The Model MC55 Electronic Indicating Pressure Transmitters measure gauge or compound pressure. The instruments transmit a proportional 4 to 20 mA DC signal over long distances using ordinary unshielded leads. The transmission distance is limited only by the load resistance.

### STANDARD SPECIFICATIONS

**Door and Case:**
- Cast aluminum, finished with polyurethane paint.
- Right grayish green (Munsell 2.5GY5.0/1.0).

**Mounting:**
- Surface, flush panel and 2-inch pipe.

**Scale:**
- Effective nominal length 156 mm (6 inches).
- Black divisions and letters on white background.

**Pointer:**
- Fluorescent red.

**Output Signal:**
- 4 to 20 mA DC, 2-wire circuit.

**Supply Voltage:**
- 12 to 45 V DC.

**Explosion-protected Construction:**
- TIIS flameproof type certified for d2G4
  - Certificate: T33436
- TIIS intrinsically safe type certified for i3aG4
  - Certificate: T34322

  Note: The applicable safety barrier of BARD-400 is not available due to its production discontinuance.

**Ambient Operating Temperature Range:**
- General Use Type: -30 to 80 °C (-20 to 180 °F).
- TIIS Flameproof Type, TIIS Intrinsically Safe Type: -10 to 60 °C (14 to 140 °F).

**Process Connection:**
- Refer to Measuring Element Specifications.

**Electrical Connection:**
- JIS G1/2 or 1/2 NPT female
  (TIIS Flameproof type is not available)

**Approximate Weight:**
- 9 kg (20 lb) excluding elements.

**Indicator and Transmitter Accuracies:**
- (Percent of span).

<table>
<thead>
<tr>
<th>Element Code</th>
<th>Indicator Accuracy</th>
<th>Transmitter Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>//P31, //P32, //PR1, //P42, //P51, //P52</td>
<td>±0.75</td>
<td>±0.5</td>
</tr>
</tbody>
</table>
### MODEL AND SUFFIX CODES

<table>
<thead>
<tr>
<th>Model</th>
<th>Suffix Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC55</td>
<td>A</td>
<td>Indicating Pressure Transmitter</td>
</tr>
</tbody>
</table>

#### OPTIONS

- **Shatterproof Glass Window (Option code: GID):**
  For use in areas where abrasive dust would cause scratching of the polycarbonate window under conditions of frequent wiping.

- **Stainless Steel Tag Number Plate (Option code: SCT):**
  JIS SUS 304 stainless steel tag number plate on front of door.

- **Special Color Finish on Door (Option code: SCF-P):**
  Specify color code in □ (see GS 22D1F1-E).

- **Flameproof Packing Adapter (Option code: PG1):**
  Cable diameter limits 8.8 to 10.7 mm. Protective pipe connection (protects against mechanical damage to cable) G1/2 female.

- **ANSI Connection (Option code: NPT):**
  Electrical connection are also tapped for ANSI NPT threads in addition to the process connection. (JIS Flameproof type is not available).

- **Calibration Units:**
  See Table 1.
  P-calibration (Unit. . . . psi) (Option code: CAL-E)
  M-calibration (Unit. . . . kgf/cm²) (Option code: CAL-M)

- **Special Scale Plates:**
  Specify the following option codes when scale plates other than standard are desired.
  (Refer to GS 22D1C7-E)
  - Special range scale (uniform single-scale with single label)
    Option code : SPQ
  - Special graduation scale (uniform single-scale with single label)
    Option code : SPR
  - Special range scale (uniform double-scale with double label)
    Option code : SPW
  - Pressure equivalent unit scale (uniform double-scale with double label)
    Option code : SPX

**Note:**
Users must consider the characteristics of selected wetted parts material and the influence of process fluids. The use of inappropriate materials can result in the leakage of corrosive process fluids and cause injury to personnel and/or damage to plant facilities. It is also possible that the instrument itself can be damaged and that fragments from the instrument can contaminate the user's process fluids. Be very careful with highly corrosive process fluids such as hydrochloric acid, sulfuric acid, hydrogen sulfide, sodium hypochlorite, and high-temperature steam (150ºC [302ºF] or above). Contact Yokogawa for detailed information of the wetted parts material.
## MEASURING ELEMENT SPECIFICATIONS

