

CCM04 MK III Miniature Connectors



Introducing a new range of CCM04 connectors designed to interface with either full or SIM/SAM smart cards and designed to minimize space usage on the PCB .

Features

- Available with 6 or 8 contacts.
- The contact area is spooned to reduce the risk of accidental (or deliberate) damage and to optimize the electrical connection with the card.
- The insulators, molded from high temperature thermoplastic, are suited for infrared and convection soldering processes.
- With tape and reel packaging as standard, the connectors are designed to be automatically pick and placed.

Construction

Insulator	High temperature thermoplastic UL 94V-0
Contacts	Copper Alloy
Contact finish	Gold over nickel
PC Tail plating	Tin lead (2 µm min)

Mechanical Data

Mechanical life	50,000 cycles minimum
Contact force	0.25 N min / 0.5 N max
Contact travel	0,75mm

Electrical Contacts Data

Insulation resistance	1000 MΩ min
Contact resistance max	100 mΩ max
Switching current	10 µA min / 1 A max
Dielectric strength	500 Vrms min

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
Salt mist	IEC 512 test number 11f (96 days)
Damp heat	IEC 512 test number 11c (10 days)

Packaging

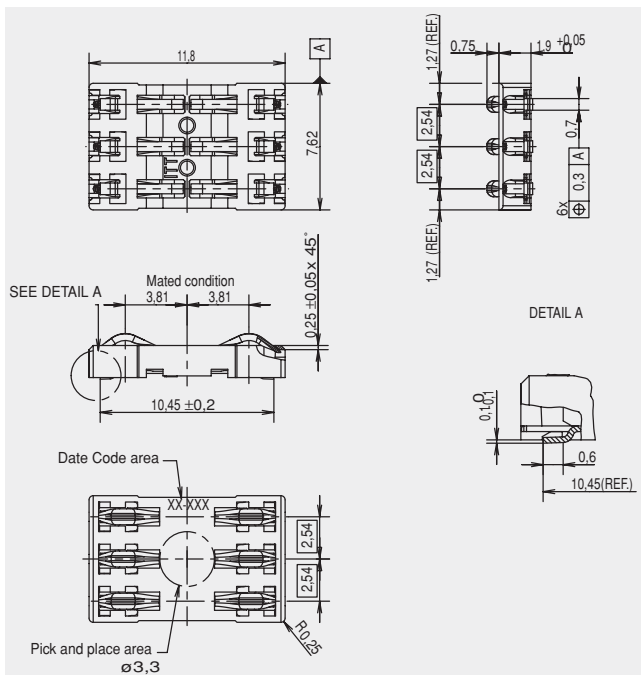
8 reels per box. See part number table for other packaging details.

