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AMS-K

AMS cassettes for 5B modules

Modular amplifier technology.

The AMS amplifier systems from BMC Messsysteme GmbH can be equipped with different plug-in cassettes of the AMS-K series - just so easy and comfortable.

The right connection.

The available plug-in cassettes have different connectors on the front panel. Depending on the sensor or signal to be connected, the suitable cassette can be chosen.

Equip individually.

The 5B modules are placed on the assigned position of the cassette and screwed to the bracket. Via the small bore holes at the relevant position on the front panel, the potentiometers of the 5B modules can still be reached for calibration even after being mounted into the AMS device.

Plug-in. Screw tightly. Done.

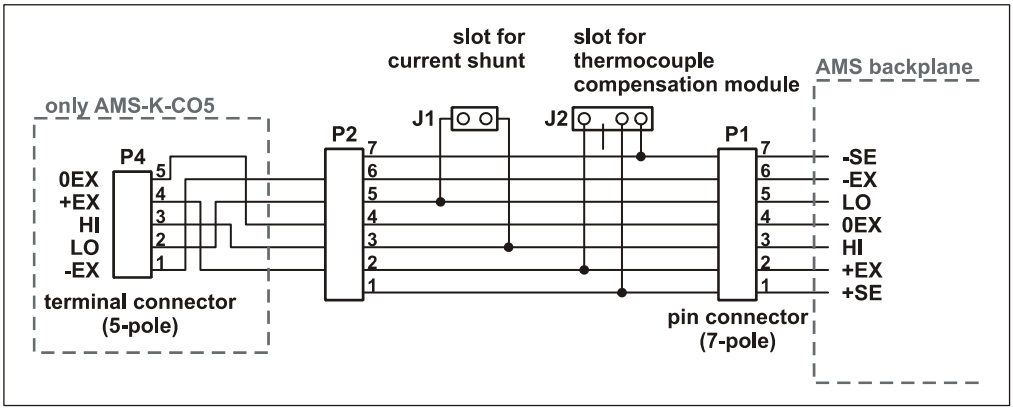
The equipped individual cassettes are pushed along guide bars into the AMS device, plugged into the backplane with the front panel being screwed tightly to the AMS housing. Unneeded slots are covered by a blank panel.

It's all in the combination.

As the cassettes equipped with different 5B modules can be used in any combination, the AMS amplifier system can perfectly be adapted to the measuring task.

Versions and options. Something for everybody.

AMS devices are available in two sizes: as a mobile tabletop unit in 42HP format, or as a stationary 19" rack system in 84HP format.
The 42HP version features eight slots for the plug-in cassettes, the 84HP sixteen accordingly. This number can optionally be increased (*AMS-EXT8*) to 16 or 32 at the maximum.



Functional diagram

1 Application-specific data

5B measuring module _____

- Type: _____
- Measured phys. quantity: _____
- Amplification: _____
- Filter cut-off frequency f_g: _____
- Other: _____

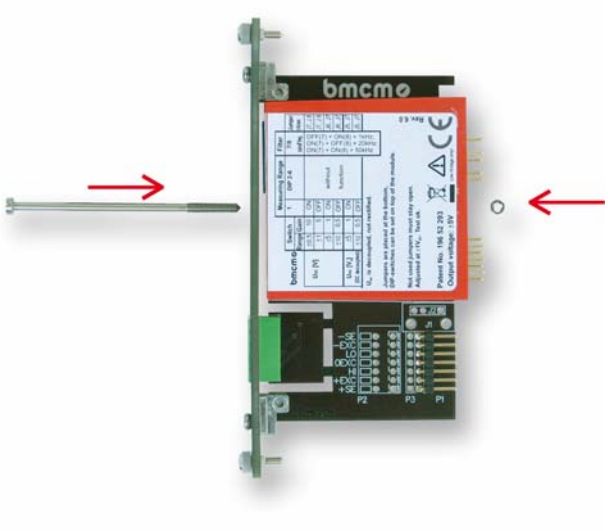
_____

Assignment AMS-_____

Input socket	5B module
	-SE
	-EXC
	LO
	0EXC
	HI
	+EXC
	+SE

2 Assembly

Mounting of the 5B modules to the cassette and into the AMS device is done in a few simple steps.



2.1 5B module

As the cassettes are already pre-assembled only mount the relevant 5B module and fix it on the cassette using the screw of the 5B module and the included flat nut.

2.2 Mounting in the AMS amplifier system

Insert the cassette board along the guide bars of the relevant slot into the AMS housing in upright position until the pins of the 5B module and the 7-pole pin connector (P1) are plugged in the corresponding connectors of the AMS carrier board. Now press the cassette with the right touch in the backplane the front panel touching the housing frame.

The cassette is screwed to the housing at both ends of the front panel for a save installation. To better distinguish the input signals from each other, the inscription fields on the panels can be used.

