

DI5000 Series Digital Indicator with Alarm



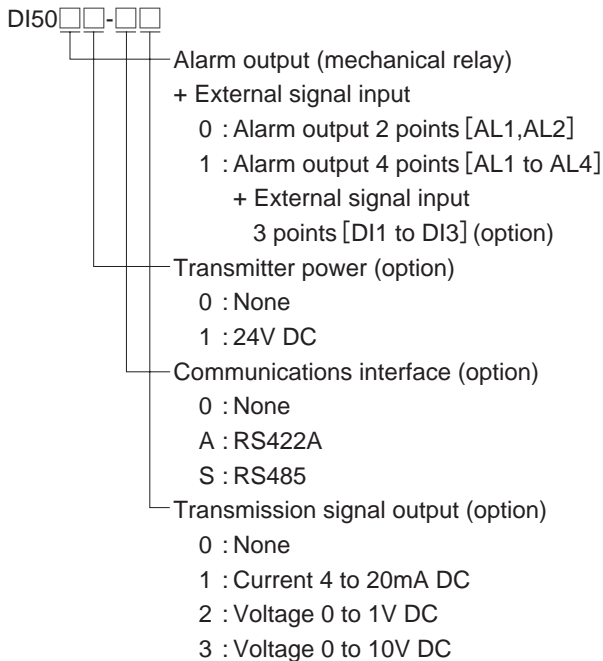
DI5000 series is a digital indicator with alarm which has easy-to-see 5 digits/11 segments display, measuring accuracy $\pm 0.1\%^{*1}$, sampling rate about 0.1 seconds in size of 48x96mm. Equipped with various functions such as multi range input of thermocouples, resistance thermometers, DC voltage/current and alarm outputs.



FEATURES

- Easy-to-see wide view angle 5 digits/11 segments display
- Various input/output function, 29 multi range input
- High measuring accuracy $\pm 0.1\%$
- Abundant types of alarms, max. 4 alarm output
- Compact designed (48x96x65mm)

MODEL



* Alarm output 2 points (AL1,2) is equipped as standard.

INPUT TYPE AND ACCURACY RATING

| Input type | Measuring range | Measured accuracy | | |
|------------------------|------------------------|--------------------|---|---------------------------|
| Thermocouple | B | 0.0 to 1820.0°C | $\pm 0.1\%FS \pm 1$ digit For below 0°C $\pm 0.2\%FS \pm 1$ digit | |
| | R | 0.0 to 1760.0°C | | |
| | S | 0.0 to 1760.0°C | | |
| | N | 0.0 to 1300.0°C | | |
| | K | -200.0 to 1370.0°C | | |
| | | -200.0 to 500.0°C | | |
| | E | -200.0 to 900.0°C | | |
| | J | -200.0 to 1200.0°C | | |
| | T | -200.0 to 400.0°C | | |
| | U | -200.0 to 400.0°C | | |
| | L | -200.0 to 900.0°C | | |
| | WRe5-WRe26 | 0.0 to 2310.0°C | | |
| | W-WRe26 | 0.0 to 2310.0°C | | |
| Platinel II | 0.0 to 1390.0°C | | | |
| Resistance thermometer | NiMo-Ni | -50.0 to 1410.0°C | $\pm 0.1\%FS \pm 1$ digit | |
| | CR-AuFe | 0.0 to 280.0K | $\pm 0.2\%FS \pm 1$ digit | |
| | PtRh40-20 | 0.0 to 1880.0°C | $\pm 0.3\%FS \pm 1$ digit | |
| | Au-Pt | 0.0 to 1000.0°C | $\pm 0.1\%FS \pm 1$ digit | |
| | Resistance thermometer | Pt100 | -200.0 to 850.0°C -200.0 to 200.0°C | $\pm 0.1\%FS \pm 1$ digit |
| | | JPt100 | -200.0 to 649.0°C -200.0 to 200.0°C | |
| Pt50 | | -200.0 to 649.0°C | | |
| Pt-Co*2 | | 4.0 to 374.0K | $\pm 0.15\%FS \pm 1$ digit | |
| DC voltage | 20mV | -20.00 to 20.00mV | $\pm 0.1\%FS \pm 1$ digit | |
| | 100mV | -100.0 to 100.0mV | | |
| | 5V | -5.000 to 5.000V | | |
| | 10V | -10.000 to 10.000V | | |
| DC current | 20mA | 0.00 to 20.00mA | $\pm 0.1\%FS \pm 1$ digit | |

