Life Is On | Schneider Electric

AccessXpert

Security System Controller (AX-SSC)

Product at a glance

At the core of the AccessXpert security system is the AX-SSC field controller. The AX-SSC is a Mercury-powered device that includes following features:

- Local control logic
- Alarm supervision
- 8 Active card format support
- BACnet support for coordinated control
- AES and TLS encryption
- Native IPv4 and IPv6
- Cloud or on-premise connectivity

Introduction

The Security System Controller (SSC) is a standalone, intelligent controller that includes local connectivity to the host environment. It provides commercial-grade performance, and functions as a network level coordinator for the AccessXpert system. The AX-SSC operates as the communications hub for downstream controllers. While doing so, it provides intelligent management of those devices through its onboard memory and processing capabilities. All of the controller's functional information resides locally via onboard memory, so even if a network outage occurs, the AX-SSC will continue to operate.

BACnet/BMS Integration

The AX-SSC supports integration and communication via the BACnet protocol to BMS systems from Schneider Electric and other systems. By supporting BACnet, the AX-SSC allows the AccessXpert SMS to directly integrate with other building systems, such as HVAC controls, lighting controls, irrigation, and power management systems. BACnet support also allows the AX-SSC to provide coordinated control using standard BACnet objects to represent security values for read/write functions.

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Security System Controller (AX-SSC)

Features

The AX-SSC is a Mercury-powered device that aggregates reader and I/O controllers to allow communication with the AccessXpert system software and other security system controllers. It monitors and manages field bus devices, processes alarms, events, schedules, and timers, validates door access events, and maintains a local configuration database. Each AX-SSC can manage up to 64 downstream devices with a total number of readers and other I/O points up to 1,024.

On-board memory provides storage for up to 1,500,000 credentials and up to 50,000 access events with 8 active, credential types (format and facility codes). The AX-SSC validates all access attempts by downstream devices.

Device options

Support for a wide range of popular devices including Mercury serial I/O controllers and wireless locks from ASSA ABLOY, Allegion, and Sielox is provided by the AX-SSC. Mercury devices are well-accepted in the market and have a proven track record of performance.

Credential format options

The AX-SSC interfaces with a variety of industry-standard readers and supports a wide range of credential formats including magnetic stripe, proximity, smart cards, and F2F and Supervised F2F.

Communications options

The AX-SSC is an Ethernet-enabled device that supplies several communications options for downstream devices including:

Connectivity- The AX-SSC provides cloud or on-premise connectivity to the AccessXpert Security Management System (SMS).

Ports- While IP and RS-485 is used to with I/O serial controllers, other ports are available in the AX-SSC to support legacy Schneider Electric devices (future). In addition, an onboard USB port is used to install firmware and establish the initial communication parameters.

IP protocols- The AX-SSC supports the following protocols:

- IP addressing (Native IPv4 and IPv6 connectivity)
- TCP communications
- DHCP/DNS for rapid deployment and lookup of addresses
- HTTP/HTTPS for Internet access through firewalls, which enables remote monitoring and control
- SMTP enables sending email messages
- SNMP enables network supervision and reception of application alarms in designated network management tools

CyberSecurity

System and device-level communications can be protected using AES 128 or 256 bit encryption. Communications at the IP level can utilize TLS 1.2 with SHA-1 or SHA-256 hashing algorithms for authentication along with data encryption. The servers ship with a default self-signed certificate. Commercial Certification Authority (CA) server certificates are supported to lower the risk of malicious information technology attacks.

Programming capabilities

The AX-SSC has both traditional programming capabilities as well as support for control logic (If/Then) statements.

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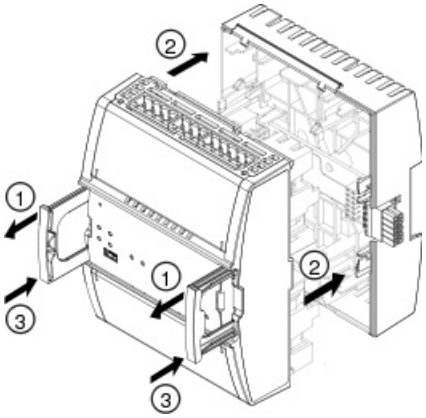
Patented two-pieced design

Each module can be separated from its terminal base to allow the site to be wired prior to the installation of the electronics. The patented locking mechanism serves as handles for removing the module from its base. All critical components have a protective cover that permits convection cooling to occur.



Simple DIN-rail installation

Fasteners easily snap into a locked position for panel installation. The fastener has a quick release feature for easy DIN-rail removal.

