

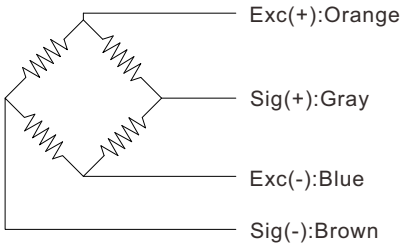
--- Specifications ---

|                                     |                                      |                       |                        |
|-------------------------------------|--------------------------------------|-----------------------|------------------------|
| Capacity                            | Fx=Fy=Fz---10/20/50/100/200/500/1k N |                       |                        |
| Rated Output                        | 1.0 mV/V                             | Crosstalk             | <3% of F.S.            |
| Excitation                          | 3~15V                                | Operating Temp.       | -10...+60°C            |
| Zero Balance                        | ±0.05mV/V                            | Temp. Shift Zero      | ±0.03% of R.O./°C      |
| Nonlinearity                        | ±0.3% of R.O.                        | Temp. Shift Span      | ±0.02% of R.O./°C      |
| Hysteresis                          | ±0.3% of R.O.                        | Input Resistance      | 1000±100Ω              |
| Nonrepeatability                    | ±0.1% of R.O.                        | Output Resistance     | 1000±100Ω              |
| Creep(3min)                         | ±0.2% of R.O.                        | Insulation Resistance | >2000MΩ(50V)           |
| Safe Overload                       | 150% of F.S.                         | Ingress Protection    | IP62                   |
| Ultimate Overload                   | 200% of F.S.                         | Material of Element   | Refer to ordering code |
| Cable                               | Ø5*3000mm 12-pin shielded cable      |                       |                        |
| R.O.=Rated Output / F.S.=Full Scale |                                      |                       |                        |

