C702A Landing Contact Full Smart Card Connectors

The Landing Contacts ensure a rugged construction that will not scratch the card surface simultaneously offering high durability.

**Electrical**
- Contact resistance: < 100 mΩ
- Switch resistance: < 200 mΩ
- Insulation: > 10^6 Ω
- High Voltage resistance: 500VAC 1 min
- Unlock Solenoid PUSHMATIC Only
- Rated Voltage/Current Use:
  - 5V/2.5A ± 10%
  - 12V/1.1A ± 10%
- Current pulse length: 10...25ms
- Pulse break: > 0.5s

**Environmental**
- Temperature: -25°C thru 85°C
- Vibration: IEC 60512-4, Test 6d
- Shock: IEC 60512-4, Test 6c
- Degree of Protection:
  - IP 30 (no card)
  - IP 20 (card inserted)

**Switch**
- Normally open.
- Switch activates after data contacts mate.
- Chatter time: < 5 ms

**Durability**
- Push Only: 5 x 10^6 Cycles
- Push-Push: 5 x 10^6 Cycles
- Push-Pull: 5 x 10^6 Cycles
- PUSHMATIC: 3 x 10^6 Cycles

**Description Chip Diagram**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Chip</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>C702 10M008 018 2</td>
<td>Push Only</td>
<td>ISO</td>
<td>Fig 1</td>
</tr>
<tr>
<td>C702 10M008 015 2</td>
<td>Push-Push</td>
<td>ISO</td>
<td>Fig 3</td>
</tr>
<tr>
<td>C702 10M008 514 2</td>
<td>Push-Pull</td>
<td>ISO Std</td>
<td>Fig 2</td>
</tr>
<tr>
<td>C702 10M008 522 2</td>
<td>Push-Pull</td>
<td>AFNOR</td>
<td>Fig 2</td>
</tr>
<tr>
<td>C702 10M008 521 2</td>
<td>Push-Pull</td>
<td>ISO+AFNOR (S)</td>
<td>Fig 2</td>
</tr>
<tr>
<td>C702 10M008 523 2</td>
<td>Push-Pull</td>
<td>ISO+AFNOR (P)</td>
<td>Fig 2</td>
</tr>
<tr>
<td>C702 10M008 701 2</td>
<td>PUSHMATIC 5V</td>
<td>ISO Std</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 700 2</td>
<td>PUSHMATIC 12V</td>
<td>ISO Std</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 702 2</td>
<td>PUSHMATIC 24V</td>
<td>ISO Std</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 703 2</td>
<td>PUSHMATIC 5V</td>
<td>ISO+AFNOR (S)</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 704 2</td>
<td>PUSHMATIC 12V</td>
<td>ISO+AFNOR (S)</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 705 2</td>
<td>PUSHMATIC 24V</td>
<td>ISO+AFNOR (S)</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 706 2</td>
<td>PUSHMATIC 5V</td>
<td>ISO+AFNOR (P)</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 707 2</td>
<td>PUSHMATIC 12V</td>
<td>ISO+AFNOR (P)</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 708 2</td>
<td>PUSHMATIC 24V</td>
<td>ISO+AFNOR (P)</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 732 2</td>
<td>PUSHMATIC* 5V</td>
<td>ISO</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 716 2</td>
<td>PUSHMATIC* 12V</td>
<td>ISO</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 10M008 727 2</td>
<td>PUSHMATIC* 24V</td>
<td>ISO</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 20M008 701 2</td>
<td>PUSHMATIC** 5V</td>
<td>ISO</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 20M008 700 2</td>
<td>PUSHMATIC** 12V</td>
<td>ISO</td>
<td>Fig 4 (Typical)</td>
</tr>
<tr>
<td>C702 20M008 702 2</td>
<td>PUSHMATIC** 24V</td>
<td>ISO</td>
<td>Fig 4 (Typical)</td>
</tr>
</tbody>
</table>

- Push Only – Manual insertion, held in position by hand. Ideal for short cycle transactions.
- Push-Push – Manual insertion, card held by reader, second push releases card.
- Push-Pull – Manual insertion, card held by reader, card manually extracted.
- PUSHMATIC with Locking Detector – Senses complete insertion of card. Card is still visible but not accessible. Automatic card release on completion of transaction.
- **PUSHMATIC with Shutter** – Senses complete insertion of card. Card is still visible but not accessible. Automatic card release on completion of transaction. **PUSHMATIC with Shutter** (additional Bezel is NOT required) – The Shutter protects the card slot when no card is present. The Shutter will only open upon insertion of a standard sized card.

