



Analog Add-On Module with Voltage or Current I/O

QAIO 16/4-V / QAIO 16/4-A

■ Brief description

The QAIO is a low-cost add-on analog module for CANtrol nodes. Via the Extension Bus (E-Bus), this module can be linked to the CANtrol series Cell Controller in an in-line configuration and simply snaps to standard mounting rails.

- 16 Voltage / Current input ports
- 4 Voltage output ports
- 1 Reference voltage output port

The QAIO is designed for measurements using passive and active resistance transducers. A +10 V reference voltage source is provided for passive transducers. Via the voltage output ports, devices such as proportional valves can be controlled.

■ Inputs / Outputs

The QAIO 16/4-V provides a total of:

- 16 voltage input ports
- 4 voltage output ports and
- 1 reference voltage output port.

The QAIO 16/4-A caters for 16 current inputs and 4 voltage outputs.

The input channels are multiplexed and provide a measurement range of +/- 10 V. The output channels also operate at +/- 10 V and supply a maximum output current of 5 mA.

The reference voltage source provides a short-circuit protected voltage signal of +10 V. Four LEDs on the front panel provide information on the status of critical module functions.

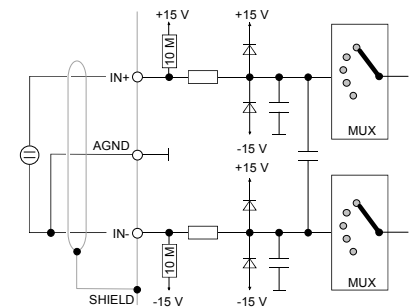
■ Field-level connections

The signal level of the QAIO is factory-configured with connector strips for easy wiring. Connections are made at the front. Choose any of three connection techniques:

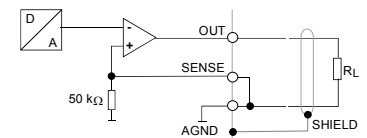
- Screw connection
- spring latch
- crimping



Analoger Eingang / analog input



Analoger Ausgang / analog output



At a glance - a brief overview

Module data		
Designation	QAIO 16/4-V	QAIO 16/4-A
Item no.	13352	13740
System integration	via E-Bus	
Configuration	self configuring via CANtrol CAN-nodes	
EMC	compliant to EN 50081-2 / EN 50082-2	
Dimensions, Weight, Temperature ...		
Dimensions WxHxD [mm]	124 x 170 x 85,5 (in-line W = 113 / 118,5)	
Weight	approx. 550 g	
Temperature range (operating)	5° C to 50° C (non-condensing)	
Enclosure	IP 20	
Mounting	mounting rail NS 35/7,5 EN 50022	
Voltage, current		
Module power supply (device supply voltage)	24 V _{DC} approx. 0,3 A (EN 61131-2)	
Power supply analog I/O's	via internal DC/DC converters fed by module power supply	
Electrical isolation	yes, opto-decoupled from E-Bus no isolation between power supply and analog channels	
Diagnostics		
4 module state LED	module functions	
Analog I/O	QAIO 16/4-V	QAIO 16/4-A
16 x analog IN, differential	+/- 10 V	0...20 mA
Resolution	12 bit	12 bit
4 x analog OUT, floating	+/- 10 V,	+/- 10 V
Resolution	12 bit	12 bit
Output current	approx. 5 mA	
Resistance load	min. 2 K Ω	
Capacitive load	approx. 10 μ F	
Polarity protection	yes	
Connection	standing 3-lead connection via screw, spring-latch or crimp connector Connector plug: 5 x 18 pole	
Common-mode range	+/- 2 V	
Reference voltage source		
Reference voltage	+10 V _{DC} sustained short-circuit protection	
Load current	approx. 5 mA	
Accuracy	+/- 10 mA	