CCM04 MK III

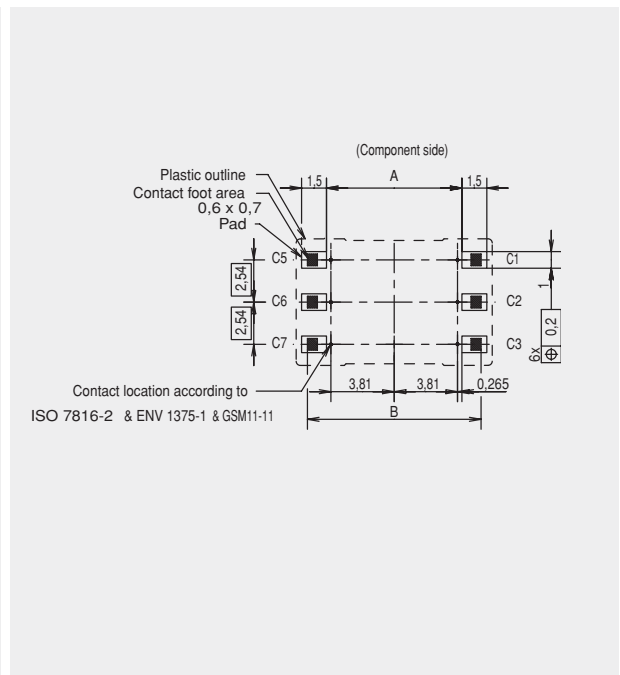
6 Contacts Versions

Part Number	Total Height	Total Length	Terminal Design	Quantity per Reel	Packaging Code	Dimension A	Dimension B
CCM04-5137	1,90	11,8	SMT IN	2400	R242	8,15	10,45
CCM04-5111	1,90	14,3	SMT OUT	2400	R242	12,85	15,15
CCM04-5116	2,10	11,8	SMT IN	1900	R192	8,35	10,65
CCM04-5112	2,10	14,3	SMT OUT	1900	R192	11,95	14,25
CCM04-5120	2,40	14,3	SMT OUT	1900	R192	11,95	14,25
CCM04-5106	2,50	11,8	SMT IN	1900	R192	8,85	11,15
CCM04-5121	2,65	14,3	SMT OUT	1900	R192	11,95	14,25
CCM04-5115	2,80	11,8	SMT IN	1900	R192	8,65	10,95
CCM04-5122	2,90	14,3	SMT OUT	1600	R162	11,95	14,25
CCM04-5107	3,15	11,8	SMT IN	1900	R192	8,85	11,15

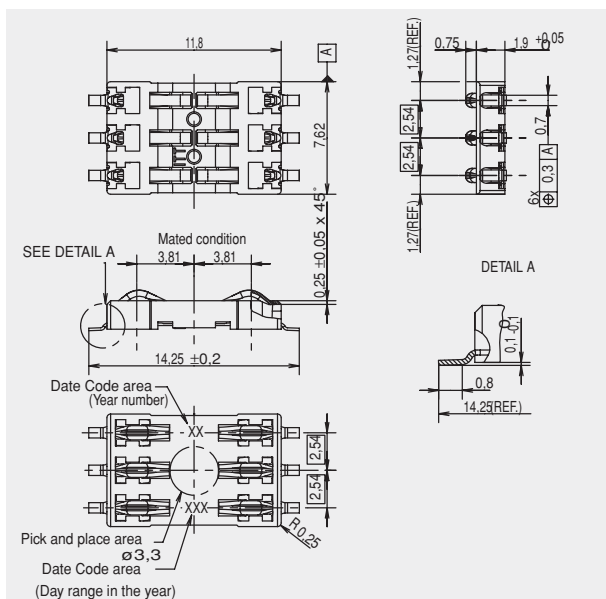
2 x 3 contacts SMT IN - Dimensional Drawings



