FoxSec access door controller

FoxSec® products provide a complete and fully featured hardware/firmware infrastructure for access control systems. The FS7301 Door controller connects 2 access control card readers via Wiegand or clock-and-data (magnetic card) interface controlling either one or two doors.

The FS7301 features on-board memory, allowing program updates to be downloaded via the RS485 network. On-board dataline optical isolation and on-board optional 24VDC power . The FS7301 is compatible with FS9131 and/or FS9000 hardware through a RS-485 network. The FS9131 and FS9000, in turn, communicates with the system server (FoxSec 1850 and/or FoxSec Net+ via industry standard TCP/IP protocol over 10Mbps Ethernet or the Internet.

Internal memory stores up to 18500 users and last 500 events. This architecture minimizes the impact on corporate LANs by using only one UDP/IP address for FS9000 Main panel itself, and by handling low-level transactions on the RS485 network.

The access door controller has developed in a way that it is very durable and has many different and flexible functions.

Compatible communication modules
ADP2 RS485/232 (for connecting over COM port with FoxSec Net+ or FoxSec 1850)
ADP3A RS485/Ethernet (for connecting over Internet with FoxSec Net+ or FoxSec 1850)
FS9000 control panel door data line (for connecting over internet with FoxSec Net+)
FS9131 door data line expansion module (for connecting with FoxSec Net+)

FS7301 Features

- Real time monitoring with FoxSec Net+ or FoxSec 1850 software
- Configurations and setup with FoxSec Net+ or FoxSec 1850 software
- On-board Dataline optical isolation
- Optional on-board 24VDC
- 1 x 12V7Ah battery bacup for 12 and 24VDC
- Possibility to connect up to 2 card readers (26 or 34bit wiegand or clock-and-data magnetic card)
- Card data memory
- Access rights memory
- Last events memory
- 220V lost alarm
- Battery trouble alarm
- Sensor determining the status of the door
- Door opening switch
- Tamper alarm
- Alarm of opening the door by a key.
- Alarm of a door being open too long

- Full battery test and monitoring
- Low voltage alarm
- 14 different holidays per controller
- 20 schedules per controller
- 8 periodic programs per controller
- 63 time zones per controller
- Up to 20 programs for 2 (not door) additional relays.
- Up to 100 different controller configurations
- Anti passback
- Elevator module connection possibility (up to 16 floors for one controller)
- Dual cards access
- Empty room programmable relay
- Battery recharging
- RS485 data line
- Determined reader functions: Card (normal), Card + pin
- Up to 2 security area monitoring if armed or disarmed (accessing permitted or restricted)

FS7301 Features

Mounting

Metal enclosure protects components from
Damage and tampering the device
Mount to any wall surface, using three screws. The unit should be installed indoors, inside a secure area, such as in an IT or telecommunications room, utility closet, or on a wall above a suspended ceiling.

Indications

Controller LEDs
Power input U1 (12VDC) electronical fuse LED. If LED is ON then fuse is OK and power is provided to controller and 12VDC outputs
Power input U2 (24VDC) electronical fuse LED. If LED is ON then fuse is OK and 24VDC is provided to lock outputs.
Sepparate 12VDC output electronical fuse LED. If LED is ON then fuse is OK and power is provided to elevator module or other external device
Battery LED. If LED is ON then battery power is provided to the unit
Relay status LEDs. If LED is ON then corresponding relay is activated. (Applies to RL1 and RL4)
RS485 data line supervision – If blinking then it is sending and receiving data over RS485. Green= transmit (TX), Red= receive (RX).

Connectors

- All quick-disconnect screw terminal connectors
- One RS-485 connection to dataline
- 2 card reader inputs (26 or 34bit wiegand or clock-and-data)
- 1 door status sensor inputs
- 1 door opening button inputs
- 2 power outputs for electric locks (rated 1.5A @ 12 or 1A@ 24 VDC)
  (Optional 3A @ 12VDC, 0A @ 24VDC) **
  (Optional 2A @ 12VDC and 1A @ 24VDC)**
- 2 non-latching output relays for electric loks or other devices
  (rated 1 x 5A (max500W) and 1 x 1A (max50W) @ 48 VDC)
- 1 electronical fuse protected 1A 12VDC Power output for elevator module or other device
- DC Power input
- One Tamper inputs
- Door opened by key or door opened too long output*
  *Additional relay (RL1) outputs can be configured as a fail output
  **Higher current power MUST be ordered sepparately

Power

The user should supply 12 VDC to connected interfaces. Separate supervised DC supplies with battery back-up are recommended for door locking or relay activated devices if consumption is exceeded

CPU

- 16-bit CPU Microcontroller, 16 MHz

Memory

- 32 k Flash memory inside microcontroller
- 128k EEPROM memory non-volatile
- 32k FRAM memory non-volatile

Warranty

Warranted against defects in materials and workmanship for 24 months. (See complete warranty policy for details.)

FS7301 Specifications

Measures

Dimensions
251W x 292H x 90D mm without lid
(10.0" x 11.5" x 3.54")
Weight
2.70kg (95 oz) without battery

Case

Enclosure Material
Metal

Power supply

Power Supply Requirements
100-240VAC 50/60Hz power transformer
Mains fuse 500mA
Power transformer output supply 16V
Power transformer max output current 2.2A
Controller current 400mA @ 13.7VDC
PWM (Pulse-with modulation) regulator on-board
Recommended: Factory installed power transformer. Battery backup, input surge protection and AC Fail is fully monitored in controller.Separate supervised DC supply with battery back-up recommended if power supply max consumption exceeds.

Environmental

Operating Environment
Indoors, or customer-supplied NEMA-4 Enclosure
Temperature
-10° to 40° C (14° to 104° F)
Humidity
0% to 80% relative, non-condensing
Materials
RoHS compliant 2002/95/EC

Communications

Communication Ports
1 x RS-485 – two wire with optical isolation

Cables

Cable Distance
RS-485 –1500m (4900 feet), using shielded twisted pair cable (Cat5e, Cat6e)
Input Circuits – 150m (500 feet), using 4 x 0.22 cable
Output Circuits – 150m (500 feet),
using 2 x 0.5+2 x 0.22 cable
Card reader – 50m (165 feet) 2 x 0.5+4 x 0.22+S
Minimum wire gauge depends on cable length and current requirements.

Protection

4000-V_{PEAK} Isolation
2500-V_{RMS} isolation up to 60sec
Human Body Model Up to 16kV (ESD)
Charged Device Model Up to 1kV (ESD)
Machine Model Up to 200V (ESD)
Thermal Shutdown Protection
Onboard DC-DC converter isolation Up to 3kVDC