

Non-Hazardous Location



I.S. Barrier
See note 1

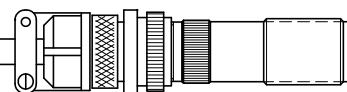
(Associated Equipment)

$$\begin{aligned} V_{max, U_i} &\geq U_o, V_{oc} \text{ or } V_f \\ I_{max, I_i} &\geq I_o, I_{sc} \text{ or } I_f \\ C_o \text{ or } C_a &\geq C_i + C_c \end{aligned}$$

$$\begin{aligned} L_o \text{ or } L_a &\geq L_i + L_c \\ P_t \text{ or } P_o &\leq P_i \end{aligned}$$

Hazardous Location

Cable seal



(Intrinsically Safe Equipment)

$$\begin{aligned} V_{max, U_i} &= 30 \text{ Vdc} \\ I_{max, I_i} &= 100 \text{ mA} \\ C_i &= 0 \text{ nF} \quad (\text{For IS100, IS101, IS100A, IS101A, IS220, IS221, IS220A \& IS221A}) \\ C_i &= 12 \text{ nF} \quad (\text{For IS90, IS90A, IS91, IS91A, IS160, IS160A, IS161, IS161A, IS170, IS170A, IS171 \& IS171A}) \\ L_i &= 0 \text{ mH max.} \\ P_{max, P_i} &= 0.66 \text{ watts} \end{aligned}$$

Certifications for IS90A & IS91A, IS100A & IS101A, IS160A & IS161A, IS170A & IS171A, IS220A & IS221A

ATEX: II 1 G Ex ia IIC T6...T4 Ga
FM08ATEX0066X

IECEX: Ex ia IIC T6...T4 Ga
IECEX FMG 16.0003X

T4 @ $-40^{\circ}\text{C} \leq T_{amb} \leq +100^{\circ}\text{C}$

T5 @ $-40^{\circ}\text{C} \leq T_{amb} \leq +85^{\circ}\text{C}$

T6 @ $-40^{\circ}\text{C} \leq T_{amb} \leq +65^{\circ}\text{C}$

CE: Compliance with
EN55011, EN50082-2

Certifications for IS90 & IS91, IS100 & IS101, IS160 & IS161, IS170 & IS171, IS220 & IS221

USA: Intrinsically Safe
Class I, II, III, Division 1
Group ABCDEFG T6...T5
Class I, Zone 0, AEx ia IIC T6...T5

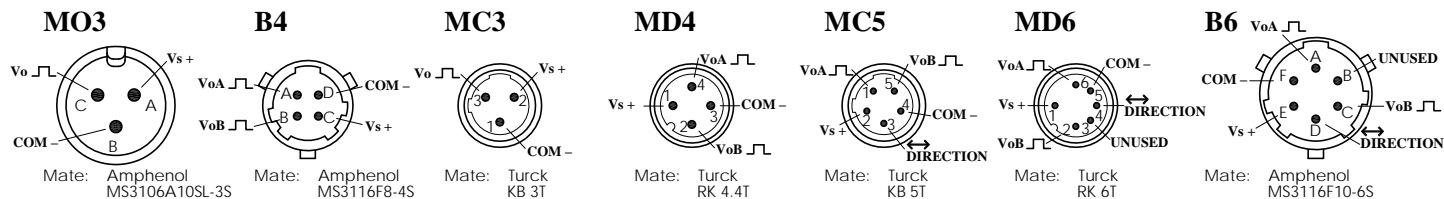
Canada: Intrinsically Safe
Class I, Division 1
Group ABCD T6...T5
Class I, Zone 0, Ex ia IIC T6...T5

T5 @ $-40^{\circ}\text{C} \leq T_{amb} \leq +85^{\circ}\text{C}$

T6 @ $-40^{\circ}\text{C} \leq T_{amb} \leq +65^{\circ}\text{C}$

NOTES:

- Barrier must satisfy the electrical requirements listed above.**
Barrier manufacturer's installation drawing must be followed when installing the system. For US installations, the barrier configuration must be FM Global approved. See Bulletin 4003 for recommended barriers.
- Installation** to be in accordance with the following standards:
for US installations follow ANSI/ISA RP12.6 and the National Electrical Code ANSI/NFPA 70,
for Canadian installations follow the Canadian Electrical Code,
for ATEX installations follow EN 60079-14, for IECEx installations follow IEC 60079-14.
- Control Equipment** connected to associated equipment must not use or generate more than 250V.
- Sensor must be mounted as part of a bonded structure.**
- Sensor should be de-energized** before separating connector and sensor.
- Aluminum housings:** The mounting bracket contains aluminum and is considered to constitute a potential risk of ignition by impact or friction and must be taken into account during installation.
- Lead Wires:** Red/Vs+, Black/Common-, White/Vo Output A, Yellow/Vo Output B, Green/Direction
Connector:



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DO NOT ALTER WITHOUT AGENCY APPROVAL

IS

DIGISPEC SPEED AND POSITION SENSOR



TITLE
**INTRINSICALLY SAFE
INSTALLATION INSTRUCTIONS**

AGENCY APPROVAL DATE
Feb 03, 2017
REV. 13 DATE 01-05-17

DRAWN BY JE

APPROVED BY *JE*

SCALE PROCESS SPEC.

NUMBER
85047