## TENSION / COMPRESSION & CENTER-HOLE TYPE LOAD CELL







**Detachable cable** 

Specifications

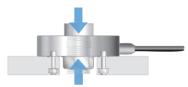
Flexible cable

| Model  Rated capacity  Rated output  Safe overload  Zero balance  Non-linearity  Hysteresis  Repeatability | ICPI-1KN, UCPI-2KN, UCPI-5KN<br>UCPI-10KN, UCPI-20KN<br>1 kN, 2 kN, 5 kN, 10 kN, 20 kN<br>Approx. 2 mV/<br>150% R.C.<br>±10% R.O.<br>0.1% or less R.O.<br>0.1% or less R.O. | UCPI-50KN 50 kN V 0.15% or less R.O. |  |
|--|---|--------------------------------------|--|
| Rated capacity Rated output Safe overload Zero balance Non-linearity Hysteresis                            | 1 kN, 2 kN, 5 kN, 10 kN, 20 kN  Approx. 2 mV/ 150% R.C. ±10% R.O. 0.1% or less R.O.   | 50 kN                                |  |
| Rated output Safe overload Zero balance Non-linearity Hysteresis   | Approx. 2 mV/<br>150% R.C.<br>±10% R.O.<br>0.1% or less R.O.  | V                                    |  |
| Safe overload Zero balance Non-linearity Hysteresis  | 150% R.C.<br>±10% R.O.<br>0.1% or less R.O.   |                                      |  |
| Zero balance Non-linearity Hysteresis  | ±10% R.O.<br>0.1% or less R.O.  | 0.15% or less R.O.                   |  |
| Non-linearity<br>Hysteresis  | 0.1% or less R.O.   | 0.15% or less R.O.                   |  |
| Hysteresis   | 0.170 01 1000 11.0.   | 0.15% or less R.O.                   |  |
|  | 0.1% or less R.O.   |                                      |  |
| Repeatability  |   | 0.25% or less R.O.*                  |  |
|  | 0.1% or less R.O.   |                                      |  |
| Compensated temperature range  | -10 to +60°C  |                                      |  |
| Safe temperature range   | -20 to +70°C  |                                      |  |
| Temperature effect on zero   | 0.1% R.O./10°C or below   |                                      |  |
| Temperature effect on span   | 0.1% R.O./10°C or below   |                                      |  |
| Input resistance   | Approx. 1000 Ω  |                                      |  |
| Output resistance  | Approx. 1000 Ω  |                                      |  |
| Recommended excitation voltage   | 10 V  |                                      |  |
| Maximum excitation voltage   | 15V   |                                      |  |
| Insulation resistance (DC 50 V)  | 1000 MΩ or more   |                                      |  |
| Cable  | $\phi$ 5 6-conductor flexible cable 3 m, Cable end: 7 wires   |                                      |  |
| Loadcell material  | Stainless steel   |                                      |  |
| RoHS directives  | 2011/65/EU (EU)2015/863   |                                      |  |

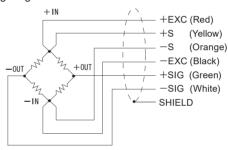
- A tapped hole cut in the center, can be used for both tension & compression.
- Suitable for assembling into press machine and compression & tension testing machine due to its low-profile body.
- A cable with a connector.
   Convenient for exchange.

## Application example

Capable of measuring axial force between bolt and nut as illustrated below, and is ideal for tension measurement of anchor!



## Wiring diagram

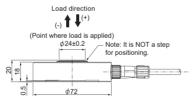


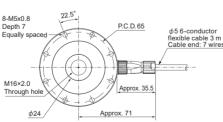
## External dimension

## ■ UCPI-1KN/2KN/5KN

# Load direction (-) (+) (+) (Point where load is applied) (Point where load is applied)

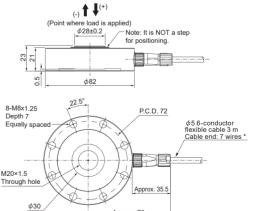
## ■ UCPI-10KN/20KN





## ■ UCPI-50KN

Load direction



## \* Connector can be attached to the cable according to your requests

Approx. 65

P.C.D. 51

| Model     | Deflection at rated | Natural frequency | Weight |
|-----------|---------------------|-------------------|--------|
| UCPI-1KN  | 0.05 mm             | 5 kHz             |        |
| UCPI-2KN  | 0.05 11111          | 7 kHz             | 350 g  |
| UCPI-5KN  | 0.06 mm             | 40 1/11=          |        |
| UCPI-10KN | 0.04 mm             | 10 kHz 410 g      |        |
| UCPI-20KN | 0.05 mm             | 13 kHz            |        |
| UCPI-50KN | 0.06 mm             | 10 KHZ            | 630 a  |

## Optional accessories

With the mounting flange, it is possible to mount UCPI easily to a press machine manufactured by THK.

| Model                 | Supported product |
|-----------------------|-------------------|
| UCPI(1-5K)-FG-PC30A   | UCPI-1KN/2KN/5KN  |
| UCPI(10-20K)-FG-PC40H | UCPI-10KN/20KN    |
| UCPI(50K)-FG-PC60FF   | UCPI-50KN         |



Unit: mm

4-M4x0.7 Depth 5 Equally space

M12×1.75

φ15.5