

# LAC 74.1 - Flexible - Economic

## Load cell Analogue Converter 074.101.5. Ver. 2.00

LAC74.1 is a Universal amplifier for static/semi-dynamic weighing applications in **industrial environments** providing both **current** and **voltage** output at high precision. Zero, span and filter settings are performed via **firm DIP-switches** in binary organized steps and fine trimmed by 20 turn pots to achieve a very high resolution. The LAC 74.1 can be clipped on to a DIN rail TS35 and offers robust screw terminals for all connections.

- Offers **good stability** and security in **hostile**, industrial environments.
- Both **voltage output** 10V and **current output** 0-20 or 4-20mA
- Can drive up to **4 Pc** 350 ohm load cells or **12 Pc** 1000 ohm load cells.
- **Wide range of gain** and **minimum zero drift** enables a live range down to a few percent of the load cell's rating.
- Wide range of the low pass input filter from **33 to 0.33Hz** to meet any requirement.
- Load cell wiring **defects** and power error are signaled for **safety**. (E.g. for TÜV approved applications)
- The lay out of the front and the LED indicators **ease the set-up and calibration**



### LAC 74.1 Qualities

True 6 wire technology with high input resolution. Minimum 4 load cells are supported at 10Vdc. The low pass input filter can be set from 33 to 0.33Hz to meet any requirement to speed or damping.

The adjustment of gain and zero virtually do not affect one another. Binary DIP-switches and quality 25-turn trim pots permit fine resolution of adjustments

A wide range of supply voltages are accepted and superior EMC compliance is provided.

The logic I/O's and power supply withstand excessive disturbances.

<b>Input</b>	Linearity	<0,01 % of full scale.
	Load cell excitation voltage	10 Vdc
	Load cell drive capability	R <sub>LC</sub> 80-2000 ohm
	Load cell wiring system	6 wires inclusive sense
	Load cell input range	±3.2 mV/V equivalent to ±32 mVdc.
	Load cell input resolution	<200 nV/incr. (>100 000 counts at 2 mV/V input)
<b>Zero/Gain</b>	Zero coarse, binary increments	±31.5mV as 64 incr. of each 0.5mV
	Zero fine trim, 20 turn potentiometer	0.6mV, trim resolution <0.5uV
	Gain coarse, binary increments	1*-32* as 128 incr. of each 0.25*
	Gain fine trim, 20 turn potentiometer	0.3* trim resolution <0.003*
	Zero/Gain change influence on zero	0,045%FS/1*gain change
<b>Input filters</b>	First filter: Fixed 2nd order:	33Hz cut off frequency (5ms)
	Second filter: Adjustable 1st order	33-10-3,3-1,0-0,33Hz cut off frequency (5ms-500ms)
<b>Analog output</b>	Current output range	0-20mA or 4-20mA (reversed current protected)
	Voltage output range	0-10Vdc (as internal 500Ω shunt resistor)

<b>General</b>	One open collector	Normally closed OC, opens in case of error
	Rating of the logic output	I ≤ 300mA; V ≤ 30Vdc
	Fault/error messages occur if	- Load cell input- or sense wires is out of range - The current or voltage output is out of range - Power fail
	Power supply	12-24Vdc ≤15% ripple; ≤2,4 Watt Isolated

<b>Influences</b>	Temperature effect on Zero	Typical 10 ppm/°K, Max 25ppm/°K
	Temperature effect on Span	Typical 20 ppm/°K, Max 50ppm/°K
	Temperature range	Operating: -25°C/+55°C; Storage -35°C/+65°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	

<b>Dimensions</b>	Height /length/width	L 135 mm; W 66 mm; H 18 mm excl. DIN rail clips.
	Weight	130g (4.6oz) Net. (Packed 170g)
	I/O pins	8+2+4 screw terminals, 5 mm pitch; 3 gnd. terminals
<b>Mounting</b>	Dual TS35 -clips is provided	Permit standard 35mm DIN-rail mounting

<b>Standards</b>	Conform to Council Directive	CE in accordance with 93/98/EEC; 89/336/EEC
	Certificate of approval	-
	Certification accuracy	Class III: 10000e; 1 μV/VSI

#### Accessories, optional

Enclosures: Aluminum IP65; 175x80x60mm, 4 pcs M12 metal cable glands mounted. Part no. 20.125.4.  
PolyCarbonate IP65; 160x80x60mm. 4 pcs M12 plastic cable glands mounted. Part no. 20.131.4.