PRODUCT SPECIFICATION

CCM02-MKI - ROHS

Ref./ PS-CCM02-MKI-1

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Approvals:

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Note

This specification, attached documents and attached drawings cannot be communicated to anybody without written agreement of C&K.

Revision record:

Revision	Date	Comments
Issue 1	May 2nd , 2006	Creation
Issue 1 – Rev. A	August 8th , 2007	Update : • Soldering process • Solderability : temperature & spec reference *(according to ECR 628)* • Resistance to fluids : comment added *(according to ECR 1186)*
Issue 1 – Rev. B	September 4th , 2008	Update : • UL data suppressed *(according to ECR 2324)* • Reference of test specifications updated *(according to ECR 2446)*

SUMMARY

Preliminary / versions covered by this specification

VERSIONS COVERED BY THIS SPECIFICATION

Reference	Drawing N°	Cts number	Switch
CCM02-1NO-3 RoHS	CU 030288Y0207	2 x 4 cts	NO (normally open) Dust sealed switch
CCM02-1NO-32 RoHS	CU 030288Y0209	2 x 4 cts	NO (normally open) Dust sealed switch
CCM02-2NO-32 RoHS	CU 030288Y0215	2 x 8 cts	NO (normally open) Dust sealed switch
CCM02-0NO-503 RoHS	CU 030288Y0503	2 x 3 cts	NO (normally open) Dust sealed switch

1 - Description

Product group : CCM02

Product Sub Family : Mk1

ROHS Compliance

Card type : Full-sized card

Contact type : Landing

Contact plating : Selective gold

Contacts number : see table p. 4

Terminal type : Thru-hole

Card end travel switch : see table p. 4

Generic specification (C&K) : Proc. essai 20

2 – Physical data	
Mass	6 g ± 2.0
Dimensions & lay out	According to drawing : see table page 4
3 – Using temperatures	
Operating temperatures	- 40 °C / + 85 °C
Storage temperatures	- 40 °C / + 85 °C
4 - Electrical data	
Voltage / ct	≤ 5 Vdc
Current / ct	≤ 10 mA
Contact resistance	≤ 100 mΩ
Voltage proof	≥ 750 Vrms
Insulation resistance	Initial measurement ≥ 1000 MΩ (100 VDC) After damp heat ≥ 1 MΩ recovery time : 4 hours After damp heat ≥ 200 MΩ recovery time : 24 hours
Card end travel switch characteristics :	
- Max power	0.2 VA
- Max voltage	30 Vdc
- Min/Max current	50 µA min / 10 mA max
- Bounces	≤ 0.5 ms
- Voltage proof	≥ 750Vrms between signal contact / switch contacts ≥ 250Vrms between open contacts of the switch
- Insulation resistance	Initial measurement ≥ 1000 MΩ (100 VDC) After damp heat ≥ 1 MΩ recovery time : 4 hours After damp heat ≥ 200 MΩ recovery time : 24 hours between signal contact / switch contacts & between open contacts of the switch
- Contact resistance	≤ 100 mΩ
Card end travel switch sequence	Card end travel switch activates when the sliding card is 1.0 mm from the card stop.
5 – Mechanical data	
Card insertion force	10 N max
Card withdrawal force	1N min / 10 N max
Contact force (end travel switch)	0.8 N max to activate the switch 1.8 N max for complete depression
6 - Additional data : storage and handling environment	
Marking & Traceability	Designation : according to drawing Date code : year / week
Packaging conditions	30 samples per tray / 10 trays per box
Transport conditions	Sea-air-land / World wide / High ≤ 5 m 30°C / 85% HR According to H00-060
7 - Additional data : process environment	
Soldering process	Single or double wave soldering process
Solder heat resistance	260°C / 5 sec. According to IEC 60068-44
Static load (transverse) (CCM / PCB)	10N / 1 mn / 4 directions According to IEC 512-5 test 8a/8b

Terminal robustness	1 bend / 45° / forward & back According to IEC 60068-2-21 test Ub method 1
Contact retention in insert	2 N / 10sec./ displacement < 0.3 mm According to IEC 512-8 test 15a
Solderability (wetting balance)	235°C According to IEC 60068-2-69
Dust sealed test (only for switch)	Dust test / IP5x According to IEC 60529:1989/A1:1999
Resistance to fluids	The product is not compatible with washing process.
8 – Additional data : operating environment	
Operating life	≥ 100 000 cycles
Vibration	10-500 Hz / 50 m/s² / 3 axis / 2 hours per axis No discontinuity > 1 µs According to IEC 60068-2-6.
Mechanical shock	500 m/s² / ½ sinusoidal / 11 ms 3 shocks in the 2 directions of the 3 axis No discontinuity > 1 µs According to IEC 60068-2-27.
Rapid change of temperature	100 cycles / - 40°C / + 85°C According to IEC60068-2-14, test Nb
Climatic sequence	Dry heat: 85°C / 16 hours Damp heat: 1 cycle 24hours 55°C & 93% HR Cold: -40°C / 2 hours Damp heat: 1 cycle 24hours 55°C & 93% HR According to IEC 60068-2-61, test Z/ABDM
Dry heat storage	85°C / 250 hours According to IEC 60068-2-2 , test Bb.
Damp heat storage	40°C / 93% HR / 10 days According to IEC 60068-2-78 test Cab
Corrosion	96 hours / salt spray According to IEC 60068-2-11, test Ka.
The environmental tests can be cumulative according to the qualification file	
9 - Additional data : applicable norms	
Legal norm (EHS)	ITT procedure
Warranty period	1 year
10– Qualification Plan	
According to PROC-20	