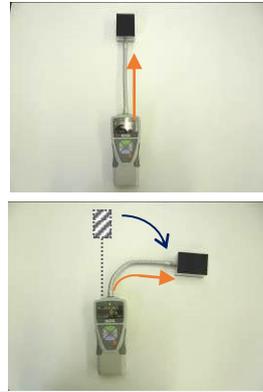


Load cell for automatic doors DM-2000N Load cell for doors and windows SKM-1000N

Measuring closing force for doors or windows.
Measurements are possible by putting the sensor between samples.
The measurement in accordance with JIS is partly approved (DM-2000N).

	Load cell for automatic doors:DM-2000N	Load cell for doors & windows:SKM-1000N
P h o t o		<div style="border: 1px solid #4a86e8; border-radius: 5px; padding: 2px; display: inline-block; background-color: white;">Approved IP65</div> 
U s i n g i m a g e s	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; justify-content: space-between; width: 100%;"> <div style="border: 1px solid black; padding: 2px;">Extension shaft (*1)</div> <div style="border: 1px solid black; padding: 2px;">DM-2000N</div> </div>  <div style="border: 1px solid black; padding: 2px;">The indicator ZTA (*1)</div> </div> <p style="text-align: center;">Measurements in accordance with Japanese Industrial Standard (JIS) is partly approved.</p>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Measurements by putting between samples</p>  </div> <div style="width: 45%;"> <p>The flexible arm can fix the sensor direction.</p>  </div> </div> <p>Easy fixing for direction and position with the flexible arm. Handy measurements are possible.</p>

*An indicator is required for reading force value. Please refer to Page 3 and 4 for the indicator detail.

*1Combination of an indicator and extension shafts is also available. Please refer to the Page 2.

[Approved standard (DM-2000N)]

DM-2000N is partly approved JIS standards below.

Standard number (Corresponding year)	Standard title
JIS A4721(2005)	Automatic revolving door—Safety
JIS A1551(1995)	Test method for automatic door system

[Load cell specification]

Model	DM-2000N	SKM-1000N*1
Capacity	2000N	1000N
Rated output	0.75~2mV/V (1500~4000×10 ⁻⁶ distortion)+/-1%	-
Nonlinearity	1.0%R.O.	-
Hysteresis	1.0%R.O.	-
Recommended voltage (Allowable voltage)	1~5V AC or DC (7V AC or DC)	- (-)
Safe overload rating	150%	-
Working environment (allowable temperature)	0 degree Celsius~ +50 degree Celsius (-10 degree Celsius~ +60 degree Celsius)	0 degree Celsius~ +40 degree Celsius (0 degree Celsius~ +40 degree Celsius)
Temperature influence for 0 point	0.05%/ degree Celsius	-
Temperature influence for output	0.05%/ degree Celsius	-
Weight	Approx. 1200g (The weight is only sensor)	-
Cable	Approx.2m	Approx.200mm(Flexible arm)
Dimension	Refer to dimensions	Refer to dimensions
International Protection	-	IP65 *2

*1 The load cell does not separate from an indicator therefore, the feature is not on the specification. Please refer to [Model lists connecting ZT series] on the Next page for the accuracy.

*2 IP is approved for the load cell only. The amplifier (indicator), the connecting part and the connector are not approved

[eZ-Connect series load cell specification]

Model	eDM-2000N
Capacity	2000N
Accuracy	+/-0.2%F.S or less
Safe overload rating	150%
Working environment (allowable temperature)	0degree Celsius~+50degree Celsius(-10degree Celsius~+60degree Celsius)
Cable	Approx.1200g(Sensor only)
Dimensions	Approx.2m
Model	Refer the dimension

*Please refer Page 5 for the detail of eZ-Connect series.

*SKM-1000N is not approved for eZ-Connect series.

