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## Access Control Systems

Product overview



02-429-6466



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# Proximity Readers

Material description	Card Reader, HIDprox, mullion	Standalone device	Standalone device	Card Reader, EM, mini mullion
<b>Commercial type number (CTN)</b>	ARD-MINIPROX	ARD-PROX-PPL	ARD-ENTRYPROX	ARD-AYK12
				
<b>Bosch controller compatibility</b>	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series	Standalone device	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series
<b>Software compatibility</b>	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS	APE, BIS-ACE, AEC, AMS
<b>Interfaces</b>	Wiegand	Wiegand	Wiegand	Wiegand
<b>Supported protocol</b>	Wiegand	Wiegand	Wiegand	Wiegand
<b>Panel connection</b>	Pigtail	Pigtail	Terminal strip	Pigtail
<b>Supported credential technology</b>	HID Prox	HID Prox	HID Prox	EM4102
<b>Bosch code</b>	-	-	-	-
<b>Power supply</b>	5 – 16 VDC	5 – 16 VDC	10 – 16 VDC	5 – 16 VDC
<b>Environment class</b>	IP55	IP55	IP55	IP65
<b>Maximum reading distance</b>	13 cm	6 cm	6 cm	8 cm
<b>Keypad</b>	no	no	yes	no
<b>Dimensions (H x W x D)</b>	152 x 43 x 25,4 mm (indoor and outdoor)	79,6 x 44 x 17 mm (indoor and outdoor)	133 x 70 x 35 mm (indoor and outdoor)	80 x 40 x 13 mm (indoor and outdoor)

# Smart Card Readers

## (Wiegand) iClass

Name	LECTUS secure 1000 WI	LECTUS secure 4000 WI	LECTUS secure 5000 WI	LECTUS secure 9000 WI
Material description	Card reader, iCLASS, Wiegand	Handsfree card reader, iCLASS, Wiegand	Card reader with keypad, iCLASS, Wiegand	Handsfree card reader, iCLASS, Wiegand
Commercial type number (CTN)	ARD-SER10-WI	ARD-SER40-WI	ARD-SERK40-W1	ARD-SER90-WI



- ▶ 13.56 MHz proximity readers for connecting to access controllers with Wiegand interfaces
- ▶ Available with four different form factors, LECTUS secure readers meet nearly all installation requirements

<b>Bosch controller compatibility</b>	AMC2-4WCF, APC-AMC2-2WCF, AEC, B/G-Series			
<b>Software compatibility</b>	APE, BIS-ACE, AEC, AMS			
<b>Interfaces</b>	Wiegand	Wiegand	Wiegand	Wiegand
<b>Supported protocol</b>	Wiegand	Wiegand	Wiegand	Wiegand
<b>Panel connection</b>	Pigtail	Terminal strip	Terminal strip	Terminal strip
<b>Supported standard</b>	ISO 1443A, ISO 15693, ISO 14443B			
<b>Supported credential technology</b>	ISO14443A CSN, MIFARE Classic, MIFARE DESFire, iCLASS, iCLASS SE, Seos	ISO14443A CSN, MIFARE Classic, MIFARE DESFire, iCLASS, iCLASS SE, Seos	ISO14443A CSN, MIFARE Classic, MIFARE DESFire, iCLASS, iCLASS SE, Seos	ISO14443A CSN, MIFARE Classic, MIFARE DESFire, iCLASS, iCLASS SE, Seos
<b>Bosch code</b>	-	-	-	-
<b>Power supply</b>	5 – 16 VDC			
<b>Environment class</b>	IP55 (IP65 with gasket)	IP55 (IP65 with gasket)	IP55 (IP65 with gasket)	IP65
<b>Maximum reading distance</b>	7.6 cm	11.4 cm	14 cm	33.6 cm
<b>Keypad</b>	no	no	yes	no
<b>Dimensions (H x W x D)</b>	103 x 48 x 23 mm (indoor)	122 x 84 x 24 mm (indoor)	122 x 85 x 28 mm (indoor)	333 x 333 x 39 mm (indoor and outdoor)

# Smart Card Readers

## (Wiegand and RS-485 (OSDP V1)) – MIFARE

Name	LECTUS duo 3000C	LECTUS duo 3000 CK	LECTUS duo 3000 E	LECTUS duo 3000 EK
Material description	Card reader, MIFARE Classic	Card reader with keypad, MIFARE Classic	Card Reader, MIFARE EV1	Card reader with keypad, MIFARE EV1
Commercial type number (CTN)	ARD-AYBS6260	ARD-AYBS6360	ARD-AYBS6280	ARD-AYBS6380



