

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
- actuator:
 - in LCP: -40/+160°C
 - in polycarbonate: -40/+85°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	<input type="checkbox"/>	<input type="checkbox"/>
Switch	Mounting	L 6 low temp. white
	T through-hole	L 9 low temp. black
	S surface mount	H 9 high temp.

3 E	<input type="checkbox"/>	<input type="checkbox"/>	9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Switch	Mounting	L low temp.	Black				Standard overall height
	T through-hole	H high temp.	Actuator made of LCP				08.0
	S surface mount						09.5
							10.4
							11.0
							12.0
							15.0

3 E	T	L	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Switch	Mounting	L low temp.	20 blue				Standard overall height
	T through-hole		23 grey				08.0
			24 yellow				09.5
			28 red				10.4
			29 black				11.0
			Actuator made of polycarbonate				12.0
							15.0

Switch and 3E actuator can be delivered unassembled.
 The actuators made of polycarbonate can also be used for high temperature switches, however they must be mounted after soldering and the temp. range will be reduced to 85°C.

Ordering example: 3CTL6 and 3ETL9-09.5 or 3ETL23-08.0

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

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				
Parts				
ABS	1A, 1B, 1C, 1D, 1E, 1F, 1H, 1K, 1M, 1N, 1P, 1Q, 1R, 1T, 1U, 1V, 1WA, 1WD, 1WP, 1X, 1ZA, 1ZB, 1ZC.		Temp limit 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.

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