

Instructions

- ⚠ Disconnect power before wiring and use an ESD bracelet during installation.
- ⚠ Be sure that the AP7803m, AP7003m I/O terminals are not accessible by the end user.

	Remarks
1. 485bus	To connect AP70xx(m) to AP7803(m) (see Topology)
2. External power supply	Not necessary when using PoE+, PoE (step 5)
3. Inputs	Supervised (configurable)
4. Outputs	Vlock can be used in combination with PoE+ or an external power supply (step 2), Vlock follows Vin
5. Ethernet	AP7803(m) only (see Topology)
6. Badge readers	RS485, Wiegand. Vout follows Vin
7. Battery activation strip	AP7803(m) only
8. External tamper	External tamper connection (digital input)
9. Monitor inputs	External power monitoring (digital inputs)

Wiring specifications

- ⚠ Failure to comply with the specifications may result in reduced performance or malfunction.

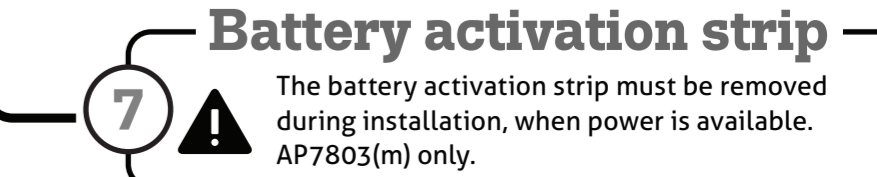
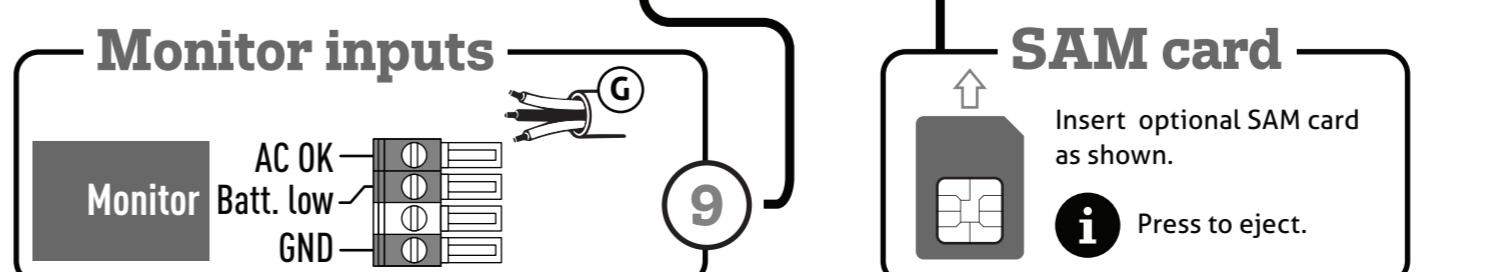