- ▶ The LECTUS duo 3000 Classic line consists of a keypad and a non keypad version for MIFARE Classic and MIFARE DESFire. They come equipped with the Bosch coded MIFARE data sector and support reading the CSN of ISO14443A cards as well.
- ▶ Both reader types provide a Wiegand and RS-485/OSDP interface, selectable easily by DIP switch.
- ▶ Three LED indicators and a beeper give clear feedback to the user during operation. The reader's logo is illuminated in the dark.

<b>Bosch controller compatibility</b>	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF, AEC
<b>Software compatibility</b>	BIS-ACE, APE, AMS	BIS-ACE, APE, AMS	BIS-ACE, APE, AMS	BIS-ACE, APE, AMS
<b>Interfaces</b>	Wiegand, RS-485	Wiegand, RS-485	Wiegand, RS-485	Wiegand, RS-485
<b>Supported protocol</b>	Wiegand, OSDPv1	Wiegand, OSDPv1	Wiegand, OSDPv1	Wiegand, OSDPv1
<b>Panel connection</b>	Terminal strip	Terminal strip	Terminal strip	Terminal strip
<b>Supported standard</b>	ISO 1443A	ISO 1443A	ISO 1443A	ISO 1443A
<b>Supported credential technology</b>	ISO14443A CSN , MIFARE Classic	ISO14443A CSN , MIFARE Classic	ISO14443A CSN, MIFARE DESFire, MIFARE Classic	ISO14443A CSN, MIFARE DESFire, MIFARE Classic
<b>Bosch code</b>	yes	yes	yes	yes
<b>Power supply</b>	8.5 – 16 VDC	8.5 – 16 VDC	8.5 – 16 VDC	8.5 – 16 VDC
<b>Environment class</b>	IP65	IP65	IP65	IP65
<b>Maximum reading distance</b>	3 cm	3 cm	3 cm	3 cm
<b>Keypad</b>	no	yes	no	yes
<b>Dimensions (H x W x D)</b>	137 x 44 x 27,5 mm (indoor and outdoor)	137 x 44 x 27,5 mm (indoor and outdoor)	137 x 44 x 27,5 mm (indoor and outdoor)	137 x 44 x 27,5 mm (indoor and outdoor)

# Smart Card Readers

## Multitech smart card readers (RS-485 OSDP V2 encrypted) – iClass and MIFARE

Name	LECTUS Secure 1000 RO	LECTUS Secure 2000 RO	LECTUS Secure 4000 RO	LECTUS Secure 5000 RO
Material description	Card reader, OSDP	Card reader, OSDP	Card reader, OSDP	Card reader with keypad, OSDP
Commercial type number (CTN)	ARD-SER10-RO	ARD-SER15-RO	ARD-SER40-RO	ARD-SERK40-RO



- ▶ Highest level of security due to OSDPv2 AES 128bit encryption.
- ▶ 13.56 MHz proximity readers for connecting to access controllers with OSDP interfaces
- ▶ They come equipped with the Bosch coded MIFARE data sector and support reading the CSN of ISO14443A cards as well.
- ▶ Interoperable with a growing range of technology environments and form factors

<b>Bosch controller compatibility</b>	AMC2-4WCF	AMC2-4WCF	AMC2-4WCF	AMC2-4WCF
<b>Software compatibility</b>	APE, BIS-ACE, AMS	APE, BIS-ACE, AMS	APE, BIS-ACE, AMS	APE, BIS-ACE, AMS
<b>Interfaces</b>	RS-485	RS-485	RS-485	RS-485
<b>Supported protocol</b>	OSDPv2 SC	OSDPv2 SC	OSDPv2 SC	OSDPv2 SC
<b>Panel connection</b>	Terminal strip	Terminal strip	Terminal strip	Pigtail
<b>Supported standard</b>	ISO 1443A, ISO 15693, ISO 14443B			
<b>Supported credential technology</b>	MIFARE DESFire EV1, MIFARE Classic, iCLASS, iCLASS SE, Seos	MIFARE DESFire EV1, MIFARE Classic, iCLASS, iCLASS SE, Seos	MIFARE DESFire EV1, MIFARE Classic, iCLASS, iCLASS SE, Seos	MIFARE DESFire EV1, MIFARE Classic, iCLASS, iCLASS SE, Seos
<b>Bosch code</b>	-	-	-	-
<b>Power supply</b>	5 – 16 VDC			
<b>Environment class</b>	IP55 (IP65 with gasket)			
<b>Maximum reading distance</b>	7.6 cm	7.6 cm	13 cm	13 cm
<b>Keypad</b>	no	no	no	yes
<b>Dimensions (H x W x D)</b>	103 x 48 x 23 mm (indoor and outdoor)	153 x 48 x 23 mm (indoor and outdoor)	122 x 85 x 24 mm (indoor and outdoor)	122 x 85 x 28 mm (indoor and outdoor)

