



Data acquisition system for crash test DIS-7000 series **NEW**

Multi-channel on-board data acquisition system
Modularization structure enables to optimize your system.

- Compact and lightweight
(168 channels: 290 × 100 × 210 mm, approx. 9 kg)
- Impact resistance: 100 G
- Synchronous measuring channels up to 1056
(Up to 999 channels when using DIS-70A)
- Outputs ignition current based on the pre-set delay time.
(DIA-708A)
- Acquires CAN data. (DIC-706A)

System example

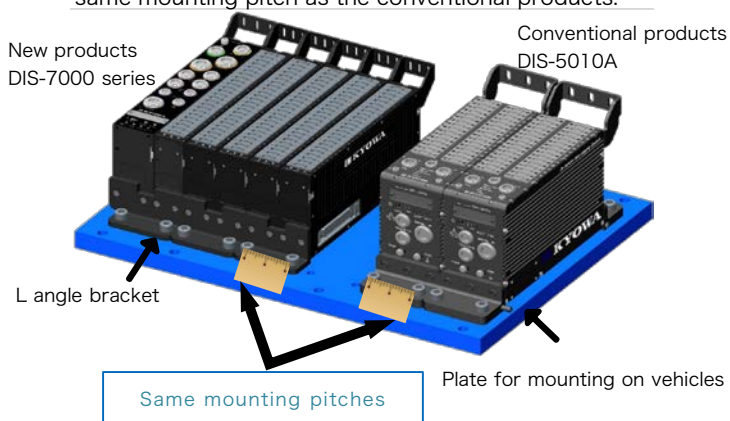


DIS-7000A: Control module for controlling DIS-7000 series.
DIS-724A-T: Signal conditioner module (square connector, 24 channels) for measuring strain and voltage.
DIS-724A-L: Signal conditioner module (round connector, 24 channels) for measuring strain and voltage.
DIA-708A: Airbag timer module (8 channels) for outputting ignition current.
DIC-706A: CAN measurement module (6 channels) for acquiring CAN bus data.
DIS-70A: Control software

Note The number of modules is up to 48 (including up to four DIS-7000A modules).
Single DIS-7000A connects up to 15 modules (DIS-724A-T/-L, DIA-708A, and DIC-706A).

Interchangeable with the conventional plates

Capable of using the conventional plates for mounting on vehicles by selecting the L angle brackets which have the same mounting pitch as the conventional products.



Example of use



Offset crash test

Common main specifications (DIS-7000A, DIS-724A, DIA-708A, DIC-706A)

| | | | |
|--------------------------------|--|-------------------------------|---|
| ■ Operating Environment | | ■ Trigger | |
| Operating Temperature | 0 to 50°C | Mode | Ring buffer mode, recorder mode |
| Operating Humidity | 20 to 80%RH (Non-condensing) | Type | Switch trigger, software trigger, analog trigger *Trigger synchronization of multiple models is available. |
| Storage Temperature | -10 to 60°C | ■ Built-in Batteries | |
| Storage Humidity | 10 to 90%RH (Non-condensing) | Type | Li-ion battery |
| Impact Resistant | 980.7 m/s ² (100G), 10 ms half-sine X-, Y-, Z-axis directions, each 1000 times | Continuous Operation | Approx. 30 minutes (Operating temperature: 0 to 40°C, non-degradation) |
| ■ Interfaces | Conforming to 10BASE-T/100BASE-TX | ■ Power Supply | |
| ■ A/D Converters | 16 bits | 15 to 28 VDC (Typical 24 VDC) | |