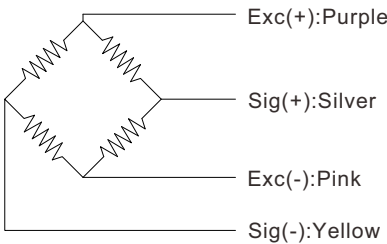
• Subject to change without notice

# Wiring Diagram

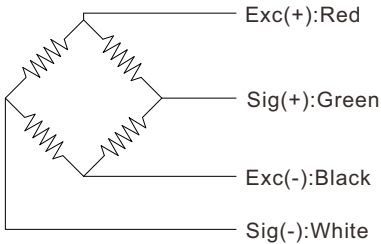
X-axis



Y-axis

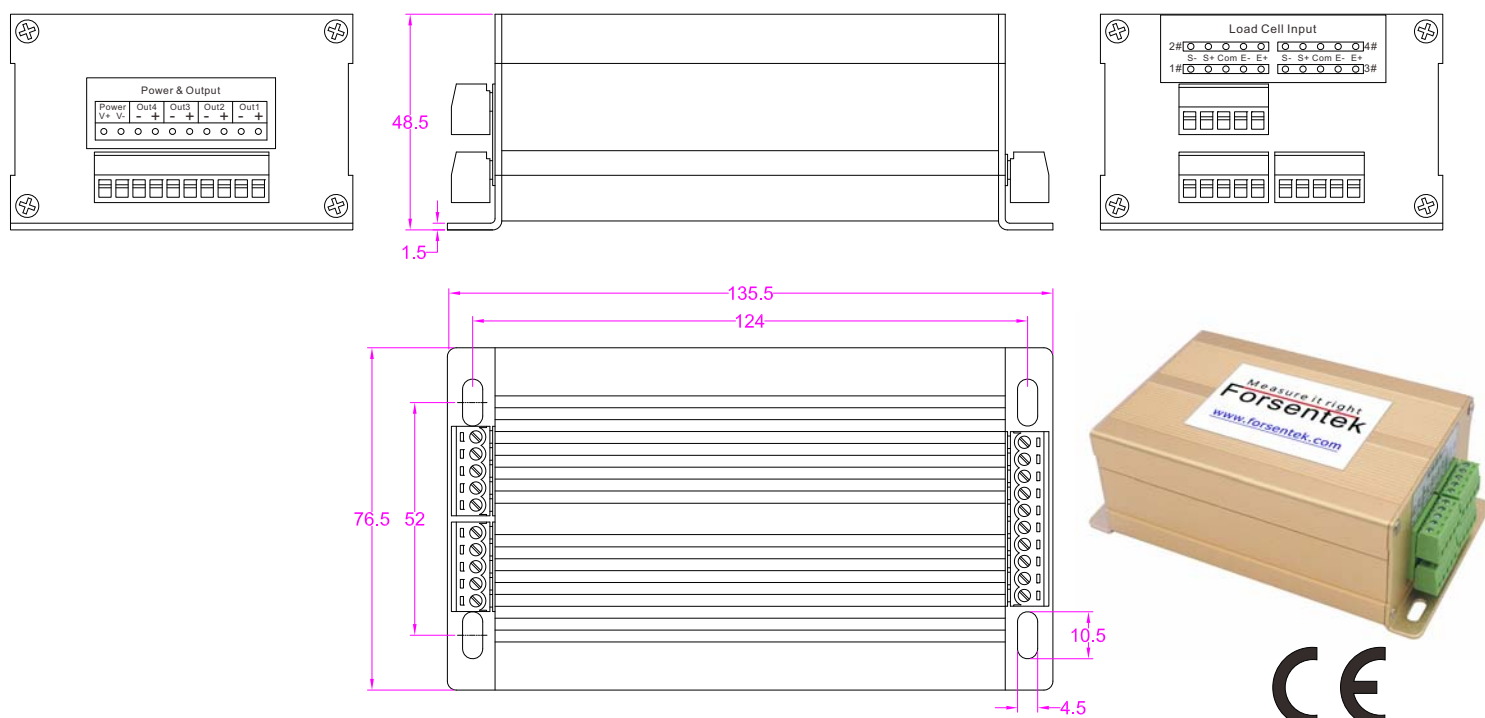


Z-axis



| Ordering code |  |                            |
|---------------|--|----------------------------|
| Part No.      | Capacity                                       | Material                   |
|               | F <sub>x</sub> =F <sub>y</sub> =F <sub>z</sub> |                            |
| F3N-10N       | 10N  | Aluminum<br>(Red anodized) |
| F3N-20N       | 20N  |                            |
| F3N-50N       | 50N  |                            |
| F3N-100N-A    | 100N   |                            |
| F3N-200N-A    | 200N   |                            |
| F3N-100N-S    | 100N   | Stainless steel            |
| F3N-200N-S    | 200N   |                            |
| F3N-500N      | 500N   |                            |
| F3N-1kN       | 1kN  |                            |