# Biometric Readers

## BioEntry W2 reader

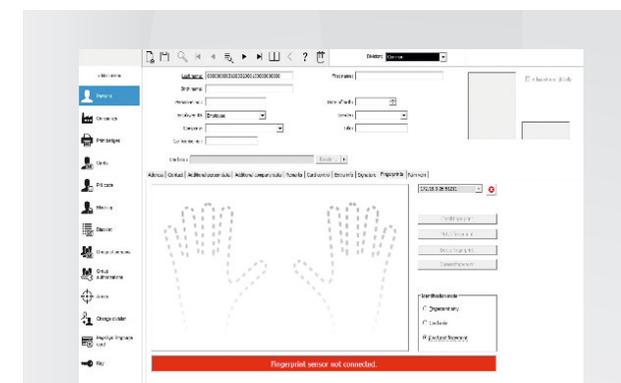
<b>Name</b>	BioEntry W2
<b>Material description</b>	<b>Fingerprint reader, OSDP, multiCLASS</b>
<b>Commercial type number (CTN)</b>	ARD-FPBEW2-H2



<b>Bosch controller compatibility</b>	AMC2-4WCF, APC-AMC2-2WCF, AMC2-4R4CF
<b>Software compatibility</b>	BIS-ACE, AMS
<b>Interfaces</b>	Wiegand, RS-485
<b>Supported protocol</b>	Wiegand, OSDPv2 SC
<b>Panel connection</b>	Terminal strip, RJ45 (PoE)
<b>Supported standard</b>	ISO 1443A
<b>Supported credential technology</b>	EM, HID Prox, MIFARE Classic, MIFARE DESFire EV1, HID-Corporate-1000, iCLASS, iCLASS SE, Seos
<b>Bosch code</b>	yes
<b>Power supply</b>	12 VDC or PoE
<b>Environment class</b>	Indoor / outdoor product (IP67/ IK09)
<b>Maximum reading distance</b>	13 – 127 mm
<b>Keypad</b>	no
<b>Dimensions (H x W x D)</b>	172 x 50 x 43 mm

### Biometry at its highest standard

- ▶ Convenient cardholder registration including the enrollment of fingerprint templates in just one management system (AMS or BIS-ACE)
- ▶ Fingerprint templates can be stored either in secure database or locally on the reader
- ▶ BioEntry W2 provides class-leading performance and security by featuring the latest fingerprint algorithm coupled by a powerful quad-core CPU
- ▶ The device offers flexibility and sustainability by featuring multitechnology support of credentials, including EM, iClass and MIFARE DESFire\*
- ▶ Packed in a rugged IP67/IK09 housing with sleek metallic finish, BioEntry W2 is a perfect access control solution for tough environment and outdoor installation



### Features



#### Best-In-Class Performance

- ▶ 1.2GHz quad-core CPU



#### Accuracy & Security

- ▶ High-precision optical sensor to detect a wide variety of fake fingers



#### High storage capacity

- ▶ Supports up to 400k users
- ▶ Data can be stored either on device or on secure database of AMS / BIS-ACE



#### Rugged Structure

- ▶ IK09 impact protection
- ▶ IP67 ingress protection
- ▶ Ideal for outdoor installation



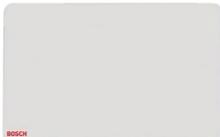
#### Multi RFID Card Reading

- ▶ LF(125KHz), HF(13.56MHz) dual-band
- ▶ Reads all card types that HID multiCLASS supports (EM/HID Prox/MIFARE Classic/iCLASS/MIFARE DESFire/NFC)
- ▶ Highest security standard by supporting Bosch coded MIFARE credentials

