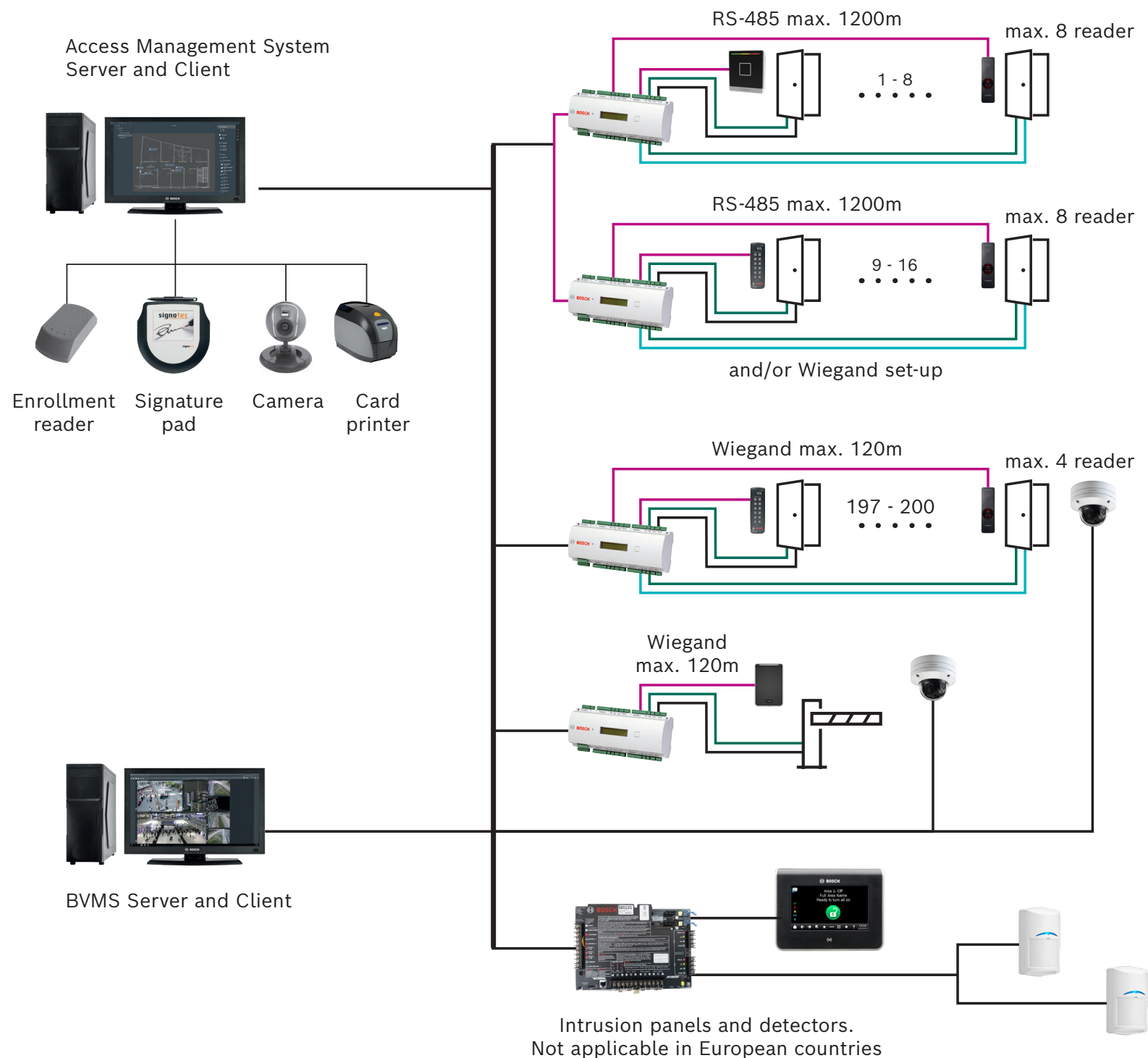


System design examples - Access Control Systems



System description / application

System size

- ▶ 200 doors
- ▶ 1,200 cardholders
- ▶ Three operators

AMS Plus features

- ▶ Max. 288 doors
- ▶ Max. 10.000 cardholders
- ▶ 5 cards per person
- ▶ 1,024 authorizations per MAC
- ▶ Graphical location map
- ▶ Video integration for video verification via BVMS
- ▶ Credential management

AMC features

- ▶ 2 RS-485 buses or 4 Wiegand ports
- ▶ 8 inputs
- ▶ 8 relays
- ▶ TCP/IP, RS-485 connection

Reader features

- ▶ Support of OSDPv2 secure channel
- ▶ Outdoor resistant (up to IP67)
- ▶ Multitechnology support (125kHz and 13.56MHz)
- ▶ Wiegand and RS-485 support
- ▶ Keypad or fingerprint for verification