[DM Model list]

Model	Detail
DM-2000N	Only load cell
ZTA-DM-2000N or ZTS-DM-2000N	Combination model of a load cell and an indicator (ZTA or ZTS)
DM-ETM-200	Extension shaft (Length 200mm)
DM-ETM-300	Extension shaft (Length 300mm)
DM-ETM-500	Extension shaft(Length 500mm)
RDM-2000N	Combination model including all above products (A load cell and an Indicator ZTA is a pair)



Combination model	Contents
RDM-2000N	Load cell DM-2000N, Indicator ZTA, Extension shafts DM-ETM-200/300/500, Handle DM-ETM-001(*), Graphing software Force Recorder Standard, Data installing software ZT-Logger, USB cable, Adaptor for USB memory, AC adaptor, The case for the indicator

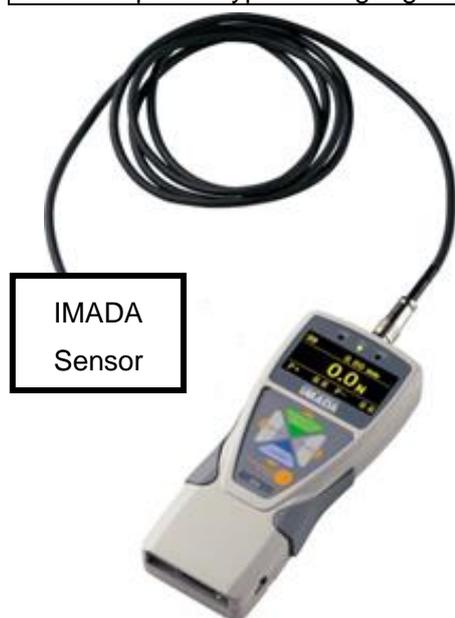
*The handle is to hold a middle part of an extension shaft and make easy to grip.

Force value display/ Data management/ Operating external device are ALL possible by combining with IMADA amplifier.

→There are 3 selectable amplifiers.

Amplifier	Feature
ZT series	High accuracy and Easy operation
FA-Plus	Stable installation
eZ-Connect series :eZT	Interchangeable multiple sensors

Sensor separate type force gauge ZT series



- [Remote operation](#)
→Measurement value is possible to check easily apart from the sensor. Users can keep safe distance even if the test involves some danger like Crushing test.
- [Easy data management on PC](#)
→Included software “ZT-Logger” helps to export continuous data to PC. Furthermore, separately-sold software “Force Recorder” enables to draw into a graph in real time at 2000Hz. It also inputs sampling date and time at the same. Data management can be easy.
- [Various outputs for operating external devices](#)
→It realizes machine working control by force, Pass/Fail decision and more.

*It is inappropriate to interchange the load cells.
*The accuracy adjustment and the calibration are necessary whenever changing load cells.

Accuracy Guarantee
-The inspection certificate by force data is attached.
-Please request us the calibration certificate if necessary.

[The range list connecting with ZT series]

Model		Capacity	Accuracy(*1)	Display	Resolution
ZTA-DM-2000N	ZTS-DM-2000N	2000N	+/-2.0%F.S.or less	2000N(2.000kN)	1N(0.001kN)
ZTA-SKM-1000N	ZTS-SKM-1000N	1000N	+/-1.0%F.S.or less	1000N(1.000kN)	1N(0.001kN)

** Please refer to the each amplifier specification for the detail.

*1The accuracy is only available for combinations with sensor separate type ZT series.

Desktop amplifier FA Plus



- [The box shape realizes easy installations on a desk or in equipment](#)
- [The sampling rate is equals to ZT series 2000Hz.](#)

Accuracy Guarantee

- The inspection certificate is attached only when the below set models are ordered.
- The inspection certificate is NOT attached when FA Plus and the load cell are separately ordered.
- Please request us the calibration certificate if necessary.

[The range list connecting with FA Plus]

Model	Capacity	Accuracy(*1)	Display	Resolution
FAP-DM-2000N	2000N	+/-2.0%F.S.or less	2000N(2.000kN)	1N(0.001kN)

* Please refer to the each amplifier specification for the detail.
 *SKM-1000N is not able to connect with FA-Plus.
 *1The accuracy is only available for combinations with FA Plus.

eZ-Connect: Interchangeable sensor amplifier eZT



- [ONE amplifier can be used with multiple load cells.](#)
 →It is possible to be carried out different range, circumstance and other measurements by changing load cells.
- [Basic functions are equal to ZTA.](#)

Accuracy Guarantee

- The inspection certificate by force data is NOT attached.
- Please request us the calibration or the calibration document if necessary.

