

- 1-Channel
- Input EEx ia IIC
Class I, Div 1, Groups A-G
- DC 24 V supply voltage
- SMART is capable up to 40 kHz (-1dB)
- EMC per NAMUR NE 21

Output 4 ... 20 mA:
KFD2-STC3-Ex1

Output 1 ... 5 V:
KFD2-STV3-Ex1-1

Output 2 ... 10 V:
KFD2-STV3-Ex1-2

SMART transmitter power supplies provide SMART transmitters with power in hazardous areas and transfer the 4 ... 20 mA analog values to output terminals 9+ and 10.

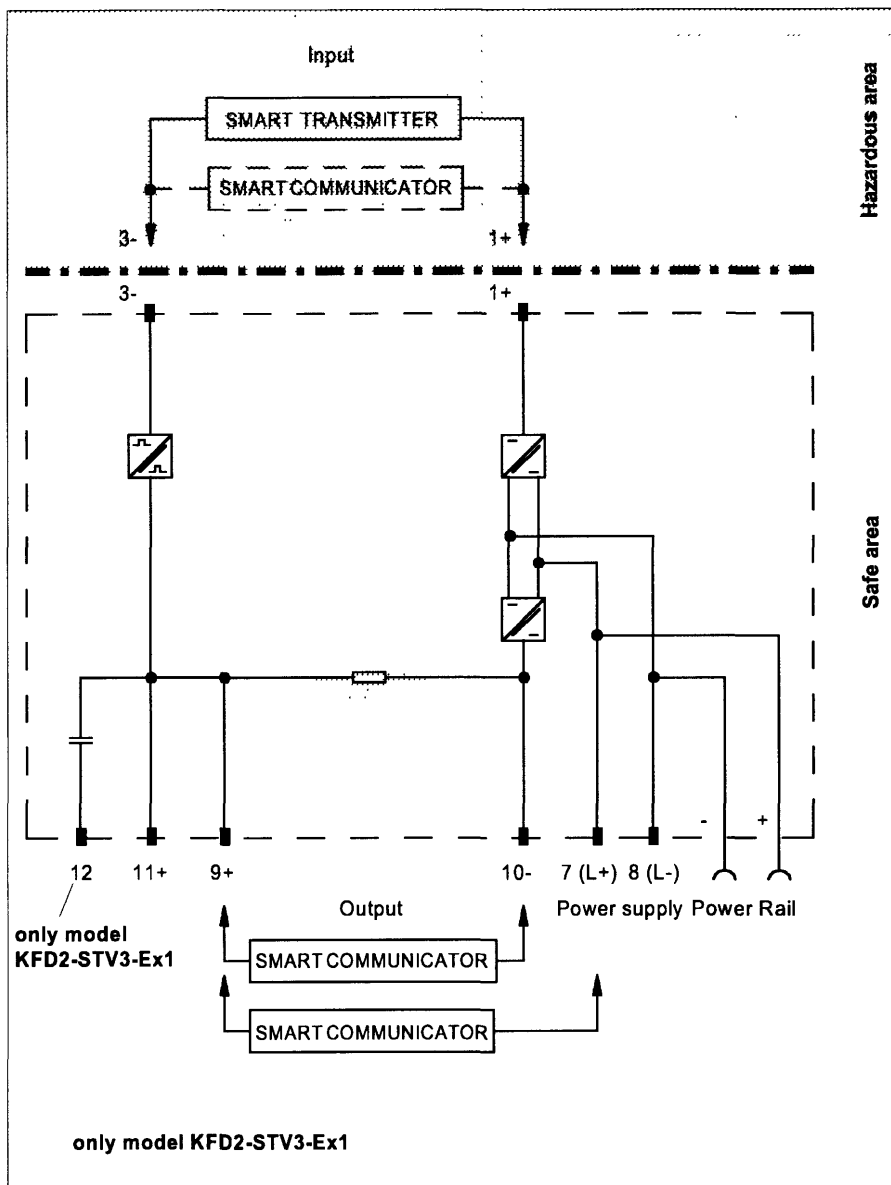
Digital signals may be superimposed on the analog values in the hazardous or safe area, which may be transferred bidirectionally. Handheld terminals should be connected as shown in the circuit block diagram. A series circuit, i.e. for the Bailey STT01, is also possible. SMART transmitter power supplies are delivered standard with terminals STP-BU and KF-STP-GN. Jacks are integrated in these terminals for the connection of the handheld units.