Access components

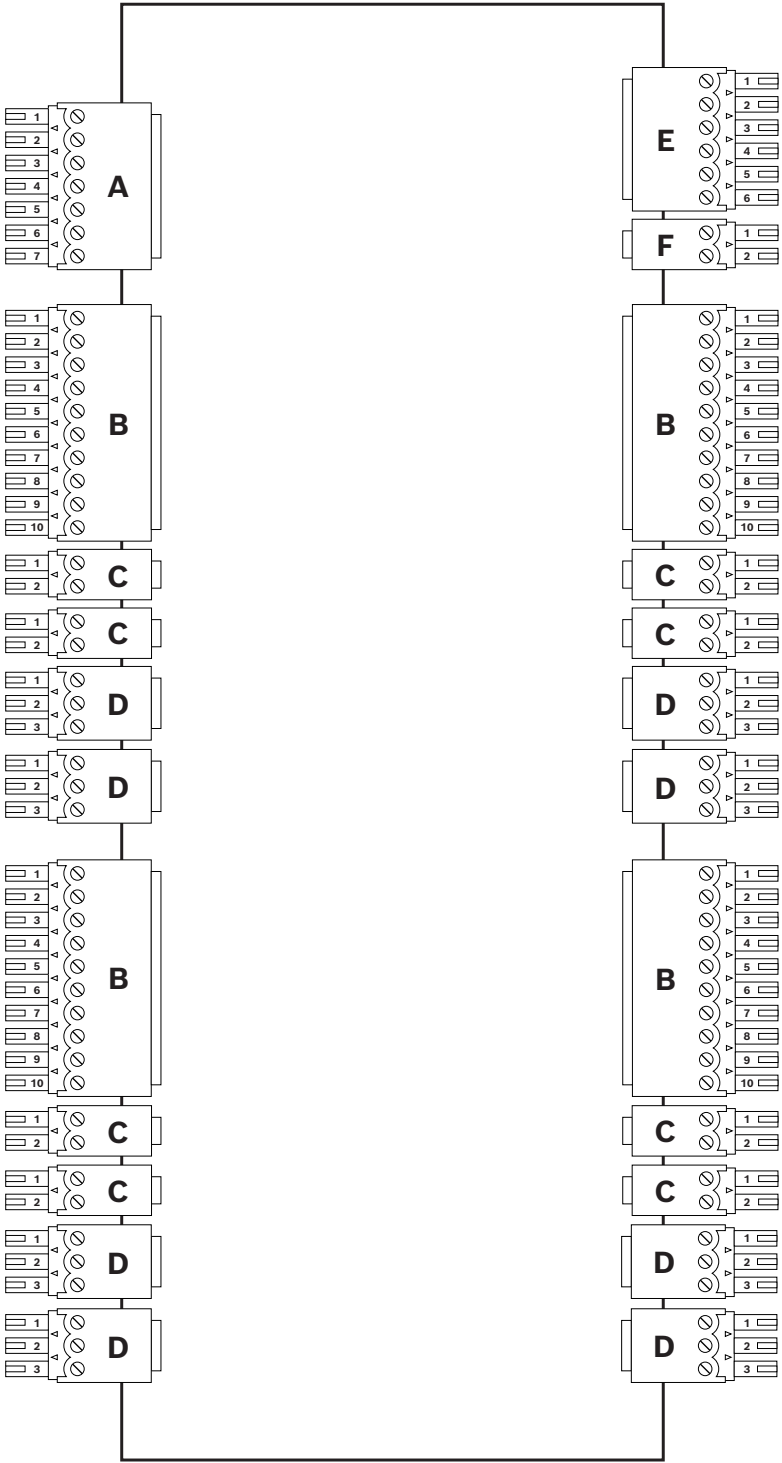
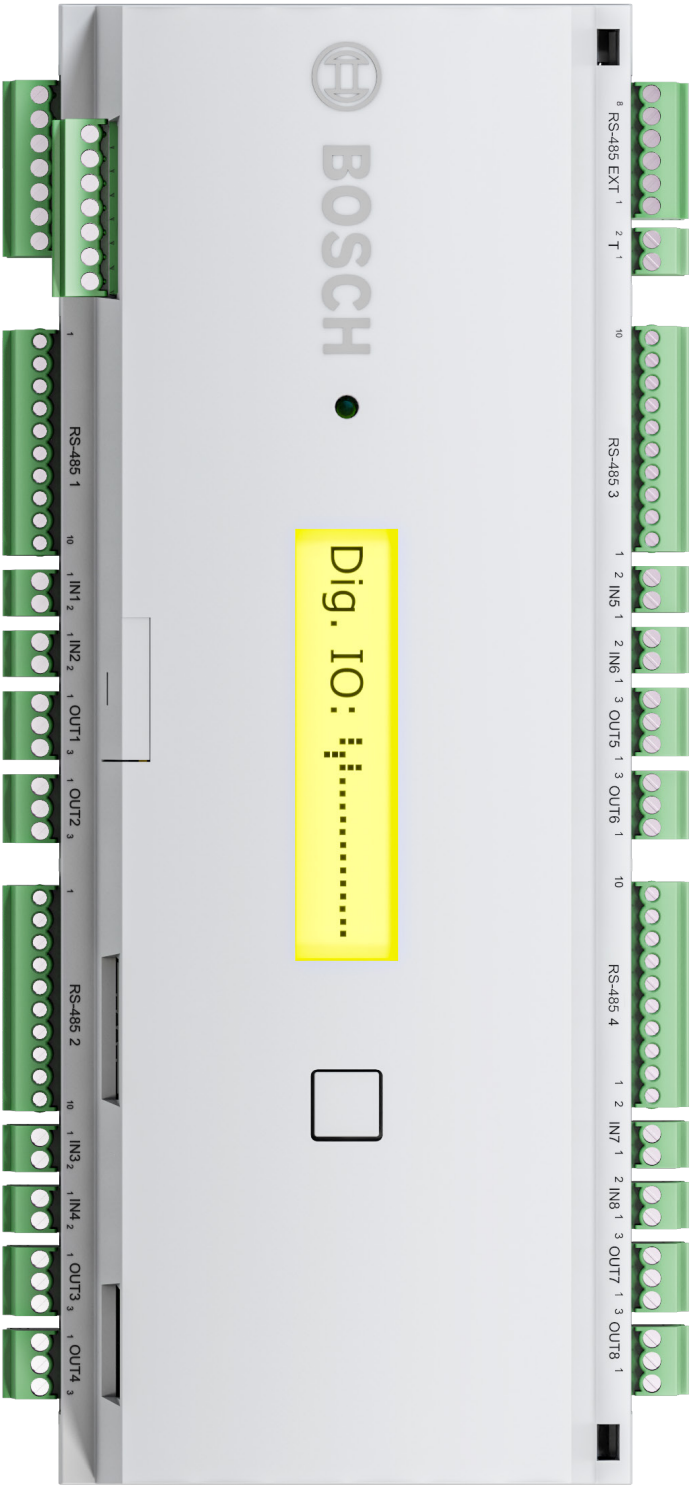
Item type

Readers	ARD-AYBS6380, ARD-FPBEW2-H3, ARD-SIGR40-ICL, ARD-SELECT-BO
Lock	to be purchased from 3rd party
Magnetic contact	ISN-CSM35-W
Request-to-exit	Request-to-exit Detector DS160
AMS Software	1 x AMS-BASE-PLUSxx**, 1 x AMS-XDRS-128Vxx, 2 x AMS-XCLI-1Vxx
Controller	APC-AMC2-4R4CF, APC-AMC2-4WCF
Power supply	APS-PSU-60
Battery	D126

Integrations

BVMS Software	
Cameras	
Intrusion control panel	B9512G
Intrusion touch screen keypad	B942
Intrusion detectors	CDL2-A15G

