A D LCCA21N100 Button Load Cell With Amplifier Instruction Manual

A&D Company, Ltd.

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A D LCCA21N100 Button Load Cell With Amplifier Instruction Manual

Check the following packing contents before use.

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Mounting holder	AXP-4036220	For LCCA21N100 and LCCA21N200	1
	AXP-4036221	For LCCA21N500 and LCCA21KN001	
Amplifier case holder (AXP-4038262)			2
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2. INTRODUCTION

The LCCA21 series are compression load cells connected to an amplifier for force measurement. These can be used for load distribution measurements, compression measurements, etc. and the voltage output terminals can be easily connected to the computer peripheral A/D converter.

3. SPECIFICATIONS

Model No.			LCCA21N100	LCCA21N200	LCCA21N500	LCCA21KN001
Rated capacities			100 N 10.20 kg	200 N 20.39 kg	500 N 50.99 kg	1 kN 102.0 kg
Maximum safe overload			150 % OF R.C.			
Compensated temperature range			0 °C to 70 °C			
Permissible temperature range			-10 °C to 80 °C			
Insulation resistance			Greater than 500 MΩ at 50 VDC between signal wires and load cell			
Power	Supply voltage		5 V ± 0.25 V			
	Consumption current		Less than 16 mA			
Load resistance			Greater than 5 kΩ			
Output voltage			1 V to 4 V			
Zero voltage			1 V ± 0.04 V			
Span voltage			2 V ± 0.01 V			
Combined error			0.5 % OF R.O.			
Temperature effect		on zero	0.6 % OF R.O. / 10 °C			
		on span	0.6 % OF LOAD / 10 °C			
Frequency characteristics		※1	100 Hz (–3 dB)			
Resonance frequency		※1 ※2	45 kHz	55 kHz	30 kHz	35 kHz
Cables			ϕ6 mm, 0.18 mm^2, length 0.5 m, From load cell to amplifier: ϕ2 mm, length 2 m			
Dustproof / waterproof			IP64 compliant (at the load cell case)			
Mass		※3	Approx. 65 g		Approx. 70 g	

