BOSCH
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AMC2 4W-EXT - Wiegand Extension Board

- **RS485 connection to the AMC2 4W controller**
- **4 Wiegand reader interfaces**
- **8 analog inputs**
- **8 relais outputs (wet or dry)**
- **Status of inputs and outputs shows on AMC2 4W LCD display**
- **Transfer rate to EXT interface (RS485): 9,6 kBit/sec**

The extension module AMC2 4W-EXT is equipped with four Wiegand type reader-interfaces plus eight inputs and eight outputs. Hence with the AMC2 4W-EXT it is possible to double the number of readers on an AMC2 4W from 4 to 8.

The AMC2 4W-EXT can not be deployed as an independent controller but only as an extension module for the AMC2 4W. Control and access decisions and bookings are carried out by the AMC2 4W alone.

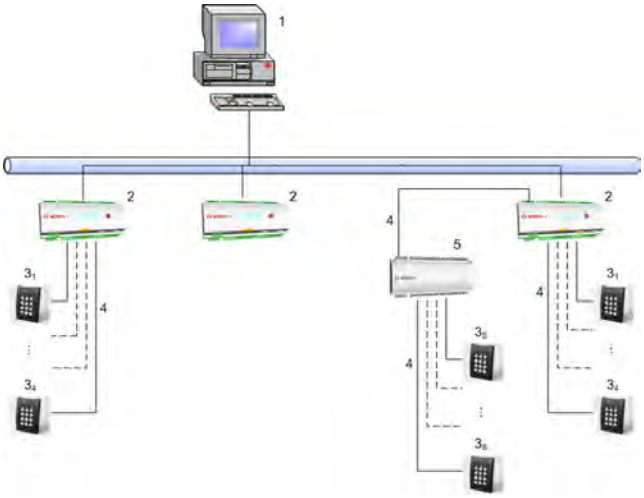
The AMC2 4W can be extended by a maximum of one AMC2 4W-EXT plus a maximum of three I/O extension modules. The I/O extension modules AMC2 8I-8O-EXT, AMC2 16I-16O-EXT, or AMC2 16I-EXT (in any combination) are, like the AMC2 4W-EXT, connected via the AMC2 4W's extension interface (RS485). As the extension modules contain neither memory nor display they are controlled and monitored entirely by the AMC2 4W.

Note Systems with **Access Personal Edition** Software can only connect one I/O-Extension to an AMC2 Controller.

The signal settings and parametrization of the readers connected to the extension module, are carried out by the configuration applications in the access control systems Access Personal Edition and BIS Access Engine, and by the AMC2 4W to which it belongs.

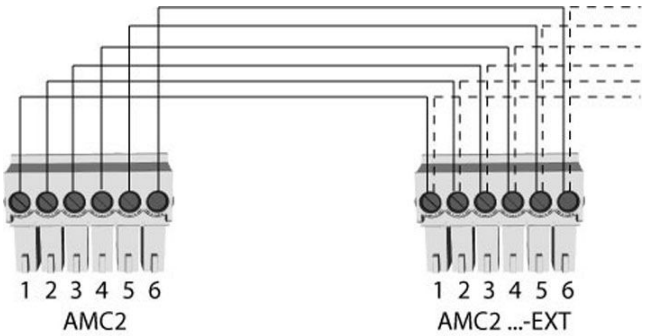
System Overview

The AMC2 4W-EXT is connected between the access controller AMC2 4W and the various peripheral devices.



1 = Host
2 = AMC2 4W
3 = Card reader
4 = Communication and power supply
5 = AMC2 4W-EXT

The AMC2 4W-EXT is connected to the AMC2 4W using the RS-485 extension interface. This interface will also be used to connect further extension modules.



Installation/Configuration Notes

The number of controllers in one system is limited to 200.

The using of AMC2 4W-EXT modules has no influence on this limit, because it is an extension to an AMC2 4W and not a controller.

Using Wiegand interfaces, up to eight peripheral devices can be connected to each AMC2 4W. The interfaces are point-to-point connections, meaning that only one reader can be connected to one interface.

Power supply

An external power supply (10 to 30 V DC) for the AMC2 is connected to the first (positive) and third pin (negative).

When using an uninterruptible power supply (UPS), the relevant UPS output relay is connected to the pins

- 4 and 7 for alternating current (AC)
- 5 and 7 for the battery
- 6 and 7 for direct current (DC)

Otherwise, these pins will short-circuit.

Voltage equalization - grounding

- Different grounds can be balanced via jumpers with protective ground.
- A line (shielding, potential equalization) with protective ground must only be connected in one place.
- For further instructions, please see the operating manual.

Wiegand interface

The AMC2 4W-EXT has four interfaces to connect up to four readers. The following definitions apply to the interface:

- 10 wire interface with shield
- Max. cable length: 158 m (172.8 yd)
- 26 bit wiegand format
- 37 bit wiegand format

Default configuration:

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

Contacts

Inputs

The analog inputs can be used as digital or analog contacts. For analog use, resistance values can be specified to check for cable breaks and short-circuits.

Relay outputs

The relay outputs offer the following functions:

- The outputs can operate with potential free contacts for external power supply (dry mode).
- The outputs can operate using the internal voltage of power supply (wet mode).
- Only ohm resistive loads can be connected to the relay.
- Inductive loads must be bypassed via recovery diodes. These diodes (1N4004) are enclosed.

General instructions

- All access equipment should be mounted within a "secured area".
- Detailed connection conditions are specified in the operating manual!
- After purchase, primary AC power must be carried out by a licensed electrician.

Technical Specifications

Hardware	4 Wiegand reader interfaces
	8 relay outputs - with ohm load: - max. switching voltage: 30 V DC - max. switching current: 1,25 A
	8 analog inputs
	Tamper switch
Temperature	0°C to +45°C (32° F to 113° F)
Power supply	- 10 or 30 V DC, max. 60 VA Available for external devices: 55 VA - or via the AMC2
Protection class	IP 30
Housing	Base: PPO (UL 94 V-0) Upper: Polycarbonate (UL 94 V-0)
Color	White
Dimensions	WxHxD: 232 x 90 x 46 mm (9.13 x 3.54 x 1.81 in.)
Weight	Approx. 0.4 kg (0.88 lb)
Type	Rail mounting

Ordering Information

AMC2 4W-EXT - Wiegand Extension Board **API-AMC2-4WE**
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