

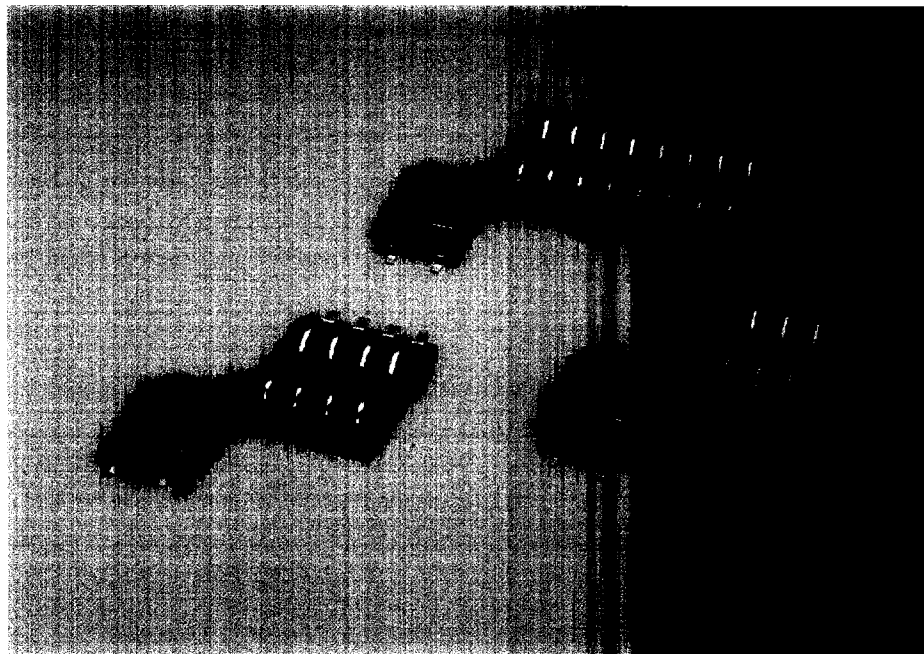
CCM04 Mk II

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 2,75 mm (.108") to 5 mm (.196").
- ◆ For added reliability, the integrated card detection switch is sealed against dust and grit.
- ◆ 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.



Specifications

MECHANICAL

Mechanical life	50,000 cycles minimum
Precious metal	5,000 cycles minimum
Contact force	0.25N min. / 0.5N max. with a contact deflection of 0,50 mm (.019")
Switch actuation force	0.8N max. (1.3N max. for complete actuator depression)

ELECTRICAL

Signal Contacts

Insulation resistance	1000 M Ω minimum
Contact resistance	100 m Ω maximum
Current rating	10 μ A minimum / 1 A maximum
DWV	750 Vrms minimum

Switch

Contact resistance	100 m Ω maximum
DWV	200 VDC minimum
Working voltage	30 VDC maximum
Resistive load	10 mA maximum
Bounce time	3 ms maximum

Switch circuit is Normally Open and activates when the card is 0,90 mm (.035") from the card stop.

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 with Integrated Card Detection Switch

Part Numbering

Moulding Height	CCM04-XXXX 2 x 4 contacts		CCM04-XXXX 2 x 8 contacts	
	SMT Straight	SMT Standard	SMT Straight	SMT Standard
2,75 (.108)	-1316	-1317	-1333	-1334
3,50 (.137)		-1318		
4,25 (.167)		-1319		
5,00 (.196)		-1320		

The part numbers shown are standard items. For variants which are not shown (e.g. through hole pc tails, insulators with pcb locating pegs) please consult Sales Department.