(ISO) – Cable in Series (P) – Cable in Parallel
C702F Landing Card Full Smart Card Reader

PCB Mount card reader with stationery contacts. Mechanism lands Smart Card onto contacts. Card insertion depth is short.

**Electrical**
- Contact resistance: < 35 mΩ
- Switch contacts: < 70 mΩ
- Insulation: > 10^Ω
- High Voltage resistance: 500VAC 1 min

**Environmental**
- Temperature: -25ºC thru 85ºC
- Vibration: IEC 60512-4, Test 6d
- Shock: IEC 60512-4, Test 6c

**Switch**
- Normally open.
- Switch activates after data contacts mate.
- Chatter time: < 5 ms

**Mechanical**
- Card Insertion Force: ≤ 12N
- Card Extraction Force: ≥ 2.5N
- Durability: 3x10^5 Cycles

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C705A Disk Drive Slot Full Smart Card Reader

Push-Pull smart card reader mount into a Disk Drive housing for PC applications

**Characteristics**
- Card Reader Type: C702A
- Colour: Tan
- LED: Bicolour red/green

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**Part Number**

<table>
<thead>
<tr>
<th>Description</th>
<th>Chip</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>C702 10M008 120 4</td>
<td>GSM</td>
<td>Fig 1</td>
</tr>
<tr>
<td>C702 10M008 121 4</td>
<td>ISO</td>
<td></td>
</tr>
<tr>
<td>C702 10M008 122 4</td>
<td>AFNOR</td>
<td></td>
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<tr>
<td>C702 10M008 123 4</td>
<td>ISO+AFNOR</td>
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**Part Number**

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<tr>
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<tr>
<td>C705 10M008 005 5</td>
<td>ISO</td>
<td>Fig 2</td>
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<tr>
<td>C705 10M008 019 5</td>
<td>ISO</td>
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</tr>
<tr>
<td>C705 10M008 006 5</td>
<td>ISO</td>
<td>Fig 3</td>
</tr>
<tr>
<td>C705 10M008 020 5</td>
<td>ISO</td>
<td>Fig 3</td>
</tr>
</tbody>
</table>

---

**Figures**

Fig 1: Diagram of C702F<br>Fig 2: Diagram of C705A<br>Fig 3: Diagram of C705A
C702E Wiping Contact Full Smart Card Connectors

Ideal for limited mating cycle application such as set top boxes.

**Electrical**
- Contact resistance: < 30 mΩ
- Switch contacts: < 50 mΩ
- Insulation: > 10^9 Ω
- High Voltage resistance: 500VAC 1 min

**Environmental**
- Temperature: -25ºC thru 70ºC
- Vibration: - IEC 60512-4, Test 6d
- Shock: - IEC 60512-4, Test 6c

**Switch**
- Normally closed.
- Switch activates after data contacts mate.
- Chatter time: < 5 ms

**Mechanical**
- Durability: - 10^6 Cycles
- Mounting: Dip Solder Pin unless otherwise indicated
- Soldering conditions:
  - Wave Soldering: - 260°C, 10s max
  - Infrared Reflow: - 230°C, 30s max

**Features**
- DIP solder or SMT
- Self cleaning switch
- Special contact to minimize card scratching
- Indicated connectors according to EMV

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### Part Number:

