Access control

SiPass readers and cards

Built to stand the test of time

Answers for infrastructure.
SiPass readers and cards – robust, reliable and easy to use

Siemens provides a wide range of readers and cards to satisfy the access control requirements of most environments. Our readers and cards can work with virtually any access control system on the market, but they are specifically tested and qualified for use with SiPass systems.

Designed for easy installation and use, the SiPass reader portfolio includes technologies ranging from magnetic stripe to 125 kHz proximity, multi-purpose smart card technology, and Cotag technology, which offers the convenience of hands-free functionality. Each technology type includes at least one model with an integrated keypad to enable card-plus-PIN functionality, which is ideal for higher security applications.

The majority of SiPass readers supports Siemens advanced reader protocols – BC-Link or CerPass/UCI (RS485). The advantages of using these protocols include the ability to connect two readers to a single door controller, which simplifies the installation and reduces costs, and active monitoring of reader status, which enhances security.

Whichever type of SiPass readers you choose, you can be confident that they will significantly enhance security at your site(s).
Which technology suits your needs?

**Reading technologies**
SiPass readers and cards operate via four different types of reading technology: magnetic stripe, 125 kHz proximity, Cotag and Smart Card.

**Magnetic stripe**
The user swipes a magnetic stripe card in the slot on the reader. The advantage of magnetic stripe cards is that they are fairly inexpensive. They are mainly used today when expanding an existing access control system that uses magnetic stripe technology.

**125 kHz proximity**
The information stored within a 125 kHz proximity card or tag is sent to the reader when the card or tag is held in front of it. This reduces the wear and tear on the cards and readers which results in a lower total cost of ownership over time. Some of our 125 kHz proximity readers support the SiPass algorithm, which offers a higher level of security than conventional 125 kHz.

**Cotag**
The main advantage of Cotag technology is that it provides both proximity and hands-free card reading. It operates on the 132 kHz band, which is similar to 125 kHz. All Cotag readers can read both active (long-range) and passive (proximity) Cotag cards and tags. Both types of cards can be mixed in the same system to provide ultimate convenience and cost-efficiency.

Cotag active cards contain a battery, which enables these cards to transmit information with a higher output power than passive cards and thereby results in a longer reading distance. When Cotag hands-free readers are used together with active cards and tags it is possible to create a truly hands-free access control environment. This is useful in cases where some cardholders are disabled or where hands are often occupied, such as in a hospital or a warehouse.

Cotag is more secure than standard 125 kHz technology because the content on the card is protected and there is no equipment available outside Siemens to read or copy the cards.

**Smart card**
Smart cards can be used for additional purposes beyond that of access control. They function as proximity access cards, but since they can store much more information they can also be used as cash cards at company restaurants or vending machines, for example. It is also possible to store biometric data such as fingerprint templates. Smart cards offer the highest degree of security in our card range.

**Communication protocols**
SiPass readers communicate with the door controllers in the system either via standard reader protocols such as Wiegand and Clock&Data, or via Siemens’ advanced reader protocols, BC-Link and CerPass (RS485).

**Advantages of BC-Link and CerPass (RS485) protocols:**
- Since they are bi-directional they can be used for buzzer control, LED feedback and arming/disarming of an intrusion area
- Installation is faster since less wiring is required
- Higher level of security compared to using Wiegand or Clock&Data
- Constant monitoring of reader status

**Highlights**
- Hands-free access with Cotag technology
- Easy to install and use
- Robust and reliable
- Fully tested with SiPass systems
- Enhanced security with advanced reader protocols
### Readers

<table>
<thead>
<tr>
<th>PIN-only</th>
<th>Magnetic Stripe</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>SiPass Entro Lite</td>
<td>SiPass Entro</td>
</tr>
<tr>
<td>SiPass Entro</td>
<td>SiPass integrated</td>
</tr>
<tr>
<td>SiPORT</td>
<td>IB41-EM</td>
</tr>
</tbody>
</table>

**Card technology**

- PIN-only reader. Used for group codes or to add PIN functionality to an existing card-only reader. Tamper switch.
- Card-only reader. Square design. Smart two-part construction makes it very easy to mount. Also includes a surface mounting frame.
- Card-only reader. Square design. Smart two-part construction makes it very easy to mount. Also includes surface mounting frame.
- Card-only reader. Compact and economical. Tamper switch.
- Card Multi-two makes to m switch.

**Description**

- PIN-only reader. Used for group codes or to add PIN functionality to an existing card-only reader. Tamper switch.
- Compact card-only reader. Supplied with 3 meter cable.
- Card and PIN reader. Tamper switch.
- Card and PIN reader. Tamper switch.
- Card and PIN reader. Tamper switch.
- Card and PIN reader. Tamper switch.
- Card Multi-two makes to m switch.