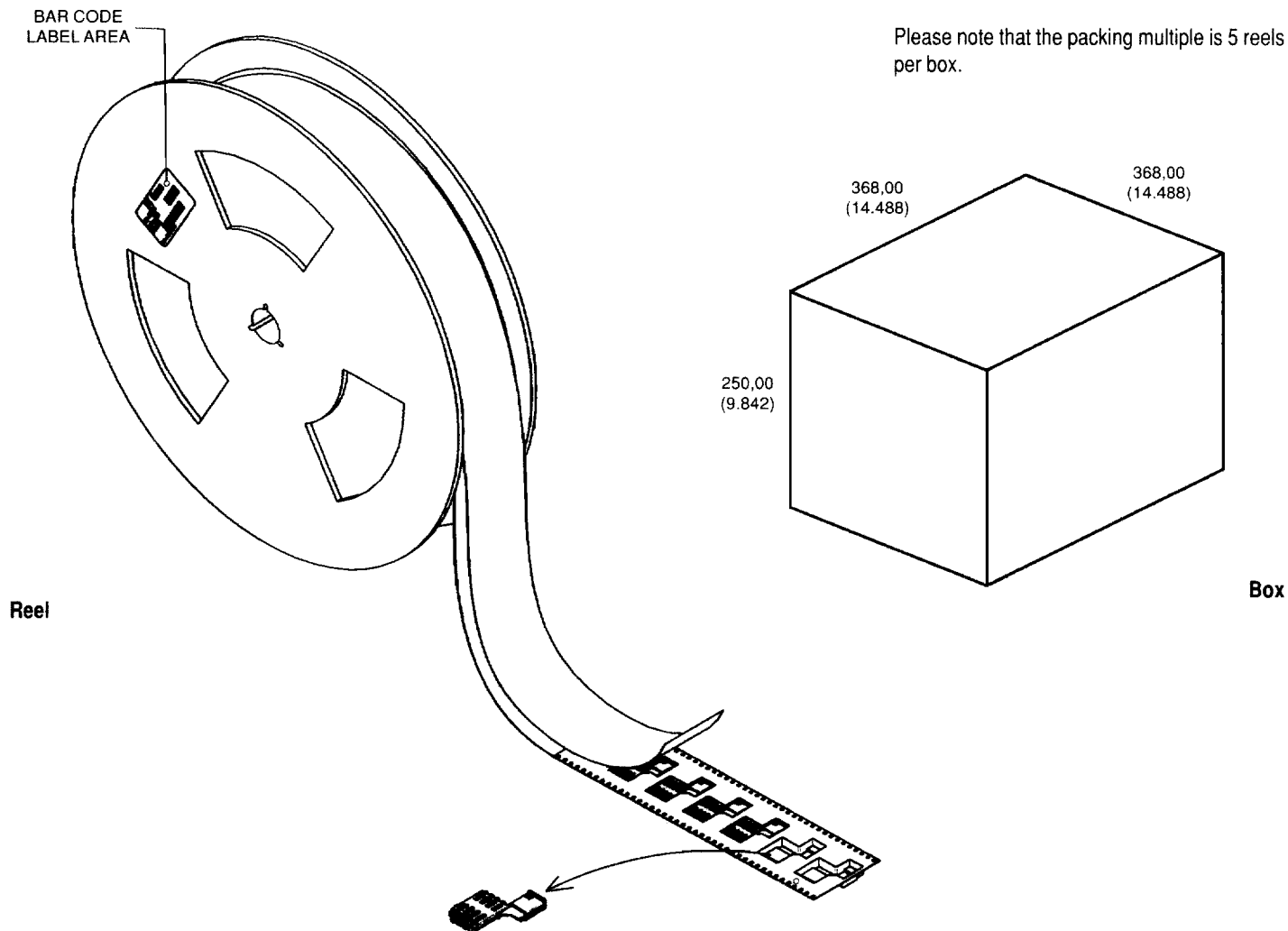
Packaging

Moulding Height	CCM04-XXXX-XXXX 2 x 4 contacts		CCM04-XXXX-XXXX 2 x 8 contacts	
	SMT Straight	SMT Standard	SMT Straight	SMT Standard
2,75 (.108)	-R701 (700 pcs)	-R701 (700 pcs)	-R451 (450 pcs)	-R451 (450 pcs)
3,50 (.137)		-R601 (600 pcs)		
4,25 (.167)		-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).