** Version dependent

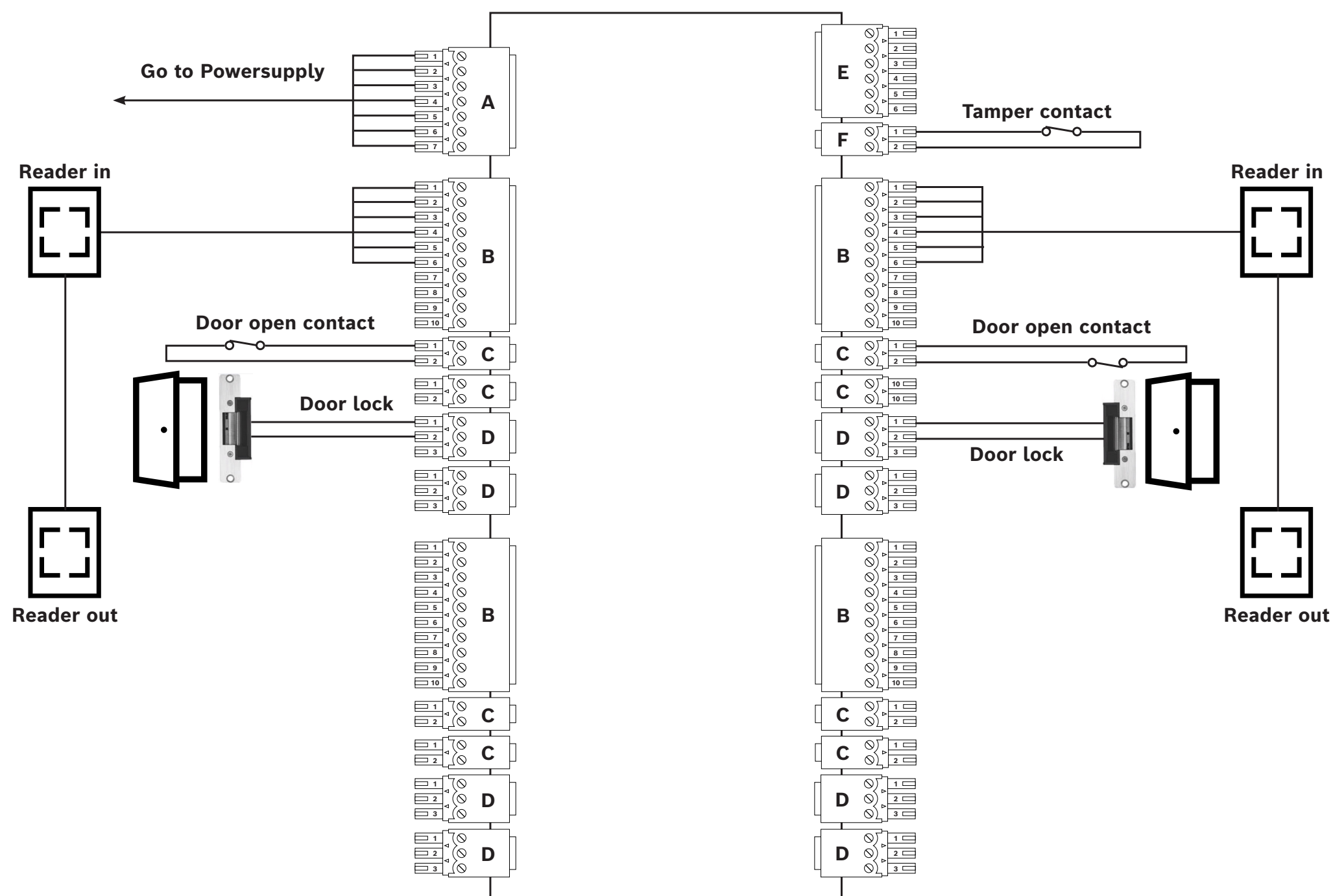


A	Power supply	
	1	Power supply, DC positive (10V - 30V)
	2	Shield
	3	Power supply (0V)
	4	UPS (power good signal) - AC
	5	UPS (power good signal) - Battery
	6	UPS (power good signal) - DC
	7	UPS (power good signal) - Common
B	RS-485 reader interface	
	1	Reader Supply (10V - 30V)
	2	Reader Supply (0V)
	3	Shield
	4	Data RxTx+
	5	Data RxTx-
	6	Data shield (PAG)
	7	not connected
	8	not connected
	9	not connected
	10	not connected
	Wiegand interface AMC	
		Reader Supply (12V)
		Reader Supply (0V)
		Data 0
		Data 1
		Shield
		green LED
		red LED
		Beeper
		Hold
C	Analog input	
	1	Analog input, in
	2	Analog input, out
D	Relay output	
	1	Relay Output, normally open
	2	Relay Output, common
	3	Relay Output, normally closed
E	Host/Extension Interface	
	1	Power supply for external devices (10V - 30V)
	2	Power supply for external devices (0V)
	3	Shield
	4	Data RxTx+
	5	Data RxTx-
	6	Ground (PAG)
F	External tamper contact	
	1	Tamper contact, in
	2	Tamper contact, out

RS-485 AMC2-4R4CF

Wiring diagram - 2 doors

1 door with two readers, door contact and lock per door application



A

Power supply

- | | |
|---|---------------------------------------|
| 1 | Power supply, DC positive (10V - 30V) |
| 2 | Shield |
| 3 | Power supply (0V) |
| 4 | UPS (power good signal) - AC |
| 5 | UPS (power good signal) - Battery |
| 6 | UPS (power good signal) - DC |
| 7 | UPS (power good signal) - Common |

B

RS-485 reader interface

- | | |
|----|---------------------------|
| 1 | Reader Supply (10V - 30V) |
| 2 | Reader Supply (0V) |
| 3 | Shield |
| 4 | Data RxTx+ |
| 5 | Data RxTx- |
| 6 | Data shield (PAG) |
| 7 | not connected |
| 8 | not connected |
| 9 | not connected |
| 10 | not connected |

C

Analog input

- | | |
|---|-------------------|
| 1 | Analog input, in |
| 2 | Analog input, out |

D

Relay output

- | | |
|---|-------------------------------|
| 1 | Relay Output, normally open |
| 2 | Relay Output, common |
| 3 | Relay Output, normally closed |

E

Host/Extension Interface

- | | |
|---|---|
| 1 | Power supply for external devices (10V - 30V) |
| 2 | Power supply for external devices (0V) |
| 3 | Shield |
| 4 | Data RxTx+ |
| 5 | Data RxTx- |
| 6 | Ground (PAG) |