※1: Reference value ※2: Load cell only ※3: Including the amplifier and cables

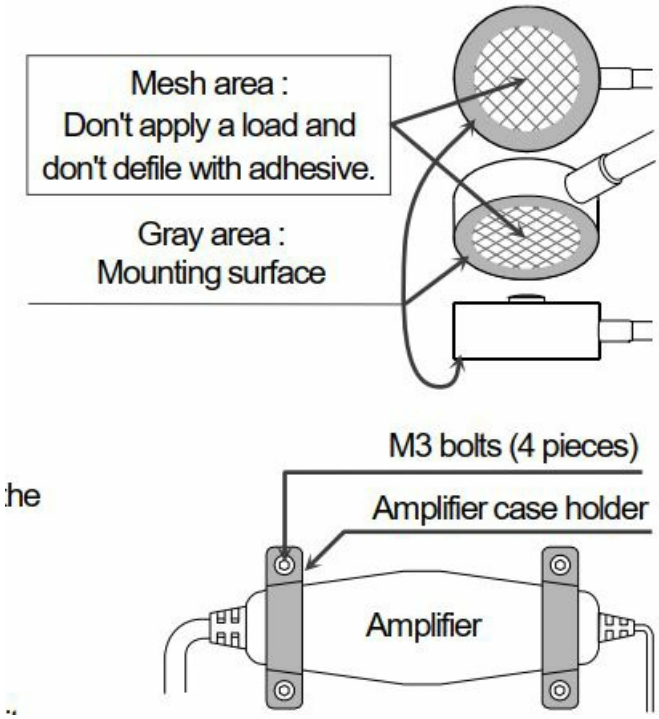
4. INSTALLATION

4.1. ATTACHING THE LOAD CELL

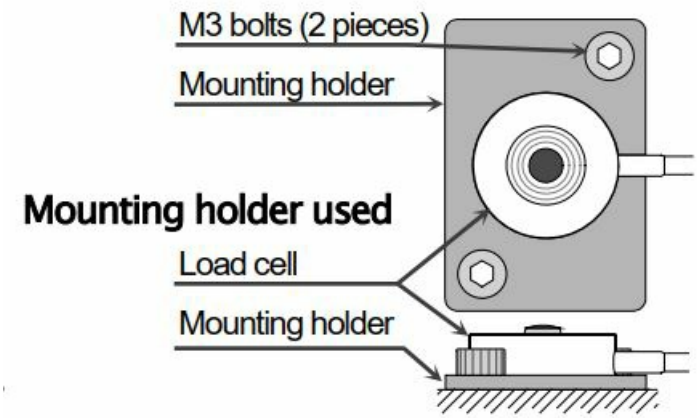
Attach the load cell to a rigid and flat base (the fixed surface). If there is a slope or distortion on a part of the base, it will affect the measurement accuracy.
The mounting surface is the gray area on the bottom of the load cell in the figure. Do not apply a load to the concavity of the center of the bottom (mesh area). Don't defile the mesh area with adhesives.
Clean the mounting surface before attaching the load cell.
When securing the amplifier using the accessory amplifier case holder, refer to the figure.
Note M3 bolts are not included in accessories.
Secure the position of the load cell using adhesive or the mounting holder.

Adhesive used

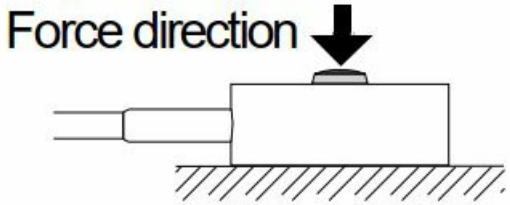
Use the cyanoacrylate adhesive.
Push gently the load cell so as to keep the position.
Paste the adhesive to the place contacting the fixed surface and outer circumference of the load cell.
Hold the load cell until the adhesive has fixed the load cell. Do not apply excessive loads and do not defile the mesh area with adhesives.
Peel and shave the adhesive with a cutter when removing the load cell. Do not hit or apply a shock to the load cell when removing it. Take care not to hurt yourself or damage the load cell during removal.



Mounting holder used
Put the load cell into the mounting holder and secure it.
Note M3 bolts are not included in accessories.



4.2. LOADING TO THE LOAD CELL
Load a vertical load to the load cell indicated in the figure to the right.
Avoid eccentric load, horizontal force and moment.
Apply load to the load cell through a rigid surface.



4.3. CAUTIONS
Avoid a shock and excessive force to the load cell.
Keep a constant temperature using insulation, when the load cell is installed in a place exposed to direct sunlight or radiant heat.
Handle the load cell cable gently. Do not pull it when using the load cell.

Connect wires of the load cell cable correctly. If an incorrect wiring exists, it may cause malfunction and damage.
Prevent the amplifier case from getting wet in water.

4.4. CABLE COLOR CODE

Red …….. Power+ Green ……. Output Yellow ……. Shield
White …….. Power- Blue ……. GND