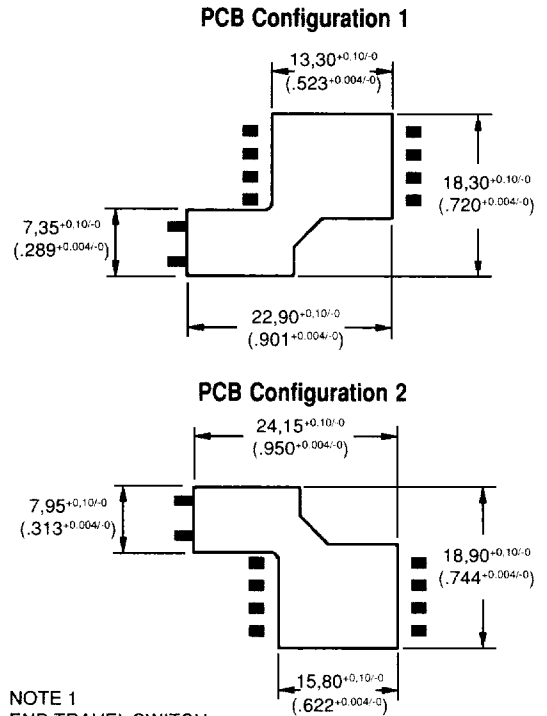
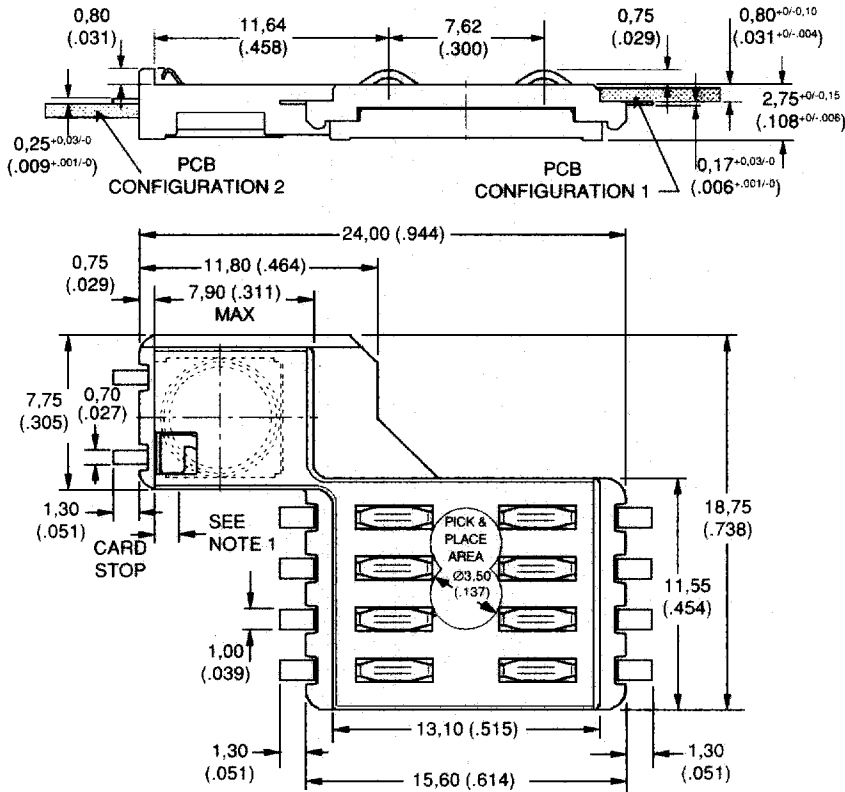
So a CCM04 with 8 contacts, a moulding height of 3,50 (.137) and a normally open card detection switch has a part number CCM04-1318-R601.

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



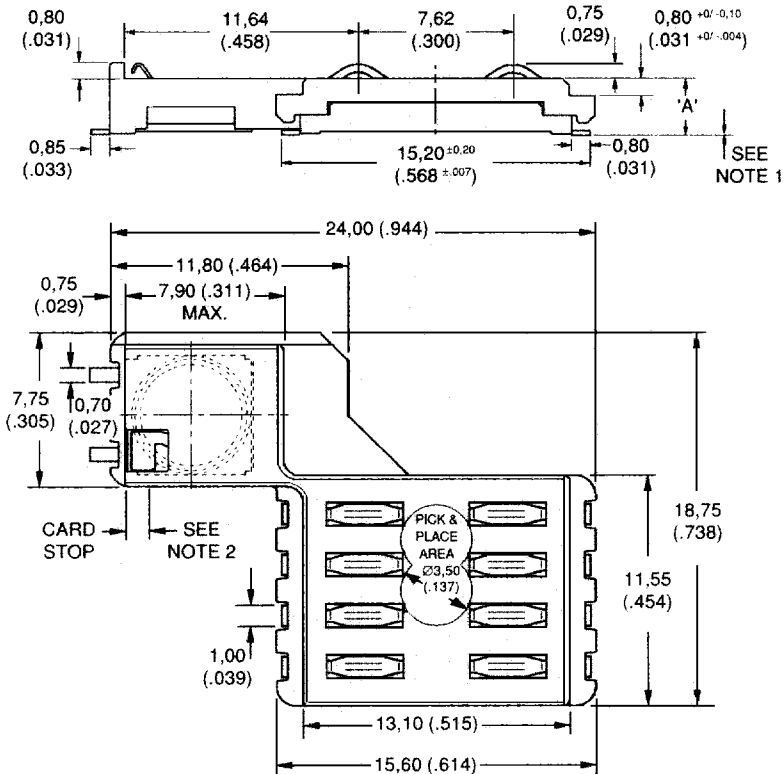
Miniature Connectors for Smart Card Readers with Integrated Card Detection Switch

