multimec® technical specifications

RoHS Compatible

	3A-3C-3E-3F Low Temperature Versions		3A-3C-3E-3F High Temperature Versions	
	Silver	**Gold**	**Silver**	**Gold**
Electrical Specifications				
Contact resistance	<30m Ω - typ. 10m Ω		<30m Ω - typ. 10m Ω	
Insulation resistance	>10M Ω		>10M Ω	
Recommended load	0.5-50mA 24VDC	0.5µ-50mA 24VDC	0.5-50mA 24VDC	0.5µ-50mA 24VDC
Contact bounce	<2mS - typically 0.5mS		<2mS - typically 0.5mS	
Mechanical Specifications				
Standard actuation force (switch)	3.0N typ.		3.0N typ.	
Max. actuation force without cap	100N for 10 sec.		100N for 10 sec.	
Key travel (switch)	1 mm		1 mm	
Life time (switch)	>10.000.000 cycles		>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. Soldering iron - max. 350°C for max. 3 sec. Flux tight.		Infrared, vapour phase, wave - max. 240°C for max. 40 sec. or max. 260°C for max. 30 sec. Soldering iron - max. 350°C for max. 3 sec. Flux tight.	
Environmental Endurance IEC 68-2-3				
Temperature	+40°C		+40°C	
Humidity	93% RH		93% RH	
Duration	56 Days		56 Days	
Temperature Cycling IEC 68-2-14				
Temperature limit	Min. -55°C - Max. +85°C		Min. -55°C - Max. +85°C	
Number of cycles	200		200	
Exposure time at each temperature	10 min.		10 min.	
Recovery time before measurements	16 hrs.		16 hrs.	
Sealing IEC 529	IP-67		IP-67	
Cleaning	Standard methods - see usage guidelines		Standard methods - see usage guidelines	
Vibration Test IEC 68-2-6				
Cycles				
Cycles time				
Material Specifications - Switches				
Housing	PBT UL94VO		PPS UL94VO	
Actuator	PBT UL94VO		PPS UL94VO	
Sealing + spring	Silicone rubber		Silicone rubber	
Contact spring	Stainless steel + 3µAg	Stainless steel + 1µAu	Stainless steel + 3µAg	Stainless steel + 1µAu
Fixed contacts	SnCu + 2µNI + 3µAg	SnCu + 2µNI + 1µAu	SnCu + 2µNI + 3µAg	SnCu + 2µNI + 1µAu
Terminals	SnCu + 2µNI + 3µSn100	SnCu + 2µNI + 3µSn100	SnCu + 2µNI + 3µSn100	

Material Specifications - Caps & Bezels		
Material	**Parts**	**Temp limit**
ABS	1A, 1B, 1C, 1D, 1E, 1F, 1H, 1K, 1M, 1N, 1P, 1Q, 1R, 1T, 1U, 1V, 1WA, 1WD, 1WP, 1X, 1ZA, 1ZB, 1ZC.	Max. 65°C
Polycarbonate	All lenses, 3E coloured actuators	Max. 85°C
LCP	Black actuator of 3E	Max. 160°C
PPS	1S, 2S, 1GA/1GC	Max. 160°C
Polyamide	Actuator of Varimec™	Max. 160°C
Legends Adhesion	ISO Class: 1/ASTM Class: 4B DIN EN ISO 2409	

* LED max. working temperature

Specifications are subject to change without notice.

For updates of products and/or changes of specifications please see **www.mec.dk**