COMPACT INFRARED THERMOMETER
IR-BZ series

Small and high-speed separated detector, resistant to heat, suitable for built-in system!
IR-BZ has separated detector and main unit to make the detector smaller and can be used at high temperature condition. Main unit has digital temperature displays and parameter setting function. Enables long stable measurement at affordable price.

- FEATURES
  - High accuracy and stable measurement even the environment temperature changes.
  - High speed response time 15ms, corresponds to production line requiring quick tracking.
  - Wide range temperature range from low to high temperature (0 to 1000°C)

- MODELS
  - IR-BZPHGE
    - Detector cable length
      1 : 1.5m
      3 : 3m
      8 : 8m
      F : 15m
  *1 CE Marking non-approved

- CONFIGURATION

- APPLICATIONS
  - Filling Machine Heater Temp. Abnormal Detection
  - Injection Molding Temp. Measurement
  - Resin Sheet Temp. Measurement
## GENERAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>IR-BZPHGE</th>
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<tbody>
<tr>
<td><strong>Measuring range</strong></td>
<td>0 to 1000°C</td>
</tr>
<tr>
<td><strong>Element</strong></td>
<td>Thermopile</td>
</tr>
<tr>
<td><strong>Measuring wavelength</strong></td>
<td>8 to 14 μm</td>
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</table>
| **Accuracy rating** | Accuracy rating *1  
Below 20°C : ±2°C  
20°C to below 100°C : ±1°C  
100°C or above : ±1% of measuring value |
| **Response time** | 15ms |
| **Emissivity adjustment** | 1.999 to 0.100 |
| **Measuring diameter** | ø8mm/200mm |
| **Working temperature** | Detector: -20 to 100°C  
Main unit: -10 to 65°C |
| **Analog output** | Output 1: Measured temp. value (select below by main unit)  
Current output 0 to 20mA DC/ 4 to 20mA DC  
7/C output J/K/R/S  
Output 2: Detector temp. 0 to 5 V/ -20 to 180°C |
| **Contact input/output** | Contact input: 1 point, sample hold/reset  
Contact output: 1 point, high/low alarm, self-diagnosis (open collector) |
| **Serial communication** | RS485 (MODBUS) |
| **Power supply** | 8 to 36V DC |
| **Detector cable** | Length 1.5m/3m/8m/15m (wire part) *2  
OD: ø3.3mm  
Covering: Fluorine resin |
| **CE Marking** | EMC directive — EN61326-1 Class A  
(except IR-BZPHGE8, IR-BZPHGEF)  
Conformity requirements — Use of power supply for IR-BZ exclusive use and the connecting cable up to 30m (indoor use). |

*1 Based on reference operation condition 23°C ±5°C, E = 1.0, factory default inspection result.

*2 Please specify the detector cable length. Detector cable cannot be removed.

## EXTERNAL DIMENSIONS

### Infrared thermometer

#### Detector

- Detector cable  
  OD: ø3.3  
  Heat resistant 100°C

#### Main unit

- Cable gland  
  Power supply signal cable inlet  
  Compatible cable dia. ø6.5 to 8
- Max core: 11 cores  
  Applicable wire dia.: 0.2 to 0.5mm²

#### Mounting bracket

- IR-ZBMP

### Connecting cable (for power supply and signals)

- IR-ZBPR □□ (select 2m or 5m)

### MEASURING DIAMETER & DISTANCE

* Measuring diameter is at 90% energy response.  
* Please make sure that the object size should be 1.5 times larger than measuring diameter.

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**Specifications subject to change without notice.** Printed in Japan (1) 2017. 3