

# UPP-100NX3 / FS300

## 3D FORCE SENSOR



### 3D force sensor UPP-100NX3

Force in 3 directions(X, Y, Z) can be measured at the same time. Safe overload rating of 500%. The three-axis force sensor with the high sensitivity and stiffness.

#### Specifications

Model	Sensor: UPP-100NX3, Amplifier: FS300
Rated capacity	Fx, Fy: $\pm 100$ N, Fz: 100 N
Power supply voltage	DC 24 V $\pm$ 15%
Consumption current	150 mA or less
Load signal output	Fx, Fy, Fz: $\pm 5$ V
Load resistance	2 k $\Omega$ or more
Response	2 kHz
I/O signal	Input: Auto zero command Output: Auto zero response
Safe overload	500% FS
Non-linearity	0.5% FS or less
Hysteresis	0.5% FS or less
Repeatability	0.5% FS or less
Compensated temperature range	0 to +40°C
Safe temperature range	-10 to +50°C
Temperature effect on zero	0.5% FS/°C or below
Temperature effect on span	0.05% FS/°C or below
Sensor material	Aluminum alloy
Weight	Sensor: Approx. 70 g Amplifier: Approx. 180 g
Cable	8-conductor flexible cable 1 m (Connector is included for FS300 connection)

\* Above specifications are achieved when the sensor (UPP-100NX3) is connected with the dedicated amplifier (FS300).

\* Accuracy is not guaranteed in the range of Fz 0 to -5 V.

\* Calibration is performed by using the dedicated adapter.

\* Depending on adapters to be used or their mounting conditions, calibration values (slopes of load and output signal) may change.

\* Please note that there are possibilities of individual differences in a color tone on display devices such as LEDs, fluorescent display tubes and LCDs due to manufacturing process or production lots.



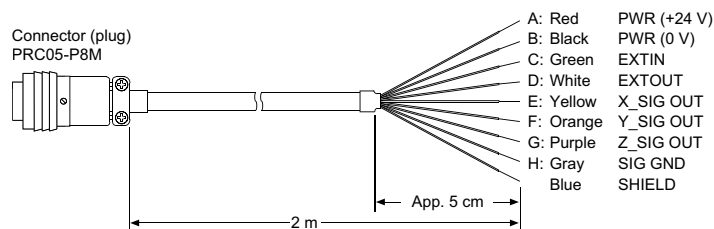
### Dedicated amplifier FS300

$\pm 5$  V output at the rated capacity for each direction:

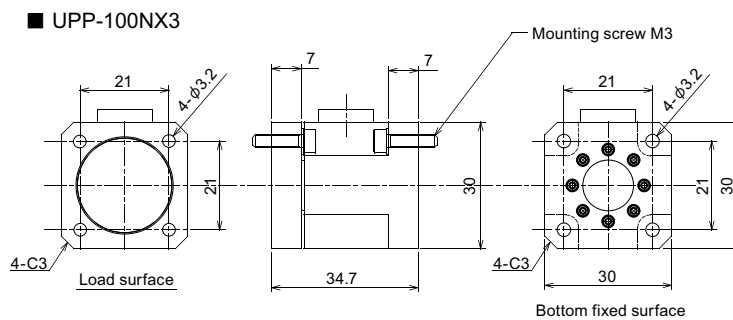
Fx, Fy, Fz (three axes).

As output signals for each direction are adjusted before shipping out, you can get calibrated (scaled) output by just connecting sensor and DC 24 V power supply to FS300.

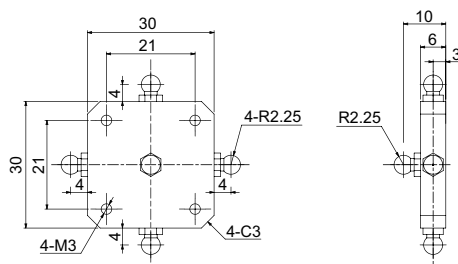
#### FS300 attached cable Flexible cable



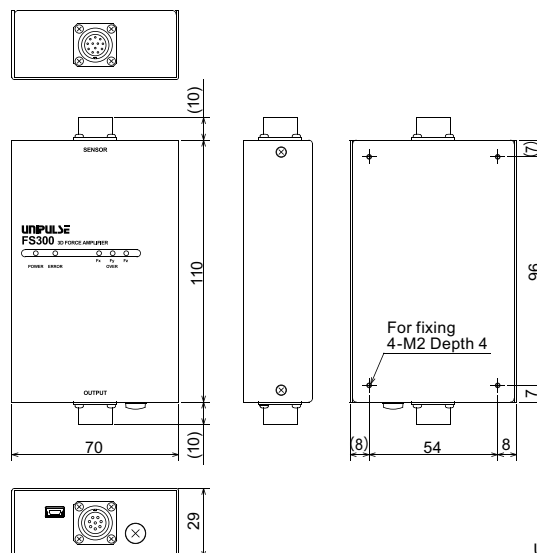
#### External dimension



#### UPP-100NX3 Dedicated adapter



#### FS300



Unit: mm