Digital Display Unit
HDA 5500

Description:

The digital display units in the series HDA 5500 are microprocessor controlled display and monitoring units designed for control panel mounting. Different versions are available with a maximum of 3 analogue inputs, an analogue output (4 .. 20 mA or 0 .. 10 V) and up to 4 relay outputs.

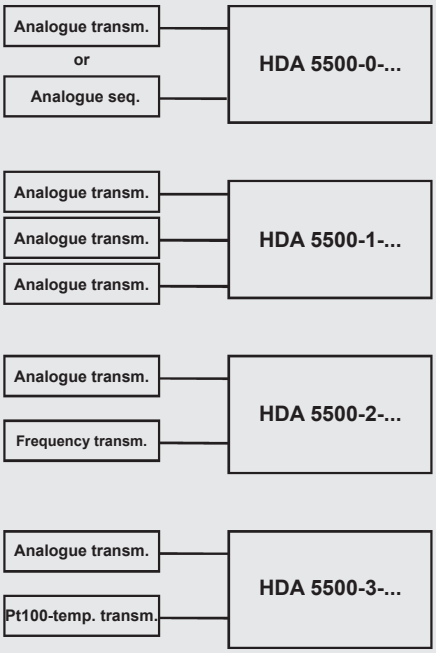
The analogue input signals are displayed according to the settings selected by the user. Each of the relay outputs can be allocated to each of the sensor inputs (1 to 3) or to the differential between input 1 and 2. A PT 100 temperature probe can be connected directly to the unit. There is also an option for frequency measurement using the HDS 1000 (HYDAC rpm probe), for example to measure the speed of rotating components.

Depending on the model, it is also possible to connect SMART sensors (condition monitoring sensors). SMART sensors are a generation of sensors from HYDAC, which can transmit several different measured values.

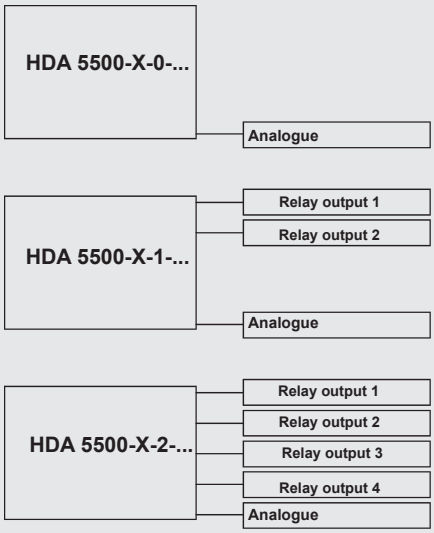
Special features:

- Digital display of analogue signals
- Clear 4-digit 7-segment LED display
- Up to 3 analogue inputs (4 .. 20 mA, 0 .. 10 V or 0 .. 5 V)
- Accuracy ≤ ± 0.5 %
- Differential measurement possible
- Analogue output (4 .. 20 mA or 0 .. 10 V)
- Up to 4 relay switching outputs
- RS 232 interface
- Voltage supply 12 .. 32 V DC or 85 .. 265 V AC 50 / 60 Hz
- Option for PT100 sensor input or frequency input

Input models:



Output models:



Connection terminals:

Supply voltage: plug-in terminal block 2 pole, RM 5.08 (cross section max. 2.5 mm²)	
Inputs / outputs: plug-in terminal block 11 pole, RM 3.5 (cross section max. 1.5 mm²)	
Relay: plug-in terminal block 5 pole, RM 5.08 (cross section max. 2.5 mm²)	

Technical specifications:

