
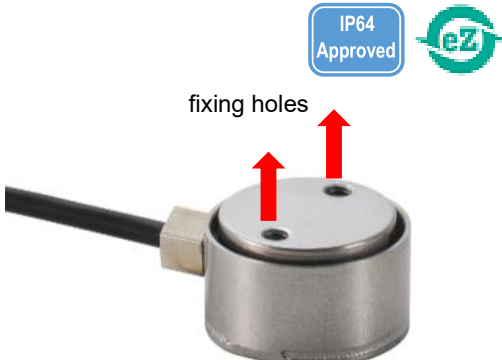


Flat Type Compression Load Cell CLFX/CFX series

- Sensor surface with large area, suitable for soft and/or spherical samples
- Thin (CLFX) and small (CFX) type available for measurements in limited space
- 5 selectable amplifiers to fit for purpose
- Graphing software (separately sold) available for analysis of results

Model	Thin and Flat Type Compression Load Cell CLFX series	Small and Flat Type Compression Load Cell CFX series
Capacity	50N to 500N	20N to 200N
Image		
Features	<ul style="list-style-type: none"> - Thin (thickness 6mm) - Dust and water spray protection 	<ul style="list-style-type: none"> - Small (diameter 15mm) - Dust and water spray protection

* IP (Ingress Protection) is a standard which is based on IEC Standard for solid foreign materials, electric devices for water and cabinet.


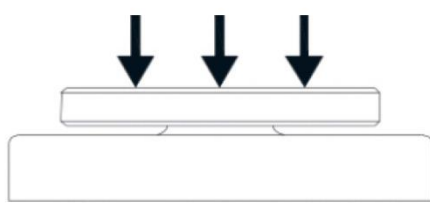


* eZ-Connect series load cells  are interchangeable and can be connected to one amplifier without adjustment, therefore suitable for measurement of different types of force (e.g. tension and torque) or ranges (e.g. small force and high capacity).

Image
<p>Since the area that receives the force is large, these sensors are well suited for testing;</p> <ul style="list-style-type: none"> - soft materials - spherical samples 

* To get accurate testing results please apply force on the center of load cell's surface.

Testing Examples
<ul style="list-style-type: none"> - Integration into a variety of machine including tactile test system, medical equipment, and press molding equipment - Application in production line including measurement and control of electronic equipment such as mobile phones, battery manufacturing process, etc. - Measurement of gripping force of cabinet drawers, etc.

Specifications				
Model	CLFX series	eCLFX series 	CFX series	eCFX series 
Capacity	Refer to page 3			
Accuracy (*1)	+/- 2.0% F.S. or less	-	+/- 1.0% F.S. or less	-
Rated Output	0.7-1.5mV/V	-	0.5-1.0mV/V (20N) 1.5-2.2mV/V (50N/200N)	-
Recommended Voltage (Allowable Voltage)	5V-10V DC (10V DC)	-	5V-10V DC (15V DC)	-
Safe Overload Rating	150%			
Recommended Temperature (Allowable Temperature)	-10 to 60 degrees Celsius (-20 to 80 degrees Celsius)			
Cable Length (*3)	Approx. 3m			
Dimensions	See [Dimensions]			
Weight	Approx. 60g		Approx. 55g	
Protection Rating (*2)	IP64			

*1 It is the accuracy of the sensor only. Refer to page 3 for the accuracy of combinations with the amplifier (indicator) under [Models of Sensors Combined with Indicators (Separated sensor models)] and [Models of eZ-Connect Series (Sensor Interchangeable Model)].







*2 IP is only approved for the sensor part. The amplifier (indicator), the connector parts, and cable are not secured.

*3 Refer to specification of [Options Available for Load cell Cable] to change cable length or so.

* An amplifier (indicator) is required to read values. Refer to "Amplifiers (Indicators)" below for details.

* When ordering load cell without indicators, three connector types are available. See [Models of Load Cell Only] on page 3 for details. The load cells are not guaranteed either for the operability with your own amplifier (indicator) or for the accuracy as a result of such use.