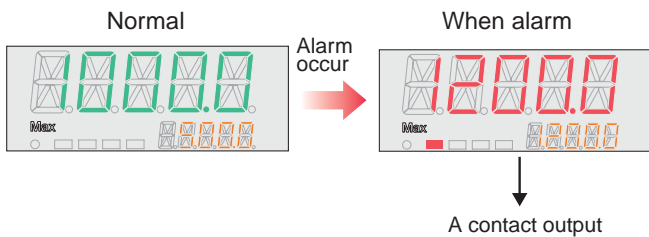
*1 There are exceptions depending on the input signal

*2 Corresponds to 3-wire only

Accuracy under reference operating condition

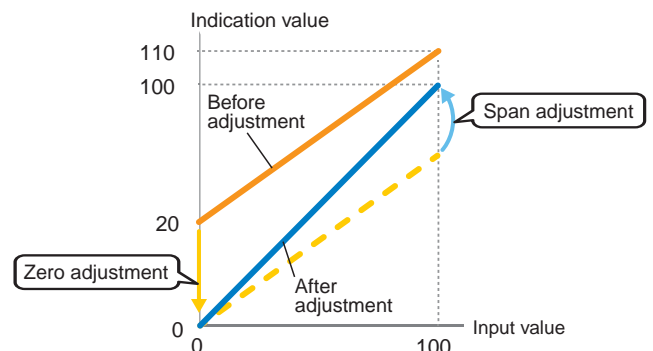
For thermocouple, the reference junction compensation accuracy is added to the above measured accuracy.

Instantly Notice When Alarm



* Changeable to red at normal and green alarm

Indication Value Adjustment (Zero/Span Adjustment)



SPECIFICATIONS

Number of measuring points: 1 point

Input signal: Thermocouple B, R, S, N, K, E, J, T, U, L, WRe5-WRe26, W-WRe26, NiMo-Ni, CR-AuFe, PlatineII, PtRh40-PtRh20, Au-Pt

Resistance thermometer Pt100, JPt100, Pt50, Pt-Co

DC voltage $\pm 20\text{mV}$, $\pm 100\text{mV}$, $\pm 5\text{V}$, $\pm 10\text{V}$

DC current 0 to 20mA

Accuracy rating: $\pm 0.1\% \pm 1$ digit of measuring range (refer to P.1 for details)

Reference junction compensation accuracy: $\pm 1.0^\circ\text{C}$ (ambient temperature $23^\circ\text{C} \pm 10^\circ\text{C}$) $\pm 2.0^\circ\text{C}$ (other than above range)

Temperature unit: $^\circ\text{C}$, K

Sampling rate: Approx. 0.1 second

Burnout: Higher limit burnout is provided for thermocouple, resistance thermometer and DC voltage (only for 20mV). Absolute value higher limit alarm output operates.

Resistance thermometer measurement current: Approx. 1mA

Rated power voltage: 100 to 240V AC, 50/60Hz

Maximum power consumption: 9VA (100V AC), 12VA (240V AC)

External materials: ABS-polycarbonate (front), polycarbonate (case)

Color: Gray

Weight: Approx. 160g (without option), approx. 220g (with option)

Ambient temperature: -10 to 50°C (when close installation -10 to 40°C)

Ambient humidity: 20 to 90% RH (no dew condensation)

STANDARD

CE marking: EMC directive --- EN61326-1 Class A
Low voltage directive --- EN61010-1, EN61010-2-030

Environmental regulation: RoHS directive

Structure: Conform to IEC60529 IP54 (front part only, not applicable when close installation)

ALARM OUTPUT

Output points: Mechanical relay 2 points (standard), maximum 4 points (option)

Contact type: A contact (common independent)

Contact capacity: Resistive load: 240V AC 3A, 30 V DC 3A
Inductive load: 240V AC 1.5A, 30 V DC 1.5A
Minimum load: 5V DC 10mA