Other main specifications

| | | | |
|--------------------------------------|--|-------------------------------------|---|
| DIS-7000A | | DIA-708A | |
| ■ Digital Input | Total 32 (16 ×2), no-voltage contact | ■ Ignition Current | |
| ■ Sampling Frequencies | 100, 200, 500, 1k, 2k, 5k, 10k, 20k, 50k, 100k Hz | Number of Channels | 8 |
| ■ Data Recording | Approx. 80 minutes (At 100k Hz) | Connectors | DIA-708A: ECP.0S.302 (LEMO made) Plug: FFA.0S.302 (LEMO made) |
| ■ Trigger Distribution Output | | Output Current | Setting range: 0.5 to 3.0A and OFF (Selectable with 0.1 A step) Accuracy: Within ±0.05A |
| Number of Channels | 4 | Maximum Output Voltage | Approx. 18 V |
| ■ Check Functions | Memory, battery, trigger | Load Resistance | 1 to 9 Ω (Including cable resistance value to the inflator) |
| ■ Buzzers | Built-in alarm buzzer | Output Time | Setting range: 0.2 to 5 ms Accuracy: Within 0.1ms |
| ■ Appearance | | Delay Time | Setting range: 0.1 to 9999 ms |
| Dimensions | 45 (W) × 100 (H) × 210 (D) mm (Excluding protrusions) | ■ Recording Current Waveform | |
| Weight | Approx. 1.1 kg | Measuring Accuracy | Within ±3%FS (FS=5.0 A) |
| DIS-724A | | ■ Sampling Frequencies | |
| ■ Analog Input | | | 10k, 20k, 50k, 100k Hz |
| Measuring Targets | Strain, voltage | ■ Data Recording | Approx. 40 minutes (At 100k Hz) |
| Number of Channels | 24 | ■ Check Functions | Memory, battery, trigger, current output |
| Connectors | DIS-724A-T: 3RT01-RW7F(TAJIMI made) DIS-724A-L: ECG.1B.307(LEMO made) | ■ Safety Functions | |
| Input Voltage | Within ±20 V | Load Resistance Measurement | Apply weak current to the inflator and measure the resistance. |
| Gain | ×0.1 to 0.9, ×1 to 5000 | SAFETY Function | In a state with the SAFETY plug inserted to the SAFETY connector, no trigger signal can be input. In addition, the current output terminals are shorted in the DIA-708A so as not to flow the accidental current to the inflator. |
| Gain Accuracy | Within ±0.2%FS | ■ Appearance | |
| Nonlinearity | Within ±0.1%FS | Dimensions | 35 (W) × 100(H) × 210(D) mm (Excluding protrusions) |
| Bridge Excitation | 10, 5, and 2 VDC Each channel ON/OFF is switchable. | Weight | Approx. 1.0kg |
| Applicable Bridge Resistance | 120 to 5kΩ (Half bridge system, full bridge system) | DIC-706A | |
| ■ Low-pass Filter | 5th order Butterworth | ■ CAN | |
| Cutoff Frequencies | 50, 100, 200, 400, 1k, 2k, 4k, 10k, 20k Hz | Number of Channels | 6 |
| Amplitude Ratio | Within -3 ±1 dB | Physical Layer | High speed CAN |
| Attenuation | Within (-30±3) dB/oct. | Insulation | Every channel |
| ■ Sampling Frequencies | | Termination Resistor | ON/OFF switchable |
| | 100, 200, 500, 1k, 2k, 5k, 10k, 20k, 50k, 100k Hz | Sampling Method | Acquires CAN data with timestamp added. |
| ■ Data Recording | Approx. 80 minutes (At 100k Hz) | Memory Capacity | Approx. 200M frames (Total 6 channels) |
| ■ Check Functions | Memory, battery, trigger, input terminal resistance, open circuit, bridge excitation, sensor, gain | ■ Appearance | |
| ■ TEDS Functions | Compatible with IEEE1451.4 | Dimensions | 35 (W) × 100 (H) × 210 (D) mm (Excluding protrusions) |
| ■ Appearance | | Weight | Approx. 0.9 kg |
| Dimensions | 35 (W) × 100(H) × 210(D) mm (Excluding protrusions) | | |
| Weight | Approx. 1.1 kg | | |

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Safety Precautions

Be sure to observe the safety precautions given in the instruction manual, in order to ensure correct and safe operation.

• Specifications are subject to change without notice for improvement.

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Manufacturer's Representative

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