[Available Amplifiers (Indicators)]



Separated Sensor Model		
Handheld type ZTS series	Handheld type ZTA series	Desktop type FA Plus2
		
<ul style="list-style-type: none"> - Handheld use - Higher accuracy 	<ul style="list-style-type: none"> - Handheld use - Higher accuracy - I/O displacement - Data saving to USB 	<ul style="list-style-type: none"> - Desktop use - Higher accuracy
eZ-Connect series Sensor Interchangeable Amplifier 		
Desktop type eFA Plus2	Handheld type eZT	Quad Sensor Measuring Amplifier QSMA-400
		
<ul style="list-style-type: none"> - Desktop use - Load cell interchangeable (such as measurement of tension and torque, or low and high load) 	<ul style="list-style-type: none"> - Handheld use - Load cell interchangeable (such as measurement of tension and torque, or low and high load) 	<ul style="list-style-type: none"> - Up to 4 different load cells can be connected Simultaneously. (Load cell interchangeable) - To use QSMA-400, the graphing Software Quad Graph Drawer is required to be downloaded.

* Refer to the specification sheet of each indicator for details.

[Models of Load Cell Only]

	Model	Capacity	Thread
CLFX series	CLFX-50N	50N	M2
	CLFX-500N	500N	
CFX series	CFX-20N	20N	
	CFX-50N	50N	
	CFX-200N	200N	

[Connector Type]

Code	-5P	-6P	-OC
Connector	 5 pin	 6 pin	Open End (without connector)
Connection	ZT series, FA Plus2, etc.	Some discontinued IMADA products	For integration
*Check the connector shape of your equipment to connect.			

* When ordering load cell only, select the connector type and add the code to the end of the load cell model; for example, the product model for CLFX-500N with 5 pin is "CLFX-500N-5P".

[Models of Sensors Combined with Indicators (Separated Sensor Models)]

- CLFX series

Model			Capacity	Accuracy (*1)	Display	Resolution
ZTA	ZTS	FA Plus2				
ZTA-CLFX-50N	ZTS-CLFX-50N	FAP2-CLFX-50N	50N	±2.0%F.S.	50.00N	0.01N
ZTA-CLFX-500N	ZTS-CLFX-500N	FAP2-CLFX-500N	500N	or less	500.0N	0.1N

- CFX series

Model			Capacity	Accuracy (*1)	Display	Resolution
ZTA	ZTS	FA Plus2				
ZTA-CFX-20N	ZTS-CFX-20N	FAP2-CFX-20N	20N	±1.0%F.S. or less	20.00N	0.01N
ZTA-CFX-50N	ZTS-CFX-50N	FAP2-CFX-50N	50N		50.00N	0.01N
ZTA-CFX-200N	ZTS-CFX-200N	FAP2-CFX-200N	200N		200.0N	0.1N

* Refer to the specification of indicator for details.

*1 It is the accuracy of the sensor and indicator combined.

[Models of eZ-Connect Series (Sensor Interchangeable Model)

Mode	Capacity	Accuracy (*1)	Display	Resolution
eCLFX-50N	50N	Accuracy of sensor + Accuracy of amplifier	20.00N	0.01N
eCLFX-500N	500N		500.0N	0.1N
eCFX-20N	20N		20.00N	0.01N
eCFX-50N	50N		50.00N	0.01N
eCFX-200N	200N		200.0N	0.1N



*1 Total accuracy when combined with the eZ-Connect series amplifier.

e.g. Total accuracy of eCLFX and eZT → +/-1.2%F.S. or less (Load cell: +/-1.0%F.S. or less + Amplifier: +/-0.2%F.S. or less)





* Please refer to the accuracy of the sensor of eZ-Connect in the Specifications table.

[Related Products]

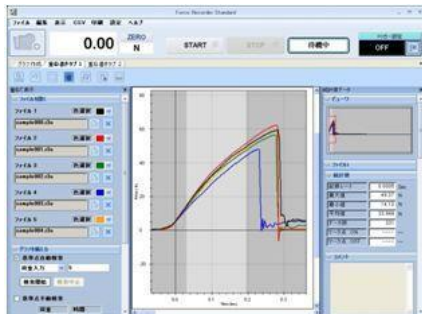
- Fixing Belt for Operativity Measurement FBO-CFX

Product Image	How to wear	Features
	 ※the amplifier is not included.	<ul style="list-style-type: none"> -Dedicated fixing belt for CFX series to attach it to your finger or the tool edge -Convenient to measure sample operating force in an actual usage scene -Flexibly usable for testing of samples with unique forms or in narrow spaces * Refer to each specification sheet for further information. *Customization of this product is available for CLFX.

