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bmcm
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AMS-DIG4, AMS-DIG8

4/8-isolated digital channels for AMS amplifier measurement systems

You want more. You get it.

Equip your AMS amplifier measurement system with galvanically isolated digital channels. The optocouplers convert digital inputs in the voltage range of 5..30V into TTL signals. The relays switch control lines (TTL) with up to 6A. The digital lines are available at the back of the device.

Versions. For USB or LAN.

The extension AMS-DIG4 is available for the USB amplifier measurement systems AMS42/84-USB. It features 4 digital inputs and outputs each. Twice as many channels are provided by the 8-channel option AMS-DIG8 to be used with the LAN devices AMS42/84-LAN16f.

Clearly safe.

Due to the galvanic isolation of the channels from each other and from the data acquisition and control system, the whole system is perfectly protected.

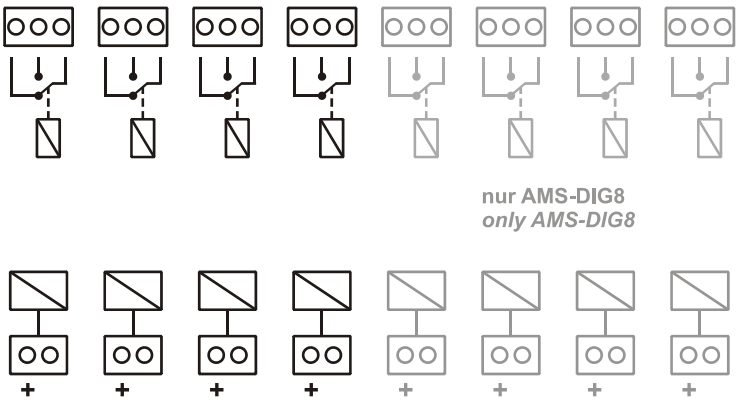
Signal connection. Screw. Plug in. Ready.

Digital sensors or other voltage signals can comfortably be connected via pluggable screw-type terminal blocks. They are available as accessory (*ZU2ST*, *ZU3ST*) at bmcm.

Mounting. We'll take care of it.

To install the option AMS-DIG4 or AMS-DIG8, an optocoupler/relay card is integrated in the AMS amplifier measurement system. This is done directly ex works on purchase of an AMS system. Otherwise, please send the device to bmcm for a retrofit - and we will do the rest.

AMS-DIG4/8: 4/8 Relais / *4/8 relays*



AMS-DIG4/8: 4/8 Optokoppler / *4/8 optocouplers*

Functional diagram

1 Assignment of the digital channels

1.1 AMS42/84-USB with AMS-DIG4

The 4 digital inputs and 4 digital outputs of the USB data acquisition system integrated in the AMS42/84-USB are connected to the optocoupler inputs and relay outputs if using the option AMS-DIG4. They are not available at the 15-pin D-Sub connector on the device front of the AMS system anymore.

1.2 AMS42/84-LAN16f with AMS-DIG8

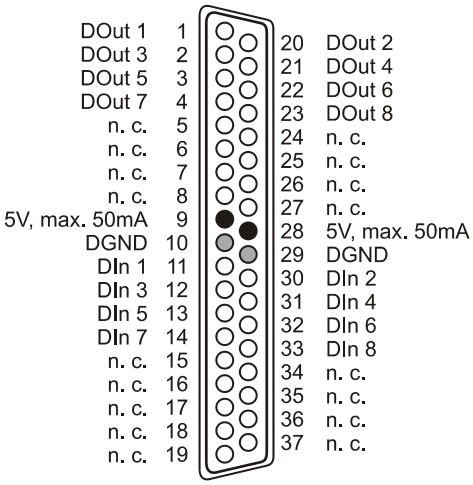
If using the option AMS-DIG8, lines 9-16 of the 16 digital inputs and 16 digital outputs of the AMS42/84-LAN16f are connected to the optocoupler inputs and relay outputs of the extension.

Only the first 8 digital inputs and outputs are still accessible at the D-Sub37 connector on the device front of the AMS system. The other pins are not connected.

The figure on the right shows the pin assignment of the D-Sub37 female at the AMS device if the option AMS-DIG8 has been mounted into the AMS42/84-LAN16f.

If the device is equipped with the option AMS-DIG8 twice, the pins of the D-Sub37 connector are not connected.

D-Sub 37 (AMS42/84-LAN16f + 1x AMS-DIG8)



● 5V Hilfsspannung / *5V auxiliary voltage*

○ digitale Masse / *digital ground*

n. c.: nicht belegt / *not connected*

2 Important notes for using the AMS-DIG4, AMS-DIG8

- 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.
- 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.

3 Technical data

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

- **Electrical data**

Input voltage:	5..30V
Input current:	max. 17mA; response time of the optocouplers <1ms
Relay data:	max. current: 6A DC; response time: 10ms; live period: 100000 cycles

- **General data**

AMS-DIG4:	4 galvanically isolated optocoupler inputs and relay outputs; available for: AMS42-USB, AMS84-USB; accessible at the back of the device
AMS-DIG8:	8 galvanically isolated optocoupler inputs and relay outputs; available for: AMS42-LAN16f, AMS84-LAN16f; accessible at the back of the device
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
Max. permissible potentials // Protection:	**60V DC acc. to VDE**, max. 1kV ESD on open lines // IP20
Temperature ranges // Rel. humidity:	operating temp. 0..50°C, storage temp. -25°C..+70°C // 0-90% (not condensing)
Available accessories:	2-pin and 3-pin pluggable screw-type terminal blocks (package of 4) for optocoupler inputs (ZU2ST) and relay outputs (ZU3ST)
Warranty:	2 years from date of purchase at bmcm, claims for damages resulting from improper use excluded

Manufacturer: BMC Messsysteme GmbH. Subject to change due to technical improvements. Errors and printing errors excepted. Rev. 1.0 05/14/2012