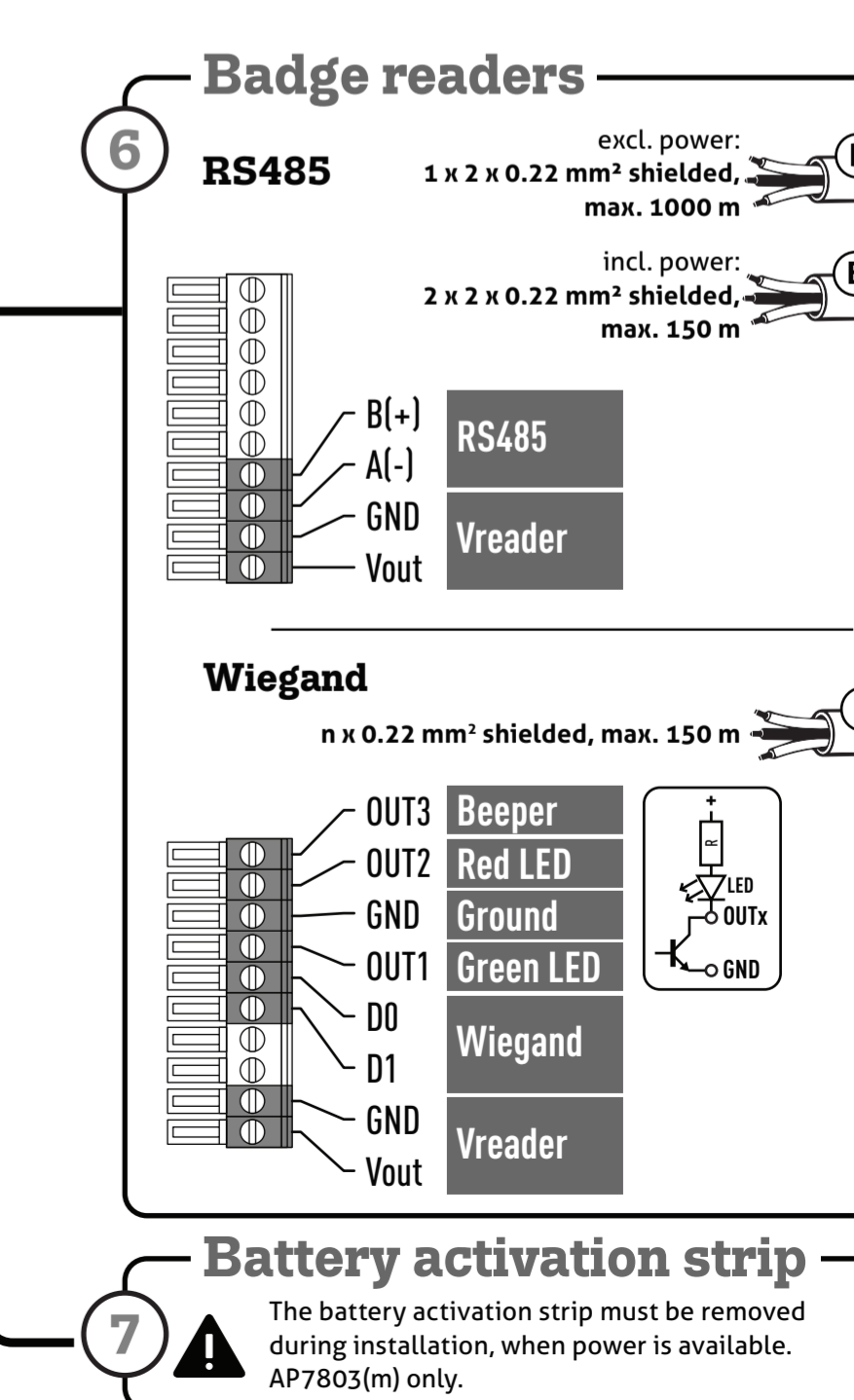
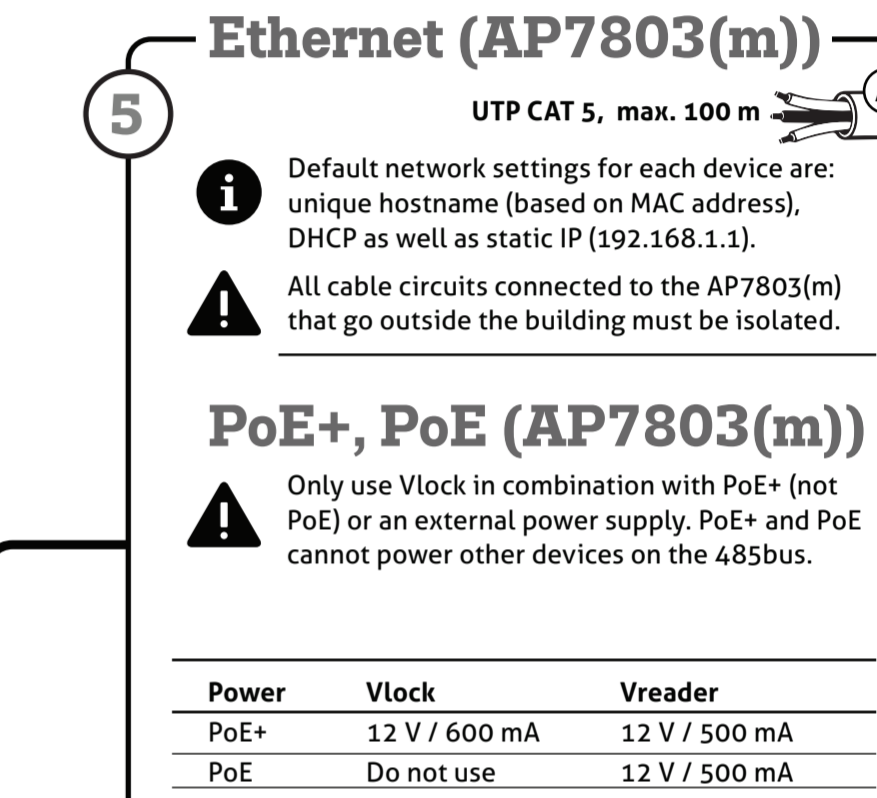
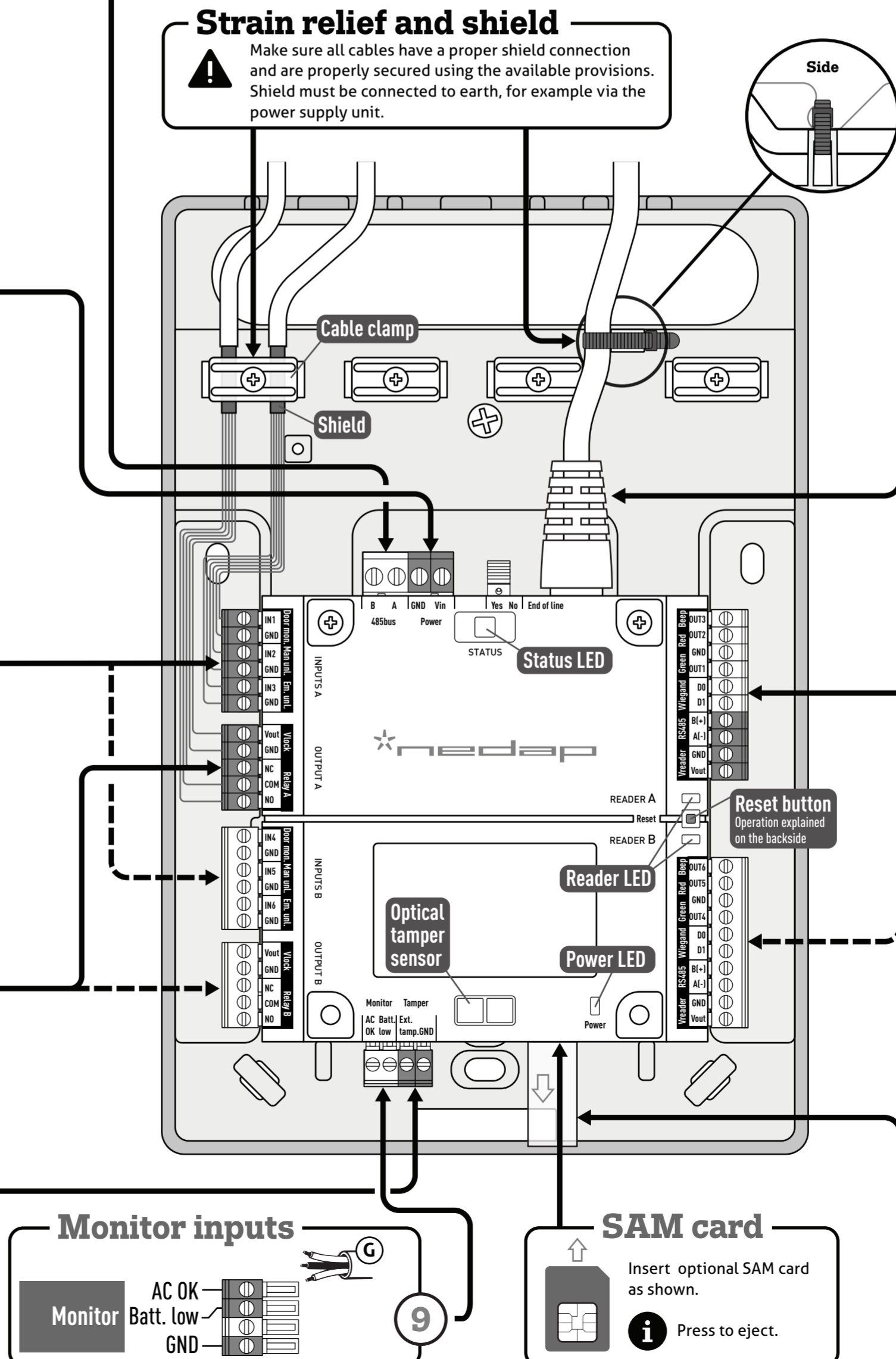
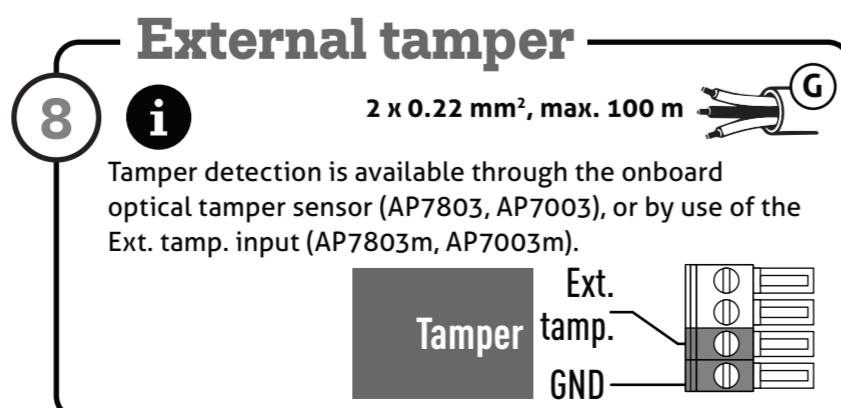
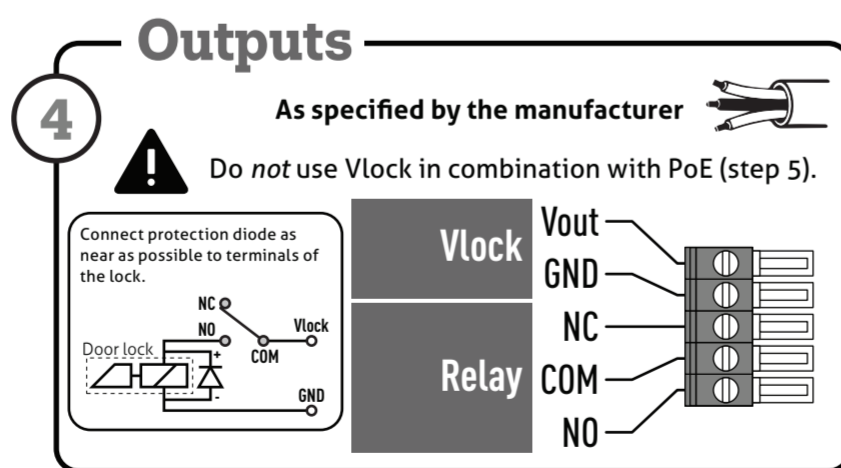
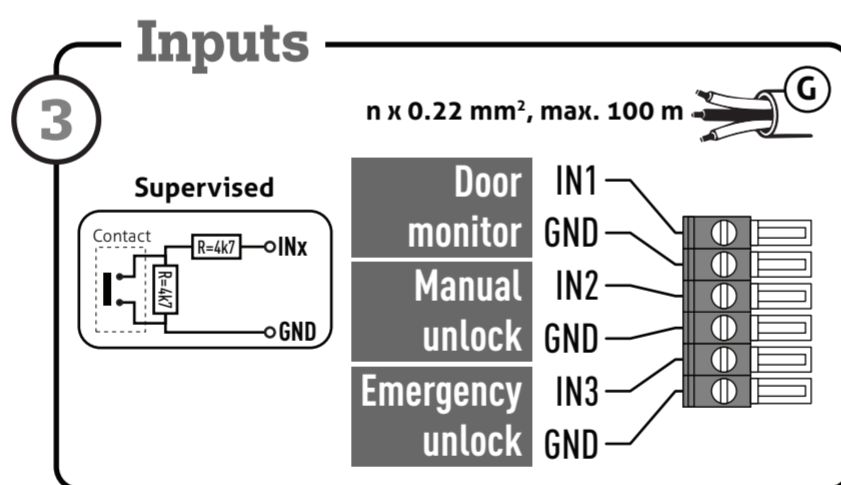
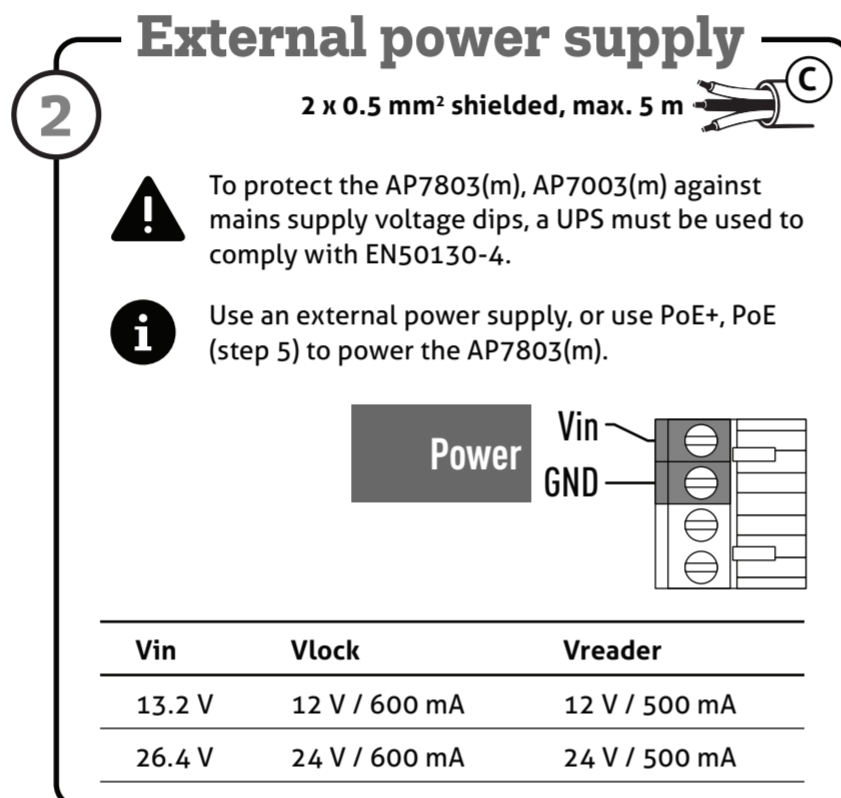
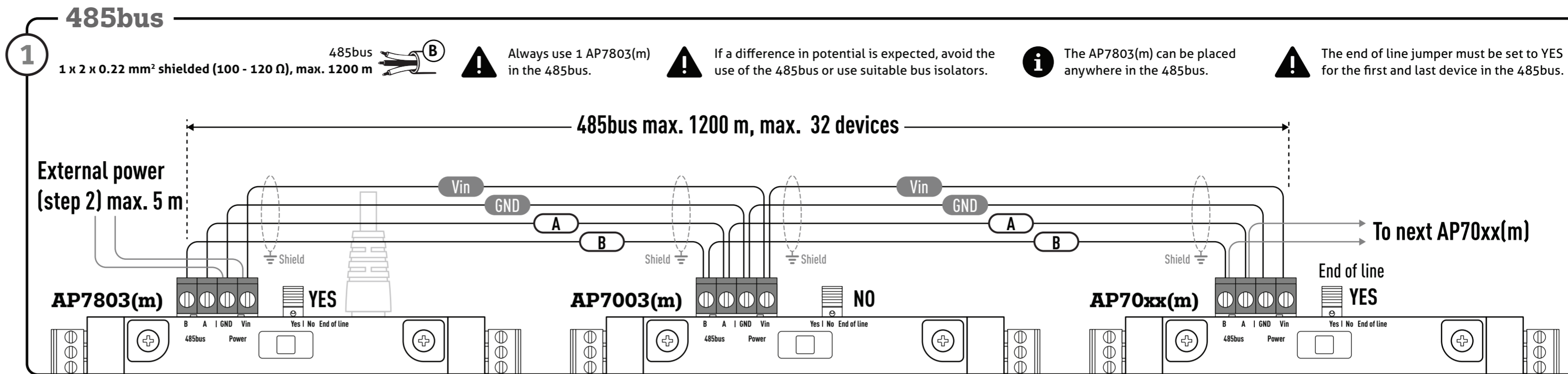
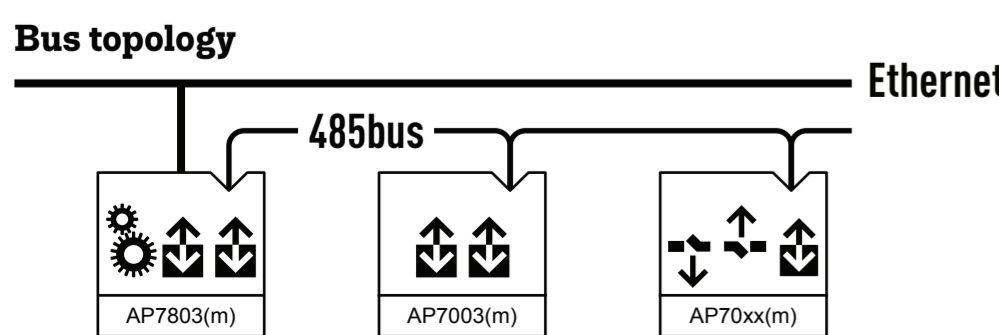
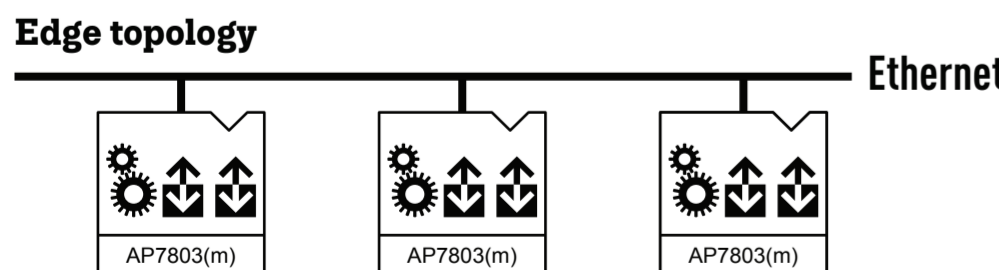
Purpose	Specification
A. Ethernet wiring	UTP CAT 5, max. 100 m
B. 485bus wiring	1 x 2 x 0.22 mm ² shielded (100 - 120 Ω), max. 1200 m
C. Ext. power supply wiring	2 x 0.5 mm ² shielded, max. 5 m
D. Badge reader wiring	RS485 excl. power: 1 x 2 x 0.22 mm ² shielded, max. 1000 m (depending on reader)
E. Badge reader wiring	RS485 incl. power: 2 x 2 x 0.22 mm ² shielded, max. 150 m (depending on reader)
F. Badge reader wiring	Wiegand: n x 0.22 mm ² shielded, max. 150 m
G. Input wiring	n x 0.22 mm ² , max. 100 m