[The range list connecting with eZT]

Amplifier Model	Load cell model	Capacity	Accuracy(*1)	Display	Resolution
eZT	eDM-2000N	2000N	+/-2.2%F.S.or less	2000N(2.000kN)	1N(0.001kN)

* Please refer to the each amplifier specification for the detail.
 *1The accuracy is only available for combinations with eZT series.

[Other load cell line-up]

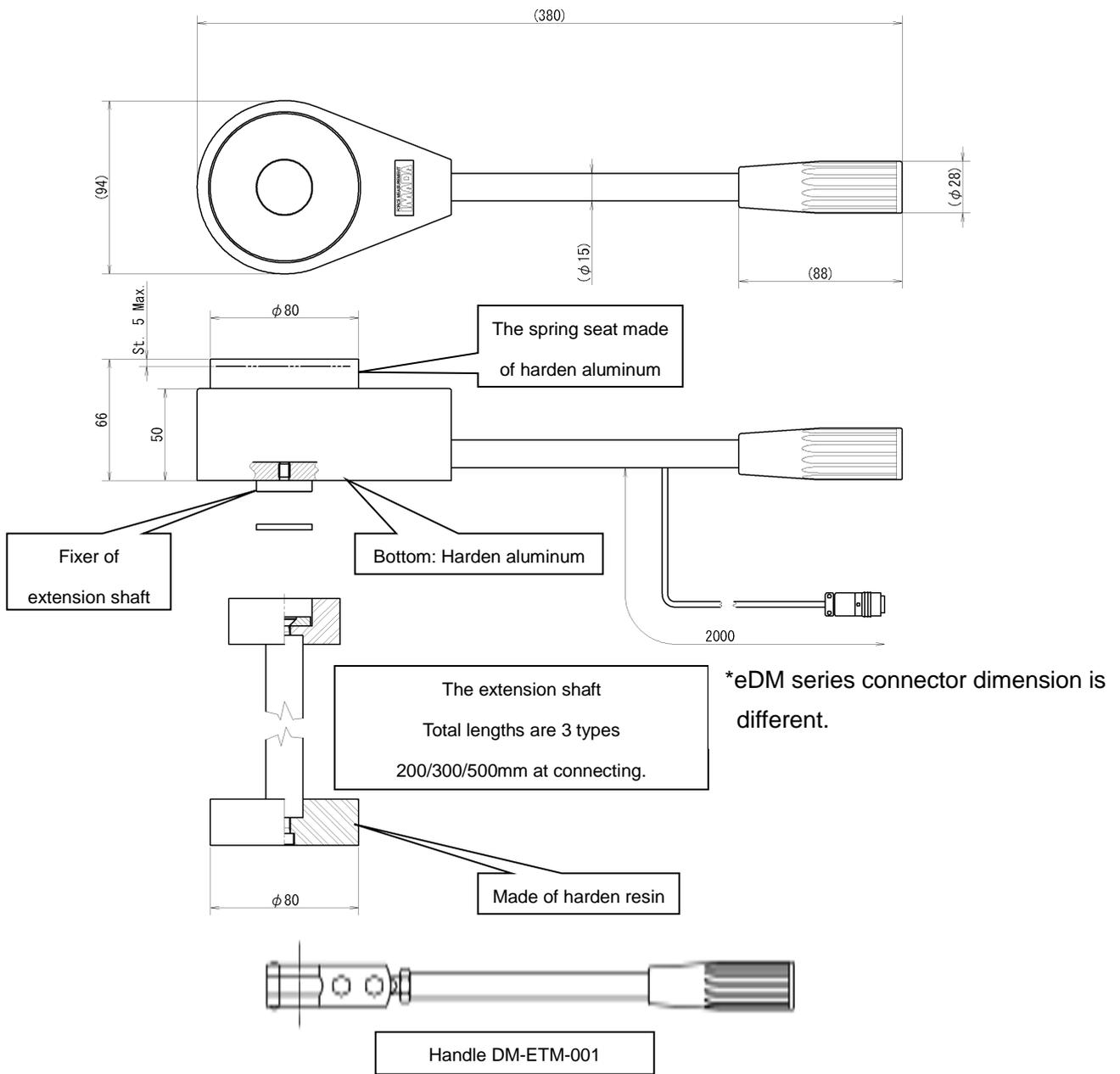
Varieties of load cells are available for your needs.

