

# CCM01 MK II



EMV™ compatible

The CCM01 MK II connectors with fixed contacts have been developed for applications where a landing contact mechanism is not required but performance and reliability are still key considerations.

## Features

- Available with 8 contacts which are designed to give a consistently reliable normal force over the life of the connector.
- For added reliability, the card detection switch (which is normally open) is sealed against dust and debris.
- Available with through-hole or surface mount contact termination and its light-weight design means that the connector can be automatically pick-and-placed.
- The moldings are made from high temperature thermoplastics suited for infrared and convection soldering processes.
- Plastic springs in the cover give a positive feel as the card is fully inserted. In case of special version with low card insertions and withdrawal, then the CCM connector is supplied without this spring effect.
- The reduced size of the contact base saves PCB space, making the connector more stable during soldering. This creates an air gap between the contacts and card entry slot which reduces the risk of an electrostatic transfer to the PCB.
- 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.
- A chamfered opening to the card entry slot improves the card guidance into the connector.
- The contact area is spooned to reduce the risk of accidental (or deliberate) damage and to optimize the electrical connection with the card.
- Robustly formed printed circuit tails allow a coplanarity of  $\pm 0.05$  mm to be maintained.

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Construction	
Contacts	Copper alloy
Plating	Contact area : Gold alloy inlay Terminals : Tin lead (2 $\mu$ min)
Moldings	High temp. thermoplastic UL 94V-0 rated
Card detection switch	Stainless steel and copper alloy

Mechanical Data	
Number of Contacts	8
Mechanical life	100,000 cycles min
Card insertion force	10 N max
Card extraction force	1 N min / 10 N max (4N max for CCM01-2253, 2255)
Contact force	0.25 N min / 0.50 N max
Card detection switch actuation force	0.8 N max for actuation (end travel switch actuates when card is 0,9 mm from card stop); 1.8 N max for complete depression
Vibration	Frequency 10 to 500 Hz. Acceleration 50m/s <sup>2</sup> Duration 6 hours - amplitude 0,35 mm; Max electrical discontinuity 1 $\mu$ s
Shock	Peak value 500 m/s <sup>2</sup> - Duration 11 ms 3 shocks in each direction of each axis; Max electrical discontinuity 1 $\mu$ s

Contact Electrical Data	
Insulation resistance	1,000 M $\Omega$ min
Resistance	100 m $\Omega$ max
Current rating	10 $\mu$ A min / 1 A max
Dielectric strength	750 Vrms min

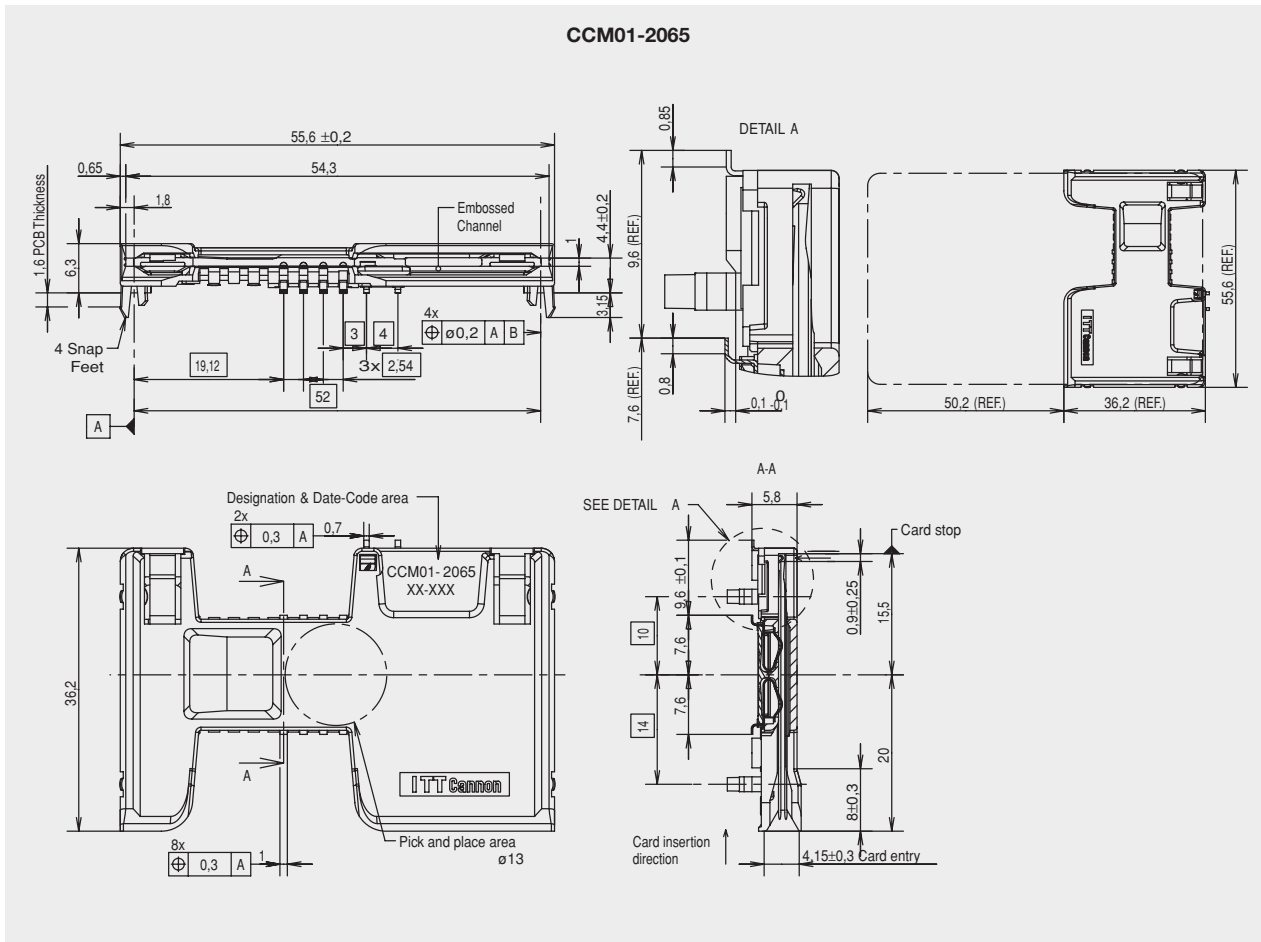
Switch Electrical Data	
Card detection switch	Normally open
Contact resistance	100 m $\Omega$ max
Dielectric strength	250 Vrms min
Current rating	1 mA min / 10 mA max
Maximum power	0.2 VA

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 against dust

Ordering Code				
Part Number	Number of Contacts	Termination Tail Design	Retention Force	Packaging Multiple
CCM01-2064	8	THT w/board lock	<10N	300
CCM01-2065	8	SMT w/board lock	<10N	300
CCM01-2251	8	SMT	<10N	300
CCM01-2253	8	SMT	<4N	300
CCM01-2255	8	Through-hole	<4N	300

Packaging
30 per tray, 10 trays per box.

## Dimensional Drawings



## PCB Layout