Display range	
Display	4-digit 7-segment LED display, red, height of digits 14.2 mm 3 LEDs for active sensor, 4 LEDs for switch points
Display range	- 999 .. 9999 (user-adjustable)
Display units with background lighting	bar, kg/cm², MPa, psi, °C, °F, mA, V, Hz, kN, m, mm, inch, l, l/min, gal, gal/min, 1/min, %, t
Input data	
Analogue signal input(s)	
Measuring range(s) (up to 3 analogue inputs)	select: 4 .. 20 mA, 0 .. 5 V, 0 .. 10 V or 4 .. 20 mA sequential (Modification 006)
Accuracy	≤ ± 0.5 % at 25 °C
PT 100 input	
Measuring range	- 25 .. 100 °C
Accuracy	≤ ± 0.5 % at 25 °C
Frequency/counter input	
Signal threshold	0 .. 0.6 V = LOW, 3 .. 24 V = HIGH
Frequency range	15 Hz to 24 kHz
Output data	
Analoge output	4 .. 20 mA, ohmic resistance ≤ 400 Ω or 0 .. 10 V ohmic resistance ≥ 2 kΩ
Accuracy	≤ ± 0.5 % at 25 °C
Rise time	70 ms
Switching outputs	
Type	2 or 4 relays each with separate common supply
Switching voltage	0.1 .. 250 V AC
Switching current	9 mA .. 2 A
Switching capacity	400 VA, 50 W (for inductive load, use varistors)
Life expectancy of switch contacts	≥ 20 million cycles at minimum load ≥ 1 million cycles at maximum load
Reaction time (with switching delay = 0 ms)	approx. 20 ms
Setting range of switch points	1.5 .. 100 % of the pre-set display range
Setting range of the switching hystereses (switch-back points)	0.5 .. 99 % of the pre-set display range
Interface	
Serial interface RS 232	Baud rate 19200 Bauds; 8 data bits; 1 start and stop bit; no parity; no handshake
Environmental conditions	
Nominal temperature range	0 .. +50 °C
Operating temperature range	0 .. +50 °C
Storage temperature range	- 40 .. +80 °C
CE mark	EN 61000-6-1 / 2 / 3 / 4
Other data	
Housing	control panel housing 96 x 48 x 109 mm; control panel cut-out 92 (+0.8) x 45 (+0.6) mm; front panel thickness 1.25 .. 15 mm; maximum installation depth 121 mm
Supply voltage	12 .. 32 V DC or 85 .. 265 V AC, 50 / 60 Hz
Power consumption	15 VA at 85 .. 230 V AC – fuse protection 1 AT
Supply of the meas. transmitter	12 V DC ± 1 %; max. 20 mA / analogue input
Residual ripple of supply voltage	≤ 5 %
Weight	approx. 320 g

Note: Reverse polarity protection of the supply voltage, excess voltage, override and short circuit protection are provided.

Model code:

HDA 5 5 0 0 – X – X – XX – 00X

Inputs

0 = one analogue input
1 = three analogue inputs
2 = one analogue input + frequency input / counter function
3 = one analogue input + PT 100 input

Outputs

0 = 1 analogue output
1 = 1 analogue output + 2 relay outputs
2 = 1 analogue output + 4 relay outputs

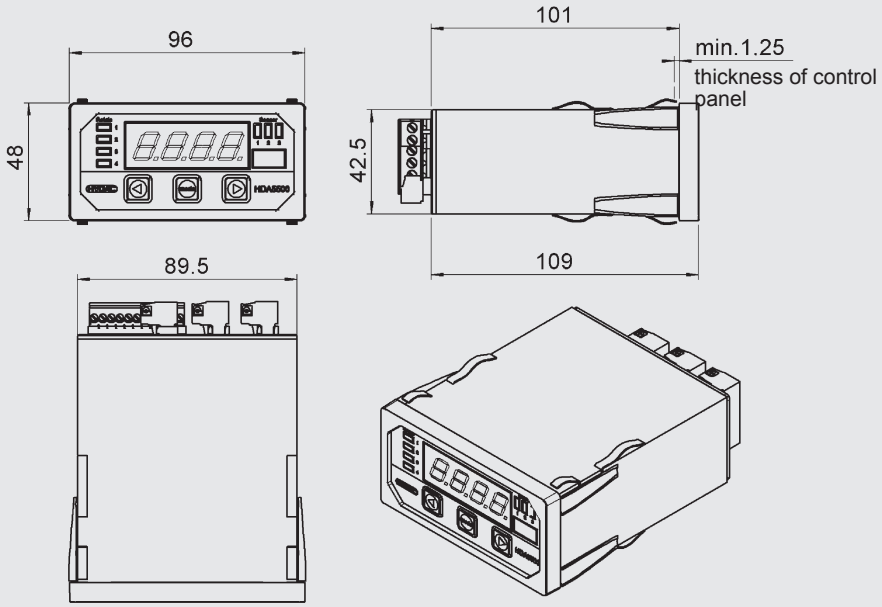
Supply voltage

AC = 85 .. 265 V AC
DC = 12 .. 32V DC

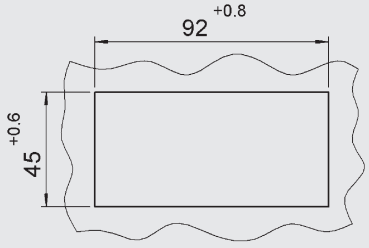
Modification

000 = standard
006 = model with sequential analogue input for HLB 1300 and CS 1000 (only possible on input model "0" and output model "2")

Dimensions:



panel cut-out



Notes:

The information in this brochure relates to the operating conditions and applications described.
For applications and operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.