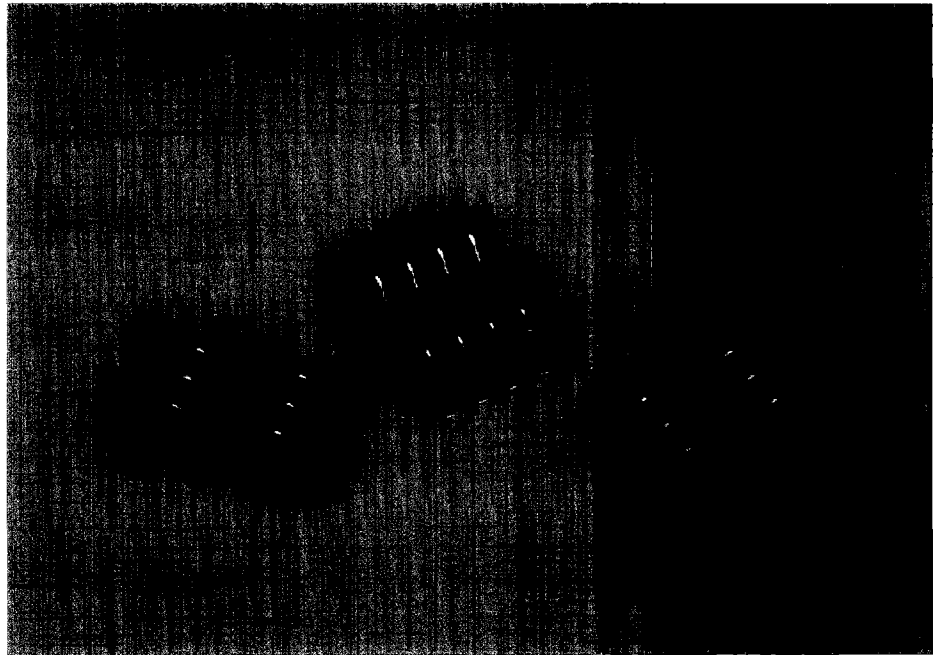


## CCM04 Mk II

The growing diversity of Smart Card applications has led to an increasing need for interconnections between the card readers and the cards themselves. It is with this in mind that ITT Cannon have developed a new range of CCM04 connectors to offer a flexible solution in a small package with the emphasis on high performance and reliability.

### Features

- ◆ Available in a variety of moulding heights, from 2 mm (.078") to 5 mm (.196").
- ◆ PCB mounting space has been minimized [only 15,80 mm (.622") x 9 mm (.354") required for 6 contact version].
- ◆ 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 spooned contact and two piece moulding protect the contact from damage (whether accidental or deliberate).
- ◆ A cantilever contact design ensures a consistent and reliable contact force over the life of the connector.
- ◆ Robustly formed printed circuit tails are well protected by the insulator body: a coplanarity of  $\pm 0,05$  mm (.002") is guaranteed.
- ◆ The insulators, moulded from LCP, are suited to high temperature soldering processes.
- ◆ With tape and reel packaging as standard, the connectors are designed to be automatically pick-and-placed.
- ◆ Versions with an integrated card detection switch, which is sealed against dust and grit, are also available (consult ITT Cannon).



### Specifications

#### MECHANICAL

Mechanical life	50,000 cycles minimum
Precious metal	5,000 cycles minimum
Contact force	0.25N minimum / 0.5N maximum with a contact deflection of 0,50 mm (.019")

#### ELECTRICAL

Insulation resistance	1000 M $\Omega$ minimum
Contact resistance	100 m $\Omega$ maximum
Current rating	10 $\mu$ A minimum / 1 A maximum
DWV	750 Vrms minimum

#### ENVIRONMENTAL DATA

Operating temperature	-40° to +85°C
Soldering temperature	Peak 250°C / 1mn maximum

#### MATERIALS

Housing	LCP UL 94V-0 rated
Contacts	Copper alloy
Contact protection	Inlay (Au / Ag / Pd)
PC tail plating	minimum 2 microns Sn / Pb

# Miniature Connectors for Smart Card Readers

## Part Numbering

Moulding Height	CCM04-XXXX 2 x 3 contacts		CCM04-XXXX 2 x 4 contacts	
	SMT Straight	SMT Standard	SMT Straight	SMT Standard
2,00 (.078)		-1402		
2,75 (.108)	-1200	-1201		-1218
3,50 (.137)		-1202		-1219
4,25 (.167)		-1203		-1220
5,00 (.196)				-1221

The part numbers shown are standard items. For variants which are not shown (e.g. through hole, pcb locating pegs), please consult ITT Cannon.

