



- 1-channel
- Galvanically isolated input EEx ia IIC
- Galvanically isolated output
- Suitable for HART communication
- Device installation permissible in zone 2
- Output as current source, current sink or voltage source
- EMC acc. to NAMUR NE 21
- Up to SIL2 acc. to IEC 61508

**HiC2025**

**Function**

The SMART transmitter power supply provides a 2- or 3-wire SMART transmitter and transfer the analogue values.

Digital signals may be superimposed on the analogue values, which will transferred bidirectionally.

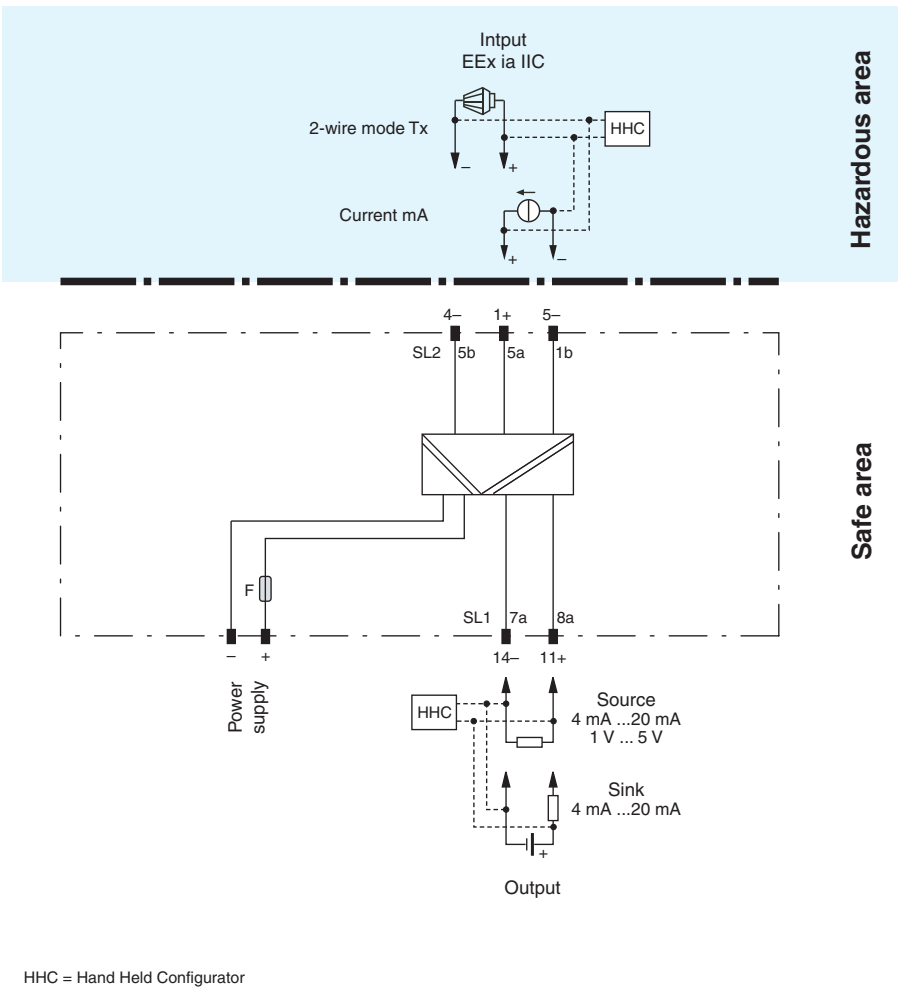
Handheld terminals (HHC) should be connected as shown in the block diagram.

The output operating mode can be selected as current source, current sink or voltage source by switches

**Application**

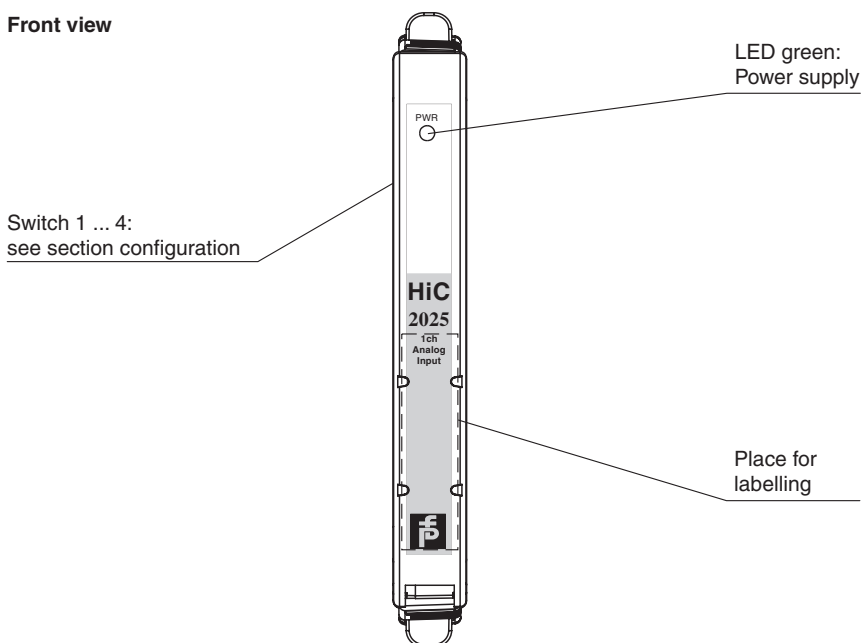
- Power supply for SMART transmitters and transfer of the measurement signal to the output
- for the transfer of a current source to the safe area
- suitable for the following SMART systems:  
ABB, Endress+Hauser, Emerson, Fuji, Smar, VEGA, Yokogawa

