HYDAC INTERNATIONAL

Digital Display Unit
HDA 5500

Description:

The Digital Display Unit HDA 5500 is a microprocessor controlled display and monitoring unit designed for control panel mounting. Different versions are available with a maximum of 3 analogue inputs and 4 relay outputs. The analogue input signals are displayed according to the measuring scale 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.

The 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.

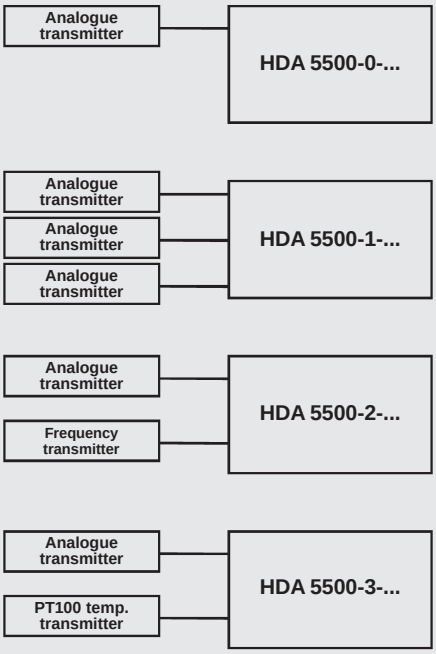
The analogue output is standard and adjustable for 4 to 20 mA or 0 to 10 V.

Special features:

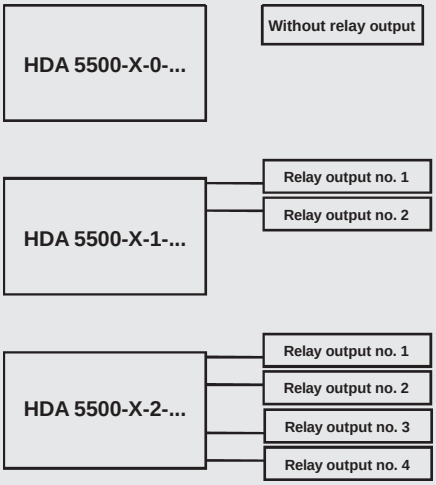
- Digital display of analogue signals
- Clear 4 digit 7 segment LED display
- Up to 3 analogue inputs (4 .. 20 mA, 0 .. 10 V or 0 .. 5 V)
- Accuracy ≤ ± 0.5 %
- Differential measurement possible
- Up to 4 relay outputs
- RS 232 serial interface
- Supply 12 to 32 VDC or 85 to 265 VAC 50 / 60 Hz
- Option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

E 18.062.0/01.06

Input models:



Output models:



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 (adjustable by user)
Display units with background lighting	bar, kg/cm², Mpa, psi, °C, °F, l/min, 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)	adjustable: 4 .. 20 mA, 0 .. 5 V or 0 .. 10 V
Accuracy class	≤ ± 0.5 % at 25 °C
PT 100 - Input	
Measuring range	- 25 .. 100 °C
Accuracy class	≤ ± 0.5 % at 25 °C
Frequency-/counter input	
Signal threshold	0 .. 0.6 V = LOW, 3 .. 24 V = HIGH
Frequency range	15 Hz to 4 kHZ
Output data	
Analogue output	adjustable: 4 .. 20 mA, Ohmic resistance ≤ 400 Ω or 0 .. 10 V, Ohmic resistance ≥ 2 kΩ
Accuracy of the analogue output	≤ ± 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 VAC
Switching current	9 mA .. 2 A
Switching capacity	400 VA, 50 W (for inductive loads use varistors)
Life expectancy of the switching contacts	≥ 20 million at minimum load ≥ 1 million at nominal load
Reaction time (with switching delay = 0 ms)	Approx. 20 ms
Setting range of the switching 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 RS232 Baud rate 19200 Bauds - 8 data bits - 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 - marks	EN 50081-1 and -2, EN 50082-1, EN 61000-6-2
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
Electrical connections	Supply voltage: plug-in terminal block, 2 pole, RM 5.08 Input/Outputs: plug-in terminal block, 11 pole, RM 3.5 Relay: plug-in terminal block 6 pole, RM 5.08 Max. cross-section of the connections 1.5 mm² for input/outputs Max. cross-section of the connections 2.5 mm² for supply voltage and relays
Supply voltage	85 .. 265 VAC 50 / 60 Hz or 12 .. 32 VDC
Power consumption	15 VA at 85 .. 230 VAC – Fuse protection 1 AT
Supply of the measurement transmitter	12 ± 1 % VDC max. 20 mA per analogue input
Protection class to DIN 40050	IP 20
Reverse polarity protection of the supply voltage, excess voltage, override protection	provided
Weight	approx. 320 g

Model code:

HDA 5 5 0 0 – X – X – XX – 000

Inputs

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

Outputs

0 = no switch output
1 = 2 relay outputs
2 = 4 relay outputs

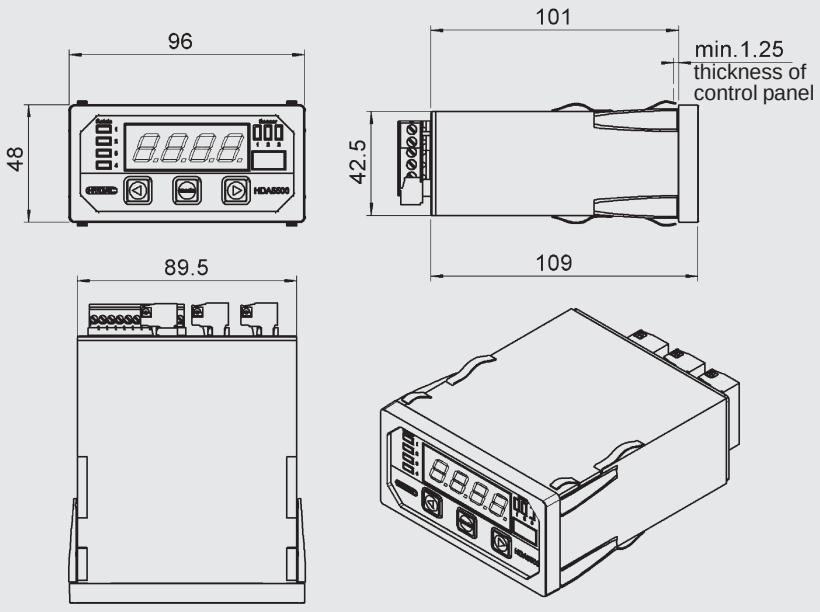
Supply voltage

AC = 85 .. 265 VAC
DC = 12 .. 32 VDC

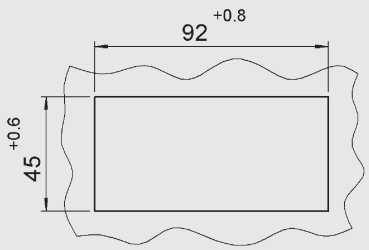
Modification

000 = standard

Dimensions:



Control panel cut-out



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.