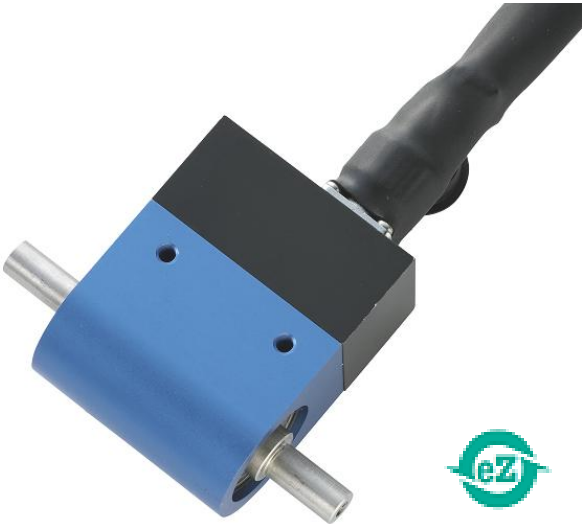
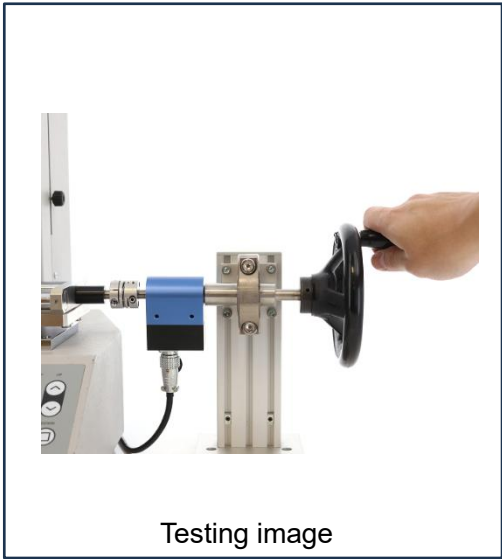


# Rotating Torque Load Cell eRT-5N



- Sensor for Rotating Torque Measurement
- Enables measurement of Torque during continuous measuring shaft rotation
- Graphing software (separately sold) available for recording torque transition
- Designed exclusively for the eZ-Connect series



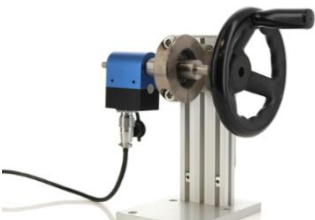
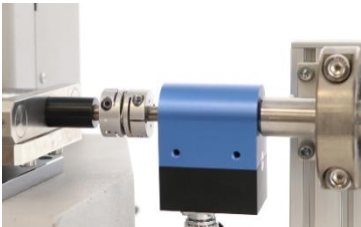

eRT-5N



Testing image

eZ-Connect series  load cells and amplifiers are interchangeable and can be combined without adjustment. Therefore, measuring different types of force (e.g. tension, compression and torque) and range (e.g. low force value and high force value) can be realized with a single amplifier and multiple load cells. eZ-Connect series load cells and amplifiers are marked with .




Features	
<b><u>Enables measurement of torque during continuous rotation</u></b> Supports max. rotation speed of 4000rpm. Suitable for torque measurement with over 360-degree rotation: - e.g., rollers and gear systems.	<b><u>Easy amplifiers and Software connection</u></b> Usable with IMADA amplifiers (eZ-Connect series) without displaying value adjustment. Software for data management and graphing are also available.

Measurement Procedure (e.g. the sliding vice resistance measurement)		
Attach the drive source (motor, handle, etc.) to the eRT-5N Load side rotating shaft.	Hold the sample on the other side of the measuring shaft with a coupling, etc.	Operate the drive source to rotate the measurement shaft to conduct the torque measurement.
		

Specifications	
Model	<b>eRT-5N</b>
Accuracy	$\pm 1.0\% \text{F.S.} + \text{Accuracy of amplifier}$
Capacity	5N-m
Overload Capacity *1	Approx. 150% F.S.
Max. Rotation Speed	4000rpm
Expected Durability	Max. of approx. 50 million rotations *2
Temperature Compensation Range (Temperature Tolerance)	-10~60°C (-20~65°C)
Cable Length	Approx. 3m
Dimensions	See [Dimensions]
Weight	Approx. 450g

\*1 Measurement values exceeding the capacity are not subject to calibration. The load over Overload Capacity applied may cause failure. When it occurs, stop the operation immediately and proceed with the accuracy check for measurement safety.

