Please use attached sheets for the pages listed below in IM 1E10B0-01E (10th).

<table>
<thead>
<tr>
<th>Page</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page 10-2</td>
<td>Changed the number of &quot;EMC Conformity Standard&quot;.</td>
</tr>
<tr>
<td>EMC Conformity Standard</td>
<td>Add the caution note.</td>
</tr>
<tr>
<td>Page 12-1 to 12-4</td>
<td>Applicable Standard and Certificate No are added in each</td>
</tr>
<tr>
<td>12. EXPLOSION PROTECTED</td>
<td>Ex-proof Technical Data description.</td>
</tr>
<tr>
<td>TYPE INSTRUMENT</td>
<td></td>
</tr>
</tbody>
</table>
Flange: Carbon steel (SS400) or stainless steel (SUS304)
Pipe: Stainless steel (15 to 25mm: SCS13, 40 to 100mm: SUS304)
Size 150 to 200mm (6 to 8in.)
Housing: Carbon steel (SS400)
Mini-flange for wafer conn.: Carbon steel (SS400)
Pipe: Stainless steel (SUS304) or stainless steel (SUS304)

Wetted Part Material:
- Lining: Fluorocarbon PFA
- Electrode: Stainless steel (SUS316L), Hastelloy C (equivalent to Hastelloy C-276), Titanium, PFA lining+Earth-electrode(Tantalum/Platinum-Iridium)
- Earth Ring: Stainless steel (SUS316), Hastelloy C (equivalent to Hastelloy C-276), Titanium, PFA lining+Earth-electrode(Tantalum/Platinum-Iridium)

Note: Hastelloy is a registered trademark of Haynes International Inc.

Gasket:
- VALQUA#4010; Fluoro rubber, viton (between flow tube body and earth ring; for optional code /FRG)
- Non-asbestos joint sheet sheathed with fluoro resin PTFE (between earth ring and process flange; for optional code /BSF)

Other gaskets between flow tube and earth ring:
- VALQUA#4010(Mixing#RCD970); Alkali resistance gasket for PVC piping(Fluoro rubber)
- VALQUA#4010(Mixing#RCD470); Acid resistance gasket for PVC piping(Fluoro rubber)

Contact YOKOGAWA office. (Refer to TI 1E6A0-06E)

Electrode Construction: External insertion type.

STANDARD PERFORMANCE
SE***DJ/EJ+SE14(Up to 300m cable length)

Accuracy:

<table>
<thead>
<tr>
<th>Size in mm (inch)</th>
<th>Span in m/s (ft/s)</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 to 400 (0.5 to 16)</td>
<td>0.3 to 1 (1 to 3)</td>
<td>0.5% of span</td>
</tr>
<tr>
<td>1 to 10 (3 to 33)</td>
<td>0.25% of span (at indications below 50% of span)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.5% of rate (at indications 50% of span or more)</td>
<td></td>
</tr>
</tbody>
</table>

Repeatability: 0.1% of flowrate (1mm/s minimum)

Maximum Power Consumption:
10W for combination of flow tube and converter

Insulation Resistance:
- 100MΩ between power terminals and ground terminal at 500V DC.
- 100MΩ between power terminals and each output terminal at 500V DC.
- 20MΩ between each output terminal and ground terminal at 100V DC.

Withstand Voltage:
- 1500V AC between power terminals and ground terminal for 1 minute. (for -A1/A2 power supply)
- 500V AC between power terminals and ground terminal for 1 minute. (for -D1 power supply)

CAUTION

When performing the Voltage Breakdown Test, Insulation Resistance Test or any unpowered electrical test, wait 10 seconds after the power supply is turned off before removing the housing cover. Be sure to remove the Short Bar at terminal “G”. After testing, return the Short Bar to its correct position. Screw tightening torque should be 1.18Nm (0.88ft-lb) or more, because the G-terminal is thought as a protective grounding and should conform to the Safety Requirements.

Safety Requirement Standard:
IEC1010, EN61010

EMC Conformity Standards:
EN61326-1 Class A, Table 2 (For use in industrial locations)
EN61326-2-3
EN61000-3-2 ClassA
EN61000-3-3

CAUTION
This instrument is a Class A product, and it is designed for use in the industrial environment. Please use this instrument in the industrial environment only.

Grounding: 100Ω or less
*In case of explosion proof type, the protective grounding must be connected to a suitable IS grounding system.

NORMAL OPERATING CONDITION

Ambient Temperature: -20 to 60 °C (-4 to 140 °F)
Note: The minimum temperature is -10°C (14°F) in case of the 40mm or larger sizes with the carbon steel flange connection or wafer connection.

