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**User's  
Manual**

**ADMAG *SE***  
**Models SE100DJ/EJ, SE200DJ/EJ  
and SE300DJ/EJ**  
**Magnetic Flow Tube**

Manual Changes No. 05-008-3E

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Please use attached sheets for the pages listed below in IM 1E10D0-01E (8th).

Page	Contents
Page 6-1 to 6-4 6. EXPLOSION PROTECTED TYPE INSTRUMENT	Applicable Standard and Certificate No are added in each Ex-proof Technical Data description.

# 6. 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.

## 6.1 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 85 120 150°C

Enclosure; IP67

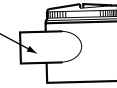
Ambient Temp.: -20 to 60°C

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.

Screw Size	Marking
ISO M20x1.5 female	△ M
ANSI 1/2NPT female	△ A
DIN Pg13.5 female	△ D



### (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 10min. 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.

## (6) Data Plate

ADMAC SE MAGNETIC FLOW TUBE		SIZE	mm
MODEL		METER FACTOR	
SUFFIX		ELECTRODE	
STYLE		FLUID PRESS	- 0.1 MPa MIN. (SEE IM)
ENCLOSURE	IP67	FLUID TEMP.	- 40 °C MIN. (SEE THE NOTE AT BELOW)
LINING	PFA	Tamb	- 20 to + 60 °C SEE IM
TAG NO.		NO.	*1)
CE *2) II2G 0038		TEMP. CLASS T6 T5 T4 T3 MAX.PROCESS TEMP. +70 +85 +120 +150 °C ENCLOSURE: IP67	
KEMA No.: KEMA 98ATEX3230 EEx dm[ia] II C T6...T3 ELECTRODE CIRCUIT Um: 250Vac/dc			
IM : User's Manual			
YOKOGAWA ◆ Made in *3) <b>WARNING</b> DE-ENERGIZE BEFORE OPENING			

MODEL : Specified model code  
 SUFFIX : Suffix codes of the model code  
 STYLE : Specified style code  
 ENCLOSURE : Enclosure protection number  
 LINING : Material of liner  
 TAG NO. : Tag number  
 SIZE : Nominal size of apparatus  
 METER FACTOR : Sensor constant number of apparatus  
 ELECTRODE : Material of electrodes  
 FLUIDPRESS : Fluid pressure of apparatus  
 FLUIDTEMP. : Fluid temperature of apparatus  
 Tamb : Ambient temperature  
 No. : Manufacturing serial number  
 CE : CE marking  
 ExII 2G : Group II Category 2 Gas atmosphere  
 KEMA No. : KEMA 98ATEX3230 : Certificate number  
 EExdem[ia]IICT6...T3 : Protection type and temp. class  
 ELECTRODE CIRCUIT Um : Voltage of electrode circuit  
 IM : User's Manual

 **WARNING** : Warning to apparatus  
 YOKOGAWA ◆ TOKYO 180-8750 JAPAN :  
 Name and address of manufacturer

\*1) The third figure from the last shows the last one figure of the year of production. For example, the year of production of the product engraved as follows is year 1998.

No. F261GA091 813

↑  
Produced in 1998

\*2) The identification number of the notified body :  
 0344

\*3) The product-producing country

## 6.2 FM

## (1) Technical Data

Applicable Standard:

FM 3600, FM 3610, FM 3615, FM 3810,  
NEMA 250

Explosion proof for Class I, Division 1, Groups A, B, C & D.

Dust-ignition proof for Class II/III, Division 1, Groups E, F & G.

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

Electrode circuit Vmax: 250 Vac/dc

Temperature Code	Maximum Ambient Temperature	Maximum Process Temperature	Minimum Process Temperature
T6	+60°C	+70°C	-40°C
T5	+60°C	+85°C	-40°C
T4	+60°C	+120°C	-40°C
T3	+60°C	+150°C	-40°C

Enclosure: NEMA 4X

Ambient Temperature: -20 to +60°C

Maximum Working Pressure: 4MPa(SE115E to SE205E), 2MPa(SE208E to SE220E)

Flange rating should be also considered.

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

## (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 IM1E10D0-01E.
- 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.

**6.3 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.

Excitation Circuit: 41V max. 6/6.25Hz

Electrode Circuit Vmax: 250V ac/dc

Temperature Code	Maximum Ambient Temperature	Maximum Process Temperature	Minimum Process Temperature
T6	+60°C	+70°C	-40°C
T5	+60°C	+85°C	-40°C
T4	+60°C	+120°C	-40°C
T3	+60°C	+150°C	-40°C

Ambient Temperature: -20 to +60°C

Maximum Working Pressure: 4MPa(SE115E to SE205E), 2MPa(SE208E to SE220E)

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 SCÉLLEMENT DOIT ÊTRE INSTALLÉ À MOINS DE 50cm DU BOÎTIER.

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

**(3) Operation****WARNING**

**Note a warning label worded as follows.**

**Warning :** OPEN CIRCUIT BEFORE REMOVING COVER.

OUVRIR LE CIRCUIT AVANT D'EN LEVER LE COUVERCLE.

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 CSA Explosionproof Certification.

**6.4 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: 41Vmax, 6/6.25Hz

Electrode Circuit Um: 250V ac/dc

Temperature Code	Maximum Ambient Temperature	Maximum Process Temperature	Minimum Process Temperature
T6	+60°C	+70°C	-40°C
T5	+60°C	+85°C	-40°C
T4	+60°C	+120°C	-40°C
T3	+60°C	+150°C	-40°C

Ambient Temperature: -20 to +60°C

**(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**

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



**WARNING**

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

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