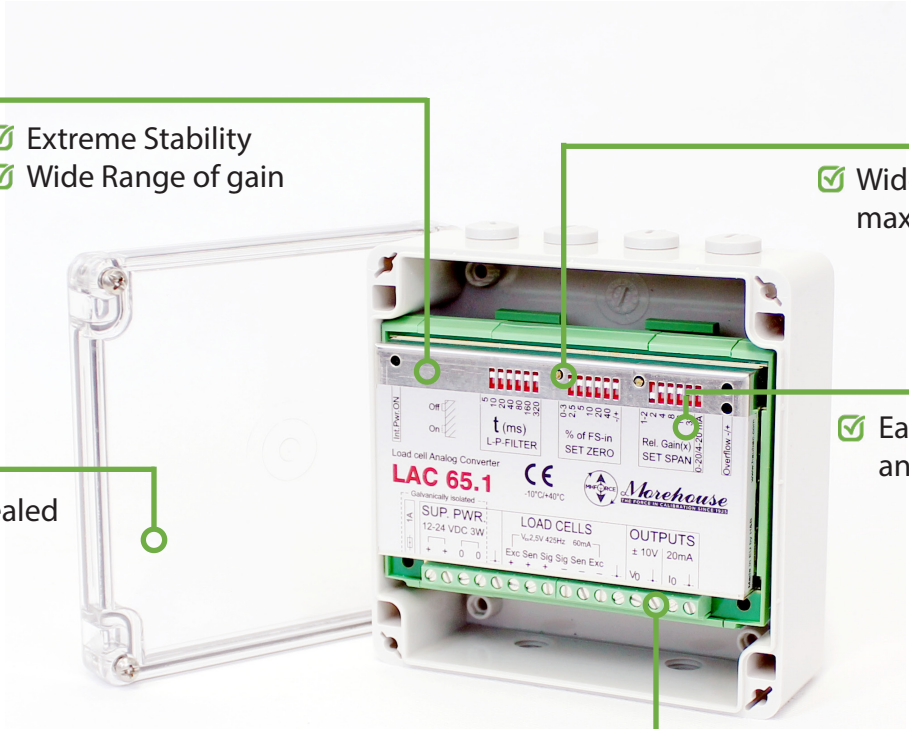
Morehouse
THE FORCE IN CALIBRATION SINCE 1925

Load Cell Amplifier for Controllers (LAC)

PD-4501



- Extreme Stability
- Wide Range of gain
- Wide range of filter to maximize stability
- Easy adjustment of span and offset
- Available with sealed mounting box
- Bipolar voltage output ±10 V
- Current output 0-20 mA
- Current output 4-20 mA

Standard Features

- Offers extreme long-term stability and security in hostile, industrial environments
- Both bipolar voltage output (±10 V) and current output (0-20 or 4-20 mA)
- Wide range of the low pass input filter from 33 to 0.33Hz to meet any requirement
- AC excitation voltage (425Hz) cancels influence from EMI and thermoelectric forces from wire joints
- Low 2.5 V excitation voltage effectively prevent load cell warm up errors
- 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 supply voltage range and the isolated power supply underline the electrically robustness
- Can be clipped on to various DIN rails and offers robust screw terminals for all connections

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Technical Specifications

Specifications	Load Cell Amplifier for Controllers Model: LAC 65.1
Input	
Linearity	< 0.005 % FS
Load Cell Excitation	2.5 VAC 425 Hz
Load Cell Drive Capability	RLC 40-2000 ohm
Load Cell Wiring System	6 wire inclusive sense
Load Cell Input Range for Full Output	± 0.17 mV/V to ± 4 mV/V
Load Cell Input Resolution	< 100 nV (> 50000 increments at 2 mV/V input)
Zero / Gain	
Zero Coarse (Binary Increment)	± 2.4 mV/V as 32 incr. of each 0.075 mV/V input
Zero Fine Trim (20 Turn Potentiometer)	0.1 mV/V, trim resolution < 0.5 µV/V
Gain Coarse (Binary Increment)	1-32 relative as 32 incr. of each 1
Gain Fine Trim (20 Turn Potentiometer)	1-2 trim resolution < 0.005
Optional Gain Set	10-320
Zero / Gain Change Influence on Zero	0.045 % FS /1 gain change
Input Filters	
First Filter: Fixed 2nd Order	0-20 mA or 4-20 mA (reversed current protected)
Second Filter: Adjustable First Order	0±10 VDC
General	
Offset Deviation Between VOUT and IOUT	< 2 %
Gain Deviation Between VOUT and IOUT	< 2 %
Power Supply	12-24 VDC < 15 % ripple; < 3 Watt isolated
Isolation of the Power Source	> 10 MΩ; < 1 nF; > 0.5 kV
Influences	
Temperature Effect on Zero	Typical 10 ppm/°K; Max 25 ppm/°K
Temperature Effect on Span	Typical 15 ppm/°K; Max 30 ppm/°K
Temperature Range	Operating: -20°C to +50°C; Storage -30°C to +60°C
Relative Humidity	0-95 % non-condensing
EMI	10 V/m (1-1000 MHz) IEC801-1 level 2
Burst (Transient)	IEC 801-4 (level 2)
Electrostatic Discharge to Meet)	IEC 801-2 (level 3)
General I/O Protection, All Pins	Reversed polarity, excess voltage and surge
Vibration	2.5 G operational; 5 G non-operational
Protection, Environment	IP40

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Dimensions	
Height x Length x Width	L 114 mm; W 77 mm; H 35 mm incl. DIN rail clip
Weight	4.6 oz (130 g) net; Packed 6.0 oz
I/O Pins	6 screw terminals; 3.81 mm pitch
Mounting	
Universal DIN – Rail Clips is Provided	15 to 35 mm C or Hat profile
Standards	
Conform to Council Directive	CE in accordance with 93/98/EEC; 89/336/EEC
Certification Accuracy	Class III: 10000e ; 1 µV/VSI