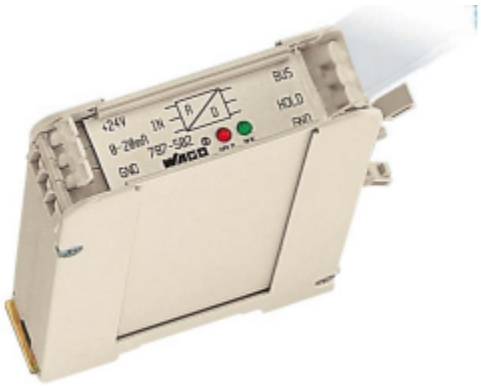
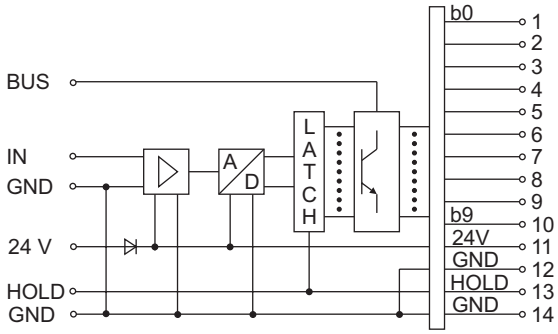
10 Bit A/D Converter in DIN-Rail-Moutable Enclosure

Input signal 0-20 mA

Data sheet





Description	Item-No.	Pack.-unit pcs
Input signal 0-20 mA	787-502	1

- LED status indication for BUS and HOLD signals.
- DIN-rail-mountable enclosure acc. to EN 50022.
- 14-pole flat cable connector acc. to DIN 41651.

A/D converters are used for the conversion of standard analogue signals into digital signals, allowing digital computers or programmable logic controllers (PLCs) to process analogue signals using the digital inputs.

Any number of A/D converters can be connected either to the digital BUS interface of the computer or to the digital inputs of the PLC. Specific converters can be individually selected with BUS and HOLD signals for data reception.

The BUS input is used to select one of the A/D converters which are connected in parallel. Synchronous data reception is possible via HOLD signal controlling. Without HOLD signal controlling, the A/D converter is in the free-running mode.

Technical Data

Input:	
Input signal	0-20 mA
Max. input signal	100 mA
Input resistance	<50 Ω
Resolution (1 LSB)	19.5 µA
Sampling rate (free-running mode)	1 kHz
Control signals (BUS, HOLD)	
Input level 1-signal "H"	DC 20-30 V
0-signal "L"	<5 V or open connection
Output:	
Output signal	10 bits
Output level 1-signal "H"	U_B – 3 V
0-signal "L"	Open output
Max. output current	20 mA / bit
General data:	
Supply voltage U_B	DC 24 V
Supply voltage range	U_B ±10 %
Current consumption	75 mA
Protective measure	Suppressor diode
Transmission error	±1 LSB
Ambient operating temperature	0 °C...+55 °C
Storage temperature	-40 °C...+80 °C
Dimensions (WxHxD)	(22,5x105*x74) mm (0.89x4.13*x2.91) in
	* from upper edge of DIN 35 rail
Wire connection	CAGE CLAMP®
	(WAGO series 257)
	0,08-2,5 mm² / AWG 28-12
Stripped length	5-6 mm / 0.22 in
BUS interface	Flat cable connector
	14-pole acc. to DIN 41651

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Subject to design changes
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Input signal 0-20 mA

Data sheet

IN Analog-input

0-10V	*Item-No. 787-501*
0-20mA	**Item-No. 787-502**
4-20mA	*Item-No. 787-503*

B BUS input

A high level triggers the digitaly converted data word to the data BUS.

A low level inactivates the BUS drivers, thus allowing another parallel connected A/D converters to transmit data to the data BUS. The internal conversion of the signal is being continued!

H HOLD input

A high level allows storage of the currently converted value of the A/D converter.

A low level deactivates the storage function of the device, thus allowing the pending analogue values to be continually converted and to be available on the data BUS.

b0...b9 Data BUS

The digital outputs are used to trigger the PLC or the computer system via the flat cable connector.

Us Voltage supply

A 24V input voltage supplies the A/D converter.

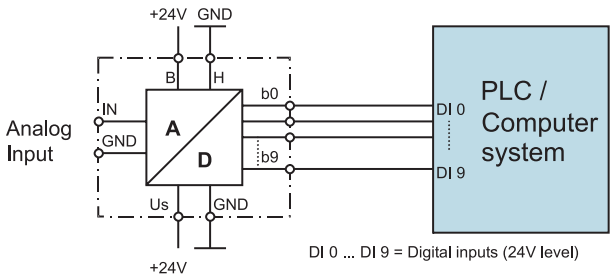

Fig.1 Individual mode with continuous conversion

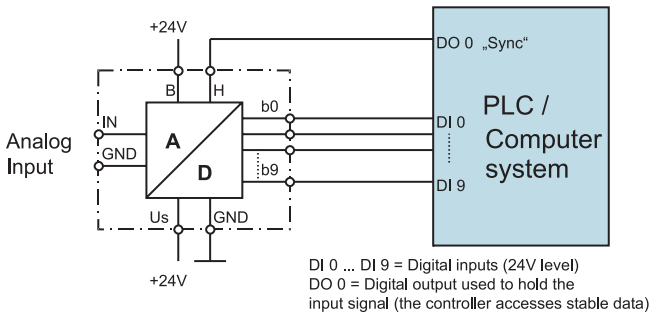

Fig.2 Individual mode with “HOLD control”

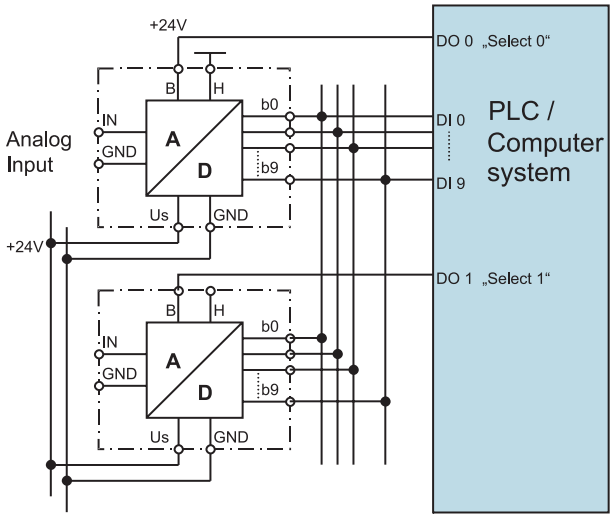

Fig.3 BUS operation with continuous conversion

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