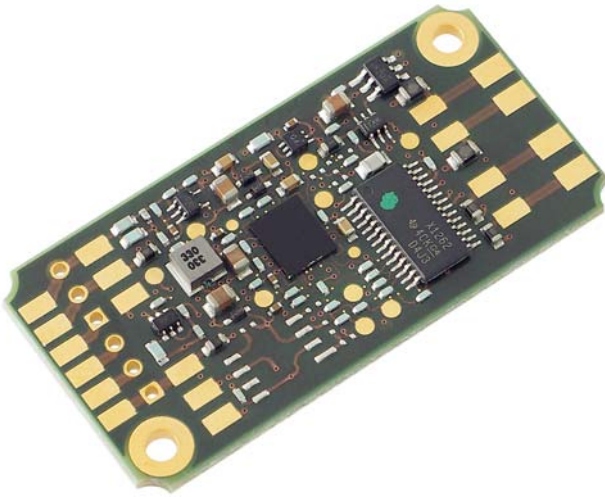


# AD105D

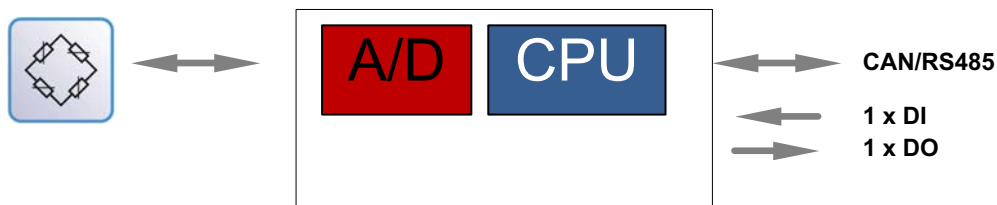
## Digital transducer electronics

### Special features

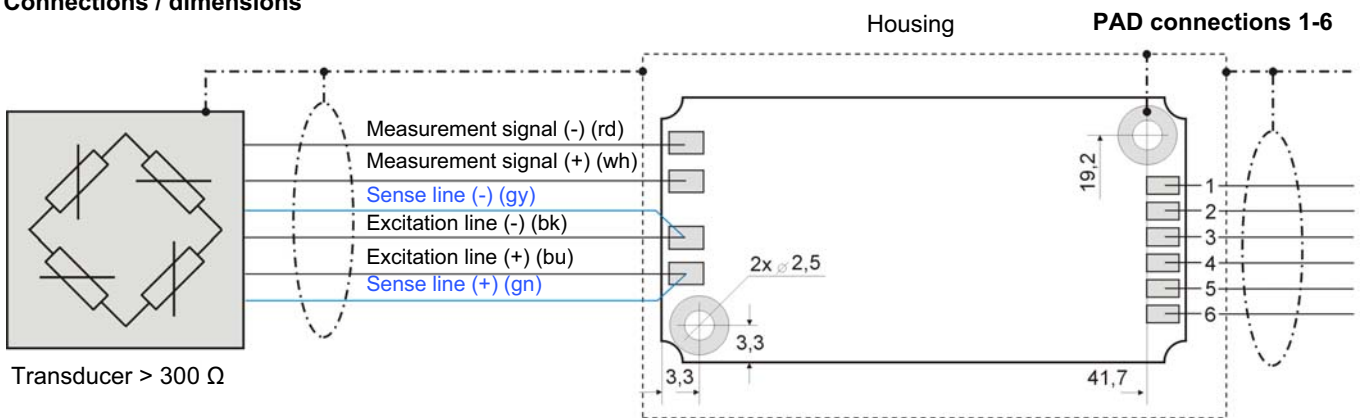
- Variant with 2-wire RS485 or CAN interface (UART)
- Digital filtering and scaling of the measurement signal
- Limit value output with hysteresis
- Intuitive and user-friendly PanelX software for parameter setup, configuration, measurement and analysis, including extensive online documentation
- Power fail safe parameter storage
- Freely configurable LEDs



