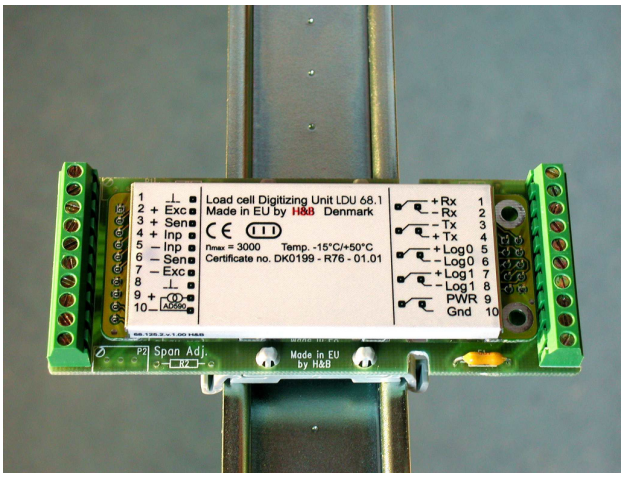
LDU 68.1 - Economy - R76 Approved

Load cell Digitizing Unit 068.101.5. Ver. 2.20

LDU 68.1 provides digital data from weighing operations based on strain gauge load cells at a speed and precision **suitable for most purposes. Logic operations** can be controlled directly vie the dual logic inputs and outputs.
The LDU's are designed to be **embedded into customer's equipment**, to be plugged into a **Unit Adaptor** or integrated with a hosting device.

- **An economic solution** for most standard **weighing** application.
- **OIML R76 approved** for non-automatic weighing. Eases the MID approvals of R51, R61 and R107 applications.
- Internal **precision reference 2.000.0mV/V** for mV/V calibration.
- **Supports** any automatic or manual weighing device with **normal requirements** as to speed and precision.
- **Communicates** via a RS 422/485 full duplex interface in 32 node networks or point to point.
- Offers **dual logic outputs and dual logic inputs** for various control, filling and sorting operations.
- A **graphic presentation, analysis** and set up PC program, **DOP** is available.



LDU 68.1 Qualities

±131000 counts input signal resolution, 100 nV/count, 90 A/D conversions/sec.
Digital filter performance 60 db/decade LP filter 5 to 0,02Hz.
Can drive 250 ohm load cells, e.g. 4 pc, each 1000 ohm, at 5 Vdc.
Dual logic inputs for position sensors or valve feed back etc. can define a time frame for automatic operations.
Dual logic outputs provide external control of actuators etc., or for internal computing.
Signal conditioning, zero and tare operations convert the load cell output into a calibrated unit (g; kg; lbs; etc.).
To be designed into customers' PCB or bolted on the side a load cell.
Fits with a selection of Unit Adaptors, offering many I/O facilities and mounting options.

The LDU 68.1 is pin and protocol compatible with other members of the LDU family, (68.2/68.3/69.1/78.1), thus offering a selection of precision levels, functionality and cost.

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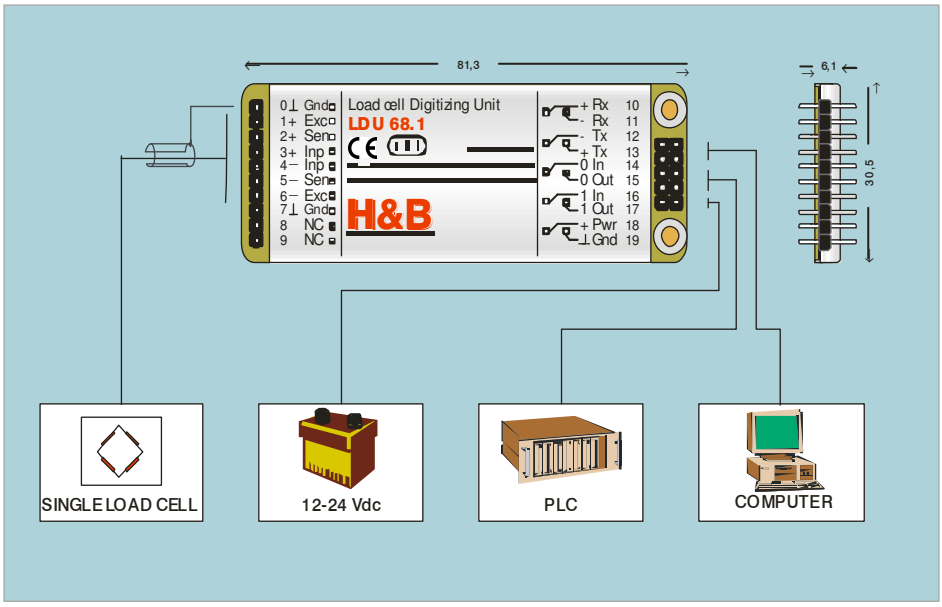

Input and A/D	Linearity	<0,005 % of full scale
	Load cell excitation voltage	5 Vdc
	Load cell drive capability	250-2000 ohm
	Load cell wiring system	6 wires inclusive sense
	Load cell input range	±2.2 mV/V equivalent to ±11 mVdc
	Load cell input resolution	<100 nV/incr. (>100 000 counts at 2 mV/V input)
	A/D-performance	90 updates/second; resolution: 130000 increments
	Analog LP filter performance	2,8 Hz; 20 db/decade
	Digital LP filter performance	5-0.02 Hz; 40db/decade, selectable in 8 steps
	Averaging period (display output)	0.2-3.2 seconds, selectable in 16 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
	Logic inputs	2 (10-30 V; 1-3 mA; ref to gnd.)
	Logic outputs	2 open collectors (30 Vdc; 0.2 A; ref to gnd.)
	Power supply	12-24 Vdc max 100 mA

Influences	Temperature effect on Zero	Typical 5 ppm/°K, Max 10ppm/°K
	Temperature effect on Span	Typical 3 ppm/°K, Max 5ppm/°K
	Temperature range	Operating: -15°C/+50°C; Storage -30°C/+70°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	H 6mm excl. pins; L 81.3mm; W 30.5mm
	Weight	27 g (1 oz)
	I/O pins	2x5 pins, 2.54 mm pitch; 1x10 pins, 2.54 mm pitch

Standards	CE EMC directive 89/336	EN 61326/A1 Table A.1. passed
	Certificate of approval	Cert.no. DK 0199-R76-02.02. Rev.1 (EN45.501)
	Certified accuracy	Class III: 5000e; 0,7µV/VSI

Accessories, optional

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

Extensions: A number of Unit Adaptors provide screw terminals, fuse protection, DIN TS35 rail mounting and data bus-converters.
The Unit Adaptors can be built to specific customer demands.