



Please use the attachment sheets for the IM 01F06F00-01EN (9th).

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10. EXPLOSION PROTECTED TYPE INSTRUMENT

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



WARNING

- Only trained persons use this instrument in industrial locations.



CAUTION

- Process temperature and ambient temperature on this section are the specifications for explosion protected type. Read IM 01F06A00-01EN Section 13.1 "Standard Specifications" before operating.

10.1 ATEX



WARNING

- Only trained persons use this instrument in industrial locations.
- Electrostatic charge may cause an explosion hazard. Avoid any actions that cause the generation of electrostatic charge, such as rubbing with a dry cloth on coating face of product.

■ Technical Data

• Flameproof

Applicable Standard : EN 60079-0: 2012+A11: 2013,
EN 60079-1: 2014

Certificate : DEKRA 11ATEX0212X

Type of Protection:

Ex d IIC T6...T1 Gb (Integral Type and Remote Type Detector)

Ex d IIC T6 Gb (Remote Type Converter)

Group: II

Category: 2 G

Specification of Protection:

Temperature Class: (Integral Type and Remote Type Detector)

Temperature Class	Process Temperature
T6	-40°C to +80°C
T5	-40°C to +100°C
T4	-40°C to +135°C
T3	-40°C to +200°C
T2	-40°C to +300°C
T1	-40°C to +450°C

*1 Note: Use /HT version above +250°C

T6 (Remote Type Converter)

Ambient Temperature.:

-30 to +60°C (With indicator)

-40 to +60°C (Without indicator)

Power Supply: 9 to 32Vdc max.

Special Fastener: Class A2-50 or more

• Intrinsically Safe Ex ia

Applicable Standard: EN 60079-0: 2012 +A11: 2013,
EN 60079-11: 2012

Certificate: KEMA 03ATEX1136X

Type of Protection: Ex ia IIC T4...T1 Ga (Integral Type)

Ex ia IIC T6...T1 Ga (Remote Type Detector)

Ex ia IIC T4 Ga (Remote Type Converter)

Group: II

Category: 1 G

Ambient Temperature: -40 to +60°C (Integral Type)

-50 to +80[+78]°C (Remote Type Detector)

-40 to +80°C (Remote Type Converter)

(Option /LT below -29°C, []

Option /MV at T6)

Electrical Data:

Entity Ui = 24 V,

Ii = 250 mA, Pi = 1.2 W,

Ci = 3.52 nF, Li = 0 mH

FISCO(IIC) Ui = 17.5 V,

Ii = 500 mA, Pi = 5.5 W,

Ci = 3.52 nF, Li = 0 mH

Connect sensor circuit of DYA and DY-N (/HT)

(Integral Type)

Temperature Class	Process Temperature
T4	≤ +135°C
T3	≤ +200°C
T2	≤ +250°C
T1	≤ +250°C

(Remote Type Detector)

Temperature Class	Process Temperature*
T6	≤ +84/[+78]°C
T5	≤ +100°C
T4	≤ +135°C
T3	≤ +199°C
T2	≤ +299/[+288]°C
T1	≤ +449/[+438]°C

*: Use /HT option above +250°C, use /LT option below -29 °C, [] for /MV option.

• **Intrinsically Safe Ex ic**

Applicable Standard: EN 60079-0: 2012+A11: 2013
EN60079-11:2012

Type of Protection: Ex ic IIC T4...T1 Gc (Integral Type)
Ex ic IIC T6...T1 Gc (Remote Type Detector)
Ex ic IIC T5...T4 Gc (Remort Type Converter)

Group: II

Category: 3 G

Enclosure:IP66/67

Overvoltage Category:I

Ambient Temperature:

- 40 to +60°C (Integral Type)
- 50 to +80 [+79]°C (Remote Type Detector)
(Option /LT below -29°C, [] for Option /MV at T6)
- 40 to +80°C (Remote Type Converter)

(Integral Type)

Temperature Class	Process Temperature
T4	-40°C to +135°C
T3	-40°C to +199°C
T2	-40°C to +250°C
T1	-40°C to +250°C

(Remote Type Detector)

Temperature Class	Process Temperature
T6	-196°C to +84/[+79]°C
T5	-196°C to +100°C
T4	-196°C to +135°C
T3	-196°C to +199°C
T2	-196°C to +299/[+289]°C
T1	-196°C to +449/[+439]°C

*: Use /HT option above +250°C, use /LT option below -29°C, [] for /MV option.

Electrical data:

Supply and Output Circuit (SUPPLY + and -);
FISCO Field Device
Entity Concept:
Maximum Input Voltage Ui: 32Vdc
Internal Capacitance Ci: 3.52nF
Internal Inductance Li: 0mH
Electrical Connection: ANSI 1/2 NPT female,
ISO M20 X 1.5 female

For the connection of DYA to DY-N :

Maximum cable capacitance: 160nF
Electrical Connection: ANSI 1/2 NPT female,
ISO M20 X 1.5 female

Special conditions for safe use

1. For process temperatures above 250°C the flow meters of the /HT version must be used.
 2. Because the enclosures of the flow meters and the flow converter are made of aluminium alloy, when used in an potentially explosive atmosphere requiring apparatus of equipment category 1 G, they must be installed so, that even in the event of rare incidents, an ignition source due to impact of friction between the enclosure and iron/steel is excluded.
- Precautions shall be taken to minimize the risk from electrostatic discharge of painted parts.
 - The dielectric strength of at least 500 V a.c. r.m.s. between the intrinsically safe circuits and the enclosure of the flow meter or the converter is limited only by the overvoltage protection.