Controller / Interface

- Door controller (AP7803(m))**
Includes controller and requires an ethernet connection (step 5) to connect to the AEOS server.
- Door interface (AP7003(m))**
Requires an AP7803(m) to function and must therefore be connected to an AP7803(m) through the 485bus (step 1).

Topology

- ⚠ Before installation, please determine in what topology the device will be placed.



LED indications

Status LED (AP7803(m))

Colour	Status	Description
Green	Glowing	Running normally
Red	Blinking fast	Controller not running
Pink	Glowing	Service mode
Blue	Blinking medium	Updating
Blue	Blinking slowly	Kernel update successful
Blue	Blinking fast	Update failed / No application
White	Blinking slowly	Beacon activated remotely

Status LED (AP7003(m))

Colour	Status	Description
Green	Glowing	Running normal
Red	Blinking medium	No connection to controller
Blue	Blinking medium	Updating
Blue	Blinking slowly	Kernel update successful
Blue	Blinking fast	Update failed / No application
White	Blinking slowly	Beacon activated remotely

Reader LED

Colour	Status	Description
Yellow	Flash	RS485 connection
Yellow	Blink	RS485 conn. (relay activated)
-	Off	Wiegand connection
Yellow	Static	Wiegand conn. (relay activated)
Yellow	Blinking fast	Badge is being read

Power LED

Colour	Status	Description
Green	Static	Device powered

Ethernet LEDs (AP7803(m))

Colour	Status	Description
Yellow	Static	Speed: 100 Mbps (off: 10 Mbps)
Green	Flashing	Comm. over / link to ethernet