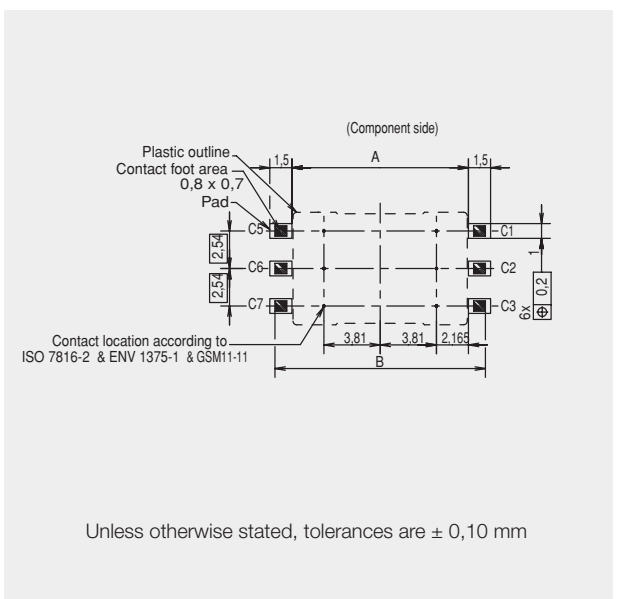
PCB Layout



2 x 3 contacts SMT OUT - Dimensional Drawings



PCB Layout



Unless otherwise stated, tolerances are ± 0,10 mm

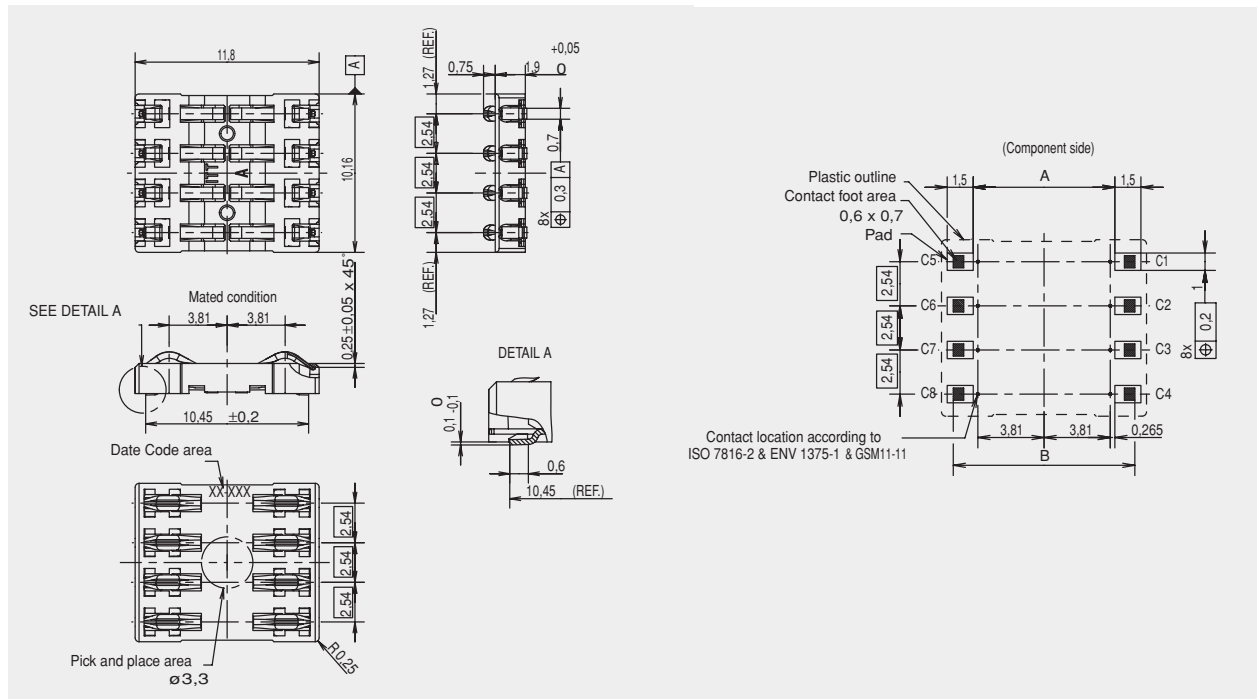
CCM04 MK III

8 Contacts Versions

Part Number	Total Height	Total Length	Terminal Design	Quantity per Reel	Packaging Code	Dimension A	Dimension B
CCM04-5123	1,90	11,8	SMT IN	2400	R242	8,15	10,45
CCM04-5129	1,90	14,3	SMT OUT	2400	R242	11,95	14,25
CCM04-5113	2,10	11,8	SMT IN	1900	R192	8,35	10,65
CCM04-5130	2,10	14,3	SMT OUT	1900	R192	11,95	14,25
CCM04-5131	2,40	14,3	SMT OUT	1900	R192	11,95	14,25
CCM04-5125	2,50	11,8	SMT IN	1900	R192	8,85	11,15
CCM04-5132	2,65	14,3	SMT OUT	1900	R192	11,95	14,25
CCM04-5127	2,80	11,8	SMT IN	1900	R192	8,65	10,95