## 3-Channel load cell amplifier



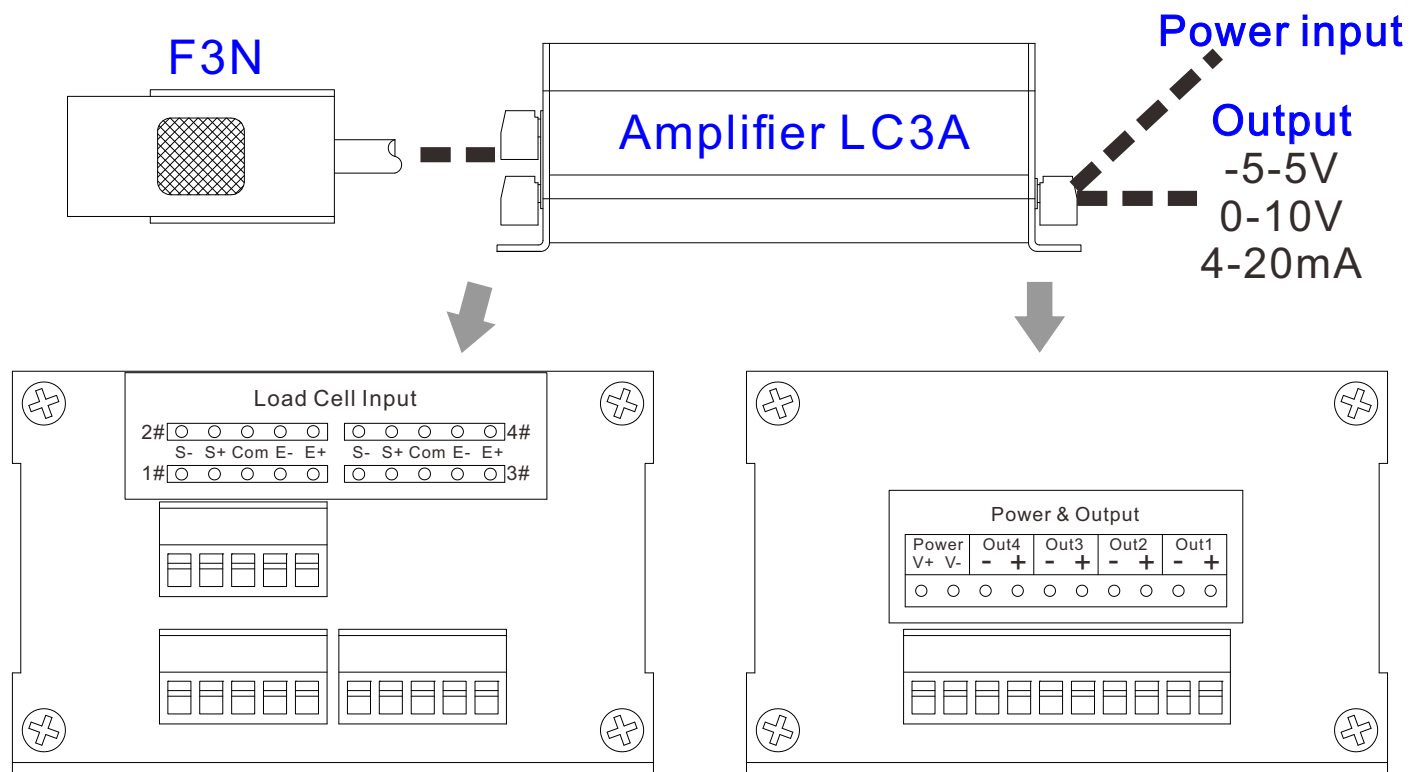
| Ordering Code                             |                  |   |                     |
|---|------------------|---|---------------------|
| For compression only<br>(Or tension only) |                  | For tension and compression<br>(Or clockwise and CCW) |                     |
| 24V Power supply                          | 12V Power supply | 24V Power supply                                      | 12V Power supply    |
| LC3A(0-3.3V)-24V                          | LC3A(0-3.3V)-12V | LC3A(0-1.5-3V)-24V                                    | LC3A(0-1.5-3V)-24V  |
| LC3A(0-5V)-24V                            | LC3A(0-5V)-12V   | LC3A(0-2.5-5V)-24V                                    | LC3A(0-2.5-5V)-12V  |
| LC3A(0-10V)-24V                           | LC3A(0-10V)-12V  | LC3A(0-5-10V)-24V                                     | LC3A(0-5-10V)-12V   |
| LC3A(0-20mA)-24V                          | LC3A(0-20mA)-12V | LC3A(-5-5V)-24V                                       | LC3A(-5-5V)-12V     |
| LC3A(4-20mA)-24V                          | LC3A(4-20mA)-12V | LC3A(-10-10V)-24V                                     | LC3A(-10-10V)-12V   |
| /   | /                | LC3A(4-12-20mA)-24V                                   | LC3A(4-12-20mA)-12V |
| Consult us for other outputs              |                  |   |                     |

### --- Specifications ---

| Function                 | Turn mV signal into V or mA signal |
|--------------------------|------------------------------------|
| Accuracy                 | 0.15%                              |
| Power supply             | 24V DC or 12V DC                   |
| Excitation for load cell | 5V DC                              |
| Input signal range       | 0.6~3.0mV/V                        |
| Output signal            | Refer to ordering code             |
| Working Temp.            | -10...+60°C                        |
| Material of enclosure    | Aluminum alloy                     |
| Ingress protection       | IP40                               |