\* One card format at a time is supported

# Credentials

## MIFARE DESFire, MIFARE Classic and iClass

Material description	Card, MIFARE EV1, Bosch coded	Keyfob MIFARE EV1	MIFARE Classic Card Imprinted Card Number/ Bosch coded	Contactless MIFARE ID Keyfob 1
<b>Commercial type number (CTN)</b>	ACD-EV1-ISO	ACT-EV1TRF-SA1	ACD-MFC-ISO	ACT-MFCTRF-SA1
				
<b>Description</b>	MIFARE DESFire EV1 ID card with 8 kByte data storage, 2 application areas, one of which can be customized.	MIFARE DESFire EV1 ID keyfob with 8 kByte data storage, 2 application areas, one of which can be customized.	MIFARE Classic ID card with 1 kByte data storage, 2 application areas, one of which can be customized <ul style="list-style-type: none"> <li>▶ PVC plastic card</li> <li>▶ Credit card size</li> <li>▶ Imprinted card number</li> <li>▶ MIFARE Classic chip or</li> </ul>	MIFARE Classic ID keyfob with 1 kByte data storage, 2 application areas, one of which can be customized
Material description	iClass 26 bit Card with printed Bosch Logo	iClass 37 bit card with printed Bosch Logo	iClass 26bit Keyfob	iClass 37bit Keyfob
<b>Commercial type number (CTN)</b>	ACD-IC2K26-50	ACD-IC2K37-50*	ACT-ICL256-2AR*	ACT-IC16K37-10*
				
<b>Description</b>	A 13.56 MHz contactless smart card programmed to Wiegand 26-bit format. It has two 1 Kb application areas (256 Byte capacity).	A 13.56 MHz contactless smart card programmed to Wiegand 37-bit format. It has two 1 Kb application areas (256 Byte capacity).	<ul style="list-style-type: none"> <li>▶ Plastic Tag, PVC</li> <li>▶ Dimensions: 34 x 31 x 4.4 mm</li> <li>▶ Fastening Slot</li> <li>▶ ICLASS chip</li> </ul>	A contactless adhesive tag with smart card technology programmed to Wiegand 37-bit format. It operates at 13.56 MHz. It is 16K (2K Byte) with 16 application areas.

\* Check regional availability with your local sales contact

MIFARE DESFire and MIFARE Classic are all Bosch coded and compatible with the complete Bosch reader portfolio. Further credentials can be found in your local online product catalogue (link: <https://www.boschsecurity.com/xc/en/product-catalog/>).

# Readers and credentials

## Compatibility matrix

Bus type	Recommended Bosch Readers	Card format					
		MIFARE DESFire EV1 (Bosch code)	MIFARE Classic (Bosch code)	iClass, iClass SE, Seos	ISO 14443-A CSN	EM card	HID Prox
		13.56 MHz			125kHz		
RS-485	LECTUS secure 1000 RO LECTUS secure 2000 RO LECTUS secure 4000 RO LECTUS secure 5000 RO		●	●	●	●	
	LECTUS duo 3000 C LECTUS duo 3000 CK LECTUS Duo 3000 E LECTUS Duo 3000 EK			●		●	
	ARD-FPBEW2-H2		●	●	●	●	●
	LECTUS secure 1000 WI LECTUS secure 4000 WI LECTUS secure 5000 W1 LECTUS secure 9000 WI				●	●	
Wiegand	ARD-AYK12					●	
	ARD Miniprox ARD Entrypox ARD-PROX-PPL						●

# Access Modular Controller

## AMC Controllers

Material description	Door controller Wiegand, 2 reader	Door controller Wiegand with CF card	Door controller RS-485 with CF card
<b>Commercial type number (CTN)</b>	APC-AMC2-2WCF	APC-AMC2-4WCF	APC-AMC2-4R4CF
			
<b>Input voltage</b>	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
<b>Output voltage</b>	12 VDC	12 VDC	10 - 30 VDC
<b>Number of connectable readers</b>	2	4	8
<b>Number of Inputs</b>	4	8	8
<b>Number of Outputs</b>	4	8	8
<b>Display</b>	yes	yes	yes
<b>Internal storage (compact flash)</b>	2GB	2GB	2GB
<b>Reader Interface</b>	Wiegand	Wiegand	RS-485
<b>Max reader cable length</b>	110m per reader port	110m per reader port	1200m per Bus
<b>Reader operating voltage E-Mail</b>	12V DC	12V DC	10-30V DC
<b>Reader monitoring</b>	no	no	yes
<b>Number of wires per reader</b>	7 + 1	7 + 1	4 + 1
<b>Number of connectable reader extensions</b>	1	1	-
<b>Number of connectable I/O extensions</b>	3	3	3
<b>Reader protocol support</b>	Wiegand	Wiegand	OSDP, LBUS, MICOS, BG900
<b>Standards</b>	CE	CE, UL	CE, UL, VDS