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Chip</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>C702 10M008 272 4</td>
<td>B/L, EMV, SC</td>
<td>ISO</td>
<td>Fig 1</td>
</tr>
<tr>
<td>C702 10M008 255 4</td>
<td>B/L, EMV, SC, 3mm</td>
<td>ISO</td>
<td>Like Fig 1</td>
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<tr>
<td>C702 10M008 271 4</td>
<td>B/L, EMV, SC, DP</td>
<td>ISO</td>
<td>Fig 2</td>
</tr>
<tr>
<td>C702 10M008 263 4</td>
<td>B/L, EMV, SC, 3mm, CG</td>
<td>ISO</td>
<td>Fig 3</td>
</tr>
<tr>
<td>C702 10M008 286 4</td>
<td>B/L, EMV, SC, CG</td>
<td>ISO</td>
<td>Like Fig 3</td>
</tr>
<tr>
<td>C702 10M008 278 4</td>
<td>B/L, SC, DD</td>
<td>ISO</td>
<td>Fig 4</td>
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<tr>
<td>C702 10M008 279 4</td>
<td>B/L, SC, DD, 3mm</td>
<td>ISO</td>
<td>Fig 4</td>
</tr>
<tr>
<td>C702 10M008 295 4</td>
<td>B/L, SC, DD</td>
<td>ISO</td>
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<tr>
<td>C702 10M008 283 4</td>
<td>B/L, SC, DD, 3mm, CG</td>
<td>ISO</td>
<td>Like Fig 4</td>
</tr>
<tr>
<td>C702 10M008 294 4</td>
<td>B/L, SC, DD, DT</td>
<td>ISO</td>
<td>Fig 5</td>
</tr>
<tr>
<td>C702 10M008 210 4</td>
<td>SM</td>
<td>ISO</td>
<td>Fig 5</td>
</tr>
<tr>
<td>C702 10M008 202 4</td>
<td>SM</td>
<td>AFNOR</td>
<td>Fig 5</td>
</tr>
<tr>
<td>C702 10M008 203 4</td>
<td>SM</td>
<td>ISO+AFNOR</td>
<td>Fig 5</td>
</tr>
<tr>
<td>C702 10M008 204 4</td>
<td>B/L</td>
<td>ISO</td>
<td>Like Fig 5</td>
</tr>
<tr>
<td>C702 10M008 207 4</td>
<td>B/L</td>
<td>AFNOR</td>
<td>Like Fig 5</td>
</tr>
<tr>
<td>C702 10M008 205 4</td>
<td>B/L</td>
<td>ISO+AFNOR</td>
<td>Like Fig 5</td>
</tr>
<tr>
<td>C702 10M008 244 4</td>
<td>B/L, SC, SMT</td>
<td>ISO</td>
<td>Like Fig 6</td>
</tr>
<tr>
<td>C702 10M008 230 4</td>
<td>B/L, SC, CG, SMT</td>
<td>ISO</td>
<td>Like Fig 6</td>
</tr>
<tr>
<td>C702 20M008 224 4</td>
<td>B/L, SC, CG, SMT</td>
<td>ISO+AFNOR</td>
<td>Fig 6</td>
</tr>
<tr>
<td>C702 20M008 226 4</td>
<td>B/L, SC, CG</td>
<td>ISO</td>
<td>Like Fig 6</td>
</tr>
<tr>
<td>C702 20M008 235 4</td>
<td>B/L, SC, CG</td>
<td>ISO+AFNOR</td>
<td>Like Fig 6</td>
</tr>
</tbody>
</table>

**Terminology**
- B/L – Board Locks
- 3mm – 3mm stand-offs
- SC – Self-Cleaning Switch (N/C)
- CG – Card Guide
- SM – Screw/Rivet Mount

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**ATE**

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C702D Landing Contact Super-flat Full Smart Card Connectors

Second generation Push-Pull connectors with a high degree of miniaturization.

**Electrical**
- Contact resistance: - < 30 mΩ
- Switch contacts: - < 40 mΩ
- Insulation: - > 10^9 Ω
- High Voltage resistance: - 500VAC 1 min

**Environmental**
- Temperature: - -25ºC thru 65ºC
- Vibration: - IEC 60512-4, Test 6d
- Shock: - IEC 60512-4, Test 6c

**Switch**
- Normally open. Switch activates after data contacts mate. Chatter time: - < 5 ms
- Durability: - 3 x 10^6 Cycles

**Features**
- According to EMV available
- Snap-in (Board Locks) versions available
- Additional saving option by integrating base into customer’s housing
- Chip side up insertion allows for debris egress
- Dip Solder or Flat Flex termination available

**Part Number:**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Chip</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>C702 10M008 001 4</td>
<td>Standard</td>
<td>ISO</td>
<td>Fig 1</td>
</tr>
<tr>
<td>C702 10M008 065 4</td>
<td>Standard, EMV</td>
<td>ISO</td>
<td>Fig 1</td>
</tr>
<tr>
<td>C702 10M008 023 4</td>
<td>With Card Guide</td>
<td>ISO</td>
<td>Fig 2</td>
</tr>
<tr>
<td>C702 10M008 040 4</td>
<td>Push-Lift, EMV</td>
<td>ISO</td>
<td>Fig 3</td>
</tr>
<tr>
<td>C702 10M008 060 4</td>
<td>Board Lock, Dip Solder</td>
<td>ISO</td>
<td>Fig 4</td>
</tr>
<tr>
<td>C702 10M008 061 4</td>
<td>Board Lock, FFC</td>
<td>ISO</td>
<td>Fig 5</td>
</tr>
<tr>
<td>C702 10M008 063 4</td>
<td>Board Lock, Dip Solder, EMV</td>
<td>ISO</td>
<td>Fig 4</td>
</tr>
<tr>
<td>C702 10M008 064 4</td>
<td>Board Lock, FFC, EMV</td>
<td>ISO</td>
<td>Fig 5</td>
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# C702A Accessories Bezels and Mounting Plates for C702A Card Readers

