

Medium Speed Network Terminal Box

NTB-500C

Distributed deployment and synchronous sampling of all channels

- Measurement of large strain ($300 \text{ k} \times 10^{-6}$ strain)
- Sampling frequencies Max. 1 kHz
- Connects strain gages directly. (Built-in bridge circuit)

Line-up

Main unit

Model	Channels	Measuring Unit	Synchronous Operation	DCS-100A
NTB-500C	Max. 8	Mixed combination of up to 2 measuring units possible	Max. 8 units (Can connect with the NTB-500A.)	Standard accessory
NTB-500C-0				Optional accessory

Measuring unit

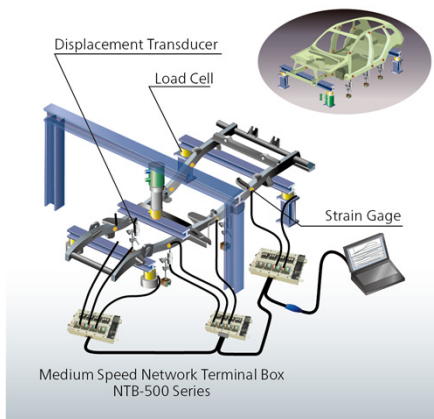
Model	Channels	Strain Gages and Strain-gage Transducers				Voltage		Temperature	
		Quarter bridge 120 Ω		Half-bridge 120 to 1000 Ω	Full-bridge 120 to 1000 Ω	±10.0000 V	± 50.000 V	Thermocouples	
		2-wire	3-wire	Active-active system	Ful-bridge system			K	T
NTB-50 C	4	●	●	●	●	-	-	-	-
NTB-51C		-	-	-	-	●	●	●	●

Note that the following limitations exist when combining new products with the conventional product NTB-500A.

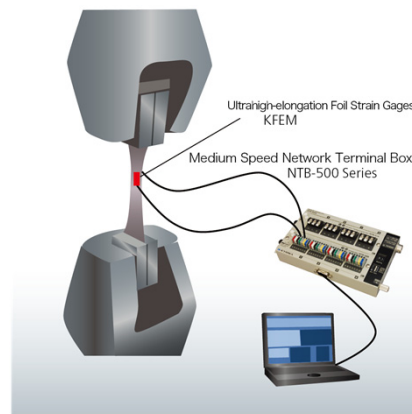
* You cannot combine the NTB-500C (-0) with the NTB-50A, NTB-50B or NTB-51A.

* You cannot combine the NTB-50C or NTB-51C with the NTB-500A (-0).

Applications

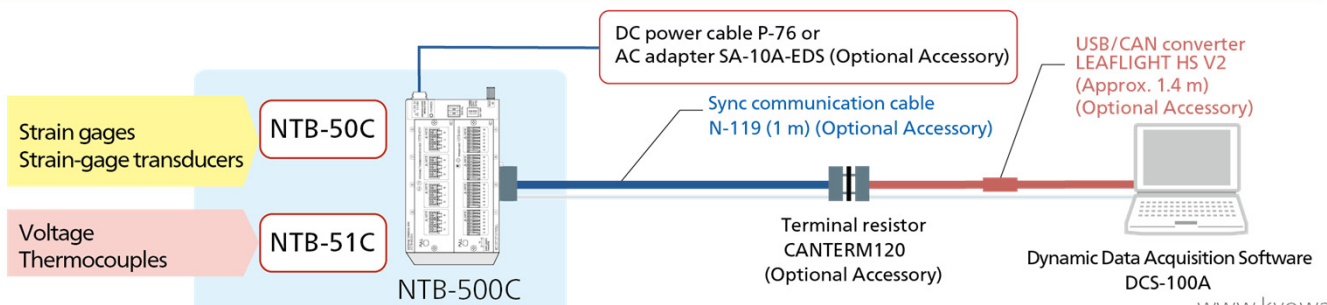


Stress Evaluation of Auto Components and the Strength Testing of Automotive Bodies



Tensile Testing of Complex Materials

System Content (1 unit)