Mounting of the cassette must only be done with slight pressure to connect the pin plug with the carrier board! If the resistance is too high, check if the cassette is in the guide bar or if the pins are bent. Too much pressure may damage the 5B module, the cassette, or the AMS device!

3 Connections and pin assignments

The following figure shows a PCB of the AMS cassette.

The different types only vary by the female connector on the front panel.

The input signal connected to the panel is internally available at the 7-pole pin connector (P1) and is led to the amplifier via the AMS backplane.

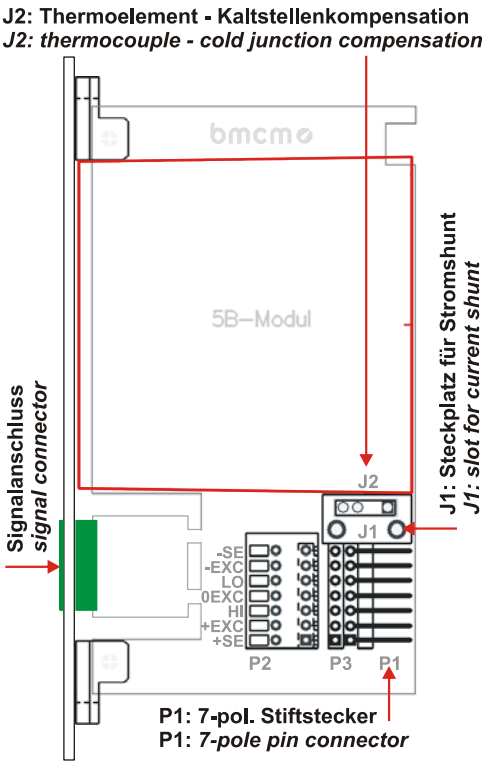


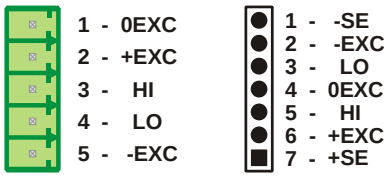
Figure 1

3.1 AMS-K-CO5

The 5-pole terminal connector of the standard cassette AMS-K-CO5 is hard-wired.

The pin assignment of the terminal connector (P4) and the internally connected 7-pole pin plug (P1) are listed in the following table and figure:

5-pole terminal conn. (P4)	Pin assignment	7-pole pin plug (P1)
1	0EXC	4
2	+EXC	6
3	HI	5
4	LO	3
5	-EXC	2
-	-SE	1
-	+SE	7



To comfortably connect signals to the terminals, a package of eight 5-pole screw-type terminal blocks (*ZU5ST*) are available.

3.2 AMS-K-BNC

The AMS-K-BNC cassette provided with a BNC female. In this case, only the connections "HI" and "LO" are available for using 2-pole sensors.

3.3 AMS-K-BIN5

The connector of the AMS-K-BIN5 cassette is a 5-pole Binder socket of the 712 series.

3.4 AMS-K-THK

The AMS-K-THK cassette can be used for temperature measurements with thermocouple (type K).

3.5 AMS-K-BLANK

To protect the AMS system against external influences, unused slots can be covered with the AMS-K-BLANK, a blank panel without a connector.

4 Slots for thermocouples or current shunts

If the cassette is equipped with a thermocouple amplifier, the cold junction compensation element delivered with the module must be installed on the cassette (J2). If the cassette is equipped with a current amplifier, the shunt delivered with the module must be installed on the cassette (J1). The positions of the slots J1 and J2 are illustrated in Figure 1.

5B modules from bmcm do not need any extra equipping. These options have been implemented in the modules already.

5 Important notes for using the AMS-K

- The AMS-K cassettes are only suitable for extra-low voltages - please observe the relevant regulations!
- Only use an electrical isolated power supply unit (with CE).
- All accessible pins are electrostatic devices. Workplace must be conductive during installation.
- Only use non-solvent detergents for cleaning. The product is designed to be maintenance-free.
- The product 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.

6 Technical data

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

- **Electrical data**

Power supply (from AMS system):	+5V DC ±5%, max. 0.2A DC
Galvanic isolation:	depending on the module in use
Max. permissible potentials:	**max. ±60V DC (VDE)**

- **General data**

Signal connection:	at the AMS-K cassette panels (AMS-K-BIN5: 5-pole Binder female of the 712 series; AMS-K-BNC: BNC female; AMS-K-CO5: 5-pole terminal connector; AMS-K-THK: thermocouple conn. (type K)
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)
Dimensions (without connector):	W x H x D: 20mm x 128mm x 60mm
Delivery:	device, description
Accessories:	AMS-K-CO5: 5-pole screw-type terminal blocks ZU5ST; 5-pole Binder female ZU5S712
Warranty:	2 years from date of purchase at bmcm, claims for damages resulting from improper use excluded