## CCM02 MK II



EMV<sup>™</sup> compatible

The CCM02 MK II connectors with landing contacts are dedicated for applications where the reader usage is high and the life span of the card is a key consideration. A connector with contacts which land on the card, rather than slide over it, should be specified so as to minimize card wear. The CCM02 has been redesigned to give an even higher performance in a compact, affordable package.

## Features

- 500,000 card insertion cycles.
- The contacts do not touch the card until it is almost fully inserted – A minimal wiping action removes any non-conductive material.
- The connector has been designed to give a positive indication once the card has been fully inserted.
- The reduced size of the contact base saves PCB space, making the connector more stable during surface mounting, and creates an air gap between the contacts and card entry slot, which reduces the risk of an electrostatic transfer to the PCB.
- For added reliability, the integrated card end-travel switch, which is normally open, is sealed against dust and grit.
- By using an inlay finish in the contact area, the life of the precious metal is extended by more than 10 times that of standard gold plating.
- The contact area is spooned to reduce the risk of accidental (or deliberate) damage and to optimize the electrical connection with the card.
- Snap-locks underneath the molding position and hold the connector on the PCB, and give additional support to the contact terminals.
- The plastic moldings are made from a high temperature thermoplastic suited for infrared and convection soldering processes.

EMV<sup>™</sup> is a trademark owned by EMVCoLLC.



Construction				
Contacts			Copper alloy	
Plating			Contact area : Gold allov inlav	
5			Terminals: Tin lead (2µ min)	
Moldings			High temp. thermoplastic UL 94V-0 rated	
Spring			Stainless steel	
Card detection switch actuator			Stainless steel	
Mechanical Da	ta			
Number of Contacts			8	
Mechanical life			500,000 cycles min	
Card insertion force			10 N max	
Card extraction force			1 N min / 10 N max	
Contact force			0.25 N min / 0.5 N max	
Card detection switch actuation force			actuates when card is 1,0 mm from card stop) 1.8 N max for complete depression	
Vibration			Frequency 10 to 500 Hz. Acceleration 50m/s Duration 6 hours - amplitude 0,35 mm Max electrical discontinuity 1µs	
Shock			Peak value 500 m/s <sup>2</sup> – Duration 11 ms 3 shocks in each direction of each axis Max electrical discontinuity 1 µs	
Contact Electri	cal Data			
Insulation resistance			1,000 MΩ min	
Resistance			100 mΩ max	
Current rating			10 µA min / 1 A max	
Dielectric strength			750 Vrms min	
Switch Electric	al Data			
Card detection switch			Normally open	
Contact resistance			100 mΩ max	
Dielectric strength			250 Vrms min	
Current rating			1 mA min / 10 mA max	
Maximum power			0.2 VA	
Environmental	Data			
Operating temperature			-40°C to +85°C	
Soldering temperature			Temperature/time profile acc. to CECC00802	
			para. 6.1, Fig. 3 with peak temperature 250°C	
Damp heat			IEC 512 test number 11c (10 days)	
Salt mist			IEC 512 test number 11f (96 hours)	
Card detection switch			Sealed IP 54	
Ordering Code	)			
Part Number	Number of Contacts	Termination Tails Design	PCB Locating	Packaging Multiple
CCM02-2503	8	Through Hole	4 Board Lock (PCB 1.6 mm thick)	300
CCM02-2504	8	SMT	4 Board Lock (PCB 1.6 mm thick)	300
CCM02-2508	8	SMT	2 Pegs	300
CCM02-2511	8	Through Hole	4 Pegs	300

CCM02-2766
Packaging

CCM02-2512

CCM02-2758

CCM02-2763

CCM02-2765

30 per tray, 10 trays per box.

Cannon

Dimensions are shown in mm Dimensions subject to change

300

300

300

300

300

4 Pegs

2 Pegs (without cover)

4 Board Lock + 2 Pegs

4 Board Lock (PCB 1mm thick)

4 Board Lock (PCB 1mm thick)

8

8

8

8

8

SMT

SMT

SMT

Through Hole

SMT

## **Dimensional Drawings**



PCB Layout





Cannon

Dimensions are shown in mm Dimensions subject to change