

The ControlNet Ex barrier type RS-FB-Ex2.CN is an associated apparatus according to EN 50020. If the ControlNet Ex barrier is connected to intrinsically safe circuits the applicable national and local construction, installation and operating regulations must be heeded (EN 50020, EN 60079-14), as well as the attached ControlNet installation drawing.

Application

The ControlNet Ex barrier type RS-FB-Ex2.CN functions as a galvanic isolation barrier for signals between a non-intrinsic ControlNet System and an intrinsic safe ControlNet Ex System. The ControlNet Ex barrier must be installed in the safe area.

Label

The product label is located at one of the smaller sides of the ControlNet Ex barrier.

Pepperl+Fuchs GmbH
D-68307 Mannheim
RS-FB-Ex2.CN
CE 0102
DMT 99 ATEX E058 X
II (2) G [EEEx ib] IIC
Year of manufacturing

The area around the intrinsic safe BNC-connectors is marked light blue.

Cover plug for IS BNC-connector

The IS BNC-connectors are provided with a cover plug. The cover plug shall only be removed when a cable will be connected.
Connect only IS marked coax cables from the ControlNet Ex-System to the IS BNC-connectors.

Part No. 115022 / 45-0817 / 18.09.2003

Installation

The ControlNet Ex barrier must be installed in such a way that protection factor IP20 is guaranteed.

The ControlNet Ex barrier cannot be used as an associated apparatus after the IS connectors have been connected to non-intrinsically safe signals. The intrinsically safe circuits of the ControlNet barrier must be grounded. To achieve this a grounding terminal is provided with the barrier. When this terminal is directly connected to the Rail it has to be screwed and the DIN Rail has to be connected to PA¹⁾. When the DIN Rail is not connected to PA¹⁾ then the terminal must be connected to PA¹⁾ using a copper conductor of at least 4 mm² (for further details see EN 60079-14 section 12.2.4).

Only one barrier is allowed to be connected within a ControlNet Ex-System.

The ControlNet specification states that the CNet cables should not be connected to ground. The only permissible exception to this rule is the grounding of the barrier. Signal integrity of the CNet system is not affected when the barrier is used.

¹⁾ PA: Equipotential bonding system in the hazardous area, where the ControlNet Ex-System coax cable is installed.

Repair

The ControlNet Ex barrier is not field-repairable. Any attempt to open this device will void the warranty and IS certification. If repair is necessary, return this device to the factory.

IS Output (BNC-connector in blue area)

Maximum open circuit voltage U_0 is 7 V

Maximum current I_0 is 55 mA (at the resonant frequency of 52 kHz)

Ambient Temperature

The Ambient Temperature of the barrier (-20 °C ... +70 °C) has to be considered.

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Installation drawing: ControlNet Ex System

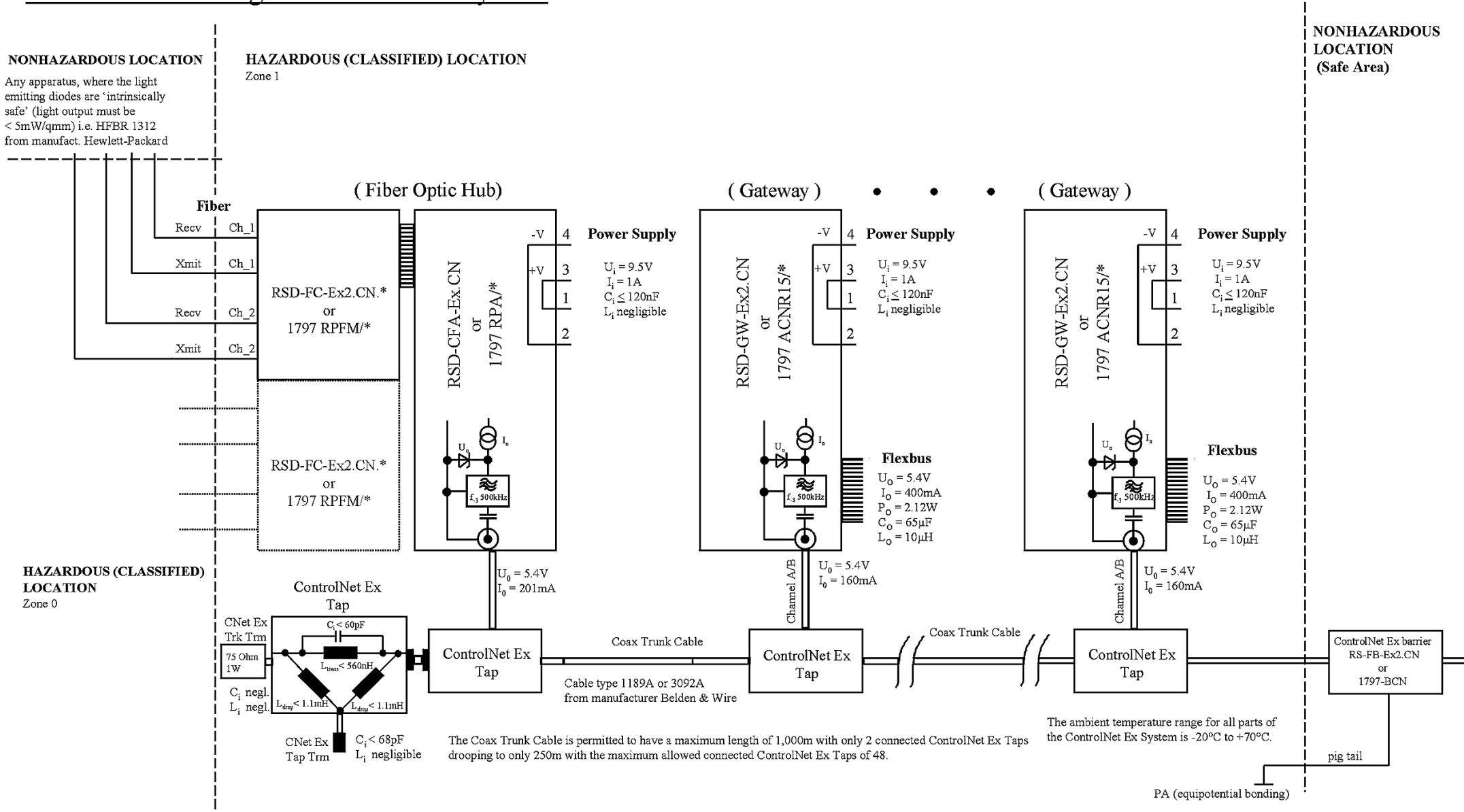
NONHAZARDOUS LOCATION

Any apparatus, where the light emitting diodes are 'intrinsically safe' (light output must be < 5mW/qmm) i.e. HFBR 1312 from manufact. Hewlett-Packard

HAZARDOUS (CLASSIFIED) LOCATION

Zone 1

NONHAZARDOUS LOCATION
(Safe Area)



HAZARDOUS (CLASSIFIED) LOCATION

Zone 0

The Coax Trunk Cable is permitted to have a maximum length of 1,000m with only 2 connected ControlNet Ex Taps drooping to only 250m with the maximum allowed connected ControlNet Ex Taps of 48.

The ambient temperature range for all parts of the ControlNet Ex System is -20°C to +70°C.