Document information

Date	31-05-2022
Version	5.1
Part number	5282942

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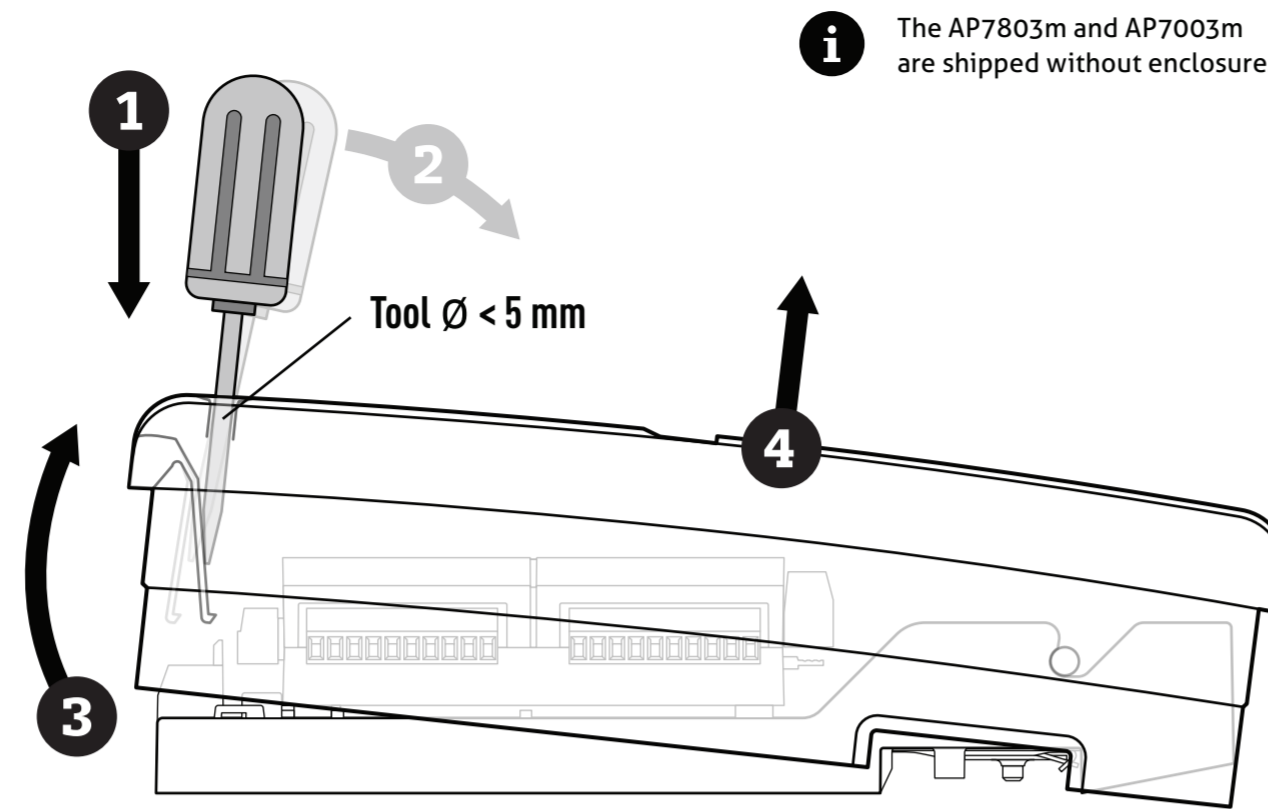
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Opening enclosure (AP7803, AP7003)



Special functions

Reboot procedure

If you press the reset button with the power supply still connected, you can reboot the device.

Step 1. Press and hold the Reset button.

Step 2. Release the Reset button when the Status LED is blinking in red to reboot the device.

The instructions below apply to controllers with an AX8010 processor inside. More information can be found in the AEOS Technical Webhelp.

Factory reset (AP7803(m))

Installs AEOS version 2019.1.14. Deletes the door configuration and network configurations from the door controller. Deletes any custom additions to the controller keystore. Deletes any custom settings such as event filters etc. Resets the root password to the default value.

⚠ Please contact your local partner for support on this function.

Step 1. Back up the network settings and configuration of the door controller if you want to keep them.

Step 2. Disconnect the power supply.

Step 3. Press and hold the Reset button.

Step 4. Connect the power supply while holding the Reset button. Do not release this button.

Step 5. Release the Reset button when the Status LED is blinking in yellow to start the factory reset procedure.

Step 6. The factory reset is completed after the device has rebooted itself and the Status LED is glowing green.

⚠ Do NOT disconnect the power while the controller is performing its factory reset procedure. The factory reset can take up to 10 minutes to complete. There is no other feedback from the door controller during the update process.

Network reset (AP7803(m))

Deletes network configuration only.

⚠ Please contact your local partner for support on this function.

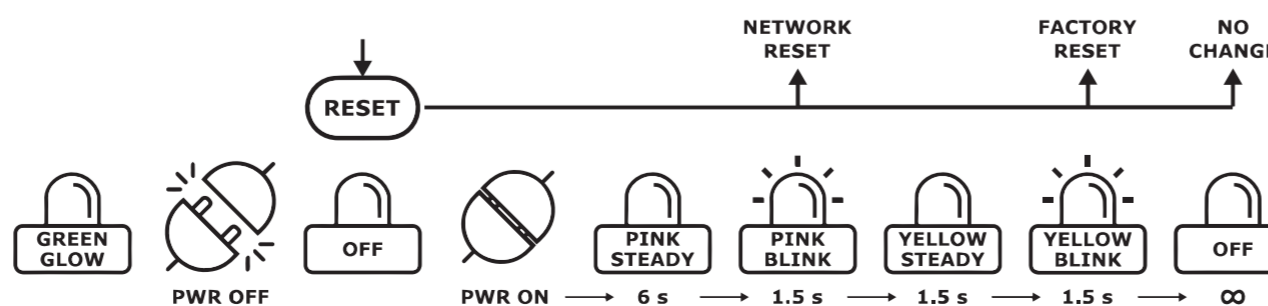
Step 1. Disconnect the power supply.