• Subject to change without notice

## Wiring example between F3N and amplifier LC3A



## Wiring code

|                                      |        |    |        |
|--------------------------------------|--------|----|--------|
| 1# terminal connects with Fx channel |        |    |        |
| E+                                   | Orange | E- | Blue   |
| S+                                   | Gray   | S- | Brown  |
| 2# terminal connects with Fy channel |        |    |        |
| E+                                   | Purple | E- | Pink   |
| S+                                   | Silver | S- | Yellow |
| 3# terminal connects with Fz channel |        |    |        |
| E+                                   | Red    | E- | Black  |
| S+                                   | Green  | S- | White  |

|                  |         |    |         |
|------------------|---------|----|---------|
| Power            |         |    |         |
| V+               | Power+  | V- | Power-  |
| Out1 @ Fx output |         |    |         |
| +                | Output+ | -  | Output- |
| Out2 @ Fy output |         |    |         |
| +                | Output+ | -  | Output- |
| Out3 @ Fz output |         |    |         |
| +                | Output+ | -  | Output- |

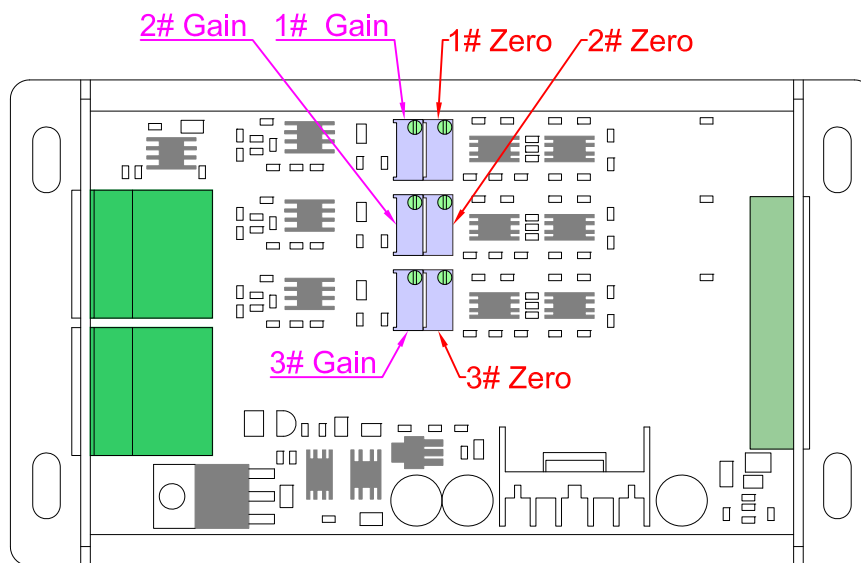
## Calibration instructions of F3N and LC3A

Before operation, clients need to prepare:

- 1-Power supply for LC3A
- 2-4 x 2-core cables for power input and signal output
- 3-Multimeter to measure the output signal from LC3A
- 4-Reference load and necessary tools for calibration
- 5-Screw drivers to open the cover plate of LC3A and adjust the potentiometers during calibration

1-Wiring(Refer to P-4/5)

2-Open the top cover plate of LC3A,you'll see below view:



### 3-Calibration of Fx channel

- 3.1-Measuring the output signal from Out1 of LC3A using a multimeter.
- 3.2-Applying 0 load to Fx direction,adjust potentiometer “**1# Zero**” to get desired output.
- 3.3-Applying reference load to Fx direction,adjust potentiometer “**1# Gain**” to get desired output.
- 3.4-Repeat step 3.2 and 3.3 for 2-3 times to get better result.

### 4-Calibration of Fy channel

- 4.1-Measuring the output signal from Out2 of LC3A using a multimeter.
- 4.2-Applying 0 load to Fy direction,adjust potentiometer “**2# Zero**” to get desired output.
- 4.3-Applying reference load to Fy direction,adjust potentiometer “**2# Gain**” to get desired output.
- 4.4-Repeat step 4.2 and 4.3 for 2-3 times to get better result.

### 5-Calibration of Fz channel

- 5.1-Measuring the output signal from Out3 of LC3A using a multimeter.
- 5.2-Applying 0 load to Fz direction,adjust potentiometer “**3# Zero**” to get desired output.
- 5.3-Applying reference load to Fz direction,adjust potentiometer “**3# Gain**” to get desired output.
- 5.4-Repeat step 5.2 and 5.3 for 2-3 times to get better result.

### 6-Install the top cover plate of LC3A