Ambient Humidity: 5 to 95% RH (no condensation)

Rated Power Supply Voltage:
- 100V DC/AC Version:
  Range 80 to 127V AC, 47 to 63Hz
  90 to 110V DC
- 230V AC Version:
  Range 180 to 264V AC
- 24V DC/AC Version:
  Range 20.4 to 28.8 V DC/AC

Supplied Power and Max. Cable Length for 24V DC version:

<table>
<thead>
<tr>
<th>Allowable cable length m (ft)</th>
<th>Cable cross section area: 1.25 mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000 (3300)</td>
<td>1000 (3300)</td>
</tr>
<tr>
<td>900 (2970)</td>
<td>900 (2970)</td>
</tr>
<tr>
<td>800 (2640)</td>
<td>800 (2640)</td>
</tr>
<tr>
<td>700 (2310)</td>
<td>700 (2310)</td>
</tr>
<tr>
<td>500 (1650)</td>
<td>500 (1650)</td>
</tr>
<tr>
<td>400 (1320)</td>
<td>400 (1320)</td>
</tr>
<tr>
<td>300 (990)</td>
<td>300 (990)</td>
</tr>
<tr>
<td>200 (660)</td>
<td>200 (660)</td>
</tr>
<tr>
<td>100 (330)</td>
<td>100 (330)</td>
</tr>
</tbody>
</table>

Altitude at installation side:
Max.2000m above sea level

Installation category based on IEC1010:
II (See Note)
12. EXPLOSION PROTECTED TYPE INSTRUMENT

In this section, further requirements and differences for explosion proof type instrument are described. For explosion proof type instrument, the description in this chapter is prior to other description in this User’s Manual.

**NOTE**
The terminal box cover and display cover is locked by special screw. In case of opening the cover, please use the Hexagonal Wrench attached.

**CAUTION**
Be sure to lock the cover with the special screw using the Hexagonal Wrench attached after tightening the cover.

12.1 CENELEC ATEX(KEMA)

**WARNING**
Only trained persons use this instrument in industrial locations.

(1) Technical Data
Applicable Standard:
- EN50014, EN50018, EN50020, EN50028, EN60529, EN61010-1
Certificate: KEMA 98ATEX3230
Group: II
Category: 2G
Type of Protection: EEx dm[ia] II C T6..T3
Electrode Circuit Um; 250Vac/dc
Excitation Circuit: 41V max. 6/6.25Hz
Temp. Class; T6 T5 T4 T3
Process Temp.; 70 85 120 130°C
Enclosure; IP67
Ambient Temp.: -20 to 60°C (refer to note below)
Maximum power supply voltage: 250 Vac/ 110 Vdc
Note: The minimum temperature is -10°C in case of the 40mm or larger sizes with the carbon steel flange connection or wafer connection.

(2) Electrical Connection
The type of electrical connection is stamped near the electrical connection port according to the following codes.

<table>
<thead>
<tr>
<th>Screw Size</th>
<th>Marking</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO M20x1.5 female</td>
<td>▲ M</td>
</tr>
<tr>
<td>ANSI 1/2NPT female</td>
<td>▲ A</td>
</tr>
<tr>
<td>DIN Pg13.5 female</td>
<td>▲ D</td>
</tr>
</tbody>
</table>

(3) Installation

**WARNING**
- All wiring shall comply with local installation requirements and local electrical code.
- In hazardous locations, the cable entry devices shall be of a certified flameproof type, suitable for the conditions of use and correctly installed.
- Unused apertures shall be closed with suitable flameproof certified blanking elements. (The plug attached is flameproof certified.)

(4) Operation

**WARNING**
- Wait 10 min. after power is turned off, before opening the covers.
- Take care not to generate mechanical spark when access to the instrument and peripheral devices in hazardous locations.

(5) Maintenance and Repair

**WARNING**
The instrument modification or parts replacement by other than authorized representative of Yokogawa Electric Corporation is prohibited and will void the certification.
12. EXPLOSION PROTECTED TYPE INSTRUMENT

12.2 FM

(1) Technical Data

Applicable Standard:
FM 3600, FM 3610, FM 3615, FM 3810, NEMA 250

Explosionproof for Class I Division 1 Groups A, B, C and D. Dust-ignitionproof for Class II/III Division 1 Groups E, F and G. Leads factory sealed.

Intrinsically safe (electrodes) for Class I Division 1 Groups A, B, C & D

Electrode Circuit Vmax : 250V ac/dc

(2) Wiring

WARNING

• All wiring shall comply with National Electrical Code ANSI/NFPA 70 and local electrical code.