**Card read distance**

- 7 cm (approx.)
- 7 cm (approx.)
- 12 cm (approx.)
- 7 cm

**Interface to controller**

- BC-Link
- Clock&Data
- BC-Link
- RS485 monitored CerPass/UCI protocol
- RS485 monitored CerPass/UCI protocol
- Clock&Data (ABA Track II) and Wiegand (26/34/42 bit)
- RS485 CerPass/UCI protocol
- Clock&Data (ABA Track II) and Wiegand (26/34/42 bit)
- Clock&Data (ABA Track II) and Wiegand (26/34/42 bit)

**Operating voltage**

- 12 to 24 VDC
- 5 VDC
- 12 to 24 VDC
- 12 to 24 VDC
- 12 to 24 VDC
- 10 to 16 VDC
- 12 V

**Average current consumption**

- 27 mA @ 12 VDC
- 5 mA @ 5 VDC
- 30 mA @ 12 VDC
- 145 mA @ 12 VDC
- 145 mA @ 12 VDC
- 32 mA @ 12 VDC
- 35 mA @ 12 VDC

**Indicators**

- 3 x LED (red/yellow/green)
- 2 x LED (red/green)
- 3 x LED (red/yellow/green)
- 1 x LED (red/yellow/green), 1 x buzzer
- 1 x LED (red/yellow/green), 1 x buzzer
- 1 x LED (red/yellow/green), 1 x buzzer
- 2 x LED (red/yellow/green), 1 x buzzer

**Environment**

- Indoor and outdoor use
- Indoor and outdoor use
- Indoor and outdoor use
- Indoor and outdoor use
- Indoor and outdoor use
- Indoor and outdoor use
- Indoor and outdoor use
- Indoor and outdoor use

**Operating temperature**

- ~35 to +50 °C
- ~10 to +55 °C
- ~35 to +50 °C
- ~25 to +70 °C
- ~25 to +70 °C
- ~25 to +60 °C
- ~10 to +55 °C
- ~10 to +55 °C

**IP rating**

- IP54
- IP55
- IP44
- IP65
- IP65
- IP56
- IP66
- IP65

**Housing**

- Cast metal with security lock
- Cast metal
- Cast metal with stainless steel keys and security lock
- Cast metal with stainless steel keys and security lock
- Cast metal
- Cast metal
- Cast metal
- Cast metal

**Color**

- Grey
- Brushed aluminum
- Grey
- Grey
- Grey
- Grey
- Grey
- Grey

**Dimensions (W x H x D)**

- 80 x 140 x 40 mm
- 29 x 124 x 28 mm
- 110 x 160 x 47 mm
- 60 x 26 x 6 mm
- 85.5 x 91 x 23 mm
- 85.5 x 91 x 40 mm
- 85.5 x 91 x 40 mm
- 85.5 x 91 x 40 mm

**Keypad**

- Stainless steel keys
- No
- Stainless steel keys
- No
- Stainless steel keys
- No
- Membrane keys
- No

**Approval**

- CE
- CE
- CE
- CE
- CE
- CE
- CE
- CE

**Accessories**

- SH2 rain cover
- SH1 universal rain cover
- SH1 universal rain cover
- SH1 universal rain cover
- SH1 universal rain cover
- SH1 universal rain cover
- SH1 universal rain cover
- SH1 universal rain cover

**Compatible cards/tags**

- None
- IB1
- IB1
- IB1
- IB1
- IB1
- IB1
- IB1

**Order no.**

- 524246-F8400-A1
- 524246-F4100-A1
- 524246-F4101-A1
- 524246-F4102-A1
- 524246-F4103-A1
- 524246-F4104-A1
- 524246-F4105-A1
- 524246-F4106-A1

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### Cards

<table>
<thead>
<tr>
<th>Magnetic Stripe</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>

**Description**

- Magnetic stripe card with CR80 ISO format (track 2). Card number on back.
- Pre-printed ISO cards compliant with the SiPass algorithm. Can be used with the readers ARS6311-RX, AR6331-CP, AR6332-CP, AR6181-RX and AR6182-RX. Card number on back.
- Blank, printable ISO cards compliant with the SiPass algorithm. Can be used with the readers ARS6311-RX, AR6331-CP, AR6332-CP, AR6181-RX and AR6182-RX. Card number on back.
- SiPass proximity keying tag. Can be used with readers ARS6311-RX, AR6331-CP, AR6332-CP, AR6181-RX and AR6182-RX. Card number on back.
- Print your own cards. Can be used with PD30-EM and PD40-EM cards.

**Quantity in order**

- 100
- 10
- 10
- 1

**Dimensions (W x H x D)**

- 54 x 86 x 0.76 mm
- 54 x 86 x 0.76 mm
- 29.80 x 44.90 x 7 cm
- 54 x 86 x 0.76 mm

**Order no.**

- 524246-D5000-A1
- 6FL7820-8KA10
- 524246-D8400-A1
- 524246-D5000-A1
- 6FL7820-8KA30
- 6FL7820-8KA20
- 6FL7820-8KA10
- 524246-D5000-A1

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*All reading distances provided here have been measured in lab conditions and may vary according to environmental conditions.*
### Cotag

