

The board BB0020A1 represents the system for analog input signals. The board is intended to measure the 16 DC current signals from transducers and sensors technology.

To meet various requirements for the treatment of analog channel is selected, a modular solution, where the inlet channels may be coupled to the input connector of the base plate directly or via an extension board which is inserted from the rear side of the tub. The range of these expansion boards includes:

- The boards for galvanically isolated power supply sensors individual measuring channels.
- The boards with HART modem
- The circuit board for adjusting the input and output screen.

Inputs parameters					
Parameter	Conditions	Min.	Stand.	Max.	Units
Input range I	SW programmable	-0,5	0+20	22	mA
Input range II		-0,5	4+20	22	
Input range III		-22	-22+20	22	
Input range VI		-0,5	0+5	6	
Exceeding of the range without input circuit damage				± 50	mA
A/D conversion time		78.52	80.12	81.72	ms
Suppression of signal 50Hz <sup>4</sup>		110	140		dB
Accuracy of an input after calibration	ambient temperature 23±5°C		0,03	0,07	%
Accuracy of an input without calibration	ambient temperature 23±5°C		0,07	0,11	%
Error of an input datum caused by the amb.temp.change <sup>4</sup>			0,015	0,0025	% / K
Error of an input datum caused by the supply voltage change <sup>4</sup>				0,0015	% / K
Input resistance				53	Ω
Interface parameters UART for HART modem					
Parameter	Conditions	Min.	Stand.	Max.	Units
Number of channels			1		
Communication speed			1200		Bd
Number of data bits			8		
Number of stop bits			1		
Parity			lichá		

General Parameters					
Parameter	Conditions	Min.	Stand.	Max.	Units
Number of inputs			16		
Dielectric strength input/system		700			V DC
Dielectric strength input/input		700			V DC
Power supply		21	24	26	V
Consumption			260	350	mA



**BB0020A1**

- 16 analog channels
- Independent inputs, galvanic-isolated for measuring of direct current signals:
  - Input ranges -20mA ÷ 20mA
  - Resolution of inputs 24 bits
  - Accuracy of inputs 0.05% of the range
  - Software adjusting of measuring channels
  - Galvanic-isolation of inputs from the system and from each other
- High tolerance to the input over-voltage
- Integrated failure / error testing:
  - Check of data consistency
  - Check of a calibration state
  - Automatic recovery after the failure / error
  - Reports on the failure / error
- Suppression of a serial alternate disturbance 50HZ min. 110 dB