

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 4 relay outputs can be allocated to each of the 1 to 3 sensor inputs or to the differential between input 1 and 2.

A PT100 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).

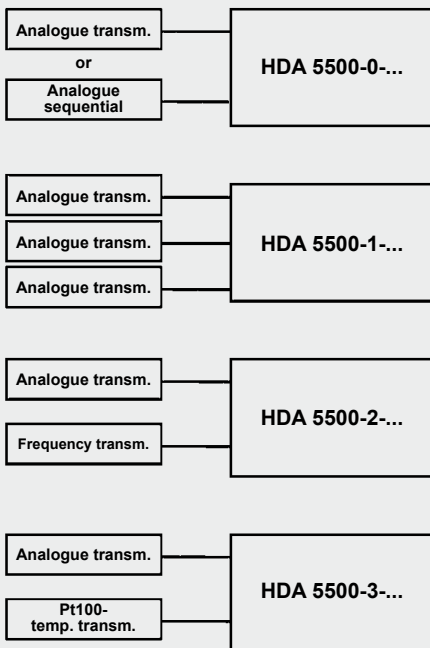
SMART sensors are a new generation of sensors from HYDAC, which can provide a variety of different measurement values.



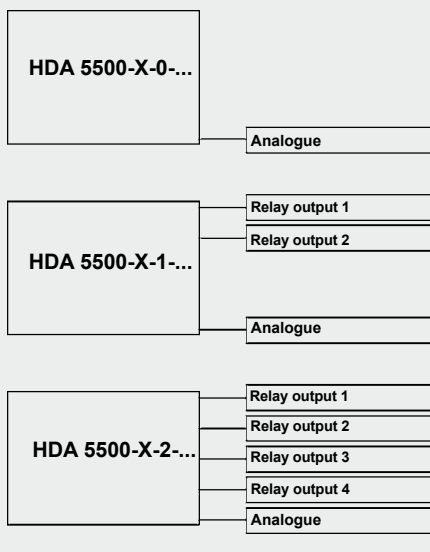
Special features:

- 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 $\leq \pm 0.5 \%$
- 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-selectable)

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) selectable: 4 .. 20 mA, 0 .. 5 V, 0 .. 10 V or
(up to 3 analogue inputs) 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

Analogue 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 approx. 20 ms

(with switching delay = 0 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 Baud rate 19200 Bauds; 8 data bits;
RS 232 1 start and stop bit; no parity;
no handshake

Ambient 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 + PT100 - input

Outputs

- 0 = without switch outputs
- 1 = two relay outputs
- 2 = four relay outputs

Supply voltage

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

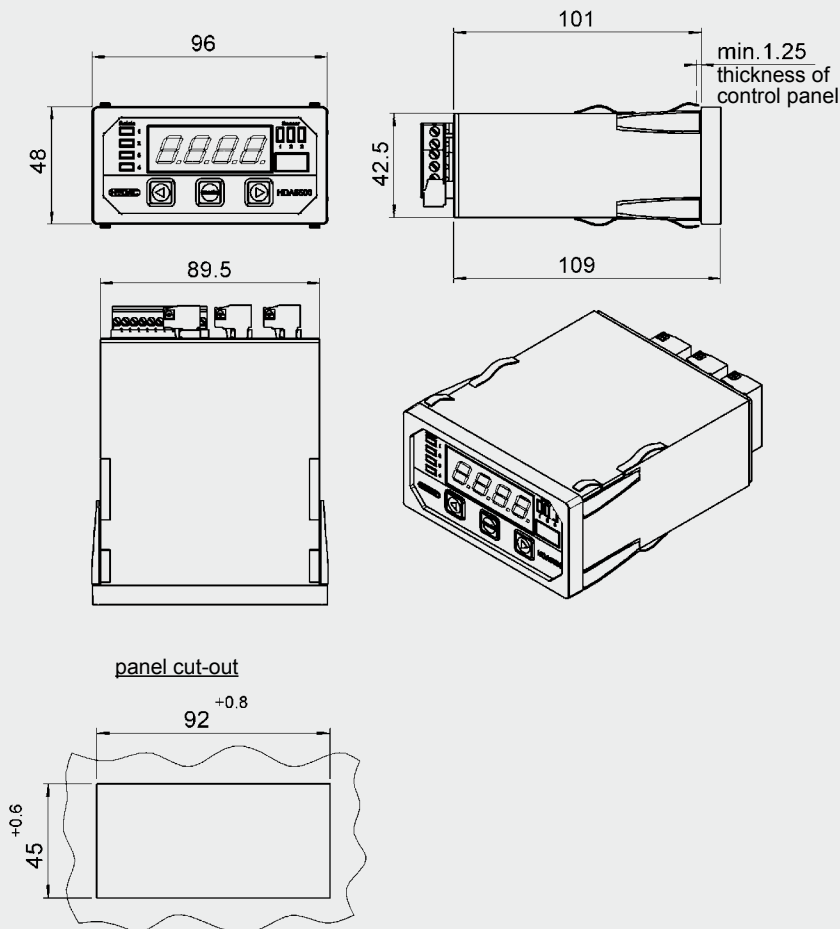
Modification

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

Notes:

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

Dimensions:



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