

Technical Data:

- through-hole or SMD
- 50mA/24VDC
- single pole/momentary
- 10.000.000 operations life time
- IP67 sealing
- temperature range:
low temp: -40/+115°C
high temp:-40/+160°C

STANDARD 3C		VARIABLE HEIGHTS 3E	
Dimensions (Through-hole)	Dimensions (SMD)	Dimensions (Through-hole)	Dimensions (SMD)
PCB layout	PCB layout	PCB layout	PCB layout

HOW TO ORDER

3 C		
Switch	Mounting	L 6 low temp. white
	T through-hole	L 9 low temp. black
	S surface mount	H 9 high temp.

Standard versions:

- 3CTL6
3CTL9
3CTH9
3CSH9
3CSH9R (tape/reel)

3 E				
Switch	Mounting	L 9 low temp.		Standard overall height
	T through-hole	H 9 high temp.		08.0
	S surface mount			09.5
				10.4
				11.0
				12.0
				15.0
Standard versions:				
3ETL9				
3ETH9				
3ESH9				
3ESH9R				

Custom heights:

3E is available in any height from 08.0 to 15.0 mm.
Min. order qty. for custom heights is 2.000 pcs. / A start-up charge will apply.

Ordering example: 3CTL6 and 3ETL9 - 09.5

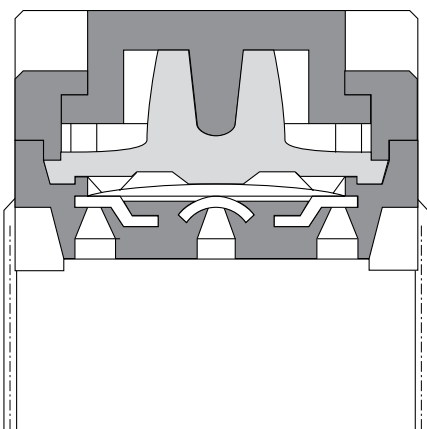
multimec® basic switch modules

Through-hole Version						
3A		3C	3E	3F		
For 1A/1B/1M	w/LED for 1C/1H			For 1D/1K/1N/1P/1S/1T/1U/1V/1X/1GA/1GC	w/LED for 1E/1F/1N/1Q/1R/1S/1X	w/LED for 1K116/1T/1U/1V
Standard Versions						
3ATL6 3ATH9	3ATL600/20/40/80	3CTL6/3CTL9 3CTH9	3ETL9-H* 3ETH9-H*	3FTL6 3FTH9	3FTL600/20/40/80/ 2040/8020/8040	3FTL623/44/88
* 3E available in 6 standard heights: 08.0, 09.5, 10.4, 11.0, 12.0, 15.0 mm Other heights between 08.0 and 15.0 mm are available upon request						
Specials: Gold contacts, quiet version and actuation force other than 3.0N						

Surface Mount Versions			
3A	3C	3E	3F
3ASH9/3ASH9R	3CSH9/3CSH9R	3ESH9/3ESH9R	3FSH9 / 3FSH9R
For 1A/1B/1M			For 1D/1K/1N/1P/1S/1T/1U/1V/1X/1GA/1GC

Right Angle Versions	
3C	3F
3CTL6RAS	3FTL6RAS
	For 1D/1K/1P/1S

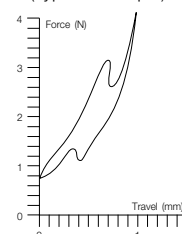
multimec® Cross Section



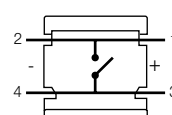
Recommended PCB layout

MULTIMEC top view 	MULTIMEC Surface-mount solder pad 	MULTIMEC Right Angle Version top view
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Operating Force
(Typical example)



Circuit diagram



DIMENSIONS (mm) Unless otherwise specified, all tolerances ± 0.2

multimec® technical specifications

	Low Temperature Versions		High Temperature Versions	
	Silver	Gold	Silver	Gold
Electrical Specifications				
Contact resistance	<30 mΩ - typically 10mΩ			
Insulation resistance	>10MΩ			
Recommended load	0.5-50mA 24VDC	0.5μ-50mA 24VDC	0.5-50mA 24VDC	0.5μ-50mA 24VDC
Contact bounce	<2mS - typically 0.5mS			
Mechanical Specifications				
Standard actuation force (switch)	3.0N typ.			
Max. actuation force without cap	100N for 10 sec.			
Key travel (switch)	1 mm			
Life time (switch)	>10.000.000 cycles			
Temperature Range				
Working temperature	Min. -40°C Max. +115°C		Min. -40°C Max. +160°C	
Storage temperature	Min. -40°C Max. +115°C		Min. -40°C Max. +160°C	
Soldering IEC 68-2-20	Wave -max. 260°C for max. 10 sec., please refer to usage guidelines		Infrared, vapour phase, wave - max. 260°C for max. 30 sec.	
	Soldering iron - max. 350°C for max. 3 sec. Flux tight.		Soldering iron - max. 350°C for max. 3 sec. Flux tight.	
Environmental Endurance IEC-68-2-3				
Temperature	+40°C			
Humidity	93% RH			
Duration	56 Days			
Temperature Cycling IEC 68-2-14				
Temperature limit	Min. -55°C - Max. +85°C			
Number of cycles	200			
Exposure time at each temperature	10 min.			
Recovery time before measurements	16 hrs.			
Sealing IEC 529	IP-67			
Cleaning	Standard methods such as freon and water			
Material Specifications - Switches				
Housing	PBT UL94VO		PPS UL94VO	
Actuator	PBT UL94VO		PPS UL94VO	
Sealing + spring	Silicone rubber			
Contact spring	Stainless steel + 3μAg	Stainless steel + 3μAg + 1μAu	Stainless steel + 3μAg	Stainless steel + 3μAg + 1μAu
Fixed Contacts	SnCu + 2μNi + 3μAg	SnCu + 2μNi + 3μAg+1μAu	SnCu + 2μNi + 3μAg	SnCu + 2μNi + 3μAg + 1μAu
Terminals	SnCu + 2μNi + 3μSnPb	SnCu + 2μNi + 3μSnPb	SnCu + 2μNi + 3μSnPb	SnCu + 2μNi + 3μSnPb
Material Specifications - Caps & Bezels				
Material	Parts	Temp limit	UL rating	
ABS Standard	Standard parts except the below mentioned	Max 65°C	UL94HB	
Polycarbonate	All lenses	Max. 85°C	UL94V1	
LCP	Actuator of 3E	Max. 160°C	UL94VO	
PPS	1S, 2S	Max. 160°C	UL94VO	
Polyamide	Actuator of Varimec , 1GA/ 1GC	Max. 160°C	UL94VO	
Legends Adhesion	ISO Class.: 1/ ASTM Class.: 4B DIN EN ISO 2409			

Specifications are subject to change without notice