F

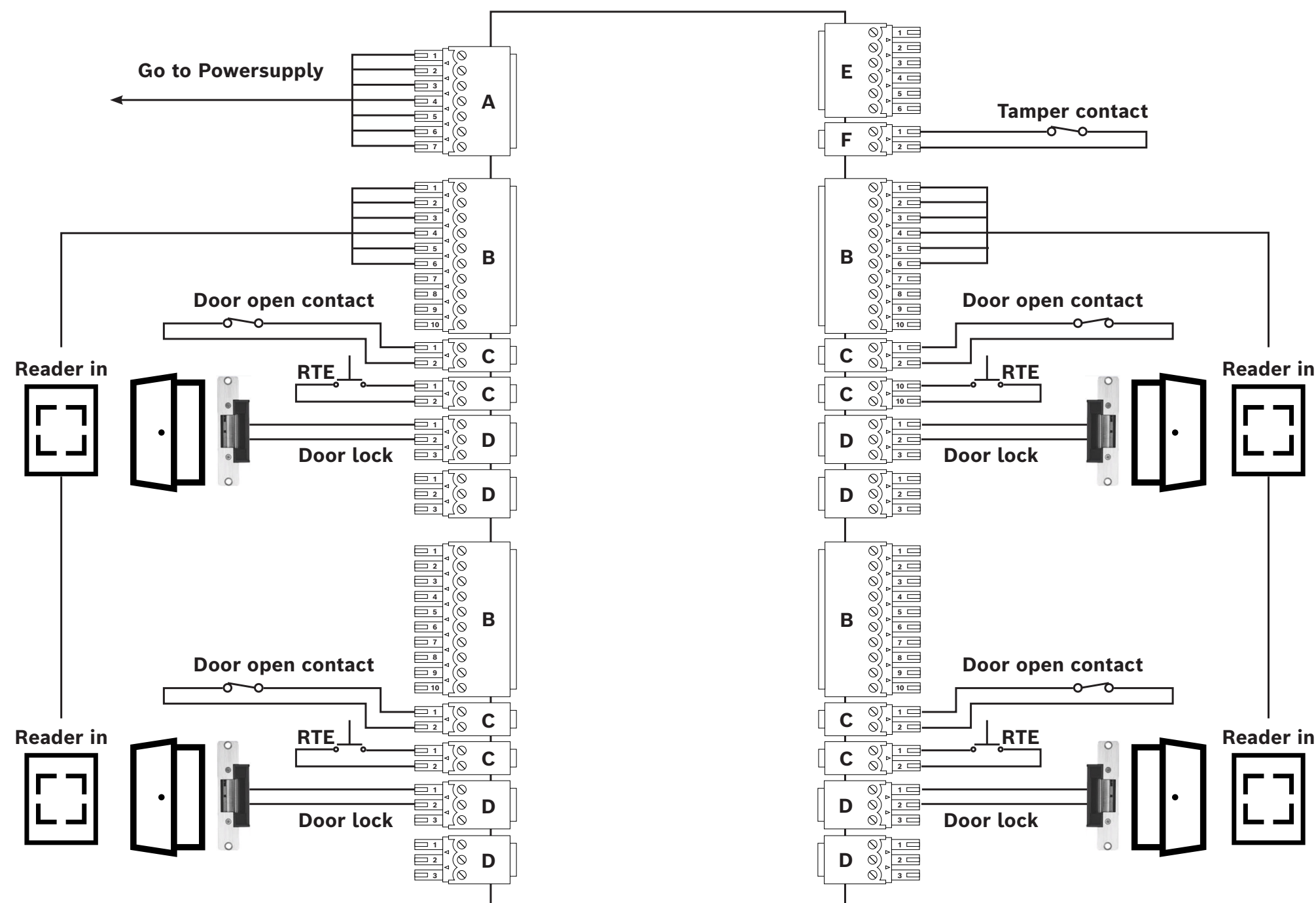
External tamper contact

- | | |
|---|---------------------|
| 1 | Tamper contact, in |
| 2 | Tamper contact, out |

RS-485 AMC2-4R4CF

Wiring diagram - 4 doors

Entrance set-up with 1 reader and 1 request-to-exit button per door application



A

Power supply

- 1 Power supply, DC positive (10V - 30V)
- 2 Shield
- 3 Power supply (0V)
- 4 UPS (power good signal) - AC
- 5 UPS (power good signal) - Battery
- 6 UPS (power good signal) - DC
- 7 UPS (power good signal) - Common

B

RS-485 reader interface

- 1 Reader Supply (10V - 30V)
- 2 Reader Supply (0V)
- 3 Shield
- 4 Data RxTx+
- 5 Data RxTx-
- 6 Data shield (PAG)
- 7 not connected
- 8 not connected
- 9 not connected
- 10 not connected

C

Analog input

- 1 Analog input, in
- 2 Analog input, out

D

Relay output

- 1 Relay Output, normally open
- 2 Relay Output, common
- 3 Relay Output, normally closed

E

Host/Extension Interface

- 1 Power supply for external devices (10V - 30V)
- 2 Power supply for external devices (0V)
- 3 Shield
- 4 Data RxTx+
- 5 Data RxTx-
- 6 Ground (PAG)

F

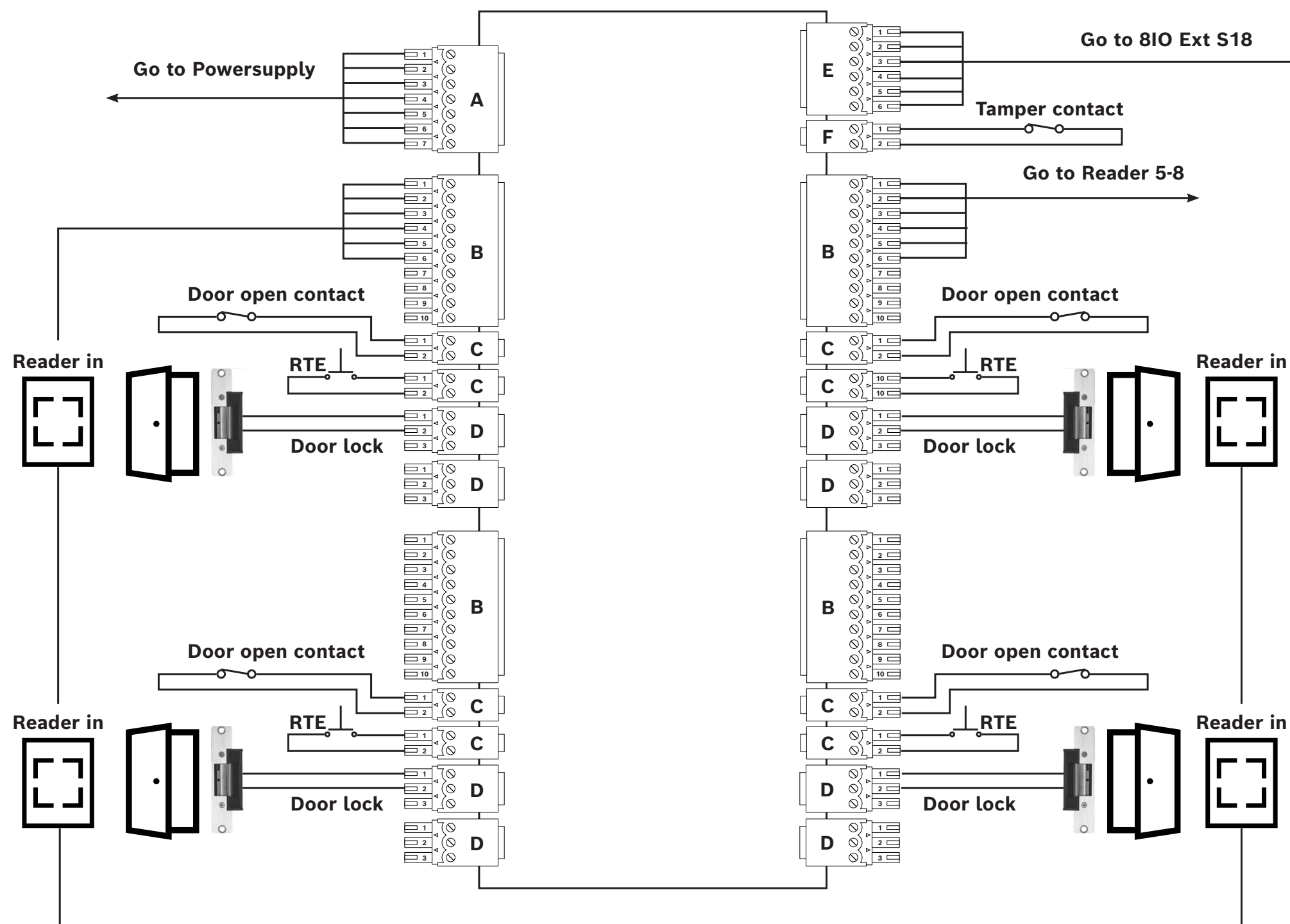
External tamper contact

- 1 Tamper contact, in
- 2 Tamper contact, out

RS-485 AMC2-4R4CF

Wiring diagram - 8 doors

Entrance set-up with 1 reader and 1 request-to-exit button per door application



A

Power supply

- 1 Power supply, DC positive (10V - 30V)
- 2 Shield
- 3 Power supply (0V)
- 4 UPS (power good signal) - AC
- 5 UPS (power good signal) - Battery
- 6 UPS (power good signal) - DC
- 7 UPS (power good signal) - Common

