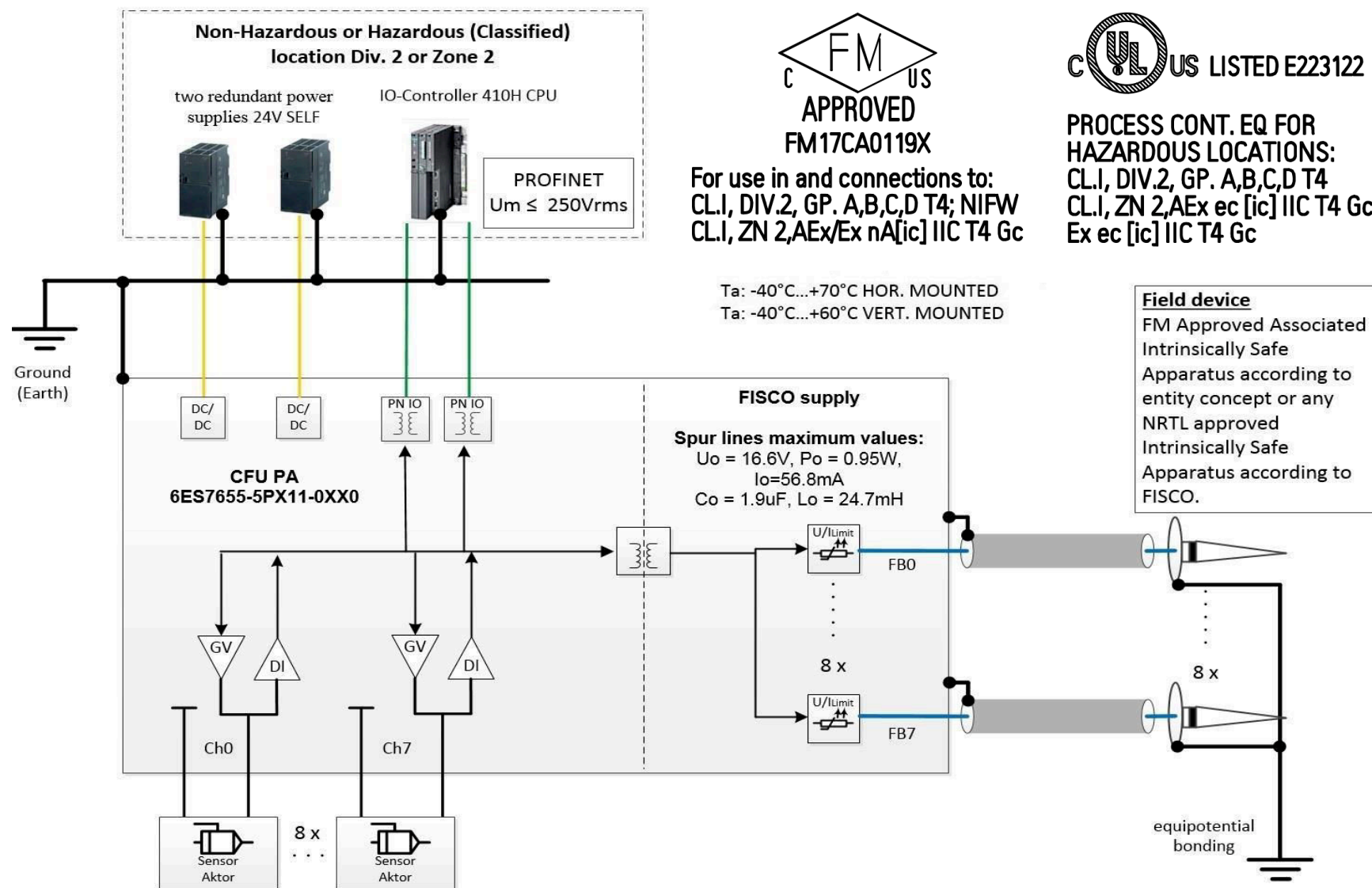




System Overview

Type of protection and marking:



FM17CA0119X

For use in and connections to :