## Packaging

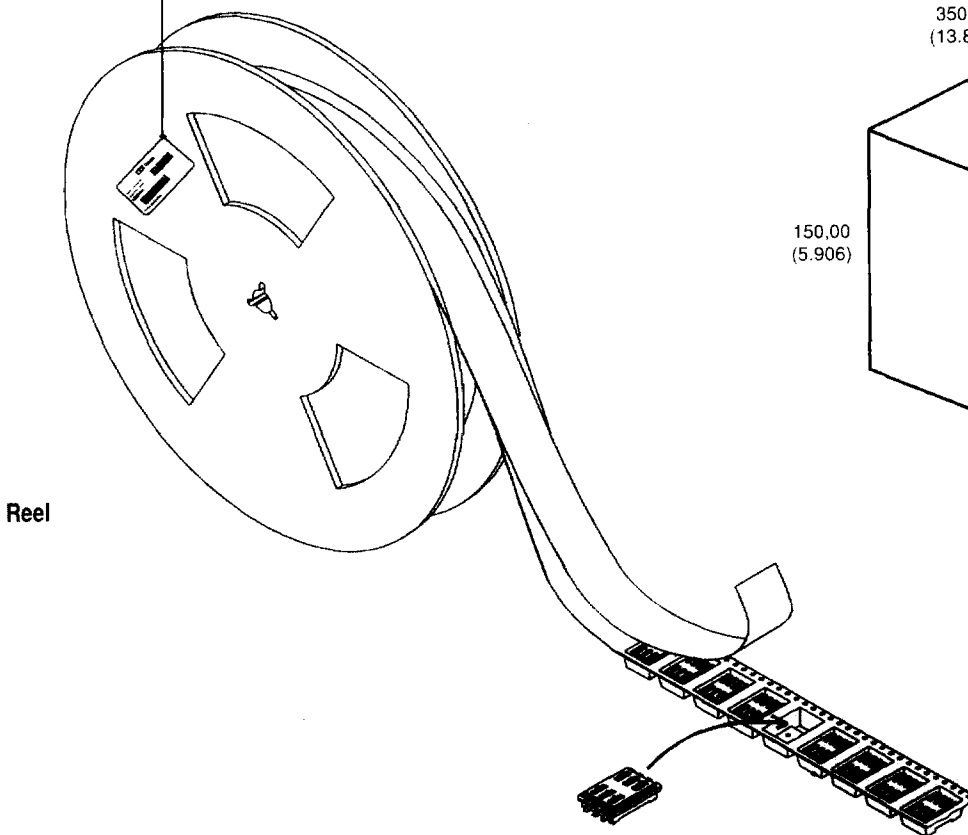
Moulding Height	CCM04-XXXX-XXXX 2 x 3 contacts		CCM04-XXXX-XXXX 2 x 4 contacts	
	SMT Straight	SMT Standard	SMT Straight	SMT Standard
2,00 (.078)		-R901 (900 pcs)		
2,75 (.108)	-R901 (900 pcs)	-R901 (900 pcs)		-R701 (700 pcs)
3,50 (.137)		-R801 (800 pcs)		-R651 (650 pcs)
4,25 (.167)		-R651 (650 pcs)		-R551 (550 pcs)
5,00 (.196)				-R501 (500 pcs)

Standard packaging is in tape and reel. A modification code is added to the part number which indicates reel packing and the number of components per reel (which varies according to the moulding height).

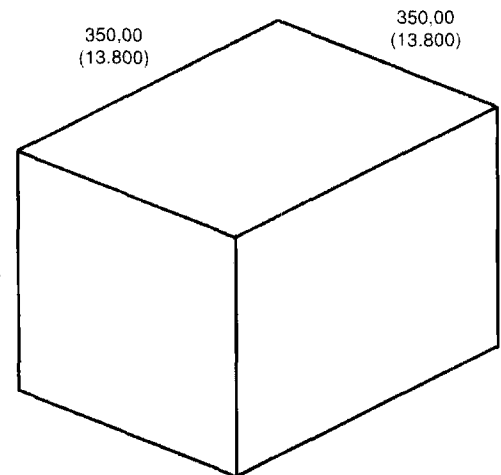
So a CCM04 with 8 contacts and a moulding height of 3,50 (.137) has a part number CCM04-1219-R651.