Standard type DPU series	Coin shaped type LM series	High accuracy coin shaped type LC series	Extra small type LMU series	Pen type PN-50N
High accuracy built-in type load cell for general use.	Coin size load cell for compression.	High accuracy coin shaped load cell for compression.	Sensor diameter is only 18mm	Ideal for testing manipulation or touching force for small items.

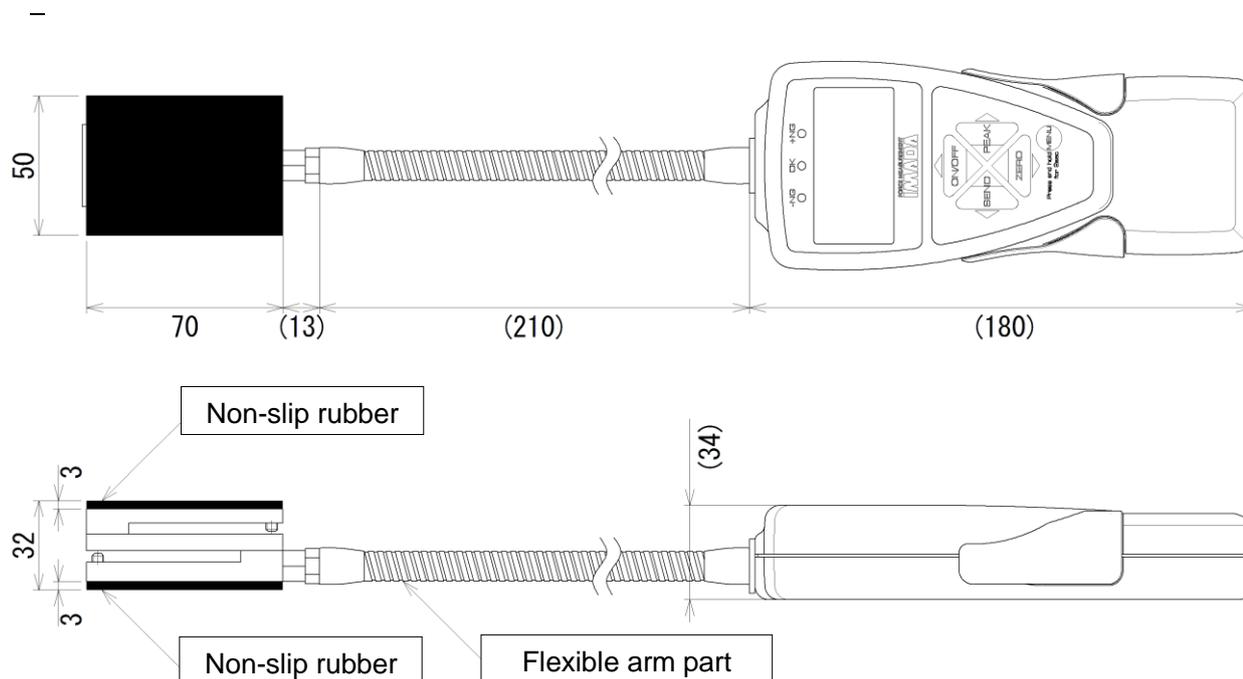
*Please refer to the each load cell specification for the detail.

[Dimensions]

DM-2000N



SMK-1000N



[Caution]

- This product is designed for force measurement only. Do not use it for other purpose.
- Please pay close attention to install this products.
 - Never apply strong force or impact especially on the sensing direction.
 - Do not apply bending or torsion stress when setting up the sensing shaft to a measuring object.
- Do not use in the condition of rapid temperature changes, high temperature, high humidity, near water and dusty place.
- The contents may be changed without notice in advance.
- Please note the allowable values are a little different by the selecting unit of the amplifier. Please contact us if you need the details.

[Please feel free to contact us \(+81-\(0\)-532-33-3288\) for your measurement.](tel:+81-0-532-33-3288)