



Communication Cables

- A wide range of cable to meet the needs of variable measurement
- Custom made options available to meet your measurement needs



- Cables to Connect a Force Gauge, Torque Gauge or Amplifier to External Devices

[1. Analog Cable]

Model	Image	Compatible Gauges	External Devices	Description	Length
CB-108		ZTA/S eZT HTGA/S DTXA/S FA Plus2/eFA Plus2	Analog device (Pen Recorder, Oscilloscope, Multi Meter etc.)	Connect to analog devices and Output the voltage.	Approx. 3m *1
CB-118		ZTA/S-AN FA Plus2-AN	Analog device (Pen Recorder, Oscilloscope, Multi Meter etc.)	Connect to analog devices and Output the voltage in the raw (RAW) state.	Approx. 3m *1

*1 Optional cable extension and connector changes on the external device connection side available. Refer to page 5 for details.


[2. RS232C Cable]

Model	Image	Compatible Gauges	External Devices	Description	Length
CB-203		DSV DST	PC PLC RS232C printer	Enables data recording and operation from external devices. The connector shape on the external device connection side is D-Sub 9-pin (female).	Approx. 3m *2
CB-208		ZTA/S eZT HTGA/S DTXA/S FA Plus2/eFA Plus2 ACT-1000N	PC PLC RS232C printer *1	Enables data recording and operation from external devices. The connector shape on the external device connection side is D-Sub 9-pin (female).	Approx. 3m *2

*1 Data output from ZTA/S, eZT, HTGA/S, DTXA/S, FA Plus2, or eFA Plus2 to RS232C printer is supported only for products with firmware Ver. 3.10 or later; For Next Series products, "RS232C Print Function" must be installed via network.


*2 Optional cable extension and connector changes on the external device connection side available. Refer to page 5 for details.

[3. Digimatic Cable]

Model	Image	Compatible Gauges	External Devices	Description	Length
CB-308		ZTA/S eZT HTGA/S DTXA/S *1	Mitutoyo Digimatic Printer	Enables to print out the measured values.	Approx. 3m


*1 Usable for ZTA/S, eZT, HTGS/A, DTXA/S limited with their firmware older than Ver.5.

[4. External Contact Point Cable]

Model	Image	Compatible Gauges	External Devices	Description	Length
CB-808		ZTA/S eZT HTGA/S DTXA/S FA Plus2/eFA Plus2	Measuring objects (switches, sensors, etc.)	Information on contact point changes (marked points) can be added to measurement data and graphs by inputting an external signal.	Approx. 3m *1


*1 As an option, it is possible to use the length extended Cable. Refer to page 5 for details.

[5. Open End Cable]

Model	Image	Compatible Gauges	External Devices	Description	Length
CB-908		ZTA/S eZT HTGA/S DTXA/S FA Plus2/eFA Plus2	External Equipment such as PLC.	This Cable has all the input/output functions of the compatible model connectors. The Cable end without connector to select wires required to connect for external devices such as PLC.	Approx. 3m *1

*1 As an option, it is possible to use the length extended Cable. Refer to page 5 for details.

[6. Cable with Terminal Block]

Model	Image	Compatible Gauges	External Devices	Description	Length
CTB-A		ZTA/S eZT HTGA/S DTXA/S FA Plus2/eFA Plus2	External Equipment such as PLC.	This Cable has all the input/output functions of the compatible model connectors (*1). It has a terminal block (*2) for a simple connection, easily connected to external devices such as PLCs. Combined use with external device communication and Linear-Scale DMK (*3).	Approx. 1m



*1 Mitutoyo Digimatic output which is only available on models with firmware versions prior to the Next Series (firmware versions earlier than 5.00) is not supported.

*2 Insertable cable size for CTB-A. (single cable $\phi 0.5 \sim 1.6$, standard cable $\phi 0.08 \sim 1.255\text{mm}^2$, AWG28~16)



*3 For the Linear-Scale DMK. Please use the Open End, loose wire specification.

- Cables to Connect Force Gauge, Torque Gauge or Amplifier to IMADA's Test Stands

[1. Force Control Cable]



Model	Image	Compatible Gauges	External Devices	Description	Length
CB-508		ZTA/S	MX series MH-1000N	Activates test stand's functions such as overload stop and force control.	Approx. 1.5m
CB-528		ZTA/S eZT FA Plus2/eFA Plus2	MX2 series MH2 series EMX series	Activates test stand's functions such as overload stop and force control.	Approx. 1.5m
		DTXA/S	MTS series		

[2. Displacement Cable]

Model	Image	Compatible Gauges	External Devices	Description	Length
CB-718		ZTA eZT FA Plus2/eFA Plus2	MX2-FA series MH2-FA series EMX-FA series with firmware ver.2.0 or later	Activates test stand's functions such as overload stop and displacement I/O.	Approx. 1.5m
CB-728		ZTA eZT FA Plus2/eFA Plus2	EMX-FA series with firmware earlier than ver.2.0	Activates test stand's functions such as overload stop and displacement I/O.	Approx. 1.5m
		DTXA	MTS-10N-RA series		

