DI5000 series is a digital indicator with alarm which has easy-to-see 5 digits/11 segments display, measuring accuracy ±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 ±0.1%
- Abundant types of alarms, max. 4 alarm output
- Compact designed (48x96x65mm)

**MODEL**
- DI5000
  - Alarm output (mechanical relay) + External signal input
    - 0 : Alarm output 2 points [AL1, AL2]
    - 1 : Alarm output 4 points [AL1 to AL4] + External signal input
    - 3 points [DI1 to DI3] (option)
  - Transmitter power (option)
    - 0 : None
    - 1 : 24V DC
  - Communications interface (option)
    - 0 : None
    - A : RS422A
    - S : RS485
  - Transmission signal output (option)
    - 0 : None
    - 1 : Current 4 to 20mA DC
    - 2 : Voltage 0 to 1V DC
    - 3 : Voltage 0 to 10V DC

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

**INPUT TYPE AND ACCURACY RATING**

<table>
<thead>
<tr>
<th>Input type</th>
<th>Measuring range</th>
<th>Measured accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>0.0 to 1820.0°C</td>
<td>±0.1%FS±1digit</td>
</tr>
<tr>
<td>R</td>
<td>0.0 to 1760.0°C</td>
<td>±1digit</td>
</tr>
<tr>
<td>S</td>
<td>0.0 to 1760.0°C</td>
<td>±0.2%FS±1digit</td>
</tr>
<tr>
<td>N</td>
<td>0.0 to 1300.0°C</td>
<td>±1digit</td>
</tr>
<tr>
<td>K</td>
<td>-200.0 to 1730.0°C</td>
<td>±0.1%FS±1digit</td>
</tr>
<tr>
<td>E</td>
<td>-200.0 to 1200.0°C</td>
<td>±1digit</td>
</tr>
<tr>
<td>J</td>
<td>-200.0 to 900.0°C</td>
<td>±0.2%FS±1digit</td>
</tr>
<tr>
<td>T</td>
<td>-200.0 to 400.0°C</td>
<td>±1digit</td>
</tr>
<tr>
<td>U</td>
<td>-200.0 to 400.0°C</td>
<td>±1digit</td>
</tr>
<tr>
<td>L</td>
<td>-200.0 to 900.0°C</td>
<td>±1digit</td>
</tr>
<tr>
<td>W-Re5-WRe26</td>
<td>0.0 to 2310.0°C</td>
<td>±0.1%FS±1digit</td>
</tr>
<tr>
<td>W-WRe26</td>
<td>0.0 to 2310.0°C</td>
<td>±1digit</td>
</tr>
<tr>
<td>Pt100</td>
<td>0.0 to 1390.0°C</td>
<td>±0.1%FS±1digit</td>
</tr>
<tr>
<td>NiMo-Ni</td>
<td>0.0 to 1410.0°C</td>
<td>±1%FS±1digit</td>
</tr>
<tr>
<td>CR-AuFe</td>
<td>0.0 to 280.0K</td>
<td>±0.2%FS±1digit</td>
</tr>
<tr>
<td>PtRh40-20</td>
<td>0.0 to 1880.0°C</td>
<td>±0.3%FS±1digit</td>
</tr>
<tr>
<td>Au-Pt</td>
<td>0.0 to 1000.0°C</td>
<td>±1%FS±1digit</td>
</tr>
<tr>
<td>Pt-Co²</td>
<td>4.0 to 374.0K</td>
<td>±0.15%FS±1digit</td>
</tr>
<tr>
<td>Pt50</td>
<td>4.0 to 374.0K</td>
<td>±0.15%FS±1digit</td>
</tr>
<tr>
<td>20mV</td>
<td>-2.00 to 20.00mV</td>
<td>±1%FS±1digit</td>
</tr>
<tr>
<td>100mV</td>
<td>-100.0 to 100.0mV</td>
<td>±1%FS±1digit</td>
</tr>
<tr>
<td>5V</td>
<td>-5.00 to 5.00V</td>
<td>±1%FS±1digit</td>
</tr>
<tr>
<td>10V</td>
<td>-10.00 to 10.00V</td>
<td>±1%FS±1digit</td>
</tr>
<tr>
<td>DC voltage</td>
<td>0.00 to 20.00mV</td>
<td>±1%FS±1digit</td>
</tr>
</tbody>
</table>

*1 There are exceptions depending on the input signal
*2 Corresponds to 3-wire only
For thermocouple, the reference junction compensation accuracy is added to the above measured accuracy.

**Indication Value Adjustment (Zero/Span Adjustment)**

![Indication value adjustment diagram]

Normal

Alarm

Zero adjustment

Span adjustment

* Changeable to red at normal and green alarm
**SPECIFICATIONS**

Number of measuring points: 1 point

Input signal:
- Resistance thermometer: Pt100, Pt100, Pt50, Pt-Co
- DC voltage: ±20mV, ±100mV, ±5V, ±10V

DC current: 0 to 20mA

Accuracy rating:
- ±1% of digital accuracy of measuring range (refer to P.1 for details)
- ±0.5% of ambient temperature ±10°C (other than above range)

Temperature limit: -10 to 50°C (ambient temperature 23°C ±10°C)

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

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

Color: Gray

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

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

100 to 240V AC, 50/60Hz

Resistance thermometer measurement current: Approx. 0.1mA

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

FAIL alarm

Contact protection element

- Minimum load: 5V DC 10mA
- Requires metal coupling fixtures

- Up to 5 units horizontally connected

Contact type: A contact (common independent)

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 thermométer measurement current: Approx. 0.1mA

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

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

Environmental regulation:
- RoHS directive
- Low voltage directive --- EN61010-1, EN61010-2-030

Input signal: Thermocouple B, R, S, N, K, E, J, T, U, L, W, Re5-WRe26, W-Re5, W-Re26, NMo-Ni, CR-AuFe, Platinum, Pt100, Pt-Rh20, Au-Pt

Accuracy:
- Resistance thermometer: ±0.1ºC
- Thermocouple: ±2.0ºC

Reference junction compensation accuracy:
- ±0.1ºC (ambient temperature 23 ºC ±10 ºC)
- ±0.5ºC (ambient temperature 23 ºC ±10 ºC)

Temperature unit: ºC, K

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

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

Contact type: A contact (common independent)

Contact capacity: Resistor load: 240V AC 3A, 24V DC 3A

Inductive load: 240V AC 1.5A, 24V DC 1.5A

Minimum load: 5V DC 10mA

Contact protection element:

Not included

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

**OPTIONS**

Options:
- Alarm output [AL3, AL4]

Transmission signal output

- Output: 1 point
- Output signal: 4 to 20mA/DC, 0 to 1V/DC, 0 to 10 V/DC
- Accuracy: ±0.1%, ±1%
- Output updating interval: Approx. 0.1 sec.

External contact capacity:

- Contact protection element
- Minimum load: 5V DC 10mA
- Requires metal coupling fixtures
- Up to 5 units horizontally connected
- Requires metal coupling fixtures

External signal input

Function: Alarm reset, PV hold, MAX/MIN value

External contact capacity:

- Contact protection element
- Minimum load: 5V DC 10mA
- Requires metal coupling fixtures
- Up to 5 units horizontally connected
- Requires metal coupling fixtures

External signal input terminal

Function: Host (upper) communication

External signal input terminal

Function: Host (lower) communication

Transmission signal output terminal *

Transmission power terminal *

Alarm output terminal (Mechanical relay output)

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