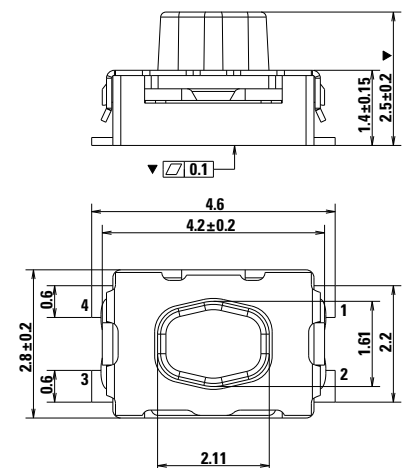
<b>Soldering</b>	Lead free reflow soldering process in accordance with IEC 61760-1.
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**Notes:**  
1. For ULC version minimum current is 1μA at 1.8 VDC  
2. Specifications listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

## G - Ground Pin



## NG - No Ground Pin

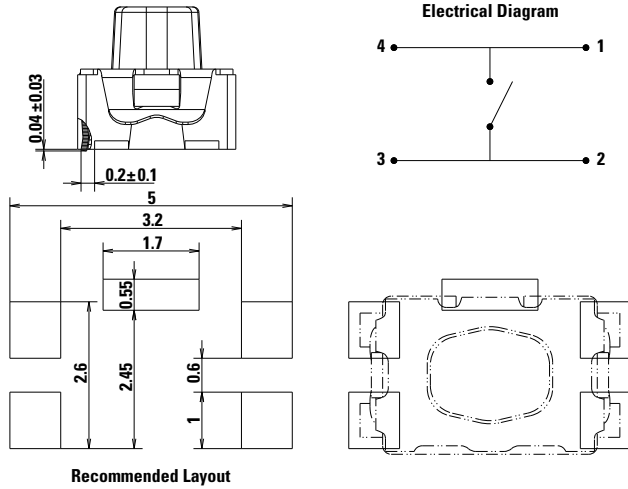


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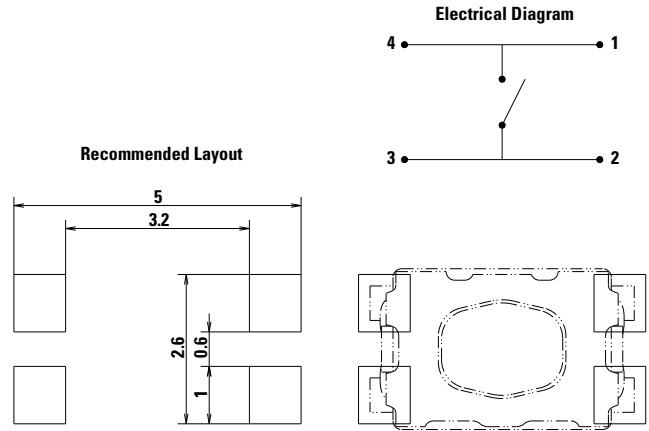
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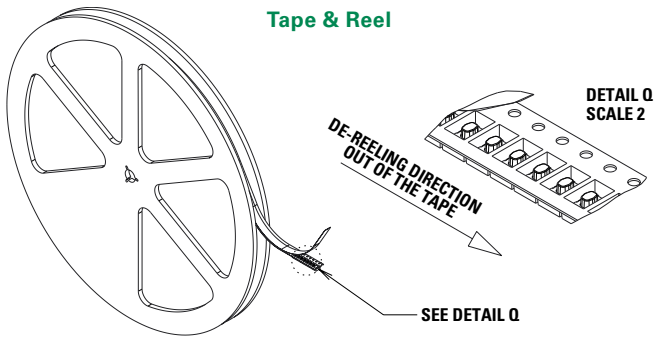
### G - Ground Pin