\*2 Signals are transmitted using a Slip Ring (a specialized rotating connector). The Slip Ring is recommended for replacement after approximately every 50 million revolutions.

Available Amplifiers (Indicators)*1		
Handheld type	Desktop type	Quad Sensor Measuring Amplifier
eZT	eFA-Plus2	QSMA-400
		

• Refer to the specification sheet of each amplifier (indicator) for details.

\*1 The Amplifiers (Indicators) listed are from the eZ-Connect series only.

Please refer to the [Related Products] for the load cell and indicator integrated models HTGS/HTGA-RT-5N.



## [Specifications of the Sensor and Indicators Combined]

Amplifier	Load cell	Capacity	Accuracy *1	Display	Resolution
eZT	eRT-5N	5N-m	$\pm 1.2\% \text{F.S.}$ or less	5.000N-m (500.0N-cm)	0.001N-m (0.1N-cm)
eFA Plus2					
QSMA-400 *2			$\pm 1.5\% \text{F.S.}$ or less		




\*1 The accuracy level data is only available for combinations with the amplifier (indicator).

\*2 To use QSMA-400, the downloadable graphing software Quad Graph Drawer is required. Refer to the specification sheet of QSMA-400 for details.

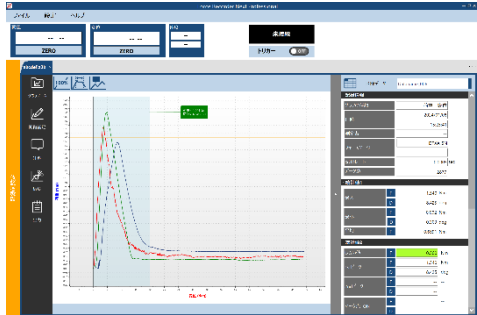
## [Peripheral Devices]

Handle (Customized Product)	Angle Meter (Customized Product)
	
A test stand with a manually rotating handle for the torque shaft rotation. The height is adjustable according to the sample.	A displacement sensor can be connected to HTGA-RT-5N to measure the angle, by installing it between the drive source and the load cell.