B

RS-485 reader interface

- 1 Reader Supply (10V - 30V)
- 2 Reader Supply (0V)
- 3 Shield
- 4 Data RxTx+
- 5 Data RxTx-
- 6 Data shield (PAG)
- 7 not connected
- 8 not connected
- 9 not connected
- 10 not connected

C

Analog input

- 1 Analog input, in
- 2 Analog input, out

D

Relay output

- 1 Relay Output, normally open
- 2 Relay Output, common
- 3 Relay Output, normally closed

E

Host/Extension Interface

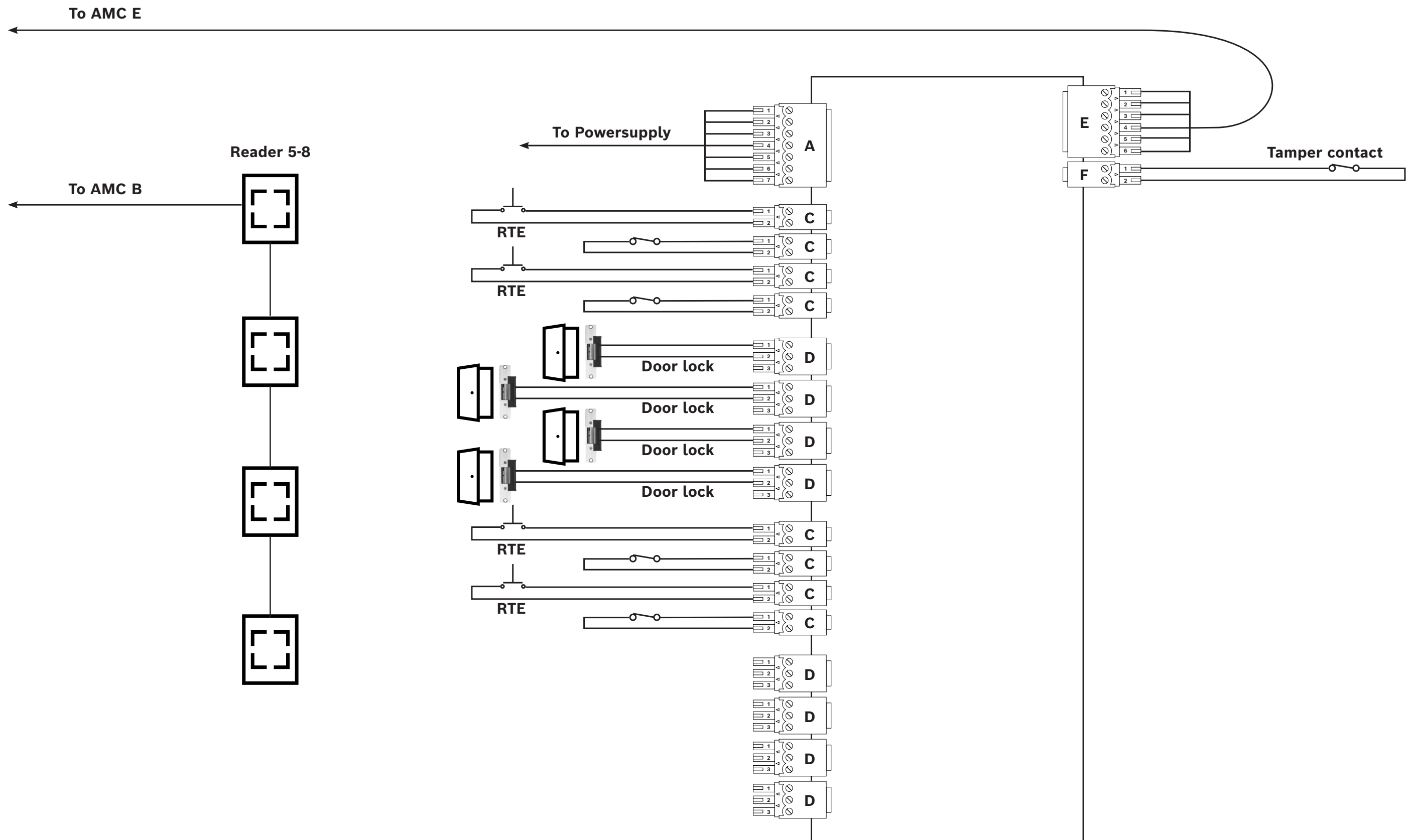
- 1 Power supply for external devices (10V - 30V)
- 2 Power supply for external devices (0V)
- 3 Shield
- 4 Data RxTx+
- 5 Data RxTx-
- 6 Ground (PAG)