Specifications

Electrical

DC input supply power ..... 10 W

DC input supply voltage ..... 24 VDC

Environment

Ambient temperature operating .....0 to 50 ^{0}C (32 to 122 ^{o}F)

Ambient storage, operating ..... -20 to + 70 ^{o}C (-4 to 158 ^{o}F)

Maximum Humidity .....95% RH non-condensing

Material

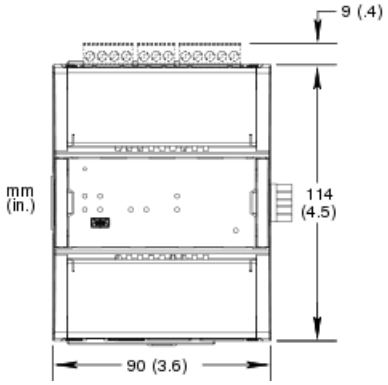
Plastic rating UL94-5VB

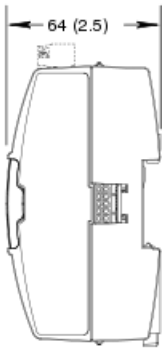
Enclosure ..... Eco Friendly ABS/PC

Enclosure rating..... IP 20

Mechanical

Dimensions including terminal base.....
90 W x 114 H x 64 D mm (3.6 W x 4.5 H x 2.5 D in.)





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Specifications – Continued

Weight including terminal base ..... 0.321 kg (0.71 lb)

Weight excluding terminal base ..... 0.245 kg (0.54 lb)

Agency compliances

Emission .....RCM; EN 61000-6-3; EN 50491-5-2; FCC Part 15, Sub-part B, Class B

Immunity ..... EN 61000-6-2; EN 50491-5-3

Safety ..... EN 60730-1; EN 60730-2-11; EN 50491-3; UL 916 C- UL US Listed

Product ..... EN 50491-1, UL 294

Real-time clock backup

Inaccuracy, at 25 °C (77 °F) ..... +/-52 seconds per month

Backup time ..... 10 days

Communications

Ethernet interface ..... Dual 10/1000BASE-TX RJ45

USB .....USB 2.0,1 device port (mini-B) and 1 host port (type-A)

BACnet ..... BACnet/IP, default 47808

LonWorks TP/FT-10

RS-485 ..... Dual 2-wire ports, bias 5.0 VDC

TCP ..... Binary, port fixed, 4444

HTTP ..... Non-binary, port configurable, default 80

HTTPS ..... Encrypted supporting TLS 1.2, port configurable default 443

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Specifications – Continued

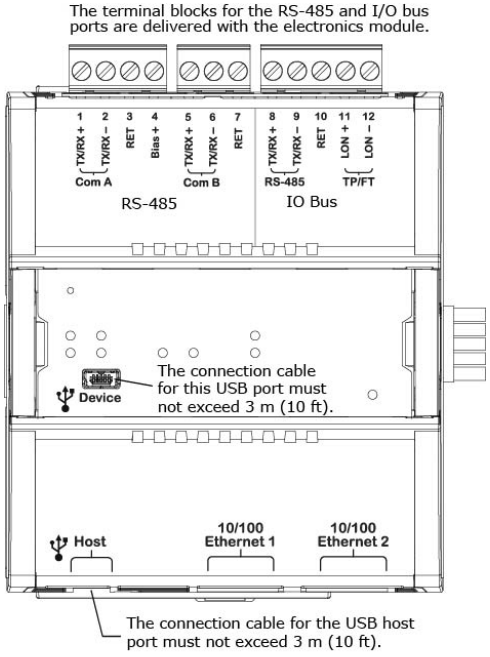
SMTP ..... Email sending, port configurable, default 25

SNMP ..... version 3

..... Network supervision using poll and trap

..... Application alarm distribution using trap

Terminals



Caution: Install the termination jumper ONLY on the panel at each end of the RS-485 bus. Failure to do so will compromise the proper operation of the communication channel.

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Specifications – Continued

CPU

Frequency ..... 500 MHz

Type ..... SPEar1380, ARM Cortex-A9 dual core

DDR3 SDRAM ..... 512 MB

eMMC memory .....4 GB

Memory backup..... Yes, battery-free, no maintenance

Part numbers

Security System Controller – AX-SSC ..... AX-SSC

TB-ASP-W1, Terminal Base SXWTBASW110002

Power Supply 24 VDC SXWPS24VX10001

TB-PS-W1, Terminal Base for Power Supply
(Required for each Power Supply) SXWTBPSW110001

Regulatory Notices

Federal Communications Commission
FCC Rules and Regulations CFR 47, Part 15, Class B
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received, including interference that may cause undesired operation.

The AX-SSC is powered by the Mercury security control engine. The Mercury Powered™ trade mark is owned by Mercury Security.

UL 916 Listed products for the United States and Canada, Open Class

Energy Management Equipment. UL file E81046
UL 294 Recognized Component. UL file BP6537

Industry Canada
ICES-003
This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.