• There is no need of conduit seal for both of Division 1 and Division 2 hazardous locations because this product is sealed at factory.

(3) Operation

WARNING

• OPEN CIRCUIT BEFORE REMOVING COVER. INSTALL IN ACCORDANCE WITH THE INSTRUCTION MANUAL IM1E10B0-01E.

• Take care not to generate mechanical spark when access to the instrument and peripheral devices in hazardous locations.

(4) Maintenance and Repair

WARNING

The instrument modification or parts replacement by other than authorized representative of Yokogawa Electric Corporation is prohibited and will void the approval of Factory Mutual Research Corporation.
12.3 CSA

(1) Technical Data

Applicable Standard:
- C22.2 No 0, C22.2 No 0.4, C22.2 No 0.5,
- C22.2 No 25, C22.2 No 30, C22.2 No 94,
- C22.2 No 157, C22.2 No 1010.1

Certificate: 1221381

Class I, Groups B, C and D; Class II, Groups E, F and G; Class III; Encl Type 4X

Electrodes: Intrinsically Safe, Ex ia, Class I, Groups A, B, C and D

When installed in Class I, Division 2 locations - Seals No Required.

Electrode Circuit Vmax: 250V ac/dc

Excitation Circuit: 41V max. 6/6.25Hz

<table>
<thead>
<tr>
<th>Temperature Code</th>
<th>Maximum Ambient Temperature</th>
<th>Maximum Process Temperature</th>
<th>Minimum Process Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6</td>
<td>+60°C</td>
<td>+70°C</td>
<td>-40°C</td>
</tr>
<tr>
<td>T5</td>
<td>+60°C</td>
<td>+85°C</td>
<td>-40°C</td>
</tr>
<tr>
<td>T4</td>
<td>+60°C</td>
<td>+120°C</td>
<td>-40°C</td>
</tr>
<tr>
<td>T3</td>
<td>+60°C</td>
<td>+130°C</td>
<td>-40°C</td>
</tr>
</tbody>
</table>

Ambient Temperature: -20 to +60°C

Maximum power supply voltage: 250 Vac/ 110 Vdc

Maximum Working Pressure: 4MPa (SE115N to SE205N), 2MPa (SE208N to SE220N)

Flange rating should be also considered.

(2) Wiring

 WARNING

All wiring shall comply with Canadian Electrical Code Part I and Local Electrical Codes. Note a warning label worded as follows.

**Warning:** A SEAL SHALL BE INSTALLED WITHIN 50cm OF THE ENCLOSURE.

UN SCELLEMENT DOIT ÊTRE INSTALLÉ À MOINS DE 50cm DU BOÎTIER.

When installed in Class I, Division 2, “SEALS NO REQUIRED.”

12.4 SAA

(1) Technical Data

Applicable Standard:
- AS 2380.1, AS2380.2, AS2380.7, AS 2431, AS1939

Certificate: AUS Ex 3764X

Type of Protection: Ex d m ia II C T6...T3

Enclosure Type: IP67

Excitation Circuit: 41V max. 6/6.25Hz

Electrode Circuit Um: 250V ac/dc

<table>
<thead>
<tr>
<th>Temperature Code</th>
<th>Maximum Ambient Temperature</th>
<th>Maximum Process Temperature</th>
<th>Minimum Process Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>T6</td>
<td>+60°C</td>
<td>+70°C</td>
<td>-40°C</td>
</tr>
<tr>
<td>T5</td>
<td>+60°C</td>
<td>+85°C</td>
<td>-40°C</td>
</tr>
<tr>
<td>T4</td>
<td>+60°C</td>
<td>+120°C</td>
<td>-40°C</td>
</tr>
<tr>
<td>T3</td>
<td>+60°C</td>
<td>+130°C</td>
<td>-40°C</td>
</tr>
</tbody>
</table>

Ambient Temperature: -20 to +60°C

Maximum power supply voltage: 250 Vac/ 110 Vdc

(2) Installation

 WARNING

- All wiring shall comply with local installation requirements and local electrical code.
- In hazardous locations, the cable entry devices shall be of a certified flameproof type, suitable for the conditions of use and correctly installed.
(3) Operation

⚠️ WARNING

- Open circuit before opening the covers.
- Take care not to generate mechanical spark when access to the instrument and peripheral devices in hazardous locations.

(4) Maintenance and Repair

⚠️ WARNING

The instrument modification or parts replacement by other than authorized representative of Yokogawa Electric Corporation is prohibited and will void the certification.