Step 2. Press and hold the Reset button.

Step 3. Connect the power supply while holding the Reset button. Do not release this button.

Step 4. Release the Reset button when the Status LED is blinking in pink to start the network reset procedure.

Step 5. The network reset is completed after the door controller has rebooted itself and the Status LED is glowing green.

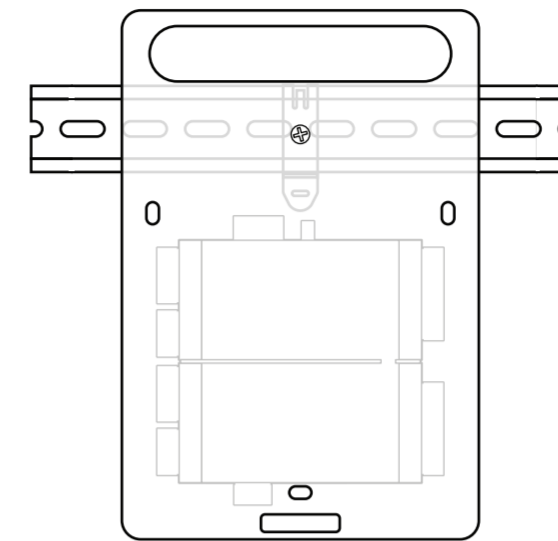


Mounting

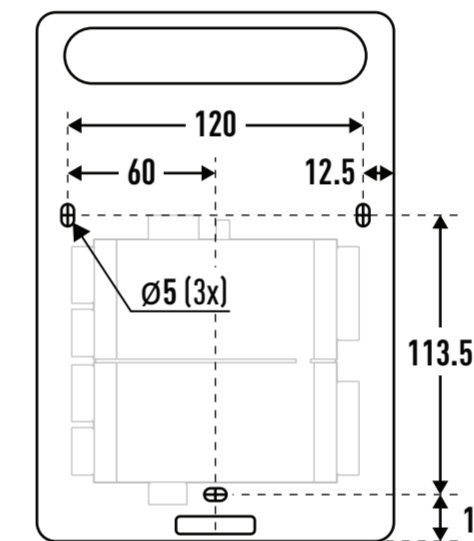
ⓘ All dimensions are in millimeters (mm).

⚠ For EN-IEC 60839-11-1 compliant installations: Ensure the AP7803, AP7003 is installed in an EN-IEC 60839-11-1 compliant enclosure with a total weight of 4.75 kg or more.

DIN rail 35 x 7.5 mm (AP7803, AP7003)



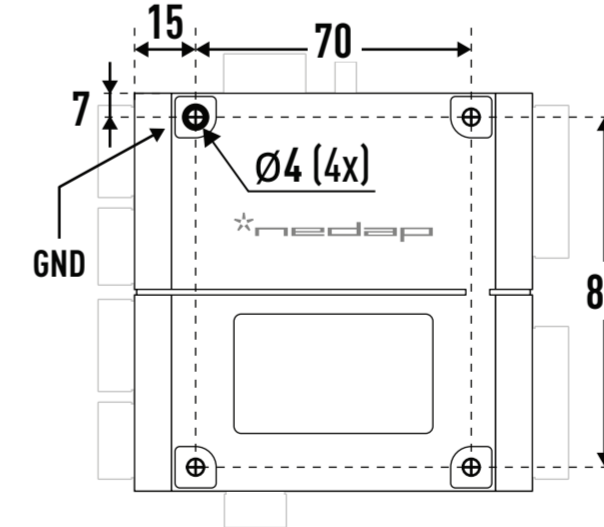
Drill pattern (AP7803, AP7003)



Drill pattern (AP7803m, AP7003m)

⚠ Ensure the AP7803m, AP7003m is used in an enclosure that enables proper strain relief and shield connection of the cables.

⚠ For EN-IEC 60839-11-1 compliant installations: Ensure the AP7803m, AP7003m is installed in an EN-IEC 60839-11-1 compliant enclosure.



Certifications

CE Hereby, Nedap N.V. declares that this equipment is in compliance for CE with directives 2014/30/EU (EMC Directive) and 2011/65/EU (RoHS). Full text of declarations of conformity is available at www.nedapsecurity.com where, if applicable, also REACH information can be found.

FC This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

⊗ The products will be disposed of by the end-user and discharge Nedap for any liability or responsibility thereof.