F

External tamper contact

- 1 Tamper contact, in
- 2 Tamper contact, out

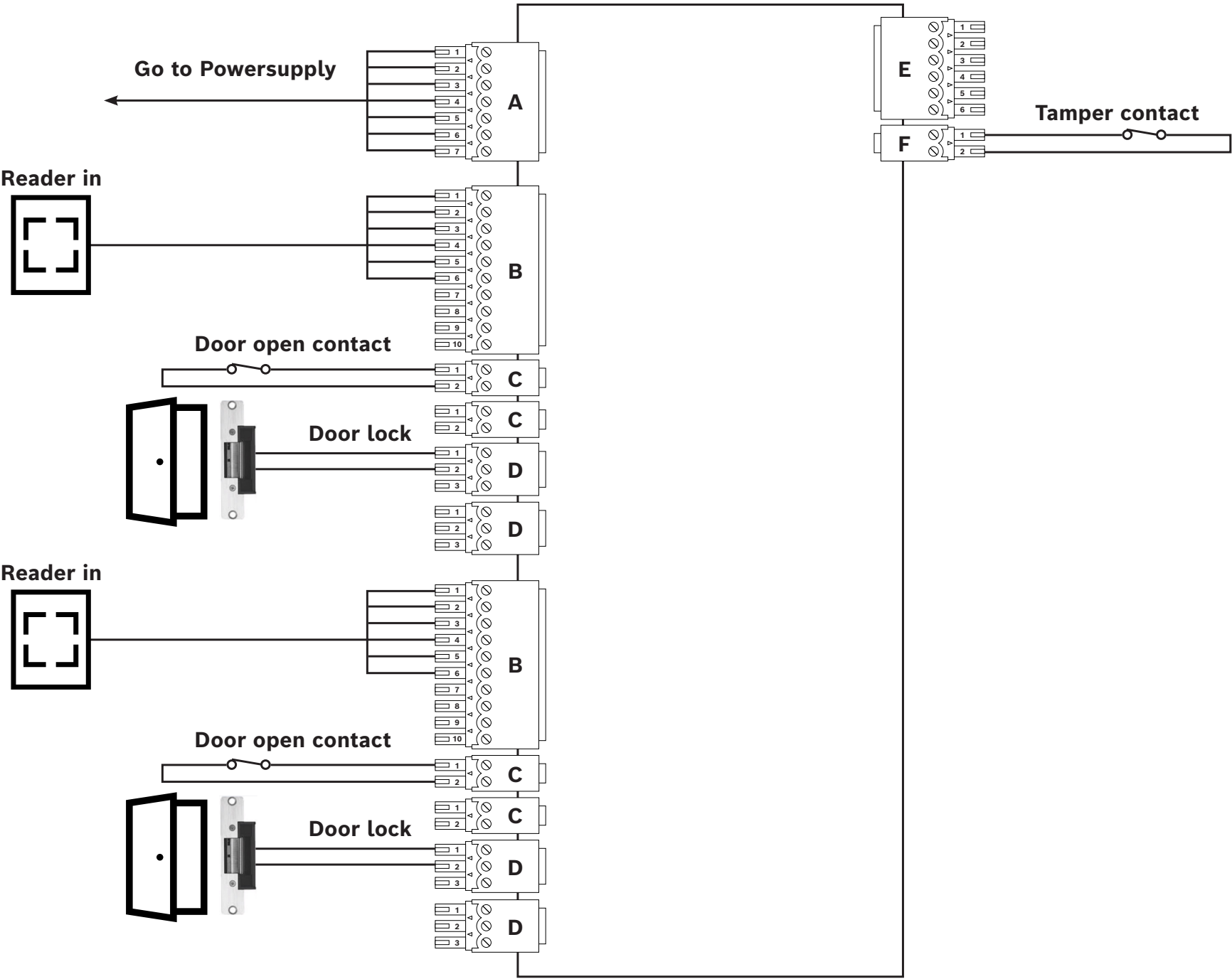
Extension unit



Wiegand AMC2-2WCF

Wiring diagram - 2 doors

Entrance set-up with 1 reader and 1 request-to-exit button per door application

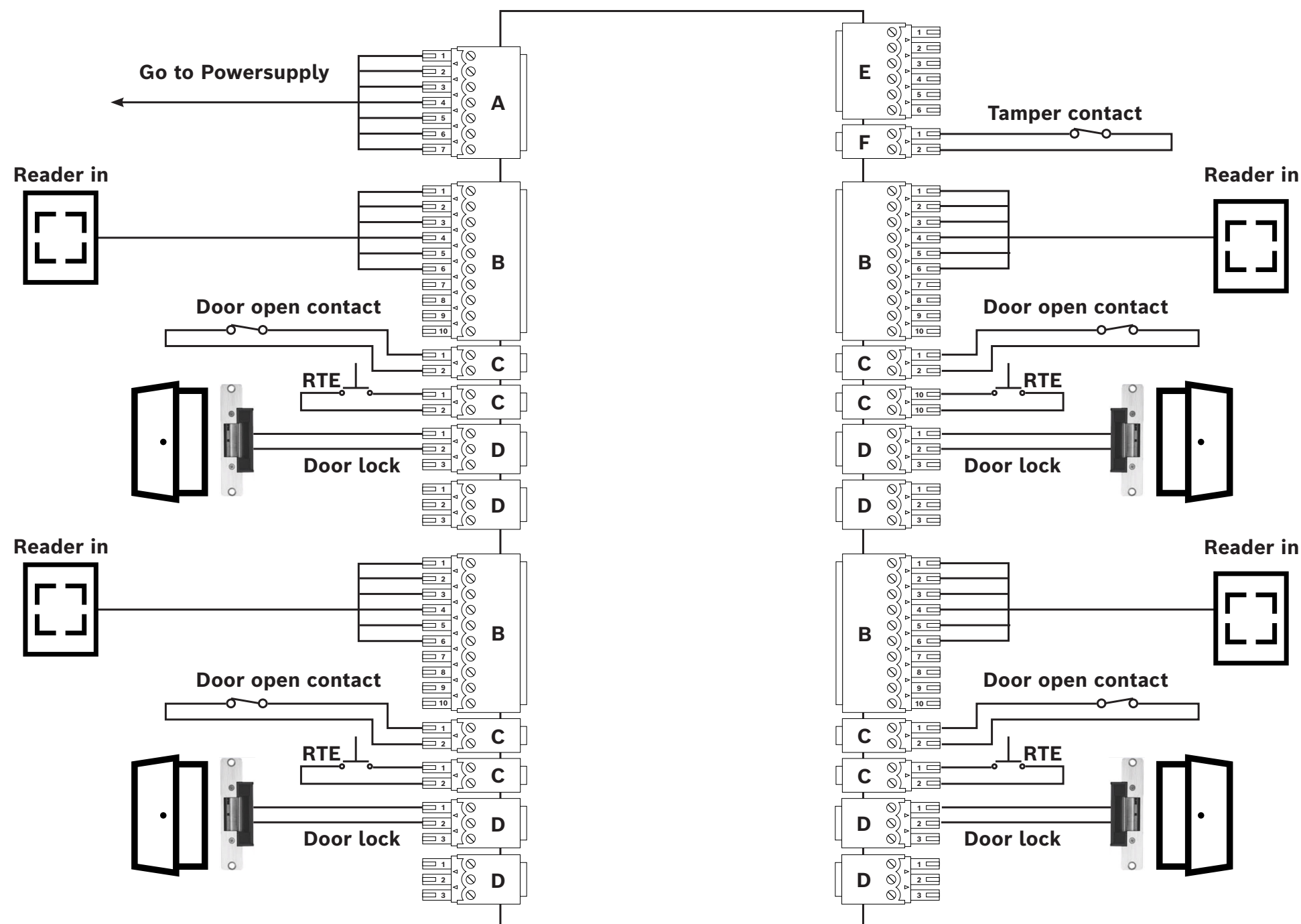


A	Power supply	
	1	Power supply, DC positive (10V - 30V)
	2	Shield
	3	Power supply (0V)
	4	UPS (power good signal) - AC
	5	UPS (power good signal) - Battery
	6	UPS (power good signal) - DC
	7	UPS (power good signal) - Common
B	Wiegand interface AMC	
	1	Reader Supply (12V)
	2	Reader Supply (0V)
	3	Data 0
	4	Data 1
	5	Shield
	6	green LED
	7	red LED
	8	Beeper
	9	Hold
	10	Card Present
C	Analog input	
	1	Analog input, in
	2	Analog input, out
D	Relay output	
	1	Relay Output, normally open
	2	Relay Output, common
	3	Relay Output, normally closed
E	Host/Extension Interface	
	1	Power supply for external devices (10V - 30V)
	2	Power supply for external devices (0V)
	3	Shield
	4	Data RxTx+
	5	Data RxTx-
	6	Ground (PAG)
F	External tamper contact	
	1	Tamper contact, in
	2	Tamper contact, out