- Cables to Connect IMADA's Test Stand to External Device

[1. External Signals I/O Cable]

Model	Image	Compatible Stands	External Devices	Description	Length
CB-706		MX2-CN MH2-CN EMX	External Equipment such as PLC	The cable has all the input/output functions of the I/O2 connector on the back of the stand. The cable ends without connector to select wires required to connect for external devices such as PLC.	Approx. 1.5m *1
CB-716		MX3-CN	External Equipment such as PLC	The cable has all the input/output functions of the I/O2 connector on the back of the stand. The cable ends without connector to select wires required to connect for external devices such as PLC.	Approx. 1.5m *1

*1 As an option, it is possible to use the length extended Cable. Refer to page 5 for details.

[Compatible Gauges List]

	ZTA	ZTS	eZT	DSV DST	DTXA	DTXS	HTGA/S	FA Plus2 eFA Plus2	ACT- 1000N
CB-108	○	○	○	×	○	○	○	○	×
CB-118	○ *1	○ *1	×	×	×	×	×	○ *1	×
CB-203	×	×	×	○	×	×	×	×	×
CB-208	○ *2	○ *2	○ *2	×	○ *2	○ *2	○ *2	○ *2	○
CB-308	○ *3	○ *3	○ *3	×	○ *3	○ *3	○ *3	×	×
CB-508	○	○	×	×	×	×	×	×	×
CB-528	○	○	○	×	○	○	×	○	×
CB-718	○	×	○	×	×	×	×	○	×
CB-728	○	×	○	×	○	×	×	○	×
CB-808	○	○	○	×	○	○	○	○	×
CB-908	○	○	○	×	○	○	○	○	×
CTB-A	○	○	○	×	○	○	○	○	×

*1 From the ZTA, ZTS, and FA Plus 2 series, supported products are limited to the specifications option with -AN.

*2 Data output from ZTA/S, eZT, HTGA/S, DTXA/S, FA Plus2, or eFA Plus2 to RS232C printer is supported only for products with firmware Ver. 3.10 or later; For Next Series products, "RS232C Print Function" must be installed via network.

*3 Usable for ZTA/S, eZT, DTXA/S, HTGA/S limited with their firmware older than Ver.5.

[Compatible Cables List]

- Connecting Force Gauge to Test Stand or Test Stand to External Device

	ZTA series	ZTS series
MX series	○CB-508 (Force Control cable)	○CB-508 (Force Control cable)
MX2 series	○CB-528 (Force Control cable) ○CB-718 (Displacement cable/FA version only) ○CB-706 (External Signals I/O cable/CN version only)	○CB-528 (Force Control cable) ○CB-706 (External Signals I/O cable/CN version only)
MX3 series	○CB-528 (Force Control cable) ○CB-718 (Displacement cable/FA version only) ○CB-716 (External Signals I/O cable/CN version only)	○CB-528 (Force Control cable) ○CB-716 (External Signals I/O cable/CN version only)
EMX series	○CB-528 (Force Control cable) ○CB-718 For firmware ver.2.0 or later (Displacement cable/FA version only) ○CB-728 For firmware earlier than version 2.0 (Displacement cable/FA version only) ○CB-706 (External Signals I/O cable)	○CB-528 (Force Control cable) ○CB-706 (External Signals I/O cable)
MH-1000N	○CB-508 (Force Control cable)	○CB-508 (Force Control cable)
MH2 series	○CB-528 (Force Control cable) ○CB-718 (Displacement cable/FA version only) ○CB-706 (External Signals I/O cable/CN version only)	○CB-528 (Force Control cable) ○CB-706 (External Signals I/O cable/CN version only)

- Connecting a Torque Gauge and a Test Stand

	DTXA series	DTXS series
MTS series	○CB-528 (Force Control cable)	○CB-528 (Force Control cable)
ACMTS series	○CB-528 (Force Control cable) ○CB-728 (Displacement cable)	○CB-528 (Force Control cable)

[Specification Changes Options]

Cable length extension			
Compatible Model	Standard Cable Length	Length *1	Code *2
CB-108/CB-118/CB-203/ CB-208/CB-808/CB-908	3m	Max. 10m	-()m
CB-706/CB-716	1.5m	Max. 8.5m	-()m

*1 The overall length is including the Standard Cable Length. To maintain the signal quality, the overall connecting Cable Length for the load cell and the display unit must be limited.

*2 The overall Cable Length required entered to (__)m. It should be Standard Cable Length, plus the length for extension in the units of 1m to be specified.