### Pressure Element

#### Table 1. Span Limits.

<table>
<thead>
<tr>
<th>Element Code</th>
<th>Element Type</th>
<th>Element Material</th>
<th>Process Connection</th>
<th>Minimum and Maximum Spans *3</th>
</tr>
</thead>
<tbody>
<tr>
<td>//P31</td>
<td>Bellows</td>
<td>Phosphor Bronze</td>
<td>JIS Rc 1/4 (or 1/4 NPT) female</td>
<td>34 and 101.3 kPa Vacuum. 255 and 760 mmHg Vacuum. 10 and 32 inHg Vacuum.</td>
</tr>
<tr>
<td>//P32</td>
<td>Bellows</td>
<td>JIS SUS 316</td>
<td></td>
<td>31 and 140 kPa 0.32 and 1.4 kgf/cm² 4.5 and 20 psi</td>
</tr>
<tr>
<td>//PR1 1️⃣</td>
<td>Receiver bellows</td>
<td>Phosphor Bronze</td>
<td></td>
<td>80 kPa 0.8 kgf/cm² 12 psi</td>
</tr>
<tr>
<td>//P42</td>
<td>Spiral bourdon</td>
<td>JIS SUS 316L</td>
<td></td>
<td>100 and 1370 kPa 1.0 and 14 kgf/cm² 15 and 200 psi</td>
</tr>
<tr>
<td>//P51</td>
<td>Helical bourdon</td>
<td>JIS SUS 316L</td>
<td></td>
<td>1.37 and 7 MPa 14 and 70 kgf/cm² 200 and 1000 psi</td>
</tr>
<tr>
<td>//P52</td>
<td>Helical bourdon</td>
<td>JIS SUS 316L</td>
<td></td>
<td>7 and 42 MPa 71 and 420 kgf/cm² 1000 and 6000 psi</td>
</tr>
</tbody>
</table>

*1: Pressure range for PR1 is 20 to 100 kPa, 0.2 to 1 kgf/cm² or bar, or 3 to 15 psi.
*2: Measuring pressure 13.7 MPa (140 kgf/cm² or bar, or 2000 psi) or less: Process connection JIS Rc1/4 (or 1/4 NPT) female.
Measuring pressure 13.8 to 42 MPa (140 to 420 kgf/cm² or bar, or 2000 to 6000 psi): JIS R1/2 (or 1/2 NPT) male.
*3: mbar or bar unit calibration is also available.

#### Applicable Items for Pressure Element

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<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>//P31</td>
<td>×</td>
<td>×</td>
<td></td>
<td>standard</td>
<td>×</td>
</tr>
<tr>
<td>//P32</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>standard</td>
<td>×</td>
</tr>
<tr>
<td>//PR1</td>
<td>always</td>
<td>×</td>
<td>×</td>
<td>standard</td>
<td>standard</td>
</tr>
<tr>
<td>//P42</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>//P51</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>//P52</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

○ mark: Optionally available.
× mark: Not available.

#### Pressure Element Options

Write Option code immediately after element code (Example: //P32/ORP).

/EXS: Extended scale. Suppressed zero range.
P42, 51 and 52: Specify option code /EXS when the lower range is greater than 0 (zero).
/ORP: Overrange protection.
/URP: Underrange protection.
/OSW: Element degreasing for oxygen service.
Available for P42, P51 and P52.
**DIMENSIONS**

Specify the following when ordering:
1. Model, suffix and Option codes.
2. Range and scale range. Refer to GS 22D01C07-00E.

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**ORDERING INSTRUCTIONS**

Power Distributor (for 1 point): See GS 01B04T01-02E
Power Distributor (for 4 points): See GS 01B04T02-02E