# 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 ± 0.05 mm to be maintained.

EMV™ is a trademark owned by EMVCoLLC.

| Construction | |
|---|---|
| Contacts | Copper alloy |
| Plating | Contact area : Gold alloy inlay<br>Terminals : Tin lead (2µ 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/s² Duration 6 hours - amplitude 0,35 mm; Max electrical discontinuity 1µs |
| Shock | Peak value 500 m/s² – Duration 11 ms 3 shocks in each direction of each axis; Max electrical discontinuity 1 µs |

| Contact Electrical 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 Electrical 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 against dust |

### Ordering Code

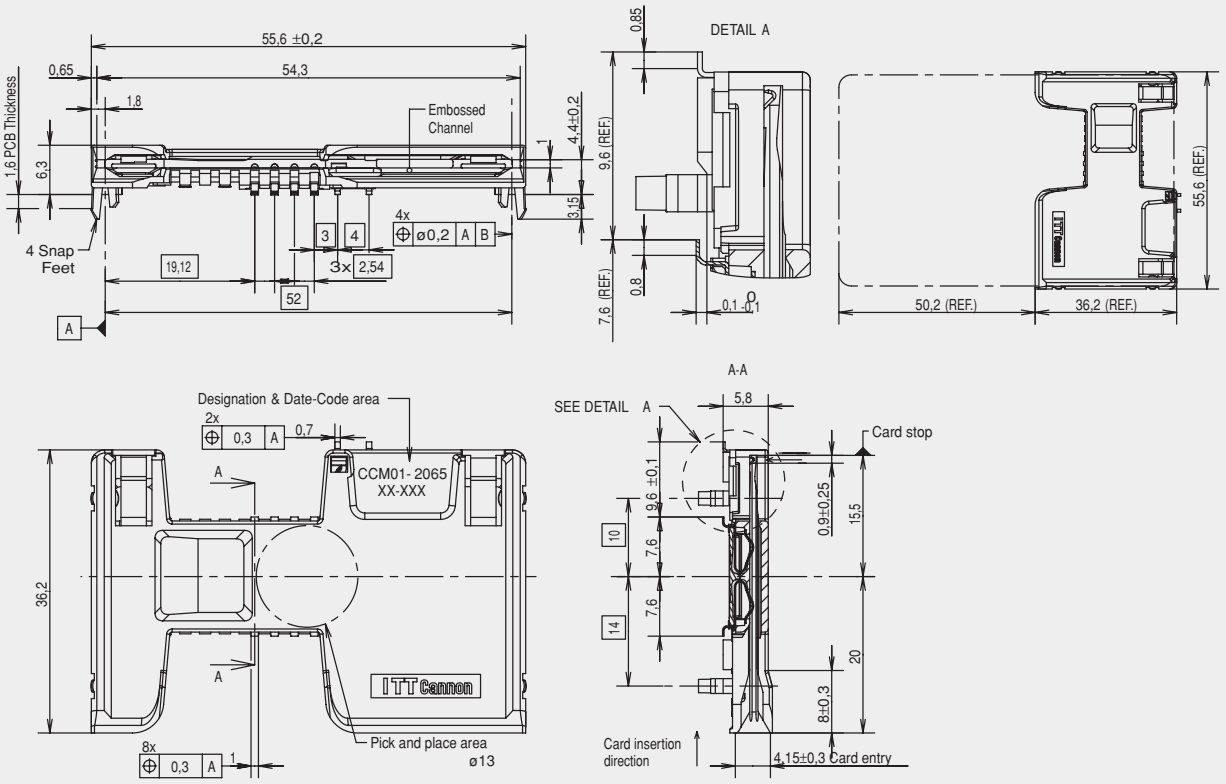
| Part Number | Number of Contacts | Termination Tail Design | Retention Force | Packaging Multiple |
|---|---|---|---|---|
| CCM01-2064 | 8 | THT w/board lock | <10N | 300 |
| CCM01-2065 | 8 | SMT w/board lock | <10N | 300 |
| CCM01-2251 | 8 | SMT | <10N | 300 |
| CCM01-2253 | 8 | SMT | <4N | 300 |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

### Packaging

30 per tray, 10 trays per box.

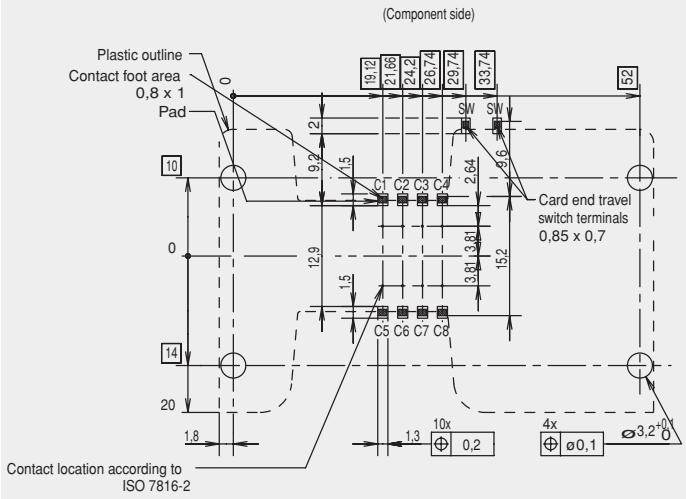
## Dimensional Drawings

**CCM01-2065**




## PCB Layout

**CCM01-2065 (8 contacts SMT with board lock)**




Drawings shown for reference only. For other part numbers please consult your local Cannon Customer Service Center.

Unless otherwise stated, tolerances are ± 0,10 mm