## [Related Products]

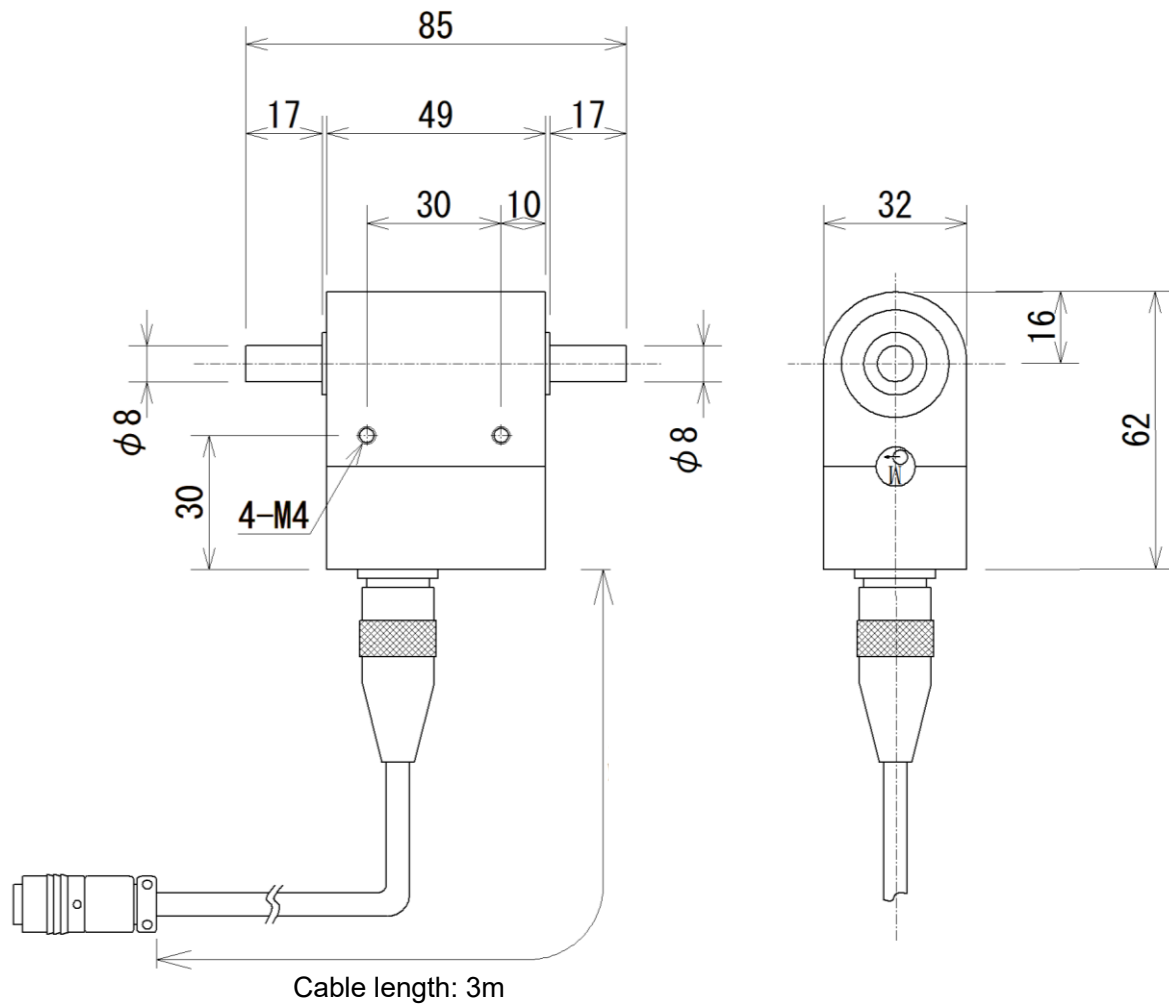
Rotating Torque Gauge: HTGS/HTGA-RT-5N	
	<ul style="list-style-type: none"> <li>- Indicator and Torque sensor integrated Model.</li> <li>- The Load Cell detachment / replacement unsupported.</li> <li>- The highly accurate (<math>\pm 1.0\%</math> F.S.) economic Model amongst the eZ-Connect series.</li> </ul> <p>Refer to the specification sheet of HTGA/S-RT-5N for details.</p>
Torque Load Cell: eHT series	
	<ul style="list-style-type: none"> <li>- Non-rotating torque Load Cell in the eZ-Connect series.</li> <li>- Series of optional attachments available for different sample requirements (sold separately).</li> <li>- Test Stand with a manually rotating handle for torque-angle measurement is also available.</li> </ul> <p>Refer to the specification sheet of eHT series for details.</p>
Flange Type Load Cell: eTFX series	
	<ul style="list-style-type: none"> <li>- Non-rotating torque Load Cell in the eZ-Connect series.</li> <li>- Small with easy installation suitable for incorporating into equipment.</li> <li>- Waterproof and dustproof protection rating IP64.</li> </ul> <p>Refer to the specification sheet of eTFX series for details.</p>

## [Related Software]

Downloadable Graphing Software: Force Recorder Next Series *1	
 <p>Force Recorder Next Professional</p>	<ul style="list-style-type: none"> <li>- High sampling rate of max. 2000Hz enables accurate graphing.</li> <li>- Test condition preset functions increase efficiency of recording and analyzing measurement results.</li> <li>- Various data editing functions such as up to 10-graph overlaying enable analyzing measurement result.</li> <li>- Adding Images and Comments functions are useful for recording the details of measurement.</li> <li>- The Print Command allows users to output of measurement data as PDF/Word, Excel, and images and drawing up reports easily.</li> </ul> <p>CD version software Force Recorder Standard is also available. Some specifications such as operating environment is different from Downloadable version and CD version. Please refer to the individual specification sheets for details.</p>

\*1 To use Force Recorder Next Series, user & product registration on IMADA Connected and downloading the software are required. Only Next Series products (For eZT and eFA Plus2, firmware versions 5.00 or later) are available for the product registration. An Internet connection is required in process of user & product registration and downloading the software.

## [Dimensions]



Unit: mm

## [Cautions]

- Information in this document is subject to change without prior notice.
- This document introduces product descriptions and handling precautions, and it does not guarantee the features 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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