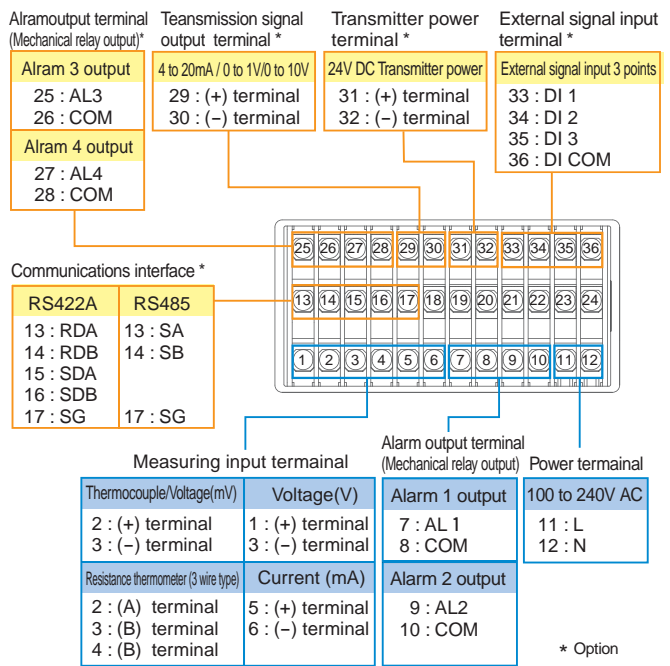
Contact protection element: Not included

Alarm: Absolute value higher limit alarm, Absolute value lower limit alarm, FAIL alarm

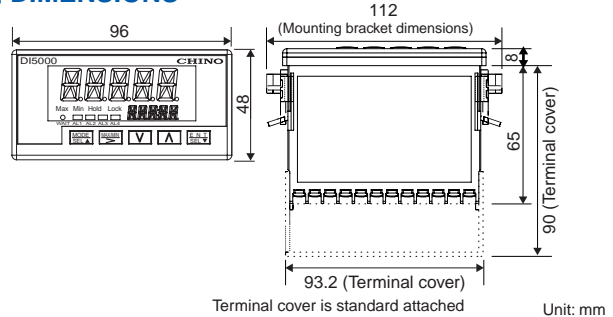
OPTIONS

| Options | Specifications |
|----------------------------|--|
| Alarm output [AL3, AL4] | Output: 2 points (mechanical relay, a contact) |
| Transmission signal output | Output: 1 point Output signal: 4 to 20mADC, 0 to 1VDC, 0 to 10 VDC Accuracy: $\pm 0.3\%$ FS Output updating interval: Approx. 0.1 sec. Type: PV, MAX value, MIN value |
| External signal input | Input: Max. 3 points (COM common) Input signal: Non-voltage contact (digital input) External contact capacity: 5VDC 2mA Function: Alarm reset, PV hold, MAX/MIN value reset |
| Communication Interface | Type: RS422A, RS485 Protocol: MODBUS-RTU, MODBUS-ASCII, Private (compatible for old device) Function: Host (upper) communication/ Digital transmission |
| Transmitter power supply | Point: 1 point Output voltage: 24VDC Accuracy: $\pm 10\%$ Max. allowable current: 30mA |

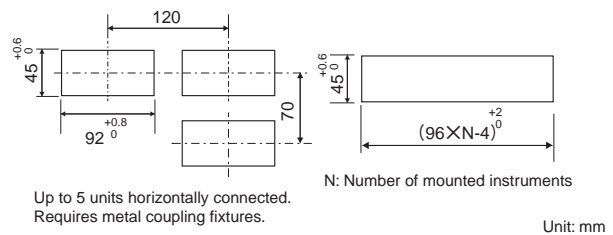
TERMINAL NUMBER AND FUNCTIONALITY



DIMENSIONS



Panel cutout



ACCESSORIES

Contact protection element

| | |
|---------------------|---|
| CX-CR1 (light load) | 0.01 μF +120 Ω (switching current below 0.2A) |
| CX-CR2 (heavy load) | 0.5 μF +47 Ω (switching current above 0.2A) |

Metal coupling fixture

| | |
|----------|---|
| CX-DI002 | Close installation horizontally up to 5 units (Required no.: Number of installing units minus 1) (accuracy rating is different when close installation) |
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Front protection cover

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|-------------|--|
| Panel cover | Plastic cover to protect incorrect operation |
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Specifications subject to change without notice. Printed in Japan (I) 2016. 10

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