Wiegand AMC2-4WCF

Wiring diagram - 4 doors

Entrance set-up with 1 reader and 1 request-to-exit button per door application



A

Power supply

- 1 Power supply, DC positive (10V - 30V)
- 2 Shield
- 3 Power supply (OV)
- 4 UPS (power good signal) - AC
- 5 UPS (power good signal) - Battery
- 6 UPS (power good signal) - DC
- 7 UPS (power good signal) - Common

B

Wiegand interface AMC

- 1 Reader Supply (12V)
- 2 Reader Supply (0V)
- 3 Data 0
- 4 Data 1
- 5 Shield
- 6 green LED
- 7 red LED
- 8 Beeper
- 9 Hold
- 10 Card Present

C

Analog input

- 1 Analog input, in
- 2 Analog input, out

D

Relay output

- 1 Relay Output, normally open
- 2 Relay Output, common
- 3 Relay Output, normally closed

E

Host/Extension Interface

- 1 Power supply for external devices (10V - 30V)
- 2 Power supply for external devices (0V)
- 3 Shield
- 4 Data RxTx+
- 5 Data RxTx-
- 6 Ground (PAG)

F

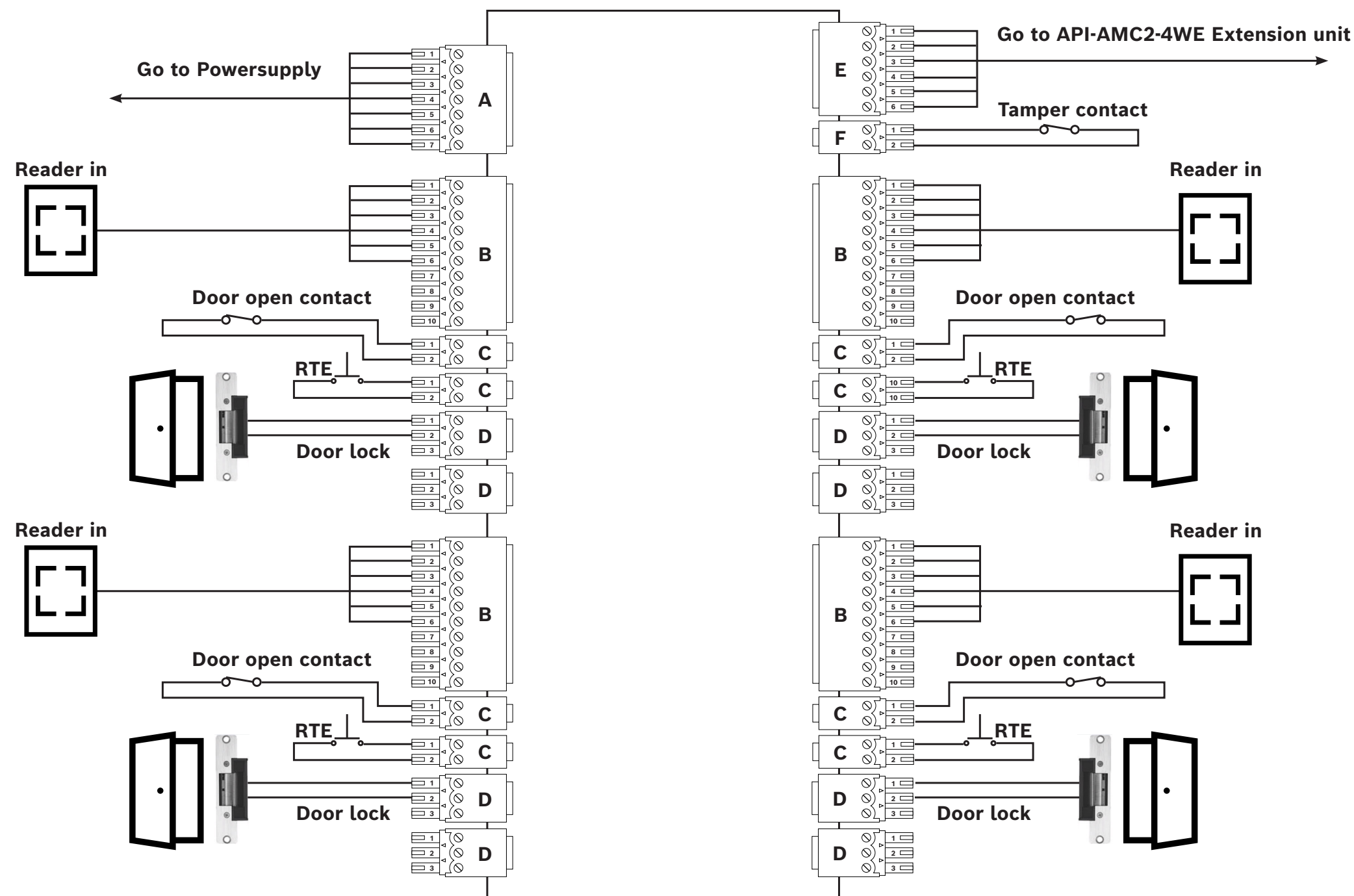
External tamper contact

- 1 Tamper contact, in
- 2 Tamper contact, out

Wiegand AMC2-4WCF

Wiring diagram - 8 doors

Entrance set-up with 1 reader and 1 request-to-exit button per door application



A

Power supply

- 1 Power supply, DC positive (10V - 30V)
- 2 Shield
- 3 Power supply (0V)
- 4 UPS (power good signal) - AC
- 5 UPS (power good signal) - Battery
- 6 UPS (power good signal) - DC
- 7 UPS (power good signal) - Common

B

Wiegand interface AMC

- 1 Reader Supply (12V)
- 2 Reader Supply (0V)
- 3 Data 0
- 4 Data 1
- 5 Shield
- 6 green LED
- 7 red LED
- 8 Beeper
- 9 Hold
- 10 Card Present

C

Analog input

- 1 Analog input, in
- 2 Analog input, out

D

Relay output

- 1 Relay Output, normally open
- 2 Relay Output, common
- 3 Relay Output, normally closed

E

Host/Extension Interface

- 1 Power supply for external devices (10V - 30V)
- 2 Power supply for external devices (0V)
- 3 Shield
- 4 Data RxTx+
- 5 Data RxTx-
- 6 Ground (PAG)