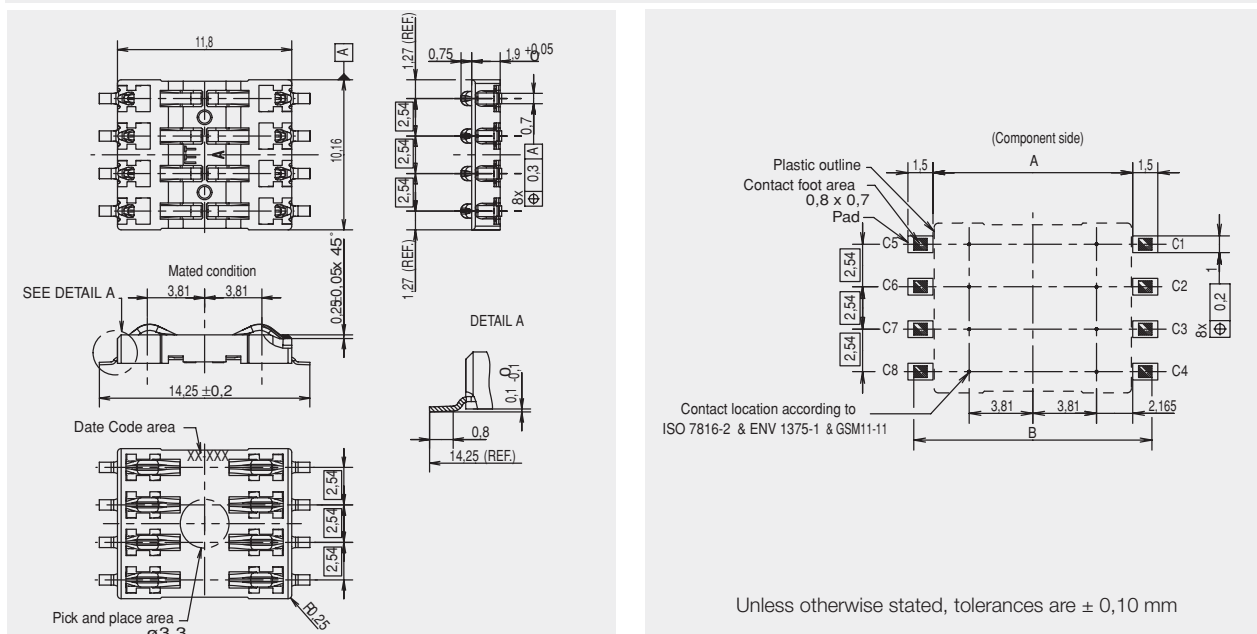
2 x 4 contacts SMT IN - Dimensional Drawings

PCB Layout



2 x 4 contacts SMT OUT - Dimensional Drawings

PCB Layout



Unless otherwise stated, tolerances are ± 0,10 mm

CCM04 MK III with switch



EMV™ compatible

For applications that require a switch and you do not want to struggle with correct sequencing and PCB saving is still a must.

Features

- Available with 8 contacts.
- Integrated card stop.
- Ultra low profile sealed switch included.
- Meets EMV requirements.
- By using an inlay finish in the contact area the life of the precious metal is extended by up to 10 times that of a 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.
- The insulators, molded from high temperature thermoplastic, are suited for infrared and convection soldering processes.
- With tape and reel packaging as standard, the connectors are designed to be automatically pick and placed.

EMV™ is a trademark owned by EMVCoLLC.

