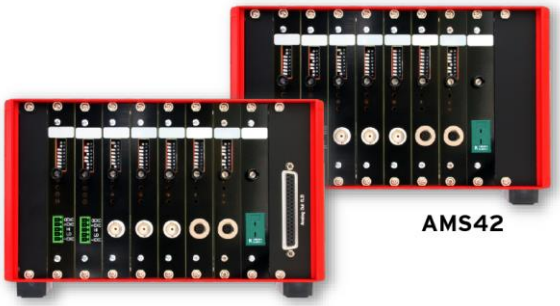
bmc messsysteme gmbh

AMS-EXT8

8-Channel Extension for AMS Systems



AMS42-LAN16fx/AMS42-USB
(option without cassettes and housing)

You Want More. You Get It.

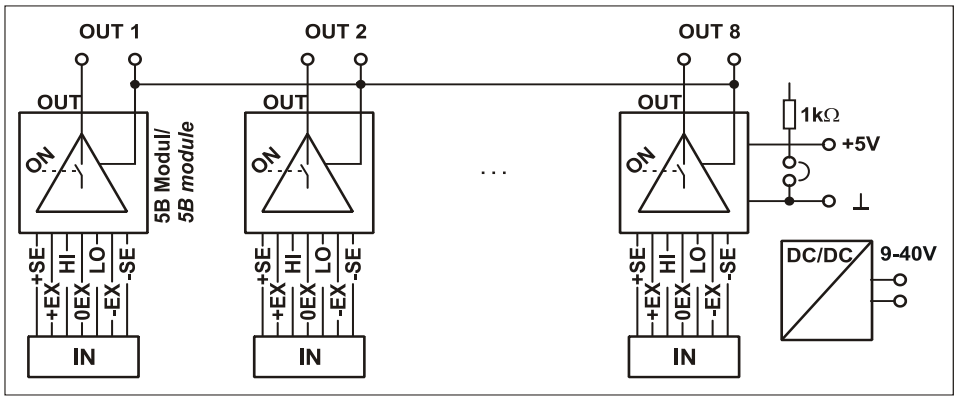
Equip your AMS42 system by additional 8 channels available at the back of the device. Up to 8 AMS cassettes with 5B measuring amplifiers, converters, output modules, or any other function modules can individually be chosen for the installation in the AMS system (not included with delivery).

For All AMS42 Systems.

The extension AMS-EXT8 is available for all ½ x 19'' tabletop units of the AMS42 series (AMS42, AMS42-LAN16fx, AMS42-USB). An 8-channel amplifier system can be extended to 16 amplifiers inputs.

Mounting. We'll Take Care of It.

To install the option AMS-EXT8, an additional backplane is integrated in the AMS42 system. This is done directly ex works on purchase of an AMS42 system. The extension is only available for new devices.



Funktionsschaltbild

1 Modified Pin Assignment with AMS-EXT8

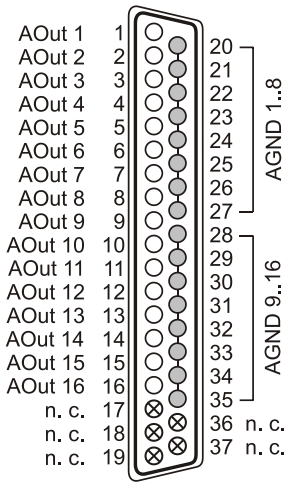
If the extension AMS-EXT8 is installed in an AMS42 system, additional 8 analog signals can be connected to the amplifier inputs available at the respective connectors of the cassette panels on the back of the device. Concerning the pin assignment of the D-Sub37 connectors, the following changes apply:

1.1 AMS42 with AMS-EXT8

To connect a PC data acquisition system, all 16 amplifier outputs are led out to the 37-pin D-Sub female on the device front.

Pin	Assignment AMS42
1..6	Analog OUT 1..16
17..19	n. c.
20..27	AGND channel 1..8
28..35	AGND channel 9..16
36..37	n. c.

The ground of the first eight channels is not electrically connected to the ground of the next eight channels.

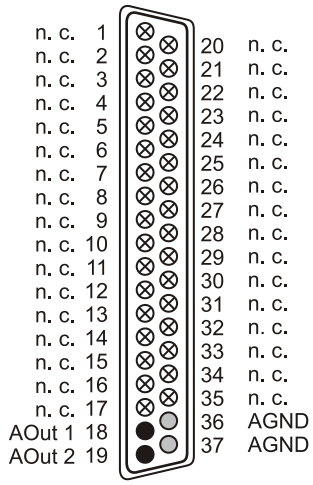


○ AGND = analoge Masse / *analog ground*
⊗ n. c. = nicht verbunden / *not connected*

1.2 AMS42-LAN16fx, AMS42-USB with AMS-EXT8

If the extension AMS-EXT8 is installed , the 37-pin D-Sub female at the back of the device is designed for the connection of the analog outputs 1+2 only.
The following table and figure show the pin assignment.