Please note that the packing multiple is 5 reels per box.

BAR CODE LABEL AREA



Reel



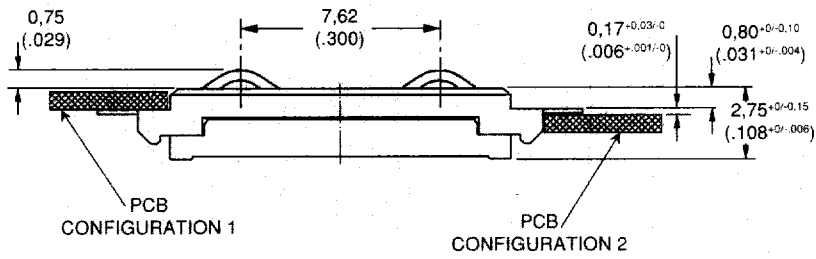
Box

**ITT Cannon**

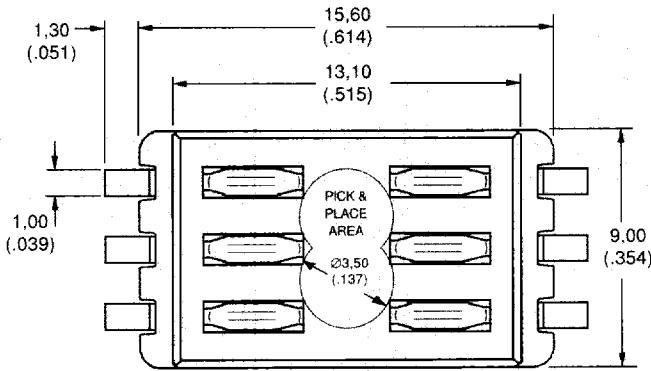
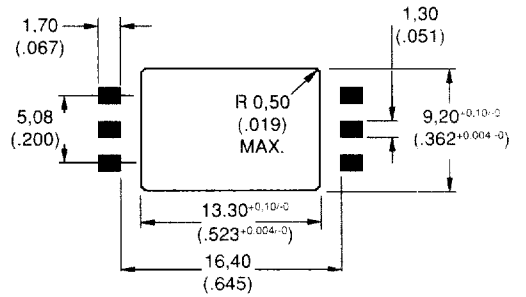
Dimensions are shown in mm (inch)  
Dimensions subject to change

# Miniature Connectors for Smart Card Readers

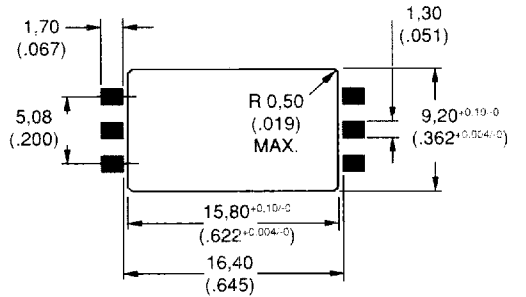
## CCM04-1200 - 2x3 contacts. Straight Surface Mount