Main Specifications

Medium Speed Network Terminal Box NTB-500C

Measuring Targets	Strain gages, strain-gage transducers, voltage, temperature		
Channels	Max. 8 channels/unit Mixed combination of up to 2 measuring units (4 channels/unit) possible		
Synchronous Operation	Max 8 units, 64 channels The NTB-500C can connect with the NTB-500A.		
Sampling Frequencies	1, 2, 5, 10, 20, 50, 100, 200, 500, 1 kHz (Synchronous sampling of all channels)		
Cable Length	Total extended cable length, max. 400 m		
TEDS	When NTB-50C installed Reads information from TEDS-installed sensors. Channel name writing (If the manufacturer's ID is Kyowa)		
Interfaces	Bosch2.0B active support (ISO-11898 specifications-compliant high-speed CAN)		
Data Save	Measurement data is saved on a PC. (No internal storage)		
Operating Temperature	-10 to 50°C		
Operating Humidity	20 to 85% (Non-condensing)		
Power Supply	11 to 16 VDC		
Current Consumption (At 12 VDC)	Measuring unit	Stand-by	Measuring
	With 2 NTB-50C installed	200 mA or less	230 mA or less
	With 2 NTB-51C installed	250 mA or less	300 mA or less
Dimensions	175 W x 28.7 H x 106.4 D mm (Excluding protrusions)		
Weight	Approx. 490 g		
Compliance	Directive 2014/30/EU (EMC) (Between units should be: Within 30 m)		

Strain Unit NTB-50C

Terminal Block	One-touch type terminal		
Channels	4		
Measuring Targets	Strain gages Strain-gage transducers		
Compatible Bridge Resistance	Quarter-bridge (2-wire, 3-wire) 120 Ω Half-bridge, full-bridge 120 to 1000 Ω		
Gage Factor	2.00 fixed		
Bridge Excitation	2 VDC ±1%		
Check Functions	Cable disconnection check		
TEDS	Reads information from TEDS-installed sensors. Channel name writing (If the manufacturer's ID is Kyowa)		
Measuring Range, Resolution, Range Accuracy	Measuring range	Resolution	Range accuracy
	30k × 10 ⁻⁶ strain	0.1 × 10 ⁻⁶ strain	±0.1%FS
	300k × 10 ⁻⁶ strain	1 × 10 ⁻⁶ strain	
Response Frequencies	DC to 100 Hz (Deviation +1 dB, -3 dB)		
Dimensions	152.2 W x 45 D x 6.1 H mm (Excluding protrusions)		
Weight	Approx. 85 g		

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Voltage Thermocouple Unit NTB-51C

Terminal Block	Soldering, screwing type			
Channels	4			
Measuring Targets	Voltage, thermocouples (K, T)			
Check Functions	Burnout check			
Measuring Range, Resolution, Range Accuracy	■ At voltage measurement			
	Measuring range	Resolution	Range accuracy	Input resistance
	10 V 50 V	100 μV 1 mV	±0.1%FS	Approx. 1 MΩ
Measuring Range, Resolution, Range Accuracy	■ At thermocouple measurement			
	Type	Measuring range	Resolution	Accuracy
	K T	-200.0 to +1230.0°C -200.0 to +400.0°C	0.1°C	External standard junction: ±(0.5%rdg +1.0)°C Internal standard junction: ±(0.5%rdg +2.0)°C (At input terminal temp. balance)
Response Frequencies	At voltage measurement: DC to 100 Hz (Deviation +1 dB, 3 dB) At thermocouple measurement: DC to 10 Hz (Deviation +0.5 dB, -1 dB)			
Isolation	Between channels: 50 MΩ or more (500 VDC)			
Dimensions	152.2 W x 45 D x 6.1 H mm (Excluding protrusions)			
Weight	Approx. 95 g			

Dynamic Data Acquisition Software DCS-100A

OS	Windows® 7, Windows® 8.1, Windows® 10 English/Japanese, 32, 64 bits support
CPU	Corei5 2 GHz or advanced
Memory	If 32-bit OS, 2 GB or more If 64-bit OS, 4 GB or more
Display	Resolution 1024 x 768 or more
Interfaces	CAN, a specified USB/CAN converter (LEAFLIGHT HS V2) is required.

Standard Accessories

DC power cable P-76: 1
Ground wire P-72: 1
NTB-500A/C dummy panel (NTB500-DUMMY): 1*
* NTB-500A/C dummy panel is mounted on a vacant slot before shipment.
Wire connection sticker: 1
Rubber feet: 4
Driver holder (With a mini screwdriver): 1 set
Simplified software
Driver for a USB/CAN converter
DVD (Dynamic Data Acquisition Software DCS-100A) **
** For NTB-500C, standard accessory. For NTB-500C-0, optional accessory.
Instruction manual

For the optional accessories, see our website.



Safety Precautions

- Be sure to observe the safety precautions given in the instruction manual, in order to ensure correct and safe operation.
- Do not use in locations subject to significant water, dampness, steam, dust, or flammable gases.
Doing so may lead to fire, electrical shock, or malfunction.

- Specifications and designs are subject to change without notice.
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