RS232C Sprit Cable		
Compatible Model	Description	Code
CB-528/CB-728	RS232C cable (1.5m) is branching from the connector on the gauge connection side. It enables to connect the gauge to both the test stand and the external device (RS232C communication). The connector shape on the external device connection side is D-Sub 9-pin (female).	-RS
CB-718	RS232C cable (1.5m) is branching from the connector on the linear-scale connection side. It enables to simultaneously connect the gauge to the test stand, the linear scale, and the external device (RS232C communication). The connector shape on the external device connection side is D-Sub 9-pin (female).	-RS

* Data output from each cable's compatible gauges to RS232C printer is supported only for gauges with firmware Ver. 3.10 or later; For Next Series products, "RS232C Print Function" must be installed via network.

* We can offer CB-508 with RS232C split cable as a custom-made product. Please contact us for details.

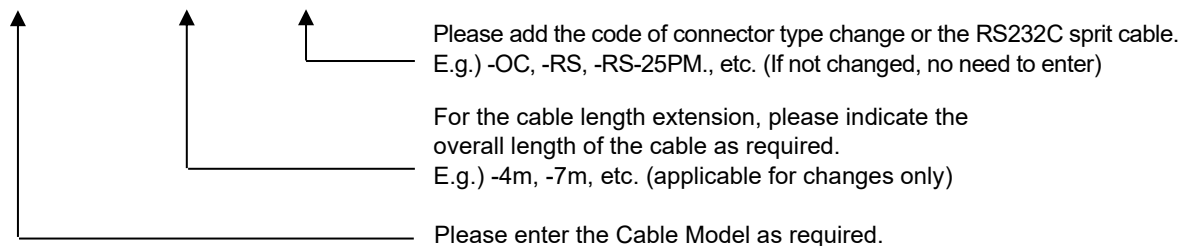
* Only RS232C cable part is extendable.

Changing the Connector Types to Connect with the External Devices		
Compatible Model	Connector Types after Changes	Code
CB-108/CB-118	Open End (without connector)	-OC
	BNC Connector	-BNC
CB-203/CB-208/ CB-528-RS*/ CB-718-RS*/CB-728-RS*	25-Pin (M2.6) male connector	-25PM
	25-Pin (#4-40) male connector	-25PI

* Only RS232C cable part with 25-Pin male connector is extendable.

[Selecting Model]











CB-□□□-○m-△△



E.g.) Cable Model: CB-108, Overall Length 7m (extended additionally by 4m)
→ Connector Code : CB-108-7m-BNC

E.g.) Cable Model: CB-203, Overall Length 3m (no change), Connector Model with 25-Pin (M2.6) male connector
→ Connector Code : CB-203-25PM

- Cables for Old Model Force Gauge, Torque Gauge and Amplifier

Type of Cable	Model	Image	Compatible Gauges	External Device	Description	Length
Analog Cable	CB-101		DS2	Analog device (Pen Recorder, Oscilloscope, Multi Meter etc.)	Connects to an analog device to enable voltage output.	Approx.3m
	CB-104		ZP Z2 HTG2 DTX2	Analog device (Pen Recorder, Oscilloscope, Multi Meter etc.)	Connects to an analog device to enable voltage output.	Approx.3m
RS232C Cable	CB-204		ZP Z2 HTG2 DTX2	PC, PLC	Enables data recording and operation from external device. The connector shape on the external device connection side is D-Sub 9-pin (female).	Approx.3m
Digimatic Cable	CB-301		DS2	Mitutoyo Digimatic Printer	Enables to print out the measured values.	Approx.3m
	CB-304		Z2 HTG2 DTX2	Mitutoyo Digimatic Printer	Enables to print out the measured values.	Approx.3m
Test Stand Option Cable	CB-501		ZP Z2	Motorized Test Stand MX series MH series	Activates test stand's functions such as overload stop and force control.	Approx. 1.2m
	CB-504		ZP Z2	Motorized Test Stand MX series MH series	Connect ZP/Z2 with Mx test stand and PC, activates test stand's functions such as overload stop and force control.	Gauge side: Approx. 1.2m PC side: Approx. 2m
	CB-705		FA Plus	Motorized Test Stand EMX series with firmware earlier than ver.2.0	Activates test stand's functions such as overload stop and displacement I/O.	Approx. 1.5m
	CB-704		ZP Z2	Motorized Test Stand MX2series EMX series with firmware earlier than ver.2.0	Activates test stand's functions such as overload stop and force control.	Approx. 1.5m
	CB-707		FA Plus	Motorized Test Stand MX2-FA series EMX-FA series with firmware ver.2.0 or later	Activates test stand's functions such as overload stop and force control.	Approx. 1m

* Different cables are not able to connect to the same connector. We offer custom made options to allow using two different cables at the same time.

[Custom made solution]

- Different cables are not able to connect to the same connector. We offer custom-made options to allow using two different cables at the same time.
- There is a limit to the overall length of the extension. Please contact us for details.

[Cautions]

- Information in this document is subject to change without prior notice.
- This specification does not guarantee the possible combinations of test stands, force gauges, load cells, and torque testers. Please refer to the individual specifications for combination details.
- 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.

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