CCM04-1316 - 2x4 contacts. Straight Surface Mount



NOTE 1
END TRAVEL SWITCH
ACTIVATES WHEN
CARD IS 0.90 (.035)
FROM CARD STOP

CCM04-1317/1318/1319/1320 - 2x4 contacts. Standard Surface Mount

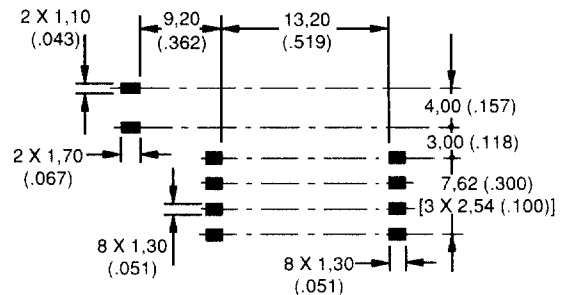


	A ^{+0/-0.15} (.006)
CCM04-1317	2.75 (.108)
CCM04-1318	3.50 (.137)
CCM04-1319	4.25 (.167)
CCM04-1320	5.00 (.196)

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

NOTE 2
END TRAVEL SWITCH ACTIVATES WHEN CARD
IS 0.90 (.035) FROM CARD STOP

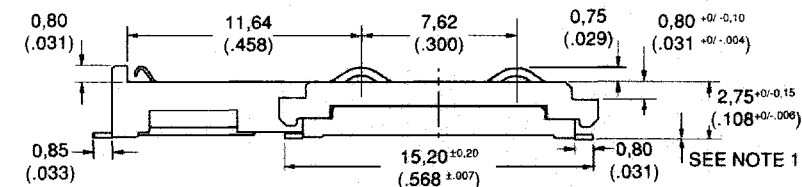
PCB Configuration



Unless otherwise stated tolerances are ±0.10 (.004)

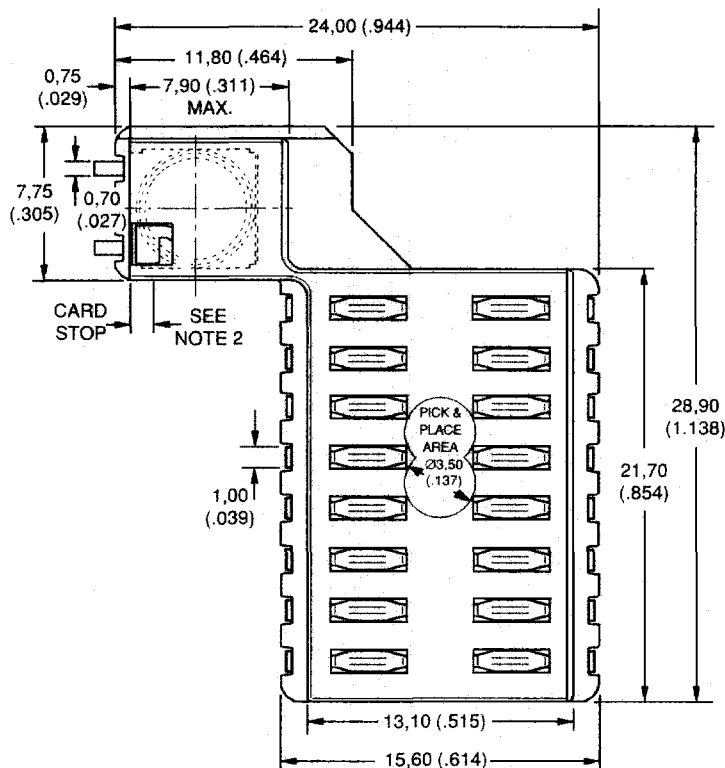
Miniature Connectors for Smart Card Readers with Integrated Card Detection Switch

CCM04-1334 - 2x8 contacts. Standard Surface Mount Contacts

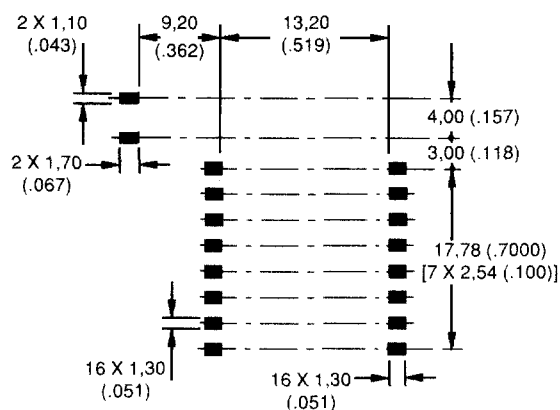


NOTE 1
COPLANARITY OF SOLDERING SURFACES
 $\pm 0,05$ (.002)

NOTE 2
END TRAVEL SWITCH ACTIVATES WHEN CARD
IS 0,90 (.035) FROM CARD STOP



PCB Configuration



Unless otherwise stated tolerances are $\pm 0,10$ (.004)

For more detailed information please contact
your local Sales Office.

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ITT Cannon, 666 East Dyer Road, Santa Ana, CA 92705-5612
Tel: 714.557.4700 Fax: 714.754.2142

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