4.5. RELATIONSHIP OF OUTPUT VOLTAGE TO LOAD

Load [% OF R.C.]	0 %	100 %	150 %
Output voltage	1 V	3 V	4 V

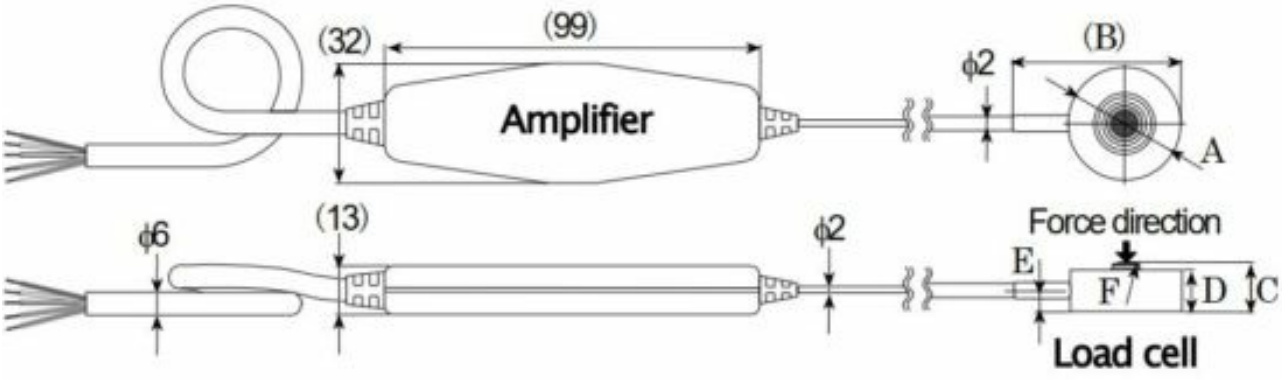
5. MAINTENANCE

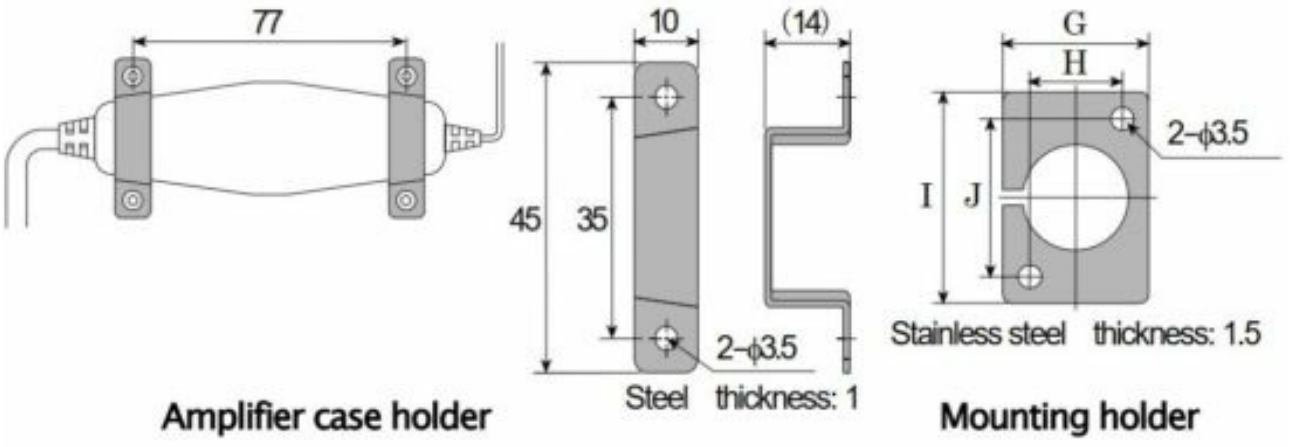
Remove all dirt and dust from the load cell, and always use it in a clean environment.
When cleaning, use an air blower.

6. DIMENSION

Model No.	A	B	C	D	E	F	G	H	I	J
LCCA21N100 LCCA21N200	ϕ10	18	4	3.6	1.6	SR3	16	8	28	20
LCCA21N500 LCCA21KN001	ϕ16	24	7	6	3	SR6	22	14	32	24

(Number) : Reference value. Unit: mm





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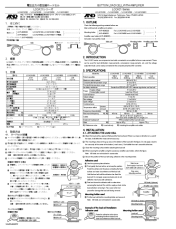	A D LCCA21N100 Button Load Cell With Amplifier [pdf] Instruction Manual LCCA21N100 Button Load Cell With Amplifier, LCCA21N100, Button Load Cell With Amplifier, Load Cell With Amplifier, Cell With Amplifier, Amplifier

References

- User Manual