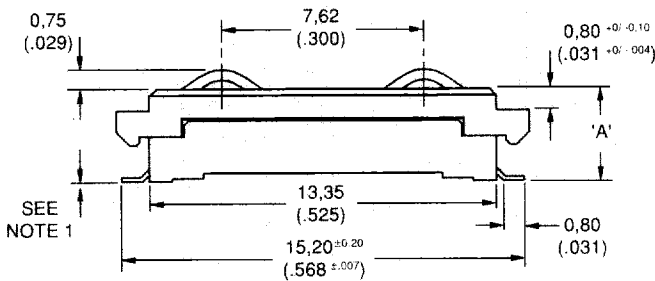
PCB Configuration 1



PCB Configuration 2

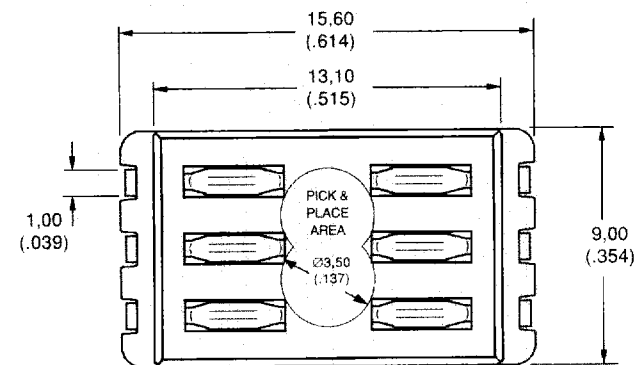


## CCM04-1402/1201/1202/1203 - 2x3 contacts. Standard Surface Mount

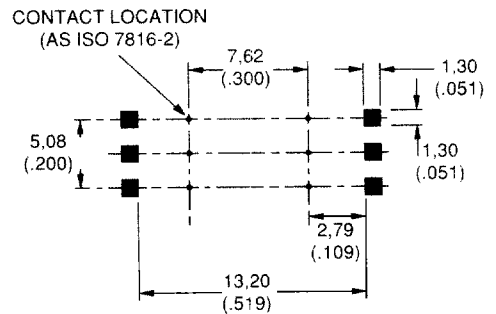


	A <sup>+0</sup> -0.15 (.006)
CCM04-1402	2,00 (.078)
CCM04-1201	2,75 (.108)
CCM04-1202	3,50 (.137)
CCM04-1203	4,25 (.167)

NOTE 1  
COPLANARITY OF SOLDERING SURFACES  
± 0.05 (.002)



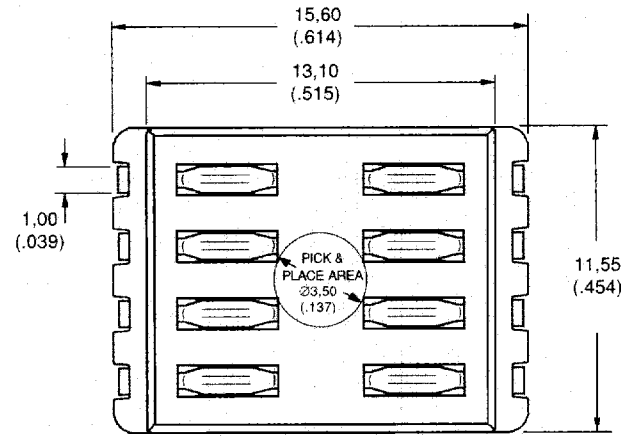
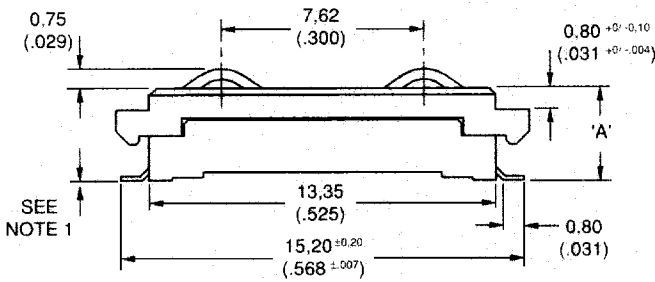
PCB Configuration



Unless otherwise stated tolerances are ± 0,10 (.004)

# Miniature Connectors for Smart Card Readers

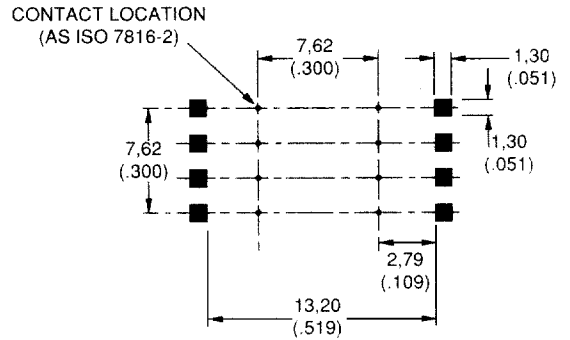
## CCM04-1218/1219/1220/1221 - 2x4 contacts. Standard Surface Mount



	A <sup>+0</sup> -0.15 (.006)
CCM04-1218	2.75 (.108)
CCM04-1219	3.50 (.137)
CCM04-1220	4.25 (.167)
CCM04-1221	5.00 (.196)

NOTE 1  
COPLANARITY OF SOLDERING SURFACES  
± 0.05 (.002)

### PCB Configuration



Unless otherwise stated tolerances are ±0.10 (.004)

For more detailed information please contact your local Sales Office.

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Dimensions are shown in mm (inch)  
Dimensions subject to change