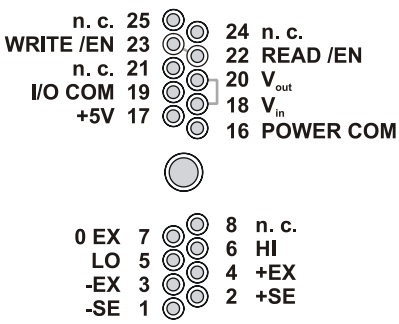
Pin	AMS42-LAN16fx/-USB
1..17	n. c.
18	AOut 1
19	AOut 2
20..35	n. c.
36..37	AGND



● AOut = Analogausgang / *analog output*
○ AGND = analoge Masse / *analog ground*
⊗ n. c. = nicht verbunden / *not connected*

1.3 Module Pin Assignment

The pin assignment on the right shows the top view of the module backplane. It corresponds to the 5B modules of Analog Devices®, BURR BROWN® etc.
However, an additional 0EX pin has been introduced particularly suitable for ungrounded shielding. This is a specific assignment of bmcm. The 0EX pin is not connected in modules of other manufacturers.
The extension AMS-EXT8 also supports the use of output modules.



2 Supplementary Products for AMS-EXT8

2.1 5B Modules (MA Line)

The 5B measuring amplifiers from bmcm allow for the professional signal adjustment to a data acquisition system.
The amplifier output is ±5V or 0..5V. Most of the modules are electrically isolating and provide sensor supply.
The following 5B modules from bmcm are available:

Product	Description
MA-UNI	universal amplifier with galvanic isolation for U, I, R, thermocouple, strain gauge, LVDT
MA-UI	multi-range amplifier with galvanic isolation for U, I
MA-U	voltage measuring amplifier with galvanic isolation, 50kHz bandwidth

2.2 Plug-in Cassettes (AMS-K Line)

The amplifier system can individually be equipped with up to 16 plug-in cassettes.
Each cassette is equipped with the relevant 5B module and suitable input connector.
The suitable input connector on the front panel guarantees for the relevant connection to be available when exchanging the cassette.

The following cassettes are available:

Product	Description
AMS-K-BIN5	cassette with panel and 5-pin Binder female connector (712 series)
AMS-K-BLANK	blank panel
AMS-K-BNC	cassette with front panel and BNC female connector
AMS-K-CO5	cassette with front panel and 5-pin terminal connector
AMS-K-THK	cassette with front panel and thermocouple socket (type K)

3 Important Notes for Using the AMS-EXT8

- The extension is only suitable for extra-low voltages - please observe the relevant regulations! For reasons relating to EMC, it must only be used in closed PC housings.
- Only use an electrical isolated power supply unit (with CE).
- Only use non-solvent detergents for cleaning. The product is designed to be maintenance-free.
- Use shielded cables for reasons relating to CE. Connect the shield to ground at one end only. Close open inputs if possible.
- When mounting the cassettes, a connection between power supply ground and chassis of the device is made via the module screw.
- The device must not be used for safety-relevant tasks. With the use of the product, the customer becomes manufacturer by law and is therefore fully responsible for the proper installation and use of the product. In the case of improper use and/or unauthorized interference, our warranty ceases and any warranty claim is excluded.

Do not dispose of the product in the domestic waste or at any waste collection places. It has to be either duly disposed according to the WEEE directive or can be returned to bmcm at your own expense.

4 Technical Data

(typical at 20°C, after 5min., +24V supply)

- Electrical Data

Power supply:	+9..40V DC, ±5%, min 3W, max. 20W (depends on number of 5B modules used)
Galvanic isolation:	depends on the 5B modules used
Max. permissible potentials:	60V DC acc. to VDE

- General Data

AMS-EXT8:	extension of the AMS42 system to a maximum of 16 channels in total; available for: AMS42, AMS-LAN16fx, AMS42-USB; accessible at the back of the device
Analog connections:	different connectors (Phoenix, Binder, BNC, Thermo) on the front panels of the cassettes at the device back
Signal connection:	different connectors (Phoenix, Binder, BNC, Thermo) on the front panels of the cassettes
CE standards:	EN61000-6-1, EN61000-6-3, EN61010-1; for decl. of conformity (PDF) visit www.bmcm.de
ElektroG // ear registration:	RoHS and WEEE compliant // WEEE Reg.-No. DE75472248
Protection:	IP20
Temperature ranges:	operating temp. -25..50°C, storage temp. -25..70°C
Relative humidity	0-90% (not condensing)
Warranty:	2 years from date of purchase at bmcm, claims for damages resulting from improper use excluded

- Available Accessories

AMS-K-BIN5:	cassette and front panel with 5-pin Binder socket (712 series)
AMS-K-BLANK:	blank panel
AMS-K-BNC:	cassette and front panel with BNC female
AMS-K-CO5:	cassette and front panel with 5-pin terminal connector
AMS-K-THK:	cassette and front panel with thermocouple socket (type K)