



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

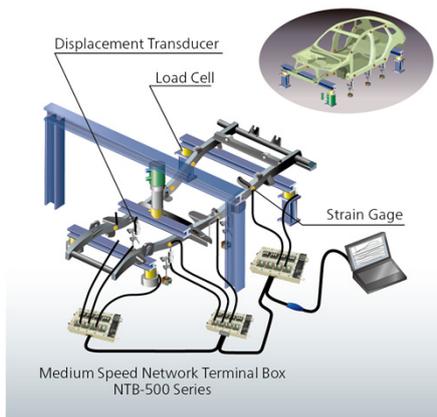
| Model | Channels | Strain Gages and Strain-gage Transducers | | | | Voltage | | Temperature | |
|----------|----------|--|--------|------------------------------|------------------------------|------------|------------|---------------|---|
| | | Quarter bridge 120 Ω | | Half-bridge 120 to 1000 Ω | 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.

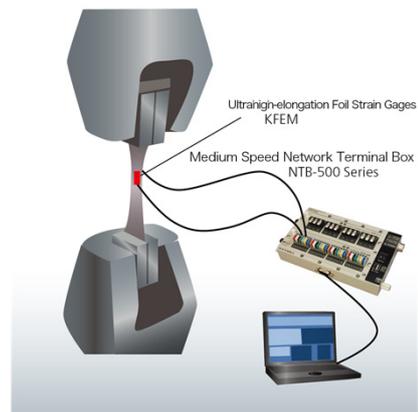
* You cannot combine the NTB-500C (-0) with the NTB-50A, NTB-50B or NTB-51A.

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

Applications

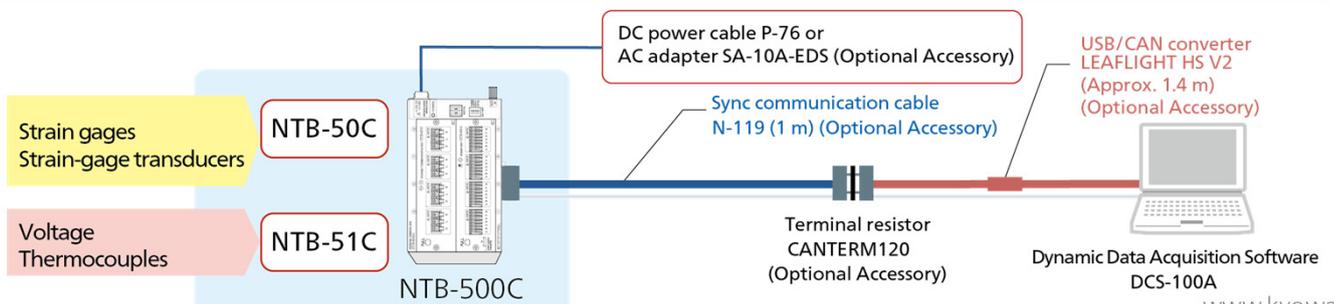


Stress Evaluation of Auto Components and the Strength Testing of Automotive Bodies



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.

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