### NG - No Ground Pin



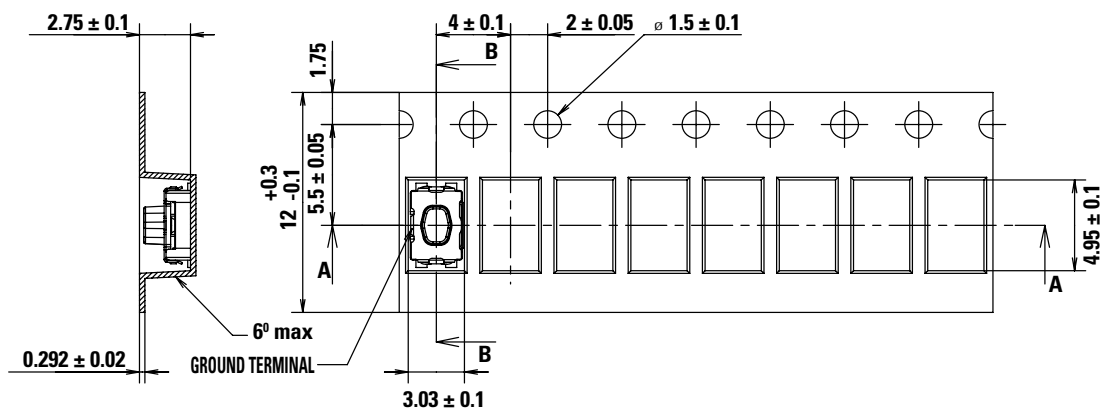
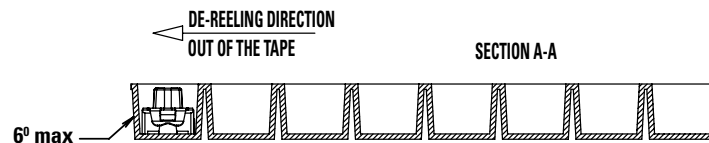
### Tape & Reel



### Packaging Details

Type	Tape & reel
Number of Parts in Packaging	6,000
Other information	Tape and reel per EIA 481, External diameter 330 +/- 2mm
Transport Conditions	According to specification NF H00-060

### Tape & Reel



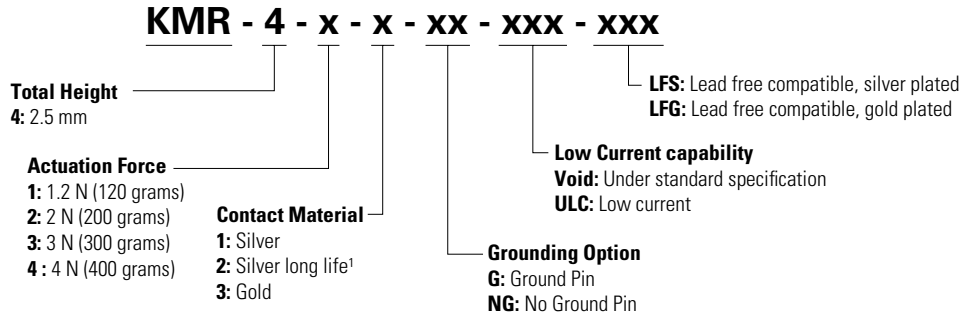
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### Ordering Number

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



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## Micro Miniature Tactile Switch for SMT

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### Mechanical Characteristics