Application:

- The supply of power to SMART transmitters and the transfer of the current to the output
- Suited for the following SMART systems:
 - ABB
 - Bailey
 - Chessel
 - Eckhardt-Foxboro
 - Endress+Hauser
 - Fisher-Rosemount
 - Fuji
 - Honeywell
 - Smar
 - Yokogawa
 - Siemens

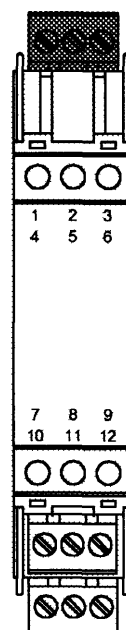
Note:

Terminal 12 is placed across an internally applied capacitance. Active input cards such as Foxboro FMB 18, can be operated with this.



Front View

Housing type A4
(see page 14)



Technical data**Power supply**

Nominal voltage

Ripple

Power consumption

Input (Intrinsically safe)

Input signal

Available voltage at 20 mA

Certificate of Conformity Peak Values $U_o / I_o / P_o$ **Allowable circuit values****Ignition protection method, category**

Explosion group

Max. external capacitance

Max. external inductance

Entity Parameters

Suitable for Div 2 installation/mounting

Voltage V_{oc} Current I_{sc} Voltage V_i Current I_i

Explosion group

Max. external capacitance (C_a)Max. external inductance (L_a)**Safety Parameters**

Safety Parameters

Voltage V_{oc} Current I_{sc}

Explosion group

Max. external capacitance (C_a)Max. external inductance (L_a)**Output (Not intrinsically safe)**

Output signal

Ripple

Transfer characteristics

Transfer fault at 293 K (20 °C)

Temperature drift

Frequency range (Load = 250 Ohm)**Hazardous area to safe area**Band with at 1 mA_{ss}-Signal**Safe area to hazardous area**Band with at 1 V_{ss}-Signal

Rise time / Fall time

Galvanic isolation

Input / Output

Input / Power supply

Output / Power supply

Conformity to standard

EMC / Electromagnetic compatibility

Weight**Ambient temperature****KFD2-STC3-Ex1****KFD2-STV3-Ex1-1****KFD2-STV3-Ex1-2**

Power Rail or Terminals 7 (L+), 8 (L-)

DC 20 V ... 35 V
within the supply tolerance
≤ 1.7 W

Terminals 1+, 3-

4 mA ... 20 mA
≈ 16.5 V**BASEEFA Nr. Ex-89C2093**

for additional international approvals see page 384

DC 28 V / 93 mA / 660 mW

[EEx ia]

IIC	/ IIB	/ IIC
1.04 µF	/ 0.39 µF	/ 0.13 µF
33.6 mH	/ 12.6 mH	/ 4.2 mH

FM Control Drawing No. 116-0129

Terminals 1+, 3-

Yes	Yes	Yes
28.21 V	28 V	28 V
93.4 mA	93 mA	93 mA
-	-	-
-	-	-
A&B	C&E	D, F&G
0.14 µF	0.43 µF	1.14 µF
4.18 mH	16.83 mH	34.21 mH

CSA Control Drawing No. 116-0132

Terminals 1+, 3-

28 V / 300 Ohms	28 V	28 V
93 mA	93 mA	93 mA
A&B	C&E	D, F&G
0.14 µF	0.42 µF	1.14 µF
3.1 mH	16.7 mH	34.0 mH

Terminals 9+, 10-, 11+

4 mA ... 20 mA, max. Load 1000 Ohm, at HART ≥ 230 Ohm ≤ 0.05% Output signal range	1 V ... 5 V, Internal resistance ≈ 305 Ohm	2 V ... 10 V, Internal resistance ≈ 305 Ohm
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≤ 0.03% Output signal range (Voltage output)
 ≤ 0.05% Output signal range (Current output)
 ≤ 20 p.p.m. / K

0 Hz ... 40 kHz (-1dB); 0 Hz ... 100 kHz (-6dB)

0 Hz ... 40 kHz (-1dB); 0 Hz ... 100 kHz (-6dB)

10 µs / 10 µs

Safe galvanic isolation per DIN EN 50 020

Safe galvanic isolation per DIN EN 50 020

present

per EN 50 081-2 / EN 50 082-2, NAMUR NE 21

≈ 150 g (≈ 5.3 oz)

-20 °C ... +65 °C (-4 °F ... 149 °F)

See page 12 for additional information on mechanical and electrical standards of the K-System.