CL.I, DIV.2, GP. A,B,C,D T4 ; NIFW

CL.I, ZN 2, AEx/Ex nA[ic] IIC T4 Gc

Ta: -40 °C...+70 °C HOR. MOUNTED

Ta: -40 °C...+60 °C VERT. MOUNTED



US LISTED E223122

**PROCESS CONT. EQ FOR
HAZARDOUS LOCATIONS:**

CL.I, DIV.2, GP. A,B,C,D T4

CL.I, ZN 2, AEx ec [ic] IIC T4 Gc

Ex ec [ic] IIC T4 Gc

Installation notes

1. The power supplies, IO-Controller, and CFU PA can be installed in the non-hazardous location or is suitable for installation in **CL I, Div.2, GP A-D** or **CL I, Zone 2, GP IIC** locations.
2. The CFU PA (MLFB = 6ES7655-5PX11-0XX0) is an associated apparatus with NIFW or FISCO for connections to **CL I, Div.2, GP A-D** or **CL I, Zone 2, GP IIC** locations, and is not suitable for connections to **Div.1 or Zone 1, 0** hazardous (classified) locations.
3. CFU PA and all other approved devices in the fieldbus system must be installed in accordance with the manufacturer's instructions.
4. When installing CFU PA according to requirements of the certification authority, all field devices as well must be approved by the certification authority.
5. The Intrinsic Safety FISCO concept allows the interconnection of approved intrinsically safe devices with FISCO parameters not specifically examined in combination as a system when:

$$U_O \leq U_{\max}, I_O \leq I_{\max}, P_O \leq P_{\max}$$

$U_{\max}$, $I_{\max}$ and $P_{\max}$ are the values specified for the field devices.

The safety relevant output values of CFU PA according to FISCO, NIFW or entity concept: $U_O = 16.6V$, $P_O = 950mW$, $I_O = 58.8mA$, $C_O = 1.9\mu F$, $L_O = 24.7mH$.

6. The maximum voltage U_m used or generated by the PROFINET may not exceed 250VAC.
7. Customer has to use a gland and cable "listed for the application" based on the NEC and CEC. Installations shall comply with the relevant requirements of the National Electrical Code® (ANSI/NFPA-70 (NEC®), where applicable.
8. Intrinsically safe circuits (field bus lines) must be wired and separated in accordance with Article 504.20 of the NEC ANSI / NFPA 70 or other local codes, as applicable.
9. If more than one field device (FD) is connected to CFU PA, the field devices must be connected via separate cables. Refer to Article 504.30(B) of the National Electrical Code (ANSI / NFPA 70) and Instrument Society of America Recommended Practice ISA-RP 12.6 for installing intrinsically safe equipment.
10. WARNING FOR APPLICATIONS IN ZONE 2 (CLASSIFIED) LOCATIONS: EXPLOSION HAZARD. EXCEPT FOR FIELD BUS LINES (FIELD DEVICES), DO NOT CONNECT OR DISCONNECT ANY OTHER CABLE (POWER SUPPLY, PROFINET AND CH0...CH7) UNLESS THE AREA IS KNOWN TO BE NONHAZARDOUS.
11. This Control Drawing document is part of the certification documentation of the certification authority and must not be modified without reference to the certification authority.
12. *Nonincendive field wiring enables interconnection of nonincendive field wiring apparatus with associated nonincendive field wiring apparatus not specifically examined in combination as a system when:*
 $Co \geq Ci + C_{cable}$; $Lo \geq Li + L_{cable}$

CFU PA installed in Div.2 or Zone 2:

In the potentially explosive area Div.2 or Zone 2, you are not permitted to connect or disconnect the power supply, PROFINET and channels to a CFU PA during operation.

Prior to starting work, disconnect the voltage supply to the power supply(s), turn off IO-Controller and all active sensors and actuators.

Connecting and disconnecting cables on FB0 through FB7 (field bus lines)

The field bus cables may be connected to or disconnected from the field bus terminals during operation.

Cable requirements

The cable shall comply with the following parameters:

- a) loop resistance $R_C = 15 \Omega/\text{km} \dots 150 \Omega/\text{km}$
- b) loop inductance $L_C = 0.4 \text{ mH}/\text{km} \dots 1 \text{ mH}/\text{km}$
- c) capacitance $C_C = 45 \text{ nF}/\text{km} \dots 200 \text{ nF}/\text{km}$

Field bus cable:

Maximum field bus cable length between CFU PA and field device 120 m