Construction

Insulator	High temperature thermoplastic UL 94V-0
Contacts	Copper Alloy
Contact finish	Gold Alloy Inlay
PC Tail plating	Tin lead (2 µm min)

Mechanical Data

Mechanical life	50,000 cycles minimum
Contact force	0.25 N min / 0.5 N max
Contact travel	0,75 mm

Electrical Contacts Data

Insulation resistance	1000 MΩ min
Contact resistance max	100 mΩ max
Switching current	10 µA min / 1 A max
Dielectric strength	500 Vrms min

Electrical Switch Data

Card detection switch	Normally open
Rc card detection switch	100 mΩ max
Dielectric strength card detection switch	250 Vrms min
Switch current rating	1 mA min / 10 mA max
Maximum switch power	0.2 V

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
Salt mist	IEC 512 test number 11f (96 hours)
Damp heat	IEC 512 test number 11c (10 days)

Ordering Code

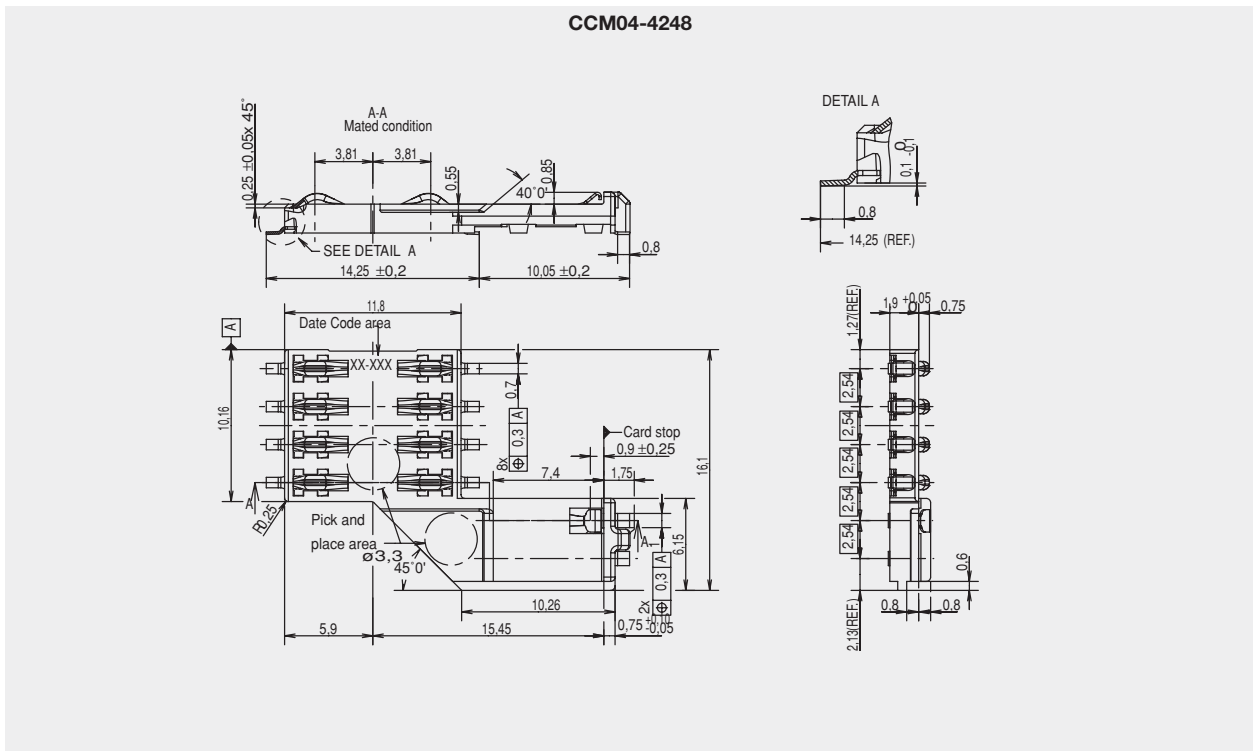
Part Number	Total Height	Termination Design	Quantity per reel
CCM04-4248	1,90 mm	SMT	1000
CCM04-4251	2,65 mm	SMT	1000
CCM04-4333	1,90 mm	In board mount SMT PCB thickness 1,1 mm	900

Packaging

5 reels per box.

CCM04 MK III with switch

2 x 4 contacts SMT OUT - Dimensional Drawings



PCB Layout

