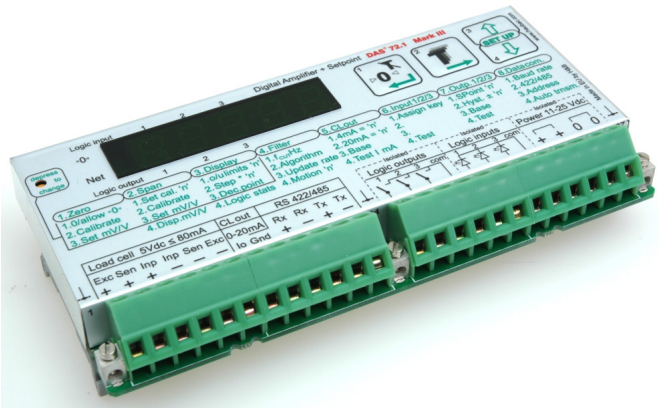
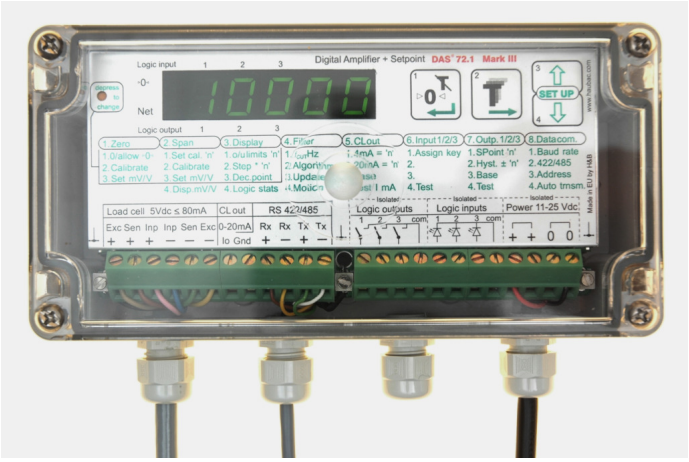
DAS 72.1 - Versatile - High speed

Digital Amplifier + Set points 072.101.5. Ver. 3.02

The DAS 72.1 is an **advanced, high speed** weighing instrument in a compact packaging. The DAS provides both digital and analog data from weighing operations based on strain gauge load cells. **Triple, logic inputs and triple logic outputs are** all standard and limited PLC functionality is available.
The DAS 72.1 can be clipped on to a DIN rail (TS35) and provides a full display for set-up, calibration and primary display of weight.

- Support any automatic weighing device, requiring operations at **high speed.**
- All hardware for **automatic weighing operations** is available as standard, i.e.:
  - Robust **triple,** logic, isolated **outputs**
  - Robust **triple,** logic, isolated **inputs**
  - **Analog current output** for a PLC or alike
- Internal **precision reference 2.000.0mV/V** for mV/V calibration.
- Automatic **detection of load cell errors,** signalized visually, digitally and analog.
- A library of specialized firmware for **check weighing, grading** or **filling applications** is available.
- **Communicates** via a RS 422/485 full duplex interface and is entirely **set up via the PC**, even while networking.
- A **graphic presentation, analysis** and set up PC program, **DOP** is available.





DAS 72.1 Qualities

±262000 counts input signal resolution, 50 nV/count, 2400A/D conversions/sec.
Advanced digital filters offering FIR or IIR performance, both to be set in 8 LP frequency steps and up to 100 db/dec.
Device output update rate of 600 upd./sec (IIR) followed by an averaging filter to be set from 600 to 0,6 upd./sec.
Can drive 80 ohm load cells, e.g. 4 pc, each 350 ohm, at 5 Vdc.
The mV/V calibration facility permits span calibration without loading the scale (provided the load cell output is specified).

Triple isolated, logic inputs for position sensors or valve feed back etc. can define a time frame for automatic operations and allow the pushbuttons to be operated externally.
Triple isolated, logic outputs for control of actuators, PLC inputs and lamps etc. The semiconductor relays are robust, bidirectional and permit high or low switching.
Robust analog current output, 0-21 mA or any range within that span.
The device can generate calibrated current output as keyed in for test and reference purposes.

The power supply range is 10-30 Vdc, 3W isolated and protected.
EMC compliance and surge protection provided by shielding and T-filters at all pins.

The set-up and calibration are eased by the memory table directly at the front.
Custom designed software for special purposes is created upon request.

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Input and A/D	Linearity	<0,005 % of full scale.
	Load cell excitation voltage	5 Vdc
	Load cell drive capability	R_{LC} 80-2000 ohm
	Load cell wiring system	6 wires inclusive sense
	Load cell input range	±3.2 mV/V equivalent to ±16 mVdc.
	Load cell input resolution	<50 nV/incr. (>200 000 counts at 2 mV/V input)
	A/D-performance	2400 updates/second; 260000 incr. resolution
	Analog LP filter performance	17Hz; 60 db/decade
	Digital IIR LP filter performance	18-0.25 Hz; 40db/decade, selectable in 8 steps
	Digital FIR LP filter performance	19.7-2.5 Hz, selectable in 8 steps
	Averaging period (display output)	600-0,6 updates/second, selectable in 8 steps.

General I/O's	Hardware interfaces	RS485, 32 nodes or RS422 –full duplex
	Data transmission, rates	9.6; 19.2; 38.4; 57.6; 115.2 kB
	Data transmission, protocol	Get results or auto transmit
	Analog output range	0-21mA (0-10.5 Vdc at 500 ohm load)
	Analog output resolution	1µA (20000 increments 0-20mA) 600 upd./sec.
	Logic inputs	3 pc (10-30V; 3.5 mA; isolated.)
	Logic outputs	3 pc FET bidirectional relays (45Vac; 1A; isolated.)
	Power supply	12-24Vdc ≤15% ripple; ≤3Watt (isolated, protected).

Influences	Temperature effect on Zero	Typical 5 ppm/°K, Max 10ppm/°K
	Temperature effect on Span	Typical 4 ppm/°K, Max 8ppm/°K
	Temperature range	Operating: -10°C/+50°C; Storage -20°C/+60°C
	Relative humidity	0-95 % non condensing
	EMI	10 V/m (1-2000 MHz)
	General I/O protection, all pins	Reversed polarity, excess voltage and surge
	Vibration	2.5 G operational; 5 G non-operational
	Protection, environment	IP40

Dimensions	Height /length/width	L 135 mm; W 66 mm; H 18 mm excl. DIN rail clips.
	Weight	165 g (5.8 oz)Net. (Packed 198 g)
	I/O pins	4x6 screw terminals, 5 mm pitch; 3 gnd. terminals.

Standards	Conform to Council Directive	CE in accordance with 93/98/EEC; 89/336/EEC
	Certificate of approval	-
	Certification accuracy	Class III: 10000e; 0,5 µV/VSI

Accessories, optional

Enclosures: A number of metal or plastic enclosures are available, all IP65 proofed.