# Access Modular Controller

## AMC I/O Extension boards

Material description	Door controller Wiegand extension	Extension board with 8-input 8-output	Extension board with 16-input 16-output	Extension board with 16-input
<b>Commercial type number (CTN)</b>	API-AMC2-4WE	API-AMC2-8IOE	API-AMC2-16IOE	API-AMC2-16IE
				
<b>Input voltage</b>	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC	10 - 30 VDC
<b>Output voltage to reader</b>	12 VDC	n/a	n/a	n/a
<b>Number of connectable readers</b>	4	-	-	-
<b>Number of Inputs</b>	8	8	16	16
<b>Number of Outputs</b>	8	8	16	
<b>Display</b>	no	no	no	no
<b>Internal storage (compact flash)</b>	no	no	no	no

# AMC accessories

## Enclosures

Material description	Enclosure with 1 DIN rail	Enclosure VDS certified	Enclosure with 2 DIN rails	Enclosure with power supply & DIN rail
<b>Commercial type number (CTN)</b>	AEC-AMC2-UL1	AEC-AMC2-VDS (EMEA)*	AEC-AMC2-UL2	AEC-AMC2-ENC3/ENC3Z (China)
				
<b>Information</b>	<ul style="list-style-type: none"> <li>▶ Steel enclosure</li> <li>▶ 1 DIN rail system for easy mounting of AMC2 or AMC2 extension board, power supply and battery</li> </ul>	<ul style="list-style-type: none"> <li>▶ Steel enclosure with preassembled cabling</li> <li>▶ 1 DIN-rail click system for easy mounting and replacement</li> <li>▶ Compliant with Vds 2119</li> </ul>	<ul style="list-style-type: none"> <li>▶ Steel enclosure</li> <li>▶ 2 DIN rail system for easy mounting of AMC2 or MAC2 extension board, power supply and battery</li> </ul>	<ul style="list-style-type: none"> <li>▶ Steel enclosure with preassembled cabling</li> <li>▶ This enclosure can be used for securely mounting and housing AEC and AMC2 and a power supply.</li> </ul>

## Mounting Plate, Power supply

Material description	Mounting plate for two/four DIN rails	Power Supply Unit
<b>Commercial type number (CTN)</b>	AEC-PANEL19-UPS/AEC-PANEL19-4DR	APS-PSU-60
		
<b>Information</b>	<ul style="list-style-type: none"> <li>▶ 4 rack units/ 88 horizontal pitches</li> <li>▶ Up to four rails for AMC devices</li> <li>▶ Battery bracket</li> <li>▶ Screw socket for PBC-60</li> <li>▶ Cable kits to connect the power supply</li> </ul>	<ul style="list-style-type: none"> <li>▶ Power supply unit with integrated battery charging device</li> <li>▶ Support of 12 V/7 Ah, 12 V/14 Ah and 24 V/7 Ah batteries</li> </ul>

# Access Hardware Extensions

## Request-to-Exit

Material description	DS160 Series High Performance	Door Release Button	Door Release Button
<b>Commercial type number (CTN)</b>	DS160(white)/DS161(black)	4710760047*	4710760048*
			
<b>Type</b>	Request-to-exit Detectors	RTE button with key symbol surface-mount	RTE button with key symbol flush-mount
<b>Information</b>	<ul style="list-style-type: none"> <li>▶ Door monitor with sounder alert</li> <li>▶ Up to 64 second adjustable latch time</li> <li>▶ Selectable relay trigger mode</li> <li>▶ Selectable fail safe/fail secure modes</li> </ul>	<ul style="list-style-type: none"> <li>▶ Zero-potential sensor contact for signaling whether the door is open or closed</li> <li>▶ Suppressor diode to counteract voltage spikes during the switching process</li> </ul>	<ul style="list-style-type: none"> <li>▶ Zero-potential feedback contact for signaling whether the door is open or closed</li> <li>▶ Recovery diode for suppressing interfering pulses during the switching process</li> </ul>

\* Check regional availability with your local sales contact