F

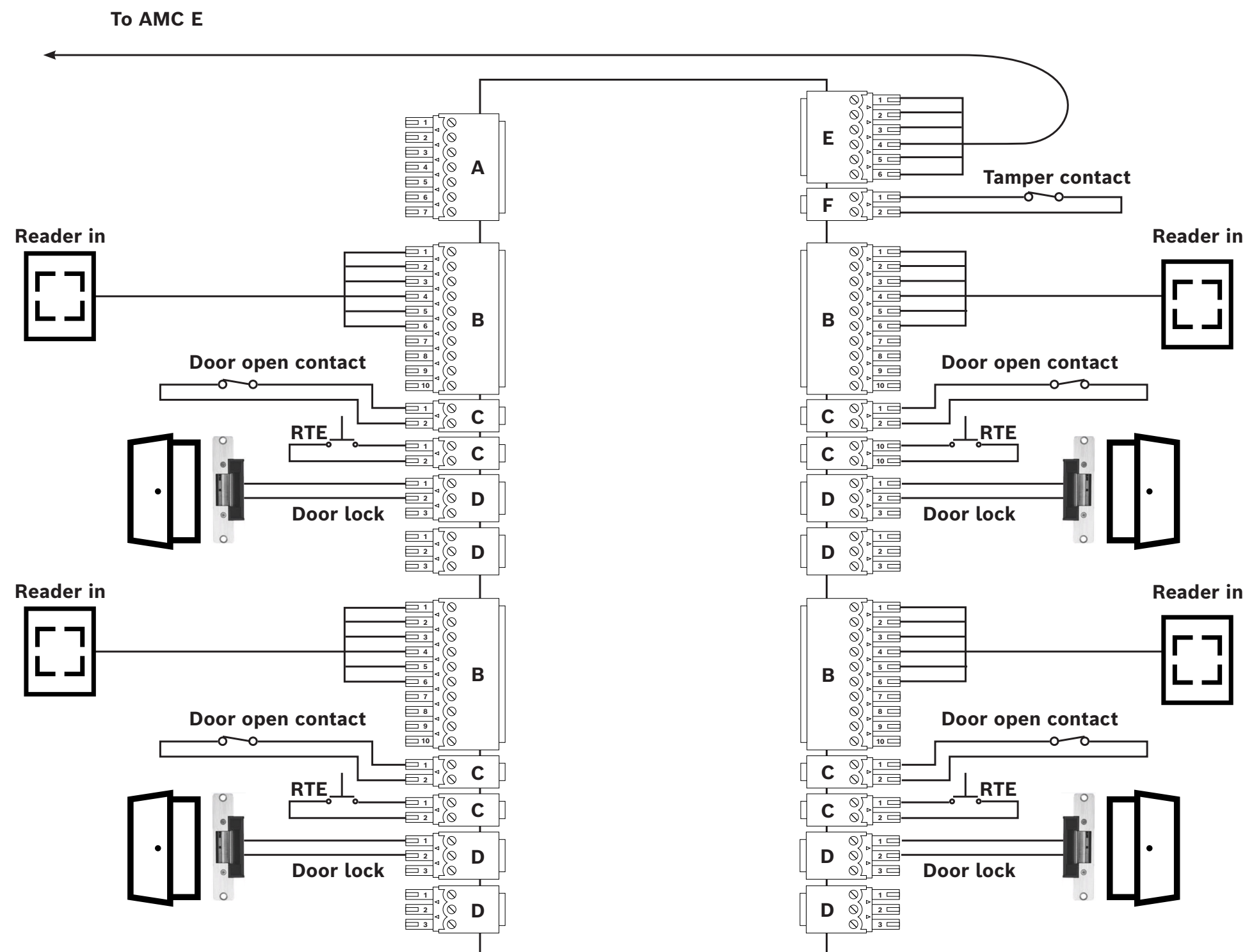
External tamper contact

- 1 Tamper contact, in
- 2 Tamper contact, out

Wiegand Extension API-AMC2-4WE unit

Wiring diagram - 8 doors

Entrance set-up with 1 reader and 1 request-to-exit button per door application



A

Power supply

- 1 Power supply, DC positive (10V - 30V)
- 2 Shield
- 3 Power supply (0V)
- 4 UPS (power good signal) - AC
- 5 UPS (power good signal) - Battery
- 6 UPS (power good signal) - DC
- 7 UPS (power good signal) - Common

B

Wiegand interface AMC

- 1 Reader Supply (12V)
- 2 Reader Supply (0V)
- 3 Data 0
- 4 Data 1
- 5 Shield
- 6 green LED
- 7 red LED
- 8 Beeper
- 9 Hold
- 10 Card Present

C

Analog input

- 1 Analog input, in
- 2 Analog input, out

D

Relay output

- 1 Relay Output, normally open
- 2 Relay Output, common
- 3 Relay Output, normally closed

E

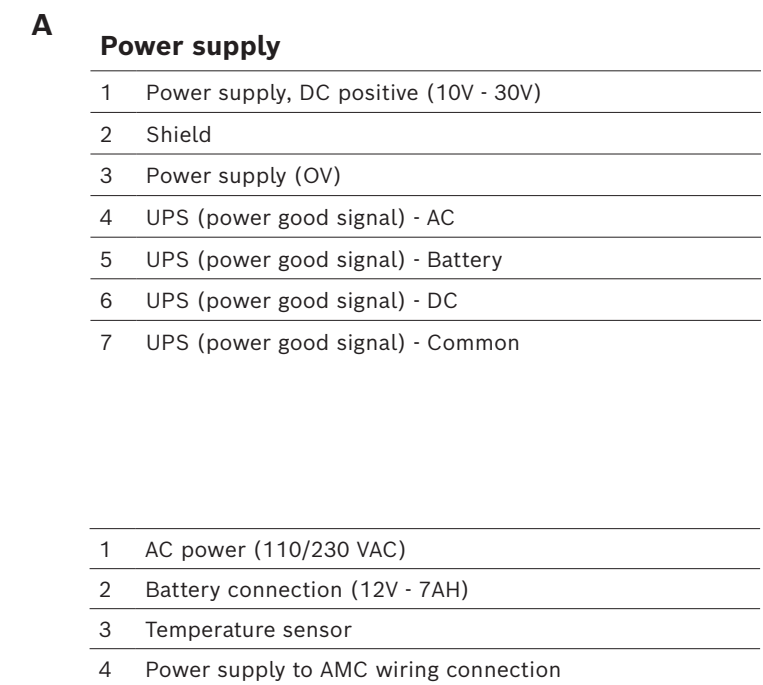
Host/Extension Interface

- 1 Power supply for external devices (10V - 30V)
- 2 Power supply for external devices (0V)
- 3 Shield
- 4 Data RxTx+
- 5 Data RxTx-
- 6 Ground (PAG)

F

External tamper contact

- 1 Tamper contact, in
- 2 Tamper contact, out



Power supply

- | | |
|---|---------------------------------------|
| 1 | Power supply, DC positive (10V - 30V) |
| 2 | Shield |
| 3 | Power supply (0V) |
| 4 | UPS (power good signal) - AC |
| 5 | UPS (power good signal) - Battery |
| 6 | UPS (power good signal) - DC |
| 7 | UPS (power good signal) - Common |

- | | |
|---|---------------------------------------|
| 1 | AC power (110/230 VAC) |
| 2 | Battery connection (12V - 7AH) |
| 3 | Temperature sensor |
| 4 | Power supply to AMC wiring connection |