**Connection**



**Composition**

**Front view**



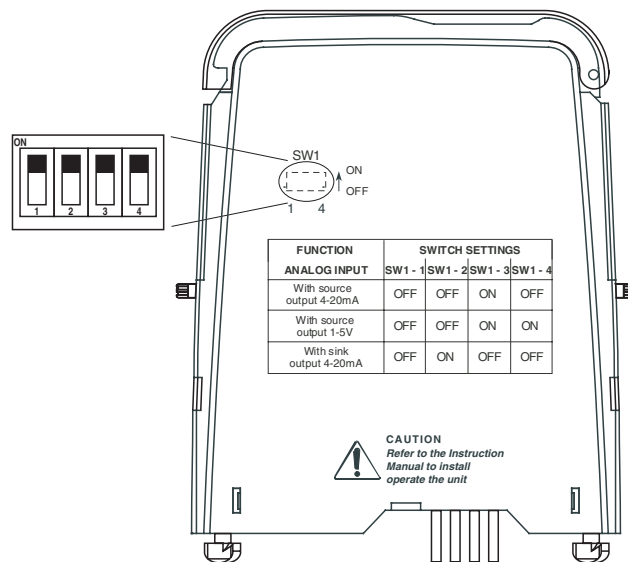
Release date 2007-08-28 17:36 Date of issue 2007-08-28 185539\_ENG.xml

<b>Supply</b>	
Connection	SL1: 1a - 1b (-); 2a - 2b (+)
Rated voltage	19 ... 30 V DC
Ripple	≤ 10 %
Rated current	≤ 45 mA
Power loss	≤ 800 mW
Power consumption	≤ 1.1 W
<b>Input</b>	
Connection	SL2: 5a (+), 5b (-) or 5a (+), 1b (-)
Input signal	4 ... 20 mA limited to approx. 30 mA
Voltage drop $U_d$	approx. 5 V on SL2: 5a (+), 1b (-)
Available voltage	≥ 15 V at 20 mA on SL2: 5a (+), 5b (-)
<b>Output</b>	
Connection	SL1: 8a (+), 7a (-)
Load	0 ... 300 Ω (source mode)
Output signal	4 ... 20 mA or 1 ... 5 V (on 250 Ω, 0.1 % internal shunt) 4 ... 20 mA (sink mode), operating voltage 15 ... 26 V
Ripple	20 mV rms
<b>Transfer characteristics</b>	
Deviation	at 20 °C (293 K), 4 ... 20 mA ≤ ± 0.1 % incl. non-linearity and hysteresis (source mode)
Influence of ambient temperature	< 2 μA/°C (0 ... +60 °C); < 4 μA/°C (-20 ... 0 °C)
Frequency range	hazardous area into the safe area: bandwidth with 0.5 $V_{pp}$ -signal 0 ... 3 kHz (-3 dB) safe area into the hazardous area: bandwidth with 0.5 $V_{pp}$ -signal 0 ... 3 kHz (-3 dB)
Rise time	10 to 90 % ≤ 20 ms
<b>Electrical isolation</b>	
Input/output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Output/power supply	basic insulation acc. to DIN EN 50178, rated insulation voltage of AC 50 V
<b>Indicators/settings</b>	
LED PWR	green
DIP-switch	selection of operating mode: current source, current sink or voltage source
Factory setting	output: current source
Labelling	place for labelling on the front side
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326
<b>Conformity</b>	
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
<b>Mechanical specifications</b>	
Protection degree	IP20
Mass	approx. 100 g
Dimensions	12.5 x 128 x 106 mm (0.5 x 5.1 x 4.2 in)
<b>Data for application in conjunction with hazardous areas</b>	
EC-Type Examination Certificate	CESI 06 ATEX 017 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection	Ⓔ II (1)GD [EEx ia] IIC, [Ex ia D] [circuit(s) in zone 0/1/2/20/21/22]
Input	Ex ia/Ex ia D
<b>Supply</b>	
Safety maximum voltage $U_m$	253 V AC (Attention! $U_m$ is no rated voltage.)
<b>Equipment</b>	
Voltage $U_o$	25.2 V
Current $I_o$	100 mA
Power $P_o$	630 mW
Internal capacitance $C_i$	5.7 nF
Internal inductance $L_i$	negligible
Permissible connection values [EEx ia]	
Explosion group	IIA      IIB      IIC
External capacitance	2.8 μF    0.81 μF    0.1 μF
External inductance	28 mH    14 mH    3.5 mH
<b>Equipment</b>	
Voltage $U_i$	SL2: 5a (+), 1b (-) < 30 V

Release date 2007-08-28 17:36 Date of issue 2007-08-28 185539\_ENG.xml

Current	$I_i$	< 128 mA
Voltage	$U_o$	7.2 V
Current	$I_o$	100 mA
Power	$P_o$	25 mW
Internal capacitance	$C_i$	5.7 nF
Internal inductance	$L_i$	negligible
Permissible connection values [EEx ia]		
Explosion group		IIA IIB IIC
External capacitance		1000 $\mu$ F 239 $\mu$ F 13.49 $\mu$ F
External inductance		28 mH 14 mH 3.5 mH
Statement of conformity		Pepperl+Fuchs
Group, category, type of protection, temperature classification		$\text{Ex}$ II 3G Ex nA II T4 X
Directive conformity		
Directive 94/9 EC		EN 50014, EN 50020, pr EN 61241-11, EN 50284, EN 60079-15 , EN 60079-0
<b>General information</b>		
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

Configuration



The configuration is performed in the following way:

- Remove the module from termination board, pulling-up the tab on each side of the module.
- Set the DIP switches according to the figure.