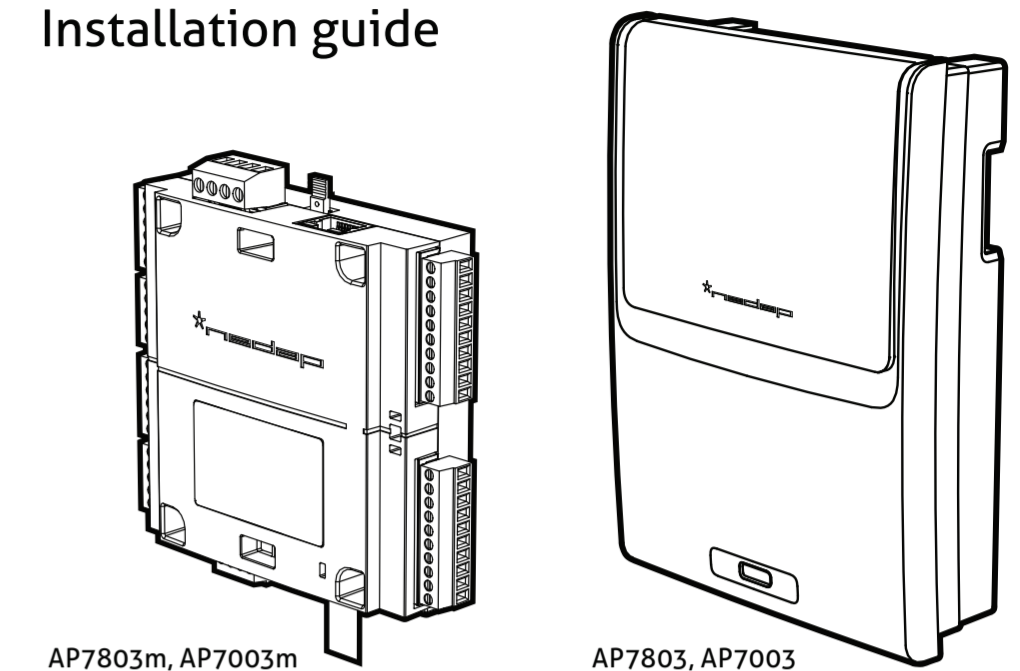
Complies to standard: EN-IEC 60839-11-1. Component type: Access control unit. Grade: High. Environmental class: II.

AEOS Blue door controller door interface

AP7803(m)

AP7003(m)

Installation guide



AP7803m, AP7003m

AP7803, AP7003

Technical specifications

AP7803 (9981608), AP7803m (9981624)

Ethernet connection	10/100 Mbps, RJ45
Power over Ethernet	PoE+: IEEE 802.3at (max. 25.5 W) Readers: 500 mA @ 12 VDC (shared by both readers) Locks: 600 mA @ 12 VDC (shared by both locks) PoE: IEEE 802.3af (max. 15.4 W), max. 500 mA @ 12 VDC (readers only)
Ethernet wiring	UTP CAT 5, max. 100 m
Battery	3 V BR1225 (lifetime 1 year if no power present, 10 years total lifetime)

AP7803(m), AP7003 (9981616), AP7003m (9981632)

Dimensions	Enclosure: 230 x 165 x 65 mm (H x W x D) Module: 122 x 120 x 35 mm (H x W x D)
Weight	Enclosure incl. module: approx. 700 g, module: approx. 200 g
Housing	PC ABS
Temperature range	Enclosure: operation: 0°C to 45°C, storage: -30°C to 65°C Module: operation: 0°C to 55°C, storage: -30°C to 65°C
Relative humidity	10% to 93% (non-condensing)
485bus connection	RS485 based (non-isolated), jumper selectable end of line, support for up to 32 units, bitrate up to 240 kbps
External power supply	12-27 VDC SELV (AP7803(m): min. 250 mA, max. 1.5 A @ 12-27 VDC) (AP7003(m): min. 100 mA, max. 1.3 A @ 12-27 VDC) Readers: 500 mA @ V _{in} (shared by both readers) Locks: 600 mA @ V _{in} (shared by both locks) For use in low voltage, power limited, class 2 circuits only
Readers	2 x RS485 or 2 x Wiegand
Inputs	2 x 3 secured inputs (Door monitor, Manual unlock, Emergency unlock) 2 digital inputs (AC OK, Battery low)
Outputs	2 x 1 relay, dry contacts (NC, COM, NO), max. 30 VDC, max. 2 A 2 x 3 open collector outputs (Green LED, Red LED, Beeper), max. 20 mA each
Tamper detection	1 optical tamper sensor (AP7803, AP7003) 1 digital input (for connecting external tamper switch)
Status LEDs	1 Status LED, 1 Power LED, 2 Reader LEDs
485bus wiring	1 x 2 x 0.22 mm ² shielded (100-120 Ω), max. 1200 m
External power supply wiring	2 x 0.5 mm ² shielded, max. 5 m
Reader wiring	RS485 excl. power: 1 x 2 x 0.22 mm ² shielded, max. 1000 m (depending on reader) RS485 incl. power: 2 x 2 x 0.22 mm ² shielded, max. 150 m (depending on reader) Wiegand: n x 0.22 mm ² shielded, max. 150 m (depending on reader)
Input wiring	n x 0.22 mm ² , max. 100 m