<table>
<thead>
<tr>
<th>Part Number:</th>
<th>Description</th>
<th>For Reader</th>
<th>Diagram</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>C702 N13 030 E2</td>
<td>Metal Bezel Silver Finish</td>
<td></td>
<td></td>
<td>Mounting plate C702 N15 100 G2 necessary to mount bezel</td>
</tr>
<tr>
<td>C702 N13 031 E2</td>
<td>Metal Bezel Dull Black Finish</td>
<td>PUSHMATIC</td>
<td></td>
<td>Bezel Mounting Bolt – 2x M3 Nut</td>
</tr>
<tr>
<td>C702 N14 030 E2</td>
<td>Metal Bezel with Coin Spacer Silver Finish</td>
<td></td>
<td></td>
<td>Mounting Plate to Reader – 2x Cross recessed countersunk head Bolt M3</td>
</tr>
<tr>
<td>C702 N11 141 E2</td>
<td>Plastic Bezel Black Finish</td>
<td>Push-Pull</td>
<td></td>
<td>Clip-on Technology requires distance plate for various thickness panels N06 702 000 2 – 0.5mm N06 702 000 1 – 1mm</td>
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</table>

# C702B Accessories Bezels and Mounting Plates for C702B Card Readers

<table>
<thead>
<tr>
<th>Part Number:</th>
<th>Description</th>
<th>For Reader</th>
<th>Diagram</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>C702 G46 000 G2</td>
<td>Metal Bezel Silver Finish</td>
<td></td>
<td></td>
<td>Mounting plate C702 G51 012 E2 necessary to mount bezel</td>
</tr>
<tr>
<td>C702 G46 100 G2</td>
<td>Metal Bezel with Coin Spacer Silver Finish</td>
<td>PUSHMATIC</td>
<td></td>
<td>Bezel Mounting Bolt – 2x M4 Nut</td>
</tr>
<tr>
<td>C702 N25 040 E2</td>
<td>Plastic Adaptor</td>
<td></td>
<td></td>
<td>Adaptor for common Bezels</td>
</tr>
</tbody>
</table>
C702B PUSHMATIC® II Auto-Eject Landing Contact Full Smart Card Reader

The PUSHMATIC II is smaller than the PUSHMATIC and provides additional performance and anti-vandal features.

**Electrical**
- Contact resistance: < 100 mΩ
- Switch resistance: < 200 mΩ
- Insulation: > 10 GΩ
- High Voltage resistance: - 500VAC 1 min
- Rated Voltage/Current Use:
  - 24V with card lock: ±10%
  - 12V with card lock: ±10%
  - 5V with card lock: ±10%
- Current pulse length: 10...25ms
- Pulse break: ≥ 1s
- Interface Connector: 2x8 contact 2mm pitch

**Environmental**
- Temperature: -25°C thru 70°C
- Vibration: - IEC 60512-4, Test 6d
- Shock: - IEC 60512-4, Test 6c
- Chatter time switch: ≤ 5 ms

**Mechanical**
- Durability: - 3 x 10^5 Cycles
- Card Insertion Force: ≤ 12N

**Notes**
- ISO Chip Position
- Card accessible during power failure
- Card present switch can be used as system wake up
- Card end position switch can be used as lock sensor
- Additional sensor detects abnormal transaction termination
- Self cleaning retracting contacts
- Card presence switch according to EMV
- Housing bottom features large debris slot allowing egress of coins or paper

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C702C LP PUSHMATIC® Auto-Eject Landing Contact Full Smart Card Reader

Low Profile Reader designed for restricted spaces. With removable housing bottom to act a debris slot.

**Electrical**
- Contact resistance: < 100 mΩ
- Switch resistance: < 200 mΩ
- Insulation: > 10 GΩ
- High Voltage resistance: - 500VAC 1 min
- Rated Voltage/Current Use:
  - 24V with card lock: ±10%
  - 12V with card lock: ±10%
  - 5V with card lock: ±10%
- Current pulse length: 10...30ms
- Pulse break: ≥ 1s
- Interface Connector: 10 Contact 1mm FFC

**Environmental**
- Temperature: -25°C thru 70°C
- Vibration: - IEC 60512-4, Test 6d
- Shock: - IEC 60512-4, Test 6c
- Chatter time switch: ≤ 5 ms

**Mechanical**
- Durability: - 3 x 10^5 Cycles
- Card Insertion Force: ≤ 10N

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**Features**

- ISO Chip Position
- Card accessible during power failure
- Card present switch can be used as system wake up
- Card end position switch can be used as lock sensor
- Additional sensor detects abnormal transaction termination
- Self cleaning retracting contacts
- Card presence switch according to EMV
- Housing bottom features large debris slot allowing egress of coins or paper