Supply Status	LITTELFUSE Orderable Part Number	Description	Contact & Terminals Plating	Ground Pin	Operating Force Fa (Newtons)	Tactile ratio (Min)	Operating Life (operations)	Electrical Travel (mm)
✓	Y78B41110FP	KMR411G LFS	Silver	Yes	1.2±0.3	Min 20%	100,000	0.2±0.1
✓	Y78B41114FP	KMR411G ULC LFS	Silver	Yes	1.2±0.3	Min 20%	100,000	0.2±0.1
✓	Y78B41124FP	KMR411NG ULC LFS	Silver	No	1.2±0.3	Min 20%	100,000	0.2±0.1
ORO	Y78B41314FP	KMR413G ULC LFG	Gold	Yes	1.2±0.3	Min 20%	100,000	0.2±0.1
ORO	Y78B41324FP	KMR413NG ULC LFG	Gold	No	1.2±0.3	Min 20%	100,000	0.2±0.1
✓	Y78B42110FP	KMR421G LFS	Silver	Yes	2±0.5	Min 25%	100,000	0.25±0.1
✓	Y78B42114FP	KMR421G ULC LFS	Silver	Yes	2±0.5	Min 25%	100,000	0.25±0.1
✓	Y78B42120FP	KMR421NG LFS	Silver	No	2±0.5	Min 25%	100,000	0.25±0.1
✓	Y78B42124FP	KMR421NG ULC LFS	Silver	No	2±0.5	Min 25%	100,000	0.25±0.1
✓	Y78B42310FP	KMR423G LFG	Gold	Yes	2±0.5	Min 25%	100,000	0.25±0.1
✓	Y78B42314FP	KMR423G ULC LFG	Gold	Yes	2±0.5	Min 25%	100,000	0.25±0.1
✓	Y78B42320FP	KMR423NG LFG	Gold	No	2±0.5	Min 25%	100,000	0.25±0.1
✓	Y78B42324FP	KMR423NG ULC LFG	Gold	No	2±0.5	Min 25%	100,000	0.25±0.1
✓	Y78B43110FP	KMR431G LFS	Silver	Yes	3±0.75	Min 25%	100,000	0.3±0.1
✓	Y78B43114FP	KMR431G ULC LFS	Silver	Yes	3±0.75	Min 25%	100,000	0.3±0.1
✓	Y78B43120FP	KMR431NG LFS	Silver	No	3±0.75	Min 25%	100,000	0.3±0.1
✓	Y78B43124FP	KMR431NG ULC LFS	Silver	No	3±0.75	Min 25%	100,000	0.3±0.1
✓	Y78B43125FP	KMR431NG ULC SPD LFS	Silver	No	3.3±0.9	Min 30%	50,000	0.3±0.1
✓	Y78B43210FP	KMR432G LFS	Silver	Yes	3±0.75	Min 25%	300,000	0.3±0.1
✓	Y78B43214FP	KMR432G ULC LFS	Silver	Yes	3±0.75	Min 25%	300,000	0.3±0.1
ORO	Y78B43220FP	KMR432NG LFS	Silver	No	3±0.75	Min 25%	300,000	0.3±0.1
✓	Y78B43224FP	KMR432NG ULC LFS	Silver	No	3±0.75	Min 25%	300,000	0.3±0.1
✓	Y78B43310FP	KMR433G LFG	Gold	Yes	3±0.75	Min 25%	100,000	0.3±0.1
✓	Y78B43314FP	KMR433G ULC LFG	Gold	Yes	3±0.75	Min 25%	100,000	0.3±0.1
✓	Y78B43320FP	KMR433NG LFG	Gold	No	3±0.75	Min 25%	100,000	0.3±0.1
✓	Y78B43324FP	KMR433NG ULC LFG	Gold	No	3±0.75	Min 25%	100,000	0.3±0.1
✓	Y78B44110FP	KMR441G LFS	Silver	Yes	4±1	Min 25%	100,000	0.35±0.1
✓	Y78B44114FP	KMR441G ULC LFS	Silver	Yes	4±1	Min 25%	100,000	0.35±0.1
✓	Y78B44120FP	KMR441NG LFS	Silver	No	4±1	Min 25%	100,000	0.35±0.1
✓	Y78B44124FP	KMR441NG ULC LFS	Silver	No	4±1	Min 25%	100,000	0.35±0.1
✓	Y78B44210FP	KMR442G LFS	Silver	Yes	4±1	Min 25%	200,000	0.35±0.1
✓	Y78B44214FP	KMR442G ULC LFS	Silver	Yes	4±1	Min 25%	200,000	0.35±0.1
✓	Y78B44220FP	KMR442NG LFS	Silver	No	4±1	Min 25%	200,000	0.35±0.1
✓	Y78B44224FP	KMR442NG ULC LFS	Silver	No	4±1	Min 25%	200,000	0.35±0.1
✓	Y78B44310FP	KMR443G LFG	Gold	Yes	4±1	Min 25%	100,000	0.35±0.1
✓	Y78B44314FP	KMR443G ULC LFG	Gold	Yes	4±1	Min 25%	100,000	0.35±0.1
✓	Y78B44320FP	KMR443NG LFG	Gold	No	4±1	Min 25%	100,000	0.35±0.1

**Notes:** Supply status: ✓ Available for ordering;  
 ORO: Available On Request Only. Please contact your Littelfuse representative for details.

### 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.

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 [C&K Components](#) Information

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-  Shortage Management
-  Alternative Solution
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