<table>
<thead>
<tr>
<th>Item</th>
<th>PP500-Cotag</th>
<th>HD500-Cotag</th>
<th>PR500-Cotag</th>
<th>SP500-Cotag</th>
<th>PM500-Cotag</th>
<th>HF500-Cotag</th>
<th>BC5511-Cotag</th>
<th>BC5516-Cotag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cotag</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Heavy-duty card and PIN reader. Position indicator light and illuminated keypad make it easy to use in dark places. Tamper switch.</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Card-only reader. Vandal-proof, impact and fire resistant. Popular both in vulnerable locations and modern office environments.</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Design for panel mounting. Suitable for most remote call-point locations.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hands-free reader. Able to read through wood, concrete, glass, and most other materials, but not metal.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands-free reader. Designed for split-mounted applications. Provides a higher level of security, particularly for outdoor use.</td>
<td></td>
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</tr>
</tbody>
</table>

### Smart Card 13.56 MHz

<table>
<thead>
<tr>
<th>Item</th>
<th>ABP5100-PR</th>
<th>ABP5100-BL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Pre-printed Mifare Classic 1k ISO card. Suitable for use with all the Smart Card readers in this brochure.</td>
<td>Blank printable Mifare Classic 1k ISO card. Suitable for use with all the Smart Card readers in this brochure.</td>
</tr>
<tr>
<td>Quantity in order</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>54 x 86 x 0.76 mm</td>
<td>54 x 86 x 0.76 mm</td>
</tr>
<tr>
<td>Order no.</td>
<td>6FL7820-BX810</td>
<td>6FL7820-BX820</td>
</tr>
</tbody>
</table>


### Accessories

<table>
<thead>
<tr>
<th>Accessory</th>
<th>Order no.</th>
<th>Quantity in order</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR6181-MX</td>
<td>6FL7170-8BL</td>
<td>1</td>
<td>AR6181-MX</td>
<td>SH1 is a protective cover for the BC43. It is used for both new and existing installations. It can be used with the PP500-EM, PP500-Cotag and M43. There are cuttings for cables.</td>
</tr>
<tr>
<td>AR6182-MX</td>
<td>6FL7170-8BL</td>
<td>1</td>
<td>AR6182-MX</td>
<td>SH2 is a protective cover for the PP500-EM, PP500-Cotag and M43. It can be used for both new and existing installations. There are cuttings for cables.</td>
</tr>
<tr>
<td>AR6181-MS</td>
<td>6FL7170-8BL</td>
<td>1</td>
<td>AR6181-MS</td>
<td>SH4 is a protective cover for the BC43. There are cuttings for cables to simplify the process of adding it to an existing installation.</td>
</tr>
<tr>
<td>AR6381-MS</td>
<td>SH1 universal rain cover</td>
<td>1</td>
<td>AR6381-MS</td>
<td>SH1 is a universal protective cover for card readers. It is recommended for outdoor installations.</td>
</tr>
<tr>
<td>AR6382-MS</td>
<td>SH2 universal rain cover</td>
<td>1</td>
<td>AR6382-MS</td>
<td>SH2 is a protective cover for the PP500-EM, PP500-Cotag and M43. It can be used for both new and existing installations. There are cuttings for cables.</td>
</tr>
<tr>
<td>AR6111-MX</td>
<td>SH4 universal rain cover</td>
<td>1</td>
<td>AR6111-MX</td>
<td>SH4 is a protective cover for the BC43. There are cuttings for cables to simplify the process of adding it to an existing installation.</td>
</tr>
<tr>
<td>AR6201-MX</td>
<td>IS391</td>
<td>1</td>
<td>AR6201-MX</td>
<td>IS391 is a spy-proof cover designed for use with the PP500-EM, PP500-Cotag and M43. It is included with the PP500-EM.</td>
</tr>
<tr>
<td>BB3</td>
<td>BB3</td>
<td>1</td>
<td>BB3</td>
<td>BB3 is a flush mounting kit designed to provide an unobtrusive and aesthetically appealing installation of the PP500-EM, PP500-Cotag and M43.</td>
</tr>
<tr>
<td>BB6</td>
<td>BB6</td>
<td>1</td>
<td>BB6</td>
<td>BB6 is a flush mounting kit designed to provide a discreet and secure installation of the PP500-EM and PP500-Cotag. It hides the reader.</td>
</tr>
</tbody>
</table>
Megatrends driving the future

The megatrends – demographic change, urbanization, climate change and globalization – are shaping the world today. These have an unprecedented impact on our lives and on vital sectors of our economy.

Innovative technologies to answer the associated toughest questions

Throughout a 160-year history of proven research and engineering talent, with more than 50,000 active patents, Siemens has continuously provided its customers with innovations in the areas of healthcare, energy, industry and infrastructure – globally and locally.

Increase productivity and efficiency through complete building life cycle management

Building Technologies offers intelligent integrated solutions for industry, commercial and residential buildings and public infrastructure. Over the entire facility’s life cycle, our comprehensive and environmentally conscious portfolio of products, systems, solutions and services in the fields of electrical installation technology, building automation, fire safety and electronic security, ensures the:

– optimum comfort and highest energy efficiency in buildings,
– safety and security for people, processes and assets,
– increased business productivity.

The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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