- Other Load Cells

Standard type DPU series	Coin shaped type LM series	Pen type PN-50N For automatic doors DM- 2000N	Pen type PN-50N For automatic doors DM- 2000N
High accuracy load cell for general use with 2N to 500N capacity	Coin size load cell for compression	Pen-shaped sensor for measuring operation force of small samples	Designed for measurement of automatic door closing force
			

- Graphing Software Force Recorder Series

Image	Features
	<ul style="list-style-type: none"> - Available in 4 types; Light, Standard, Professional, and Plus - Plots graphs of force-displacement at real time via USB connection at max. 2000Hz or 1000Hz (Plus) - Comment function for keeping a note of testing conditions such as testing speed - Overlays up to 5 graphs (Standard and Professional) or 10 graphs (Plus) - Analyzes torque-angle relationships (Professional) <p>* Refer to each specification sheet for further information.</p>

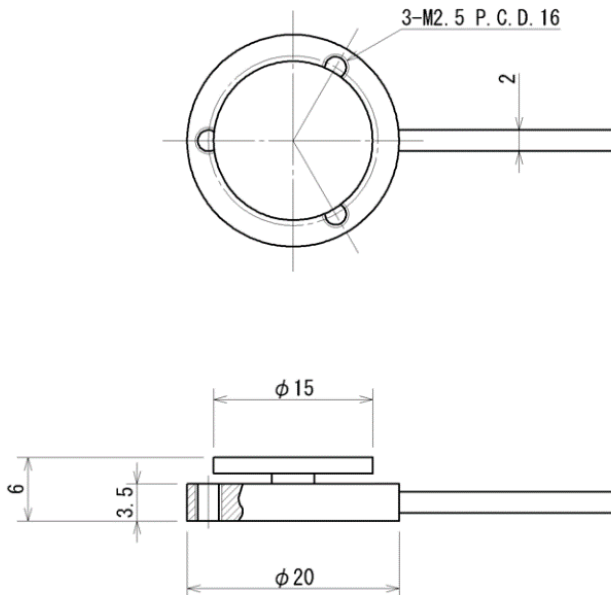
- Cables

Model	Type	Purpose of use
CB-108	Analog cable	To connect to a multi meter, oscilloscope
CB-118	Analog cable (For -AN option)	To connect to a multi meter, oscilloscope
CB-208	RS232C cable	To connect to a PC or your own system
CB-908	Open end connection cable	Output cable for loose wire 37 pin (Useful for connecting your own connector)
CTB-A	Terminal Block Cable	To connect to an external equipment such as PLC or to such and linear scale (*1)

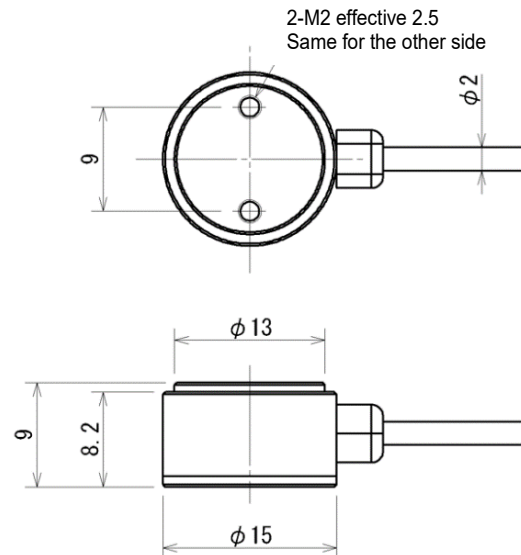
*1 The linear scale connection is limited to models equipped with the displacement output function (ZTA series, eZT, FA Plus2, eFA Plus2).

[Dimensions]

CLFX series



CFX series



Unit: mm

[Cautions]

- Information in this document is subject to change without prior notice.
- This document is product descriptions and handling precautions, and do not guarantee various characteristics or safety.
- This product is designed for force measurement purpose only.
- Do not copy and use this content without authorization.
- Do not apply force more than its capacity or from incorrect direction to the measuring shaft.
- Do not use this product in the environments including fierce temperature changes, high temperature, high humidity, near water, dusty place.

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