### Block diagram



### Connections / dimensions



Printed circuit board: L x W x H: 45 x 22.5 x 7 mm

## PAD connections

	AD105D-RS4	AD105D-CAN
PAD series communication	RS485-2-wire	CAN
1	GND	GND
2	Ub 7 ... 30 V	Ub 7...30 V
3	T/RB	CAN Low
4	T/RA	CAN High
5	Digital Out (OC)	Digital Out (OC)
6	Digital In	Digital In

## Specifications AD105D...

Basic data		
Accuracy at $\geq 0.5\mu\text{V/d}$	d	6000
Bridge resistance, transducer	ohm	300 ... 4000
Bridge excitation voltage	V	5 (AC)
Max. measuring range	mV/V	$\pm 3.0$
Nominal sensitivity (when delivered from factory)	mV/V	2.0
Measurement signal resolution	bit	24
Measured value output rate	Hz	200 ; 100 ; 50 ; 25 ; 12 ; 6 ; 3 ; 2 ; 1
Cut-off frequency of digital filter, adjustable ; at -3dB	Hz	20 ... 0.01
Linearity deviation, related to sensitivity	%	$\pm 0.0025$
Zero drift at 0 mV/V related to the full-scale value	%/10 K	$\pm 0.002$
Full-scale drift at 2 mV/V related to the measured value	%/10 K	$\pm 0.005$
Supply voltage	V	7 ... 30
Supply current (with transducer)	mA	$\leq 70$
Interfaces		
Max. number of bus nodes		90
CAN interface (CANopen)		Standard CiA DS301
Baud rate	baud	10000 ... 1000000
Maximum cable length	m	$\leq 5000$ (10 kBaud) ... $\leq 100$ (500 kBaud) ... $\leq 25$ (1 MBaud)
Asynchronous interface, 2-wire RS485		
Baud rate	baud	1200 ... 115200
Maximum cable length	m	500
Digital input		
Number		1 signal
Functions		Zero balance, tare balance, limit value reset, digital output, (adjustable) trigger
Input signal range (PLC level) <sup>1)</sup>	V	0 ... 30
Maximum permitted input signal range	V	30
Low input status	V	0 ... 6
High input status	V	10 ... 30

<b>Input signal range (HCMOS level)</b>	V	0 ... +12
<b>Low level</b>	V	<1
<b>High level</b>	V	>4
<b>Input resistance (nominal)</b>	kΩ	8.4
<b>Cable length, max.</b>	m	100
<b>Cable type</b> (required in the event of interference)		shielded
<b>Digital output</b>		
<b>Type</b>		Open collector output (OC)
<b>Functions</b>		Limit value switch (adjustable)
<b>Switching time</b>	ms	6
<b>Input voltage (24 V nominal) <math>U_{IN}</math></b>	V	6 ... 30
<b>Output switching current, max.</b>	mA	60
<b>Cut-off current</b>	mA	85 ... 95
<b>Voltage level, minimum</b>	V	3
<b>Cable length, max.</b>	m	100
<b>Environmental data</b>		
<b>Nominal (rated) temperature range</b>	°C	-10...+40
<b>Operating temperature range</b>	°C	-10...+50
<b>Storage temperature range</b>	°C	-25...+75
<b>Rel. humidity</b>	%	5 ... 95 (non-condensing)
<b>Protection class</b> (height up to 2000 m, pollution degree 2)		III
<b>Degree of protection</b>		IP 00 per EN60529
<b>Dimensions (L x W x H)</b>	mm	45 x 22.5 x 7
<b>Weight, PCB, approx.</b>	g	50

1) Factory setting

## Software for AD105D

- PC software: PanelX
- Download: [www.hbm.com](http://www.hbm.com)

**Notice:** The software package can be downloaded free of charge from the HBM website. It includes extensive online help and a command description.

**Attention:** The AD105D motherboard is not protected against electrostatic electricity. Relevant precautions must be taken when installing it in the transducer.

### Important information for EMC protection:

The AD105D must be housed in a shielding enclosure. The cables must be shielded. The cable shields are connected to the load cell and the housing of the AD105D.

Subject to modifications.  
All product descriptions are for general information  
only. They are not to be understood as a guarantee  
of quality or durability.

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